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See the Register Index for Subsequent Rulemaking Activity.

NEXT UPDATE: SUPPLEMENT SEPTEMBER 21, 1992

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Interested persons may submit comments, information or arguments concerning any of the rule proposals in this issue until **December 2, 1992.** Submissions and any inquiries about submissions should be addressed to the agency officer specified for a particular proposal.

On occasion, a proposing agency may extend the 30-day comment period to accommodate public hearings or to elicit greater public response to a proposed new rule or amendment. An extended comment deadline will be noted in the heading of a proposal or appear in a subsequent notice in the Register.

At the close of the period for comments, the proposing agency may thereafter adopt a proposal, without change, or with changes not in violation of the rulemaking procedures at N.J.A.C. 1:30-4.3. The adoption becomes effective upon publication in the Register of a notice of adoption, unless otherwise indicated in the adoption notice. Promulgation in the New Jersey Register establishes a new or amended rule as an official part of the New Jersey Administrative Code.

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January 4, 1993 issue:	
Proposals	**December 3**
Adoptions	**December 10**
January 19 issue:	
Proposals	**December 16**
Adoptions	**December 23**

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EXECUTIVE ORDER

(a)

OFFICE OF THE GOVERNOR
Governor Jim Florio
Executive Order No. 65(1992)
Implementation of Proposals in Report on State Leasing

Issued: October 5, 1992.
Effective: October 5, 1992.
Expiration: Indefinite.

WHEREAS, it is the policy of the State of New Jersey to operate government in the most efficient manner possible, and at the lowest possible cost to the taxpayers; and

WHEREAS, the government of the State of New Jersey currently occupies approximately 7.5 million square feet of rented space; and

WHEREAS, the Legislature has appropriated nearly $178 million to pay for State leases in Fiscal Year 1993; and

WHEREAS, the State leasing program would be enhanced and improved by changes in the process of acquiring space for State employees; and

WHEREAS, Chief Counsel M. Robert DeCotiis and State Treasurer Sam Crane have submitted a report setting forth various findings and proposals regarding State leasing;

NOW, THEREFORE, I, JAMES J. FLORIO, Governor of the State of New Jersey, by virtue of the authority vested in me by the Constitution and Statutes of this State, do hereby DECLARE, ORDER, and DIRECT as follows:

1. I hereby direct the Administrator of the General Services Administration in the Department of Treasury forthwith to implement the proposals set forth in the Report on State Leasing prepared by the Office of Management and Budget.

2. I further direct the Administrator of the General Services Administration to determine which of these proposals, if any, require the enactment of legislation, and to so indicate to me by October 30, 1992.

3. More particularly, I hereby direct:

a. That, consistent with the recommendations in the Report on State Leasing, a Space Management and Planning Board be formed for the purpose of implementing State policy with respect to acquiring and managing office space and resolving impasses regarding office space. The Board shall be organized within the Department of Treasury, and shall be comprised of the State Treasurer who shall serve as the Chairperson, the Director of Budget and Accounting, the Administrator of the General Services Administration, the Executive Director of the State Building Authority, and an employee of a State department or agency designated by the State Treasurer who has expertise in State leasing.

b. As soon as practicable, the Office of Leasing Operations shall prepare a Master Plan setting forth a comprehensive description of all leased facilities currently occupied by State employees. In addition, the Master Plan shall set forth specific recommendations for reducing the overall cost of State space, with particular concern given to the potential for purchasing existing property or building new facilities. These recommendations shall be consistent with the State's policy of consolidating space in urban areas, and with the policy of providing space that is safe and appropriate for State employees.

c. The Administrator of the General Services Administration shall immediately adopt a procedure for submitting lease proposals to a modified competitive process, as described in the Report on State Leasing. This process should incorporate public solicitation of bids where appropriate, and the awarding of leases on the basis of objective criteria promulgated by the Office of Leasing Operations in cooperation with the Space Management and Planning Board.

d. I hereby direct the State Treasurer to conduct a pilot privatization program, in which the State shall contract on an experimental basis with private business entities to assist the State in carrying out its leasing obligations. In particular, this program may include the use of commercial real estate companies selected through a competitive process to assist the State in selecting sites and negotiating leases.

e. The Office of Leasing Operations shall improve its procedures for monitoring leased space. In particular, the Administrator of the General Services Administration, in cooperation with the Space Planning and Management Board, shall promulgate stricter monitoring guidelines, as indicated in the Report on State Leasing.

f. In addition, the Department of Treasury shall devise a system of incentives to induce agencies to submit accurate and reliable space requests, as indicated in the Report on State Leasing.

g. The Department of Treasury shall explore with the Legislature a process that would provide for the automatic approval of a lease when the Legislature fails to act upon a lease request within a specified period of time after it receives that request.

h. I further direct the Office of Leasing Operations to strengthen its disclosure requirements, consistent with the recommendations in the Report on State Leasing.

i. I further direct the Department of Treasury to prepare a comprehensive proposal for improving the computer systems currently used in support of State leasing.

j. The Treasurer shall take all necessary and proper actions for implementing the proposals set forth in this Executive Order, as well as the other proposals submitted to me in the Report on State Leasing. The Treasurer shall provide me with a status report on or before December 15, 1992, indicating which of the proposals have been implemented, and, if any have not, what problems may exist and the proposals for resolution. On or before March 15, 1993, the Treasurer shall again provide me with a status report indicating which proposals have been implemented and, if any have not, what problems exist and what the proposals are for resolution. Thereafter, the Treasurer shall report to me on or before the 15th day of every month on the progress in implementing this Order and the proposals set forth in the Report.

4. This Order shall take effect immediately.

RULE PROPOSALS

HEALTH

(a)

OFFICE OF BOARDS AND COUNCILS

Notice of State Health Planning Board Public Hearings on the State Health Plan

Draft Chapters: Diabetes, Cancer, Surgery and End Stage Renal Disease, Mental Health, Occupational and Environmental Health, Injuries and Emergency Care, Communicable Disease Control, AIDS, and Preventive and Primary Care.

Take notice that the State Health Planning Board will hold public hearings on draft chapters of the State Health Plan, prepared pursuant to P.L. 1991, c.187. The State Health Planning Board welcomes public input regarding the content of these chapters. The seven chapters are diabetes, cancer, surgery and end stage renal disease, mental health, occupational and environmental health, injuries and emergency care, and communicable disease control.

Beginning in November 1992, the State Health Planning Board will hold a series of **six hearings** (one in each Local Advisory Board region) to obtain public testimony which it will consider in revising and preparing the final versions of each chapter. Copies of the draft chapters are available at the Local Advisory Boards (telephone numbers listed below), at county libraries, or in this issue of the New Jersey Register. Interested parties are invited to testify on any or all of the chapters at the hearings, which will be held during the hours of 2 P.M. to 5 P.M. and 6 P.M. to 9 P.M., at the following locations and on the following dates:

Tuesday, November 17, 1992—LAB Region VI—(908) 262-9047
Atlantic, Cape May, Monmouth and Ocean Counties

Stockton State College
Performing Arts Center Building
Pomona, New Jersey

Thursday, November 19, 1992—LAB Region I—(201) 361-3390
Morris, Passaic, Sussex and Warren Counties

Paterson Museum
2 Market Street
First Floor
Paterson, New Jersey

Tuesday, December 1, 1992—LAB Region IV—(908) 932-5143
Hunterdon, Mercer, Middlesex and Somerset Counties

Labor Education Center
Rutgers, The State University
Ryders Lane and Clifton Avenue
New Brunswick, NJ 08901

Thursday, December 3, 1992—LAB Region II—(201) 460-5385
Bergen and Hudson Counties

Fairleigh Dickinson University
Sammartino Hall Auditorium
West Passaic and Montross Avenues
Rutherford, New Jersey

Tuesday, December 15, 1992—LAB Region V—(609) 338-1276
Burlington, Camden, Cumberland, Gloucester and Salem Counties

Rutgers University
Camden Campus Center
Fine Arts Building—Multipurpose Room
326 Penn Street
Camden, NJ 08102

Thursday, December 17, 1992—LAB Region III—(201) 761-6920
Essex and Union Counties

Essex County College
Lecture Hall, Room 2131
303 University Avenue
Newark, NJ 07102

Remarks should be limited to five minutes. Please provide 20 copies of your testimony. Individuals must sign up before the hearing at which they wish to present their testimony by contacting Margaret Payne as follows:

Margaret Payne
Office of Boards and Council
New Jersey Department of Health
CN 360
Trenton, N.J. 08625
(609) 292-9383

If you cannot attend one of the hearings, written testimony may be submitted, and should be sent to Ms. Payne by December 18, 1992.

(a)

OFFICE OF HEALTH POLICY AND RESEARCH

Notice of Draft State Health Plan Diabetes, Cancer, Surgery and End Stage Renal Disease, Mental Health, Environmental and Occupational Health, Injuries and Emergency Care, Communicable Disease Control, Preventive and Primary Care, and AIDS

Take notice that the Department of Health is hereby releasing seven preliminary draft chapters of the State Health Plan, prepared pursuant to P.L. 1991, c.187. The State Health Planning Board welcomes public input regarding the content of these chapters. The seven chapters are diabetes, cancer, surgery and end stage renal disease, mental health, occupational and environmental health, injuries and emergency care, and communicable disease control.

The purpose of this notice is to assure widespread dissemination of the draft chapters. Due to budget cuts, the Department of Health is unable to incur the expense of mailing the draft chapters to interested individuals. Consequently, the Department intends to use this notice as a means of making the documents available to the public. No formal action on the chapters is proposed; however, when finalized as elements of the State Health Plan, they will be used as advisory documents by the Department as it formulates planning rules.

Additional draft chapters included in this phase of the State Health Plan are Preventive and Primary Care and AIDS. These chapters are being prepared for publication in the November 16, 1992 issue of the New Jersey Register. While they will not be published until November 16, they will be available to the public after November 5, 1992. Please contact your local advisory board at the phone number given below for copies:

LAB I (201) 361-3390	LAB IV (908) 932-5143
—Morris	—Hunterdon
—Passaic	—Mercer
—Sussex	—Middlesex
—Warren	—Somerset
LAB II (201) 460-5385	LAB V (609) 338-1276
—Bergen	—Burlington
—Hudson	—Camden
	—Cumberland
	—Gloucester
	—Salem
LAB III (201) 761-6920	LAB VI (908) 262-9047
—Essex	—Atlantic
—Union	—Cape May
	—Monmouth
	—Ocean

Beginning in November 1992, the State Health Planning Board will hold a series of six hearings (one in each Local Advisory Board region) to obtain public testimony which it will consider in revising and preparing the final versions of each chapter. Interested parties are invited to testify on any or all of the chapters at the hearings, which are scheduled for the following dates:

November 17, 1992	LAB VI
November 19, 1992	LAB I
December 1, 1992	LAB IV
December 3, 1992	LAB II
December 15, 1992	LAB V
December 17, 1992	LAB III

For information about the times and locations of the public hearings, please contact Margaret Payne at the address below, or refer to the hearing notice published elsewhere in this issue of the New Jersey Register. Individuals should sign up before the hearing at which they wish to present their testimony by contacting Margaret Payne as follows:

Margaret Payne
Office of Boards and Council
New Jersey Department of Health
CN 360
Trenton, N.J. 08625
(609) 292-9383

Written testimony may also be submitted, and should be sent to Ms. Payne at the above address by December 18, 1992. More specific information about the hearings and presentation of testimony is published in this issue of the New Jersey Register as a separate notice.

When finalized as elements of the State Health Plan, all of the chapters will be used as advisory documents by the State Health Planning Board and the Commissioner of the Department of Health, as a guide to implementing public health policy, formulating planning rules, and in making decisions regarding Certificates of Need.

Each chapter has been prepared by Department of Health staff, in consultation with experts in the relevant fields, and with other departments and agencies of the New Jersey State government. The Department of Health and the State Health Planning Board have recognized that there may be short-comings or gaps in each chapter. Specific areas of concern must be identified and addressed before the chapters can be finalized. That is the purpose for which general public input and participation is solicited. As presented, the drafts represent a preliminary effort to establish the direction that health policy development should take in this State in the coming years.

The State Health Plan drafts for diabetes, cancer, surgery and end stage renal disease, mental health, environmental and occupational health, injuries and emergency care, and communicable disease control follow:

DRAFT STATE HEALTH PLAN
DIABETES MELLITUS CHAPTER
EXECUTIVE SUMMARY

By acting on what is already known about preventing disease and promoting health, New Jersey can save many lives lost prematurely and needlessly. Good health, however, also comes from reducing illness and disability and from improving the quality of life. The health of this state, furthermore, is measured by the extent to which these indicators are accomplished for all of its people.

As the population grows older, the problems posed by chronic and disabling conditions have a profound effect not only on mortality rates, but also on quality of life. Diabetes imposes a major burden of preventable illness, premature mortality, and excessive financial cost upon persons with diabetes and on the state as a whole. One of the most prevalent chronic diseases among New Jerseyans, diabetes imposes a disproportionate burden upon minorities and the elderly.

There are an estimated 225,000 New Jerseyans with diagnosed diabetes, and approximately the same number who have the disease but are unaware of it.

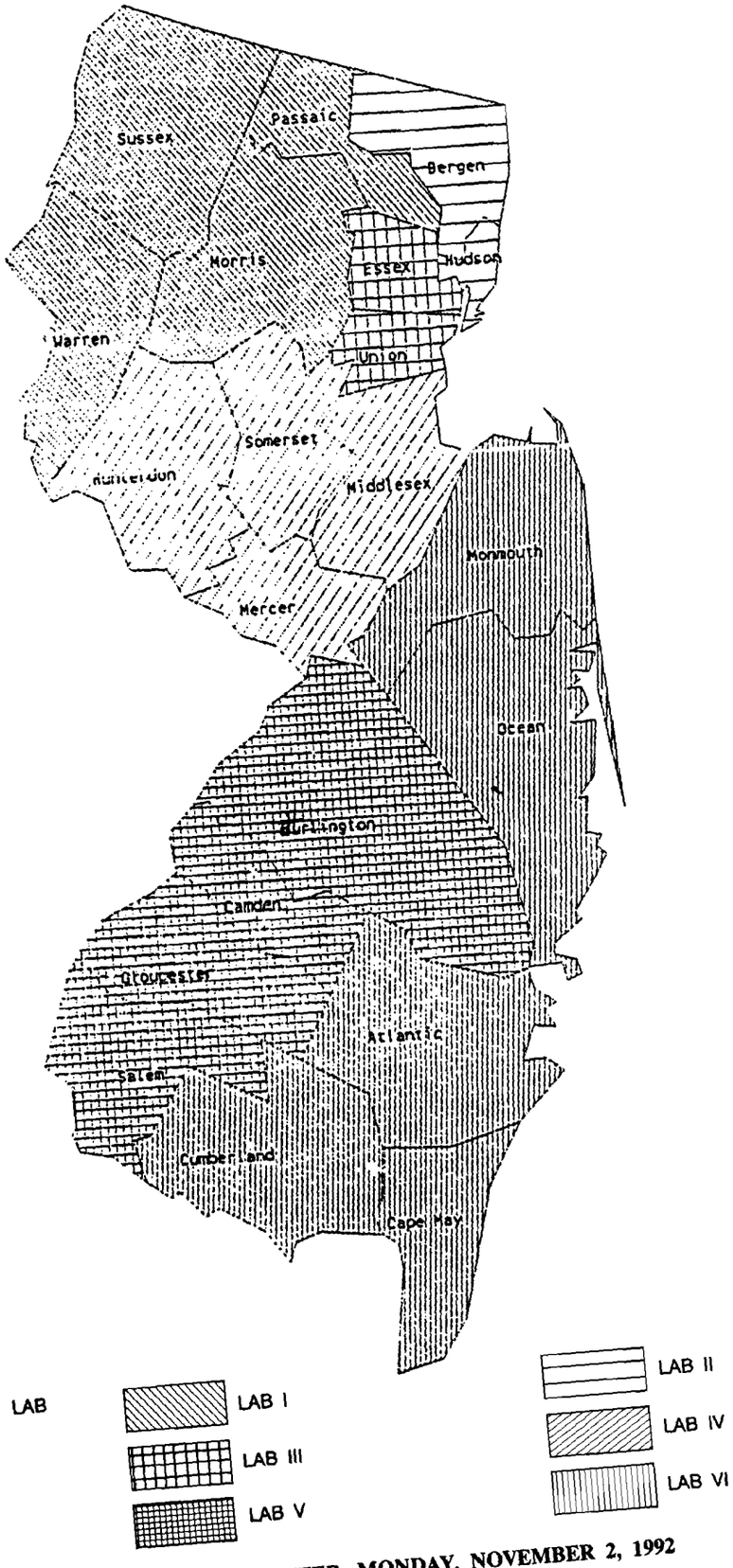
Diabetes is a disease in which the body does not produce insulin (Type I, insulin-dependent diabetes) or properly use insulin (Type II, non-insulin-dependent diabetes). Insulin is a hormone that is needed to convert glucose, starches, and other food into the energy needed for daily life. Diabetes often leads to serious complications that involve nearly every tissue in the body. When high levels of glucose build up in the blood, heart and circulatory disease, kidney disease, blindness, nerve damage, and lower extremity amputations from gangrene can occur. The pregnant woman with overt or gestational diabetes is at much higher risk of fetal death or offspring with congenital malformations than is the woman without the disease. Irrefutable evidence, based on carefully controlled studies, exists to demonstrate that available knowledge and technology are effective in preventing from 45-85 percent of these complications.

Diabetes also contributes significantly as a cause of death. With its complications, it ranks as the seventh leading cause of death by disease, and 13th as a cause of years of potential life lost.

In 1987, the direct (medical care) and indirect (lost productivity) cost of diabetes in New Jersey was about $689 million. Translated to 1991 dollars, the cost was $1.03 billion.

Diabetes research has resulted in exciting new progress in improved treatment and care for people with diabetes. Self-monitoring of blood glucose, intensive insulin therapy, pancreas and islet transplantation,

NEW JERSEY LAB REGIONS



laser therapy to prevent diabetes-caused blindness, and new insights into diabetic dietary needs are some of the recent advances that are resulting in longer, healthier lives for persons with diabetes.

The focus of this chapter is predicated on the national health objectives for the year 2000 which have been formulated for diabetes and its complications. The Department's strategy for prevention, which must be in line with the national strategy coordinated by the Centers for Disease Control, is to promote the translation of diabetes research findings into widespread clinical and public health practice in order to reduce the burden of diabetes and its related costs.

The major goal of this chapter is to reduce preventable morbidity and mortality related to diabetes mellitus. The key issues addressed are:

1. Improving the completeness and accuracy of data collection related to diabetes to establish baseline data where they do not exist and to track progress toward achieving the Year 2000 objectives.
2. Promoting access to quality diabetes management in the primary care setting.
3. Promoting access to quality diabetes management in the hospital inpatient setting.
4. Fostering improved access to ongoing quality patient education for individuals with diabetes in order to promote improved daily management and the prevention or delay of diabetes-related complications.
5. Promoting continuing diabetes education for all health care providers involved in managing patients with diabetes, either as a primary or secondary diagnosis.
6. Improving third party reimbursement for diabetes-related education and services related to the prevention of complications.

Translating what has been proven in diabetes research to the community health care setting is the most effective use of scarce health care dollars and the most reasonable way of improving life expectancy, productivity, and quality of life among our citizens with diabetes. Since racial and ethnic minorities endure a disproportionate share of diabetes and its complications, implementation of the activities outlined in this document will especially benefit this population.

Among the objectives in "Healthy People 2000: National Health Promotion and Disease Prevention Objectives" is the goal of reducing the incidence of diabetes. While it is theoretically attractive to aim at decreasing the incidence of new cases of diabetes, the means to achieve this goal are not at hand. There are no known primary preventive measures for Type I (insulin-dependent) diabetes, and there are as yet no irrefutable data to demonstrate that weight control, dietary modification, or exercise are effective in preventing or delaying Type II (non-insulin-dependent) diabetes. It is prudent, however, for the Department and the health care system to continue to stress these measures in the promotion of overall good health and well being.

NEW JERSEY STATE HEALTH PLAN
Diabetes Mellitus Chapter
DRAFT 4

I. Statement of Goals and Policies

Diabetes mellitus is a chronic, metabolic disease characterized by high blood glucose levels caused by a deficiency in insulin production, an impairment of insulin action, or both. Approximately 225,000 people in New Jersey have been diagnosed with diabetes, and an additional 202,500 may unknowingly have the disease. Each year, more than 10,000 new cases of diabetes are identified in this state.

Symptoms of diabetes can include excessive thirst and hunger, frequent urination, weight loss, blurred vision, and recurrent infections; however, the disease is often asymptomatic in its early stages. Diabetes can damage virtually every organ system in the body and result in premature heart disease, stroke, blindness, renal failure, amputation of extremities, loss of nerve sensation, early loss of teeth, and birth defects.

Diabetes also contributes significantly as a cause of death. From 1980-86, New Jersey ranked fourth in the nation for diabetes as any listed cause of death per 100,000 population. In 1986, diabetes mellitus was the seventh leading cause of death by disease in the United States, and the 13th leading cause of years of potential life lost before age 65 years. Because these statistics are based on underlying cause of death, however, they understate diabetes' overall impact on mortality. Previous studies have shown that diabetes is selected as the underlying cause on approximately one quarter of the death certificates on which it appears in any field, and diabetes is recorded on only half of the certificates for persons who have the disease at the time of death. Thus, diabetes contributes to a much larger number of deaths than it directly causes.

Of particular concern is the high prevalence of diabetes in New Jersey, and the lack of recognition of the severity of the problem.

Excessive morbidity and mortality occur in spite of the fact that many cases of diabetes and many of its complications are preventable. Though there are nationally accepted standards for prevention and care of diabetes and research attesting to their efficacy, availability and access to these services have been limited in New Jersey. One explanation for this situation may simply be inadequate information on the part of patients, providers, and payers. A central priority of the State Health Plan will be to expand services incorporating these standards. Until this occurs, New Jersey will remain below the threshold at which these interventions will make a difference, and the cost of treating diabetes-related conditions will far exceed the cost of preventing them in the first place. The impact of diabetes on morbidity and mortality has led to its inclusion in "Healthy People 2000: National Health Promotion and Disease Prevention Objectives." (HP2000) Diabetes objectives include the following:

1. Reduce diabetes-related deaths to no more than 34 per 100,000. (Age-adjusted baseline: 38 per 100,000 in 1986.) This objective also targets special populations (Blacks, American Indians/Alaska Natives) whose death rates are considerably higher. (HP2000-17.9)
2. Reduce the most severe complications of diabetes (that is, end-stage renal disease, blindness, lower extremity amputation, perinatal mortality, and major congenital malformations). Again, there are special population targets specified for end-stage renal disease and lower extremity amputations. (HP2000-17.10)
3. Reduce diabetes to an incidence of no more than 2.5 per 1,000 people and a prevalence of no more than 25 per 1,000 people. (Baselines: 2.9 per 1,000 in 1987; 28 per 1,000 in 1987). Special population targets are again specified. (HP2000-17.11)
4. Increase to at least 40 percent the proportion of people with chronic and disabling conditions who receive formal patient education, including information about community and self-help resources, as an integral part of the management of their condition. "People with Diabetes" is one of the type-specific targets listed in this objective. (HP2000-17.14)

This chapter is designed to describe the impact of diabetes on the individual and his or her support system, as well as on the health care system and its related costs, and to propose options for economically removing many of the barriers that threaten the successful attainment of the Year 2000 objectives as they relate to diabetes mellitus. Consideration will be given to policies in the following broad areas:

1. Promoting training of health care providers and the implementation of quality diabetes management in ambulatory care settings.
2. Fostering better access to ongoing patient education for individuals with diabetes in order to promote improved daily self-management and the prevention or delay of diabetes-related complications.
3. Increasing and broadening third party coverage of aspects of diabetes care which are essential to the prevention of some of the severe complications of diabetes, as well as improving access to health and life insurance for individuals with diabetes.
4. Supporting improved inpatient management of the patient with diabetes.
5. Improving the completeness and accuracy of data collection related to diabetes.
6. Increasing community awareness of diabetes and its risk factors, symptoms, and treatment options.

II. Current Status, Trends and Analysis

Diabetes is a group of diseases that may be classified as follows:

Type I, Insulin-dependent diabetes mellitus (IDDM). This type of diabetes was formerly referred to as Juvenile-onset Diabetes Mellitus. Type I diabetes can develop at any age, although most cases are generally diagnosed when the patient is less than 30 years old. Because individuals with IDDM are insulinopenic (that is, they lack insulin), insulin therapy is essential to prevent rapid and severe dehydration, catabolism, ketoacidosis, and death. Individuals with this type of diabetes are usually lean and often have experienced significant weight loss, excessive urination and excessive thirst before presentation.

Type I diabetes accounts for approximately 3 percent of all new cases of diabetes diagnosed each year in the United States. Although it is much less common in the general population than Type II diabetes (described below), Type I diabetes is by no means rare among children and young adults. IDDM is 3 to 4-fold more common than chronic childhood diseases such as cystic fibrosis, peptic ulcer, juvenile rheumatoid arthritis, or leukemia, and it is nearly 10-fold more common than nephrotic syndrome, muscular dystrophy, or lymphoma. It is estimated that there are approximately 22,500 individuals (all ages) with IDDM in New Jersey.

Prevalence and Incidence of Insulin-dependent Diabetes: Prevalence and incidence patterns of IDDM tend to be quite different from NIDDM, but the types are rarely differentiated in national data because of the small proportion of IDDM cases, as well as difficulties in classifying diabetes types in large population studies.

One problem in estimating the prevalence of IDDM is defining "insulin-dependent." Estimation is especially difficult in older people, in which the distinction between true IDDM and insulin-treated NIDDM may be unclear.

Most IDDM research tends to focus on people younger than 20. Hence, most of the data presented below are for diabetes diagnosed during childhood or adolescence. In this younger age group, nearly all cases of diabetes are IDDM, and diagnosis is relatively straightforward and accurate because people with IDDM typically present with the classic clinical symptoms. These symptoms are sufficiently severe to require treatment to prevent death, and few cases are likely to avoid diagnosis.

Prevalance: The prevalence of IDDM in U.S. children is about 1.6 cases per 1,000 people younger than 16. This estimate translates to about 120,000 children with IDDM in the United States and 2,700 in New Jersey.

IDDM prevalence appears to vary slightly according to race, with rates lower among blacks, Hispanics, and Asians compared with whites. This variation may result both from lower incidence as well as from higher mortality rates in racial and ethnic minorities. In other words, minorities appear less likely to get the disease, but those that have IDDM may have a greater risk of dying from it.

There is little difference in prevalence according to sex.

Incidence: Overall, the annual incidence of IDDM in the United States is approximately 12 to 14 new cases per 100,000 people younger than 20. In New Jersey, this means there are 255 to 298 new cases each year. The risk of developing IDDM before the age of 20 is 0.3 percent. After age 20, the yearly incidence decreases to 5 per 100,000. Two to 5 percent of siblings of individuals with Type I diabetes will develop the disorder, and among identical twins, one of whom has IDDM, concordance rates are only 50 percent.

Although Type I accounts for only 10 percent of all cases of diabetes, its immediate risks and stringent acute treatment requirements demand rapid recognition, diagnosis and management.

Type II, non-insulin-dependent diabetes (NIDDM): This type of diabetes was formerly referred to as Adult-onset Diabetes Mellitus. Individuals with Type II diabetes mellitus may have few or none of the classic symptoms of diabetes when first discovered. Although the symptomatology of Type II diabetes is less obvious than that of Type I, this classification of diabetes is also accompanied by vascular and neuropathic complications. In persons with NIDDM, insulin levels may be normal, depressed, or elevated. Typically, insulin resistance (decreased tissue sensitivity or responsiveness to external and internal insulin) is present.

Other characteristics of Type II diabetes are as follows:

1. The insulin secretory defects and insulin resistance of Type II diabetes are partially reversible.
2. Individuals with Type II diabetes are not prone to develop ketoacidosis except during periods or conditions of stress, such as those caused by infections, trauma, and surgery.
3. Although about 75 percent of persons are obese or have a history of obesity at the time of diagnosis, NIDDM can occur in nonobese individuals as well, especially in the elderly.

Although persons with Type II diabetes are not dependent on an outside source of insulin for survival, many of them require insulin for adequate blood glucose control. Insulin may also be needed temporarily for control of stress-induced high blood sugars (hyperglycemia).

This type of diabetes accounts for approximately 90 percent of the people with diabetes in the United States. The prevalence of diagnosed Type II diabetes mellitus in the United States is about 6 million people, or bout 2.5 percent of the population. In New Jersey, an estimated 202,500 citizens have diagnosed NIDDM. There probably is an equal number of undiagnosed cases. The prevalence of Type II diabetes is markedly increased among American Indians, African Americans, and Hispanic Americans. The prevalence rate increases with age and degree of obesity. There is evidence that the number of new cases diagnosed each year is increasing.

The etiology of NIDDM remains unknown. It appears to be a heterogeneous disorder, and genetic and environmental factors seem important. Twin studies indicate that there is 90 to 100 percent concordance for this disease in identical twins. There are families in which Type II diabetes is present in children, adolescents, and adults and in which an autosomal dominant inheritance has been established.

Intake of excessive calories leading to weight gain and obesity is probably an important factor in the pathogenesis of Type II diabetes. In fact, obesity was singled out as the most powerful risk factor by the Expert Committee on Diabetes of the World Health Organization in 1980, and even small weight losses are associated with return of blood glucose levels toward normal in many individuals with this type of diabetes.

Other Types: This category, which is numerically the smallest, includes diabetes mellitus associated with certain disease or conditions. To be placed in this category, the person's disease either has to have a known or very likely cause or be part of a specific condition or syndrome.

Impaired Glucose Tolerance: Impaired glucose tolerance (IGT) is the term used to describe the condition of individuals who have blood glucose levels that are higher than normal but lower than those considered diagnostic for diabetes mellitus. Persons in this category may be subgrouped by weight (obese or nonobese). Those with IGT secondary to or associated with certain conditions and syndromes constitute another subgroup. It has been shown that about 25 percent of persons with IGT eventually develop diabetes mellitus. Although individuals with IGT do not appear to have an increased risk for the microvascular (small blood vessel) complications of diabetes, they have been shown in some populations to have a greater than normal risk for atherosclerotic disease.

In the United States, 5 to 11 percent of people ages 20 to 74 have IGT (251,317-552,898 individuals in NJ). The prevalence varies according to methods used to diagnose IGT.

The overall prevalence rate is similar in black and white individuals, but the effect of increased age differs in the two populations. IGT prevalence increases according to age in whites and in black men, but not in black women.

Males and females have similar prevalence rates of IGT.

Gestational diabetes mellitus: The term gestational diabetes mellitus (GDM) is used to describe glucose intolerance that has its onset or is first detected during pregnancy. Women with known diabetes mellitus before conception are not part of this class. Gestational diabetes occurs in about 2 to 4 percent of pregnant women, usually during the second or third trimester, when levels of insulin-antagonist hormones increase and insulin resistance normally occurs. Gestational abnormal glucose tolerance and GDM appear to be quite rare in pregnant women younger than 20.

In most cases, glucose tolerance in women with gestational diabetes returns to normal after delivery. Within 5 to 10 years afer parturition, however, 30 to 40 percent of women with gestational diabetes develop overt diabetes mellitus (usually Type II). The risk is highest among women with GDM who give birth to babies weighing 9 pounds or more.

There are two statistical risk classes for diabetes mellitus:

Previous abnormality of glucose tolerance (PrevAGT): Individuals in this category have normal glucose tolerance and a history of transient diabetes mellitus or impaired glucose tolerance.

Potential abnormality of glucose tolerance (PotAGT): Individuals in this category have never experienced abnormal glucose tolerance but have a greater than normal risk of developing diabetes mellitus or impaired glucose tolerance.

Treatment Goals for Individuals with Diabetes Mellitus: Insulin-dependent diabetes (Type I) is a prime example of a disease in which the goals and attitudes of the physician and the health care team, coupled with those of the affected individual, are paramount in determining management and outcome. Three factors that strongly influence treatment are the health providers' treatment philosophy, including beliefs regarding blood glucose control and complications; the patient's and/or parent's self-care attitudes, knowledge, and abilities; and, health team-patient congruence of goals.

For the physician and the health care team, the primary aim of treatment must be to restore individuals with Type I diabetes to a state

of day-to-day clinical well-being and keep them there, free from the threat of metabolic disequilibrium and its serious consequences. The secondary aim of treatment is to prevent, delay, or arrest the vascular complications facing most individuals who have had the disease for 10 to 20 years. The first aim is clearly achievable at reasonable degrees of cost, inconvenience, and risk; the second is much more problematic.

Management for the person with IDDM includes insulin administration, meal planning, regular activity, and self-monitoring of blood glucose. The glue that binds all of these together is intensive patient education.

In summary, the treatment goals for Type I diabetes are:

IMMEDIATE GOALS

1. Relief of symptoms
2. Normalization of blood glucose and lipids
3. Regain lost weight
4. Patient and family education: Survival skills

LONG-RANGE GOALS

1. Maintain near-normal blood glucose
2. Maintain normal glycosylated hemoglobin levels (a measure of blood glucose control over a 3-month period)
3. Strive for normal growth and emotional development for children
4. Prevent retinopathy (diabetic eye disease), neuropathy (nerve damage), and nephropathy (diabetic kidney disease)

A rational approach to the treatment of individuals with non-insulin-dependent diabetes (Type II) includes measures that will specifically reverse the underlying pathogenic metabolic disturbances that result in fasting high blood glucose levels—namely, insulin resistance and impaired insulin (that is, beta-cell) function. When a treatment plan designed to achieve normalization of blood glucose concentration is successfully employed (through meal planning, exercise, and, if necessary, the use of oral medications and/or insulin administration), it is hoped that the result of long-term blood glucose control will be prevention or amelioration of the major complications of diabetes mellitus, for example, accelerated atherosclerosis (the large blood vessel disease of diabetes), diabetes-specific small blood vessel complications (leading to diabetic eye disease and diabetic kidney disease), neuropathic (nerve) disease, and infection.

Modification of the diet is the most important element in the therapeutic plan for persons with NIDDM. In fact, for some people, prescription of an appropriate diet is the only therapeutic intervention needed to effectively control the metabolic abnormalities associated with this disease.

Type II diabetes management must further address blood lipid control, hypertension control, smoking cessation and the achievement of desirable body weight. As in the management of Type I diabetes, it is critical to educate the individual with Type II diabetes and his/her family in all of these treatment modalities.

In summary, the treatment goals for Type II diabetes are:

IMMEDIATE GOALS:

1. Diet and weight control
2. Regular exercise
3. Take diabetes medication as prescribed
4. Patient and family education

LONG-RANGE GOALS:

1. Maintain near normal blood glucose
2. Maintain normal glycosylated hemoglobin
3. Attain normal lipid levels
4. Prevent neuropathy
5. Prevent recurrent infections
6. Prevent large blood vessel complications
7. Prevent foot complications
8. Prevent small blood vessel complications

III. Associated Health Issues

Compared to persons without the disease, individuals with diabetes mellitus have highly accelerated risks for cardiovascular disease and stroke, blindness, end-stage renal disease, lower extremity amputation, and poor pregnancy outcomes. As well as contributing to much personal misery and premature death, complications of diabetes constitute an enormous and costly burden on the medical resources of society.

All complications affect both Type I and Type II individuals, although emphases, clinical manifestations, and consequences differ considerably. Generally, kidney and eye diseases predominate in persons diagnosed early in life (Type I disease) and atherosclerotic disease in those diagnosed later (Type II disease), while neuropathy occurs in both. Substantial advances have been made in the early detection and treatment of certain of their manifestations and adequately organized regular screening and prompt treatment can have major impact.

One explanation for the development of the long-term complications of diabetes is the failure of antidiabetic therapy to normalize metabolism **completely**. The degree of hyperglycemia (high blood glucose) and associated glycosuria (sugar in the urine) through the years is thought to be related to increased risk and severity of diabetic complications. Chronic hyperglycemia is clearly an important determinant, but not the only determinant, of risk. It may be the intrinsic severity of diabetes or inadequate treatment (or the effect of both) that determines both poor control and increased risk of complications. Some individuals with chronically poor metabolic control escape severe complications, while others in apparently satisfactory control develop complications early, reinforcing the conclusion that additional factors, environmental or inherited, must determine individual susceptibility to the long-term effects of diabetes.

At the present time a large, well-designed study called the Diabetes Control and Complications Trial (DCCT) is under way in the United States and Canada. This randomized, controlled clinical trial is designed to assess the relationship between glycemic control and the development, progression or amelioration of early vascular complications in persons with Type I (insulin-dependent) diabetes. This study should provide a more definitive answer concering the relationship between hyperglycemia and the development of chronic vascular complications in persons with diabetes mellitus.

Cardiovascular Disease and Diabetes

Concurrence: In the United States, cardiovascular disease (CVD) is the leading cause of morbidity and mortality among persons with diabetes. The annual risk for death from CVD is two to three times greater for persons with diabetes than for persons without the disease. For persons with diabetes, the risk for cerebrovascular disease and for coronary artery disease is two to three times greater, and the risk for peripheral vascular disease is five times greater. Among persons without diabetes, women have a lower rate of CVD than men do; among pesons with diabetes, women are not preferentially spared.

CVD caused by atherosclerosis accounts for approximately 25 percent of deaths among people with onset of diabetes before 20 years of age. Although cardiovascular deaths are less common in Type I (IDDM) than in older individuals with Type II (NIDDM), CVD becomes an increasingly important cause of death with increasing age among people with IDDM diagnosed in childhood. One-fourth to one-half of deaths in people 30 years or older with IDDM of long duration are caused by CVD.

In New Jersey, the estimated annual incidence of coronary heart disease among persons with diabetes is 2,763 cases, while an estimated 748 citizens with diabetes endure strokes.

Risk Factors: Hypertension, a strong risk factor for CVD, occurs two to three times more often in persons with diabetes than in persons without diabetes. The risk for CVD increases linearly with increases in blood pressure.

Abnormalities in the concentration of lipids and lipoproteins in plasma have been reported to occur in almost 30 percent of persons with diabetes. The risk for CVD is directly proportional to the concentration of low-density lipoprotein (LDL) cholesterol and inversely proportional to the concentration of high-density lipoprotein (HDL) cholesterol. Although hypertriglyceridemia is common among persons with non-insulin-dependent diabetes, whether the triglyceride level independently predicts CVD is uncertain.

The precise relationship between hyperglycemia and atherosclerosis is also unknown. Among persons with diabetes, as well as those with impaired glucose tolerance, several concomitant conditions may affect the etiology of atherosclerosis: obesity, inactivity, hyperinsulinemia, abnormalities in platelet function, and defects in blood coagulation and flow.

Among persons with diabetes, part of the increased likelihood of CVD appears to be a consequence of the increased frequency of risk factors, which must be managed. Yet diabetes itself is an independent risk factor for CVD.

Diabetic Eye Disease

Visual impairment is a frequent complication of diabetes, both NIDDM and IDDM. In the United States, diabetes is responsible for 8 percent of legal blindness, making it a leading cause of new cases of blindness in adults 25 to 74 years of age.

The major cause of blindness in people with diabetes is diabetic retinopathy, a term used for all the abnormalities of the small blood vessels of the retina caused by diabetes. Nonproliferative (background) retinopathy is the common, usually mild form. Nonproliferative retinopathy usually does not require treatment, although in some people it may be associated with macular edema, a condition that does require treatment. Early detection and timely treatment if retinopathy begins to progress to an advanced stage are crucial for preventing loss of vision. Only a small percentage of people who have NIDDM develop proliferative reinopathy, the more serious form that can cause blindness. Glaucoma, cataract, and corneal disease are also more prevalent in people with diabetes than in those without and contribute to the excess rate of blindness.

Occurrence: The prevalence of blindness due to diabetes differs by race and sex. Minority females are nearly four times as likely to be blind because of diabetes as white males and three times as likely as minority males. White females are about 25 percent more likely to suffer from diabetes-related blindness than white males. The frequency for minority males is similar to that for white females.

The incidence of diabetes-related blindness is about 12,000 new cases per year in the United States, while in New Jesey the estimated number of new cases annually is about 190. Incidence increases with age and duration of diabetes. One study estimated that 5.5 percent of people with diabetes diagnosed at 60 years of age became blind after 20 years of diabetes. Note that these data reflect frank blindness. Even more people with diabetes suffer severe visual impairment.

Risk Factors: The major risk factors for blindness or visual impairment in diabetes are age at onset, duration of diabetes, sex, and severity of retinopathy.

Age at onset: Diabetic retinopathy is a more important cause of visual impairment in younger-onset (usually Type I, IDDM, before 30 years of age) people than in older-onset people. By 5 years after diabetes diagnosis, retinopathy is present in 13 percent of younger-onset people with diabetes and 40 percent of older-onset insulin-taking people with diabetes. After 20 years duration, more than 95 percent of younger-onset cases have evidence of diabetic retinopathy.

Duration: In a study of IDDM patients, the median duration of diabetes at onset of retinopathy was 9.1 years, and nearly all showed retinal changes by 15 years duration. The severity of diabetic retinopathy increases with age and duration of diabetes.

Sex: In younger-onset cases, males have a higher likelihood of having retinopathy after 15 years duration of diabetes than do females. In older-onset diabetes, a similar increase in severity with diabetes duration is seen; however, the proportion of affected cases is smaller than in the younger-onset group. Little difference in the prevalence for males and females is evident.

Severity: Chronic hyperglycemia, measured by glycosylated hemoglobin (a test that measures average blood glucose levels for the previous three months), is a strong predictor of incidence of proliferative retinopathy and visual loss in people with diabetes. Among younger-onset people, the risk for developing proliferative retinopathy was increased 21 times in those in the highest quartile of glycosylated hemoglobin values compared with those in the lowest quartile. For older-onset people using insulin, the risk was 2.1 times higher.

Race: Data derived from the United States Model Reporting Area (MRA) on Blindness for 1969-70 (most recent available data) show that the age-standardized rate of self-reported blindness from diabetic retinopathy alone in minorities is twice that for whites (13.6/100,000 vs. 5.9/100,000 respectively). Minority females have almost three times the rates of blindness of that of either minority males (19.2/100,000 vs. 6.8/100,000 respectively) or white females (6.3/100,000). The explanation for this discrepancy requires further study.

Hypertension: In younger-onset individuals, high blood pressure is significantly associated with increased risk of development and progression of retinopathy. In older-onset people, however, no relationship was found. Neither cigarette smoking nor presence of proteinuria has been associated with an increased risk of development or progression of diabetic retinopathy.

People with diabetes who have visual loss or severe retinopathy are at higher risk of earlier death than those having less severe retinopathy.

Diabetic Kidney Disease

Kidney disease, or nephropathy, is a significant cause of illness and early death in people with diabetes. Diabetic nephropathy (defined as greater than 30 milligrams of protein per deciliter of urine) is a progressive disease that takes several years to develop. The course of diabetic nephropathy begins with proteinuria (protein in the urine) and can progress to end-stage renal disease (ESRD, defined as insufficient kidney function requiring dialysis or kidney transplantation) and death.

Occurrence: Diabetes is the most common cause of ESRD. Thirty-two percent of new cases of ESRD—more than 10,000 cases each year—are attributed to diabetes.

ESRD incidence among people with diabetes is increasing yearly. From 1986 to 1988, diabetes accounted for 2.2 percent of new ESRD cases, up from 25 percent of new cases in this country in 1982. A dramatic increase—close to 18 percent per year—is noted for Asian Americans and Native Americans with diabetes.

The incidence of reported ESRD is more than three times as high in blacks with diabetes as in whites with diabetes in the United States. Mexican Americans experience about six times the risk of ESRD of non-Hispanic whites, and Native Americans about eight times the risk. The risk of ESRD is 15 times as high in people with IDDM as in those with NIDDM.

Diabetic nephropathy occurs in 34 percent of younger-onset and 19 percent of older-onset insulin-taking people after 15 years of the disease. In people with IDDM who develop persistent proteinuria, ESRD or death usually follows after an average of about 6 years. At least 75 percent of people with IDDM and diabetic nephropathy develop ESRD by 10 years following onset of nephropathy. In contrast, proteinuria occurs earlier after diagnosis in people with NIDDM, but is less likely to progress to renal insufficiency. Nevertheless, persistent proteinuria is an important predictor of renal failure in NIDDM.

Renal failure accounts for about 10 to 40 percent of deaths in people with diabetes, with the higher risk in people diagnosed before the age of 20. ESRD is associated with poorer prognosis in people with IDDM than in people with either NIDDM or without diabetes. People with IDDM and ESRD are more likely to die of renal failure than ESRD patients without diabetes.

(**NOTE:** Refer to the Cardiovascular Disease Chapter of the State Health Plan for expanded New Jersey data on the occurrence of end-stage renal disease.)

Diabetes-related Lower Extremity Amputation

Occurrence: Annually, in the United States, the incidence of lower extremity amputations (LEA) is 45 per 10,000 people (ages 45-64) with diabetes, a rate 15 times as high as in people without diabetes. The incidence increases with age and tends to be higher in men than in women. Among black people with diabetes, the rate of amputation is 1.5 to 2.5 times that of whites with diabetes. Survival is poor in people with diabetes after amputation: three- and five-year survival rates are about 50 percent and 40 percent respectively.

In New Jersey, during the period 1985-87, there were a total of 5,911 hospitalizations for a diabetes-related LEA. These hospitalizations involved 5,342 persons. The overall rate for diabetes-related LEAs during that period was 80.06 per 10,000 diabetic population. The overall rate for whites was 78.19 and for minorities 86.76. In this descriptive study, "minority" included African Americans, American Indians, Asian and Pacific Islanders, and all other races. The highest rates for LEA were observed for minority men, while the lowest rates were observed for white women. For the three-year period, minority men had an LEA rate of 116.30, compared to 101.61 for white men, 68.38 for minority women, and 60.06 for white women. For the three-year period, the rate for minorities was 1.19 times that for whites. The rates for whites demonstrated a small increase over the three years, while those for minorities increased sharply. The 1987 rates for white females increased <1 percent when compared to 1985 rates; for white males, the increase was 3.1 percent, for minority females 15.5 percent, and for minority males 27.2 percent.

Rates increased by age for all groups, with the lowest rates in the 0-44 year age group and the highest rates in the 65+ years age group. For minority males 65+, the rate for the three-year period was 211.92/10,000.

The rates for men were consistently higher than those for women at all ages and for all races. Overall, for the three-year period, the rate for men was 1.7 times greater than that for women. However, it should be noted that the greatest proportionate increase over the three-year

period was for white women age 0-44 years. For this group, the 1987 rate was nearly twice that for 1985.

Perhaps the most striking trend noted is the increase in the rates for minority men, especially those over 65 years. Over the three-year period, the rates for minority males showed a consistent pattern of increase for all age groups. A similar pattern, albeit to a lesser extent, is found for minority women. The overall rates for minority men in 1987 increased 1.4 times over those for 1985 and, for minority women, the overall rate for 1987 was 1.2 times greater than that for 1985. The overall rates for whites showed little change over the three years.

In 1986, the overall number of LEAs increased by 7.8 percent over 1985; the increase for 1987 over 1986 was 1.3 percent. There was an increase of 145 LEAs in 1986 over 1985; of these, 42 (29.4 percent) were performed on whites and 101 (70.6 percent) on minorities. In 1987, there was an increase of 6 (0.4 percent) LEAs in whites over 1986, while for minorities, there was an increase of 16 (3.5 percent).

Of the 1,679 persons with diabetes hospitalized for diabetes-related LEA during 1985, 162 persons (9.7 percent) were again hospitalized for LEA in 1986, and 14 (8.6 percent) of these 162 were again hospitalized for LEAs during 1987.

The enormity of this problem among people with diabetes in New Jersey is evident when their LEA rate is compared to that of people who do not have diabetes. A total of 3,884 non-diabetes-related amputations were performed during 1985-87, and involved 3,512 persons. This number represents 39.6 percent of the total lower extremity amputations performed in New Jersey acute care hospitals during that period. Consequently, the State's estimated 225,000 citizens with diabetes accounted for 61.4 percent of all non-traumatic LEAs over the three-year period. The overall rate of amputation in the non-diabetes population was 1.6 per 10,000 non-diabetes population, compared to 80.06 per 10,000 for the diabetes population. As was noted for the diabetes-related LEAs, minority men had the highest overall rate, 2.11 per 10,000 non-diabetes population, for the three-year period, followed by white men (1.67), minority women (1.52), and white women (1.36).

A more dramatic increase in the LEA rate by age is noted for the non-diabetes population compared to the diabetes population. For example, the rate for non-diabetic minority men over 65 years of age is more than 51 times greater than that for those in the age group 0-44 years. For diabetes, the rate for minority males 65+ is only 3.9 times greater than that for those aged 0-44, indicating that a disproportionate share of LEAs are performed on younger males with diabetes.

While this descriptive study effectively pointed out serious racial discrepancies related to lower extremity amputations, there is a need for further intensive investigation regarding the causes on these discrepancies.

Risk Factors: Peripheral neuropathy, peripheral vascular disease, and infection all may contribute to amputation in people with diabetes. Peripheral neuropathy may contribute to loss of sensation in the feet and to the development of foot deformities. In insensitive feet, deformities can cause pressure points that are vulnerable to ulceration. Inadequate blood supply and infection can then lead to osteomyelitis and gangrene.

Many persons with diabetes who undergo a lower extremity amputation have an amputation of the contralateral leg within a few years. This occurs not only because of peripheral neuropathy and peripheral vascular disease, but also because the remaining foot bears increased pressure and frequently develops ulceration and infection.

The in-hospital mortality rate for diabetes patients who receive an LEA is higher than the rate for non-diabetes patients. In general, morbidity and mortality are high among diabetes patients who have amputations. All diabetes patients who undergo amputation require close supervision for other medical problems, particularly coronary artery disease.

Adverse Outcomes of Pregnancy Among Women with Diabetes

When a woman who is known to have diabetes becomes pregnant, she is said to have pregestational diabetes. When a woman develops diabetes during pregnancy or is first recognized as having this condition during pregnancy, she is said to have gestational diabetes.

Occurrence: Overt diabetes complicates between 2 and 10 per thousand pregnancies. Maternal complications include ketoacidosis, exacerbated microvascular, renal, ocular and neural complications, infections, toxemia, and hydramnios. Infants are at high risk for mortality, prematurity, congenital defects, macrosomia, neonatal hypoglycemia, respiratory distress syndrome, and hyperbilirubinemia, particularly when maternal glucose levels are not controlled tightly during pregnancy.

Most pregnant women with established diabetes suffer from Type I (IDDM) diabetes. Since the usual onset of Type II (NIDDM) diabetes is later in life (>40 years), the number of women with Type II diabetes who become pregnant is small.

Gestational diabetes occurs in approximately 2 to 4 percent of pregnancies in the United States, and usually develops in the third trimester. Because of improper screening, it is estimated that 50 percent of all cases go undetected. It has recently been recognized that certain minority groups exhibit very high rates of GDM (Navajos—6.1%, Mexicans—4.3%, Hispanic Americans—10%, Vietnamese—14.3%, Cambodians—16.1%). The effects of GDM on the offspring include increased risk of mortality, macrosomia, trauma related to difficult labor and delivery, hypoglycemia, hypocalcemia, and hyperbilirubinemia. Women with GDM have an increased risk of developing GDM in later pregnancies. In addition, women with GDM are at a greatly increased risk of developing Type II diabetes later in life.

The prognosis for infants of mothers with diabetes has improved dramatically because of improved medical care. However, congenital abnormalities, in particular, are considerably more frequent in diabetic than in non-diabetic pregnancies.

Perinatal mortality (occurring within 28 days of live birth) has been reported to be two to six times more common in infants of women with diabetes compared with the general population, with the much greater risk in women with IDDM.

The incidence of major congenital malformations in infants of mothers with diabetes (that is, central nervous system, cardiac, renal, skeletal, and other malformations) is about 4 to 10 percent—two to five times greater than in non-diabetic women. In one study, fetal congenital abnormalities occurred in 1.2 percent of women managed intensively before pregnancy versus 10.9 percent of women receiving intensive management sometime after they became pregnant. Major malformations may occur in 20-25 percent of infants born to women with very poor glycemic control during organogenesis, as evidenced by markedly elevated glycosylated hemoglobin levels during the first trimester.

Macrosomia, or birth weight over 4,000 grams, occurs two to three times more often in diabetic pregnancies as in the general population.

Women with diabetes are up to five times as likely to develop toxemia and hydramnios (excessive amounts of amniotic fluid) as women without diabetes.

Because of the increased risk of fetal macrosomia, a caesarean section is more likely in diabetic pregnancies.

Pregnancy does not appear to increase risk of retinopathy, nephropathy, or neuropathy in women with IDDM. Pregnancy may be associated with exacerbation of diabetic eye disease, especially in women with unrecognized or untreated proliferative diabetic retinopathy. Diabetic women with nephropathy and hypertension are at greater risk for preeclampsia and fetal growth retardation than are women without nephropathy.

Maternal mortality is extremely low in the United States. There is no indication of excess mortality in pregnant women with diabetes. However, death has been reported among pregnant women with diabetes and coronary artery disease.

Risk Factors: The factor most important to the outcome of pregnancy is how well the mother's glucose level is controlled before and during pregnancy. When women with diabetes receive optimal care, the perinatal mortality rate for their offspring approaches the corresponding rate for the general population. However, when pregnant women with diabetes do not receive expert treatment, the perinatal mortality rate for their offspring more than doubles to two to six times the rate for offspring of nondiabetic women.

Diabetes-related Mortality

Diabetes mellitus is the seventh leading cause of death by disease in the United States and sixth in New Jersey, and the 13th leading cause of years of potential life lost before age 65 years. Each year in this country it is estimated that about 150,000 people die from diabetes and its complications. In 1986, more than 37,000 deaths were attributed directly to diabetes.

Diabetes appears to be associated with reduced survival and excess mortality. The overall U.S. age-adjusted mortality rate due to diabetes, 15.4 per 100,000 living population, represents about 1.8 percent of the total U.S. mortality. One investigation of mortality patterns in people with IDDM found that, in white people ages 25 to 40, the risk of dying was about 20 times that of the general U.S. population. The mortality rate varies according to age, sex, and duration of diabetes. The diabetes mortality rate for Hispanics is twice the rate of non-Hispanic whites.

These estimates are based on diabetes being listed on death certificates as the underlying cause of death. When certificates reporting diabetes as a contributing cause are included, the actual number of deaths caused by or associated with diabetes is four times higher. Thus, the overall diabetes mortality rate in 1986 was 62 per 100,000 when all listed causes of death are considered. Moreover, studies show that diabetes is not even listed on more than half of the death certificates of people with diabetes; hence, the true impact of diabetes on mortality is substantially higher than reported.

The following analysis of diabetes-related death rates in New Jersey, apply to black and white racial groups, which comprise 96 percent of the population.

In 1990, there were a total of 2,083 deaths from diabetes in New Jersey. The overall death rate for diabetes as the underlying cause was 26.1 per 100,000 population, as shown in Table A. The rate was 21.3 percent higher for females than for males. Not surprisingly, the highest death rate was in the age group 65+. This rate was 5.6 times that of the 45-64 age group.

The total death rates noted above represent both the black and white races, and include Hispanics in those racial categories. In most surveys, people of Hispanic ethnicity overwhelmingly place themselves in the white racial group. The total death rate for blacks was 32.0/100,000, compared to 25.1/100,000 for whites, or a difference of 27.5 percent.

Among blacks, the rate per 100,000 was higher in every age and sex category than for the population as a whole. In the two lower age groups, for both males and females, the rate was double or more than that for the total population. Although the death rate for black females was lower than among black males in the younger age groups, it exceeded the male rate by 33.5 percent in the 65+ age group. As a result of this significant differential, the total rate for black females was 35.7 percent higher than for black males.

Among whites, the diabetes death rate per 100,000 was lower in every age and sex category than for the population as a whole. In both the youngest and oldest age groups, male and female death rates were similar; but the male rate exceeded the female rate in the 45-64 group by 46.8 percent.

In comparing black and white diabetes-related death rates per 100,000 population, the black rate was more than double the white in every age group for both males and females, with one exception. In the oldest age group, the rate for black males exceeded the rate for white males by only 59.3 percent.

For purposes of this analysis, individuals of Hispanic ethnicity were studied separately, though they were also included in the black and white racial designations described above. Although the majority of Hispanics fall into the white racial group, when compared to whites, the death rate for Hispanics was higher in all except the youngest age group. Again excepting the youngest age group, the death rate for Hispanics, both male and female, exceeded that for the total population. Compared to blacks, the death rates were lower for Hispanics in every age and sex category, except for males ages 65+, where the Hispanic rate was slightly higher.

Tables B and C represent the data used to calculate the rates displayed in Table A.

IV. Existing Health Delivery System

Because of the high morbidity and mortality related to diabetes worldwide, as well as its increasing financial burden on society, as well as on individuals, it is becoming increasingly important to reduce the incidence and prevalence of the complications of diabetes.

It is likely that the complications of diabetes can be greatly reduced in severity, if not prevented, if people with diabetes take measures to:

1. Control obesity;
2. Reduce cholesterol level;
3. Exercise;
4. Stop smoking; and
5. Improve control of blood glucose levels.

Early identification and treatment of diabetes complications are also essential for limiting their severity and improving quality of life. A recent evaluation of national data concluded that at least half of most major complications could be prevented by appropriate education and intervention programs.

The prevention of NIDDM means the reduction of lifestyle risk factors, whether in high-risk people (those with positive family history of diabetes) or in entire populations. The most important factors to change are overeating and inactivity. Altering these factors, with a subsequent reduction in obesity, can theoretically reduce NIDDM rates in high-risk populations. Unfortunately, there are as yet no irrefutable data to demonstrate that weight control, dietary modification, or exercise are effective in preventing or delaying Type II diabetes. However, it is important for the health care system to continue to stress such lifestyle changes for overall good health and well being.

Although both genetic and environmental factors are implicated in the development of IDDM (Type I), specific modifiable environmental risk factors have not yet been identified. Not enough is known about the importance of specific factors to recommend their alteration, even in people with high genetic risk.

The ability to detect highly susceptible people poses two other potential directions for prevention of IDDM:

1. Immunosuppression in "prediabetic" people to prevent the progress of pancreatic destruction, the immunologic process that leads to insulin deficiency and overt diabetes; and
2. Gene therapy or genetic manipulation to alter susceptibility.

Immune suppression to prevent diabetes is under extensive investigation. To date, insufficient evidence has been collected to recommend this means of prevention outside the context of a clinical investigation. Alteration of susceptibility through gene therapy is untested, and the technology is not yet available.

Diabetes-related patient education

In preventing any of the acute or chronic complications of diabetes, patient education is critically important. The person with diabetes mellitus (and/or his family) plays the key role in managing this disease. Proper therapy consists of consistent and regular attention to some of the most basic aspects of living, such as food and physical activity, as well as to other important aspects of diabetes management.

A number of studies have been conducted, both in the United States and in other countries. to determine the impact of intensive diabetes patient education or reducing diabetes-related hospitalizations. It has consistently been shown that there is an inverse relationship between diabetes education and diabetes-related hospitalizations.

This finding was borne out during a study in New Jersey spanning the years 1986-89. (See Appendix A.) Six agencies received funding from the NJ Diabetes Control Program to conduct intensive diabetes patient education in seven counties considered at high risk for diabetes-related hospitalizations, that is, their diabetes hospitalization rate exceeded the state rate in four or more of eight race-sex categories, and there were at least 2,000 diabetes-related hospitalizations in a one-year period. While almost 2,000 individuals with diabetes and/or family members participated in at least parts of the courses, 772 actually completed the entire education program. These individuals were then followed up for two years to compare their post-education experience with hospitalization and emergency room visits to their pre-education experience. In every race-sex group, except Hispanic females, there were **considerably** more diabetes-related hospitalizations and ER visits in the two years prior to education than there were in the two years following completion of a diabetes education program.

Nationally and in New Jersey, a system now exists to formally recognize high-quality diabetes patient education programs. In 1984, the National Diabetes Advisory Board (NDAB) developed the National Standards for Diabetes Education Programs. The NDAB determined that 10 standards (and 59 criteria used to measure them) would be used to evaluate the quality of a diabetes education program and the facility in which it is provided. Programs meeting the National Standards would be granted "recognition"—a status that would separate quality programs from those of less merit. The American Diabetes Association (ADA) was chosen to administer a national recognition program and to grant recognition to successful programs.

In January 1989, New Jersey began its own efforts to achieve third-party reimbursement for outpatient diabetes education. Its reimbursement proposal stipulates that only programs recognized as meeting the National Standards for Diabetes Education Programs would be eligible for insurance coverage. Since the cost of applying for national recognition through the ADA ($600) was prohibitive for most programs in the state, a New Jersey Recognition Program (NJRP) was initiated.

The NJRP is based on the National Standards for Diabetes Education Programs and uses an application package that is modified from the ADA recognition application. The NJRP is free to applicant programs, self-limited, and designed to facilitate the recognition process for programs. Applications were accepted between July 1, 1990 and September

30, 1991. NJRP recognition is granted for two years and is not renewable. To continue recognition beyond this two-year period, the program must apply to ADA for national recognition.

There are currently 19 diabetes education programs in New Jersey which have been recognized by the American Diabetes Association, the New Jersey Recognition Program, or both. One applicant to the NJRP is currently under review. By Local Advisory Board (LAB) region, they are:

LAB I: Dover General Hospital Diabetes Program, Dover

LAB II: Englewood Hospital, Englewood
Bayonne Hospital Diabetes Teaching Program, Bayonne
Hackensack Medical Center Outpatient Diabetes Education Program, Hackensack
Jersey City Medical Center/Family Health Center, Jersey City

LAB III: Diabetes Center of New Jersey, Plainfield
Union Hospital Outpatient Diabetes Education Program, Union
Overlook Hospital—Diabetes Education Program, Summit
East Orange Veterans Administration Medical Center, E. Orange

LAB IV: Somerset Medical Center—Diabetes Treatment Center of America, Somerville
Princeton Diabetes Treatment and Education Center, Princeton
Diabetes Care Unit at St. Peter's Medical Center, New Brunswick
Patient Education Department of the Hunterdon Medical Center, Flemington

LAB V: Memorial Hospital of Burlington County, Mount Holly
Zurbrugg Memorial Hospital, Riverside
South Jersey Hospital System, Bridgeton
Rancocas Hospital—Taking Control

LAB VI: Monmouth Medical Center—Diabetes Treatment Center of America, Long Branch
Community Medical Center, Toms River
Shore Memorial Hospital Outpatient Diabetes Education Program, Somers Point

Each of these programs offers a comprehensive and individualized approach to patient education related to diabetes, its management, and the prevention and/or amelioration of its complications.

The American Association of Diabetes Educators has developed a certification program for experienced diabetes educators throughout the nation. Minimum qualifications to sit for the examination are active involvement in direct patient education and experience in diabetes education for a minimum of two years or 2,000 hours. Successful examinees (including nurses, dietitians, physicians, pharmacists, podiatrists, social workers, etc.) are certified for five years and must retake the examination to maintain certification.

At the present time, there are approximately 111 Certified Diabetes Educators (CDEs) in New Jersey, and their locations span all six LABs. The certification examination is given twice annually, so the number will continue to increase provided that currently-certified educators maintain their certification. The majority of the diabetes educators in the state belong to the Garden State Association of Diabetes Educators (GSADE), a chapter of the American Association of Diabetes Educators. GSADE offers quarterly continuing education programs for its members at which continuing education units are awarded. In this way, the skills of New Jersey's educators are consistently enhanced.

The American Diabetes Association engages in a host of activities affecting education of individuals with diabetes, including patient education programs, corporate wellness programs, ongoing support groups, and the distribution of numerous educational pamphlets and brochures.

Additionally, ADA engages in regular health care provider education. The New Jersey affiliate of the ADA, located in Bridgewater (LAB IV), has four chapters in the state:

1. Northeast Regional Chapter (LABs I and II)
2. North Central Regional Chapter (LABs II and III)
3. Central Regional Chapter (LAB IV)
4. Southern Regional Chapter (LABs V and VI)

The Juvenile Diabetes Foundation (JDF) is actively involved in fund-raising for research to find a cure for diabetes. They also present patient education programs specifically for children with diabetes and their families. The Regional Office of JDF is located in Clifton (LAB I). There are six chapters in the state:

1. North Jersey Chapter (LABs I, II, and II)
2. Rockland/Bergen/Passaic Chapter (LABs I, II, and III)
3. Tri-County Chapter (LAB IV)
4. Central Jersey Chapter (LABs IV and VI)
5. South Jersey Chapter (LAB V)
6. Cape Atlantic Chapter (LAB VI)

Local health departments throughout New Jersey are mandated by the Minimum Standards of Performance for Local Boards of Health to provide diabetes patient education, unless they can document that such education is already being provided by another agency(ies) in their jurisdiction. Although there is an audit system to determine if this mandate is met, there is no system in place to assess the quality of the education being provided directly by the local health departments unless they apply for recognition.

Diabetes-related provider education

Continuing education on the daily management of diabetes, as well as on the prevention, early detection and prompt management of the long-term complications of diabetes, must be targeted to primary care physicians and to nurses, dietitians, pharmacists, podiatrists, social workers and other categories of providers, since the best management of diabetes is **team** management. Standards for **medical** care of individuals with diabetes in the primary care setting have been developed by the American Diabetes Association. The ADA has also developed comprehensive physician guides to the diagnosis and treatment of both Type I and Type II diabetes mellitus. The Centers for Disease Control, Division of Diabetes Translation, has recently published a prevention guide which addresses nine of the complications of diabetes.

Under a grant from the New Jersey State Department of Health Diabetes Control Program, The Academy of Medicine of New Jersey, the continuing education arm of the Medical Society of New Jersey, is currently sponsoring a series of five traveling, or "roving", symposiums which address five of the major complications of diabetes. They include diabetic eye disease, diabetes-related lower extremity amputation, diabetic kidney disease, diabetes-related cardiovascular disease, and adverse outcomes of pregnancy among women with overt or gestational diabetes. For each series, an expert physician consultant developed the curriculum, wrote a monograph and developed slides, chose additional faculty, and trained the faculty to present the program. The symposiums are marketed by the Academy to all hospitals in the state, in all LABs. Continuing medical education units are awarded to each physician attendee, and faculty and program evaluation sheets are completed by each participant. It is anticipated that a minimum of 50 symposiums related to these complications will be presented each year over the next two years.

In 1990, the Academy of Medicine of New Jersey developed a training manual, "Lower Extremity Amputation Prevention (LEAP) in Persons with Diabetes Mellitus," for use by hospital outpatient departments, health maintenance organizations, ambulatory care centers and nursing homes. The manuals are available through the NJ Diabetes Control Program.

"A Guide for the Management of Pregnancy and Diabetes, 1991" has been developed under a grant from the NJ Diabetes Control Program by the New Jersey Diabetes and Pregnancy Program, UMDNJ—School of Osteopathic Medicine. This guide is intended for use by physicians, diabetes educators and counselors, dietitians and nutritionists, and other health care providers.

Use of health care

Diabetes is a condition requiring frequent contact with the medical care system.

Hospitalization: People with diabetes are more likely to be hospitalized and to remain in the hospital for longer periods than are people without diabetes. These hospitalizations may be for treatment of the acute or chronic complications of diabetes or for conditions unrelated to diabetes.

Nationally, about 25 percent of those with diabetes 20 to 74 years old (compared with 15 percent of those without diabetes) had one or more hospitalizations in the previous year. Approximately 7.2 percent of all hospitalizations involve diabetes as the primary or non-primary diagnosis. The length of stay for people hospitalized with a primary diagnosis of diabetes is about 1.7 days greater than for people without diabetes.

In 1987, in the United States, there were 367,262 hospitalizations for treatment of diabetes or hypoglycemia (low blood glucose), with a mean

length of stay of 6.1 days. Two-thirds of the hospitalizations were for people younger than 65 with diabetes, with the highest prevalence (284 per 1,000) in people younger than 25. Although a smaller **proportion** of older people are hospitalized for diabetes, the length of stay increases with increasing age.

The national rate of hospitalizations for chronic complications of diabetes is 162 per 1,000 patients with diabetes compared with 72.5 per 1,000 for the same conditions in patients without diabetes. The majority (77 percent) of hospitalizations for chronic complications are for treatment of cardiovascular complications. Renal, neurologic, ophthalmic, and other complications account for 9, 6, 4, and 3 percent, respectively, of all hospitalizations in this category.

The rate of hospitalizations for conditions unrelated to diabetes is 177 per 1,000 people with diabetes, compared with 161 per 1,000 age-matched people without diabetes. The excess hospitalizations in this category are confined to people under age 65.

The Department has collected data on preventable diabetes discharges per 100,000 population for patients treated in New Jersey hospitals between 1986 and 1988. The ICD-9 codes included were:

250.1, Diabetes with ketoacidosis
250.3, Diabetes with other coma (diabetic coma with ketoacidosis)
250.4, Diabetes with renal manifestations
250.5, Diabetes with ophthalmic manifestations
250.7, Diabetes with peripheral circulatory disorders
84.1, Lower extremity amputation (with diabetes code to indicate the amputation was diabetes-related)

Aggregating these data by city and county suggests areas in greatest need of additional diabetes services.

At the county level, four counties had rates of preventable diabetes discharges above the state rate of 373.8 discharges per 100,000 population. They were Essex, Mercer, Atlantic, and Cumberland (see Table D). The highest, Essex, was 29 percent above the state rate. While it cannot be stated with certainty what specific factors contributed to the higher-than-average rates, it is true that too many citizens in these counties were hospitalized for conditions that, with appropriate early treatment and education, may not have resulted in hospitalization. Preventable hospitalizations extract high costs. The patient experiences physical and emotional trauma and loss of productivity while the payer expends money that could have been saved or used for other purposes.

Seventeen counties have rates of preventable discharges that are below the state average. Somehow, they are succeeding in keeping more people out of the hospital, and saving the associated costs. It is interesting to note that the county with the lowest number of preventable discharges, Hunterdon, has a rate (123.7/100,000 population) that is one-third that of the state rate.

In analyzing patterns in cities of at least 30,000 population, the highest number of preventable diabetes discharges in the years 1986 through 1988 were found in some of the state's poorest and largest cities. The five highest rates range from 1193.4/100,000 in Trenton to 712.3/100,000 in Newark (see Table E). In contrast, the five cities with the lowest rates of preventable hospital discharges for diabetes-related conditions were some of the state's smaller and wealthier communities. Rates in these places ranged from a low of 58.4 discharges/100,000 population in Washington Township to 128.8/100,000 in Gloucester Township. However, the large difference in these two sets of rates may be less than these numbers indicate because each of the five lowest rates is in a community located in the southwestern part of the state, in close proximity to Philadelphia. Thus, their rates are almost certainly understated because of citizens receiving their hospital care in out-of-state hospitals.

Another type of analysis corrects for this movement of patients between states, the Codman Small Area Analysis. Data in this analysis include patients from New Jersey who received hospital care out-of-state, and exclude out-of-state patients who received hospital care in New Jersey.

In 1989, there were a total of 8,475 admissions with a principal diagnosis of diabetes mellitus in this state, a rate of 1.09 admissions per 1,000 residents. For these patients, the average charge was $4,590 and the average length of stay was 8.87 days. These data are displayed in Table F.

Table G displays the payment source for these statewide hospitalizations. Of note, the payment source for almost 18 percent of the admissions were self-pay and "other."

County-level data, based on principal diagnosis, reveal that admission rates per 1,000 residents for diabetes-related DRGs are highest in Essex and Cumberland counties (see Table F). Interestingly, Essex County also had the highest number of preventable diabetes discharges, and Cumberland was fourth on that list. Implementation of programs to improve health and health care should clearly include these two areas of the state. This database also includes charge and utilization information derived from hospital records. Charges for all of the DRGs with diabetes as the principal diagnosis were highest in Essex County, $4,940 per case which is almost double the state average. Essex also had the longest length of stay, 9.81 days per patient, compared to the state average of 8.87. Both the high charge and long length of stay suggest that diabetes patients in Essex County may be sicker than the average diabetes patient in the state, and thus more intensive intervention is needed.

As shown in Table G, private pay and Medicare paid for 71.7 percent of the cost of all the admissions with a principal diagnosis of diabetes in 1989.

In New Jersey, several acute-care hospitals have created diabetes "cluster units." A cluster unit is one in which there is a certain number of beds, located in one area of the hospital, which are specifically designated for patients with diabetes and which are staffed by professionals specially trained in the management of diabetes. The manager of the unit is often a certified diabetes educator. Three of these hospitals (Newark Beth Israel Medical Center-LAB III, Somerset Medical Center-LAB IV, and Monmouth Medical Center-LAB VI) are affiliated with the Diabetes Treatment Centers of America in Memphis, TN, and one (St. Barnabas Medical Center-LAB III) is an affiliate of the Joslin Diabetes Center in Boston, MA. Other hospitals with established diabetes cluster units, which are known to the State Department of Health, include Hackensack Medical Center (LAB II), St. Michael's Medical Center (LAB III), Mercer Medical Center, Princeton Medical Center, Hamilton Hospital (unit now in development) and St. Peters Medical Center (LAB IV), and Shore Memorial Hospital (LAB VI). There may be similar units in other hospitals of which the Department is unaware.

Nursing Homes: People with diabetes are also more likely to be institutionalized in nursing homes than are people without diabetes. The national prevalence of nursing home stays is 30.2 per 1,000 people with diabetes, but 24.1 per 1,000 people without diabetes. People with diabetes under age 45 have an eightfold higher risk of institutionalization in a nursing home than people of the same age without diabetes.

Outpatient Medical Care: Use of outpatient medical care is also higher for people with diabetes than for those without diabetes. The most frequent location was physicians' offices, but hospital outpatient clinics or emergency rooms and telephone contacts were also significant sources of medical care. For only one medical care provider, dentists, was the proportion of persons using the service lower for people with diabetes than for the general population.

There are no New Jersey data available on office visits for diabetes. National data show that during the 12-month period from March 1989 to March 1990, there were an estimated 13.2 million visits made to nonfederally employed, office-based physicians in the United States, at which the principal, or first-listed diagnosis was diabetes. An additional 8.7 million visits included diabetes mellitus as the second or third-listed diagnosis.

More than half (57.5 percent) of the estimated 13.2 million office visits with a principal diagnosis of diabetes were made by females (see Figure 1), and the overwhelming majority (86.3 percent) were made by persons aged 45 years and over. More than three quarters (79.3 percent) of the visits were made by white persons.

The overall visit rate for visits with a principal diagnosis of diabetes was 5.4 visits per 100 persons per year; visit rates were not found to differ significantly for males and females or for white persons and black persons.

Visit rates rose with age, however, with significant increases noted for those in the 45-64 years category and the aggregated 65 years and over category. Increasing visit rates by age were observed for both females and males.

Age-related increases in visits for diabetes are further evidenced in the distribution of physician diagnoses among older age groups. For all office visits made by persons aged 45-64 years and 65-74 years, diabetes was the second most frequently reported principal diagnosis, after essential hypertension, accounting for 3.1 percent of the diagnoses among those 45-64 years of age and 4.8 percent of the diagnoses among those 65-74 years of age. For visits made by persons aged 75 years and over, diabetes was the third most frequently reported principal diagnosis after essential hypertension and cataract and accounted for 4.3 percent of the diagnoses in the age group.

TABLE A

DIABETES

1990 DIABETES DEATH RATES BY RACE, HISPANIC ETHNICITY, AGE AND SEX PER 100,000 POPULATION
(New Jersey)

	White & Black Population*			Hispanic**			Black*			White*		
Age	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-44	1.6	2.0	1.3	1.0	1.3	0.7	3.5	4.8	2.2	1.3	1.4	1.1
45-64	25.8	29.7	22.1	36.7	35.3	37.9	58.8	63.9	54.7	21.2	25.4	17.3
65+	145.3	145.2	145.4	217.8	227.9	211.1	267.9	221.8	296.2	135.3	139.2	132.7
TOTAL	26.1	23.5	28.5	18.0	15.9	20.1	32.0	26.9	36.5	25.1	23.0	27.1

*Includes persons of Hispanic ethnicity
**The Hispanic population includes persons of all races.

TABLE B

1990 DIABETES DEATHS BY AGE, RACE, HISPANIC ETHNICITY AND SEX—NEW JERSEY

	Hispanic**		White*		Black*		Total Black & White*		Total Black & White*
Age	Male	Female	Male	Female	Male	Female	Male	Female	Male + Female
0-44	4	2	30	22	19	9	49	31	80
45-64	20	23	162	119	52	55	214	174	388
65-74	20	17	249	264	35	67	284	331	615
75+	15	32	268	485	30	74	298	559	857
TOTALS	59	74	709	890	136	205	845	1,095	1,940

Hispanic deaths included in racial designations in the total counts.

*Includes persons of Hispanic ethnicity
**The Hispanic population includes persons of all races.

TABLE C

1990 CENSUS POPULATIONS BY AGE, RACE, HISPANIC ETHNICITY & SEX—NEW JERSEY

Age	White Male	White Female	Black Male	Black Female	Hispanic Female	Hispanic Male	Total Black & White	TL Male Black & White	TL Female Black & White
<1	46,324	44,462	10,304	10,188	5,841	5,839			
1-4	171,612	163,061	37,550	36,465					
5-9	196,238	186,452	43,454	41,850					
10-14	190,550	179,946	43,417	42,128	85,201	89,743			
Subtotal	604,724	573,921	134,725	130,631	91,042	95,582	1,444,001	739,449	704,552
15-19	203,113	191,694	46,826	45,779					
20-24	230,134	222,522	48,447	49,764					
25-29	272,551	267,634	50,108	53,477					
30-34	280,545	281,381	45,358	50,522					
35-39	251,979	254,861	38,025	44,306					
40-44	232,584	242,202	31,669	38,620					
Subtotal	1,470,906	1,460,294	260,433	282,468	193,880	203,471	3,474,101	1,731,339	1,742,762
45-49	188,619	196,869	25,590	31,857					
50-54	152,363	160,741	21,770	26,254					
55-59	145,943	158,315	18,358	22,632					
60-64	151,522	170,337	15,670	19,793					
Subtotal	638,447	686,262	81,388	100,536	60,613	56,708	1,506,633	719,835	786,798
65-69	135,486	169,555	12,293	16,644					
70-74	102,996	142,884	7,769	12,136					
75-79	70,847	112,988	4,986	9,081					
80-84	38,775	75,759	2,523	5,421					
85+	23,298	63,269	1,731	4,321					
Subtotal	371,402	564,455	29,302	47,603	23,208	15,357	1,012,762	400,704	612,058
Total 0-8	3,085,479	3,284,932	505,848	561,238	368,743	371,118	7,437,497	3,591,327	3,846,170
Total 15-	2,480,755	2,711,011	371,123	430,607	277,701	275,536	5,993,496	2,851,878	3,141,618

Hispanic population based on different age distribution
Hispanic population subsumed in racial designations in the total count

Table D: Four Counties with the Highest Rates of Preventable Hospitalizations with a Principal or Secondary Diagnosis of Diabetes Mellitus, per 100,000 Population, New Jersey, 1986-88.

County	Rate/100,000
ESSEX	480.3
MERCER	434.1
ATLANTIC	411.3
CUMBERLAND	381.2
NEW JERSEY	373.8

Table E: Cities with a Population Over 30,000 with the Five Highest Rates and the Five Lowest Rates of Preventable Hospitalizations with a Principal or Secondary Diagnosis of Diabetes Mellitus, per 100,000 Population, New Jersey, 1986-88.

Highest Rates	Rate/ 100,000	Lowest Rates	Rate/ 100,000
TRENTON	1193.4	WASHINGTON TWP.	58.4
ATLANTIC CITY	1173.0	MANCHESTER	84.6
CAMDEN	832.1	MOUNT LAUREL	92.5
EAST ORANGE	737.6	CHERRY HILL	108.2
NEWARK	712.3	GLOUCESTER TWP.	128.8

Table F: Hospital Admissions with a Principal Diagnosis of Diabetes Mellitus, by County, New Jersey, 1989

County	Number of Admissions	Adm. per 1000 Residents	Length of Stay	Charge per Admission
1 ESSEX	1544	1.87	9.81	$4,940
2. CUMBERLAND	217	1.59	9.82	4,060
3. CAMDEN	648	1.40	8.68	5,750
4. HUDSON	752	1.35	9.66	4,470
5. CAPE MAY	140	1.30	7.18	3,890
6. SALEM	71	1.22	8.58	3,980
7. GLOUCESTER	281	1.21	8.94	4,970
8. ATLANTIC	262	1.17	8.28	4,430
9. MERCER	417	1.16	8.29	4,320
10. PASSAIC	499	1.09	9.53	4,640
11. MONMOUTH	607	1.06	9.25	4,620
12. UNION	515	1.02	8.14	4,390
13. SOMERSET	241	1.00	7.87	4,250
14. BURLINGTON	358	0.99	7.61	4,290
15. WARREN	88	0.99	7.15	3,580
16. SUSSEX	99	0.87	8.82	3,480
17. OCEAN	389	0.85	8.17	3,870
18. MIDDLESEX	518	0.83	9.12	4,700
19. BERGEN	541	0.63	8.50	4,480
20. MORRIS	238	0.58	7.45	3,990
21. HUNTERDON	50	0.49	5.90	3,850
TOTAL NEW JERSEY	8475	1.09	5.00	$4,590

Table G: Payment Source for Hospital Admissions With a Principal Diagnosis of Diabetes Mellitus, New Jersey, 1989

Payment Source	No. of Admissions	Percent
Medicare	2,867	33.8
Medicaid	888	10.5
Private Pay	3,211	37.9
Self Pay	1,001	11.8
Other	508	6.0
TOTAL	8,475	100.0

Patient characteristics of visits with a principal diagnosis of diabetes were found to differ in one major respect from those characteristics noted in the aggregate of all other visits. While the distribution of office visits by sex and by race was not found to differ significantly for each of the two groups, differences in the proportions of visits by age category were noted. Specifically, a significantly higher percent of visits with a principal diagnosis of diabetes was made by persons in each age category after the age of 44 years than was true for matching age categories for all other visits (see Figure 2). Similarly, significantly lower proportions of visits with a principal diagnosis of diabetes were made by persons under the age of 45 years than was the case for all other visits.

Of the estimated 13.2 million office visits with a principal diagnosis of diabetes, 44.0 percent (about 5.8 million visits) were made to general and family practice physicians. Internal medicine specialists received 28.7 percent of the visits, while ophthalmologists accounted for 6.8 percent.

Diabetes was the fourth most frequently reported principal diagnosis rendered by general and family practice physicians, accounting for 2.8 percent of all visits to this physician group. For internal medicine specialists, diabetes was second only to essential hypertension as a principal diagnosis and represented 4.8 percent of all visits to this specialty. Among ophthalmologists, diabetes was found to be the tenth most frequently rendered principal diagnosis, accounting for 2.3 percent of all ophthalmology visits.

The vast majority (92.2 percent) of office visits with a principal diagnosis of diabetes were made by patients who were making return visits to the physician for care of their condition. Only 5 percent of the visits were made by new patients.

The ratio of return visits to new problem visits was nearly 12:1, meaning that nearly 12 return visits for continuing care of this problem were recorded during the year for every visit that was recorded as a "new problem" encounter. New problem encounters include those made by new patients, as well as those made by "old" patients for the care of new problems.

Medicare was the expected source of payment at 44.4 percent of visits, followed by self-pay (33.5 percent), commerical insurance (21.2 percent), and HMO/prepaid plan (13.9 percent).

Among visits with a principal diagnosis of diabetes, patients most often expressed their reason for visit as, simply, diabetes (38.5 percent of visits); next was glucose level determination (13.8 percent); and general medical examination (7.8 percent).

Of all the office visits in 1989, diabetes was the seventh most frequently reported principal diagnosis, and the fourth most frequently reported morbidity-related principal diagnosis after essential hypertension, otitis media and acute upper respiratory infections.

The majority of visits (68.2 percent) with a principal diagnosis of diabetes had a second diagnosis listed on the patient record, and 25.2 percent included a third diagnosis. Essential hypertension was the most frequently reported second or third-listed diagnosis, showing up at about 3.5 million visits, or 26.5 percent of all visits with a principal diagnosis of diabetes.

About 72.2 percent of visits with a principal diagnosis of diabetes included a blood pressure check. This is significantly higher than the 34.2 percent of all other office visits (that is, those visits which did not list diabetes as a principal diagnosis) that included a blood pressure check in 1989.

Other frequently performed diagnostic services included "other" blood test (54.8 percent), urinalysis (17.4 percent), cholesterol measure (9.8 percent), and visual acuity examination (8.0 percent). All of these, with the exception of the visual acuity examination, were performed at a significantly higher rate at visits with a principal diagnosis of diabetes than at all other visits.

Weight reduction was the most frequently reported type of counseling/advice either ordered or provided (32.7 percent of visits). In contrast, only 5.8 percent of visits with a principal diagnosis other than diabetes included counseling or advice on weight reduction. Similarly, 9.9 percent of visits with a principal diagnosis of diabetes included counseling/advice ordered or provided for reduction of cholesterol, compared with about 3 percent of all other visits.

The mean duration of physician-patient contact for visits with a principal diagnosis of diabetes was 17.3 minutes and does not include visits in which no face-to-face contact with the physician occurred. The great majority (89.2 percent) of visits with a principal diagnosis of diabetes resulted in a scheduled return visit.

In addition to the 13.2 million office visits with a first-listed diagnosis of diabetes, approximately 8.7 million office visits were made during 1989 at which a second or third diagnosis was listed as diabetes. In addition to essential hypertension, other common diagnoses reported in conjunction with diabetes included other forms of chronic ischemic heart disease, other retinal disorders, obesity and hyperalimentation, disorders of lipoid metabolism, and other and unspecified arthropathies.

Costs of diabetes

The burden of disease on society can be measured by estimating its economic cost, both direct and indirect expenditures. Calculation of the cost of disease means estimating the direct costs of medical care and treatment and the indirect costs associated with work loss, long-term disability, and mortality. Estimates of the total economic burden of diabetes in the United States vary considerably depending on methods; but it is clear that diabetes is a major economic, as well as medical, problem.

The total cost of diabetes is estimated to be more than $20 billion (1987 dollars; 1991 dollars $30 billion) per year in the United States. Direct medical costs account for 47.1 percent of total costs. Institutional care accounts for the greatest proportion of total costs, followed by premature mortality, long-term morbidity, outpatient care, and short-term morbidity.

This rate translates to more than $3,000 (1991 dollars $4,500) per individual with diabetes per year. Annual health-care expeditures per **NIDDM** case increase with increasing age and are higher for women than for men. Per capita, the costs of health care for people with diabetes are two to three times as high as those for people without diabetes.

In 1987, the direct (medical) and indirect (lost productivity) cost of diabetes in New Jersey was about $689 million. Translated to 1991 dollars, the cost was about $1.03 billion.

Most people with diabetes—almost 92 percent—have some form of health coverage, a rate slightly higher than for the general population. The most common type of coverage in people with diabetes ages 20 to 64 is private health insurance; 96 percent of people with diabetes older than 64 are covered by Medicare. The proportion of people covered by public programs, such as Medicare, Medicaid, or Veterans Affairs, is higher among people with diabetes than among those without diabetes.

Although most people with diabetes appear to have access to health insurance, it is unclear from the available data what proportion of their diabetes-related expenses is covered and what proportion must be paid out of pocket.

Diabetes treatment

Diabetes therapy is aimed at controlling high blood glucose levels and preventing complications. Conventional treatment can take several forms: injection of insulin to replace the body's deficient natural insulin production; ingestion of hypoglycemic medications to reduce blood glucose levels; diet therapy to control weight as well as to control blood glucose; and increased physical activity to help support the principal treatment regimen. As a support to these therapeutic approaches, glucose monitoring—by both the individual and the health care team—is considered vital.

The firm basis upon which all treatment rests is intensive patient education which, in diabetes, is considered to be an integral part of treatment rather than simply a desirable adjunct to it.

People with insulin-dependent diabetes must inject insulin to control their diabetes. In contrast, diet modification accompanied by regular physical activity is the preferred initial method for treating persons with NIDDM. Pharmacologic agents may be added when diet therapy alone is unsuccessful at reducing blood glucose levels satisfactorily in people with NIDDM.

A national survey found that about one-quarter of people 12 to 74 years old with diabetes use insulin. Most of these people presumably have NIDDM, because only about 5 to 10 percent of people with diabetes in this age group have IDDM. An additional one-third of those with diabetes use oral medication.

The use of oral hypoglycemic agents appears to be increasing in the United States. Nearly half of those people who use insulin or oral agents also use a physician-prescribed diet as part of their therapy. Only 14 percent of people with diabetes use diet alone. Surprisingly and of concern, nearly one-quarter of people diagnosed with diabetes use none of these treatments.

Patterns of therapy vary according to age, age at diagnosis, and duration of diabetes. Almost half of those with diabetes younger than 45 use insulin with or without a written diet, but less than one-quarter of people above that age use insulin. Insulin use also declines with increasing age at diagnosis, with only one-fifth of people diagnosed at 70 to 74 years old currently using insulin. With increasing duration of diabetes, the proportion of people with diabetes using insulin increases, while the rate of oral agent or diet use remains fairly constant. Among insulin users, human insulin is becoming more widely prescribed; currently, two-thirds of all insulin used in the United States is of this form.

The patterns of diabetes treatment vary little with sex or income. Therapies for people with diagnosed diabetes in the United States differ slightly among the black, white and Hispanic (Mexican-American) populations. Insulin is used more and oral agents less in African Americans. Mexican Americans with diabetes were more likely than either black or white Americans to be untreated.

The most effective means of monitoring glycemic control is self-monitoring of blood glucose, yet only about 50 percent of insulin users and 5 percent of non-users perform this procedure. It can be speculated that there may be a number of reasons for this: high cost; lack of third party reimbursement (predominantly Medicare); lack of patient education stressing the importance of the procedure and the ease of performing it; lack of patient support by the providers caring for them.

In the absence of self-monitoring, physician glucose testing becomes extremely important. Overall, blood glucose level is assessed in about 69 percent of visits for diabetes care to office-based primary-care physicians, or about twice per year per person with diabetes. The proportion is highest for pediatricians, who measured blood glucose in 91 percent of diabetes-related visits.

Pancreas transplantation: Although diabetes cannot be considered curable, progress in pancreatic transplantation technology has opened the door to a "cure" of selected IDDM cases. People who receive a transplant today at an experienced transplant center can expect a one-year graft survival rate of about 70 percent. After five years, they can expect a 50 to 65 percent likelihood of graft survival. This five-year success rate is about equivalent to the success rate of heart transplants, but is less than that of kidney transplants (about 75 percent). The pancreas transplant recipient is, indeed, cured of diabetes in that the individual no longer needs insulin injections. However, even those with successful transplants must receive chronic immunosuppressive therapy, which is often accompanied by serious side effects.

Most pancreas transplant recipients to date (approximately 85 percent of the total) have also received a kidney transplant and therefore were clearly suffering from the complications of diabetes before the actual transplant. Because so many recipients are transplanted late in the course of their disease, it is still uncertain to what extent a transplant can reverse or ameliorate diabetes-related complications. Because of this uncertainty and because a transplant recipient must take immunosuppressive drugs for the rest of his or her life, transplantation of a pancreas alone (that is, not accompanied by a kidney transplant) is currently not recommended.

(NOTE: See the chapter on High Technology of the State Health Plan for a further discussion of transplantation issues.)

Printed resources related to the management of diabetes and diabetes-related complications in the ambulatory care setting

The following documents represent current recommendations/guidelines on several aspects of diabetes management, and constitute consensus of opinion in the diabetes community:

A. Overall Diabetes Management

Document: Physician's Guide to Insulin-Dependent (Type I) Diabetes: Diagnosis and Treatment
Source: American Diabetes Association, NJ Affiliate, Inc.
312 N. Adamsville Road
P.O. Box 6423
Bridgewater, New Jersey 08807
908-725-7878
Cost: $17.95, plus shipping and handling (ADA members)
$19.95, plus shipping and handling (non-members)

Document: Physician's Guide to Non-Insulin-Dependent (Type II) Diabetes: Diagnosis and Treatment
Source: Same as above
Cost: Same as above

Document: Clinical Practice Recommendations, American Diabetes Association, 1991-1992. Supplement to *Diabetes Care,* Vol. 15, April, 1992.
Source: Same as above
Cost: Reprints available at $3.50 each, plus shipping and handling

Document: The Scope of Practice for Diabetes Educators and the Standards of Practice for Diabetes Educators
Source: *The Diabetes Educator,* No. 1, January/February, 1992, 52-56 Reprints are available from:
American Association of Diabetes Educators
Publications Office
500 N. Michigan Avenue, Suite 1400
Chicago, IL 60611
312-661-1700
Cost: $2.00 per article reprint

B. Complication-related Management

Document: The Prevention and Treatment of Complications of Diabetes: A Guide for Primary Care Practitioners
Source: Centers for Disease Control
Division of Diabetes Translation
1600 Clifton Road, NE (K10)
Atlanta, Georgia 30333
404-488-5020
Or, copies can be obtained from local sales representatives of The Upjohn Company
Cost: None

Document: Detection and Referral of Diabetic Eye Disease: A Guide for Practicing Physicians
Source: Worthen Center for Eye Care Research
Center for Sight
Georgetown University Medical Center
3800 Reservoir Road, NW
Washington, D.C. 20007
202-687-4359
Cost: $10.00 for a single copy. For more than 10 copies, contact the source for special rates.

Document: Lower Extremity Amputation Prevention (LEAP) in Persons with diabetes Mellitus
Source: The Academy of Medicine of New Jersey
Two Princess Road
Lawrenceville, New Jersey 08648
609-896-1717
Cost: $10.00

Document: A Guide for the Management of Pregnancy and Diabetes, 1991
Source: Theresa Scholl, PhD, MPH
The New Jersey Diabetes and Pregnancy Program
UMDNJ—School of Osteopathic Medicine
401 Haddon Avenue
Camden, New Jersey 08103-1505
609-757-7735
Cost: $10.00

Diabetes and cardiovascular disease resources

See the chapter on Cardiovascular Disease in the State Health Plan for a description of the New Jersey State Healthy Heart Program, which targets diabetes as one of the independent risk factors for cardiovascular disease. Additionally, through its grant with the NJ Diabetes Control Program, The Academy of Medicine offers a roving symposium for physician education on Diabetes and Cardiovascular Disease.

Diabetic eye disease resources

In conjunction with the NJ Commission for the Blind and Visually Impaired (CBVI), the NJ Diabetes Control Program provides sensitive eye examinations through dilated pupils to approximately 800 individuals at high risk for diabetic eye disease at ten permanent sites across the state (see map, Appendix B). "High risk" is defined as all Type II individuals, as well as post-pubertal Type I individuals whose diabetes diagnosis exceeds five years, who have not had a definitive eye examination in the previous 12 months. Each year, approximately 35 percent of the clients in the eye examination program are found to have **any** diabetic eye disease, and over half of those have **treatable** eye disease.

In addition to conducting the eye examinations, CBVI provides financial support for any services required by the individual for diabetic eye disease who can demonstrate financial need.

Eye care specialists who can diagnose and/or treat diabetic eye disease are highlighted on the distribution maps in Appendix B. In addition, the previously-cited "Detection and Referral of Diabetic Eye Disease: A Guide for Practicing Physicians" is available as a learning tool for primary care practitioners who wish to become proficient at examining eyes for diabetic eye disease. Also, another of the roving symposium series addresses diabetic eye disease.

Diabetic kidney disease resources

Refer to the chapter on high technology in the State Health Plan for detailed information on renal dialysis facilities and renal transplantation issues. See map for distribution of nephrologists in the state. Another roving symposium from the Academy of Medicine addresses diabetic kidney disease. The previously-cited CDC publication on the prevention of complications, as well as the American Diabetes Association clinical practice recommendations, contain information on this topic as it relates to the ambulatory care setting.

In-office kits are now available for the measurement of microalbuminuria. Microalbuminuria is predictive of development of diabetic nephropathy and its associated mortality risks. Because microalbuminuria may be reversible if diabetes is well controlled, its early detection may be very beneficial in treatment programs for diabetes.

Diabetes mellitus accounts for over 30 percent of the current census of renal dialysis clients in New Jersey.

Since 1973, Medicare has been the primary source of payment for most of the renal dialysis treatment for patients with end-stage renal disease. Major exceptions include persons treated by the Department of Veterans Affairs and Individuals neither covered under the Social Security Act nor dependents of persons covered by Social Security. Generally, persons under the age of 65 who are not otherwise covered by Medicare become eligible three months after renal failure. Under Medicare policy, maintenance dialysis is reimbursed as an outpatient procedure, even in cases where a patient of an outpatient treatment center occupies a hospital bed for overnight dialysis. Medicare coverage extends to situations where individuals are hospitalized for other medical reasons and require dialysis while an inpatient.

Diabetes-related lower extremity amputations (LEA) resources

The previously-cited LEAP resource is an extensive training manual on the management of the diabetic foot in the ambulatory, as well as the inpatient setting, and is designed for an entire team of Health care providers involved in this aspect of diabetes management (that is, physicians, diabetes nurse educators, clinical nurse specialists, dietitians and nutritionists, podiatrists). Other types of health care providers frequently contacted by individuals with diabetes in an attempt to address amputa-

tions include pedorthists, orthotists and prosthetists. Pedorthists design therapeutic footwear that is protective and supportive of the diabetic foot. Orthotics is the practice of designing, fitting, assembling and adjusting devices, which are braces or supports for the correction or alleviation of musculo-skeletal diseases, injuries or deformities. These braces are prescribed by licensed doctors of medicine. Prosthetics is the practice of replacing human limbs or external body parts with artificial devices.

The number of pedorthists in New Jersey is depicted on a distribution map. (See map, Appendix B.)

In New Jersey, there are 32 accredited facilities where orthotic and prosthetic patients can go for service. There are 80 certified practitioners who service patients in their own homes, and approximately 100 certified practitioners who service orthotic and prosthetic patients on a routine basis in physician offices, private clinics, nursing homes and rest homes. The largest proportion of these practitioners is located in the northeast section of the state, with considerably fewer in the northwest and southern portions of the state.

Diabetes-related LEAs also make up one of the roving symposiums offered by The Academy of Medicine.

Resources related to pregnancy and overt/gestational diabetes

See the chapter on maternal and child health in the State Health Plan for extensive information on tertiary care services available for the high-risk pregnancy, and see map, Appendix B.

The previously-cited "A Guide for the Management of Pregnancy and Diabetes, 1991" is an extensive document intended for use by physicians, diabetes educators and counselors, dietitians and nutritionists, and other health care providers. The fifth roving symposium series offered by the Academy of Medicine addresses this topic. Further information is also available in the ADA clinical practice recommendations and the CDC prevention guide.

VI. Unmet Health Care Needs

Data Collection/Surveillance

To more fully describe the scope of the problems related to diabetes in New Jersey, as well as to track this state's progress toward meeting the Year 2000 diabetes objectives, data collection and analysis must be more complete and accurate. There are currently several problems in this area.

Diabetes mellitus is the sixth leading cause of death by disease in New Jersey (1989), and the seventh leading cause of years of potential life lost (before the age of 65) due to disease in New Jersey. These estimates are based on diabetes being listed on death certificates as the **underlying cause of death**. When certificates reporting diabetes as a **contributing cause** are included, the actual number of deaths caused by or associated with diabetes is four times higher. Moreover, studies show that diabetes is not even listed on more than half of the death certificates of people with diabetes; hence, the true impact of diabetes on mortality is substantially higher than reported.

A review of hospital discharge data has shown that diabetes-related hospitalizations are not clearly described. For approximately half of the hospitalizations involving diabetes, the ICD-9 code "250.9", representing "diabetes with unspecified complication," is used. Thus, there is no clear indication of the specific problem leading to the hospitalization, and surveillance of particular diabetes-related complications is compromised. Other codes in the 250.0 series much more accurately indicate the nature of the complication.

While patient records are fairly consistent in designating the presence of diabetes, the specific type of diabetes (i.e., Type I, Type II, gestational) is often omitted, making it difficult to estimate the true impact of various conditions on the different types of diabetes.

Although there are well-established baseline data on some of the complications of diabetes (e.g., lower extremity amputation, major congenital malformations, diabetic renal disease, perinatal mortality), baseline data are not available for conditions which may not require hospitalization (e.g., blindness). The New Jersey Commission for the Blind and Visually Impaired no longer maintains its blindness registry; but even when it did, it did not collect information on the cause of the blindness.

The assessment of the relationship between diabetes and heart disease is also difficult because of imprecise diagnosis reporting for both diseases. The definition of diabetes varies in different studies. Most diagnostic criteria previously used would not now be acceptable, and studies of older adults rarely distinguish insulin-dependent from non-insulin-dependent diabetes. Similarly, the criteria for both fatal and nonfatal heart disease vary from study to study, lack good sensitivity and specificity, and may not distinguish nonatherosclerotic from coronary artery disease. Studies using more definitive criteria for macrovascular heart disease, such as angiography and autopsy studies, suffer from the bias that subjects selected for investigation have more severe disease than that seen in the total population.

Although major congenital malformations in infants of diabetic mothers can be diagnosed at birth, others will not be immediately evident and may go undiagnosed until well after the discharge of the infant from the hospital. In need of strengthening is the link between birth certificates, which since 1990 have recorded maternal diabetes, and the Birth Defects Registry.

Within the State Department of Health, there are inadequate numbers of trained professional personnel available to conduct continuing surveillance and data analysis of diabetes and its related complications. Neither the Diabetes Control Program, nor the larger program within which it is located (Community Health Promotion), has the direct services of a statistician or data analyst. Therefore, no ongoing surveillance is being conducted. Pressing data needs on an ad hoc basis (for example, related to the State Health Plan) are being met by the Department's Center for Health Statistics. Greatly needed is the ability of the DCP to conduct ongoing mortality surveillance, as well as surveillance and data analysis of all diabetes-related complications requiring hospitalization. The databases for such surveillance are already available and could easily be tapped. More difficult is the acquisition and analysis of data on conditions not requiring hospitalization, for example, diabetic eye disease, early cardiovascular disease, early stages of kidney dysfunction, etc.

Access to Quality Diabetes Management in the Primary/Ambulatory Care Setting

The majority of individuals with diabetes are cared for by primary care physicians other than diabetes specialists, and evidence suggests that physicians, as well as other health care providers, in those settings are not necessarily up-to-date in the state-of-the-art management of diabetes or the prevention, early detection, and prompt management of its complications. While the clinical practice recommendations for diabetes have been developed and published by the American Diabetes Association, they have not widely penetrated the primary care setting, nor have the various other guidelines that are available. (See prior listing of available printed resources.)

It has been noted in New Jersey, as in most other states, that primary care physicians who do not have a special interest in diabetes do not choose to attend conferences/workshops/seminars which are designed to increase their knowledge of diabetes and its management. Although such educational offerings are generally well attended by nurses and dietitians, physician attendance is markedly low, even when the program is part of a larger physician conference. Given the tremendous amount of educational efforts covering a huge number of medical conditions, diabetes is not alone in this phenomenon. However, since diabetes directly affects, and is directly affected by, virtually every other health problem, lack of better physician participation in continuing diabetes education is a serious detriment, affecting both the outpatient and inpatient settings.

Many diabetes specialists are called upon as consultants to primary care practitioners as a last resort in difficult cases, rather than as an early option in bringing diabetes under control.

Although it has been demonstrated that use of the health care system by individuals with diabetes exceeds that of persons without the disease, access to most types of primary care physicians, specialists, and subspecialists is limited geographically in many parts of the state. Again, diabetes is not unique in this situation. While most health care providers are located in the northeast and central parts of the state, where the population is most dense, there are glaring gaps in the northwest and southern portions of the state. (See distribution maps, Appendix B.)

There are also financial barriers to services that could help to reduce some of the complications of diabetes. While most people with diabetes are reported to have some kind of third party health coverage, the majority of them do not have coverage for nutrition counseling (for routine diabetes management and obesity control), routine podiatric care (safe removal of toe nails, corns, calluses, etc., as an alternative to unsafe bathroom surgery), prescription shoes (to prevent injury, gangrene and lower extremity amputation), routine eye examinations (to detect diabetic eye disease in its treatable stage), or routine dental care (periodontal disease occurs more frequently in people with diabetes than in those without it). The cost of these preventive services is a fraction of the

cost of dealing with the complications, both in human and financial terms. (See "Cost-Benefit Model," Appendix C.)

The development of the training manual, "Lower Extremity Amputation Prevention (LEAP) in Persons with Diabetes Mellitus," was funded by the NJ Diabetes Control Program. However, there are no current funds available to actually conduct the two-day training program on site where it is most needed (hospital outpatient departments, health maintenance organizations, primary care centers and nursing homes). Additionally, it is the consensus of the professional diabetes community that many diabetes-related LEAs are performed too early when they could have been prevented with intensive management of lower extremity problems.

The true incidence of gestational diabetes in this state cannot be calculated, since there is no comprehensive screening of **all** pregnant women using methods and timing recommended by the American Diabetes Association and others in the professional diabetes community. There is a prevailing, but erroneous, belief that there is a high-risk profile for gestational diabetes, and only pregnant women who meet that profile should be tested. Hence, probably half the cases of gestational diabetes are missed. Although maternal diabetes poses a high risk for poor pregnancy outcome, only a small proportion of these cases are managed in tertiary care centers specializing in high-risk pregnancies.

It is critical in the child with diabetes to establish a treatment regimen that will facilitate normal physical and psychological growth and development. Such a regimen is best devised in a pediatric endocrinology setting; but many children are not being managed in that type of specialized setting, or even with consultation from that specialty.

There are gaps in community awareness of the risks for developing Type II diabetes, and the degree to which the risks can potentially be reduced through weight control, proper nutrition and exercise. Individuals who do not have diabetes, but who are at high risk of developing it, may not have adequate communication about risk reduction with their own primary physicians or receive proper referrals to risk reduction programs. Even if it cannot be documented that such behaviors will prevent Type II diabetes, they will certainly lead to overall better health and well being.

Access to Quality, Ongoing Diabetes-related Patient Education

While there are at least 111 certified diabetes educators (CDEs) in the state, primarily based in hospitals and in the pharmaceutical industry, they are heavily concentrated in some geographic areas, and sparsely distributed in others. (See map Appendix B.) Among the current CDEs who belong to the American Association of Diabetes Educators, none of them resides in Gloucester County, for instance. Additionally, there is a serious lack of bilingual diabetes educators who can meet the needs of the Hispanic population with diabetes.

While the American Diabetes Association and the New Jersey Recognition Program have succeeded in recognizing 19 diabetes education programs (with one applicant still under review), there are still seven counties which have no recognized programs. These are Atlantic (LAB VI), Camden (V), Gloucester (V), Passaic (I), Salem (V), Sussex (I) and Warren (I). This does not necessarily mean that diabetes education is not being conducted in those counties, or that the education is inferior if it is conducted. There is simply no formal way outside of the recognition process to estimate the quality of educational offerings for individuals with diabetes in those areas.

The foremost reason for the lack of commitment to applying for recognition of diabetes education programs is the lack of insurance coverage for outpatient diabetes education. The expenses incurred by an agency or private practice (personnel, facility, materials) in conducting such activities are high, and there are currently no means for generating program income unless the clients with diabetes are able to pay out of pocket. The charge for a comprehensive education program ranges from $150 to $250. Individuals are often reluctant or unable to cover this expense because of the high cost of daily diabetes management. New Jersey lags behind at least 17 other states in securing even a minimum level of reimbursement from Medicare, Medicaid, Blue Cross/Blue Shield, or private insurers, even though this has been a priority of the NJ Diabetes Control Program, the NJ Affiliate of the American Diabetes Association, and the Garden State Association of Diabetes Educators for a number of years.

Diabetes specialists either directly hire or contract with nutritionists and certified diabetes educators as part of their practice, or they directly refer their diabetes patients to established outside sources for patient education and nutrition counseling. This is not the case in the vast majority of practices in the primary care setting. There is little or no formal diabetes education (except for basic survival information) in these settings, and there is little evidence that clients are routinely referred to outside sources for ongoing diabetes education. This appears to be especially true for individuals with Type II diabetes.

Access to Quality Diabetes Care in the Inpatient Setting

The hospitalization of a person with diabetes, either for a principal diagnosis of diabetes or for an intercurrent illness, mandates ongoing evaluation and treatment of the diabetic state. This kind of close attention is best accomplished by a physician and nursing and dietary staff with special interest and expertise in diabetes, in alliance with the physician who admitted the individual.

It is unrealistic to expect the entire nursing and dietary staff of a hospital to be up-to-date on diabetes management. However, it is neither expensive nor unreasonable to have a core staff that receives continuing diabetes-related education and who can be assigned to one particular unit in the hospital where beds are designated for the use of patients with diabetes, and which is overseen by a specially-trained diabetes professional (that is, a certified diabetes educator). Such diabetes cluster units can offer close nursing and clinical supervision, as well as critical education, for diabetes inpatients.

The NJ Diabetes Control Program is aware of only 11 (including one in development) such specialty units in the state, each with a bed capacity of approximately six to twelve. Diabetes educators who are employed at various hospitals which do not have a diabetes cluster unit have indicated that there is lack of support for the creation of such units from administration because of the belief that they would cost too much money to set up and the fear that the institution would lose money if some of the beds remained empty. Some physicians have withheld support for this concept, expressing the belief that they would lose some of their diabetes patients to diabetes specialists, even though physician interaction on the cluster unit would be collaborative rather than competitive.

VI. Recommendations

A. Improve the completeness and accuracy of diabetes data collection to establish baseline data where they do not now exist and to track progress toward achieving the Year 2000 objectives as they relate to diabetes and its complications.
   1. Increase the completeness of reporting diabetes as the **underlying** cause of death, or **any** cause of death, or death certificates.
   2. Physicians and medical record personnel need to become more specific about recording ICD-9 codes on diabetes patient data forms. ICD-9 category 250 and its five-digit subclassification afford clear opportunities for being very specific on the type of diabetes-related problem being encountered, and there should be almost no reliance on using 250.9 (diabetes with unspecified complication) in data collection efforts. Diabetes which complicates pregnancy, childbirth or the puerperium, can be designated in the 648 ICD-9 category. Any diabetes patient hospitalized with a concurrent illness should have diabetes designated somewhere in the eight fields for a secondary diagnosis.
   3. All diabetes patient records should clearly specify the type of diabetes, i.e., Type I (IDDM), Type II (NIDDM), impaired glucose tolerance, or gestational diabetes.
   4. ICD-9 codes should be included in setting up the data collection system for Ambulatory Patient Groups.
   5. A collaborative effort of the Department's Office of Minority Health, Diabetes Control Program, and the Center for Health Statistics should be instituted in order to provide data on diabetes in minority populations, especially Type II diabetes.
   6. Funds and resources should be made available to the New Jersey Commission for the Blind & Visually Impaired (CBVI), within the Department of Human Services, to re-establish the Blindness Registry. A crucial component of such a registry is to list the cause of blindness.
   7. In order to establish more complete baseline data on congenital malformations related to maternal diabetes, a strong link needs to be developed between the Department of Health's existing Birth Defects Registry and birth certificates which, since 1990, have listed maternal diabetes. Links need to be further established with other medical record information listing diabetes in pregnancy (pre-existing diabetes, as well as gestational diabetes) as a maternal diagnosis.
   8. The Department of Health should employ more professionals trained in and adept at data collection and analysis, and disease surveillance.

B. Foster better access to quality ongoing patient education for individuals with diabetes mellitus in order to promote improved daily self-management and the prevention or delay of diabetes-related complications.
   1. Healthcare providers engaged in diabetes education, and who meet the qualifications specified by the American Association of Diabetes Educators, should seek to become certified diabetes educators (CDEs) in order to assure the diabetes population of a basic level of competence. This is especially crucial in geographic areas of the state where the services of certified diabetes educators are minimal or non-existent. It is equally crucial that health professionals who are bilingual develop expertise in diabetes education and seek certification in order to meet the very serious needs of the non-English-speaking (primarily Hispanic) population with diabetes in this state.
   2. Hospitals and other care settings that currently employ the services of a patient educator should promote diabetes educator certification, and reward educators who gain certification with salaries commensurate with the achievement of excellence. Facilities that serve minority clients should strive to recruit educators who are also members of those minority populations.
   3. Inpatient and outpatient health facilities that provide diabetes patient education programs should seek recognition through the American Diabetes Association as meeting the National Standards for Diabetes Patient Education.
   4. There should be a minimum of one recognized diabetes education program per county in the more sparsely-populated areas in the state, three per county in moderately-populated areas, and five such programs per county in more densely-populated areas.
   5. An additional option for increasing outpatient consumer access to quality diabetes education is to form "teams" or "satellite programs" of nurses and dietitians who are CDEs, and to market these to primary care physician practices for either in-office group education of their diabetes patients or at designated locations within the satellite area.
   6. All efforts to achieve third party reimbursement of outpatient diabetes education should have program recognition as the basic quality assurance mechanism.
   7. Since preconception counseling and education are essential components of improved pregnancy outcome in women with overt diabetes, every primary care physician should identify his/her female diabetes clients who are in the reproductive years and either directly, or by referral, provide such services.
   8. Many individuals with diabetes in this state are children, and/or members of minority groups, and/or do not speak English as their primary language, and/or are unable to read at other than minimal levels, if at all. The development of educational materials for use in these populations must reflect these needs, and be highly visual, age-sensitive, culturally-sensitive, and at approximately a fifth-grade or less reading level.

C. Develop and improve the mechanisms for ensuring access to quality diabetes management in the primary/ambulatory care setting.
   1. All of the written documents addressing clinical recommendations and standards for diabetes care and the prevention, early detection and prompt management of the complications of diabetes listed in this chapter should be the basis for diabetes care in the primary care setting.
   2. Primary care professionals have a personal obligation to keep informed of trends and advances in the area of diabetes management and to engage in learning behaviors that are most helpful to them.
   3. Schools and colleges engaged in the education and preparation of health care providers (physicians, nurses, dietitians, podiatrists, dentists, optometrists, and others who regularly minister to people with diabetes) should a core curriculum which incorporates the standards of diabetes care. Health professional students need opportunities to have practicums in diabetes specialty areas, such as multidisciplinary outpatient diabetes centers, formalized diabetes education programs, wound care centers, specialty practices for the high-risk diabetes pregnancy, pediatric endocrinology settings, and on cluster units in the inpatient setting.
   4. Professional specialty and subspecialty organizations and societies need to assume the major responsibility for continuing education of their members related to diabetes and its management, either directly or through cosponsorship of provider education programs on diabetes. The agendas of professional conferences, seminars, workshops, and other educational offerings that are presented by these organizations and societies should routinely (at least every three years) offer segments on diabetes. Concurrently, health professional licensing bodies which require continuing education credits for relicensure should mandate that a minimum number of such credits be earned related to diabetes for all primary care providers who have regular contact with diabetes patients. Reimbursement for the outpatient management of diabetes should be predicated upon this minimum level of expertise.
   5. At the end of state funding, the Academy of Medicine of New Jersey should continue its five roving symposia series on the complications of diabetes and market them avidly to hospitals across the state, who would then be expected to pay the usual fee for the presentations.
   6. Continuing education units are also available for nurses and dietitians at quarterly meetings of the Garden State Association of Diabetes Educators (GSADE). Information is available by calling 800-253-7408. Also available from GSADE is a videotaped, comprehensive education program on all aspects of diabetes and its management that can be rented by individuals or groups of providers.
   7. To rectify the problem of inadequate numbers of providers in various geographic areas of the state, especially primary care practitioners, refer to the chapter on health manpower. There must be financial and professional incentives established to attract providers to underserved areas.
   8. There should be no community-based screening programs for diabetes. The only population that must be screened for diabetes, according to well-published methods, is the pregnant population. **Every** pregnant woman not previously identified as having overt diabetes should be screened for gestational diabetes at the appropriate time with the appropriate test. There should be no reimbursement for gestational diabetes screening practices that fall outside the standard.
   9. Since the management of diabetic pregnancies has become highly specialized, pregnant women with diabetes ideally should be cared for in major medical centers. Women with diabetes and women who develop gestational diabetes should be considered high risk and be referred immediately for specialized care if such care is not available in their community.
   10. A board certified pediatric endocrinologist should be a part of the health care team in the management of every child (and, ideally, adolescent) with diabetes. Consultation from such a specialist should be sought regularly by the primary care physician.

       It is critical that parents of children and adolescents with diabetes receive regular educational and emotional support from the health care team, and that members of that team be available to them on a 24-hour basis.
   11. Although there are proven prevention strategies for some of the complications of diabetes, there are financial barriers that prevent access to them. The Medicare fiscal intermediary in New Jersey must abandon its policy of not reimbursing outpatient diabetes education and follow the lead of several other states that do provide such coverage according to very specific guidelines.

       In addition to rectifying the lack of third party reimbursement for outpatient diabetes education, insurers must devise policies that offer reasonable coverage for critical diabetes-related prevention services, such as routine eye examinations, periodic nutrition counseling, regular dental examinations, routine podiatric care, and prescription footwear for the foot that has already begun structural changes due to diabetes.

       The New Jersey Medicaid Program must consider the special needs of individuals with diabetes. The Program should waive the waiting period for children and pregnant women with diabetes who must have "survival supplies" (i.e., insulin, syringes, blood glucose testing meters and supplies), since going without these supplies is truly life-threatening. All other cases of individuals with diabetes should be processed through the system within 30 days as priority cases.

12. State or other funds should be made available to the Department of Health's Diabetes Control Program to implement the training program on the management of the diabetic foot, based on the manual, "Lower Extremity Amputation Prevention (LEAP) in Persons with Diabetes Mellitus."

D. Improve and promote access to quality diabetes management in the inpatient setting.
   1. All acute-care hospitals with a minimum of 200 patient admissions per year with a principal diagnosis of diabetes and/or 350 patient admissions per year with a secondary diagnosis of diabetes (except patients in labor and delivery or pediatric cases) should set up a "diabetes cluster unit." The cluster unit should have the services of a physician diabetes specialist and should be overseen by a certified diabetes educator and staffed on a 24-hour basis with professionals who receive ongoing diabetes-related education. Any individual admitted with a principal diagnosis of diabetes must be assigned to the cluster unit, and any individual with a secondary diagnosis of diabetes would be assigned to the unit upon the request of the patient and/or his/her admitting physician.

      Hospitals which have cluster units and use them appropriately should be reimbursed at 100 percent of the rate, while hospitals that meet the admission criteria but opt not to create such units should be reimbursed only 50 percent of the rate for their principal diabetes admissions.
   2. Children who need to be hospitalized with a principal diagnosis of diabetes should be admitted to, or immediately transferred to, a children's hospital or a facility where the child and family can be treated by a pediatric endocrinologist and diabetes education team specializing in children.

      There is significant mortality among babies with newly-diagnosed diabetes. At the point where diabetes is strongly suspected, and certainly at the point it is diagnosed, the baby should be immediately transferred to a specialty unit and managed by a team headed by a pediatric endocrinologist.
   3. All hospitals, whether acute or specialty-care, admit individuals with diabetes in all service areas. Each hospital must expand its in-service diabetes education offerings to its professional and ancillary staff, and diabetes-related information should be presented during the orientation period of newly-hired staff.
   4. Diabetes patients who are admitted to the hospital with a concurrent illness as the principal diagnosis need ongoing diabetes evaluation and management. Such close attention should be performed by a physician with special interest and expertise in diabetes or, if unavailable, with consultation from staff on a diabetes cluster unit. Reimbursement mechanisms should mandate this collegial relationship.
   5. The modern management of hospitalized diabetes patients often requires a blood glucose determination at the bedside. This procedure can be performed by nonlaboratory personnel (e.g., a nurse) who must be well trained when a quick, reasonably accurate determination of the blood glucose level is needed. It is especially important that fingerstick glucose measurement be available in hospital settings such as the emergency room, labor and delivery, and in operating rooms. The specific protocol for beside glucose monitoring is available from the NJ State Department of Health, Division of Public Health and Environmental Laboratories.

E. Increase community awareness of diabetes and its risk factors, symptoms, and treatment options.
   1. The Department should work cooperatively with the NJ Affiliate of the American Diabetes Association and the Garden State Association of Diabetes Educators on activities that are designed to increase the public's awareness of diabetes.

STATE HEALTH PLAN
REFERENCES CITED: DIABETES MELLITUS CHAPTER

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APPENDIX A
DIABETES EDUCATION PROJECT
1986-89

In October 1980, New Jersey became one of several states funded by the Centers for Disease Control (CDC) to develop a model program applying epidemiologic principles and methods to the study and control of diabetes and its associated problems. The overall goal of the program was to reduce morbidity and mortality and cost burdens from the preventable complications of diabetes at the community level.

Based on information collected in the planning stage of the state projects, the CDC-funded states identified five major factors that commonly contribute to excessive diabetes morbidity and mortality. These were:

1. Inadequate patient education and self-care.
2. Inadequate provider knowledge and proficiency.
3. Lack of third-party reimbursement for essential diabetes services, supplies and devices.
4. Inadequate data for targeting and evaluating programmatic activities.
5. Inadequate planning, coordination and evaluation of health services and resources for people with diabetes.

The New Jersey Diabetes Control Program (DCP) conducted a number of activities related to these deficiencies, including a patient and provider education initiative involving local health departments.

In federal fiscal year 1985, the DCP received funds from the Preventive Health and Health Services Block Grant. Along with the funding came the directive that it was to be used to enhance services offered to NJ citizens with diabetes by local health departments. The DCP subsequently released a Request for Applications to all local health departments announcing the availability of these funds for coordinated, countywide/regional diabetes education services. Program components were to in-

clude coalition building, resource assessment, and planning, implementing and evaluating diabetes education services for persons with diabetes, for health care providers, and for persons at high risk for diabetes.

Only local health departments in designated high-risk areas were eligible to apply; local health departments in lower-risk areas were eligible only if they subcontracted with an agency in a high-risk area. A high-risk area was defined as a local jurisdiction(s) having had at least 2,000 diabetes-related hospital discharges during 1981 and having a diabetes-related hospitalization rate which exceeded the state rate in four or more of eight race-sex categories. Nine counties were identified as high risk: Atlantic, Burlington, Camden, Cumberland, Essex, Hudson, Mercer, Middlesex, and Passaic.

Applications were received and ranked by the Diabetes Control Program staff, as well as by key members of the Diabetes Advisory Board. Six agencies were eventually funded to cover seven counties. These were:

1. Essex County: Bloomfield Health Department
2. Middlesex County Health Department
3. Passaic County: Paterson Division of Health
4. Cumberland and Gloucester Counties: Vineland City Health Department
5. Mercer County: City of Trenton (Henry J. Austin Health Center)
6. Hudson County: Jersey City Health Department (Jersey City Family Health Center)

The overall objective of the contracting agencies was to establish a mechanism to ensure that diabetes-related education services were coordinated, comprehensive, accessible, affordable, and offered on a regular basis for persons with diabetes, for health care providers, and for persons at high risk for diabetes.

Among other requirements, program specifications included:

1. Educate an agreed-upon minimum number of individuals with diabetes and/or family members within the agency's jurisdiction.
2. Collect baseline information on diabetes education program participants regarding their history of diabetes-related emergency room visits and hospitalizations in the two-year period prior to taking the education program.
3. Conduct follow up every six months for two years on all of the individuals with diabetes who complete the education program to document post-education diabetes-related emergency room visits and hospitalizations.

These pre and post-education data were reported to the NJ-DCP on a quarterly basis until December 31, 1989. While almost 2,000 individuals with diabetes and/or family members participated in at least parts of the courses, 772 actually completed the entire course. These were the individuals included in the follow-up.

As shown in Figure 1, 468 (60.6 percent) individuals did not experience diabetes-related hospitalizations or emergency room (ER) visits either in the two years prior to education or in the two years following completion of education. One hundred and sixty-one (20.9 percent) individuals had at least one hospitalization or ER visit both prior to and after education; 73 (9.5 percent) had no hospitalizations or ER visits prior to education, but did experience at least one hospitalization or ER visit following education; 70 (9.1 percent) experienced at least one hospitalization or ER visit prior to education, but their post-education experience is unknown.

Figure 2 presents a demographic description of the course completers. Females were over-represented at 64.5 percent of all participants. Whites represented 64.2 percent of all participants, while Blacks represented 28.1 percent, Hispanics 6.6 percent, and other 1.0 percent. The proportion of minority participants in this analysis exceeded their proportion in the New Jersey population.

Depicted in Figure 3 is a breakdown of course completers by race, sex and type of diabetes. Individuals with Type II (non-insulin-dependent) diabetes represented 81.2 percent of the group, while the remainder (17.8 percent) were individuals with Type I (insulin-dependent) diabetes. It is estimated in the general population that 90 percent of all diagnosed cases of diabetes are Type II, while only 10 percent are Type I. Therefore, individuals with Type II diabetes are under-represented in this sample, while individuals with Type I diabetes are over-represented.

Within the sub-groups of pre and post-education hospitalizations and ER visits (displayed in Figure 1), Figure 4 presents the comparative demographics of the course completers. Further analysis of the information in Figure 4 reveals that 70.8 percent of all White participants were never hospitalized or seen in the ER in the two years prior to and the two years following education. However, among minorities, only 41.5 percent of Blacks, 48 percent of Hispanics, and 50 percent of others met this distinction. Among Whites, 14.5 percent experienced hospitalizations and/or ER visits both before and after education, while 34.6 percent of the Blacks, 23.5 percent of the Hispanics, and 25 percent of others had similar experiences. Therefore, minorities with diabetes experienced a disproportionate share of diabetes-related hospitalizations.

Figures 5 through 12 (total N = 161) show that in every race-sex group, **except Hispanic females** (Figure 9), there were considerably more diabetes-related hospitalizations and ER visits in the two years prior to education than there were in the two years following completion of a diabetes education program. Although hospitalizations decreased among Hispanic females with Type II diabetes, they increased for those with Type I diabetes, and ER visits increased post-education for all Hispanic females. In all, among the 161 course participants who had both pre- and post-education hospitalizations and/or ER visits, there were 106 fewer diabetes-related hospitalizations and 67 fewer ER visits after education than there were prior to education.

During the period 1985-87, the average **charge** (vs. the actual **cost**) for a diabetes-related hospitalization was approx. $6,500, with actual charges ranging from a few hundred dollars to those in excess of $200,000. Allowing for a 22 percent inflation factor, the average charge in 1991 dollars would be $7,930 per hospitalization.

In 1988, the average actual **cost** (vs. what the individual patient was **charged**) of an emergency room visit was $103, which would translate to $126 in 1991 dollars. Data are not available to determine the actual charge to the patient or the patient's insurer.

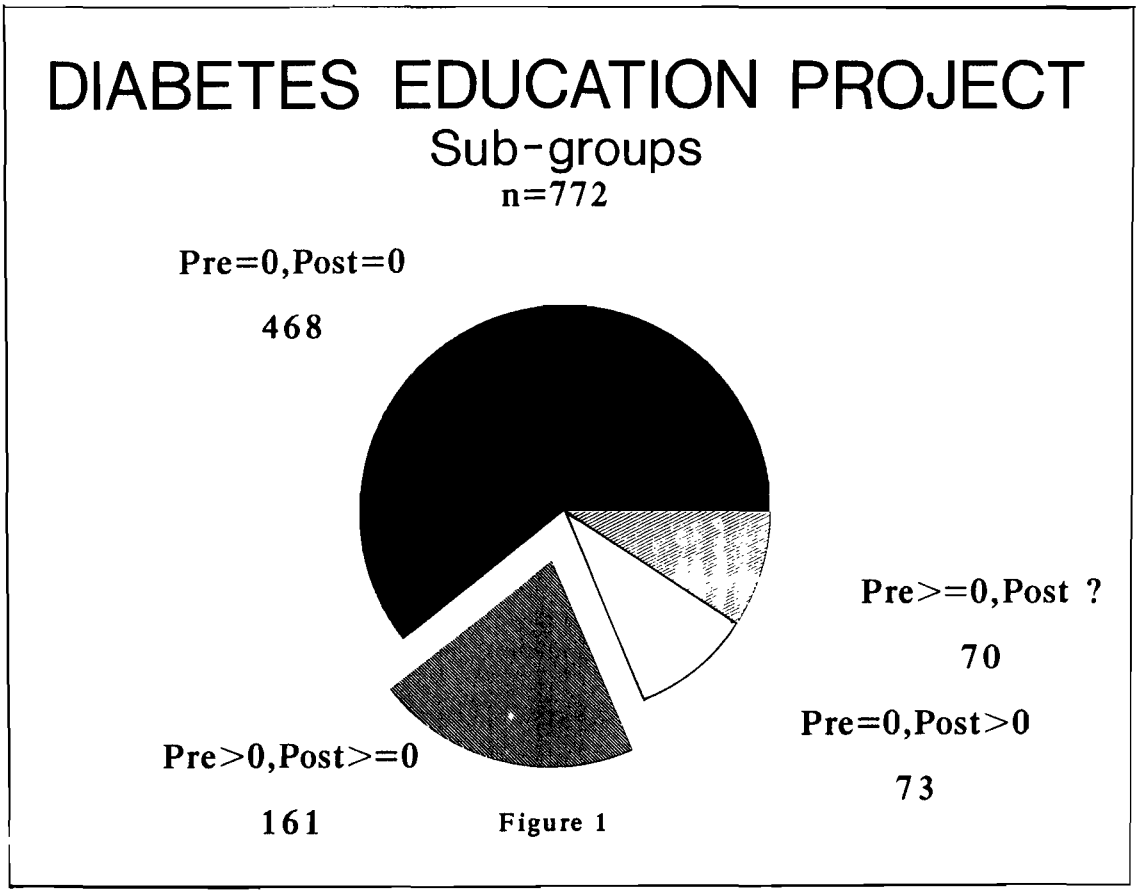


Figure 1

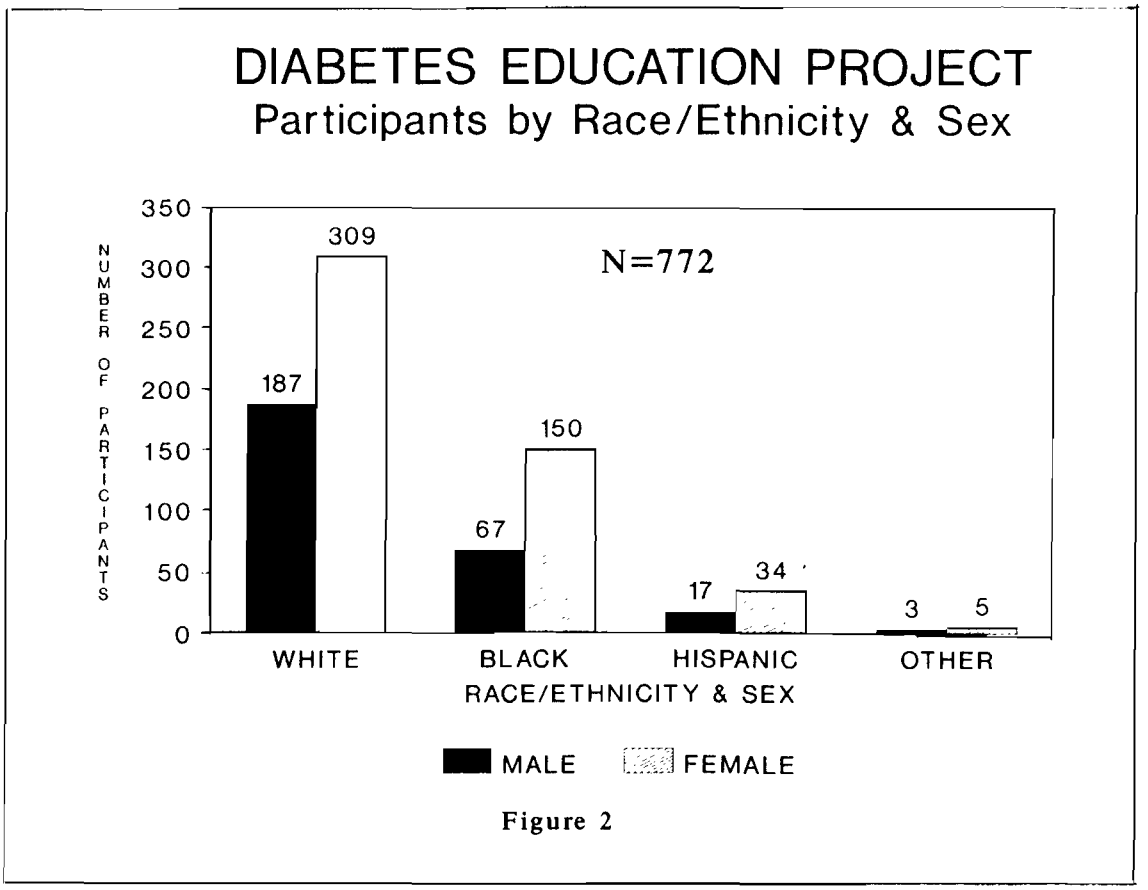


Figure 2

DIABETES EDUCATION PROJECT
RACE/ETHNICITY, SEX & TYPE

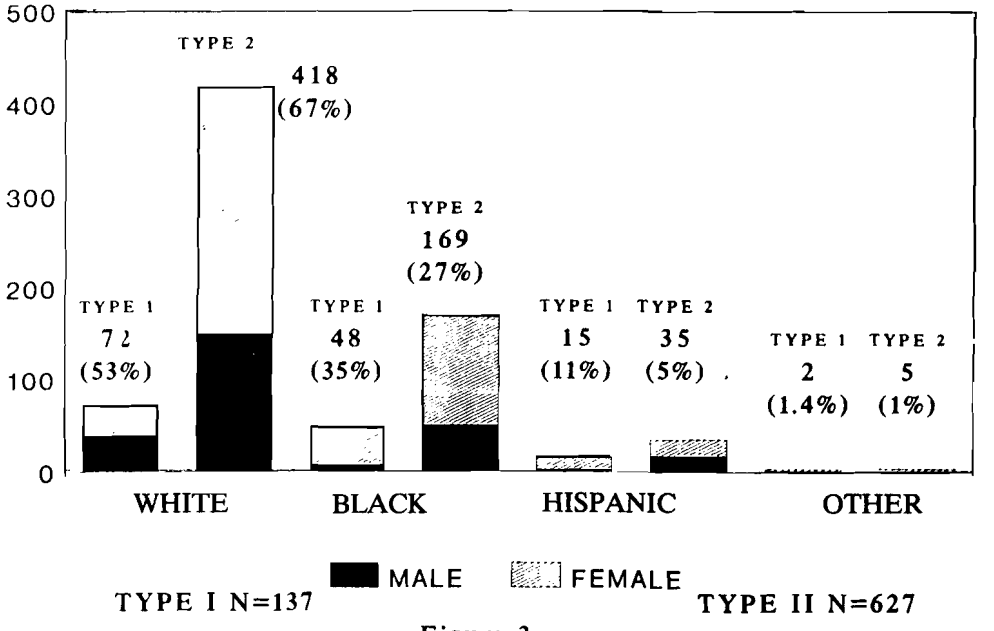


Figure 3

DIABETES EDUCATION PROJECT
Comparative Demographics

	Pre=0, Post=0, n=468			Pre>0, Post>=0, n=161		
	MALE	FEMALE	%	MALE	FEMALE	%
WHITE	126	225	75.0	35	37	44.7
BLACK	35	55	19.2	19	56	46.6
HISPANIC	8	15	4.9	2	10	7.4
OTHER	2	2	0.8	1	1	1.2

	Pre=0, Post>0, n=73			Pre=0, Post=?, n=70		
	MALE	FEMALE	%	MALE	FEMALE	%
WHITE	18	25	58.9	8	22	42.9
BLACK	4	16	27.4	9	23	45.7
HISPANIC	3	6	12.3	4	3	10.0
OTHER	0	1	1.4	0	1	1.4

Figure 4

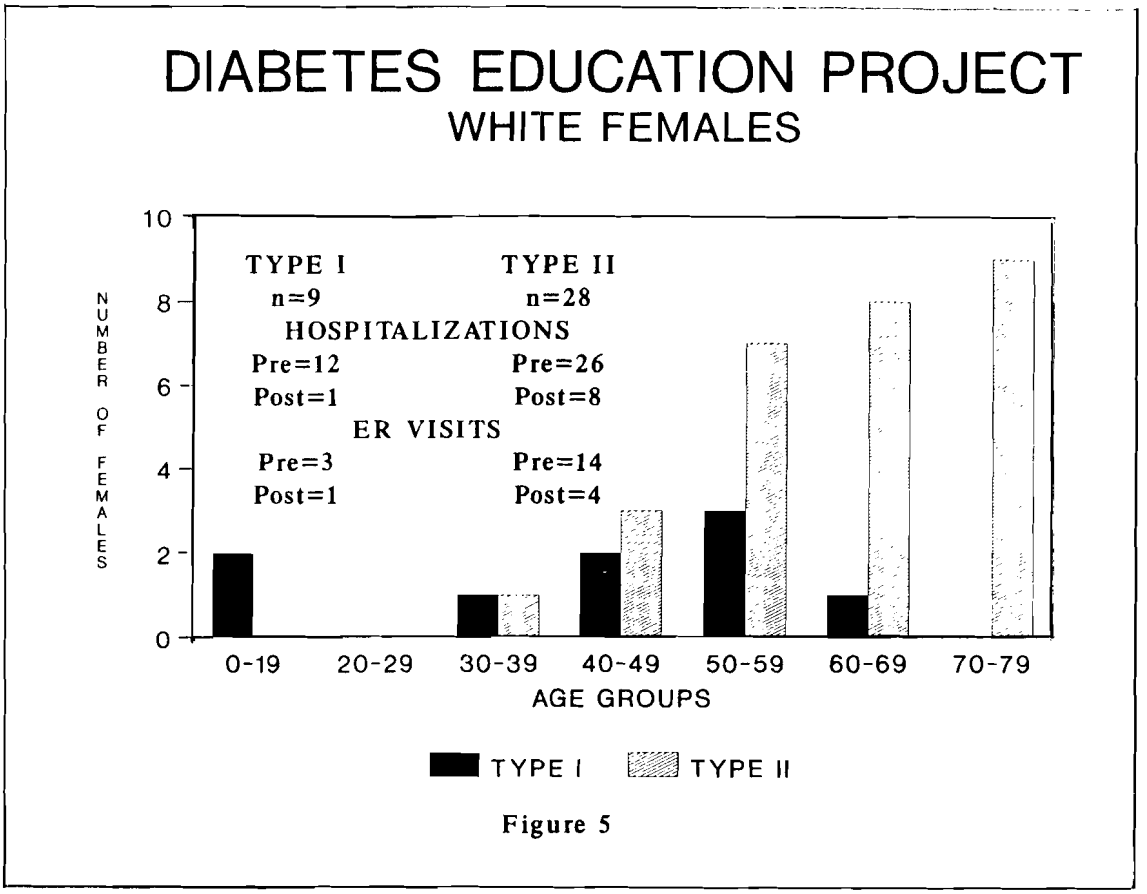


Figure 5

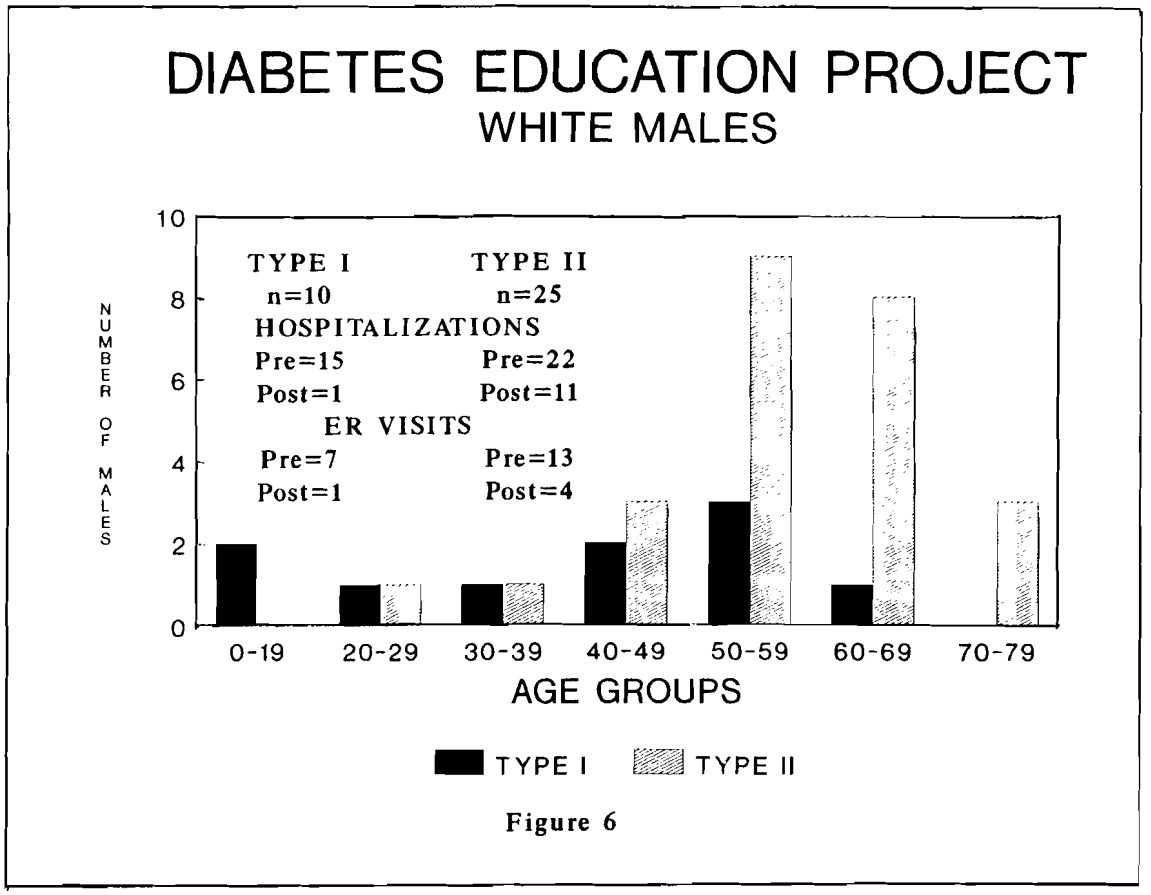


Figure 6

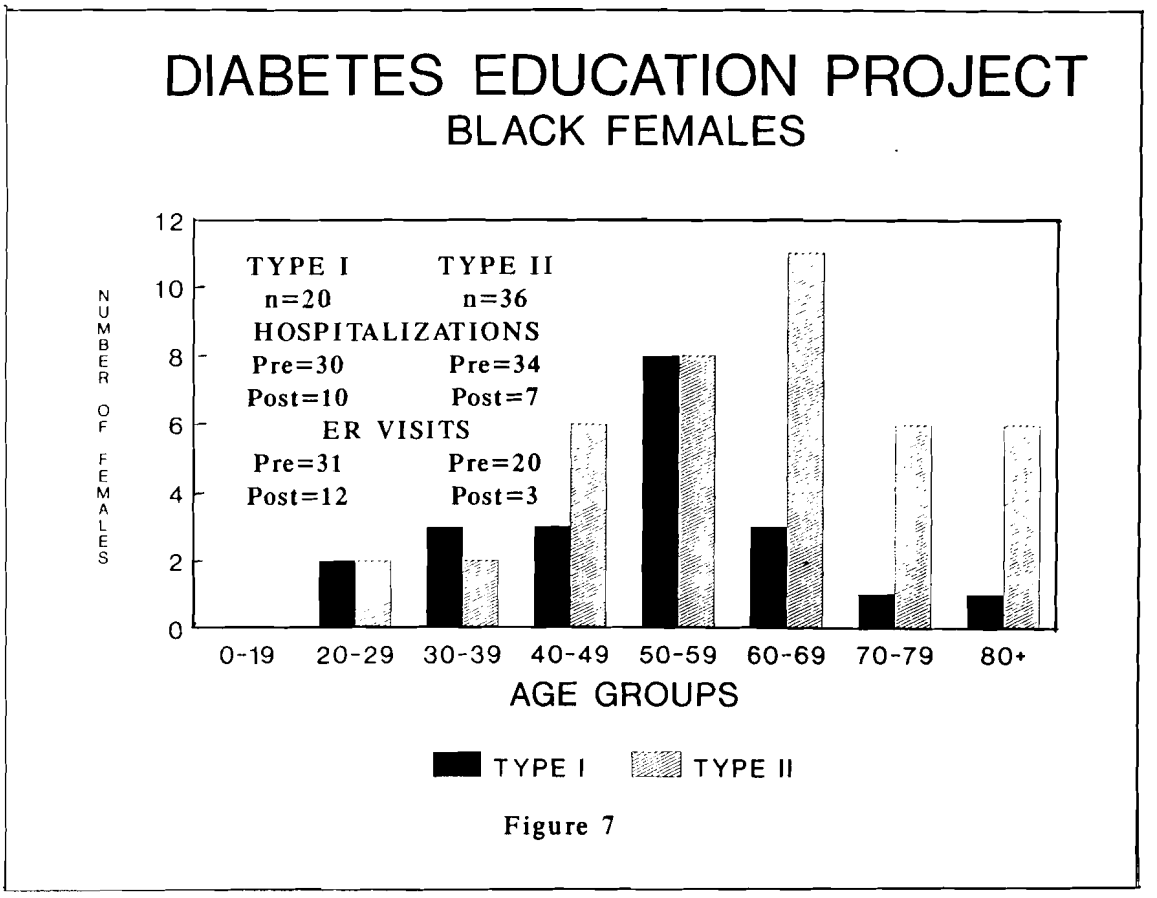


Figure 7

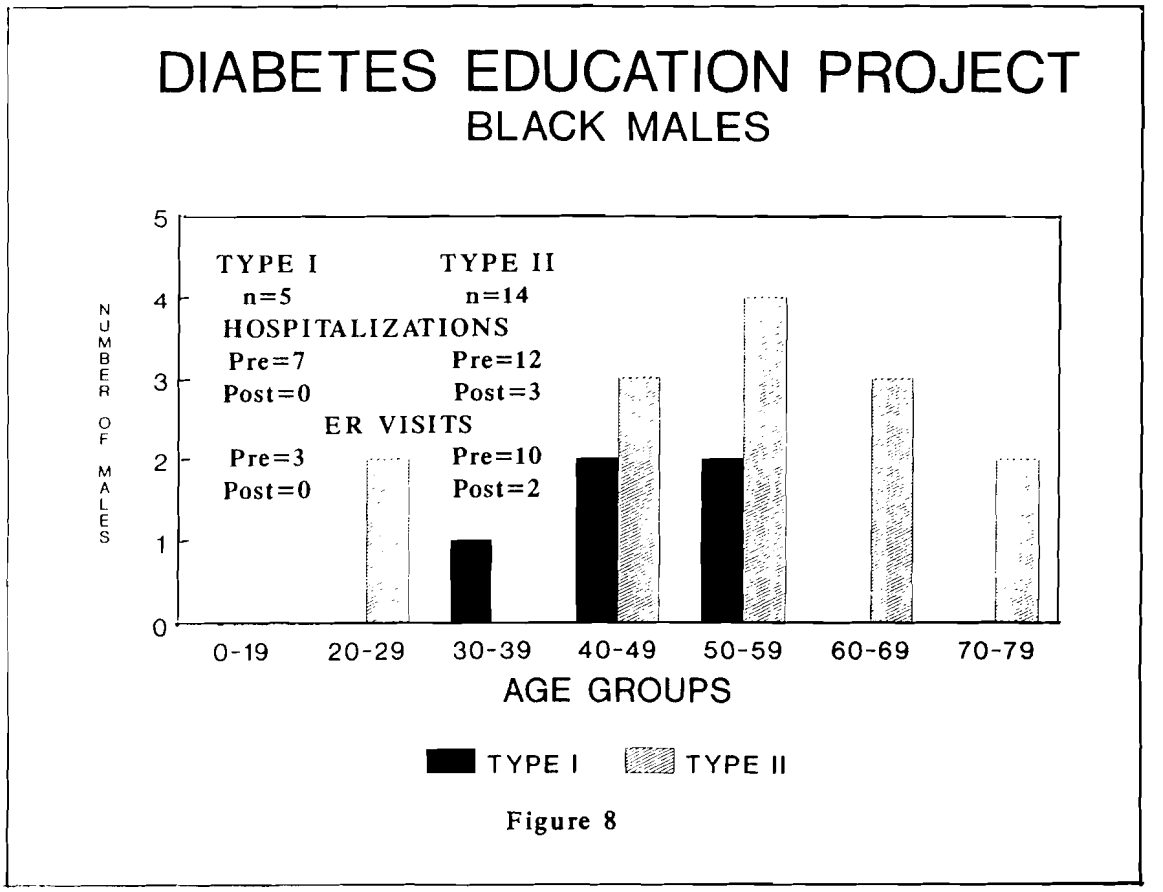


Figure 8

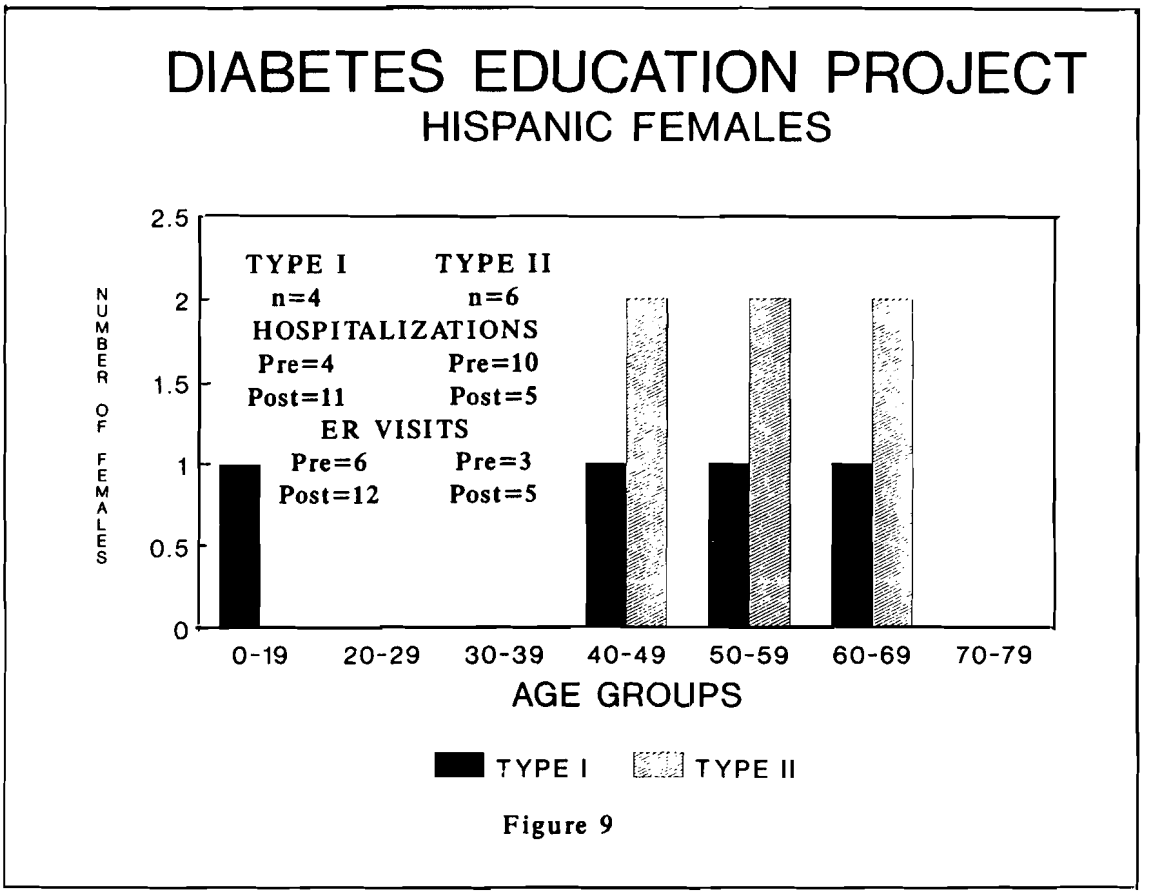


Figure 9

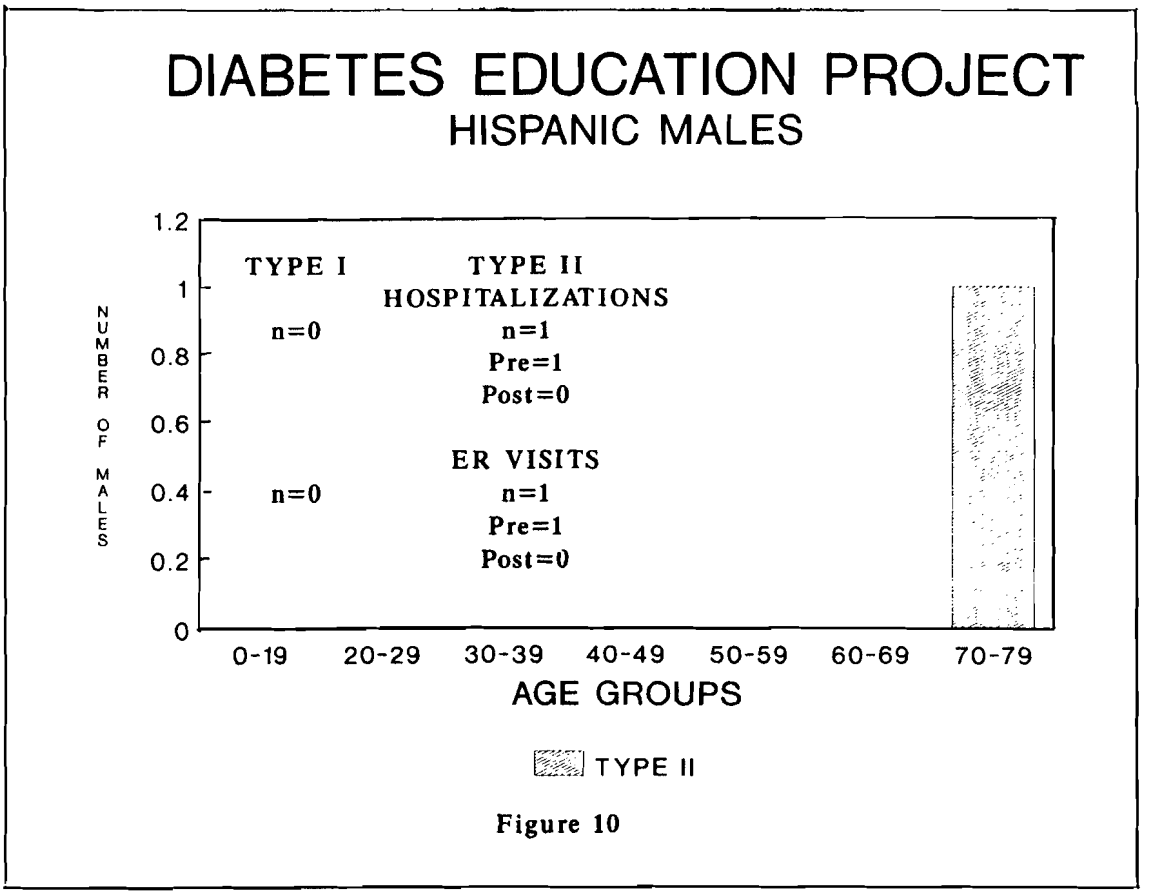


Figure 10

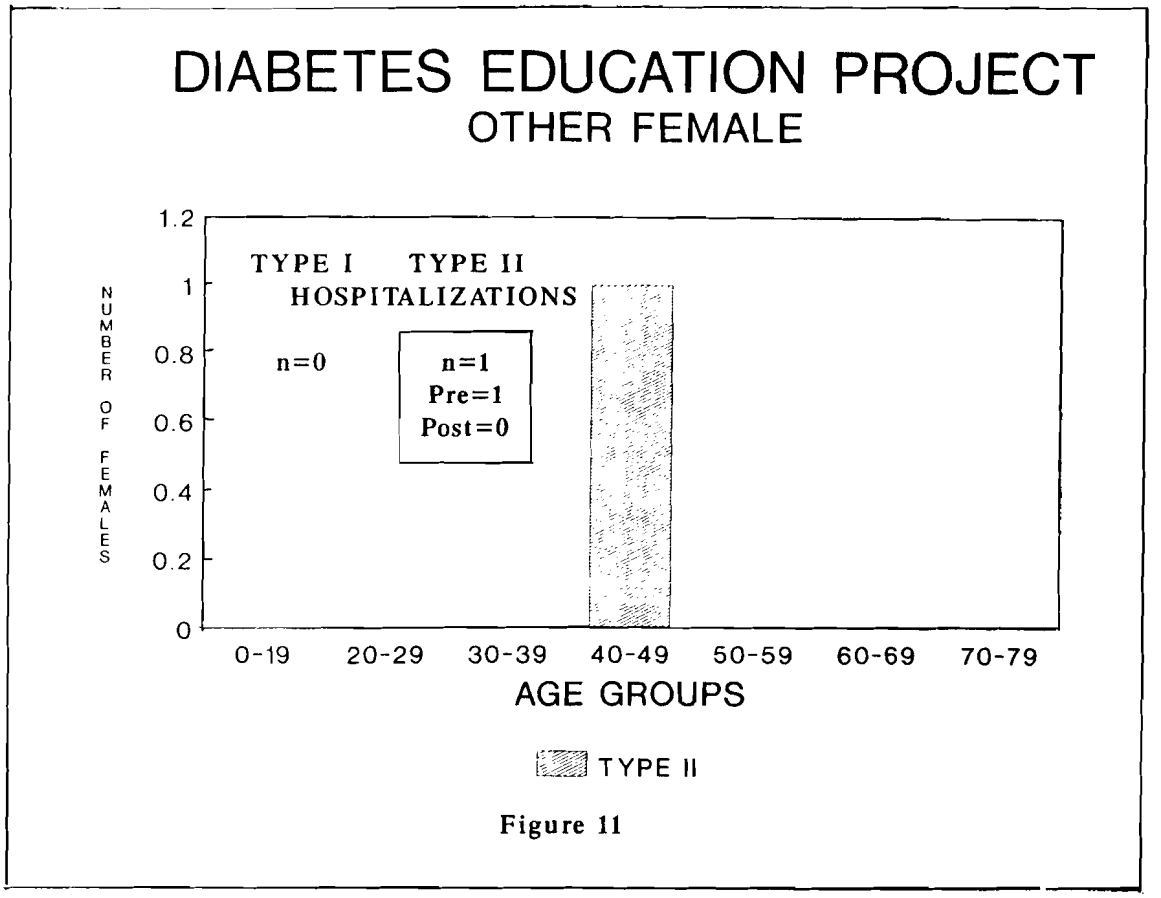


Figure 11

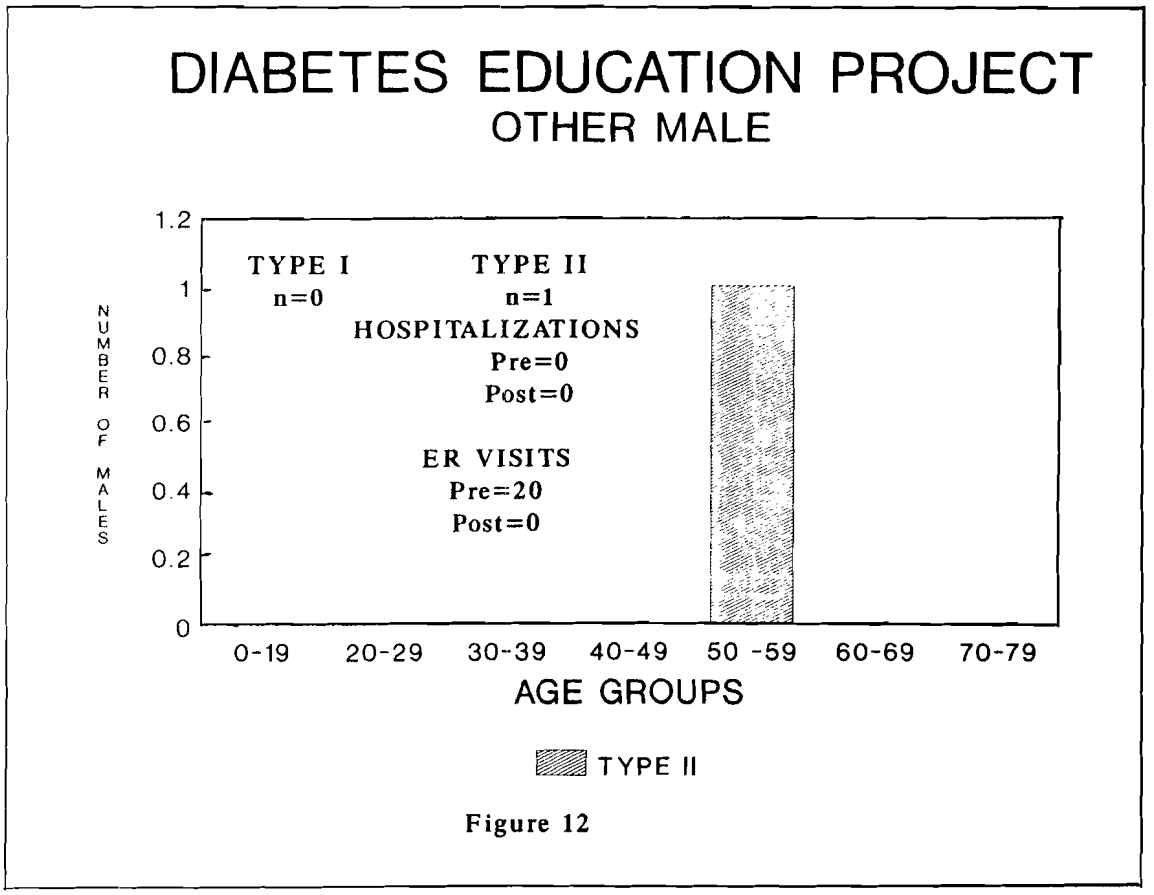
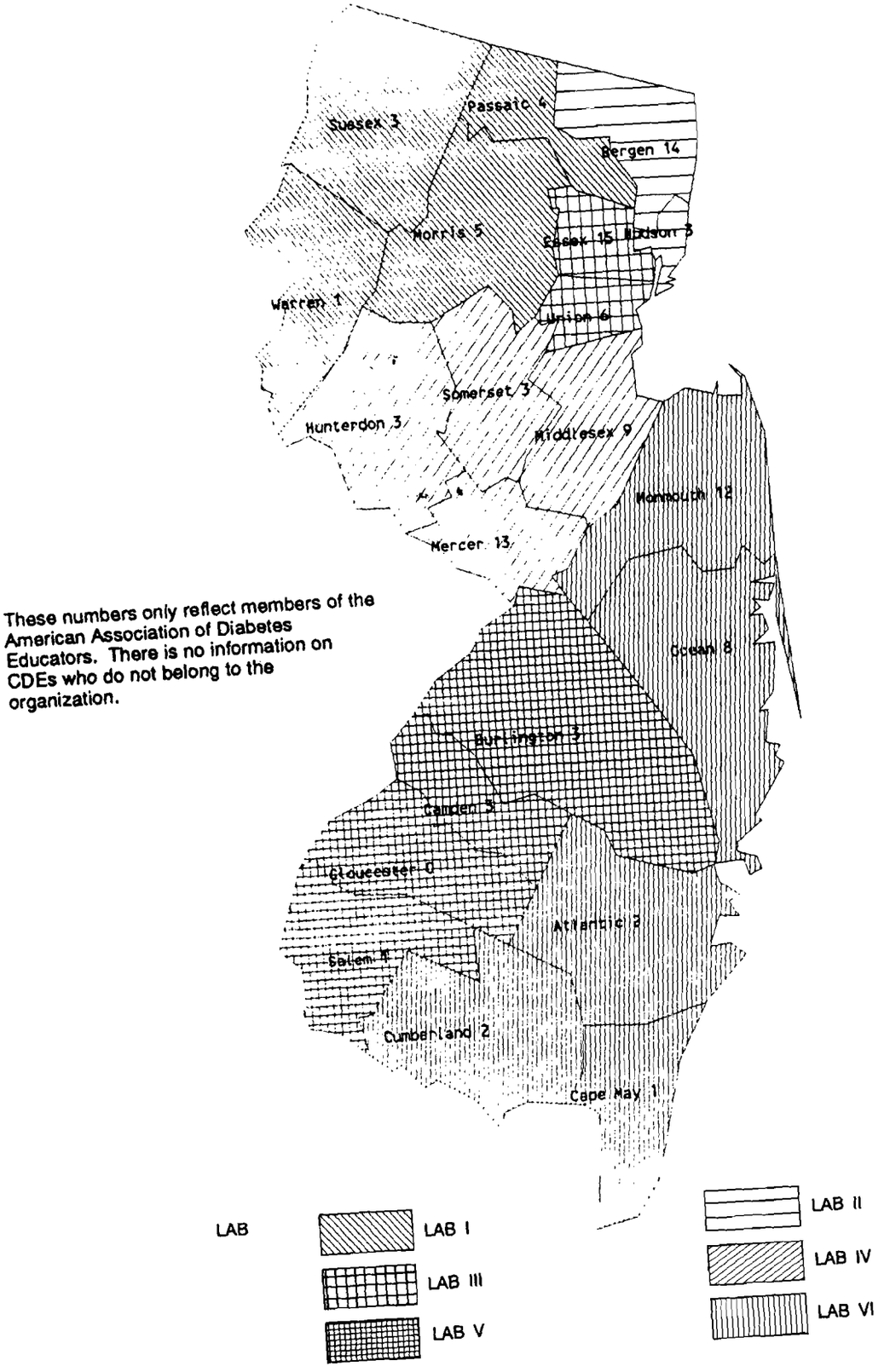


Figure 12

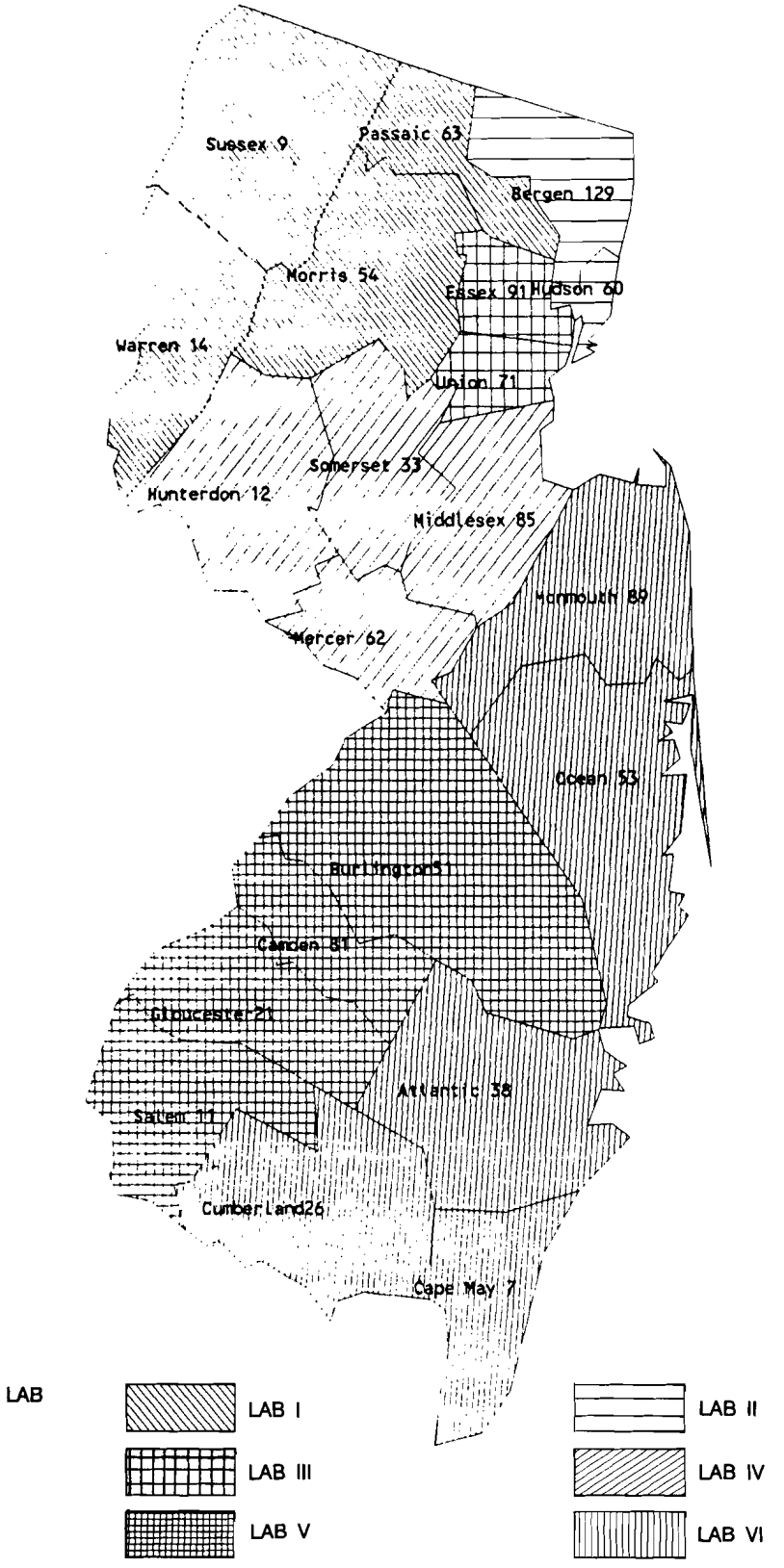
HEALTH

APPENDIX B: Distribution Maps of Various Health Care Providers Involved in the Management of Diabetes Mellitus and/or Its Complications

NUMBER OF CERTIFIED DIABETES EDUCATORS BY LAB AND COUNTY



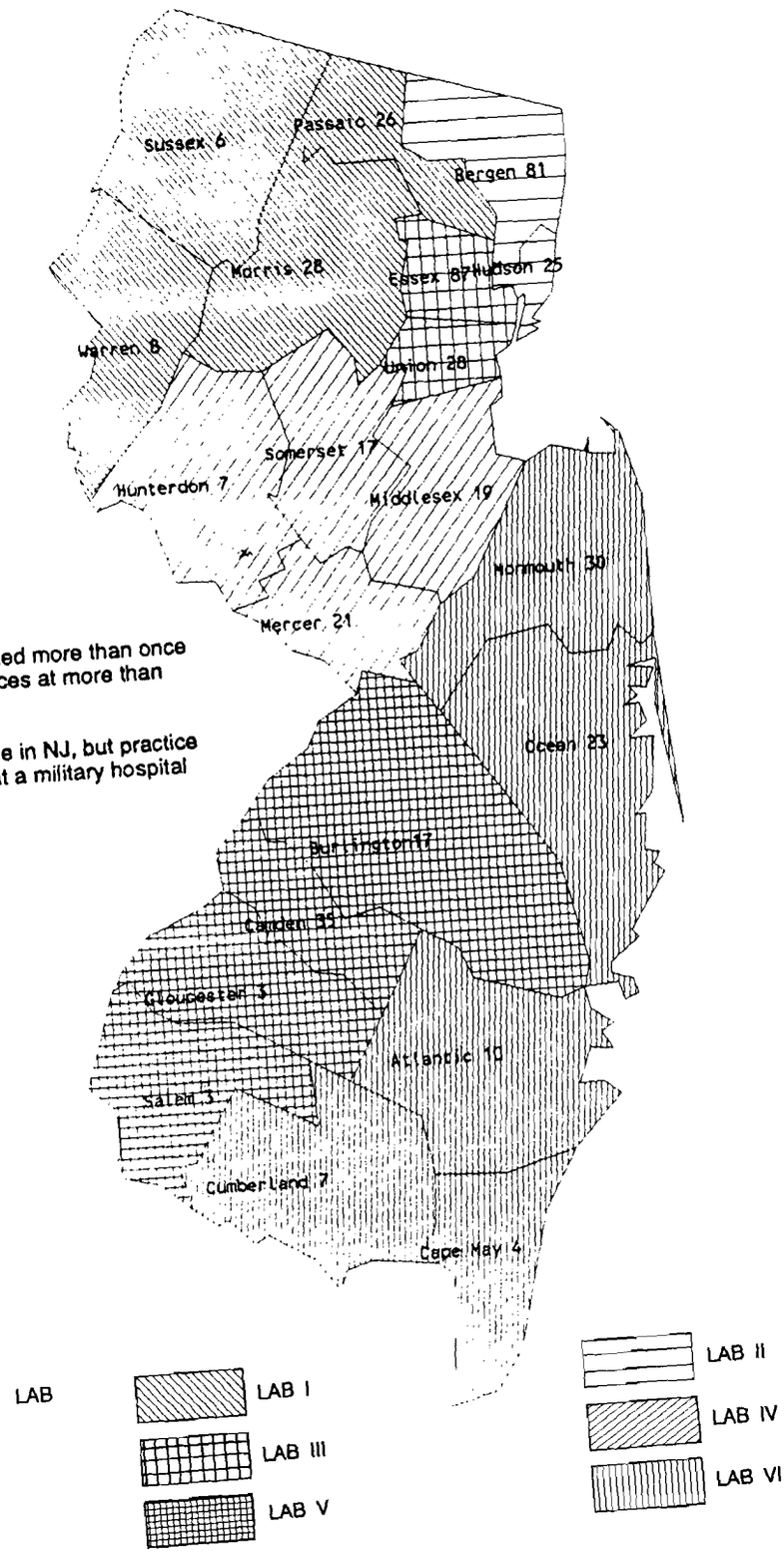
NUMBER OF OPTOMETRISTS BY LAB AND COUNTY



SOURCE: NEW JERSEY OPTOMETRIC ASSOCIATION

NUMBER OF OPHTHALMOLOGISTS* BY LAB AND COUNTY

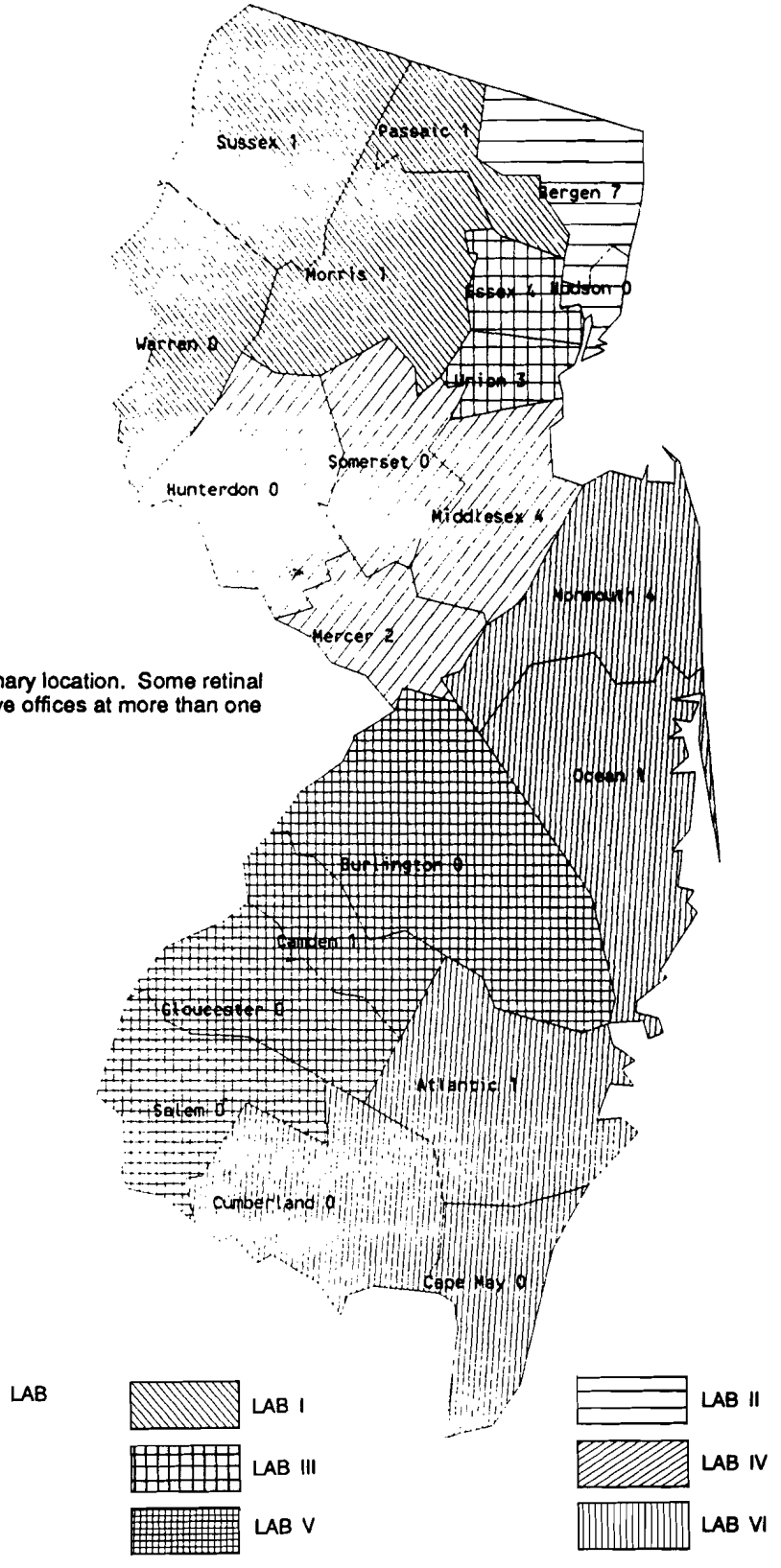
(RETINAL SPECIALISTS EXCLUDED)



* Some physicians counted more than once because they have offices at more than one site.

Some physicians reside in NJ, but practice in NY, PA or DE, or at a military hospital (Fort Dix).

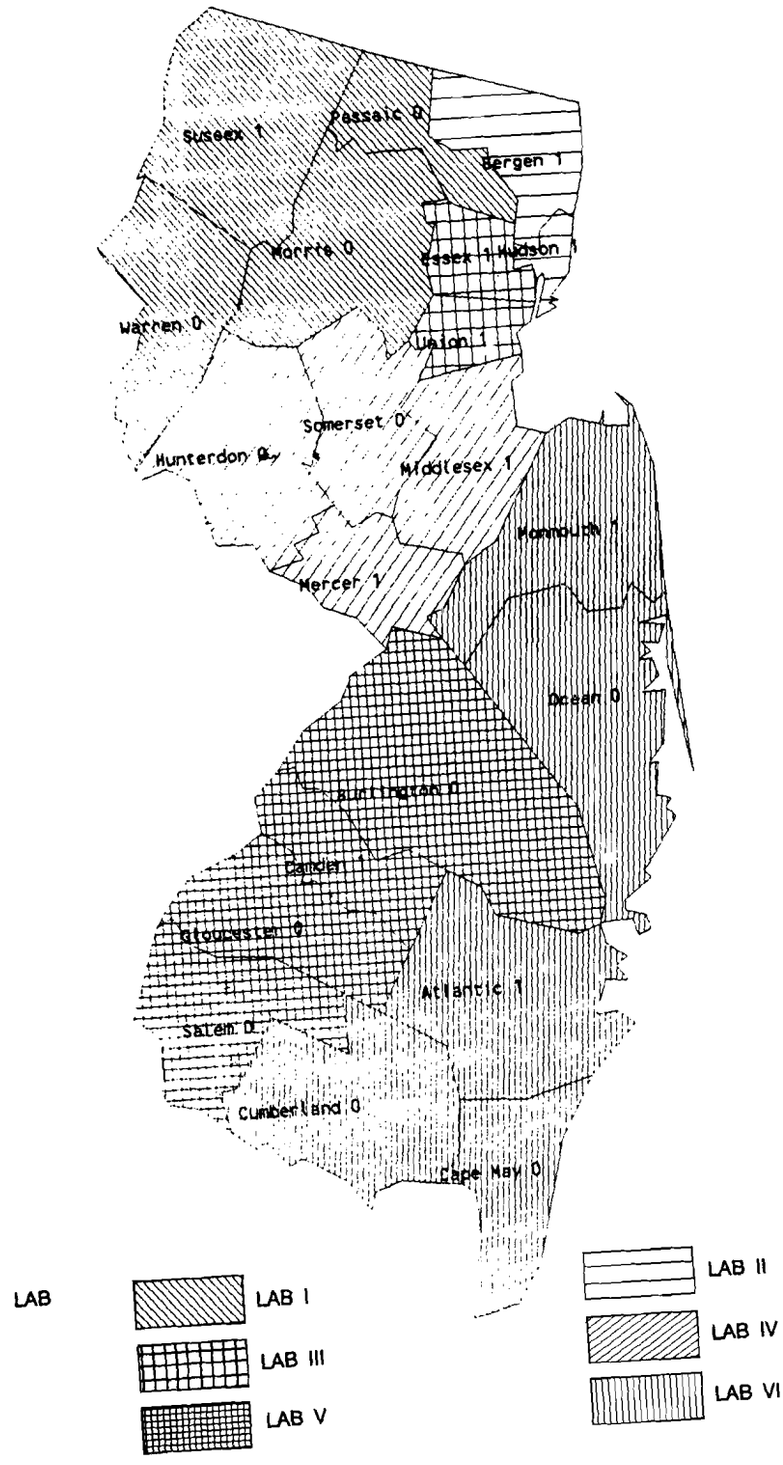
NUMBER OF RETINAL SPECIALISTS BY LAB AND COUNTY



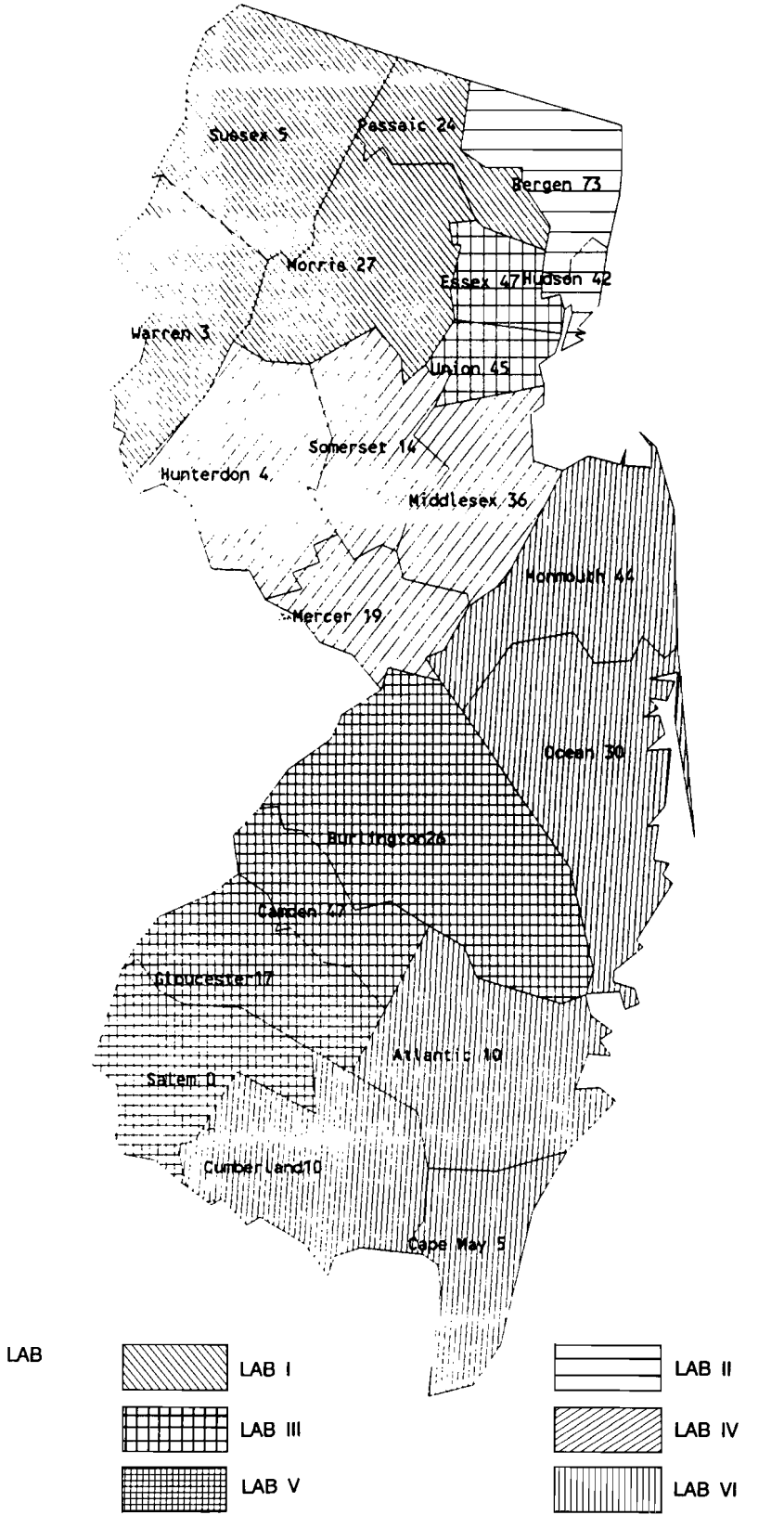
(Listed by primary location. Some retinal specialists have offices at more than one site.)

HEALTH

NEW JERSEY COMMISSION FOR THE BLIND AND VISUALLY IMPAIRED: NUMBER OF PERMANENT DIABETIC EYE DISEASE EXAMINATION SITES BY LAB AND COUNTY

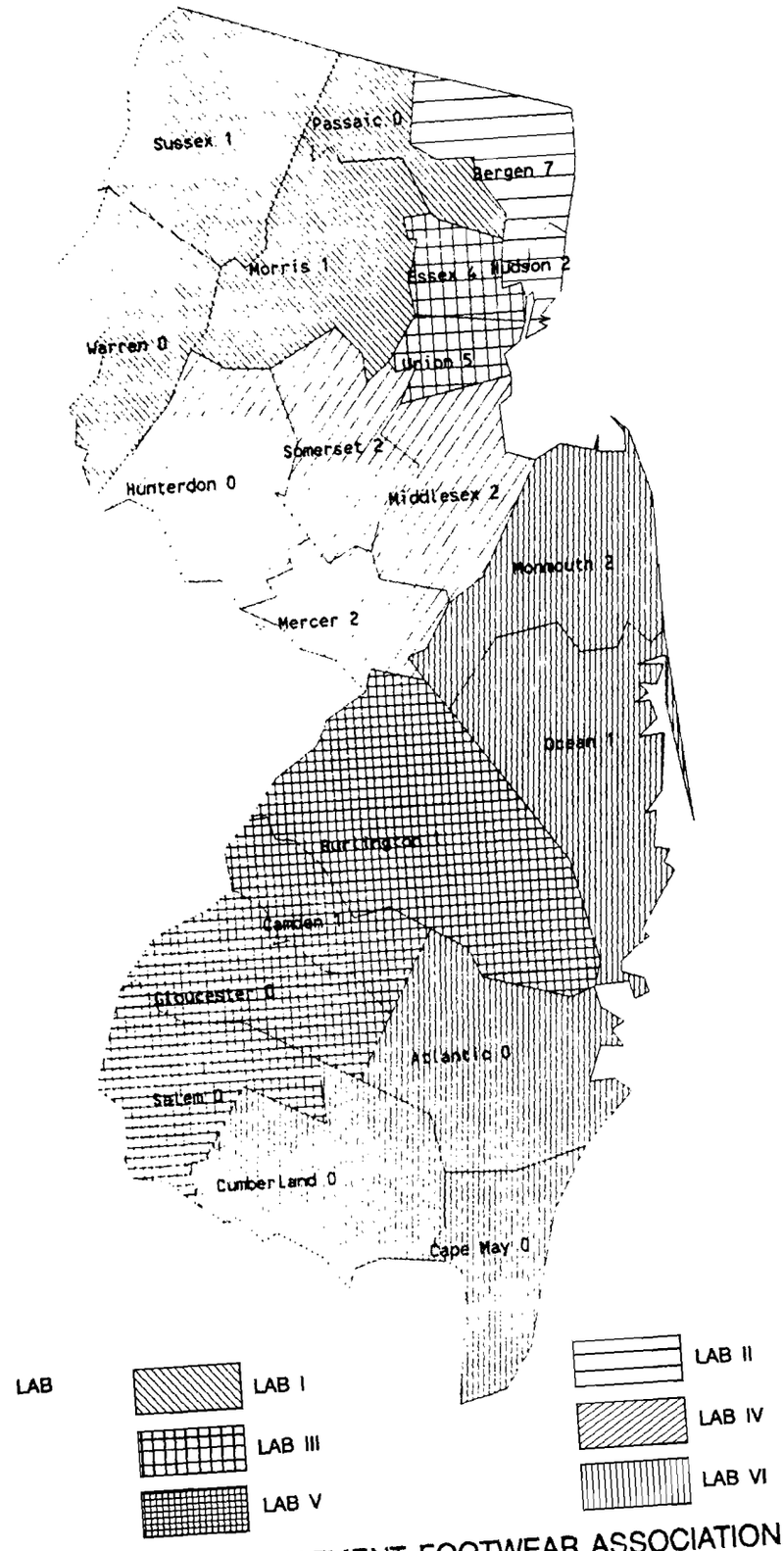


NUMBER OF PODIATRISTS BY LAB AND COUNTY



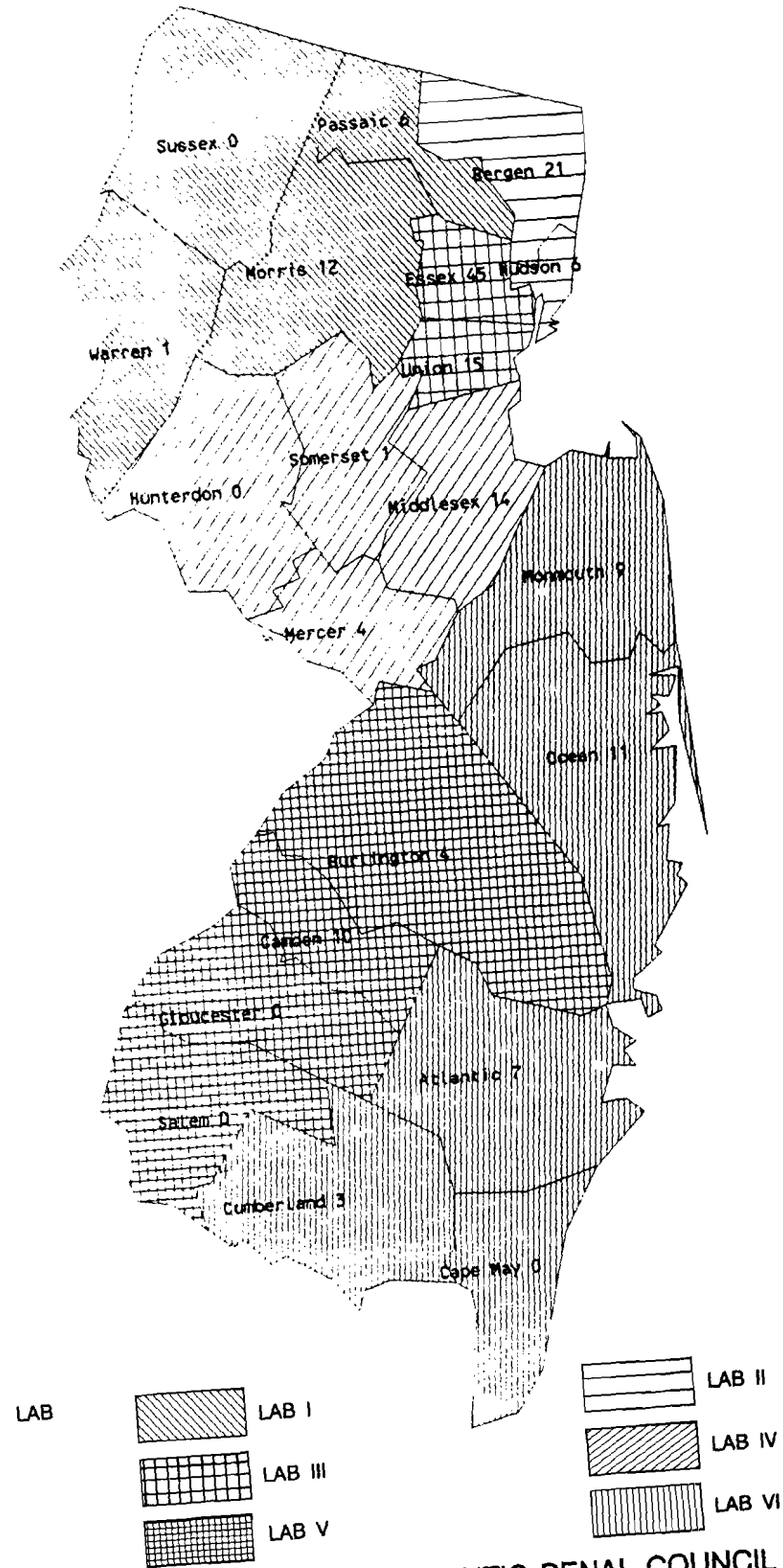
SOURCE: NEW JERSEY PODIATRIC MEDICAL SOCIETY

NUMBER OF PEDORTHISTS BY LAB AND COUNTY



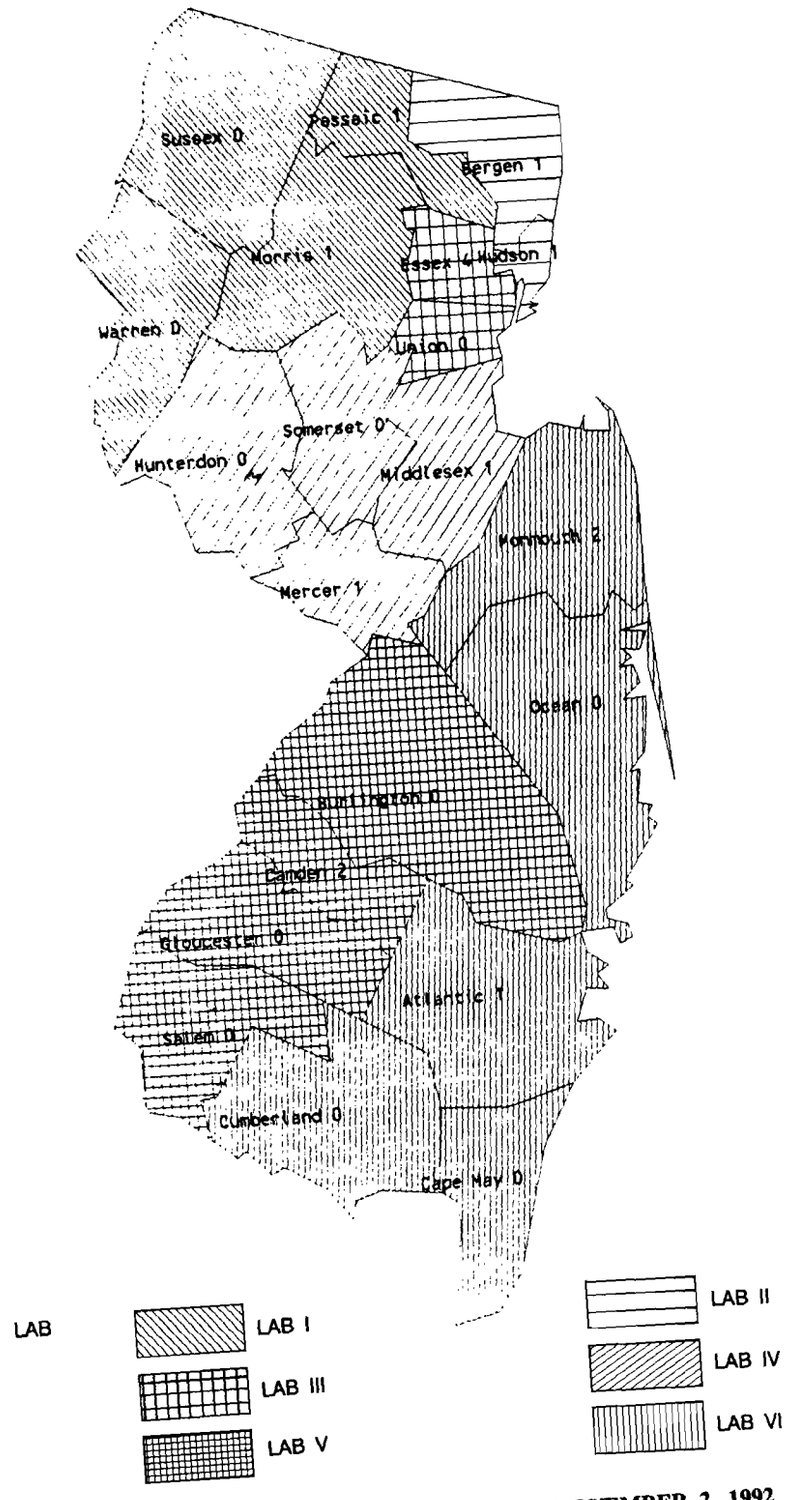
SOURCE: TREATMENT FOOTWEAR ASSOCIATION

NUMBER OF NEPHROLOGISTS BY LAB AND COUNTY

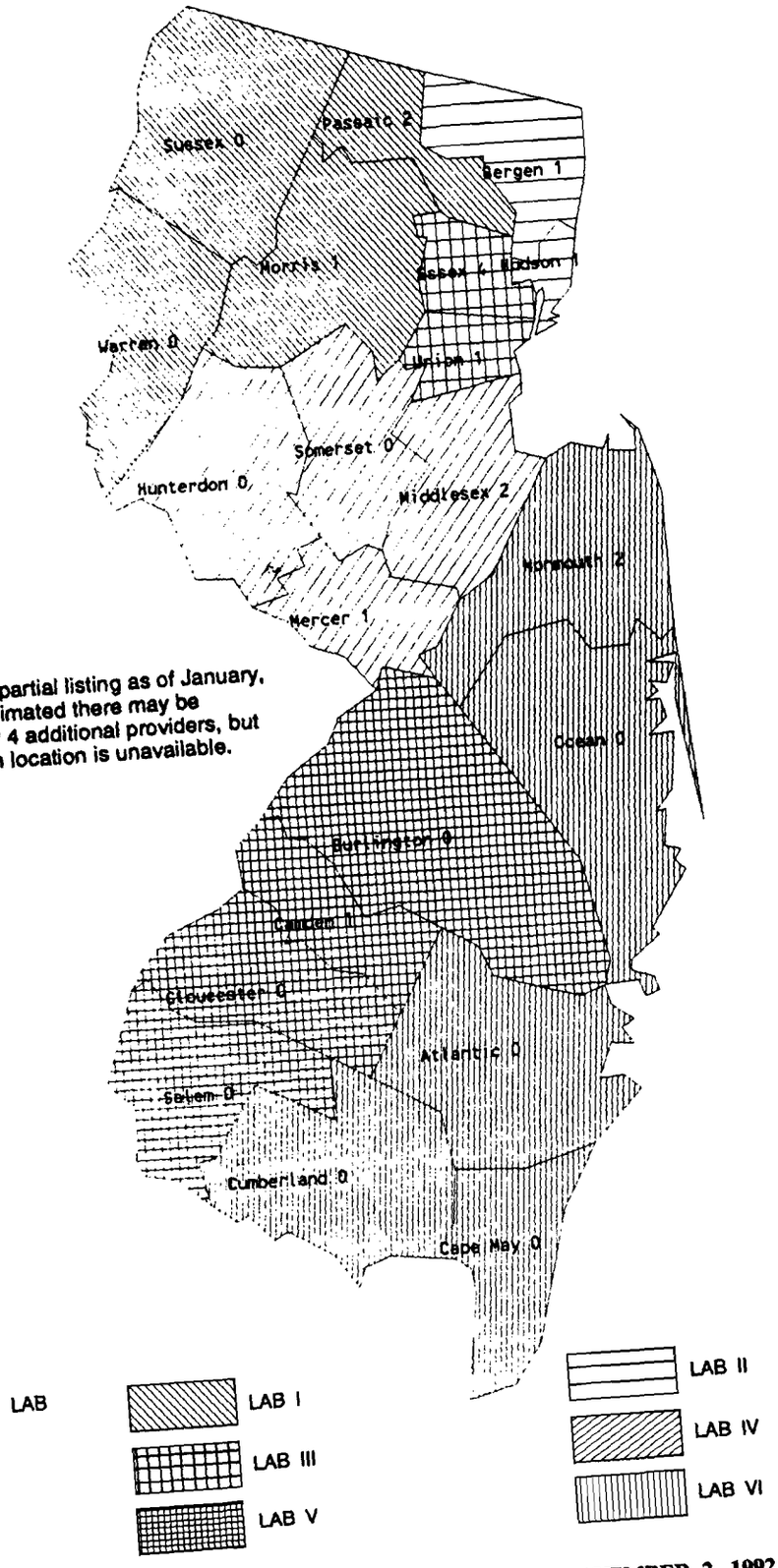


SOURCE: TRANS – ATLANTIC RENAL COUNCIL

NUMBER OF NEW JERSEY MATERNITY HOSPITALS OFFERING SPECIALIZED SERVICES FOR THE HIGH-RISK DIABETES PREGNANCY, BY LAB AND COUNTY



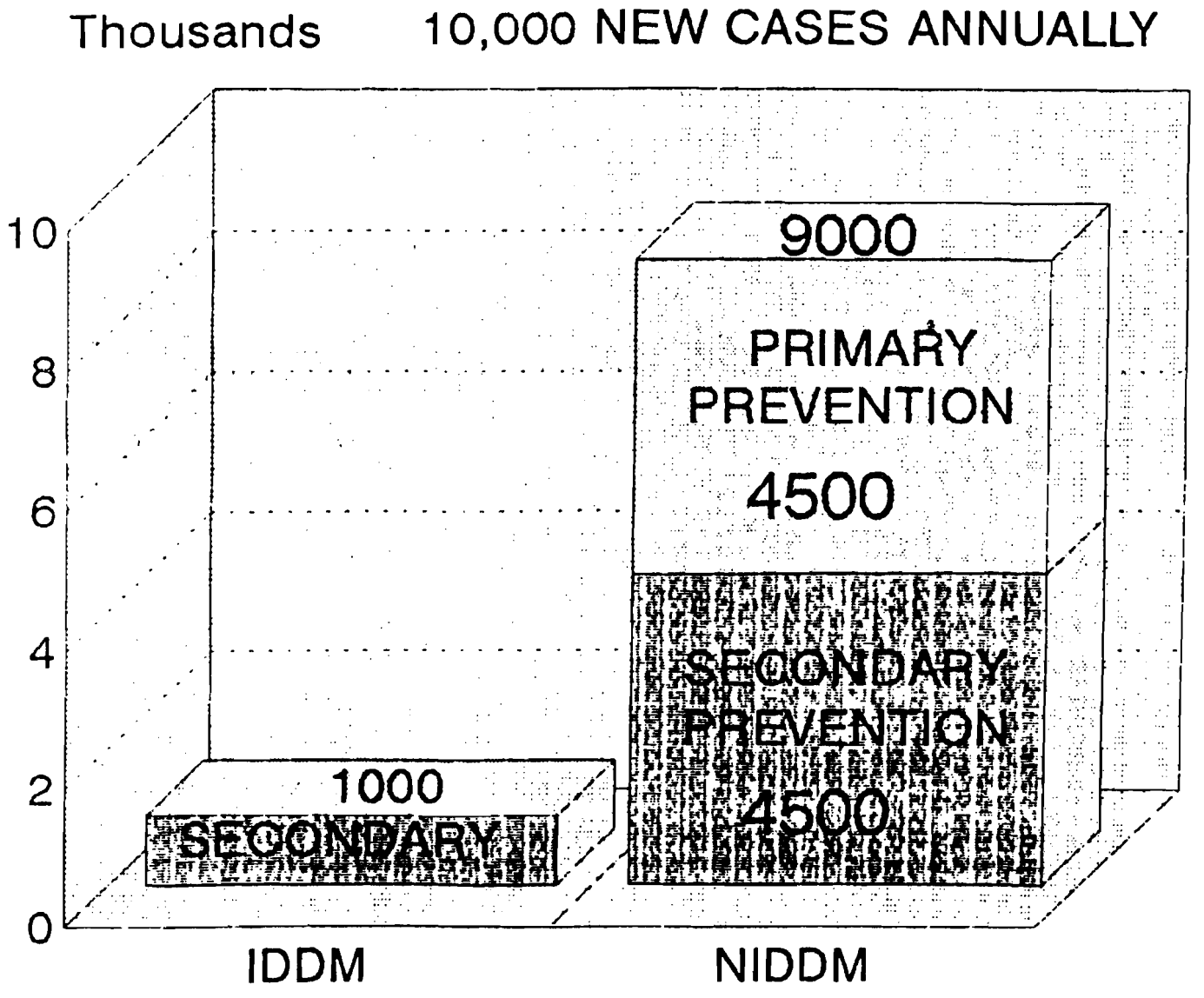
NUMBER OF BOARD CERTIFIED PEDIATRIC ENDOCRINOLOGISTS, BY LAB AND COUNTY



Represents a partial listing as of January, 1992. It is estimated there may be approximately 4 additional providers, but information on location is unavailable.

APPENDIX C: Cost/Benefit Model—Diabetes Mellitus—New Jersey Estimates
Source: State Nutrition Plan

STATE NUTRITION PLAN COST/BENEFIT MODEL
DIABETES MELLITUS - NEW JERSEY ESTIMATES



DIABETES MELLITUS

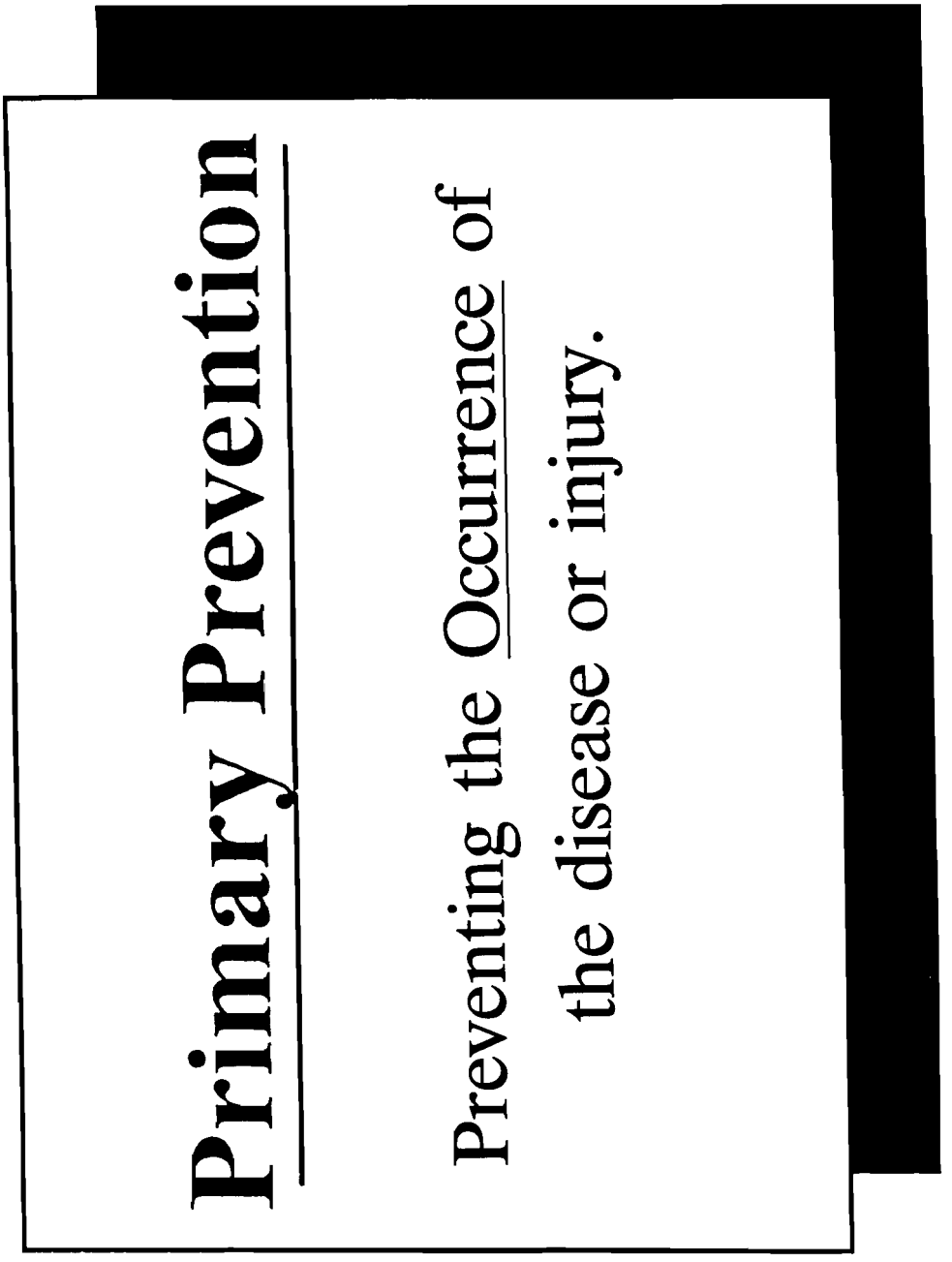
A chronic, metabolic disease characterized by high blood glucose levels caused by a deficiency in insulin production, an impairment of insulin action, or both; diabetes damages virtually every major organ system in the body and causes premature heart disease, stroke, blindness, renal failure, amputation of extremities, loss of nerve sensation, early loss of teeth, and babies born with birth defects.

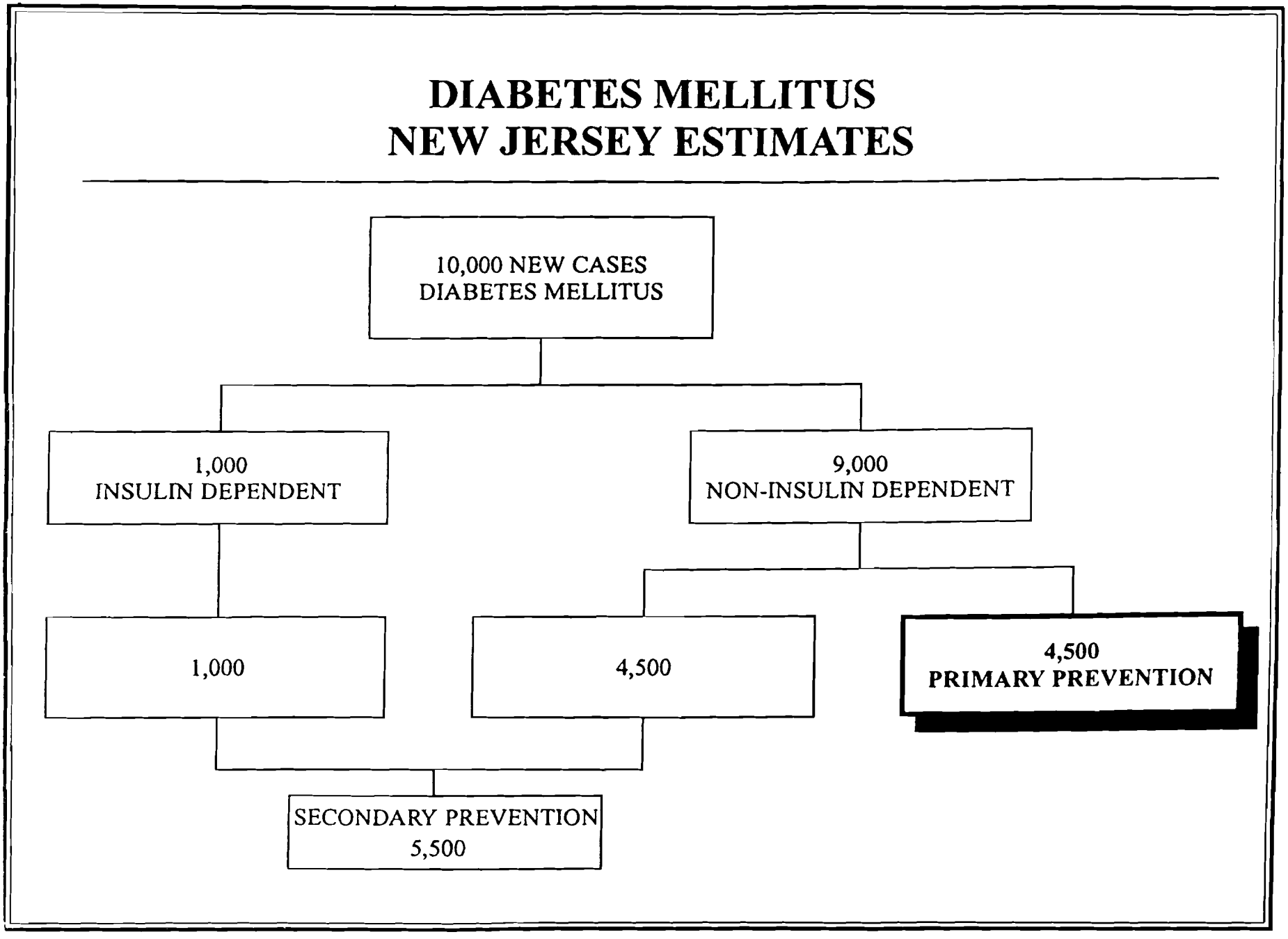
INSULIN-DEPENDENT DIABETES MELLITUS (IDDM)

- inability to produce insulin
- daily insulin injections essential for life
- diet and exercise important
- 5-10% of all diabetics
- usually appears in childhood and adolescence
- disproportionate share of total morbidity/ premature mortality associated with diabetes
- only responsive to SECONDARY PREVENTION

NONINSULIN-DEPENDENT DIABETES MELLITUS (NIDDM)

- impairment of insulin action
- frequently treated with oral hypoglycemic agents
- diet and exercise important
- 90-95% of all diabetics
- usually appears after age 40
- often associated with obesity
- strong hereditary factor
- 50% responsive to PRIMARY PREVENTION
- 50% responsive to SECONDARY PREVENTION

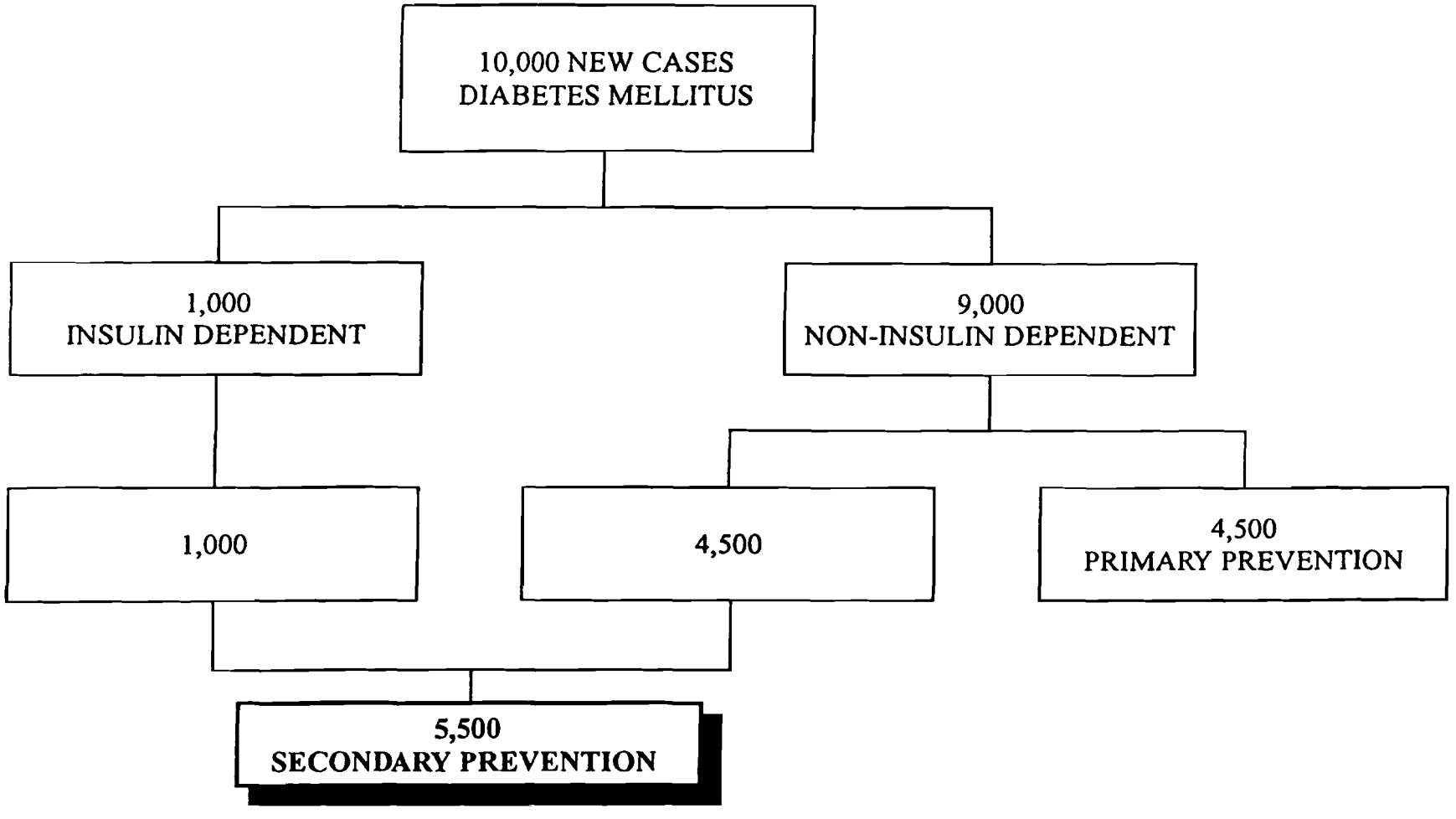

Primary Prevention
Preventing the Occurrence of the disease or injury.


DIABETES MELLITUS
NEW JERSEY ESTIMATES
10,000 NEW CASES
DIABETES MELLITUS
1,000
INSULIN DEPENDENT
9,000
NON-INSULIN DEPENDENT
1,000
4,500
4,500
PRIMARY PREVENTION
SECONDARY PREVENTION
5,500

Secondary Prevention

Early detection and treatment in order to reverse, halt, or at least retard the progress of the condition.

DIABETES MELLITUS
NEW JERSEY ESTIMATES



NUTRITION PLAN COST/BENEFIT MODEL
DIABETES MELLITUS—NEW JERSEY ESTIMATES*

POTENTIAL SAVINGS IF SECONDARY PREVENTION INITIATIVES IMPLEMENTED

COMPLICATIONS DUE TO DIABETES MELLITUS	Estimated New Jersey INCIDENCE	Estimated** Cost Per Case	Potential Percent Reduction	Estimated No. PREVENTABLE CASES	Estimated COST TOTAL CASES	Estimated SAVINGS SECONDARY PREVENTION
Diabetic Ketoacidosis	2438	$11,641	70%	1707	$28,381,855	$19,871,946
Congenital Malformations	28	$ 8,835	70%	20	$ 247,393	$ 176,710
Stroke	748	$ 9,865	85%	636	$ 7,378,923	$ 6,274,055
Coronary Heart Disease	2763	$12,450	45%	1243	$34,398,245	$15,474,849
Peripheral Vascular Disease	1333	$ 5,830	60%	800	$ 7,771,070	$ 4,663,802
Blindness	189	$ 9,957	50%	95	$ 1,881,952	$ 945,955
Lower Extremity Amputation	1098	$15,125	50%	504	$15,245,617	$ 7,622,810
End-stage renal disease—out-patient (Medicare dollars)***	540	$35,600	50%	270	$19,224,000	$ 9,612,000
					$115,296,442 Total Estimated COSTS	$64,972,815 Total Estimated SAVINGS

*Carter Center Health Policy Project—New Jersey specific
**New Jersey Department of Health Hospital Reimbursement—DRGs
***1990 Data—Trans-Atlantic Renal Council—New Jersey Specific

ESTIMATED COSTS—SECONDARY PREVENTION INITIATIVES
ALL NEW JERSEY RESIDENTS WITH DIABETES MELLITUS

Cost per patient for Diabetes Education Programs reported in literature*	Estimated Number of Cases Diabetes—New Jersey	Estimated Total Cost
$150.00 (Lowest estimated cost)	225,000	$33,750,000
$250.00 (Highest estimated cost)	225,000	$56,250,000
$200.00 (Average cost)	225,000	$45,000,000

*Geppert & Splett. "Summary document of nutrition intervention in diabetes". Supplement to the Journal of the American Dietetic Association, Effectiveness and Cost Effectiveness of Nutrition Care: A Critical Analysis with Recommendations. November 1991.

COST-EFFECTIVENESS OF NUTRITION INTERVENTION

Estimated SAVINGS Secondary Prevention	Estimated COSTS Secondary Prevention	POTENTIAL NET SAVINGS* Secondary Prevention
$64,972,815.00	$45,000,000.00	$19,972,815.00

*The **potential net savings represented in this model is probably significantly underestimated** for the following reasons:

1. Only **hospital costs for the treatment of complications** were included in calculations. Community-based services post discharge, lost labor production in and out of home, outpatient drugs, rehabilitation and specialized equipment, intermediate or possibly even long term care are all additional costs that may be incurred contingent on the patient's condition at discharge and type of complication.
2. The estimated costs for secondary prevention are based on the premise that all **225,000 persons with diabetes in the State would participate in a diabetes education program at an estimated cost of $200.00 per patient.** Even if indirect costs are added in, it is highly unlikely that this would close the gap between treatment and prevention to the extent that the outcome would result in cost-shifting rather than cost-savings.

DRAFT STATE HEALTH PLAN: CANCER CHAPTER

EXECUTIVE SUMMARY

The State Cancer Plan, a chapter of the State Health Plan, was developed under the auspices of P.L. 1991, Chapter 187: Health Care Cost Reduction Act. The Plan addresses the critical need for a comprehensive, multi-faceted approach to achieve effective cancer control for the citizens of our State.

In an effort to improve cancer control efforts in New Jersey, Frances J. Dunston, M.D., M.P.H., the State Commissioner of Health, initiated the development of the State Cancer Plan Task Force in April, 1991. The Task Force was composed of approximately 50 representatives from key private (e.g. New Jersey Hospice Association), voluntary (e.g. American Cancer Society), and public (e.g. Commission on Cancer Research) cancer organizations as well as medical, social service, insurance, education, community health care organizations, cancer survivors/consumers, private industry, and others to develop a comprehensive cancer control plan. Historically, members of the New Jersey cancer community have undertaken tremendous independent efforts in the areas of prevention, screening, and treatment. The convergence of this group symbolizes a new era in cancer control for New Jersey and strengthens the link between governmental, volunteer, and private cancer control activities which may improve cancer control efforts and the delivery of cost effective services.

It was the charge of the Task Force to identify priorities and develop goals and objectives for the State Cancer Plan to reduce cancer mortality in our State. They encompass the areas of surveillance, prevention/detection, diagnosis and treatment, continuum of care, research, and finance.

The overall goals for the State Cancer Plan include:

SURVEILLANCE: To enhance our knowledge of the incidence and impact of cancers in New Jersey, as well as to develop new sources of data on relevant behavioral and environmental factors. This information is the foundation for effective cancer control planning.

PREVENTION/DETECTION: To target specific behaviors and environmental factors that present significant risk for the development of a large number of cancers.

DIAGNOSIS AND TREATMENT: To provide state of the art treatment at an earlier stage, leading to better prognosis.

CONTINUUM OF CARE: To ensure optimum quality of life for cancer patients and their families.

RESEARCH: To maximize the efficacy of cancer research conducted in the state.

FINANCE: To provide a mechanism for funding the recommendations of the State Cancer Plan and improve access to care.

Consistent with national trends, cancer poses a significant health problem for New Jerseyans. Cancer costs for New Jersey are estimated to exceed 3.8 billion dollars yearly. Lung cancer deaths have been steadily increasing over the past 30 years among men and women, both Black and White. An estimated 85 percent of these deaths are due to cigarette smoking. Black men have consistently had the highest age-adjusted death rate. In fact, in the last 30 years, these rates have nearly doubled. For White men, the death rate for lung cancer is two-thirds that of Black men.

The most staggering increase in lung cancer rates has been among women. The death rate for women has increased fivefold over the last 30 years to an age-adjusted rate of 31 deaths per 100,000 women—although these rates remain lower than those for men. As of 1988, lung cancer tied breast cancer as the leading cause of cancer death among women.

Breast cancer, the leading cause of cancer deaths among women, will soon become the second leading cause of cancer deaths among women, if lung cancer deaths continue to increase at the current rate. On average, there are approximately 1,600 breast cancer deaths per year in New Jersey. The death rate itself has remained fairly stable over the past decades, although this stability masks the fact that increasing numbers of women are being diagnosed with the disease, while others are surviving longer due to effective treatment. It is important to note that though breast cancer incidence is higher among Whites, mortality rates are similar to those of Blacks. Furthermore, regardless of stage at diagnosis, 5-year survival rates for black women are lower than those for white women. It is believed that survival rates could be further increased with widespread use of breast cancer screening and access to effective breast cancer treatment.

"Colorectal" cancer refers to cancers of the colon and rectum collectively, and is the second leading cause of cancer death in men and the third leading cause of cancer death among women. Improved early detection and treatment methods are very likely responsible for declining death rates from this disease in recent years. Like breast cancer, it strikes persons at relatively young ages, and is amenable to treatment provided it is applied in the early stages of the disease. In New Jersey, over 2,300 people die of colorectal cancer each year. The death rates for men are consistently higher than those for women in this State.

Over the past 40 years, the number of deaths due to cervical cancer has decreased by 70 percent. Though not a leading cause of cancer death among New Jersey women, cervical cancer death is included as an objective because it is largely preventable. Each year in this State approximately 150 women die of cervical cancer. It is important to note that the death rate due to cervical cancer is approximately three times higher among Blacks than Whites. Cancer is a leading cause of death in New Jersey, second only to cardiovascular disease. Lung cancer, the most frequent cause of cancer death in both men and women in New Jersey, claimed over 4,400 lives last year. Nearly 4,000 more lives were lost to breast and colorectal cancer combined. Many of these cancer deaths were preventable—through changes in lifestyle and through early detection and treatment.

GOALS AND OBJECTIVES

Introduction

For many years professional groups with an interest in cancer have discussed developing a State Cancer Plan which would help coordinate New Jersey's cancer activities and ultimately result in a reduction of cancer incidence and mortality. Frances J. Dunston, M.D., M.P.H., State Commissioner of Health, convened the State Cancer Plan Task Force, comprised of experts in cancer research, surveillance, diagnosis and treatment, psychosocial and quality of life issues, and cancer prevention and control. Each group contributed to the development of this comprehensive plan for reducing the impact of cancer on the New Jersey population in the 1990's and beyond.

The strategies presented include expansion of health promotion and prevention activities, early detection interventions where appropriate, improving access to high quality diagnostic and treatment resources throughout the state, expanding psychosocial support to patients and their families, improving cancer surveillance, and encouraging cancer research of all types.

A small number of primary cancer sites account for nearly 70 percent of all cancer in New Jersey, therefore major efforts in cancer control should concentrate on applying methods of prevention and/or early detection toward the most frequent cancers. Cancer prevention, detection and control efforts, described in *Healthy New Jersey 2000,* provide a focus for our efforts and are listed on the following page. More detailed strategies to address the unmet needs and disparities in cancer control are elaborated upon in overall recommendations and policy issues.

Cancer Specific Objectives for the Year 2000:

Measure	Baseline	Year 2000 Objective
A. Breast cancer deaths per 100,000 women.		
Total	25.2*	22.7*
Aged 50-64	80.6	72.5
Aged 65 & Over	144.7	130.2
B. Women aged 40 and over who received a clinical breast examination and a mammogram within the past year.	—	60.0%
C. Deaths due to lung cancer per 100,000 population.		
Total population	37.3*	41.3*
Minority males	64.2*	64.8*
D. Prevalence of cigarette smoking (1989 baseline)		
Aged 20 & Over	24.5%	15.0%
High School Students	41.2%**	20.0%

E. Colorectal cancer deaths per 100,000 population.	16.9*	15.5*
F. Average daily serving of fruits and vegetables (including legumes) in the population aged 18 and over.	—	5.0
G. Deaths from cervical cancer per 100,000 women.		
Total	2.7*	1.3*
Minority	5.3*	2.6*
Aged 65 years & Over	6.3	3.2
H. Women (with uterine cervix) who have had a Pap smear in the past 2 years.		
Total	—	85.0%
Minority	—	80.0%
Aged 65 & Over	—	70.0%

*Age-adjusted death rate.

**Smoking prevalence is defined as those who reported smoking on occasion as well as those reporting regular smoking of any frequency.

The following specific goals and objectives are proposed by the State Cancer Plan Task Force and described in the following narrative, divided into six components: Surveillance; Prevention/Detection; Diagnosis/Treatment; Continuum of Care; Research; and Finance. Each component contains the specific goals and objectives and the suggested methodologies to achieve and evaluate each component. Also included are the agencies which should plan an active role in the implementation of this plan. Each of the objectives is integral to a successful cancer reduction program, thus no priority can be assigned.

A. SURVEILLANCE:

Goal: To provide timely and reliable information on cancer incidence, survival, and mortality rates and trends in the New Jersey population to be used in initiating and evaluating efforts to reduce cancer incidence and mortality.

Objective 1: To collect and maintain population-based data on cancer incidence, stage at diagnosis, survival, and mortality in New Jersey.

Rationale: Population-based data are needed to determine cancer incidence, survival, and mortality rates by age, sex, race, ethnicity, geographic location, and other groupings. These data are fundamental to planning, targeting, and evaluating prevention and control interventions. The data are also essential for health service planning related to cancer.

Methodology:

1. Continue to fund and support the N.J. State Cancer Registry.
2. Increase resources available to the Registry to eliminate the current backlog of hospital auditing and case collection and prevent future backlog.
3. Support the streamlining and enhancement modifications to the Registry so that electronic data submission and communication with reporting sources can be established.
4. Continue to support the N.J. State Vital Statistics Program.

Objective 2: To improve the timeliness and completeness of cancer reporting in New Jersey.

Rationale: To maximize the utility of Registry data, the data must be of high quality and readily available for analyses. Data that are out-dated or incomplete are of limited value for assessing cancer problems.

Methodology:

1. Educate physicians, hospital administrators, and hospital personnel about the importance of cancer reporting and the use of appropriate methodology.
2. Develop expanded case ascertainment procedures to adequately cover all facilities diagnosing cancer (e.g. free standing clinics and labs, physician offices, out-of-state facilities, etc.).
3. Develop incentives for reporting of cancer cases.
4. Support electronic data collection efforts.
5. Improve cooperative reporting agreements with other states where NJ residents are diagnosed and treated for cancer to expedite transmittal of complete data in a compatible format.

Objective 3: To improve the accuracy and quality of State Cancer Registry data.

Rationale: The State Cancer Registry has a proven track record of high quality and coverage. However, the improvement of certain data elements would improve the validity of analyses and research based on the data.

Methodology:

1. Conduct training workshops for tumor registrars and medical records personnel to improve the quality of collected data. Special emphasis will be placed on occupation/industry coding, county/municipality, stage of disease at diagnosis.
2. Support coding and keypunching of additional data items collected on death certificates such as street address and facility where death occurred. For out of State deaths, social security number, date of birth, and race must be keypunched.
3. Develop methodology to reduce the number of death certificate only cases by improved reporting techniques and increased follow back procedures.
4. Develop fully a complement of quality control measures to supplement and enhance existing methods.
5. Pursue active follow-up methods to prevent losses to follow-up.

Objective 4: To regularly produce and publish cancer incidence, survival, and mortality rates and trends, as well as special reports of importance to planning for cancer prevention and control.

Rationale: Cancer data and analyses must be available to scientists, planners and decision makers for their use in identifying problems and groups at risk, planning services, and evaluating the effectiveness of their efforts.

Methodology:

1. Produce rates on an annual basis for identification of issues requiring special reports and availability of current data for ad hoc requests (questions from the public, development of study and grant proposals, special analyses, health service planning, evaluation).
2. Publish rates and trends on a 2 to 3 year cycle but at least twice within each 5 year period.
3. Publish one special report annually, focusing on cancer issues of importance, interpretation of analyses, and recommendations for action.

Objective 5: To collect and maintain data on cancer risk factors and preventive behavior among New Jersey's population, and periodically publish prevalence rates, trends, and other analyses related to these data.

Rationale: The Behavioral Risk Factor Surveillance System (BRFSS) was funded in the state of New Jersey beginning in December, 1990, by the federal Centers for Disease Control. The random telephone survey, conducted on a monthly basis among adults in NJ, collects information on a number of health behaviors, many relating specifically to cancer. These are useful not only in planning prevention and control activities but also in assessing their impact on risk behaviors specific to NJ residents.

Methodology:

1. Collect, analyze, and report on data relating to behavioral risk factors for cancer: tobacco use; mammography and pap test utilization; practices relating to rectal exams, stool blood tests, proctoscopic exams; consumption of dietary fat and fiber.

Objective 6: To encourage and facilitate the use of cancer data for research, planning, evaluation, and educational activities.

Rationale: Data and analyses must be accessible to researchers, planners, health service providers at state and local levels, and the medical community in order to be useful in activities related to cancer prevention and control.

To regularly produce and publish cancer incidence, survival, and mortality rates and trends, as well as special reports of importance to planning for cancer prevention and control.

Objective 7: To generate hypotheses and proposals for epidemiologic studies of causal factors of cancer among New Jersey residents, determinants of the outcomes of the disease among specific population groups, and the effectiveness of prevention and screening practices.

Rationale: Once cancer incidence and mortality patterns have been delineated, a key component in preventing and controlling the disease is the determination of its causes, factors influencing its outcome, and effective techniques to prevent and detect the disease in its early stages.

Methodology:

1. Provide a core of support for the evaluation of current cancer data, generation of hypotheses, coordination of effort among experts in the epidemiologic study of cancer, development of funding proposals, and management of studies.

Objective 8: To use the State Cancer Registry to develop and enhance hospital cancer registries throughout the state.

Rationale: Hospital registries are the most effective mechanisms for collecting detailed treatment and follow-up information needed for the evaluation of treatment and quality of survival. They are also the foundation on which central cancer registries are based. In turn, the central registry can support the hospital registries in the compilation of high quality data by providing standards for reporting, assisting with follow-up and giving other important feedback.

Methodology:

1. Encourage establishment of hospital tumor registries in facilities that do not have them. Provide technical assistance to hospital registries in operational, case ascertainment & processing, and reporting procedures.
2. Further develop requirements for standardized data reporting for use by hospital registries.
3. Provide timely feedback to hospital registries on individual cases and on aggregate data to assist in reporting and use of the data.
4. Establish mechanisms whereby hospital registries can act as sources of detailed case data for special studies and investigations.
5. Assist in the educational development of tumor registry staff through training sessions on tumor registry operations, staging and coding skills, and use of selected data processing software.

Objective 9: To establish linkages with key data bases relating to cancer issues in order to facilitate studies/research and evaluations of prevention and control activities.

Rationale: Attempts to collect all necessary data in one central data set would be costly and duplicative. Establishing linkages between the State Cancer Registry and key data sets would provide access to supplementary data for research, planning, and evaluation purposes on an "as needed" basis. Computer hardware and software requirements to facilitate data base linkages should be supported.

Methodology:

1. Identify and characterize data bases that could be linked with the State Cancer Registry to supplement its data for a variety of intended research purposes including epidemiologic studies, prevention and control planning activities, and evaluation.
2. Establish agreements for linkage and storage activities.
3. Evaluate and test the available methods for matching of data sets. Determine quality and validity of matched data.
4. Publish descriptions of the data sets available for linkage and distribute to potential users such as analysts and researchers.

Objective 10: To restore the capability of the State Cancer Registry to collect detailed data on the extent of disease (EOD) and treatment.

Rationale: Federal SEER funds made it possible for a period of time for the State Cancer Registry to collect an enhanced data set that enabled the study of more treatment issues. Without these funds, the State Registry has eliminated the collection of certain data. Since the State Registry is in a unique position to document the full treatment experience of individual patients, many of whom use more than one facility both in and out of the State, restoring this capability would enhance the ability to study key issues in cancer control.

Methodology:

1. Prepare proposals for geographic or site-specific coverage of expanded data collection activities.
2. Obtain funding for the necessary collection and processing of additional data.
3. Reinstate procedures at both State and hospital levels for collecting and maintaining the enhanced data set.

Objective 11: Evaluate cancer incidence in community and small or special population settings relative to environmental and/or occupational hazards.

Rationale: New Jersey is a highly industrial state. As a result of decades of industrial activity, we have been left with hundreds of hazardous waste sites and contaminated communities. Additionally, new releases of toxic chemicals continue each year. According to the NJDEPE *Community and Right to Know Annual Report,* there were over 175 million pounds of toxic chemicals released into the New Jersey environment in 1988 alone. Some of these toxic chemicals are known carcinogens. The total burden of environmental pollution presents a real and potentially serious public health hazard. Increasingly, New Jersey residents are turning to government for answers to the perceived high levels of cancer, especially among children, in their communities. Minority, economically disadvantaged and politically disfranchised populations are frequently at highest risk. Cancer Registry data offers an important opportunity to evaluate cancer risks in small populations that are potentially exposed to environmental or occupational hazards.

Methodology:

1. Revise and update protocol for the investigation of cancer clusters.
2. Increase the resources available for community health risk assessments, thereby expanding the ability to identify and evaluate environmental hazards and their relationship to community cancer risks.
3. Based on the results of community health risk assessments, provide education, outreach and reduction services.

Objective 12: Evaluate the incidence of cancer among workers in industries and occupations.

Rationale: A number of workplace chemicals (and ionizing radiation) are known or thought to cause occupational cancer. Workers in many different industries and occupations are potentially exposed to these chemicals. Analyses of cancer registry data could identify industry and occupation groups at high risk for cancer, generate hypotheses about causal factors, and provide information necessary to target cancer prevention efforts. The role of occupational exposure in the variation of cancer risks by race and gender can also be explored using cancer registry data.

A hypothesis-generating analysis was conducted by the Occupational Health Service using data from the New Jersey Cancer Registry for cases diagnosed from 1979 to 1984. Statistical associations between several types of cancers and industry are being followed up. A limitation of the Cancer Registry is that usual occupation and industry are not included for a substantial number of the cases.

Methodology:

1. Improve the reporting and maintain the coding of usual occupation and industry items on the cancer cases reported to the Cancer Registry.
2. Repeat the analysis of 1979-1984 data for the years 1985-1987 statewide and 1985-1988 in the NJ SEER area.
3. Fund research to follow up on hypotheses generated from the analysis.
4. Design interventions based on findings from the studies including effective educational approaches for workers, employees, unions and physicians; and industrial hygiene evaluations of selected workplaces.

Evaluation of Surveillance Objectives:

1. Availability of adequate resources to maintain a functional State Cancer Registry.
2. Percentage of expected cancer cases received from reporting sources within the timeframes outlined by the reporting requirements. Percentage of case reports received through electronic data collection modes.
3. Percentage of cases for which accurate information is available on occupation/industry, county/municipality of residence, and stage of disease at diagnosis.
4. Procedure manual describing comprehensive quality control methodology and procedures for Registry staff; results of quality assessments within prescribed parameters.
5. Annual follow-up rates and lost to follow-up rates within prescribed parameters.
6. Annual rates available within six months following the completion of data collection for the diagnosis year. When the backlog of case collection is eliminated, rates will be available within nine months after the close of the diagnosis year.
7. Reports published at least twice within each 5 year period, and one special report published per year.
8. BRFSS data reported to the Centers for Disease Control per the terms of the agreement with NJSDH; tabulations for CDC-defined and NJ specific questionnaire items available on an annual basis within the quarter following the close of the year. New Jersey specific items analyzed; data available for planning and evaluation.

9. Standard analytic file will be produced at least once annually for use by researchers.
10. Requests for data, ad hoc analyses, and consultative assistance with the use of Registry data will be fulfilled within timeframes that are mutually agreeable to users and to the State Cancer Registry.
11. Registry-initiated research and analyses will be completed for use in decision-making and planning.
12. Networks and committees with broad representation among cancer epidemiology experts will meet on a regular basis to collaborate and plan responses to federal offerings as well as to initiate unsolicited proposals. Planning reports and proposals will be generated. Epidemiologic studies will be funded.
13. The number of hospitals with tumor registries will increase. Standards for data reporting will be revised and improved as needed on an ongoing basis; hospitals will be monitored for compliance with standards. Follow-up data on individual cases and aggregate statistics will be prepared for each hospital on an annual basis.
14. Trainings for staff of tumor registries will be conducted on a regular basis each year.
15. Directory of linkable data sets available to potential data users.
16. Revised protocol for cluster evaluation approved and in use.
17. Increased number of community health risk assessments completed and plan of risk reduction services completed and implemented. Studies on cancer risk from occupational and industrial exposures being conducted.

Action Groups: New Jersey State Department of Health, Office of Telecommunications and Information Systems (OTIS) of the Department of Treasury, local hospitals and other cancer reporting sources statewide, American Cancer Society—New Jersey Chapter, Tumor Registrars Association of New Jersey (TRANJ), Commission on Cancer Research, Department of Human Services, New Jersey Hospital Association.

B. PREVENTION/DETECTION

GOAL: To increase cancer prevention by minimizing high risk exposures and behaviors among susceptible individuals; to improve cancer control efforts by enhanced and early detection statewide, particularly in high risk populations.

Rationale: Primary prevention involves identifying and removing factors which cause or contribute to the development of cancer. Examples of primary prevention include smoking prevention in elementary schools, consumption of high-fiber low-fat diets, and protection from ultraviolet light exposure and potential environmental carcinogens.

Secondary prevention is accomplished by application of screening tests to "targeted," or "at risk" populations. Examples of secondary prevention include cervical cancer screening (Pap) for preinvasive stages of cervical cancer and mammography for early breast cancer detection. For most cancers, secondary prevention strategies (early detection) are directed toward shifting the distribution of cancer diagnoses to an earlier stage where presumably, treatment is more effective and survival is improved.

At this time, not all of the most common cancers in New Jersey are amenable to early detection, but recent advances in various chemical analyses, antibody detection studies, and imaging modalities are increasing the potential for earlier detection of various types of malignancies. At the moment, the most promising of these studies include prostatic specific antigen analysis for prostate cancer and the CA-125 analysis for ovarian cancer. The Department of Health and other responsible organizations must keep abreast of the progress in such areas in order to recommend and implement detection programs utilizing these new modalities as they are proven to be effective.

Objectives: Breast Cancer

1. Reduce the total breast cancer deaths to 22.7 from 25.2 per 100,000 women in New Jersey by the year 2000; to 72.5 from 80.6 per 100,000 women aged 50 to 64 years and to 130.2 from 144.7 per 100,000 women aged 65 years and older.
2. Increase to 60 percent, by the year 2000, the number of women aged 40 and over who have received a clinical breast examination and a mammogram within the past year.

Methodology:

1. Eliminate and/or reduce financial barriers to mammography screening for women 35 years of age and older and promote monthly breast self-examination as a routine activity:
   a. Provide low cost or no cost mammography screening programs accredited by the American College of Radiology.
   b. Mobilize screening vans to reach women of low socioeconomic status.
   c. Educate/encourage New Jersey State Legislators of the importance of maintaining screening mammography and clinical breast exam insurance policy benefits according to the American Cancer Society and NCI guidelines. In addition, improve existing legislation and benefits to provide services to those currently not covered. For example, the current law needs to be strengthened to require all corporations, including those who are self insured, and insurers who write policies for New Jersey residents to reimburse for screening mammography.
2. Educate and increase awareness of breast cancer risk factors and the importance of regular screening through mammography, breast physical exam and self breast examination among women and health professionals. Design culturally sensitive and learner appropriate programs to address the needs of low income and minority women.
3. Increase appropriate utilization of dedicated mammography equipment in order to lower screening costs.
4. Increase the number of appropriate mammography referrals made by physicians.
5. Increase the number of ACR accredited mammography providers.
6. Ensure that mammography personnel are experienced and properly trained; equipment is well maintained and dedicated to mammography; and that there are periodic evaluation tests of the imaging system following ACR guidelines.

Objectives: Cervical Cancer

1. To increase the proportion of women having Pap tests at least biannually to a total of 85 percent by the year 2000 for minority women 80 percent, and for women aged 65 and over to 70 percent by the year 2000. To decrease the age-adjusted cervical cancer death rate per 100,000 women from 2.7 to 1.3; and for minority women from 5.3 to 2.6; and for women aged 65 and over from 6.3 to 3.2.

Methodology:

1. Provide consumer and provider education programs to encourage cervical cancer screening. Target public information campaigns in high risk areas on prevention and the benefits of early cancer detection and screening procedures.
2. Promote the early detection of cervical cancer at all primary care physicians offices, hospitals, neighborhood health centers, family planning centers, STD and HIV clinics, rape crisis centers, senior citizen centers, and local health departments.
3. Increase the number of women receiving gynecological examinations and Pap tests regardless of the ability to pay.
   a. Increase the number of insurance policies that include preventive and diagnostic screening services in health benefit packages.
   b. Provide resources for free or low cost Pap tests/pelvic examinations and follow-up services in public clinics in targeted areas of the State.
4. Support training courses in cytology at junior colleges, technology institutions, and other appropriate educational institutions. Support training courses in cytology and radiography at junior colleges, technology institutions, and other appropriate educational institutions.
5. Establish more stringent quality assurance programs for technicians and laboratory analysis procedures.
6. Provide greater access to treatment for women diagnosed with cervical cancer.
7. Promote programs for cervical cancer prevention through STD education in high schools.
8. Develop and implement a cancer risk assessment module including screening procedures to be used in appropriate State funded projects and local health departments in high risk areas.

Objectives: Colorectal Cancer

1. Decrease the age adjusted death rate for colorectal cancer from 16.9 per 100,000 to 15.5 by the year 2000.
2. Increase the proportion of persons over 50 who have received fecal occult blood testing within the preceeding one to two years to 50 percent from a national average of 27 percent.

3. Increase the proportion of persons over 50 (who are identified as being at high risk of developing colorectal cancer) who have had proctosigmoidoscopy to 50 percent from 25 percent.
4. Increase the consumption of fruits and vegetables (including legumes) to an average of five or more servings daily.

Methodology:

1. Ensure incorporation of information about the role of nutrition and cancer prevention in a comprehensive health education curriculum by the year 2000.
2. Encourage restaurants and food providers at schools, universities, health institutions, workplaces, sports and entertainment events to offer low fat, high fiber food choices.
   a. Work with restaurant organizations to develop incentive awards for restaurants, particularly fast food restaurants, that offer low fat menu items.
   b. Establish a committee to work with restaurant organizations and sports and recreational facilities to promote food choices offering low fact, high fiber items.
3. Provide business and industry with information about the economic advantages of healthy employees, encourage them to offer wellness programs that incorporate an emphasis on cancer prevention and the role of diet, and provide incentives to employees who participate. Conduct training programs for industry staff on such programs.
4. Encourage hospitals to provide patients with instructions that stress the relationship between wellness and diet.
5. Encourage health professionals to be knowledgeable of current information about the relationship between diet and cancer and to counsel their patients accordingly.
6. Allow vacant lots to be used for neighborhood gardens.
7. Expand the number of sites accepting food stamps for the purchase of fruits and vegetables. These sites should include farmers' markets, road-side stands and food cooperatives.
8. Disseminate nutrition information to the general public through media communications and other existing, related channels such as cooperative extension home economics agents.
9. Continue early detection of colorectal cancer by medical surveillance of high risk individuals using colonoscopy, clinical examination and fecal occult blood tests.

Objectives: Lung Cancer

1. Eliminate tobacco use (except by fully informed adults).
2. Decrease the proportion of all adult men who smoke from 25.4 to 15.2 and of all adult women from 23.6 to 14.1 by the year 2000.
3. Decrease the proportion of all minority men who smoke from 25.9 to 15.5 and of minority women from 15.8 to 9.5 by the year 2000.
4. Reduce the proportion of junior high school students who smoke from 17.6 to 10 percent; high school students who smoke from 41.2 percent to 20 percent or less, and to 15 percent for those aged 20 by the year 2000.
5. Reduce the use of smokeless tobacco among youth in junior and senior high school from 8 percent and 9.8 percent respectively, to 4.5 percent by the year 2000.
6. Age-adjusted death rates for lung cancer per 100,000 population will not exceed 41.3 for the total population or 64.8 for minority males by the year 2000.

Methodology:

1. Disseminate information about factors influencing the initiation of tobacco use in young consumers and effective interventions to prevent early initiation of tobacco use.
2. Promote existing resources to the public for individual and group smoking cessation.
3. Continue to unify the multiple constituencies who are addressing tobacco use elimination with existing statewide coalition.
4. Work within the American Stop Smoking Intervention Trials (ASSIST) contract to decrease smoking rates.
5. Promote effective smoke free policies and statutes in all New Jersey workplaces, educational institutions, hospitals, restaurants and public places.
6. Provide health insurance premium incentives to non-smokers.
7. Provide educational materials to physicians, dentists and other health professionals to assist patients to stop smoking.
8. Support the Great American Smokeout each year.
9. Conduct and evaluate community and school-based programs designed to discourage students from starting to use tobacco or to encourage students to stop using tobacco. Develop school-based cessation programs for students and employees.
10. Increase the efforts to prohibit the sale of tobacco products to minors by eliminating vending machines, coupons and mailings, restricting points of sale, and by classifying tobacco as a drug not allowed in "drug free" school zones.
11. Support and evaluate the Smoke Free Class of the Year 2000 project.
12. Protect people from environmental tobacco smoke.
    a. Make all public places where children are present (day care, schools, YMCA's, teen centers, places of extracurricular instruction) entirely smokefree.
    b. Provide vigorous education for parents about protecting children from tobacco smoke pollution in private places.
    c. Most privately owned indoor places where people must go should be smokefree in all areas people must use. Included: workplaces, restaurants, stores, malls, banks, churches, laundromats, sports facilities, theaters, transport, etc. Smoking permitted areas would be allowed, if enclosed and separately ventilated and if they are not areas people must use.
    d. Create limits for the maximum level of environmental tobacco smoke allowed to enter one unit from another in apartment houses, condominiums, dormitories, other multiple unit private residences.
    e. Promote existing resources for group smoking cessation for public employees, private employees and the general public and promote effective smoking restrictions policies in private workplaces, public workplaces and public institutions as regulated by existing New Jersey law.

Objectives: Oral Cancer

1. By the year 2000, increase to at least 40 percent the proportion of people aged 50 and older, particularly black males, who have received an annual oral examination.
2. Reduce deaths due to cancer of the oral cavity and pharnyx to no more than 10.5 per 100,000 men aged 45 through 74 and 4.1 per 100,000 women aged 45 through 74.
3. Update medical and dental professionals about new and existing techniques for the diagnosis, prevention and treatment of oral cancer.

Methodology:

1. Promote the use of resources for free or low cost oral examinations and follow-up services in public clinics and dental offices in targeted areas of the State.
2. Coordinate oral cancer screening activities between state and local agencies, professional societies and the American Cancer Society.
3. Create a mechanism to notify individuals who have undergone screening that they should seek professional help for a condition (spotted visually at a screening) that might require further attention.
4. Develop an oral cancer risk assessment module including self-examination to be used in appropriate State funded projects in target areas, i.e., alcohol and drug grants, intoxicated drivers program, cardiovascular projects, smoking cessation programs, American Stop Smoking Intervention Trial (ASSIST), neighborhood health centers and local health departments.
5. Design and implement screening programs whereby dentists, oral hygenists, or other appropriate health care professionals can visually screen patients for oral cancer symptoms, and/or suspicious conditions that would require further attention. Such programs will increase access of individuals to receive oral cancer screenings, especially those persons who do not seek professional dental care on a regular basis. Programs could be conducted at work sites, senior citizen residences/programs, shopping centers, government buildings, and other sites including especially those with a potential for screening high risk individuals such as homeless shelters and Alcoholics Anonymous meetings. A screening program must be comprehensive to include notification of patients about possible suspicious conditions discovered during screening activities.
6. Implement public education program about prevention of oral cancer through publications, electronic media in New Jersey. The focus of such an effort should be targeted to school children, as well as to the adult community. This program should be a portion

of a comprehensive public information campaign mentioned elsewhere in the New Jersey Cancer Plan. This effort could certainly focus upon anti-smoking (including smokeless tobacco) campaigns.

7. Conduct an annual conference about oral cancer detection and prevention for dentists and their staff. The conference, that could take the form of a continuing education course to be given in three locations, will review new scientific findings about oral cancer and oral pathology. This effort is important in keeping the treatment community knowledgeable of new aspects in the oral cancer field.

Objective: Skin Cancer

Increase the proportion of people, all ages, who limit exposure to sun during peak hours (10:00 A.M. to 2:00 P.M.), use sunscreen or sunblock and protective clothing. Decrease the number of people incurring ultraviolet exposure from artificial sources. Increase the number of people who examine their skins for malignant change regularly. Increase the number of people whose physicians include careful examination of the skin in physical exams.

Methodology:

1. Develop and implement mass media and school based campaigns for children and teenagers, workers exposed to the sun, campers, sunbathers of all ages, and others at high risk of skin cancer. These campaigns should be designed to increase the use of sun blocks, to decrease exposure to ultraviolet rays from all sources, at all ages and to inform the high risk groups of the early warning signs of cancer.
   a. Establish a seasonal public education effort at the resort areas of the State.
2. Encourage employers to establish educational programs and free sun screen distribution to individuals who are occupationally exposed.
3. Regulate sun tanning salons and devices as described in P.L. 1989, Chapter 234.
4. Provide information on skin cancer prevention to manufacturers of cosmetics.
5. Conduct periodic skin cancer screening clinics for the public.
6. Include skin cancer prevention and detection materials in the curricula of beautician and barber training schools and include related questions on licensure exams.
7. Increase the amount of shaded areas in communities, especially public areas.

Objective: Environment

1. Identify and subsequently reduce and/or eliminate carcinogenic exposures in the home, workplace and natural environments through education and regulation where necessary.

Methodology:

1. Establish and coordinate a statewide indoor air quality program.
2. Expand monitoring and enforcement capabilities to ensure compliance with existing smoking regulations for both public/private institutions and agencies, as well as the workplace.
3. Promote existing resources for group smoking cessation for public employees, private employees and the general public and promote effective smoking restriction policies in private workplaces, public workplaces and public institutions as regulated by existing New Jersey law.
4. Expand radon testing to identify homes with elevated radon levels which have not been remediated. Promote mandatory radon testing regulations for all realty transfers in areas of high radon potential and appropriate referral to radon remediation resources.
5. Promote the establishment of a drinking water coalition to advocate appropriate regulatory change and to coordinate the functions and responsibilities relating to wells and the ingestion of potential carcinogens.
6. Promulgate new risk-based rules limiting the discharge of toxins into the air soil and surface waters of the State and continue to enforce rules related to disposal of wastes by land or incineration.
7. Continued expansion of drinking water monitoring program for volatile organics to include nonpublic and private individual drinking water systems.
8. Evaluate alternate public water supplies.
9. Disinfection technique which precludes the formation of trihalomethanes in postchlorinated drinking water.
10. Regulate underground storage tanks regardless of size in all areas dependent on private individual wells or where proximity of tanks could jeopardize other public supplies.
11. Expedite the cleanup of existing hazardous waste sites which have identified potential human exposures. Under the Superfund law, proceed with cleanup of hazardous waste sites through either Removal Actions, which are limited to sites with an immediate risk to public health or the environment, and which can be cleaned up within twelve months and for under $2 million, or Remedial Actions, which include study, design and clean up of long-term or more extensive actions.
12. Expand government-sponsored hazardous waste disposal programs for residential hazardous waste items which are currently discarded with domestic waste.
13. Minimize exposure of ionizing radiation likely to result in an increase in cancer incidence.
14. Under the Preparedness and Community Right-To-Know Program, (SARA, Title III, Sections 311-313) ensure that industrial and public facilities develop plans for managing hazardous waste and accidents. Ensure the maintenance of inventories of all hazardous chemicals that are stored and used.

Evaluation Prevention and Detection:

1. Evaluate Cancer Registry data to monitor charges in incidence rates and shift from late to early stage of disease at diagnosis. Increase in the number of professional education programs aimed at cancer prevention, detection and state of the art treatment and increase participation by professionals.
2. Evaluate changes in mortality from breast, cervical, skin, oral and colorectal cancers.
3. Increase in the number of cancer screening programs statewide and increased utilization of these services by high risk populations.
4. Monitor the change in tobacco sales Statewide.
5. Learner appropriate and culturally sensitive educational campaigns have been developed to address the prevention and detection issues for the sites mentioned in this section. Evaluations of specific campaigns have been conducted rigorously to document their efficacy.
6. Primary and secondary school curricula have been expanded to include tobacco use control and prevention, the role of nutrition in cancer prevention, preventive health screening strategies and protection from ultraviolet exposure.
7. Monitor regulatory changes resultant from this plan.
8. Document change in behaviors (decrease in smoking behavior, increase in clinical breast examination, mammography screening, Pap tests, colorectal screening via fecal occult blood testing, proctosigmoidoscopy, high fiber, low fat diet consumption, use of sun screen) through the BRFSS.
9. Foods served in schools, universities, health institutions, sports and entertainment events, worksites and restaurants are low in fat and high in fiber and include a variety of healthy choices such as Vitamin A and C rich fruits and vegetables and whole grains.
10. Document an increase in the number of insurance policies that include preventive and diagnostic screening services and financial incentives to non-smokers.
11. Increase in the number of ACR accredited mammography providers.
12. Statewide quality assurance programs are established for Pap tests.
13. Suntanning salons and devices are regulated.

Action Groups:

Citizens of New Jersey, N.J. Legislative, N.J. State Dept. of Health, Public, private and voluntary agencies involved in cancer prevention and treatment statewide, N.J. Legislature, N.J. Department of Taxation, State Health Department, American Cancer Society, Medical Society of New Jersey, New Jersey Primary Care Association, New Jersey Hospital Association, N.J. State Nurses Association, Local Health Departments, State Department of Agriculture, N.J. Agricultural Society, The Commission on Smoking OR Health, American Lung Association, GASP, N.J. Dental Association, Senior Citizen Groups, UMDNJ-NJ Dental School, Radio Broadcasts Association of N.J., N.J. Press Association, Department of Education, State and Local School Boards, N.J. Society of Oral and Maxillo Facial Surgeons, Local Chambers of Commerce, Rotary Chapters, Local Dental Societies, Licensing Bureau for Banks and Beauticians, Associations of Summer Campus, Lifeguards, Schools of Beauty and Barber Schools, American Dermatologist Association,

Local Fraternal and Professional Organizations, N.J. State Association of Occupational Health Nurses, N.J. Dept. of Labor League of Municipalities, Department of Environmental Protection, Local Environmental Commissions.

C. DIAGNOSIS/TREATMENT

Goal: Decrease preventable mortality from cancer.

Objective: Increase access to state of the art care especially by targeting interventions to the poor, minorities, and socially disadvantaged citizens of the State.

Rationale:

The inability to gain access into the health care delivery system causes delays in diagnosing and initiating prompt, effective treatment especially among the poor, minority and socially disadvantaged citizens of the State.

Special attention must also be focused on costly emerging technologies and cancer services requiring highly trained personnel such as bone marrow transplant and cytogenic and molecular biology modalities.

Methodology:

1. Coordinate existing resources and develop new methods to educate the citizens of New Jersey about cancer prevention, screening, diagnosis and treatment.
2. Ensure prompt diagnosis and treatment regardless of ability to pay. There should be a mechanism to facilitate early, comprehensive screening of potential Medicaid eligibles to insure expeditious referral and eligibility determination. For those hospitals with out-stationed eligibility workers, on-site intake is available as of January 2, 1992 and should include those individuals with clinical or potential diagnoses of cancer who appear to meet the Medicaid eligibility screening criteria. For those hospitals without out-stationed workers, training should be developed for individuals involved in the initial financial screening and referral processes.
3. Improve physician's knowledge of current diagnostic and treatment modalities.
   a. Utilize electronic medium such as the Physician Data Query (PDQ) available through the National Cancer Institute.
   b. Promote continuing education workshops to help keep physicians and health professionals abreast of state of the art diagnostic and treatment modalities.
4. Refer children with cancer to facilities with specialized pediatric oncology services.
5. Encourage existing cancer treatment facilities to participate in local, regional, and national cooperative clinical trials.
6. On a regional level, assess the adequacy of treatment facilities and plan appropriate modifications to meet the present and future needs of cancer patients.
7. Study the impact of managed care on cancer survival and cure.
8. In order to evaluate cancer data, develop incentives to promote Statewide uniformity in hospital medical records.

Evaluation:

1. Networks and committees with public and provider representation will meet on a regular basis to collaborate and plan awareness and education campaigns. Planning reports and proposals will be generated.
2. Facilities with large Medicaid recipient populations will provide out-stationed Medicaid intake workers to ensure expeditial referral and eligibility determination. Financial screening and referral training is provided for facilities without out-stationed workers.
3. Physicians and other data users will be aware of the procedure for accessing PDQ and which libraries/hospitals offer the data system.
4. Monitor the utilization of pediatric cancer centers, and use of community hospitals by pediatric cancer patients.
5. Determine that patient enrollment in clinical trials increases by 15 percent over the next five years.
6. The Local Advisory Boards will complete regional needs assessments as mandated by P.L. 1991, Chapter 187; the Health Care Cost Reduction Act.
7. Report the impact of managed care on cancer survival and cure.

Action Groups: Medicaid, New Jersey State Dept. of Health, Health Care Providers, Medical Community, ACS, Professional Organizations

D. CONTINUUM OF CARE

Goal: To ensure optimum quality of life for cancer patients and their families.

Rationale: Cancer has a profound impact on the individual and the family creating an ongoing need for coordinated services. The cancer patient's need for information, education, access to resources, and counseling and support begins with awareness of potential symptoms and may extend throughout the patient's/family's lifetime. Certain crisis points such as diagnosis, recurrence, rehabilitation, terminal care, survival and bereavement, may require an episodic need for special services. Continuity of care implies the availability of a centralized coordinating force to assist in the ongoing identification of and utilization of needed services. This concept requires strong multi-disciplinary and multi-agency coordination, including communication, interaction and the development of essential services.

The critical needs of cancer patients/families are information, education, access to resources, and psychosocial counseling/support. These needs must be met by the coordination of professionals and community agencies, in order to eliminate the fragmentation of care which characterizes health care delivery today. Other community resources including religious, educational, and fraternal organizations also play a significant role in developing and delivering needed services.

Objective 1: To provide accurate and timely information, to enable the patient and family to participate actively in decision making regarding treatment and diagnostic alternatives, choice of treatment facility, management of symptoms/side effects, termination of care, patient rights, return to an active lifestyle, and survivorship. Ensure appropriate and accessible spiritual, emotional, physical and financial resources in the community to support choices made by patients and their families.

Methodology:

1. Provide professional education regarding dissemination of socioculturally appropriate information on diagnosis and treatment options at a level and time appropriate to the patient and family.
2. Provide recommendations to require physicians and other health professionals to inform patients and their families about treatment alternatives.
3. Provide insurance coverage for second opinions regarding treatment options.
4. Provide educational materials regarding diagnosis, treatment, and outcomes.
5. Provide access to a functional computerized database containing information on state of the art treatment options; availability and location of medical, psychosocial and rehabilitative resources, and a directory of auxiliary services to aid in access to these programs and resources.
6. Promote public awareness through the workplace, schools, and other organizations to counteract employment and other discrimination against people with or recovering from cancer.

Objective 2: Ensure that cancer patients and their families have access to available resources.

Methodology:

1. Survey existing resources to identify critical factors such as language restrictions, cost, geographic location, and other factors which may affect access. These needs/resources may include (but are not limited to): an independent patient advocate; nutritional counseling; financial assistance; psychosocial counseling/support; spiritual support; transportation services; day care; homecare; respite care, hospice care (inpatient and home); legal and employment/insurance services; therapies including occupational, physical and speech therapies, and pain management.
2. Provide outreach and information to patients and families regarding available resources and to help them gain access to and utilize these resources.

Objective 3: Provide counseling/support to cancer patients and their families at all stages of the illness, and during the bereavement period.

Methodology:

1. Provide educational guidance and support directed toward individual needs to assist patients and their families in acquiring communication and decision-making skills, navigating cancer care systems, developing coping mechanisms, understanding the

bereavement process, managing pain, and dealing with emotional responses related to treatment and loss due to cancer.
2. Distribute information about resources providing counseling/support/educational services.
3. Develop and implement mechanisms to assure that these services are provided only by qualified professionals.
4. Provide training to expand the number of qualified personnel delivering these services. Provide continuing education to professionals.

Objective 4: Utilize the Local Advisory Boards, the State Health Planning Board, and other interested parties as an ongoing coordinating council to organize efforts to achieve the objectives outlined in this component regarding continuum of care.

Methodology:
1. Develop pilot studies related to continuum of care for people with cancer and their families.
2. Advocate and develop programs for unmet needs of cancer patients and their families in the State of New Jersey, including homecare, case management for the coordination of care, transportation to medical care, etc.

Evaluation of Continuum of Care:
1. Service and resource needs assessment completed.
2. Database of computerized services and resources established and utilized.
3. Increased number of policies available for second opinions regarding treatment options.
4. Public and provider education addressing issues of continuum of care conducted and evaluated.
5. Minimum professional qualification standards developed for cancer support professionals.

Action Groups: New Jersey Public Health Nurse Administration, Medical and Nursing Specialty groups, New Jersey Hospital Association, New Jersey State Nurses Association, Joint Psychosocial and Nursing Advisory Group of the New Jersey Commission on Cancer Research, New Jersey Department of Health.

E. RESEARCH

GOAL I

Enhance New Jersey's capabilities to undertake basic cancer research by providing assistance to investigators seeking the causes, prevention and treatment of cancer.

Rationale: Basic cancer research is the foundation upon which much of the progress against this disease has occurred. Advances in understanding cellular and molecular changes in cancer cells will lead to new and improved methods to prevent, diagnose and treat this disease. In addition, every $1 spent on research in New Jersey returns $3-$5 in Federal funds. Furthermore, a strong research base supports personnel needs of the biotechnology/pharmaceutical/medical supplies industries, which are so important to the economy of New Jersey.

Objective 1: Ensure that New Jersey has the scientific personnel investigating cancer in its non-profit research laboratories at levels appropriate to its higher incidence and mortality rates.

Methodology:
1. Increase the number of faculty working on cancer research projects in New Jersey non-profit laboratories from 329 to 375 within five years.
2. Support 15 new postdoctoral fellows and 15 predoctoral fellows studying cancer in New Jersey non-profit research laboratories each year for the next five years.

Objective 2: Foster continued growth of established scientists involved in cancer research at New Jersey institutions.

Methodology:
1. Expand seed grant program of New Jersey Commission on Cancer Research by five awards per year to cover the additional needs of senior investigators such as bridging grants, or new research directions.
2. Develop equipment and repair funds for non-profit institutions conducting cancer research in New Jersey.

GOAL II

Facilitate collaboration and cooperation among cancer investigators and research institutions in New Jersey to assure effective use of limited resources.

Rationale: Limited resources require that investigators work together to unite their talents and explore new strategies for improving the effectiveness of cancer research in New Jersey. Duplication of activities should be avoided and cooperation encouraged. Given the nature of cancer, multidisciplinary approaches to cancer research should be promoted. Finally, steps should be taken to move new technologies quickly from laboratory to clinic so as to assure that cancer patients in New Jersey have access to the most modern treatments available.

Objective 1: Initiate an annual planning round table conference with leaders from each major research institution.

Methodology:
1. Sponsor round table in the Fall of each year at various locations.

Objective 2: Develop scientific networks in specific areas of expertise to collaborate and respond to nationally generated Requests For Applications and Requests For Proposals as teams.

Methodology:
1. Organize units by specialty, scan grant and contract guides, initiate proposals and obtain funding for projects.

Objective 3: Increase interaction among laboratory, clinical, psychosocial/nursing and epidemiologic arenas to enhance technology transfer.

Methodology:
1. Generate Requests For Applications requiring new collaborations between researchers and practitioners.
2. Award fellowships to students of health professions investigating cancer problems.

Objective 4: Support workshops and conferences which disseminate information on research activities and increase collaboration among New Jersey scientists in basic, clinical, epidemiologic, nursing/psychosocial and other appropriate areas.

Methodology:
1. Sponsor and participate in annual, Statewide research workshops and conferences which disseminate data on research in New Jersey to at least half of the oncology health care professionals.
   a. Provide planning report to be written by round table participants.
   b. Monitor number of specialty units and proposals initiated and funded.
   c. Access the percentage of oncology health care professionals in New Jersey who participate in research conferences or other programs.

GOAL III

Identify and investigate cancers with high incidence and mortality rates in New Jersey, define key components in prevention and control, and initiate intervention models to reduce or eliminate known etiologies.

Rationale: Epidemiologic and biometrics research on the cause and natural history of cancer allows medical and health care practitioners to assess cancer risks, plan prevention and control activities, determine factors which affect survival, and measure impact on intervention activities. Cancer prevention and control research will provide new strategies to reduce high incidence and mortality from cancer.

Objective 1: Recruit additional research personnel in epidemiology, biostatistics and public health to increase epidemiologic, prevention and cancer control activities.

Methodology:
1. Support four additional core staff to work with State Cancer Registry.
2. Provide funds to support the recruitment of graduate students and postdoctoral fellows to study cancer among disadvantaged populations.
3. Expand graduate programs of public health in New Jersey to include a cancer prevention and control program.
4. Reactivate the Cancer Control and Prevention Advisory Group to the Commission on Cancer Research to develop coordination and collaboration between research teams.
5. Initiate outreach activities with outside groups.

Objective 2: Collect and maintain data on cancer risk factors and preventive behavior among New Jersey populations.

Methodology:

1. Develop data collection procedures on cancer risk factors and preventive behaviors and provide reports to New Jersey investigators in a timely fashion.

Objective 3: Initiate research in topics of special significance to New Jersey such as radon, electromagnetic fields, occupational exposures and hazardous waste sites.

Methodology:

1. Collect and maintain data on selected environmental risks for cancer.
2. Fund at least two cancer epidemiology or exposure studies per year concerning an environmental or occupational threat.

Objective 4: Expand the study of cancer prevention and control among Blacks, Hispanics, and economically disadvantaged populations.

Methodology:

1. Fund three to four grants per year to provide seed money for cancer control and prevention studies among minority and disadvantaged populations in New Jersey.

Objective 5: Develop new approaches to smoking prevention and intervention programs aimed at high risk populations.

Methodology:

1. Initiate at least one demonstration project or research study per year in smoking prevention and intervention strategies for such high risk populations as pregnant women, blue collar workers, children, and minorities.

GOAL IV

Improve methods of early detection with special emphasis on making them universally available to all citizens in New Jersey.

Rationale: Early detection saves lives. It is estimated that mammography screening following American Cancer Society guidelines can reduce breast cancer mortality by 30 percent. Research will improve methods of early detection and provide effective strategies for making such techniques available to all citizens of New Jersey.

Objective

1. Initiate one or two early detection demonstration projects per year in the state with emphasis on populations at high risk of late diagnosis of major cancers.

Methodology:

1. Continue demonstration projects such as mammography, skin screenings or colorectal tests and expand new projects as early detection techniques are improved.

GOAL V

Ensure that the most up to date cancer treatments derived from research are available and accessible to the citizens of New Jersey.

Rationale: Strong clinical research is essential to ensure that the citizens of New Jersey have access to the most modern treatments available. Studies indicate that patients have lower morbidity and mortality rates when treated in areas where research prospers. At the present time, less than one percent of cancer patients diagnosed in New Jersey enroll in clinical trials. A coordinated and organized system of clinical research activity in New Jersey will increase enrollment to more patients in their community, increase technology transfer and strengthen overall medical care for patients.

Objective 1: Provide access to modern treatments through technology transfer and clinical trials.

Methodology:

1. Encourage and support the development of clinical trials at the community level through cooperative programs.

Objective 2: Provide a local arena for clinical investigation of new products from New Jersey companies and laboratories.

Methodology:

1. Initiate cooperative activities among Cooperative Oncology Group of New Jersey, New Jersey Pediatric Hematology Oncology Network, technology transfer centers and other clinical programs with local pharmaceutical companies, biotechnology firms and basic cancer research labs.

GOAL VI

Ensure that children with cancer in New Jersey receive the most modern treatments available through specialized pediatric treatment centers which participate in the Children's Cancer Study Group and the Pediatric Oncology Group.

Rationale: It has long been recognized that a significant difference exists between tumors of adults and those of children. Prognostic factors in childhood cancers require specialized attention. Staging has become increasingly complex. For children with cancer, the ability to participate in national trials is essential. Such research has improved survival rates for children with cancer to over 70 percent for seven years after diagnosis. Furthermore, multidisciplinary treatment and support of children with cancer requires teamwork and cooperation. For these reasons, pediatric cancer research has its own special needs and goals.

Objective 1: Increase support for the New Jersey Pediatric Hematology Oncology Network and its seven participating pediatric cancer centers.

Methodology:

1. Improve laboratory and treatment capabilities so that members of the New Jersey Pediatric Hematology Oncology Network can carry out cytogenetic, and molecular biology studies as well as state of the art treatments such as bone marrow transplantation.
2. Provide funds to support research studies on important problems in pediatric cancer treatments such as the long term effects of treatments, or the psychosocial impact of bone marrow transplants.

Objective 2: Enhance cooperation with groups such as the New Jersey Pediatric Hematology Oncology Network to analyze the causes of pediatric cancer in New Jersey.

Methodology:

1. Fund at least one pediatric cancer epidemiology study per year.

GOAL VII

Encourage ongoing nursing, psychosocial, and rehabilitative research in New Jersey through grant proposal development and provision of funding. Research priorities should be a comprehensive assessment of interests and needs in these areas.

Rationale: Because of the overwhelming nature of a cancer diagnosis and recently improved survival patterns, it has become increasingly important to understand how persons can be helped to live with cancer. Psychosocial issues must be understood in order to prevent, reverse or remediate the long term consequences of cancer. In addition, the role of nursing research in symptom management is critical to improving patient outcome. In New Jersey at this time, support for research in these areas is limited to a few projects. Consequently, ongoing research in these areas is almost non-existent. Efforts must continue to promote research into the psychosocial, nursing and rehabilitative areas of cancer.

Objective 1: Conduct a needs assessment survey of current and proposed oncology nursing, psychosocial and rehabilitative research activities throughout the State utilizing hospital cancer programs, schools of nursing, and the New Jersey chapters of the Oncology Nursing Society.

Objective 2: Develop a grant proposal mechanism to target research related priorities identified by the assessment survey.

Objective 3: Fund at least four research studies per year in the areas of nursing, psychosocial and rehabilitation with State monies.

Evaluation Research:

1. Conduct a comprehensive survey of personnel, facilities, and resources every five years to determine the number of Full Time Equivalents (FTEs) in research laboratories in New Jersey.
2. Monitor on an annual basis the amount of federal funds and peer reviewed publications generated from grants, and use of purchased equipment.
3. Conduct a statewide survey of cancer resources every five years to evaluate the number of epidemiologists, biostatisticians and related staff in New Jersey laboratories and institutions.
4. Provide a report on cancer risks every three years by responsible agencies.
5. Annually monitor the amount of Federal funds, other new research monies, and peer reviewed publications and presentations generated from grants. Monitor progress toward the specific aims of projects.

6. Determine that at least two different high risk populations have been reached with smoking prevention or intervention strategies for smoking cessation.
7. Determine progress toward New Jersey's Year 2000 objectives for major cancer sites.
8. Determine that patient enrollment in clinical trials increases by 15 percent for over the next five years.
9. Initiate at least two clinical trials annually of new products with New Jersey-based cooperative groups or similar programs.
10. Ensure that one fully equipped, pediatric cytogenetic laboratory is conducting research in New Jersey by 1996.
11. Determine research capabilities and needs of pediatric cancer centers in New Jersey every five years.
12. Complete a survey which identifies oncology nursing, psychosocial, and rehabilitative needs by the end of 1992.

Action Groups: New Jersey Commission on Research, University of Medicine & Dentistry of New Jersey and its affiliated schools, Rutgers, The State University, Princeton University, New Jersey State Departments of Health and Environmental Protection, American Cancer Society, Coriell Institute for Medical Research, Center for Molecular Medicine, Immunology, The Oncology Society of New Jersey, the Oncology Nursing Society, Cooperative Oncology Group of New Jersey, New Jersey Pediatric Hematology Oncology Network, UMDNJ technology centers, The Center for Advanced Biotechnology Medicine, and other appropriate organizations.

F. FINANCE:

Goal: Provide mechanisms for funding the recommendations of the State Cancer Plan.

Rationale: Cancer prevention, detection, diagnosis, treatment and continuing care should be available to all citizens regardless of ability to pay.

Objective 1: Propose a referendum to citizens of New Jersey to increase the state excise tax on tobacco products and dedicate these revenues for use in implementing and evaluating the State Cancer Plan.

Rationale: The decision of whether or not to smoke is highly responsive to cost per pack. A higher price for cigarettes has been found to be a strong deterrent to beginning the habit, especially among the young. A higher cost also discourages smokers from continuing the habit.

Tobacco consumption by adolescents experimenting with tobacco is price sensitive. According to the literature, for every 10 percent increase in cigarette prices, a 12 percent decrease in adolescent and 4.2 percent decrease in adult smoking rates can be expected. Although excise taxes are regressive, a high excise tax is justified in light of the enormous societal cost and disease burden produced by smoking.

An estimated $40 million in revenue would be realized for a tax increase of only $.05 cent per pack.

Objective 2: Ensure that all New Jerseyans have access to adequate health care.

Methodology:

1. Should Congress not enact legislation within the next year for a universal health care system to ensure that all New Jerseyans have access to quality health care, the New Jersey Legislature should enact a universal health care plan that ensures that all New Jerseyans are covered and assured access to health care.
2. Increase the number of insurance policies that include preventive and diagnostic screening services such as smoking cessation, nutrition counseling, the Pap test, and mammography in their health benefits packages.
3. Minimize waiting periods for insurance coverage.
4. Minimize exclusionary clauses regarding preexisting conditions from insurance policies.

Objective 3: Appropriate State funds for cancer prevention, detection and diagnostic services.

Rationale: Such an appropriation would enhance current cancer screening efforts and is necessary for New Jersey to become competitive in attracting matching federal funds.

Methodology:

1. Educate legislators on the long term benefits and cost savings associated with prevention and early detection of cancer.

Objective 4: Solicit other untapped sources of funding for support of the cancer plan's objective.

Methodology:

1. Develop network of contacts at public and private foundations with an interest in cancer.
2. Encourage the financial support of New Jersey corporations and industries for projects affecting their employees and within their scope of interest.
3. Research new avenues of Federal and State funding for projects outlined in this plan.

Evaluation of Finance:

1. Excise tax is implemented and resulting revenues are dedicated to implementing and evaluating the State Cancer Plan.
2. Increase in number of residents covered by adequate health insurance.
3. Increase in number of policies written for New Jersey residents which include preventive and screening services.
4. Increase in number of policies written for New Jersey residents which have shorter waiting periods and cover individuals regardless of a history of cancer.
5. State monies are appropriated for cancer prevention and detection initiatives.
6. Foundation, corporate, and Federal support are available for the implementation of the State Cancer Plan recommendations.

Action Groups: New Jersey Legislature, Departments of Health, Insurance, Taxation, and the citizens of New Jersey.

C. PROBLEM IDENTIFICATION/EXISTING RESOURCES

Introduction

Cancer is a group of over 100 specific diseases in which abnormal cells grow at an uncontrolled rate and spread. It is estimated that nearly one in every three Americans will develop cancer in his or her lifetime, and that three of four families will be affected. On an individual basis, however, this statistic can be modified. Certain associated risks for developing disease are considered fixed, such as age, gender and genetic background. They are predetermined and cannot be altered. Other risk factors are considered to be modifiable, such as smoking, alcohol use, certain sexual practices, dietary fat and fiber intake, and occupational exposure to toxic substances. It is thought that modifiable risk factors may account for 70 percent of all cancer, and perhaps as much as 80 percent if occupational exposures are included. People with multiple risk factors have an even greater likelihood of developing disease and, for them, reducing high risk behavior is of paramount importance.

Many cancers are associated with both fixed and modifiable factors. An example is colorectal cancer for which people most at risk are age 40 or older, have a genetic inheritance of bowel diseases or have a family history of colorectal cancer. Diets high in fat have also been associated with cancers of the colon and rectum. The suspected relationship between diet and cancer is not well known among the public. Increasing public awareness of the role of diet in cancer will be a factor in achieving a decrease in colorectal cancer deaths.

Cancer accounts for one out of every five deaths in the United States. It is not one disease, but a constellation of more than 100 different diseases, each characterized by the uncontrolled growth and spread of abnormal cells. Cancer may strike at any age though it does so more frequently with advancing age. Research has demonstrated that many cancers can be prevented, or, if detected and treated at early stages, cured.

The prevention or early detection of cancer relies on the awareness of risk factors which predispose individuals or groups to develop the disease, the knowledge of ways to reduce risk, and access to the resources needed to practice risk reduction. Using the example of colorectal cancer, individuals, especially those at high risk due to a family history of colorectal cancer, should be aware that the consumption of a low fat, high fiber diet may be of benefit in preventing this disease. They should also be aware of the need for regular examination by a physician and for appropriate screening beyond age 40, as well as the warning signs of colorectal cancer. Then, they must know which foods to choose in order to eat a low fat, high fiber diet. Finally, they must have resources to purchase those foods, as well as to obtain preventive and follow-up medical care.

In New Jersey as in the nation, cancer is a significant public health problem. Over the period of 1979-1985, the average number of incident cases of reportable cancer diagnosed each year among New Jersey

residents was 34,741, of which approximately 98 percent were invasive. Blacks and Whites, the two major race groups in the state, accounted for 33,242 or about 96 percent of the total cases during this period. New Jersey's rates per 100,000 population for total cancer incidence among Blacks and Whites of both sexes are higher than the corresponding SEER (Surveillance, Epidemiology, and End Results Program) rates of the National Cancer Institute.

A recent report of the New Jersey State Cancer Registry, *The Most Frequent Cancers In New Jersey: Incidence, Stage, Survival and Mortality Rates 1979-1985,* indicated that eleven cancer sites are responsible for about 70 percent of all cancers diagnosed among New Jersey residents. These sites are bladder, female breast, uterine cervix, uterine corpus, colon/rectum, leukemia, lung, non-Hodgkins lymphona, oral cavity, ovary, and prostate. By examining this information in conjunction with the latest knowledge of feasible methods for prevention, early detection, and treatment of specific types of cancer, we have the tools to develop effective control strategies for those cancers that cause the greatest amount of death and disability. Cancer control relies on the understanding that many cancers can be prevented by changes in lifestyle and successfully treated when detected at an early stage. Survival rates among cancer patients can be improved through changes which are targeted toward early detection and access to state of the art treatment modalities.

There are two major sources of data used in the preparation of cancer rates for New Jersey. Mortality data are obtained from the Vital Statistics Program of the New Jersey State Department of Health. Incidence data are obtained from the New Jersey State Cancer Registry and are used in the calculation of age-adjusted rates, relative survival, and distribution of stage of disease at diagnosis. The data which follow are based on malignant tumors only (excluding carcinoma in-situ) for all cancer sites except bladder, which includes in-situ tumors.

The relative survival statistics presented in this chapter were calculated for the Cancer Registry by the SEER Program of the National Cancer Institute.

These statistics represent the life expectancy of cancer patients compared with the life expectancy of those of a similar age, sex, and racial background in the general United States population. As such, they represent an indirect method of measuring the single effect of cancer on normal life expectancy.

Age-adjusted incidence and mortality rates have been calculated using the direct method of standardization. All rates are adjusted to the 1970 United States Standard Million. The New Jersey population estimates for 1980-1985 were provided by the SEER Program through an interagency agreement with the United States Bureau of the Census. The data indicate that, together, Whites and Blacks account for approximately 98 percent of the New Jersey population.

Presented below are data abstracted from the *The Most Frequent Cancers in New Jersey: Incidence, Stage, Survival and Mortality Rates* which describe the major cancer sites affecting the New Jersey population, a description of cancer in general is discussed under the heading "All Cancer Sites". Comparisons of incidence, mortality, and survival rates as well as staging information on each of the major race-sex groups are included. For the purposes of brevity, the component data charts accompanied by statistical analyses are included in the Appendix (see Exhibit A).

All Cancer Sites

During the period of 1979-1985 an average of 34,741 incident cases of cancer were diagnosed each year among New Jersey residents. Blacks and Whites combined averaged 33,242 new cases of cancer each year. For invasive cases of cancer, (which excludes most carcinoma in-situ) there was an average of 32,582 cases of new primary cancers among Blacks and Whites. Specifically, there was an average of 29,653 incident cases of invasive cancer occurring among Whites and 2,929 cases among Blacks each year during this period.

During this same period, an average of 16,014 deaths occurred among black and white residents each year with cancer as the underlying cause of death. Of these deaths, 7,483 were among white males, and 6,893 were among white females, 924 were among black males and 714 were among black females.

It is helpful to observe the patterns of change in cancer incidence and mortality rates for specific groups or areas when planning effective interventions. Total cancer incidence and mortality rates by Local Advisory Board (LAB) for Blacks and Whites of both sexes are presented in the Appendix (see Exhibit A). Data for specific sites may be obtained from the New Jersey State Cancer Registry.

New Jersey's incidence rates for total cancers (all sites combined) did not increase as rapidly as the SEER rates for any race/sex group during 1980-1985. White females and males in New Jersey experienced slight increases in incidence each year. Black females and males in New Jersey experienced slight decreases in incidence rates over this time period.

By contrast, New Jersey's mortality rates for all cancer sites, for all race/sex groups except white females, increased more rapidly during 1980-1985 than the corresponding national rates. Black females in New Jersey experienced the largest increase of the four race-sex groups. Black males in New Jersey experienced an increase similar to that among white males in New Jersey. White females in New Jersey experienced an increase that was not as large as that for the other race/sex groups in the state, nor as large as that for white females in the SEER comparison area.

A closer look at the changes in incidence and mortality rates for specific cancer sites shows that rates for some sites are decreasing while others are on the rise. It may be useful for planning purposes to review those sites for which the incidence and mortality rates are increasing, especially in the context of availability of prevention and early detection methods.

For black females in New Jersey, both incidence and mortality rates increased steadily through the 1980-1985 period for lung cancer, colorectal cancer, and uterine cancer. For white females in New Jersey, increases were experienced in incidence and mortality rates for lung cancer, breast cancer, and non-hodgkins lymphoma.

For black males in New Jersey, increased incidence rates during the period were experienced for oral/pharyngeal cancer and Non-Hodgkins Lymphoma. Increased mortality rates were experienced for prostate, colorectal, and bladder cancers.

Among white males in New Jersey, increased incidence rates during 1980-1985 were experienced for Non-Hodgkins Lymphoma and oral/pharyngeal cancers. Mortality rates showing the largest increases during this period for New Jersey white males were for Non-Hodgkins Lymphoma, prostate, and lung cancers.

Age-specific cancer incidence and mortality rates have been calculated for each five-year age interval for all the race/sex groups evaluated in the 1979-1985 report. (For purposes of brevity, they have not been included here but are available from the NJSCR upon request.) In general, the risk for developing cancer increases steadily with age. Because our population is growing proportionately older, New Jersey's cancer burden will expand, even if the rates within each age group remain stable.

Cancer Profile: Selected Sites

1. Breast Cancer

Breast cancer is the most common form of cancer among women in this country; it affects one in every nine women at some time in their lives. An average of 4,600 new cases were detected annually among New Jersey women during the period, 1979-1985. During the same time period, there was an average of 1,500 deaths per year attributed to breast cancer.

Comparing the race-specific, age-adjusted incidence rates for the 1979-1985 time period, white females have an overall 21 percent higher incidence rate than black females (See Appendix). For Whites, the incidence rates throughout this seven-year period remained virtually stable. The proportion of early-stage breast cancer cases is comparable between the races, with white females having a slightly higher percentage of localized disease (50 percent) as compared to Blacks (40 percent). It should be noted that regardless of stage at diagnosis, Whites had a consistently higher percentage of five-year relative survival from breast cancer during the 1979-1985 study period. On the average, the age-adjusted mortality rates for white females and black females were fairly similar from 1979-1985.

Compared to national rates the New Jersey age-adjusted incidence rates were, on average, 7 percent higher for Whites and 6 percent for black females. In New Jersey and the nation rates increased about one percent per year over this period.

Age-adjusted mortality rates were reasonably stable over the seven year period, but the rates for New Jersey women were nearly 20 percent higher than nationally. Reviewing the survival data, regardless of stage at diagnosis, New Jersey had consistently lower percentages of five-year relative survival for both races compared to the nation.

Breast cancer is the second leading cause of cancer deaths among women. Risk for breast cancer is more likely to be associated with fixed

risk factors such as age (40 plus) and family history of breast cancer. An increased risk of breast cancer has been associated with the delay of childbirth until after age 30, or not having children. Dietary fat and alcohol intake are modifiable risk factors that are currently under study.

Early detection and treatment of breast cancer are the most effective means of reducing deaths since primary prevention is not currently feasible. Mammography has been shown to decrease breast cancer deaths by 30 percent. It is believed that survival rates could be further improved with widespread use of mammography and the prompt initiation of effective treatment.

2. Cervical Cancer

From 1979-1985, an average of 510 women in New Jersey were diagnosed each year with cancer of the uterine cervix or cervical cancer. There were on average over 160 deaths per year during this period that were attributed to cervical cancer.

Comparing the 1979-1985 age-adjusted incidence rates, Black rates are nearly 2.5 times higher than White rates (See Appendix). The proportion of cases of localized cervical cancer is approximately the same between the races. White females with localized disease, however, had a slightly higher percentage of five-year relative survival than did black women similarly diagnosed.

On the average, age-adjusted mortality rates for Blacks were roughly three times higher than those for Whites during the 1979-1985 time period. The rates for black females, however, are based on relatively few numbers of deaths and should be interpreted with caution. The mortality rates for both black and white women have declined during this period.

Age-adjusted incidence rates for Whites in New Jersey averaged approximately 21 percent higher and for Blacks 30 percent higher than the national rates from 1979-1985. The proportion of cases diagnosed in localized stages was slightly higher among New Jersey females of both races, approximately half of New Jersey women diagnosed with invasive cervical cancer were diagnosed while the disease was localized.

Age-adjusted mortality rates for New Jersey Whites were comparable to the national rates, but for Blacks they were 12 percent higher. The proportion of five-year relative survival for localized cases in the SEER comparison areas was consistently higher than that for New Jersey.

A number of risk factors appear to contribute to the development of cervical cancer, including sexually transmitted diseases, sexual activity at an early age, multiple male sex partners and tobacco use. The majority of cervical cancer deaths are thought to be preventable through screening and monitoring of patients to ensure follow-up for treatment. In recent years, it has also been reported that errors associated with Pap test technique and laboratory analysis, as well as problems with follow-up of positive or questionable results, may have contributed to a number of preventable deaths.

Widespread use of the Pap test for cervical cancer screening has been successful in reducing deaths due to uterine cervix cancer. Cervical cancer, if detected early, can be cured. Over the past 40 years, the number of deaths due to cervical cancer has decreased by 70 percent. Though not a leading cause of death among New Jersey women, cervical cancer death is an indicator of health status because it is largely preventable. Each year in New Jersey, approximately 150 women die of cervical cancer with black women continuing to have three times the cervical cancer death rate of white women.

3. Colorectal Cancer

During the time period 1979-1985, over 5,300 New Jersey residents were diagnosed each year with cancer of the colon or rectum. Similarly, over 2,300 annual deaths were attributed to cancer of either of these sites. Together, the colon and rectum comprise the large bowel. The incidence of colon cancer is almost twice that of rectal cancer; risk factors for these sites also vary. For accurate comparisons of death rates, however, the two cancer sites are often combined. In this discussion, cancers of the colon and rectum will be referred to collectively as "colorectal cancer".

The age-adjusted incidence rates for white males averaged 22 percent higher than those for black males during the 1979-1985 time period (See Appendix). The overall incidence of colorectal cancer among white males increased slightly during this time period. The rates for females of both races were relatively stable during the 1979-1985 period with white females slightly higher rates than black females.

The proportion of cases diagnosed at a localized stage was slightly higher among Whites than for Blacks. For all stages at diagnosis, Blacks had a lower proportion of five-year relative survival. Age-adjusted mortality rates were relatively stable over time for both races with male rates higher than female rates.

For the 1979-1985 period, age-adjusted incidence rates for white males and females in New Jersey were considerably higher than the corresponding national rates. The rates for black males and females were also higher. The stage distribution for incident cases was similar for males and females of both races in New Jersey and in the nation areas.

For white males in New Jersey, age-adjusted mortality rates were approximately 27 percent higher than those in the United States comparison group. Black males in New Jersey had about 24 percent higher mortality than their U.S. counterparts. The mortality rates for females of both races in New Jersey were about 20 percent higher than females in the United States.

The percentages of five-year relative survival were consistently lower for New Jersey residents diagnosed with colorectal cancer. Though not substantially lower, these survival differences were more distinct at the localized stage of disease.

Diets high in fiber and low in fat have been associated with a lower risk of developing cancers of the colon and rectum. The suspected relationship between diet and cancer is not well known among many population groups.

Consequently, a need exists to better inform the public of the diet-cancer link and to work through a variety of channels to influence changes in dietary habits.

Currently, the most effective means of early detection of colorectal cancer is medical surveillance of high risk individuals using colonoscopy, clinical examination and fecal occult blood tests. Survival for patients with colorectal cancer varies considerably with the extent of disease at diagnosis.

4. Lung Cancer

During the period 1979-1985, more than 5,200 incident lung cancer cases were diagnosed each year among New Jersey residents. Annually, on average, 3,143 white males, 1,510 white females, 400 black males and 156 black females are diagnosed with malignant tumors of the trachea, bronchus, or lung. Over 4,000 deaths each year in New Jersey are due to lung cancer. Of these, 2,445 occur among white male residents, 1,125 among white females, 325 among black males, and 116 among black females.

Black and white females have similar age-adjusted lung cancer incidence rates averaging 36 per 100,000 per year in New Jersey (See Appendix). Males have much higher annual age-adjusted incidence rates averaging 92 per 100,000 for Whites and 133 per 100,000 for Blacks. The incidence rates for females have been increasing over the period 1979-1985, while rates for males have remained fairly stable. Stage at diagnosis is similar for all race-sex groups. Since there are no reliable early detection methods for lung cancer, the majority of lung cancers are diagnosed at a late stage. Five-year relative survival rates for all race-sex groups are similar with females showing slightly improved relative survival when compared to males. New Jersey age-adjusted mortality rates for lung cancer follow the same pattern as incidence rates. Black males have the highest age-adjusted mortality rates followed by white males; black and white females have similar age-adjusted mortality rates which are increasing over the study period.

New Jersey age-adjusted lung cancer incidence rates are about 6 percent higher for white females and 12 percent higher for white males when compared to national data. Rates for Blacks are 6 percent higher in New Jersey than in the nation. New Jersey incidence rates follow the pattern seen in the nation data for the study period; the rates are increasing among females and are stable among males. New Jersey age-adjusted mortality rates for all race-sex groups exceed comparable United States rates. Mortality rates appear to be increasing more rapidly for black females in New Jersey than nationally; the mortality rates for white females are increasing at approximately the same rate in the New Jersey and United States data. Five-year relative survival rates for lung cancer are slightly lower in New Jersey when compared in nation.

Cigarette smoking is primarily the cause of all lung cancers and it is thought to contribute to 85 percent of all lung cancer deaths. Other risk factors for lung cancer include exposure to radon and certain occupational exposures many of which have a synergetic effect with tobacco use. It is thought that 90 percent of all lung cancers are preventable.

Each year tobacco use costs $13 billion in health care expenditures and $25 billion in lost productivity and wages. Smoking causes not only cancer, but also heart disease and respiratory illnesses. Thus, smoking contributes to all of the leading causes of death killing 400,000 Americans

each year. If people didn't smoke these unnecessary premature deaths would largely be prevented. Preventing these deaths does not require scientific breakthroughs. It requires both social and behavior change.

Diets low in vitamin A, and passive or involuntary exposure to cigarette smoke are also being evaluated as possible risk factors for the development of lung cancer. Clearly, these risk factors are modifiable. Presently, there are no effective means of early detection and treatment of lung cancer, and only 13 percent of those diagnosed with the disease survive five years or more.

5. Oral/Pharyngeal Cancer

In New Jersey from 1979-1985, an average of 881 new cases of cancer of the oral cavity and pharynx were reported annually for the four major race-sex groups. During this same period, there was an average of 326 annual deaths attributed to cancers of the mouth and throat in this population.

Race-specific, age-adjusted incidence rates of mouth and throat cancer in New Jersey for the 1979-1985 period were consistently higher among black males than among white males and females of both races (See Appendix). The rates for black males for 1984 and 1985 were approximately 25 percent higher than the previous years, 1979-1983. In contrast to white females, who had a higher proportion of localized disease, the predominent stage at diagnosis for males of both races and for black females was regional/distant. Blacks had consistently lower percentages of five-year relative survival from cancer of the mouth and throat regardless of stage at diagnosis.

Age-adjusted mortality rates for females of both races were comparable and relatively stable over this time period. On the average, the age-adjusted mortality rates for black males were greater than twice the rates for white males during the 1979-1985 study period.

For the 1979-1985 period, age-adjusted incidence rates for New Jersey males and females were 12 percent and 15 percent, respectively, lower than the corresponding national rates. For Blacks in New Jersey, the incidence rates for females were about 5 percent lower, while the rates for males were on average 13 percent higher than the SEER areas. During this period, New Jersey had slightly higher percentages of cases diagnosed in the localized stage than those for the SEER group. For all race-sex groups, New Jersey had higher age-adjusted mortality rates than the rates for the SEER areas. Similarly, the males and females of New Jersey had consistently lower percentages of five-year survival regardless of stage at diagnosis.

Oral and pharyngeal cancers account for four percent of all cancers that occur annually. About 75 percent of these cancers are attributable to tobacco and alcohol use. Most cases occur in men but incidence is shifting. Blacks have higher incidence and mortality rates than Whites.

The most common sites of cancer of the oral cavity and pharynx are the tongue, lip, floor of the mouth, soft palate, back of the throat, tonsils and salivary glands. Although in this country, cancer of the mouth and throat is relatively rare, it is important to include it among the major cancer sites in terms of its preventability: it can normally be detected by a physician or a dentist. When discovered early, chances of full recovery are good. Unfortunately, people may delay getting professional attention for mouth lesions because they are common place.

6. Ovarian Cancer

Of the gynecologic tumors, ovarian cancer has the second highest incidence and the highest attributable mortality. During the 1979-1985 time period there was an average of 760 new cases of ovarian cancer reported each year among New Jersey women. Each year during this time period, there were 449 deaths attributed to ovarian cancer in the population of New Jersey women.

On average, the age-adjusted incidence rates for white females were stable and approximately 33 percent higher than those for black females (See Appendix). The rates for black females fluctuated, then began to stabilize toward the end of the seven-year period, probably due to relatively small numbers of incident cases. White females had a higher percentage of cases diagnosed in the localized stages than did Blacks. It should be noted, however, that for both groups, the majority of cases diagnosed during this time period were at the regional or distant stage. Regardless of stage at diagnosis, white females exhibited higher percentages of five-year relative survival as compared to black females.

After a relatively large increase in the age-adjusted mortality rate from 1979-1981, the rates for white females stabilized at around 9.5 per 100,000 women per year. Due to relatively few deaths reported, the rates for black females fluctuated widely from 1979 to 1983.

The age-adjusted incidence rates were 27 percent higher for black females and 20 percent higher for white females in New Jersey than those in the national comparison group. The percentages of localized cases were comparable between the two groups. The age-adjusted mortality rates for New Jersey females averaged 34 percent higher for blacks and 16 percent higher for whites than the corresponding U.S. rates. Similarly, the New Jersey females had lower percentages of five-year relative survival. These differences were conistent, regardless of stage at diagnosis.

Note: New Jersey and SEER comparisons of incidence, mortality, stage at diagnosis and survival-specific information could only be approximated, due to a difference between the two comparison groups in categorizing site-specific data.

7. Prostate Cancer

About 2700 cases of prostate cancer are diagnosed in New Jersey men each year, making it the third most common cancer among white men in this state and the second most common among black men. Nationally, the incidence of prostate cancer has increased steadily since 1950, although this is thought to be due in part to better detection of the disease. In fact, the rates now show signs of stabilizing according to the National Cancer Institute.

Comparing race-specific, age-adjusted incidence rates for the 1979-1985 time period, black males have approximately 70 percent higher incidence rates than white males in New Jersey (See Appendix). For white males, incidence rates remained virtually stable over this period. Although there is more variation in the incidence rates for black males, they appear to be declining somewhat over the seven year period. Sixty percent of white males and 50 percent of black males are diagnosed with prostate cancer when it is still localized. It should be noted that overall, regardless of stage at diagnosis, white males had a consistently better five-year relative survival from prostate cancer during the 1979-1985 period.

Overall, age-adjusted mortality rates in New Jersey over this period remained relatively stable among white males and increased slightly in Blacks. However, the mortality rates for black males are more than double the mortality rates for white males.

Overall incidence rates for cancer of the prostate during the 1979-1985 period were about the same for black males in New Jersey as in the national comparison area. Rates for white males in the SEER area were 9 percent higher than in New Jersey. Further, incidence rates are increasing more rapidly for white males in the U.S. than for white males in the State. Incidence rates for black males in New Jersey are declining while national data indicate a slight increase. Age-adjusted mortality rates in New Jersey, however, are about 4 percent higher for white males and 7 percent higher for black males than those reported by SEER for the time period. National data indicate better relative survival rates for both races when compared to the New Jersey data. This difference is apparent for all stages of the disease.

Currently, there are no known methods of preventing prostate cancer. Studies are examining the role of diet, particularly high fat diets, in the development of the disease. Occupational exposures to heavy metals and toxic chemicals may also be risk factors.

Effective techniques for widespread screening for prostate cancer are not yet available, although recent work with prostatic specific antigen (PSA) analysis fosters hope for a breakthrough in the near future. The primary method of detection today is annual digital rectal examination by a physician for males 40 and older.

8. Skin Cancer

The vast majority of skin cancers are curable basal cells or squamous cell types and are more common among individuals with lightly pigmented skin. The most serious skin cancer is melanoma, which is increasing at a rate of 4 percent per year nationally. Risk factors include excessive exposure to the sun; fair complexion; and occupational exposure to coal tar, pitch, creosote, arsenic compounds or radium. A familial incidence of skin cancer, especially malignant melanoma, is of considerable significance and a definite risk factor. Skin cancer incidence among Blacks is very low because of the heavy pigmentation of their skin.

Preventing over exposure to the sun during peak hours (10:00 A.M. to 2:00 P.M.), as well as wearing protective clothing can help to avoid skin cancer. Sunscreen agents can block carcinogenic ultraviolet rays and can reduce the incidence of skin tumors in laboratory animals. Hence, many authorities advocate the use of sunscreen preparations rated 15 Sun Protective Factor (SPF) or more during sun exposure.

9. Uterine Corpus Cancer

The two principal uterine cancers are cancer of the uterine cervix, commonly referred to as cervical cancer, and of the endometrial lining of the uterine body, referred to as endometrial cancer. In New Jersey, there is an average of 1025 cases of endometrial cancer diagnosed each year, making it one of the most common cancers among women. The incidence for Whites in New Jersey appears to increase greatly after the age of 40 years. For black women, the incidence appears to increase after the age of 50 years. The highest age-specific incidence rates are in the 65 and older age groups of both races.

Comparing the race-specific age-adjusted incidence rates from 1979-1985, white females have higher rates of endometrial cancer than black females (See Appendix). On the average, these rates were 51 percent higher. For white females, the age-adjusted incidence rates were stable for the seven-year period. These cases were diagnosed predominantly in the localized stages of disease (69 percent). For black females, the age-adjusted incidence rates fluctuated throughout this time period due to relatively small numbers of cases. Approximately 52 percent of these cases were diagnosed at the localized stage.

There was a marked difference in the proportion of five-year relative survival between Whites and Blacks. Based on all stages of diagnosis Whites had approximately a 51 percent higher proportion of five-year relative survival than did Blacks. Black females had consistently higher mortality rates for uterine corpus cancer than did Whites; for 1984 and 1985, these rates were 48 percent higher.

Age-adjusted incidence rates were 9 percent lower for white females but 3 percent higher for black females in New Jersey than in the national comparison areas. The age-adjusted mortality rates for black females were 5 percent higher, while the rates for white females in New Jersey averaged 15 percent higher than the corresponding U.S. rates. Whites in New Jersey had a lower percentage of localized cases of endometrial cancer (71 percent vs. 78 percent) than did those in the comparison areas; Blacks in both areas had equivalent proportions (54 percent).

The proportion of five-year relative survival was consistently higher for all stages at diagnosis in the national comparison group for both races. This difference, however, can be attributed in part to differences in the classification of the component data.

Risk factors for endometrial cancer include age, obesity, infertility associated with failure to ovulate, and chronic use of unopposed estrogen. The incidence of endometrial cancer is greatest among women older than 65, with increases observed after age 40 for Whites and after age 50 for Blacks.

Prevention of endometrial cancer is possible with education of the public at risk and their health care providers. Preventive strategies should focus on the reduction of obesity, discontinuation of the use of unopposed estrogens after menopause, and monitoring of all women receiving estrogen replacement therapy. Early detection can be improved through the use of screening techniques which assure the sampling of endometrial cells at menopause, annually for women on estrogen therapy, and promptly upon report of unusual bleeding of menopausal women.

The Economic and Social Impacts of Cancer

Cancer exacts a physical, emotional and financial toll, affecting not only the individuals who develop the disease but also their significant others. One of our highest priorities must be the prevention of cancer, because even a 100 percent cure rate would not eliminate the hardships experienced by people with cancer.

Cancer is one of the most dreaded diseases of today, rivalled only by AIDS. Many view the diagnosis as a death sentence, and as many as 50 percent of all patients experience severe, though usually acute, psychological disorders as a reaction to their diagnosis. Long term psychological adjustment to the disease varies greatly, even among individuals pronounced cured. While some exhibit positive adjustment and even a deeper appreciation and renewed purpose in life, others exhibit poor adjustment with negative effects on their psychological and social well-being.

The physical toll of cancer includes the side effects of treatment, which may be extensive. Nausea and vomiting are common with chemotherapy and sometimes occur in anticipation of treatment and linger after treatment has been completed. Pain, anxiety, dramatic changes in physical appearance such as hair loss, and sexual dysfunction are also side effects of specific treatments. Some patients experience chronic pain and other neurologic problems as a result of tissue damage.

The support that is needed by people with cancer requires the time, effort, and resources of those closest to them. Extensive energy and coordination of services are required by treatments, convalescence and survivorship in the best circumstances, and by preparation for death in the less fortunate circumstances. There can be a marked impact on both the short and long term quality of life of those with cancer and their support systems, as they attempt to obtain treatment and follow-up services while completing necessary daily activities and coping with the emotional and psychological impacts of the disease.

A study from the National Cancer Institute puts overall costs for cancer at $104 billion for 1990; $35 billion for direct medical costs; $12 billion for morbidity costs (cost of lost productivity), and $57 billion for mortality costs. Figures from 1985 showed that cancer accounts for 10 per cent of the total cost of disease in the United States and that its share of the total cost of premature death was about 18 per cent. The cost of detection activities, including mammograms, Pap smears, and colorectal screening adds another 3 to 4 billion dollars to overall cancer costs.

Extrapolating from national data, a conservative estimate of the cost of cancer in New Jersey exceeds $3.8 billion per year, not including the cost of detection activities. In this state, third party payors, individuals, and the Health Care Trust Fund pay for the direct medical care costs of cancer. Third party payors include Blue Cross and private insurance companies, public agencies (Medicare and Medicaid), and private health maintenance organizations. In ten months of 1991, a single payor, Medicaid, paid 30,724 claims totaling more than $38.7 million. Sections I, V, and VI discuss issues relating to insurance coverage and access to medical care.

The costs of cancer morbidity and mortality are borne by individuals, businesses, and the economy at large. One measure of the mortality burden due to a particular disease is the Years of Potential Life Lost (YPLL). According to the Vital Statistics Program of the New Jersey Department of Health, malignant neoplasms rank first in our state as a cause of years of potential life lost. This is in contrast to the nation as a whole, where cancer ranks second, indicating that New Jersey has a greater than average mortality burden for cancer. Lung cancer alone accounts for 24 percent of the YPLL due to cancer, breast cancer 13 percent, and digestive tract cancers including colorectal another 17.5 percent. Given that many of these cancers are amenable to prevention or early detection, it is clear that organized prevention and control efforts can contribute significantly to the reduction of mortality costs in NJ.

Cancer and Minority Issues

Race-specific data for cancer are not widely available, except as they pertain to Blacks and Whites. Consequently, the discussion in this section will be limited to the disparities between these two groups.

As has been documented earlier in this section of the Chapter, cancer incidence and mortality are generally greater for African Americans than whites. Even in the case of breast cancer, where the disease occurs less frequently among black females, mortality rates are comparable to those of white females. Regardless of stage at diagnosis, Blacks in New Jersey generally have poorer five-year survival rates than do Whites similarly diagnosed.

To a large extent, these racial disparities are due to socioeconomic status. There is disproportionate distribution of Blacks at lower socioeconomic levels, and it is well documented that people of lower income and educational levels have lower utilization rates for preventive medical care, including cancer screening and early detection services, than do those with higher levels of income and education.

Underutilization of health services is certainly related to poor access to care and the lack of health insurance. However, other factors, such as culturally insensitive cancer education programs and service provision and individuals' culturally shaped, fatalistic attitudes about the outcome of a cancer diagnosis may also come into play.

Social mores may have a major effect on health practices and, consequently, on one's exposure to cancer-inducing hazards. Prevalance studies indicate that black males smoke heavier tar cigarettes than do whites. Most Blacks in these studies who smoke heavy tar cigarettes are in the lower-income groups. Other studies indicate that, regardless of race, low-income persons are more likely to smoke than upper-income persons.

Survival differences between Whites and Blacks, for many cancer sites, can be at least partially explained by the larger proportion of Blacks at lower socioeconomic levels. It is well known that people of lower income and educational levels tend to begin cancer treatment with more advanced disease. This could be attributed to several factors: lack of knowledge about cancer screening programs or availability of treatment, lack of health insurance, as well as lack of transportation to the cancer treatment facility. Other factors that are associated with survival differences must be examined further, such as differential treatment pat-

terns for persons with lower socioeconomic status, as well as racial differences in cancer virulency.

PROBLEM IDENTIFICATION/EXISTING RESOURCES

Surveillance

The New Jersey State Cancer Registry

The New Jersey State Cancer Registry (NJSCR) was created by legislative mandate in 1977 after the National Cancer Institute's analysis of cancer mortality signaled this state's need to examine its cancer problem. The law requires all New Jersey hospitals, physicians, and laboratories to report every new cancer case seen or diagnosed in their facilities. The NJSCR accepts reports from these and other facilities within the state and from out of state hospitals, and neighboring State Cancer registries.

Collecting incidence and outcome data on all cancers diagnosed among New Jersey residents since 1979, the Registry documents that over 37,000 new cases are diagnosed and more than 17,000 New Jerseyans die of cancer each year. The NJSCR is the largest cancer data base in the State, with data on over 350,000 cases. Data are maintained on every newly diagnosed cancer in the State, and follow-up rates are nearly 90 percent.

The NJSCR database contains statewide incidence data from 1979, including personal identifiers, demographic data, primary tumor site, histology, and stage of disease at diagnosis. Annual vital status is kept on all cases. For the years 1984-1988, all cases diagnosed among residents of Passaic, Hudson, Union, and Essex Counties contain additional data on specific extent of disease, first course of treatment, and diagnostic procedures.

The primary purpose of the Registry is to provide accurate cancer incidence data for use in defining our cancer problem, identifying high risk groups, formulating public health policies in a number of areas related to the cancer problem, planning and evaluating cancer prevention and control interventions, and supporting a broad range of research endeavors on cancer issues.

The Registry has been used to evaluate many facets of the cancer problem. Incidence reports have enumerated cases by site, residence, stage of disease and other variables. Survival rates have been calculated by site. The data have been used in cancer cluster evaluations such as Giants Stadium and Lipari Landfill, and in responding to hundreds of requests from private citizens. The data are used by hospital planners to assess community cancer needs. They are used by health planners for cancer control, screening and intervention programs. The data are also used in occupational cancer studies and by researchers from industry, academia and government. Now that several years of data have been accumulated by the Registry, they can be used to examine cancer trends in our own population.

The Behavioral Risk Factor Surveillance System

Another database maintained by the Department of Health is the Behavioral Risk Factor Surveillance System (BRFSS) provided through a contract with the Centers for Disease Control (CDC). The BRFSS collects data on the prevalence of behavioral risk factors in our population which are related to chronic disease such as cancer. Baseline data are being collected now and will provide the foundation for monitoring life style changes that effect health outcomes. The BRFSS is one of many data bases that exist throughout the State and has applications for linkage studies with Registry data for research on etiologic variables, access to care issues and cancer control.

Prevention

Tobacco Use

Given that cigarette smoking contributes to 85 percent of lung cancer deaths, the prevention of tobacco use is undisputedly the most cost-effective tool in preventing morbidity and mortality from cancer as well as a host of other chronic diseases (i.e. heart disease, lung disease, etc.). Furthermore, with the evidence of the role of "passive smoking" or environmental tobacco smoke (ETS) in the causation of cancer and heart and lung disease, prevention and cessation of tobacco use has become an even greater priority for public health practitioners.

Yet, with all the attention placed on tobacco use, every year, approximately 1.8 million Americans take up the habit of smoking. The important things to focus on are the highly addictive powers of the drug nicotine, the ill health effects of passive smoking, and the efforts that tobacco companies make to replace smokers who quit or die. In New Jersey, as well as the rest of the country, the current targets of tobacco company advertisers are youth, women and minorities. Therefore resources for prevention and cessation of tobacco use must be directed to these groups.

A brief discussion of specific anti-tobacco programs and resources is included in the Appendix (see Exhibit B).

Diet

The relationship of dietary patterns to certain types of cancer is an emerging issue. According to a 1989 report of the Committee on Diet and Health of the Food and Nutrition Board, National Research Council, "a comprehensive review of the epidemiologic, clinical and laboratory evidence indicates that diet influences the risk of several major chronic diseases. The evidence is very strong for atherosclerotic cardiovascular disease . . . and is highly suggestive for certain forms of cancer (especially cancers of the esophagus, stomach, large bowel, breast, lung and prostate)". More specifically, the weight of the evidence indicates that high fat diets are associated with a higher risk of several cancers, especially breast, colon and prostate. Conversely, diets high in fiber from plant foods, i.e. fruits, vegetables, legumes and whole grain cereals, are associated with lower occurrence of cardiovascular disease and cancers of the lung, colon, esophagus and stomach.

The resources for education of dietary prevention of cancer and other chronic diseases are largely provided through published recommendations from health organizations and government agencies. A summary of these guidelines is provided in the Appendix (see Tables 6 and 7).

Detection

Since early detection is recognized as the key ingredient in maximizing long-term cancer patient survival, access to quality cancer screening and diagnostic services is a primary concern of this plan. Currently, mammography for early detection of breast cancer and the Pap test for early detection of cervical cancer are the only screening methods shown to reduce cancer mortality. Another cancer site for which screening has been proposed is colorectal cancer. At this time, there is incomplete evidence on the effectiveness of colorectal cancer screening in the general public and the extent of the benefits and risks involved are unknown.

Mammography Services

Early detection of breast cancer has been the subject of considerable attention in recent years because of the relatively higher mortality rates and lower survival rates associated with breast cancer in this state. In 1990 Health Research and Educational Trust of New Jersey (HRET) published *A Woman's Guide to Breast Cancer Screening Services, New Jersey 1990,* which was funded by a grant from the New Jersey Department of Health. The publication identified 198 mammography facilities and included the location, hours of operation, telephone number and accreditation status of each facility in the state. A brief description of each facility is also included along with a listing of on-site follow-up services that are available. An addendum to the Guide was published the following year which identified an additional 84 mammography providers.

Mammography equipment has become more sophisticated over the last several years, exposing women to a minimal amount of radiation. To improve mammography services in New Jersey, there is a movement among providers to strength quality assurance standards by participating in the American College of Radiology's (ACR) accreditation program. The ACR program is voluntary and began in 1987.

Facilities accredited by the ACR have had their equipment, personnel, and procedures evaluated and approved. Accredited facilities have doctors and other staff members who are specially trained to perform and interpret breast x-rays. They have the equipment and procedures needed to provide high quality mammograms with the lowest possible amount of radiation exposure. To date, there are 127 ACR accredited facilities in New Jersey, the majority being nonhospital based, and located in suburban areas.

To provide timely information regarding the quality of the state's mammography services, the Department sought the most recent accreditation information that was available from the American College of Radiology (ACR) as of February 2, 1992. This information, presented by Local Advisory Board (LAB) region, is provided in the Appendix (see Exhibit B).

As the data indicate, mammography resources are reasonably well distributed through the LAB regions. Less than one half (43 percent) of these providers statewide, however, had achieved accreditation by the ACR as of February of this year. Non-accredited mammography services

include the full spectrum of providers, including some that are located in the state's acute care institutions. Sixty-one of the statewide total of 127 ACR accredited mammography programs in the state (48 percent) achieved their accreditation in the past year. This most recent statewide data clearly indicate improvement on the part of the state's mammography services to seek and obtain ACR accreditation. It is clear however, that statewide efforts continue to be needed to increase the percentage of New Jersey mammography services that have achieved accreditation by the ACR. Since 159 (54 percent) of these mammography facilities had indicated in 1991 that they were in the process of seeking accreditation, a statewide follow-up of these applicants should be undertaken at periodic intervals to provide timely and accurate information to local advisory boards and the public.

Pap Tests

The decline in cervical cancer mortality by approximately 70 percent over the past 35 years is generally attributed to the advent of the Pap test, a relatively inexpensive screening procedure. The Pap test is a simple, painless test to detect abnormal cells in and around the cervix. It can be performed in a doctor's office, clinic, or hospital. Pap testing is effective in preventing invasive cervical cancer and reducing cervical cancer mortality only in conjunction with a coordinated program of follow-up of results, referral as appropriate for treatment, and monitoring to ensure that treatment is obtained.

The laboratory costs for this test average about $3, but the charge to the consumer may range from an estimated $34 to $100 depending on the setting in which the sample is taken. Although relatively inexpensive, screening Pap tests are generally not reimbursed through third party payers. The cost of the Pap test and any required follow-up testing and/or treatment may be prohibitive. For those women eligible for Medicare, reimbursement for Pap testing became a Medicare benefit as of July 1, 1990. Medicaid also provides coverage for Pap tests. However, gaps exist in coverage for the uninsured and underinsured populations in New Jersey.

Cervical cancer screening is available through a variety of providers, including private physicians, and public health agencies. Enhancing the coordination of public health services (i.e., family planning clinics, sexually transmitted disease (STD) clinics, and local health departments) may facilitate access for those women least likely to afford services.

Currently, 21 family planning agencies receive federal funds to deliver services at 64 sites statewide. Family planning agencies provide a variety of medical, counseling, and training services. Approximately 72,000 women, average ages ranging from 18-44, receive Pap testing, breast examination and education of self-breast examination through family planning agencies annually. These services are provided on a sliding fee scale, not exceeding $10. Follow up for non-negative Pap tests is conducted by the family planning agencies, either referred to providers or in some instances, on site. Family planning agencies also disseminate STD materials provided by the Sexually Transmitted Disease Program, and use the State laboratory and courier services for diagnosis of sexually transmitted diseases.

In 1989, local health departments in New Jersey screened a total of 39,529 women aged 15 to 64 years for cervical cancer. They referred 872 non-negative results for follow-up, of which 179 were diagnosed as in-situ or invasive cervical cancer.

Diagnosis and Treatment

The clinical management of cancer patients includes a wide variety of diagnostic and therapeutic services that can be provided either on an ambulatory or inpatient basis. This discussion pertains to the types of services in New Jersey devoted to the diagnosis and treatment of cancer patients that are available in New Jersey. Those services previously examined in other chapters of the plan (e.g., Computerized Tomography, Magnetic Resonance Imaging, Bone Marrow Transplantation) are not discussed in depth, but statewide inventories are provided in the Appendix of this chapter (see Exhibit C).

There are a wide variety of diagnostic modalities that are utilized in evaluating the presence and extent or stage of cancer in the acute care setting. These diagnostic measures range from non-invasive imaging services (e.g., ultrasound, computerized tomography (CT) magnetic resonance imaging (MRI), thermography, mammography, bone scans) to invasive surgical procedures (e.g., surgical biopsy, cystoscopy, bronchoscopy, percutaneous needle biopsy, thoracotomy). Cancer is also diagnosed by evaluating lab tests, clinical marker studies, and clinical impression. The vast majority of cancers in New Jersey are microscopically confirmed. Some of these diagnostic services are performed on an ambulatory basis, and are available at all hospitals and a variety of alternative health care settings. The extent that these services are regulated by the Department of Health, or some other agency of state government, is dependent on the setting.

The choice of these wide-ranging alternative diagnostic procedures is dependent on the location or site of the suspected cancer. In large measure, these diagnostic techniques are available at community hospitals and alternative health care settings and are not necessarily confined to regional health care providers. The regional provision of services related to cancer detection are largely confined to Computerized Tomography (CT) and Magnetic Resonance Imaging (MRI), which are discussed at length in the High Technology Chapter of this Plan. These services are readily available throughout the state, but the fact that many of these services have been unregulated by the Department makes it difficult to evaluate a large proportion of the providers in the state.

There are several treatment regimens for cancer patients in the acute care setting including:

1. surgery;
2. radiation therapy;
3. chemotherapy/hormone therapy; and
4. biological response modifiers.

Cancer patients are generally treated with one of the standard treatments or a combination of these treatments depending on the location and extent of the disease.

For circumscribed or well-defined tumors, surgical removal of the tumor and nearby tissue is generally considered one of the most effective treatment methods. Cancer directed surgery may also include removal of lymph nodes and removal or resection of organs or tissues showing cancer involvement. Cancer surgery may also be used to prevent or control further spread of the disease. Surgical reconstruction is also considered part of surgical treatment.

Chemotherapy is the use of drugs which are more toxic to cancer cells than to normal cells. Generally, these drugs are most toxic to dividing cells and often act by damaging RNA or DNA. Therefore, chemotherapy is most effective in rapidly growing tumors. Because chemotherapy drugs are damaging to all dividing cells they affect many non-malignant tissues causing side effects. The selection of chemotherapy drugs depends on the balance between the toxicity to normal tissues and to the tumor. Some tumors are very sensitive to chemotherapy and others are less sensitive. The response to chemotherapy can often be increased by choosing a combination of drugs with different toxicities.

Hormone therapy is administered to treat cancer tissue through change of the hormone balance. Included are the administration of hormones, agents acting via hormonal mechanisms, antihormones, or steroids, surgery for hormonal effect on cancer tissue, and radiation for hormonal effect on cancer tissue.

"Biological response modifier" is a generic term which covers all chemical or biological agents that alter the immune system or change the host response (defense mechanism) to the cancer. Examples of biological response modifiers are: allogeneic cells, BCG, bone marrow transplant, interferon, levamisole, vaccine therapy and virus therapy.

In the past, considerable attention has been given to the need to provide multi-discipline cancer treatment centers throughout the state that could provide access to the full range of cancer treatment alternatives. One of the state's earliest regionalization rules was established in October, 1977 for radiation therapy services (N.J.A.C. 8:33I). These statewide policies have included a regional approach to the provision of cancer treatment services to assure that services would only be approved where they could document the achievement of appropriate patient treatment levels to guarantee high quality treatment services at affordable cost to the patient and the health care system. These regionalization policies are no longer in effect, however, since this rule was permitted to sunset, as of September 15, 1991 pursuant to Executive Order 66(1978) pending development of a State Health Plan.

The only remaining cancer-related services that have been considered to be regional services in New Jersey are treatment services. These services include megavoltage radiation oncology services and bone marrow transplant services. Bone marrow transplantation was also discussed in the New Technology chapter. Therefore, for the purposes of this chapter only megavoltage radiation oncology services will be examined in depth in the section of the chapter dealing with cancer treatment services below.

Radiation oncology is an effective technique for the treatment of certain cancers because, for the most part, cancer cells cannot repair radiation damage as can non-cancerous cells. It is generally accepted

that between 50 to 60 percent of new cancer patients each year undergo some form of radiation therapy, either alone or in combination with other forms of treatment. Radiation can be applied by an external source (teletherapy), focused directly upon the cancer lesion, or a sealed radioactive source (brachytherapy), through its temporary implantation within the body, or systemtically, either alone or as a radioisotope or attached to other chemical or biological agents.

At present 95 percent of all radiation therapy involves external-beam megavoltage radiotherapy. The application of radiation either cures the patient (curative therapy) or eliminates or reduces the symptoms suffered by a patient (palliative therapy). The intended end result of radiotherapy is an improvement in the length and/or quality of life of the patient.

Radiation therapy has been regionalized because, although repeated visits are often necessary, only a relatively small proportion of the general population requires treatment at any one time. Further, radiotherapy treatment departments require multi-disciplinary involvement (i.e., surgery, chemotherapy, radiation oncology) and elaborate equipment, substantial space, technical personnel and specialized support facilities in order to provide optimal care.

Within the needs of regionalization and regulation, we have tried to be sensitive to the needs of the patients. As a result, there are a considerable number of hospital megavoltage programs and units that are either in operation (33 programs with 55 units), or are approved for operation (3 new programs with 3 units and one added unit at an existing program) though not as yet operational. A total of 36 hospital programs with 59 units are either operational or are approved for operation to date. Added to this megavoltage service inventory are an additional seven megavoltage programs in private offices operating a total of nine units. Two of these units are expected to be replaced in the future by the introduction of radiotherapy services at Pascack Valley Hospital in Bergen County.

Capital costs for this equipment range from $500,000 for a low energy unit to $1,500,000 for a higher photon energy unit with electron beam capability. Megavoltage equipment is becoming increasingly sophisticated, with more and more megavoltage programs in the State offering medium/high photon energy units (linear accelerators) that also include electron beam capability. Exhibit D in the Appendix identifies the providers of megavoltage radiation oncology services in the state for 1990 and their equipment capabilities and utilization levels (both operational and approved units are listed by LAB region).

Current trends in radiation oncology treatment often require the use of equipment capable of providing several different beam energies and types of energy (photons, electrons) equipment in an effort to achieve optimal radiation dosage to the target region while minimizing potentially harmful dosage to neighboring healthy tissue. The treatment requires numerous treatment visits per patient over the course of several weeks and the use of treatment simulation and computer-generated treatment plans to derive state of the art megavoltage treatment plans and services.

Tables 1 and 1A on the following page indicate the approved Certificate of Need megavoltage services available within each LAB region.

As indicated earlier in the chapter, an average of 34,741 incident cancer cases were diagnosed each year during the period 1979-1985. The analysis that follows examines whether existing acute care resources devoted to the treatment of cancer patients are sufficient to meet the needs of New Jersey's residents.

The number of patients treated statewide in hospital megavoltage radiation oncology services has increased slightly over the past five years (see Table 1 in the Appendix). There have been sizeable regional variations within the LAB areas, but these variations can be largely attributable to two factors. The first is the initiation of new hospital-based programs during the intervening years. These new programs have considerably altered referral patterns for megavoltage services. The second factor is the presence of free-standing, non-hospital megavoltage providers whose patient volumes go unreported and are not included in these figures. The number of private providers who are licensed but not regulated by the certificate of need mechanism has remained relatively constant over the years, with at least 7 providers currently in the state based on information obtained from the Bureau of Radiological Health in the Department of Environmental Protection and Energy. The volume of patients that are being treated at these non-certificate of need-regulated megavoltage oncology providers is unknown, since these providers are not subject to the Department of Health regulatory requirements.

Based on the average number of new cancer patients in New Jersey that have been identified in this chapter (34,741 incident cases) and the generally accepted guideline that between 50 to 60 percent of cancer patients can be expected to be treated with radiation during their course of treatment, the range of expected patients would be expected to be from 17,370 to 20,844 each year. Based on these figures, it would appear that the majority of patients being treated with megavoltage radiation oncology are being treated in the regulated service providers in New Jersey.

In order to assess the need for additional megavoltage radiation oncology services in the state, an examination of statewide and Local Advisory Board (LAB) region megavoltage capacity was undertaken by

TABLE 1

CON Approved Megavoltage Radiation Oncology Unit Distribution in New Jersey—1992*

	1990 Population	Units	Megavoltage Units/ Million Population	Pop. Per Meg. Unit
LAB I	1,096,963	9**	8.20	121,185
LAB II	1,378,479	11**	7.98	125,284
LAB III	1,272,025	16	12.58	79,493
LAB IV	1,345,659	8	5.54	168,207
LAB V	1,331,319	6	4.51	221,887
LAB VI	1,305,743	9	6.82	145,083
STATE TOTAL	7,730,188	59	7.63	131,011

TABLE 1A

Megavoltage Radiation Oncology Unit distribution in New Jersey—1992—All units*

	1990 Population	Units	Megavoltage Units/ Million Population	Pop. Per Meg. Unit
LAB I	1,096,963	11**	10.03	99,723
LAB II	1,378,479	12**	8.71	114,843
LAB III	1,272,025	16	12.58	79,493
LAB IV	1,345,659	9	6.69	149,517
LAB V	1,331,319	9	6.76	147,924
LAB VI	1,305,743	11	8.42	118,704
STATE TOTAL	7,730,188	68	8.80	113,627

*See Exhibit D for details of sites, equipment and utilization.

**These figures include two linear accelerators that are certificate of need-approved but not yet operational.

the Department of Health. A comparison of actual megavoltage service utilization and equipment capacity was then examined, using the most recent annual megavoltage data available (see Tables 2 and 3 in the Appendix). This analysis, based on historic utilization data, concludes that existing and approved megavoltage equipment operated at 60 percent of its capacity when using 1990 actual patient volume. This statewide capacity would be 64 percent if all of the Cobalt units were removed from the state's inventory.

An examination of megavoltage radiation oncology patient visits was also undertaken by the Department in order to gauge the extent that treatment patterns rather than the number of patients being treated had changed significantly in recent years. Statewide growth in patient visits has not undergone dramatic change over the past five years. During this time, statewide patient visits increased by slightly less than three percent at the state's regulated megavoltage providers (see Tables 4 and 5 in the Appendix).

A further examination of statewide patient visits over the past decade reveals that the state experienced considerable growth in megavoltage patient visits from 1981 through 1986, but that the growth rate has diminished dramatically during the past five years (see Table 4 in the Appendix). The lack of growth in patient volume statewide, combined with the approval of additional megavoltage radiation oncology resources in New Jersey in the past five years, has redistributed patient treatment throughout the state but has also reduced the volume of patients and treatment visits at many of the state's megavoltage programs.

Based on historic statewide megavoltage patient volume, there does not appear to be a need for **new** megavoltage radiation oncology services in New Jersey. The existing distribution of megavoltage radiation therapy services by LAB region indicates that none of the resources in the six LAB regions is functioning above 80 percent. Indeed, the statewide average capacity level is slightly below 60 percent. Since it appears that many existing megavoltage providers are operating well below their respective capacities, the Department of Health should examine any future certificates of need seeking to replace or add megavoltage equipment capacity carefully and should not endorse any applicant that is unable to document compliance with the minimum standards that will be established by the Department of Health consistent with this Chapter of the State Health Plan.

Strategies that can be employed to "redirect" cancer treatment in the future would include:

1. Implementing proposed megavoltage criteria and standards, to be developed by the Department of Health subsequent to the adoption of this Chapter, as an administrative rule. Such a policy would prevent existing programs with considerable unused megavoltage treatment capacity from replacing or retaining equipment. In no circumstances would an existing provider be permitted to retain its treatment equipment unless the minimum treatment volume levels specified in the state's rules are achieved.
2. Requiring all hospital cancer treatment providers seeking capital reimbursement through the certificate of need program to document an extensive array of cancer detection (e.g., ACR mammography accreditation) and disease prevention services, and compliance with cancer reporting requirements of the State Cancer Registry as part of their commitment as a community-based regional provider of cancer services. Future retention or addition of cancer treatment services would be linked to an ambitious cancer prevention program.
3. Future acute cancer resources allocation can be determined through a LAB-specific process, with certificate of need applications **only** being accepted for processing from those regions of the state that achieve a relatively high level of regional service capacity (e.g., 90 percent over the previous 12 months).

Access to State-of-the-Art Treatment

Cancer patients experience many of the same access to care problems as others in our State. However, numerous access to care problems are aggravated by a cancer diagnosis, and they often begin prior to the diagnosis. Due to the fear that continues to surround a cancer diagnosis, there is often reluctance to participate in cancer screening programs which will detect cancer in an early and often treatable stage. Fear also plays a major role in the delay in seeking medical care once symptoms are present, and such delays may be crucial to cancer cure. Helping individuals overcome these fears and accept personal responsibility for lifestyle changes that will minimize the risk of developing cancer is a major public health challenge and is necessary to alleviate the burden of cancer in our state. Patients will never have access to adequate cancer care if they are immobilized by fear of the diagnosis.

Cost of cancer screening and diagnosis is another problem facing patients trying to obtain access to cancer care. Many screening programs remain cost-prohibitive and therefore out of reach. Such screening programs are best directed at the poor and underserved, yet these groups are the least likely to be able to pay for them. While progress has been made in the realm of mammography by making it a reimbursable insurance expense, much needs to be done to make other screening affordable to target populations.

Once a cancer diagnosis is made, financial issues become paramount to the patient. Access to care is largely determined by the individual's ability to pay for such services, usually through insurance, Medicare, or Medicaid. New Jersey, as elsewhere in the nation, has a problem with the growing number of medically indigent. More and more citizens are unable to pay for the high cost of health care, and cancer is often a financially catastrophic illness. Aside from the cost of treatment itself, cancer patients often require repeated surveillance for many years to monitor for recurrence or metastasis. Such monitoring often involves expensive scanning (CT or MRI), and relapses require further treatment beyond the first course of therapy. We cannot guarantee access to care without providing affordable care.

Aside from the financial costs of cancer treatment there are many other social and personal costs associated with treatment creating additional barriers to access to care. Cancer treatment often involves major surgery which may cause disfigurement and/or disability. Such surgery may require a long recovery and/or rehabilitation period resulting in loss of wages, or absence from training or schooling programs. Surgery may be followed by radiation therapy and/or chemotherapy. These therapies also present difficulties for the cancer patient including repeated visits to hospitals, clinics, or doctor's offices, and may be associated with severe nausea, vomiting and other complications or side effects. Patients may feel that they cannot complete recommended therapy because the associated costs are too high in terms of loss of wages, time off from work or burdens placed on family members for transportation and nursing care. These problems need to be addressed by developing community support systems for patients and their families.

Access to state of the art care is very difficult to measure in this state due to the diversity of our population and the wide array of treatment facilities available in New Jersey. New Jersey does not have a designated cancer center which draws patients from all areas of the state and other parts of the nation. Instead it has many institutions providing excellent care at the local level. Still many cancer patients seek diagnosis and treatment outside of the state, being drawn to the nationally known cancer centers in neighboring metropolitan areas. There is a need to take a closer look at the provision of state of the art treatment in New Jersey to determine if our citizens are able to obtain the best medical care within our boundaries.

What many in the medical community call "state of the art" treatment is often called "experimental" by the third party payers asked to reimburse for these treatments. While a certain lag time between the initiation of an experimental treatment or diagnostic procedure is necessary to prove efficacy, it is essential that these procedures and treatments become reimbursable by insurers once health benefits are demonstrated. Moreover, to reduce avoidable mortality among minorities, it is imperative that cancer patients have access to these procedures and treatments regardless of the ability to pay. Delays in accepting these procedures as well as differential treatment referral patterns cost lives and deny patients quality of life.

It is difficult to assess the adequacy of cancer treatment facilities throughout the State. However, the data from the Cancer Registry suggest that the majority of adult New Jersey residents are diagnosed and treated locally within their LAB of residence. LAB III residents are least likely to seek diagnostic or treatment services out of the LAB. LAB V has the highest proportion of residents seeking diagnostic or treatment services out of state, perhaps because of the proximity of this LAB to major cancer centers in Philadelphia and Delaware.

It is generally recognized that pediatric cancer patients require comprehensive cancer treatment at centers with the expertise and commitment to care for them. In 1986, there were 342 cancer cases diagnosed among persons aged 0 to 20, approximately 1 percent of the total number of cancer cases for that year. Given the small proportion of the total number of cancer cases among this age group and the need for efficient provision of state of the art treatment, it is necessary to concentrate resources in those facilities that maintain the full complement of board

certified pediatric hematologists/oncologists, allied health personnel, and specialized equipment in a multidisciplined approach to cancer treatment.

Currently, there are two national programs that conduct research in treatment and biology of childhood cancers, the Pediatric Oncology Group (POG), and the Children's Cancer Study Group (CCSG). Given the dynamics of pediatric treatment regimen and the necessity of rapid information dissemination in this area, it is important that pediatric cancer treatment facilities be affiliated with at least one of these two programs. Currently there are seven pediatric hematology oncology programs in New Jersey that are affiliated with one or both of these national study groups: Hackensack Medical Center in LAB II, Overlook Hospital, United Hospitals, Newark, and Newark Beth Israel in LAB III, Robert Wood Johnson University Hospital in LAB IV, Cooper Hospital/University Medical Center in LAB V, and Monmouth Medical Center in LAB VI. The physicians and nurses of these programs organized the New Jersey Pediatric Hematology Oncology Network (NJPHON) in 1987 to ensure that pediatric cancer patients and their families have appropriate access to expert cancer care facilities in this state.

Despite the efforts of NJPHON and other centers such as Morristown Memorial and St. Joseph's to provide quality, in-state pediatric cancer treatment, nearly 40 percent of the pediatric cancer admissions among New Jersey residents reported to the Registry are from out of state hospitals. Though the State Cancer Registry maintains reciprocal reporting agreements with neighboring states, it is possible that some cases are missed, resulting in an underestimate of cases.

Research

To make greater strides in reversing the high incidence and mortality rates, as well as controlling the spiraling medical costs associated with these rates, continued research for the prevention and cure of cancer is necessary. According to information from the New Jersey Commission on Cancer Research (NJCCR), total research funding for cancer from major sources such as the federal and state governments, private agencies such as the American Cancer Society, as well as institutional support is estimated at $21 million dollars per year. Furthermore, in 1990, federal cancer research dollars per capita in this state was estimated at $1.56. This figure is far below the per capita research dollars of $8.36, $5.89, and $6.26 garnered by New York, Pennsylvania, and Connecticut, respectively, despite the fact that New Jersey's number of basic researchers has increased to near national averages.

Pharmaceutical firms in this state also contribute strongly to the research effort. A recent Pharmaceutical Manufacturers Association survey indicated that 21 New Jersey firms are conducting cancer research with over 126 new cancer drugs under development. It is interesting to note that, because most clinical drug trials are conducted at cancer centers outside the state, New Jersey patients may not benefit from this effort.

D. UNMET HEALTH NEEDS

Cancer remains an enigma as to its course, pathogenesis and management, consequently, cancer related health care issues are multifaceted and complex. In spite of current efforts, fifty percent of all patients diagnosed today will die from complications of their disease. Cancer rates for many of the major sites continue to rise in New Jersey increasing the overall impact of the disease on our population. Cancer rates vary by age, sex and race. However, in general, the risk for developing cancer increases steadily with age. Because our population is growing proportionately older, the median age of New Jersey residents ranks our population as second oldest in the nation, New Jersey's cancer burden will expand even if the rates within each group remain stable.

We must examine our current control efforts to delineate shortcomings and plan strategies which emphasize awareness, prevention, and early detection. To adequately respond to the growing need for effective cancer control, we must identify the barriers in access to health care for New Jerseyans. However, the unmet health care needs for cancer go beyond strengthening public awareness and improving access to cancer screening. Progress needs to be made in the areas of cancer surveillance, prevention and detection, diagnosis and treatment, continuum of care, cancer research, the financing of these components, and the overall coordination of efforts in the cancer community.

Surveillance

New Jersey has had a cancer registry since the late 1970s which collects data on all newly diagnosed cancers among state residents. This extensive database contains information on demographic and medical characteristics of over 37,000 cancers diagnosed annually in New Jersey. The data are essential for understanding the impact of cancer, and are used to calculate incidence and survival rates. The data are fundamental to planning, targeting, and evaluating cancer control strategies, and for health service planning.

These applications of Registry data are greatly enhanced when up to date information can be utilized. This is problematic for the Registry for several reasons. Although hospitals and health care providers are required to report cases within six months of diagnosis or three months of discharge this rarely occurs. Currently there is no penalty period for failure to comply with reporting regulations and therefore submission of case reports to the NJSCR may occur a year or more after diagnosis. Further, processing of cases once reported has been very labor intensive requiring transcription, coding, editing and keypunching. A large backlog of cases reports has accumulated. Introduction of a planned electronic data submission mechanism should remediate this problem soon.

To fulfill its legislative mandate, the Registry needs significant strengthening. Additional data processing resources and personnel are necessary to bring the database up to date and improve the quality of the data. Such improvements would make the data more useful to researchers and permit more timely access to cancer data. The data would become more applicable to the study of New Jersey specific issues such as occupational exposures, clustering of cancer, and data linkage studies.

Prevention/Detection

New Jersey needs to expend more resources toward the prevention and early detection of cancer. Many cancer sites have proven effective cancer control strategies which should be broadly applied in our State. Site specific interventions are discussed elsewhere in the Chapter. Here we discuss more generally the shortcomings of the public sector, communities, health care providers, and public health agencies in their approach to cancer prevention and detection. Although the New Jersey cancer community has done a great deal to remove barriers, there is much work to be done by all of these groups to achieve the goals outlined in the Year 2000 Objectives.

Public

The general public is not fully aware of the major causes of cancer and methods for preventing it. Further, if they do realize they are at high risk of the disease, many do not seek appropriate screening services. For example, they may have heard that smoking is harmful but are unaware that more than 30 percent of cancer deaths are due to cigarette smoking or may be particularly susceptible to the carefully targeted marketing tactics of cigarette companies. They may know that early detection is important, but may not realize that detecting breast cancer early is the key to survival.

Among the public knowledgeable about cancer risk, the immediate priorities associated with day to day life may interfere with the practice of positive health behavior. Feelings of fear, denial, impending doom, and the inability to navigate bureaucracy in the health care system may also impede participation in cancer control activities. Culturally sensitive education programs can increase knowledge about cancer control activities. Knowledge may increase the likelihood that persons will seek screening services and/or treatment, but knowledge alone does not guarantee behavioral change.

The high cost of screening is a problematic issue for individuals wishing to participate in cancer screening. Insurance does not routinely reimburse for screening tests. However, in New Jersey recent legislation mandating third party payers to reimburse for screening mammography, P.L. 1991, Chapter 279, demonstrates progress in this area. Nonetheless, with the growing population of uninsured and underinsured New Jerseyans the dilemma of providing screening, to detect cancer early, is compounded by the challenge of affordability.

Community

There is a need to enhance and coordinate cancer control efforts at the community level in New Jersey. Cancer is the second leading cause of death in the State. Many individuals and community leaders are not aware of the impact that cancer makes on their communities, in terms of personal loss and the associated health care costs for treatment and care of terminally ill cancer patients. Community resources and efforts are often focused on the immediate concerns of local citizens. These efforts may be beneficial in offsetting the challenges of daily survival issues some cancer patients face. However, community programs often

lack the focus on cancer prevention and early diagnosis which is essential to cancer control.

At the community level, individual efforts and resources may be combined through coalition building to create a comprehensive impact on cancer awareness. Local schools, media, worksites, churches and community organizations need to mobilize, and demonstrate how much they can do to prevent cancer in their communities; i.e., awareness and education campaigns, anti-tobacco billboard advertising, and mobile mammography screening. When these preventive campaigns augment community services such as patient transportation to treatment and meal delivery systems to those in need, a more comprehensive cancer control effort can be realized on a local level.

New Jersey remains concerned about its environment and the potential exposure to environmental and occupational carcinogens in our daily lives. A need exists to reduce and/or eliminate exposures with an adverse effect on health and effective strategies include remediation, education and regulation. Efforts to improve air and water quality should be considered as well as programs aimed at minimizing exposure to environmental tobacco smoke and indoor radon exposure (especially among smokers).

Health Care Professionals

Traditionally, health care professionals have dealt with the immediate concerns of their patients, focusing primarily on diagnosis and treatment. Often they have been discouraged by the lack of patient response to cancer control efforts. Noncompliance on the part of some health care professionals in not referring patients to screening services has also been a problem. Many health care professionals are not familiar with the effective behavioral change materials and programs that are available today, at low cost and in some circumstances free of charge. A change in emphasis towards prevention and early diagnosis should be incorporated into the physician's day to day practice.

Health care professionals and the health care system may not appreciate the important cumulative role that their efforts play in long-term behavior change in the total population at risk of cancer. These barriers can be overcome if realistic expectations for cancer control are established and promoted as professional norms for health care in New Jersey.

Public Health Agencies

In relation to the myriad of New Jersey's pressing health problems, cancer control activities have been given a low priority although cancer affects thousands of people each year in this state. Traditionally, manpower and resources have been directed toward controlling public health problems readily amenable to change; i.e., improved sanitation and immunizations, which were significant in preventing disease in the first half of this century. In addition, extensive resources have been devoted to providing health care services for socio-economically disadvantaged populations. In spite of the continued need for these services, public health agencies must broaden their focus to include programs that address the increasing morbidity and mortality from cancer and other chronic diseases.

The ability to enhance cancer control efforts may be impeded by limited numbers of staff involved in chronic disease prevention, the demand to continue services in activities traditionally supported by public health agencies, and shrinking federal, state, and local funding for new programs. Cancer control could become a major public health issue in New Jersey if public health agencies, citizens, and state legislators recognize the impact of cancer in relation to other public health problems.

There is also a need to develop consensus and leadership among the cancer community to enhance cancer control activity in New Jersey. Consensus and the ability to set priorities in terms of the best approach for cancer control among target populations with specific risk factors are needed to establish a comprehensive statewide approach to cancer control. Leadership at all levels must be strengthened to define what individual providers can accomplish in cancer control and how providers can coordinate resources, and work together to solve the more difficult and costly problems.

Diagnosis and Treatment

It is essential that all New Jersey citizens have access to adequate diagnostic services and treatment programs. We are concerned with the economic barriers to affordable health care created by insurance exclusionary clauses, Medicaid waiting periods, and differential referral patterns based on the ability to pay. Further, the New Jersey population should have access to state of the art treatment and the option of participating in clinical trials. While these services are available, there seems to be a lack of coordination of services and it is difficult for the average patient to locate these resources. Careful evaluation of health care services for cancer patients is necessary to ensure adequate care.

Pediatric oncology requires specialized centers that provide the unique support necessary to treat children with cancer. Studies indicate that children who are treated in such centers have significantly higher survival rates than those treated at the community level. The State should support the development and improvement comprehensive of pediatric cancer centers in this State to help assure the best care available to children with cancer in New Jersey.

Continuum of Care

New Jersey has many resources available to cancer patients which will help ensure the quality of life. However, much needs to be done in terms of disseminating appropriate information to patients and their families and coordinating the efforts of the many aspects of the health care delivery system which become involved in the patient's life. Many cancer patients and their families benefit from the social services of counseling, financial assistance and treatment referral systems. These services as well as others that treat the whole patient should be incorporated into the recovery plan for all patients.

Research

New Jersey prides itself on being on the cutting edge of many aspects of research and development. It is home to many major pharmaceutical companies and other contributors to the health care system. However, much needs to be done to attract funding for all aspects of cancer research in this State. We need to enhance our capabilities to undertake basic cancer research by providing assistance to investigators, and facilitating cooperation among the major research institutions in the State.

We also need to help guide the course of research in New Jersey to not only broaden the base of existing research but to branch out into areas needing further study. For example, new emphasis should be placed on defining key elements in prevention and control, encouraging participation in treatment protocols by investigators and patients, and supporting research in rehabilitative and psychosocial aspects of the disease.

Finance

The State has a major unmet need when it comes to the financing of a comprehensive cancer plan such as in this document. Major financial resources must be committed to this plan for its success. One method of financing it is an excise tax on tobacco products. Such a tax has proven effective elsewhere in the country, not only through raising money to implement cancer control programs but also by providing a financial disincentive for tobacco use.

Coordination of Efforts

Governor's Advisory Council

It is evident that the reduction of cancer incidence and mortality in our state is reliant on the efforts of many organizations, groups, and individuals. Given the complexity of this disease and the profound impact it has on peoples' lives, a myriad of direct and support services must work together for effective prevention and control. Awareness, education, lifestyle modification, screening and detection, diagnosis and treatment, supportive services, surveillance, and research activities must all be coordinated if they are to be effective and if we are to make advances in fighting cancer. Additionally, we know that much quality work is already in progress, but there are important areas of unmet need—and very limited resources to address these.

As a vehicle for generating the needed resources for the prevention and cessation of tobacco use, an increase in the state excise tax on cigarettes is required. To provide insight on the effects of the increased excise tax on the smoking prevalence of the populations, descriptions of the California and Canada programs are included:

In 1988 California instituted a 25 cent excise tax on every pack of cigarettes sold in the state. This tax raises $600 million in revenues each year, with 20 percent earmarked for anti-smoking education. The tax is designed to deter smoking and already a 17 percent decline in the number of smokers has been documented. This decline is thought to be a direct result of the financial disincentive of this tax coupled with effective anti-smoking campaigns.

Canada has documented a decline of over 30 percent in tobacco consumption during the period 1980-1990 attributed to their multifaceted

National Strategy to Reduce Tobacco Use. This strategy includes a ban on advertising, stringent tobacco product labeling requirements which include not only health warnings but also levels of toxic constituents, and restrictions on smoking in public places and the workplace. Substantial tax increases, restriction of tobacco sales to minors, and health education/health promotion campaigns are cited as other key components to reducing the consumption of tobacco. Since 1984, tobacco consumption in Canada declined 28.5 percent while in the US it declined by about 20 percent and by about 5 percent in the UK during the same period. While tobacco consumption in Canada has declined markedly, the percentage of the population who smokes has remained the same, thus indicating a decline in the number of cigarettes smoked per day. Some strides have been made in reducing the prevalence of smoking in the 15-19 year-old age group.

In general, what is lacking from our current system of cancer prevention and control is a unified effort on the part of policy makers, cancer control experts, health care providers, and health education professionals to provide executive level recommendations to direct resources to prevent and control cancer. To facilitate cooperation and coordination among the numerous groups that have an active role in addressing cancer issues, the formation of a Governor's level cancer advisory council is recommended. A strong advisory council will have the ability to obtain the broad based input and support needed to implement a comprehensive cancer program in New Jersey.

Comprehensive Cancer Center

There are 14 cancer centers in the tri-state areas of Pennsylvania, New York and New Jersey. Of the six that are comprehensive cancer centers, none of them is in the Garden State. Yet, according to the American Cancer Society statistics, New Jersey has the highest incidence and mortality rates among the three states.

A comprehensive cancer center is a designation conferred by the National Cancer Institute through a strict review procedure that evaluates specific capabilities and standards in each of the following areas: basic laboratory research, a basic/clinical linkage, clinical research programs, high priority trials research, cancer preventions and control, education, training and technology transfers activities, information services and community outreach. This designation represents scientific excellence, leadership and the essential qualities necessary to address cancer problems of major importance.

While comprehensive cancer centers focus on major national and regional priorities, they must also have an impact on the cancer problem in the community they serve and relate to their populations. New Jersey citizens are unique. They are not a subpopulation of New York and Pennsylvania. New Jersey needs to have at least one comprehensive cancer center in order to bring needed benefits and advances to its citizens.

It is important to note that strides have been made in the area to develop a comprehensive cancer center in New Jersey. Recently, the Cancer Institute of New Jersey, a consortium of health care providers in the central New Jersey area, was designated by the National Cancer Institute as a planning site for a comprehensive cancer center. While this planning site designation does not ensure the consortium's designation of comprehensive cancer center, it is certainly an important beginning.

E. RECOMMENDATIONS

General recommendations are proposed in the areas of cancer surveillance, prevention/detection, diagnosis and treatment, continuing care research, and finance, and are based on information pertinent to the cancer sites responsible for most of the cancer diagnosed in New Jersey for which effective prevention, detection, treatment and control strategies are available. These include breast, cervical, colon/rectal, lung, oral/pharyngeal and skin cancers. The clear message is that many cancers can be prevented by changes in lifestyle and health practices. Survival rates among cancer patients can be improved through changes which are targeted toward early detection and access to state-of-the-art treatment modalities. The public needs to:

1. avoid smoking, and the use of other tobacco products;
2. eat a diet low in fat, and high in fiber by consuming more whole grain breads and cereals, as well as vegetables and fruits;
3. drink alcohol only in moderation; if at all
4. protect oneself from ultraviolet light exposure; and
5. utilize appropriate health practices for early cancer detection according to the recommended guidelines (e.g. breast self examination, mammography screening, Pap tests, fecal occult blood test, skin and oral screening, and self testicular examination).

Following these guidelines could greatly reduce one's chance of developing or dying from cancer since these modifiable risk factors are thought to play a role in the development of 70 to 80 percent of all cancers. In comparison, environmental carcinogens and workplace exposures account for a much smaller proportion of cancers. However, reducing exposure to passive smoke (environmental tobacco smoke), and eliminating carcinogens in the workplace and the environment are an important part of this plan.

Social change is necessary to reduce cancer in our population and legislators can play a key role in this effort by enacting policies which will have a positive impact on cancer control. They must also work to remove the barriers that prevent high risk populations from obtaining preventive services and state of the art care. The legislature has recently passed a law to require insurance coverage for screening mammography which will help thousands of women detect breast cancer at a treatable stage. New Jersey also has laws to prohibit smoking in many public places including schools, however these laws could be broadened to cover workplaces and public areas not now specifically covered.

Another important aspect of these recommendations is provider education. Physicians, nurses, and public health professionals must increase their awareness of cancer prevention and control and the application of these fundamental concepts. Health promotion and disease prevention curricula in medical schools and residency programs should be a cornerstone to medical education. Continuing education programs are necessary for the entire medical community to keep abreast of advances in the areas of prevention, detection, and the state of the art treatment. The utilization of such services will rely on the ability of health care professionals to recommend and provide them.

The following recommendations are proposed by the State Cancer Plan Task Force and described in the following narrative, divided into six components: Surveillance; Prevention/Detection; Diagnosis/Treatment; Continuum of Care; Research; and Finance. Each component contains the specific goals and objectives and the suggested methodologies to achieve and evaluate each component. Also included are the agencies which should plan an active role in the implementation of this plan. Each of objectives is integral to a successful cancer reduction program, thus no priority can be assigned.

Overall Recommendations and Policy Issues

1. A Governor's level Cancer Advisory Council should be formed to oversee the implementation, monitoring, and updating of the New Jersey State Cancer Plan and to facilitate collaboration and cooperation among cancer investigators, research institutions, and care providers in New Jersey. Funded out of the revenues generated by the proposed increase in cigarette and tobacco products excise tax, and in coordination with the Commission on Cancer Research, the membership of the Council should include, but not be limited to, economists, epidemiologists, members of the medical community with expertise in oncology and related practice, a member of the State Health Planning Board, Department of Health representatives, a representative of the New Jersey Commission on Cancer Research, a representative of the Medical Society, a representative of the Hospital Association and representatives of voluntary organizations such as the American Cancer Society, cancer prevention and control experts, and at least one citizen with an interest in or experience in cancer issues.
2. Propose a referendum to the citizens of New Jersey to increase the state excise tax on all tobacco products with revenues dedicated for use in implementing and evaluating the State Cancer Plan. This excise tax would not only provide funding for services directed at tobacco consumers, but would serve as a deterrent to tobacco consumption. Both California and Canada have reported declines in cigarette sales after enacting such a policy.
3. Tobacco use is the chief preventable cause of death, responsible for one-third of all cancers and many forms of cardiovascular disease. Preventing tobacco related deaths does not require scientific breakthroughs but social change. Aggressive prevention of tobacco use targeted at high risk populations must be promoted through counter advertising, limited access, and promotion of smoke-free environments. Tobacco use cessation services for those already addicted should be expanded. The recommendations of the Commission on Smoking or Health, the state level, governmental and voluntary interagency group concerned with

tobacco use control in New Jersey (see Exhibit B of the Appendix) are strongly supported.

4. Cancer control efforts in New Jersey should be based on timely, accurate New Jersey-specific cancer incidence, mortality and survival data; thus, the statewide, population-based cancer registry database should continue to be supported and improved.
   a. Support the development and enhancement of hospital-based cancer registries as a means of accessing detailed treatment and follow-up data to evaluate patterns and quality of care.
   b. Develop incentives to improve timely reporting to the New Jersey State Cancer Registry and enhance compliance with NJSA 26:2-104 et. seq.
   c. New Jersey must continue to develop the ability to link with key data bases relating to cancer issues in order to facilitate research, planning, and evaluation in cancer control.
   d. Identify and investigate cancers with high incidence and mortality rates in New Jersey, define key components in prevention and control, and initiate intervention models to reduce or eliminate known etiologies.
5. Behavioral factors such as use of tobacco or alcohol consumption, of high fat and otherwise inappropriate diets, and overexposure to the sun, account for as much as 80 percent of all cancers. Intensive awareness campaigns must be deployed to change public attitude to the acceptance of personal responsibility in the prevention of cancers; i.e., to make relevant behavioral and lifestyle changes to prevent the development of cancer. Such campaigns should aim to reach high risk populations such as youth, minorities, women and blue collar workers. Continue consumer and provider education to promote sound preventive health practices; i.e., participation in routine screening, low fat high fiber diet, smoking prevention/cessation, and use of sun block.
6. Expand and improve existing screening programs to reach a larger proportion of the State's population at risk. Develop new screening programs for major cancer sites where demonstrated cost effective screening programs are applicable.
   a. New Jersey must improve its efforts to provide appropriate awareness education, screening and care services to all women regardless of the ability to pay. New Jersey's breast cancer incidence rate has been increasing by 1 percent each year, similar to national rates. However, New Jersey women have incidence rates that are 6-7 percent higher than national rates, and mortality rates that are 18-19 percent higher than national rates. Regardless of the stage at diagnosis, New Jersey women have consistently lower survival rates than their United States' counterparts.
   b. New Jersey's cervical cancer incidence rates are 21-30 percent higher than national rates. For Whites in New Jersey, cervical cancer mortality rates are comparable to national rates, but for New Jersey Blacks they are 12 percent higher. Cervical cancer mortality rates for Black women are nearly triple those of Whites in New Jersey. Since death from cervical cancer is almost completely preventable, we must improve our efforts to screen all women for cervical cancer and to provide appropriate referral and follow-up treatment when cancers are diagnosed. Pap testing should be included as a service at all sexually transmitted disease (STD) clinics.
   c. Survival with colorectal cancer is largely dependent upon stage of disease at diagnosis. Therefore, continued emphasis is required to encourage early detection through screening by fecal occult blood testing in a clinical setting and colonoscopy according to national screening guidelines, particularly among high risk populations.
   d. Oral cancer is largely amenable to early detection, therefore, increasing public and provider awareness of oral lesions is necessary.
   e. Recent advances in technology increase the potential for earlier detection of various types of malignancies. The Department of Health must utilize existing review mechanisms in an expeditious manner to facilitate the evaluation, recommendations, and implementation of detection programs incorporating new screening modalities as they are proven to be effective.
   f. Develop and improve methods of early detection of cancers having the greatest impact on morbidity and mortality in New Jersey. Sites of interest include prostate, colorectal, ovarian, uterine and bladder cancers.
7. Improve access to state of the art care without contributing to the duplication of services; i.e., refer pediatric cases to New Jersey facilities with specialty services, encourage regional planning for treatment facilities and participation in clinical trials.
8. New Jersey does not have a National Cancer Institute-designated comprehensive cancer center. Such a designation would coordinate state of the art diagnosis and treatment. The lack of a comprehensive cancer center affects the competitiveness of New Jersey institutions for the awards of Federal grant monies, particularly in the area of cancer prevention/control. The ultimate impact of this lack of coordinated services is on the health of the citizens of New Jersey. Therefore, a unified effort must be made by all interested parties to support ongoing efforts to establish a comprehensive cancer center in New Jersey.
9. Develop more stringent statewide quality assurance programs.
   a. Regulate mammography services in conformance with American College of Radiology (ACR) accreditation standards.
   b. Mandate a statewide, uniform quality assurance program for Pap testing.
10. Should the United States Congress not enact legislation within the next year for a universal health care system to ensure that all Americans have access to quality health care, the New Jersey Legislature should consider the passage of a plan that ensures that all New Jerseyans are assured access to health care.
    a. Increase the number of insurance policies that include preventive and diagnostic screening services such as smoking cessation, nutrition counseling, the Pap test and mammography in their health benefits packages.
    b. Minimize waiting periods for insurance coverage.
    c. Minimize exclusion from insurance coverage based on pre-existing conditions, such as cancer.
11. Ensure optimal quality of life for cancer patients and their families by providing accurate and timely information which may enable the patient and family to participate actively in decisions regarding diagnosis, choice of treatment facility, treatment alternatives, management of symptoms/side effects, termination of care, patient rights, and return to an active lifestyle and survivorship. Enhance appropriate and accessible spiritual, emotional, physical and financial resources in the community to support choices made by patients and their families.
    a. Survivorship issues related to discrimination in the workplace, school and insurance need to be addressed.
    b. Encourage ongoing nursing, psychosocial, and rehabilitative research in New Jersey based upon need assessments, grant proposal development and provision of funding.
12. Improve New Jersey's capabilities to undertake basic cancer research by providing assistance to investigators studying the causes, prevention and treatment of cancer.
13. Cancers attributable to occupation and environmental exposures account for less than 20% of all cancers. Studies of the role of occupation/environmental exposures in the development of cancer should be continued; strategies to reduce carcinogenic exposures in the workplace, schools, home, and natural environment should be implemented.
    a. In documented hazardous worksites, provide educational material on the synergism between cigarette smoking and exposure to carcinogens; provide access to smoking cessation programs to affected employees.
14. To enhance the ability to monitor progress toward the control of cancer in New Jersey, restore the capability of the State Cancer Registry to collect and maintain detailed data on the extent of disease and on treatment and make the data compatible with the National Cancer Institute databases. This additional information is instrumental in developing adequate cancer control interventions and adds to the understanding of the natural history of cancer. These data are also of considerable importance to health planners and policy makers.
15. Allocate State funds for cancer screening. Such an appropriation would enhance current cancer control efforts and is necessary for New Jersey to become competitive for Federal funding requiring matching funds.

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APPENDIXES

TABLE 1

New Jersey
Megavoltage Radiation Oncology Patient Distribution

	Patients 1985	Treated 1990	Percent Increase 1985-1990
LAB I	2,390	1,958	(-18.1%)
LAB II	2,287	2,743	19.9%
LAB III	5,056	3,953	(-21.8%)
LAB IV	2,621	2,794	6.6%
LAB V	2,066	2,070	0.2%
LAB VI	1,564	2,549	63.0%
STATE TOTAL	15,984	16,067	0.5%

TABLE 2

Megavoltage Radiation Oncology Patient Capacity* in New Jersey (1990)

	CON-Approved Linear Accelerator	CON-Approved Cobalt Unit	Estimated Patient Capacity	1990 Patient Utilization	Percent Capacity
LAB I	8	1	4,250	1,985	46.7
LAB II	8	3	4,750	2,743	57.7**
LAB III	14	2	7,500	3,953	52.7
LAB IV	6	2	3,500	2,794	79.8
LAB V	6	—	3,000	2,070	69.0
LAB VI	8	1	4,250	2,549	59.0
STATE TOTAL	50	9	27,250	16,067	59.0%

*Capacity is defined as 500 patients per year treated on linear accelerator equipment and 250 patients per year for Cobalt-60 units.

**Estimated areawide capacity in this LAB region may be deceptive due to the future conversion of a "private practice" megavoltage service to that of a hospital-based service. Those megavoltage patients that are currently not reflected in the Department's data acquisition system will be reported in the future, once this certificate of need is implemented.

TABLE 3

New Jersey
Megavoltage Radiation Oncology Patients
1981-991

YEAR	Total Patients	Percent Increase
1981	14,601	—
1982	15,432	+5.7
1983	15,332	-0.6
1984	15,752	+2.7
1985	15,963	+1.3
1986	15,984	+0.1
1987	17,525	+9.6
1988	17,483	-0.2
1989	18,380	+5.1
1990	16,067	-12.6

TABLE 4

Megavoltage Radiation Oncology
Statewide Patient Visits
1986 vs. 1990

	Patient Visits		Patient Visit Increase
	1986	1990	1986-1990
LAB I	40,703	45,469	+11.7
LAB II	46,416	53,452	+15.2
LAB III	84,641	76,311	-9.8
LAB IV	55,874	53,241	-4.7
LAB V	39,984	44,109	+10.3
LAB VI	45,551	49,677	+9.1
STATE TOTAL	313,169	322,259	+2.9

TABLE 5

Statewide Megavoltage Oncology Patient Visits
1981-1990

YEAR	Total Patients	Percent Increase
1981	240,144	—
1982	259,572	+8.1
1983	265,958	+2.5
1984	284,220	+6.9
1985	295,298	+3.9
1986	313,169	+6.1
1987	328,518	+4.7
1988	321,049	-2.3
1989	333,192	+3.8
1990	322,259	-3.3

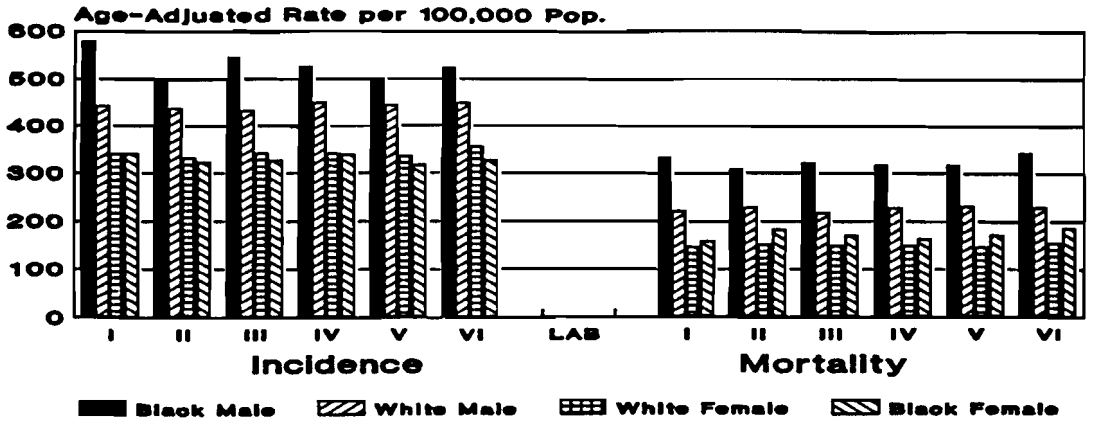
DIETARY GUIDELINES FOR HEALTHY AMERICANS: RECOMMENDATIONS OF NINE ORGANIZATIONS

			% TOTAL FAT CALORIES				CARBOHYDRATES				
ORGANIZATION	Nutrient Adequacy	Body Weight	Total Fat	Saturated Fatty Acids	Polyunsaturated Fatty Acids	Cholesterol mg/dl	Starch	Fiber gm/day	Refined Sugar	Sodium mg/day	Alcohol (If Used)
American Academy of Pediatrics	Variety of foods	Maintain ideal body weight	30 to 40	Decrease consumption	Increase intake	Decrease consumption	–		–	Decrease salt intake	–
American Cancer Society	Variety of fruits and vegetables	Avoid obesity	Cut down intake	–	–	–	–	Eat more high fiber foods	–	Eat Salt and nitrate cured foods in moderation	Moderate consumption
American Diabetes Association	–	Consume calories to achieve and maintain desirable body weight	<30	<10	6 to 8	<300	Total carbohydrates 50% to 60% total calories: fiber intake of 40 g/d beneficial		Avoid too much	Modest restriction	Moderate consumption not to exceed 2 oz. once or twice a wk
American Dietetic Association	Wide variety of nutrient-rich foods	Achieve and maintain optimal body weight	<30	<10	–	<300	Eat foods with adequate starch	20 to 35 g/d	Avoid too much	Avoid too much	Moderate consumption: children, teens and pregnant women should abstain
American Heart Association	Wide variety of foods	Maintain recommended body weight	<30	<10	≤10	≤300	Carbohydrates should constitute ≥ 50% of calories with emphasis on complex carbohydrates		–	≤3000	Not to exceed 1 to 2 oz. daily
National Cancer Institute	Variety of fruits and vegetables	Avoid obesity	≤30	–	–	–	Increase fiber intake to 20 to 30 g/d: upper limit, 35 g/d		–	–	Moderate consumption
National Cholesterol Education Program NHLAI Institute	–	Maintain desirable weight	≤30	<10	–	<300	–		–	–	–
US Departments of Agriculture and Health and Human Services	Variety of foods	Maintain desirable weight: if obese, lose weight gradually. Increase physical activity	Avoid too much	Avoid too much	–	Avoid too much	Eat foods with adequate starch	Eat foods with adequate fiber	Avoid too much	Avoid too much	Moderate consumption
Committee on Diet and Health, Food and Nutrition Board, National Research Council	–	Balance food intake and physical activity to maintain appropr. body weight	≤30	<10	≤10	<300	Carbohydrates should be increased to ≤55% of total calories by increasing primarily complex carbohydrates		–	<2400	Less than one oz. if at all

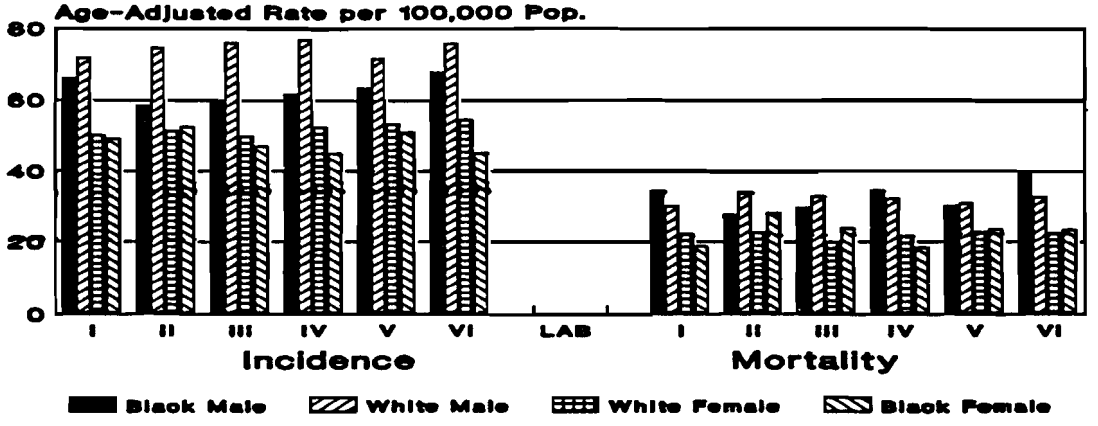
Source: Winston, Mary and Owen, Anit L., Special Report—"Dietary Recommendations", in The Official Newsletter of the Educational Program "Cholesterol and Coronary Diseases ... Reducing the Risk", Vol. 3, No. 3: 1991.

EXHIBIT A

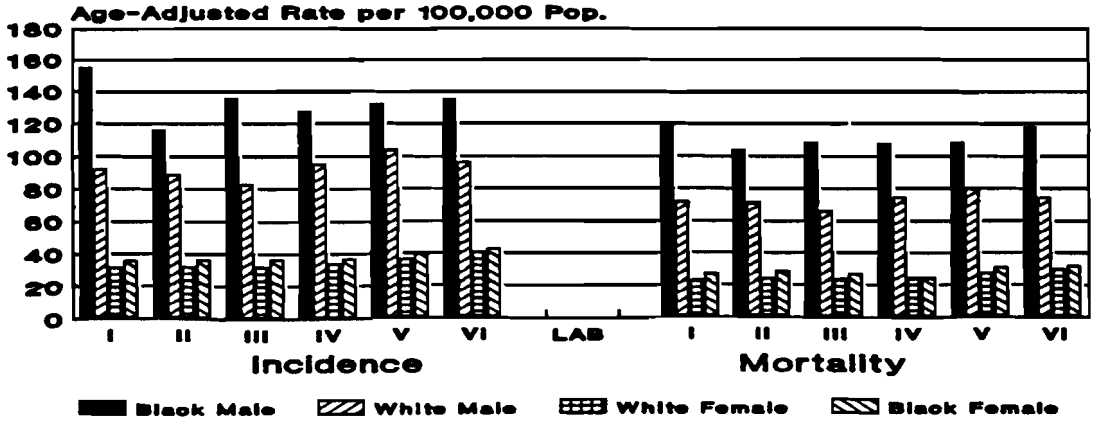
Total Cancer,New Jersey,1979-85 by Local Advisory Board (LAB)



Colorectal Cancer,New Jersey,1979-85 by Local Advisory Board (LAB)

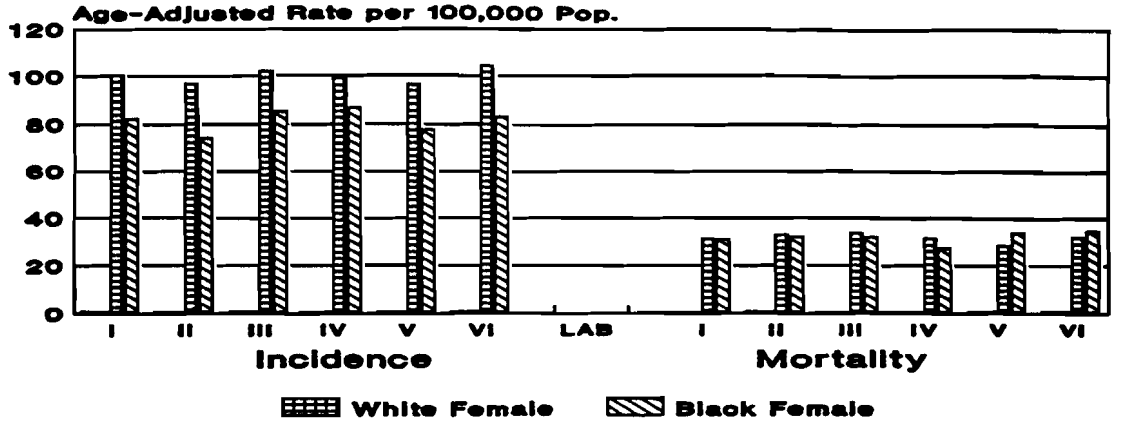


Lung Cancer,New Jersey,1979-85 by Local Advisory Board

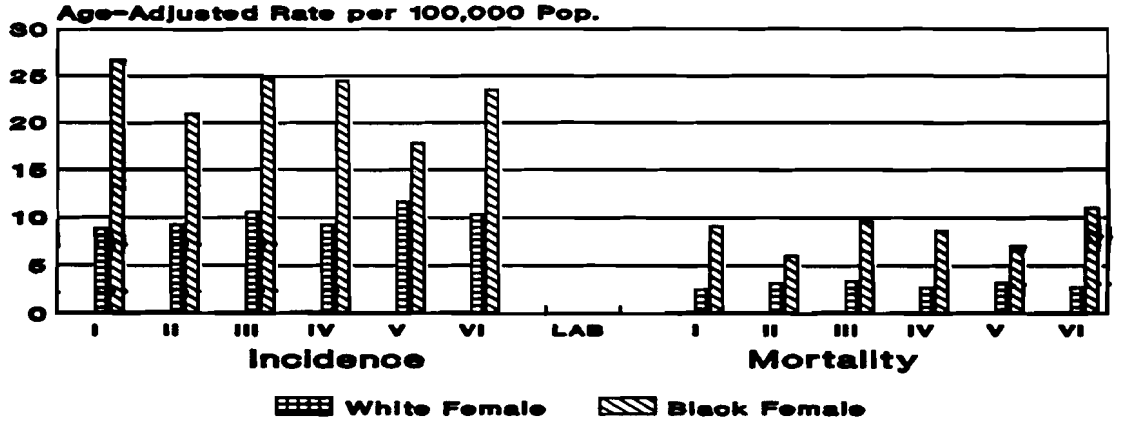


Note: Rates are Age-Adjusted to 1970 U.S. Standard Population;
Analysis: Data Applications Program, Division of Epidemiology & Communicable Disease Control;
Data Sources: New Jersey State Cancer Registry & New Jersey State Vital Statistics Unit.

Breast Cancer,New Jersey,1979-85 by Local Advisory Board (LAB)



Cervical Cancer,New Jersey,1979-85 by Local Advisory Board (LAB)



Note: Rates are Age-Adjusted to 1970 U.S. Standard Population;
Analysis: Data Applications Program, Division of Epidemiology & Communicable Disease Control;
Data Sources: New Jersey State Cancer Registry & New Jersey State Vital Statistics Unit.

CANCER SITE	ASSOCIATED DIETARY RISK FACTORS* (Highly suggestive)	ASSOCIATED DIETARY RISK FACTORS** (Evidence preliminary/ inconclusive)	DIETARY RECOMMENDATIONS (Preventive)
BREAST	High Fat Diet	Polyunsaturated Fat Saturated Fat Obesity Alcohol	Reduce dietary fat intake to 30% or less total calories Moderate consumption Alcohol Maintain healthy weight
COLORECTAL	High Fat Diet	Beer consumption (rectal) Low fiber Saturated fat	Moderate consumption alcohol Reduce dietary fat intake to 30% or less total calories Increase intake of fruits and vegetables, legumes, and wholegrain cereals
LUNG	Low B-carotene intake		Increase intake of green and yellow fruits and vegetables
CERVIX		Low B-carotene Obesity	Increase intake of green and yellow fruits and vegetables Maintain a healthy weight

*The overall evidence is highly suggestive of an association.
**Studies have shown contradictory results or insufficient evidence to draw conclusions.

CANCER-SPECIFIC STATISTICS (SELECTED SITES)

FEMALE BREAST CANCER

Age-Adusted Incidence Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	77.7	87.3	86.7	85.6	77.7	81.8	81.8
White Female	93.3	97.5	101.7	102.8	100.2	99.9	102.8

Stage at Diagnosis

	In-Situ	Local	Regional/ Distant	Unknown	All*
Black Female	3.9%	39.1%	43.1%	14.0%	100.0%
White Female	3.6%	44.2%	40.5%	11.8%	100.0%

Age-Adjusted Mortality Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	29.0	37.6	30.1	31.0	33.5	31.7	32.3
White Female	30.8	31.9	30.9	32.4	30.5	32.3	33.4

Five-Year Relative Survival by Stage of Disease

	Local	Regional/ Distant	Unknown	All Stages
Black Female	76.63%	40.50%	42.84%	54.68%
White Female	83.56%	55.12%	50.71%	67.12%

Analysis: Comparing the race-specific, age-adjusted incidence rates for the 1979-1985 time period, white females have an overall 21% higher incidence rate than black females. For White, the incidence rates throughout this seven-year period remained virtually stable with a 0.9% average increase per year. With the exception of 1983, when there was an apparent 11% decrease in the age-adjusted incidence rate compared to the previous year, the rates for Blacks remained stable.

The proportion of early-stage breast cancer cases is comparable between the races, with white females having a slightly higher percentage of localized disease. Whites with breast cancer diagnosed in the localized stage had a 9% higher five-year relative survival than that of black females similarly diagnosed. It should be noted that regardless of stage at diagnosis, Whites had a consistently higher percentage of five-year relative survival from breast cancer during the 1979-1985 study period.

On the average, the age-adjusted mortality rates for white females and black females were fairly similar from 1979-1985. With the exception of the 1980 rate, the mortality rates from 1979-1985 for both Blacks and Whites were reasonably stable and ranged from 29.0 to 37.6 deaths per 100,000 women per year in New Jersey.

Incidence, Mortality, and Survival: New Jersey vs. SEER: For a better perspective on the morbidity and mortality caused by breast cancer, comparison is made of the New Jersey rates to those available from the SEER Program of the National Cancer Institute.

For the 1979-1985 study period, the New Jersey age-adjusted incidence rates were, on average, 7% higher for Whites; for black females, the rates were 6% higher than the corresponding SEER rates. During this period, an approximate 1% increase in the annual incidence rates was comparable for women in both New Jersey and SEER comparison areas. Stage at diagnosis information was comparable for both New Jersey and SEER. Approximately 50% of the Whites and 40% of black women were diagnosed with localized breast cancer.

Age-adjusted mortality rates for New Jersey women averaged 18% higher for Whites and 19% higher for Blacks than the United States rates which, for both races, were reasonably stable between the comparison areas during the seven-year period.

Reviewing the survival data, regardless of stage at diagnosis, New Jersey had consistently lower percentages of five-year relative survival for both races compared to the SEER areas. For example, white women in New Jersey diagnosed with localized breast cancer had an overall 8% lower five-year survival rate than did women in the SEER areas who were similarly diagnosed during 1979-1985.

CERVIX UTERI CANCER

Age-Adusted Incidence Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	22.0	26.8	26.5	23.3	20.5	21.8	21.7
White Female	10.2	10.7	10.3	9.6	10.4	8.9	9.0

Stage of Disease at Diagnosis

	In Situ	Local	Regional/ Distant	Unknown	All
Black Female	61.9%	17.0%	12.9%	8.2%	100.0%
White Female	63.6%	18.0%	11.5%	6.8%	100.0%

Age-Adjusted Mortality Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	10.2	8.7	9.7	8.7	9.7	8.5	6.5
White Female	3.0	3.6	2.5	2.9	3.0	2.9	2.6

Five-Year Relative Survival by Stage of Disease

	Local	Regional/ Distant	Unknown	All Stages
Black Female	69.35%	33.82%	35.06%	49.34%
White Female	72.77%	30.67%	39.60%	53.03%

Analysis: Comparing the 1979-1985 race-specific, age-adjusted incidence rates, Black rates are nearly 2.5 times higher than White rates. During the first half of this time period, the age-adjusted incidence rates for black females increased by 13 percent. The magnitude of this observation could be a spurious result based on relatively few numbers of cases, or it could be the partial result of a statewide cervical cancer screening program conducted from 1979-1982. The target audience of the screening program was low income and minority women in New Jersey. Since 1982, the rates for black women have declined and remained stable at approximately 21 incident cases per 100,000 women per year.

The proportion of cases of localized cervical cancer is approximately the same between the races. White females with localized disease, however, had a slightly higher percentage of five-year relative survival than did black women similarly diagnosed.

On the average, age-adjusted mortality rates for Blacks were roughly three times higher than those for Whites during the 1979-1985 time period. The rates for black females, however, are based on relatively few numbers of deaths and should be interpreted with caution. The mortality rates for black women have declined by an average of 4% per year between 1979 and 1985. The mortality rates for white women declined by an average of 3% per year during this period.

Incidence, Mortality, and Survival: New Jersey vs. SEER: Age-adjusted incidence rates for Whites in New Jersey averaged approximately 21% higher and for Blacks 30% higher than the SEER rates from 1979-1985. Again it should be noted that for Blacks the result is based on relatively few numbers of cases and should be interpreted with caution. The proportion of cases diagnosed in localized stages was slightly higher among New Jersey females of both races, approximately half of New Jersey women diagnosed with invasive cervical cancer were diagnosed while the disease was localized.

Age-adjusted mortality rates for New Jersey Whites were comparable to the SEER rates, but for Blacks they were 12% higher. The average age-adjusted rate for white females in both comparison areas was three per 100,000 women per year; for Blacks, this rate was approximately nine per 100,000 women per year.

The proportion of five-year relative survival for localized cases in the SEER comparison areas was consistently higher than that for New Jersey. For Whites, approxmately 88% of the localized cases in the SEER areas lived at least five years after the diagnosis of cervical cancer compared to 73% of the New Jersey cases similarly diagnosed. For Blacks, 85% of the localized cases lived at least five years compared to 70% of the New Jersey cases.

COLON & RECTAL CANCER

Age-Adusted Incidence Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	52.9	43.1	47.2	48.7	47.7	48.8	47.4
Black Male	54.9	58.4	70.7	64.3	68.0	61.4	54.7
White Female	52.3	52.3	54.1	50.4	52.6	50.5	51.9
White Male	72.1	77.5	74.3	72.2	75.9	73.9	76.5

COLON & RECTAL CANCER

Stage of Disease at Diagnosis

	In Situ	Local	Regional/ Distant	Unknown	All*
Black Female	3.4%	29.8%	53.8%	13.0%	100.0%
White Female	3.7%	33.9%	51.3%	11.1%	100.0%
Black Male	3.0%	31.1%	53.9%	12.0%	100.0%
White Male	4.7%	34.0%	50.2%	11.2%	100.0%

Five-Year Relative Survival by Stage of Disease

	Local	Regional/ Distant	Unknown	All Stages
Black Female	68.64%	24.01%	17.99%	36.68%
Black Male	62.93%	21.07%	25.81%	34.80%
White Female	72.33%	33.29%	29.84%	46.56%
White Male	70.74%	34.19%	31.04%	46.60%

Age-Adjusted Mortality Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	25.6	21.0	24.6	22.7	23.7	22.7	23.5
Black Male	30.9	30.7	27.9	29.8	35.3	34.3	32.0
White Female	22.5	21.4	23.2	22.1	22.5	21.3	20.6
White Male	32.5	34.4	31.1	30.0	33.0	33.0	32.2

Analysis: The age-adjusted incidence rates for white males averaged 22% higher than those for black males during the 1979-1985 time period. The overall incidence of colorectal cancer among white males slightly increased during this time period. For black males, the age-adjusted incidence rates increased from 1979-1983, with a peak in 1981 approaching white male rates, then decreased by 10% from 1984-1985. With the exception of a substantial decrease in the rate for black females in 1980, the rates for females of both races were relatively stable during the 1979-1985 period with white females averaging 9% higher rates than black females.

The proportion of cases diagnosed at a localized stage was slightly higher among white males and females than for black males and females. For all stages at diagnosis, Blacks had a lower proportion of five-year relative survival. Age-adjusted mortality rates for white males were stable and averaged 16% higher than for black males during the 1979-1985 study period. For black males, these rates began to increase after 1981, leveled off after 1983, and ranged from 27.8 to 32.6 deaths per 100,000 males in New Jersey. During this period, the age-adjusted mortality rates for white females were slightly higher than those for black females and ranged from 23.5 to 21.7 deaths per 100,000 females in New Jersey.

Incidence, Mortality, and Survival: New Jersey vs SEER: For the 1979-1985 period, age-adjusted incidence rates for white males in New Jersey averaged 24% higher than the corresponding SEER rates. The rates for black males were 9% higher. The incidence rates for black females were 5% higher in New Jersey than in the SEER area; the rates for white females in New Jersey averaged 18% higher than the corresponding SEER rates. The stage distribution for incident cases was similar for males and females of both races in New Jersey and in the SEER areas.

For white males in New Jersey, age-adjusted mortality rates averaged over the seven-year period were approximately 27% higher than those in the United States comparison group. Black males in New Jersey had about 24% higher mortality than their U.S. counterparts. The mortality rates for females of both races in New Jersey were about 20% higher than females in the United States.

The percentages of five-year relative survival were consistently lower for New Jersey residents diagnosed with colorectal cancer than those in the SEER areas. Though not substantially lower, these survival differences were more distinct at the localized stage of disease.

Note: Comparison of stage and survival-specific information could only be approximated due to a difference between the two comparison groups in classifying site-specific data.

LUNG CANCER

Age-Adusted Incidence Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	32.5	37.2	37.3	33.3	39.1	40.0	42.5
Black Male	128.2	139.1	133.5	133.1	128.1	138.0	130.3
White Female	31.5	31.5	31.3	34.1	35.0	37.1	38.4
White Male	91.6	93.3	91.1	92.1	93.4	89.6	95.3

Stage of Disease at Diagnosis

	In Situ	Local	Regional/ Distant	Unknown	All*
Black Female	0.0%	19.7%	56.2%	24.1%	100.0%
White Female	0.3%	21.3%	56.4%	22.1%	100.0%
Black Male	0.4%	19.7%	57.4%	22.5%	100.0%
White Male	0.2%	20.7%	55.8%	23.2%	100.0%

LUNG CANCER

Five-Year Relative Survival by Stage of Disease

	Local	Regional/ Distant	Unknown	All Stages
Black Female	25.75%	5.94%	11.28%	10.93%
Black Male	16.21%	4.05%	7.42%	7.15%
White Female	31.89%	5.41%	8.96%	11.68%
White Male	20.87%	3.92%	7.08%	8.17%

Age-Adjusted Mortality Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	26.9	26.4	23.5	22.5	34.5	30.0	32.0
Black Male	93.5	115.7	107.7	117.2	105.2	117.2	108.8
White Female	21.3	22.9	23.3	25.4	28.0	27.1	28.1
White Male	70.9	70.6	73.6	72.4	74.2	71.7	74.1

Analysis: Black and white females have similar age-adjusted lung cancer incidence rates averaging 36 per 100,000 per year in New Jersey. Males have much higher annual age-adjusted incidence rates averaging 92 per 100,000 for Whites and 133 per 100,000 for Blacks. The incidence rates for females have been increasing over the period 1979-1985, while rates for males have remained fairly stable. Stage at diagnosis is similar for all race-sex groups. Generally, 20% of cases in New Jersey have localized tumors at diagnosis, 56% have regional or distant disease and 23% of cases have an unknown stage at diagnosis. Likewise, five-year relative survival rates for all race-sex groups are similar with females showing slightly improved relative survival when compared to males. New Jersey age-adjusted mortality rates for lung cancer follow the same pattern as incidence rates. Black males have the highest age-adjusted mortality rates followed by white males; black and white females have similar age-adjusted mortality rates which are increasing over the study period.

Incidence, Mortality, and Survival: New Jersey vs SEER: New Jersey age-adjusted lung cancer incidence rates are about 6% higher for white females and 12% higher for white males when compared to SEER data. Rates for Blacks are 6% higher in New Jersey than in the SEER area. New Jersey incidence rates follow the pattern seen in the SEER data for the study period; the rates are increasing among females and are stable

among males. New Jersey age-adjusted mortality rates for all race-sex groups exceed comparable United States rates. Mortality rates appear to be increasing more rapidly for black females in New Jersey than nationally; the mortality rates for white females are increasing at approximately the same rate in the New Jersey and United States data. The distribution of stage at diagnosis in New Jersey is the same as seen in other areas of the United States. Five-year relative survival rates for lung cancer are slightly lower in New Jersey when compared to SEER.

Note: New Jersey incidence and mortality data include cases with tumors arising in the pleura; the SEER data do not include such cases in their statistics for lung cancer. New Jersey survival data include a small number of cases of cancers of the mediastinum and pericardium. It is doubtful that these cases would influence the survival difference.

ORAL & PHARYNGEAL CANCER

Age-Adusted Incidence Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	5.9	8.9	7.7	9.0	5.2	6.8	9.2
Black Male	28.9	27.5	23.1	26.0	24.3	26.1	31.4
White Female	5.9	5.8	5.0	5.6	6.2	5.6	5.1
White Male	15.5	14.6	14.4	14.4	15.4	16.3	15.3

Stage of Disease at Diagnosis

	In Situ	Local	Regional/ Distant	Unknown	All*
Black Female	0.5%	38.5%	44.6%	16.4%	100.0%
White Female	2.6%	41.9%	39.1%	16.4%	100.0%
Black Male	2.6%	29.0%	53.3%	15.1%	100.0%
White Male	2.5%	38.0%	42.4%	17.2%	100.0%

Five-Year Relative Survival by Stage of Disease

	Local	Regional/ Distant	Unknown	All Stages
Black Female	41.67%	23.67%	25.86%	30.76%
Black Male	32.24%	10.55%	21.50%	18.48%
White Female	57.88%	27.98%	33.49%	41.63%
White Male	52.48%	25.74%	27.13%	36.49%

ORAL & PHARANGEAL CANCER

Age-Adjusted Mortality Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	4.2	3.2	3.4	3.9	2.0	2.5	1.9
Black Male	10.4	15.0	12.0	10.4	14.3	13.9	10.6
White Female	2.2	2.0	1.9	1.9	2.0	1.8	1.9
White Male	5.7	5.2	5.2	5.9	4.8	5.2	5.5

Analysis: Race-specific, age-adjusted incidence rates of mouth and throat cancer in New Jersey for the 1979-1985 period were consistently higher among black males than among white males and females of both races. The rates for black males for 1984 and 1985 were approximately 25% higher than the previous years, 1979-1983. In contrast to white females, who had a higher proportion of localized disease, the predominant stage at diagnosis for males of both races and for black females was regional/distant. Blacks had consistently lower percentages of five-year relative survival from cancer of the mouth and throat regardless of stage at diagnosis.

Age-adjusted mortality rates for females of both races were comparable and relatively stable over this time period. On the average, the age-adjusted mortality rates for black males were greater than twice the rates for white males during the 1979-1985 study period.

Incidence, Mortality, and Survival: New Jersey vs SEER: The age-adjusted incidence rates for New Jersey males and females were 12% and 15%, respectively, lower than the corresponding SEER rates for the 1979-1985 period. For Blacks in New Jersey, the incidence rates for females were about 5% lower, while the rates for males were on average 13% higher than the SEER areas. During this period, New Jersey had slightly higher percentages of cases diagnosed in the localized stage than those for the SEER group. For all race-sex groups, New Jersey had higher age-adjusted mortality rates than the rates for the SEER areas. Similarly, the males and females of New Jersey had consistently lower percentages of five-year survival regardless of stage at diagnosis.

OVARIAN CANCER

Age-Adusted Incidence Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	15.8	11.8	15.4	11.4	12.3	11.2	10.9
White Female	17.2	17.8	17.3	16.9	16.2	16.3	16.1

Stage of Disease at Diagnosis

	In Situ	Local	Regional/ Distant	Unknown	All
Black Female	0.6%	20.5%	65.5%	13.4%	100.0%
White Female	0.2%	24.9%	60.5%	14.4%	100.0%

Five-Year Relative Survival by Stage of Disease

	Local	Regional/ Distant	Unknown	All Stages
Black Female	71.71%	9.46%	26.38%	23.39%
White Female	69.92%	17.92%	21.66%	30.62%

Age-Adjusted Mortality Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	10.7	9.4	6.0	10.9	6.9	7.2	7.9
White Female	8.6	9.7	10.0	9.4	9.5	9.1	9.0

Analysis: On average, the age-adjusted incidence rates for white females were stable and approximately 33% higher than those for black females. The rates for black females fluctuated, then began to stabilize toward the end of the seven-year period, probably due to relatively small numbers of incident cases. White females had a higher percentage of cases diagnosed in the localized stages than did Blacks. It should be noted, however, that for both groups, the majority of cases diagnosed during this time period were at the regional or distant stage. Regardless of stage at diagnosis, white females exhibited higher percentages of five-year relative survival as compared to black females.

After a relatively large increase in the age-adjusted mortality rate from 1979-1981, the rates for white females stabilized at around 9.5 per 100,000 women per year. Due to relatively few deaths reported, the rates for black females fluctuated widely from 1979 to 1983.

Incidence, Mortality, and Survival: New Jersey vs SEER: The age-adjusted incidence rates were 27% higher for black females and 20% higher for white females in New Jersey than those in the SEER comparison group. The percentages of localized cases were comparable between the two groups. The age-adjusted mortality rates for New Jersey females averaged 34% higher for blacks and 16% higher for whites than the corresponding U.S. rates. Similarly, the New Jersey females had lower percentages of five-year relative survival. These differences were consistent, regardless of stage at diagnosis.

Note: New Jersey and SEER comparisons of incidence, mortality, stage at diagnosis and survival-specific information could only be approximated due to a difference between the two comparison groups in categorizing site-specific data.

PROSTATE CANCER

Age-Adusted Incidence Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Male	119.02	135.5	126.4	131.0	117.0	131.7	116.3
White Male	69.5	73.5	73.6	72.0	75.8	75.7	72.6

Stage of Disease at Diagnosis

	In Situ	Local	Regional/ Distant	Unknown	All
Black Male	0.4%	49.9%	30.5%	19.2%	100.0%
White Male	0.8%	59.9%	24.8%	14.6%	100.0%

Five-Year Relative Survival by Stage of Disease

	Local	Regional/ Distant	Unknown	All Stages
Black Male	66.54%	27.78%	43.45%	50.30%
White Male	72.75%	35.16%	55.21%	60.68%

PROSTATE CANCER

Age-Adjusted Mortality Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Male	43.7	48.8	41.7	48.7	46.9	50.6	55.7
White Male	21.0	22.3	21.0	22.0	22.8	23.3	22.3

Analysis: Comparing race-specific, age-adjusted incidence rates for the 1979-1985 time period, black males have approximately 70% higher incidence rates than white males in New Jersey. For white males, incidence rates remained virtually stable over this period. Although there is more variation in the incidence rates for black males, they appear to be declining somewhat over the seven year period. Sixty percent of white males and 50% of black males are diagnosed with prostate cancer when it is still localized. It should be noted that overall, regardless of stage at diagnosis, white males had a consistently better five-year relative survival from prostate cancer during the 1979-1985 period. Overall, age-adjusted mortality rates in New Jersey over this period remained relatively stable among white males and increased slightly in Blacks. However, the mortality rates for black males are more than double the mortality rates for white males.

Incidence, Mortality, and Survival: New Jersey vs SEER: Overall incidence rates for cancer of the prostate during the 1979-1985 period were about the same for black males in New Jersey as in the SEER area. Rates for white males in the SEER area were 9% higher than in New Jersey. Further, incidence rates are increasing more rapidly for white males in the SEER area than for white males in the State. Incidence rates for black males in New Jersey are declining while SEER reports a slight increase. Age-adjusted mortality rates in New Jersey, however, are about 4% higher for white males and 7% higher for black males than those reported by SEER for the time period. SEER reports better relative survival rates for both races when compared to the New Jersey data. This difference is apparent for all stages of the disease.

UTERINE (CORPUS AND NOT OTHERWISE SPECIFIED (NOS)) CANCER

Age-Adusted Incidence Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	13.8	13.4	15.3	12.9	18.8	14.5	14.1
White Female	22.4	22.4	21.5	22.5	22.5	22.6	21.9

Stage of Disease at Diagnosis

	In Situ	Local	Regional/ Distant	Unknown	All*
Black Female	4.1%	51.8%	25.8%	18.2%	100.0%
White Female	3.0%	69.0%	17.2%	10.9%	100.0%

Five-Year Relative Survival by Stage of Disease

	Local	Regional/ Distant	Unknown	All Stages
Black Female	68.78%	11.51%	42.27%	49.45%
White Female	84.61%	42.93%	60.16%	74.91%

Age-Adjusted Mortality Rates (per 100,000)

	1979	1980	1981	1982	1983	1984	1985
Black Female	6.9	6.8	4.4	6.0	6.8	8.0	7.1
White Female	4.2	5.1	4.3	4.0	4.5	4.2	4.0

Analysis: Comparing the race/specific age-adjusted incidence rates from 1979-1985, white females have higher rates of endometrial cancer than black females. On the average, these rates were 51% higher. For white females, the age-adjusted incidence rates were stable for the seven-year period. These cases were diagnosed predominantly in the localized stages of disease (69%). For black females, the age-adjusted incidence rates fluctuated throughout this time period due to relatively small numbers of cases. Approximately 52% of these cases were diagnosed at the localized stage.

There was a marked difference in the proportion of five-year relative survival between Whites and Blacks. Based on all stages at diagnosis Whites had approximately a 51% higher proportion of five-year relative survival than did Blacks. Black females had consistently higher mortality rates for uterine corpus cancer than did Whites; for 1984 and 1985, these rates were 48% higher.

Incidence, Mortality, and Survival: New Jersey vs SEER: Age-adjusted incidence rates were 9% lower for white females but 3% higher for black females in New Jersey than in the SEER comparison areas. The age-adjusted mortality rates for black females were 5% higher, while the rates for white females in New Jersey averaged 15% higher than the corresponding SEER rates. Whites in New Jersey had a lower percentage of localized cases of endometrial cancer (71% vs. 78%) than did those in the SEER areas; Blacks in both areas had equivalent proportions (54%).

The proportion of five-year relative survival was consistently higher for all stages at diagnosis in the SEER comparison group for both races. This difference, however, can be attributed in part to differences in the classification of the component data. For the survival analyses, data from SEER include cases of uterine cancer not otherwise specified (NOS) while these cases were excluded from the New Jersey data.

EXHIBIT B

Existing Resources

Prevention

Tobacco Use

To combat the effects of successful advertising campaigns sponsored by tobacco companies, the Department of Health funds eight Youth Tobacco Use Prevention grants. Activities during 1991 included:

—school-based smoking cessation programs
—posters and essay contests to promote nonsmoking
—vendor education
—efforts to ban cigarette vending machines (because most teens buy cigarettes from vending machines, strong control laws are a recognized public health and prevention strategy)

To address smoking-related addictions among women, an Office of Substance Abuse Prevention grant administered through the Department of Health funds the "Center for Treatment of Addictions and Pregnancy" at St. Peter's Medical Center in New Brunswick.

Department of Health strategies for smoking prevention and cessation among minorities have targeted grant projects to heavily minority populated areas. In collaboration with the University of Medicine and Dentistry of New Jersey, the DOH participated in a research study funded by the National Cancer Institute called the Community Intervention Trial for heavy smokers, (COMMIT). The COMMIT project, based in Paterson, was directed at minorities, and affirmed the need for varied, family-based modalities using successful alcohol and drug addiction treatment models.

Other DOH strategies for smoking prevention and cessation in the minority populations have been on enhancement of community resources such as:

—assisting minority groups with initial tobacco control funding in garnering other funds
—hiring minority staff and vendors for tobacco use prevention and smoking cessation
—building resource sharing alliances among minority organizations and volunteer agencies such as the American Cancer Society.

In September, 1991, the DOH in collaboration with the American Cancer Society, New Jersey Division, was awarded funds for a seven year project for comprehensive tobacco control through community-based coalitions. The American Stop Smoking Intervention Study (ASSIST) targets populations with relatively high smoking and smokeless tobacco use rates, limited access to information about smoking and cessation services, secondary risk factors, and an elevated risk for starting to smoke.

Another resource for the prevention and cessation of tobacco use is the Commission on Smoking OR Health, appointed by the DOH in 1985 as an advisory group for dealing with the problems created by tobacco use. The main areas of focus for this group are:

1. Preventing tobacco use among children.
2. Protecting nonsmokers from involuntary exposure to tobacco smoke.
3. Encouraging and enabling smokers to quit.

Diet

Tables 6 and 7 in the Appendix illustrate educational resources in the area of dietary prevention of cancers.

Detection

To examine the availability of quality assurance programs for mammography, Table 2 below outlines the most recent information on the number of mammography facilities that have received accreditation status from the American College of Radiologists.

TABLE 2

American College of Radiology (ACR)
New Jersey Mammography Services—Accreditation Status
February, 1992

	TOTAL	ACR ACCREDITED	NOT ACCREDITED	UNKNOWN	ACR ACCREDITED
LAB I	51	20	31		39 percent
LAB II	50	17	33		34 percent
LAB III	46	20	26		44 percent
LAB IV	55	27	28		49 percent
LAB V	53	23	30		43 percent
LAB VI	40	20	20		50 percent
Mobile Units	2			2	0 percent
Total	297	127	168	2	43 percent

NEW JERSEY'S CLEAN INDOOR AIR LAWS A PROMISE, BUT LITTLE PROTECTION

A Report of the Commission on Smoking OR Health

New Jersey Department of Health

A BETTER STATE OF HEALTH

25 May 1989
Trenton, New Jersey

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BACKGROUND

The Commission on Smoking OR Health of the New Jersey State Department of Health held a public forum on New Jersey's clean indoor air laws (Nov. 28, 1988, Hughes Justice Complex, Trenton). The Commission heard a full day's comments on the existing laws and on the health hazards of tobacco smoke pollution. Oral testimony was presented by more than 25 individuals, including Dr. Coye, the State Commissioner of Health, organizational representatives, scientists, physicians, teachers, businesspeople and members of the general public. More than 50 letters were received from people unable to attend the hearing.

The forum constitutes part of the Health Department's investigation for a report to the legislature on the effectiveness of the laws. The Department has also commissioned scientific studies of the laws; the preliminary results of those studies were presented at the hearing. Additionally, Department staff have compiled a report on requests for information and on complaints received about the laws, and that information was presented at the hearing.

FINDINGS

I. The Existing Laws

"In my prepared text I was going to say the present legislation has served as an excellent start but, frankly, it is extraordinarily weak and ineffective," said Molly Joel Coye, M.D., M.P.H. The State Commissioner of Health was the first speaker, but throughout the day other presenters were, unanimously, in agreement with her that the existing laws are:

- inadequate
- ambiguous
- unimplemented
- and unenforced.

Regina Carlson, Executive Director of the New Jersey Group Against Smoking Pollution (GASP), testified that GASP receives as many as 1,000 complaints per year about problems with the existing laws. Carlson reported that citizens complained most often about the workplace and restaurant laws, but added that recently schools and nursing homes are also the subject of a growing number of complaints. Patti Van Metre, speaking on behalf of the Respiratory Health Association, Paramus, reported that their organization gets many complaints, most of them focusing on the workplace and restaurant laws. Similar reports were offered by the American Lung Association of New Jersey and the American Cancer Society, New Jersey Division.

One of the last speakers of the day, Scott Goldman, of Livingston, was direct and dramatic: "So what is this businessperson's opinion of the present state of laws in New Jersey on clean indoor air? Horrible. Awful. Abysmal. Shameful. In New Jersey, for all practical purposes, there are no meaningful protections from the smoke of others." Despairing about the restaurant law, he said, "... you don't have to do a damn thing if you post a sign that says you didn't. If this is to be our policy toward public health, then I propose this sign: This restaurant does not wash its dishes, and our employees do not wash their hands, as provided by law." Mr. Goldman thereby articulated a recurring refrain, that citizens believe the passage of the laws promised them protection, so they were doubly disappointed by the lack of protection.

A number of organizational representatives and individuals described how nonsmoking citizens feel ignored, insulted, even disenfranchised, by lack of protection. Janet Neufeld, a school nurse from southern New Jersey, said, "... the tyranny of the minority is at work when as few as five people control the literal atmosphere and hold hostage a building with more than 600 adults and children." Alice Baranik, Vernon Township, described how secondhand smoke makes her a second-class citizen: "I am not a free person. I have difficulty going to shopping malls and have to 'hold my breath' a great deal of the time. Many times I cannot

go into a restroom because people are smoking or have been smoking." William Clark, Director of Respiratory Care, Bayonne Hospital, speaking on behalf of the New Jersey Society of the American Association for Respiratory Care, explained, "... over 68 million people suffered from chronic respiratory problems and 181 million people suffered from acute respiratory problems.... Is the Legislature condoning the disenfranchising of people who suffer from respiratory ailments by allowing the smoker to dictate where a person can eat, work, or enjoy leisure activities?"

(More specific findings about individual laws, with representative citizen comments, are included in the Recommendations section.)

EXECUTIVE SUMMARY

The Commission on Smoking OR Health was appointed by the Department of Health in 1985 to advise it on strategies to deal with the problems created by tobacco use in New Jersey. The Commission has identified three major areas for action:

1. Preventing tobacco use in children.
2. Protecting nonsmokers from involuntary smoking.
3. Encouraging and enabling smokers to quit.

This report deals with the second of these areas, protecting nonsmokers. (In November, 1987, the Commission issued its first report, *Preventing Tobacco Dependence in New Jersey Children.*)

FINDINGS

1. Knowledge about tobacco smoke pollution has advanced greatly since 1981 and 1985, when the existing New Jersey laws were enacted.
2. Tobacco smoke pollution is a cause of disease, including lung cancer and heart disease, in nonsmokers. Involuntary smoking is especially hazardous for children. In the United States as many as 46,000 people die annually from tobacco smoke pollution. The death toll in New Jersey may be as high as 1,400 per year.
3. Separation of smoking and nonsmoking areas does not eliminate the hazards if the areas share a common ventilation system.
4. New Jersey's current laws are grossly inadequate and extraordinarily ambiguous. They do not protect the public health.
5. The public feels betrayed by this lack of protection. The laws created expectations, but did not fulfill them.
6. Resources for implementation of the laws within the Department of Health are almost nonexistent.
7. Within the constraints of its resources, the Department of Health has displayed a commitment and leadership in protecting the rights of all New Jersey citizens to breathe clean air.

RECOMMENDATIONS

Current laws should be amended, new laws should be passed, and nonlegislative changes should be made by governmental bodies to ensure the following:

1. Places where children are present, health care facilities, educational institutions, and government facilities and functions should be entirely smokefree.
2. Most privately owned places where people must go—workplaces, restaurants, stores—should be smokefree in all areas people must use, but owners may provide enclosed, separately ventilated smoking-permitted areas.
3. If casinos, bars and nightclubs permit smoking, signs warning of tobacco smoke pollution hazards should be required.
4. The Department of Health should set standards for maximum levels of tobacco smoke pollution which are allowed to pass between residential units in apartment houses and other multiple-unit residences.
5. The Department of Health should award grants and contracts for public health related services only to recipients with smokefree premises.
6. The legislature should appropriate funding for implementation of clean indoor air laws and for an Office on Smoking OR Health within the Department of Health.

II. Tobacco Smoke Pollution

"The number of cancer deaths from passive smoking is estimated to be 100 times as large as [the number of deaths from] all the other hazardous pollutants we now regulate." Thus James Repace made clear the magnitude of tobacco smoke pollution and the inconsistency in our society's response to this pollutant, compared to other toxic substances in the air. Mr. Repace is a physicist in the Indoor Air Program of the Environmental Protection Agency and has studied tobacco smoke pollution since 1976. He and his colleague, Alfred Lowrey, are internationally recognized as leading researchers in the field.

Mr. Repace and other witnesses described the hazards of tobacco smoke pollution. The Commission also had access to the 1986 Surgeon General's Report, *The Health Consequences of Involuntary Smoking,* and the 1986 report of the National Academy of Sciences, *Environmental Tobacco Smoke.* Neither report had been published when the existing laws were passed. Therefore, in the words of Palma E. Formica, M.D., President of the Medical Society of New Jersey, in her letter to the Commission, "The present laws were written and passed at a time when the data were less persuasive than they are today that tobacco smoke is a serious pollution problem."

Based on worldwide scientific evidence, it is established that tobacco smoke pollution is a cause of disease, including lung cancer, in healthy nonsmokers. Simple separation of smoking from nonsmoking areas does not eliminate these hazards, so long as those areas share the same ventilation system. Indeed, Mr. Repace testified that ventilation rates would have to be increased 250 times to eliminate the risk. This, of course, is technologically infeasible and would turn indoor spaces into wind tunnels.

Tobacco smoke pollution is a particular risk for children because they inhale two to three times more pollutant per pound of body weight than adults. Tobacco smoke contains 4,000 chemicals, 50 of them known carcinogens. Recent evidence links tobacco smoke to heart disease in nonsmokers. Tobacco smoke is also synergistic with other pollutants.

Smoking also results in 1,500 fire fatalities and 3,400 persons injured in fires in the United States each year. In New Jersey it can be estimated that 45 people a year will die in smoking-related fires, and that more than 100 people will be injured in fires caused by smoking.

Risk analyses place the total death toll among American nonsmokers from tobacco smoke pollution at 46,000 per year. New Jersey's share of this toll would be approximately 1,400 people.

In addition to internationally recognized scientists, New Jersey physicians and health leaders, the other experts who testified about the health effects of secondhand smoke were ordinary citizens. Employees, teachers, dining patrons, and other New Jersey citizens described being made uncomfortable, ill, or unsafe at work, in schools, in restaurants, and in other public places in New Jersey.

Gloria Liberstein, Paramus, was quite clear: "It causes me to gag and inflames my sinuses." Gloria and Alfred Gary, Bordentown, wrote, "As senior citizens, we are particularly prone to upper respiratory illness, which makes us more uncomfortable being around smoke at any time. Surely, with the growing population in our age bracket, some consideration should be shown for our health...." Children, too, understood the problem. School nurse Janet Neufeld quoted fourth-grade student Brian Warner: "People can get sick from smoke and you could make other people sick also." In another school, wrote Deborah Huber of Oldwick, a teacher insisting on a "right to smoke" smokes in a workroom where volatile chemicals are stored.

Marc Liebeskind, Bayonne, wrote, "I have to work for a living. I don't see why I am less entitled to clean air and must be forced to breathe someone's cigarette smoke because I work for an employer who has less than 50 employees.... my mucus membranes and eyes become inflamed, causing dryness in the nasal passages which can then result in bleeding, excessive phlegm production, and causes me to become very tired. Additionally, I hate the smell and resent having to wash and dry-clean my clothes and take an extra shower because of the lingering cigarette smoke. I also resent having to function at an impaired level because the legislation does not go far enough. A woman where I work is a nonsmoker and is pregnant. She is concerned about the effect the smoke will have on her baby. She recently went to her doctor, who after examining her, asked her if she smoked because her throat was inflamed. The inflammation came from the smoke in the office...."

Several speakers commented on the inconsistency of pollution control in New Jersey. Linda Benjamin, a health educator in Middlesex County, asked, "Is it fair that people who do not smoke are exposed to chemicals, indoors, that we have outlawed outdoors?" Judith Shelton, a high school counselor, described the vigorous efforts her school system is making to eliminate asbestos exposure and wondered why her district did so little to protect her from tobacco smoke pollution.

Teri Manes, speaking on behalf of the New Jersey Society of Public Health Educators, explained that health education theory encourages social change as a way to eliminate health problems. "If we do not strengthen our [legislation] ... we are polluting our children's air and their minds, as well."

Additional effects of tobacco smoke pollution in New Jersey are unemployment and decreased business. Mrs. Baranik is a registered nurse and a licensed real estate agent, but she testified she doesn't know where she can work in New Jersey and be safe. Other citizens gave similar reports. Of course, our state (as well as individual citizens) suffers financially when willing people cannot work.

Numerous people testified they avoid New Jersey restaurants because of smoke. Richard Gardner, M.D., of Cresskill, declared the restaurant law a "100 percent farce," especially compared to laws in other states. James Katz, Ph.D., Morristown, wrote, "... I would be spending over $1,500 annually in North Jersey restaurants if there were ones with good nonsmoking areas available. As it is, I'm forced to drive to New York City, which does require nonsmoking areas, and spend my money there." Jane Blackman, of Bridgewater, wrote, "Many people like myself ... find ourselves forced to go out to eat most weekends in New York City, which, it appears, cares more about the health of its citizens." Scott Goldman said, "When I go out to eat, I take my business associates, my guests, and my family to New York because there, unlike New Jersey, we can dine in separate, comfortable, smoke-free restaurant seating."

CONCLUSIONS

The existing laws do not guarantee clean indoor air in New Jersey. New Jersey citizens are suffering discomfort and disease from involuntary smoking while evidence continues to accumulate on the magnitude of the health hazard. Many citizens feel confused and even cynical, and believe that there has been an insulting lack of concern for their well-being, and are disappointed that a promise made to them has been broken.

RECOMMENDATIONS

Recommendations are made for amendments to existing laws, for new laws, and for non-legislative changes by government bodies. The recommendations rest on three premises:

First, there should be, in the words of Dr. Coye, "zero tolerance for secondhand smoke" in certain public places. Places where children are present, educational institutions, and health care facilities should be entirely smokefree. Smokefree means there is no smoking or tobacco smoke pollution. Other places where there should be zero tolerance are government facilities and functions. Unpolluted air should be the standard in government facilities because government must maintain a high level of citizen protection and a high level of accessibility to citizens. Testifying before the Commission, Dr. Lawrence Meinert of the Health Department, said "... a completely smokefree environment is the only type of acceptable environment that protects the health, welfare and comfort...." Furthermore, it is inappropriate to use public money to enable addictive behavior.

Second, privately owned public places where citizens must go (workplaces, retail stores, restaurants) should be smokefree in all areas people must use, but proprietors should be free to create smoking areas if they wish, provided that pollution from smoke does not enter the common ventilation system.

Third, certain public places, such as casinos, bars, nightclubs, should be encouraged to provide clean indoor air, not required to do so by law. This exception is made for two reasons: Nonsmokers need not frequent these public places. (An exception, of course, is nonsmoking employees.) Furthermore, there is a social reality that sites for gambling and alcohol consumption also have a high incidence of smoking. Increased ventilation is recommended for these sites, to reduce the health hazards and to promote user comfort. However, with great social change taking place about smoking, certainly there will come a time when this exception will no longer be acceptable. For the present, signs warning of the tobacco smoke pollution hazards should be posted in such places.

I. Amendments to existing laws

1. Funding is needed if these laws are to be effective. There is a need for public education on the laws, for training for agencies and individuals with enforcement responsibilities, and for the treatment of nicotine dependence. Health Department staff reported they are responsible for 145,000 locations, including 30,000 restaurants, but have zero budget. The Commission recommends the Assembly fund an Office on Smoking OR Health in the New Jersey Department of Health.
2. Most of the laws contain a preamble which has several inaccuracies. The preamble posits a "right" to smoke although neither the Constitution, nor case law, nor legislation supports such a right. The preamble declares the state has no policy to deny anyone the right to smoke, but, clearly, the State does wish to stop children from smoking. Finally, the preamble states that tobacco smoke is a substantial health hazard to a "small segment" of the nonsmoking public, when current data indicate that it is toxic to all.

   All these inaccuracies could be eliminated with this version of the preamble: "The Legislature finds and declares that in addition to the deleterious effects upon smokers, tobacco smoke is a substantial health hazard to the nonsmoking majority. Therefore ..."
3. Combining all the existing laws into one clean indoor air code is recommended. This would be simpler and would create uniform control of the hazardous substance, with little variation by site. This is how the State usually controls pollution problems, for instance, sewage.
4. The private workplaces law, P.L. 1985, C. 184
   A. Smoking should be eliminated from all work areas and common areas which employees must use. Steve Rome, who works at Educational Testing Services, described how he is exposed to tobacco smoke pollution at work, even though his employer is in compliance with the law. In fact, Janice Marshall, of the Department of Health, reported that an employer can be in compliance with the law merely by designating any area nonsmoking, even the end of a hallway or one bathroom.
   B. Smoking-permitted areas need not be provided. If they are, they should be outdoors or in separately ventilated indoor areas.
   C. All private employers in New Jersey should be covered by the law. Alice Leavy, of Towaco, was one of a number of people who work in such uncovered sites and wrote, asking for help. Testifying before the Commission, Dr. Eugene Lewitt, UMDNJ, who studied the law's implementation for the Department, estimated that one-third to one-half of all employees in New Jersey work for employers of fewer than 50 people, and so are not protected by the law.
   D. The law must say "establish and implement" nonsmoking policies, instead of merely "establish."
   E. There should be protection against retaliation for employees who seek enforcement of this law, as there is in the case of other occupational health protections. Tobacco smoke pollution in the worksite is a hazardous working condition.
   F. The immunity from employee lawsuits given to employers should be eliminated.
   G. Enforcement should be through citation by state or local health departments. Penalties should be fines in local court. As with other public health nuisances, the fine should be $25-$200 per violation, per day, with higher penalties for repeated offenses.
5. Restaurants, P.L. 1985, C. 185

   The bitterest citizen complaints were evoked by the restaurant law and restaurant industry noncompliance. This is not surprising. Dr. Lewitt reported that 66% of surveyed restaurants have not complied with the minimum standard of the law, posting signs, and more than 86% of surveyed fail to provide nonsmoking dining areas. In response to Dr. Lewitt's report, Dr. Lee Reichman, Commission member, said, "... I think that's horrendous and appalling."

   A number of correspondents agreed with Dr. Reichman. Bill and Laurie Legnante of Monroeville, wrote, "Please DO NOT let the tobacco/restaurant industry take liberties with our lives. We live in an era where tobacco and second-hand smoke have been *proven* harmful." Alan E. Kligerman, President of Lactaid, Inc. in Pleasantville, wrote, "A restaurant operator has no more right to serve up noxious air than he/she has to serve up polluted water or food." Dr. Katz, of Morristown, noted an inconsistency in state policy: "Although it is at times inconvenient for restaurant owners, we do require that their kitchens and premises be sanitary. We even pay inspectors to go around and check up on them. Why? To protect the health of the public. But for some reason the same rationale is not applied in terms of harmful fumes in restaurants that are generated by smokers."

   Several writers suggested a stronger law would "get the restaurants off the hook" with the states assuming the authority for the decision. And Doris Woolf, of Pine Brook, describing a meal ruined by smoke, reported, "The waitress confided that she,

too, hated the exposure, but she was forced to breathe the befouled air or leave her job!"

A. Nonsmoking should be the law in restaurants except that smoking-permitted areas would be allowed if they were physically separate and on separate ventilation systems.
B. The person in charge of the restaurant must be required to tell a person who is smoking in a nonsmoking area to stop smoking.
C. There should be better enforcement and a stronger penalty. Enforcement could be incorporated into Chapter 12 of the State Sanitary Code.
D. The preemption of stronger local laws should be eliminated.

6. Educational Institutions, P.L. 1981, C. 320

Citizens who cited problems in schools included students, teachers, staff, administrators, board members, and parents. The primary concern was tobacco smoke pollution and how it harmed students and teachers. A graphic example came from the Bridgewater-Raritan School District. Enid Bloch, Ph.D., member of the Board of Education, told this story: "... a teacher had been demonstrating levels of carbon monoxide in the lungs. Breathing into the machine, the teacher showed the class that his own level was zero, because he was 'a nonsmoker and an avid jogger.' He asked a secretary, who was a smoker, to take the test also, and her reading was 15 to 18 on the meter. The teacher attempted to repeat the experiment in his third-period class, telling the class, 'Now you'll see the perfect lungs of a jogger, a track coach and a nonsmoker.' But to his great embarrassment, his own reading now stood at 6 or 7. What had happened is that this teacher had spent the second period of the school day in the teachers' lounge."

Concern about compromised educational goals was expressed by Linda Benjamin: "Would we allow cocaine lounges in schools?" Her concern was shared by school nurse Janet Neufeld. Mrs. Neufeld asked, "How can the school nurse, teacher or other adult truthfully answer the child who asks: 'Why is my teacher telling me it's bad for my health and yet it's okay for you to smoke?'."

Donald Merachnik, Ph.D., Superintendent, Union County Regional High School District, and Enid Bloch, Bridgewater-Raritan School District, testified how ambiguity in the current law has forced their school boards, which want to create smokefree schools, to defend their actions before the Public Employment Relations Commission. Both school districts are currently unable to implement their new policies.

A. All educational institutions, from preschools through professional educational institutions, should be smokefree in all educational and administrative facilities.
B. Residential facilities in educational institutions where the students are adults may establish smoking-permitted areas, so long as the tobacco smoke does not enter the common ventilation system.

Note: Some educational institutions are extending their nonsmoking policy to include the outdoors. The Commission endorses that decision for educational reasons and for consistency.

7. Health Care Facilities and Offices, P.L. 1981, C. 319

A. All sites should be 100% smokefree.[1]
B. Nursing homes should be included. Nursing homes that are primary health care facilities should be entirely smokefree. Nursing homes that are mainly residential facilities rather than health care facilities may establish smoking-permitted areas, so long as the tobacco smoke does not enter the common ventilation system.
C. Dentists, chiropractors and psychotherapists should be included in the law.

8. Government Buildings, P.L. 1985, C. 381

Joan Gelber, a deputy attorney general, working for the State Department of Law and Public Safety, Professional Boards Section in Newark, wrote to the Commission, including copies of her correspondence attempting to have her workplace free of the health hazards and discomforts of tobacco smoke pollution. Many other state and local government facilities are not in compliance with the law.

A. All government facilities, local and state, and all government functions held in nongovernment sites should be entirely nonsmoking. One exception could be allowed: government-owned residential facilities where the residents are all adults could create smoking-permitted areas for the resident if the tobacco smoke pollution is confined to those areas.

Note: Government institutions are often required to meet higher standards than other segments of society, but given fewer resources to meet those standards. To prevent this problem, the Commission recommends funding to help government entities create smokefree conditions. This funding should include resources to treat nicotine dependence in affected employee groups.

9. Retail Food Stores, P.L. 1985, C. 186

Beatrice Chambers, of Summit, wrote in dismay about smoking in the Welsh Farms store where she shops "because my husband likes Welsh Farms milk and that store has the freshest milk." She would like to have the law applied to small stores, especially since, in the convenience store she uses, sandwiches are also prepared.

A. All stores, regardless of size, should be nonsmoking in all areas, except that management may create a private, separately ventilated, smoking-permitted area for employees.
B. Management must be required to tell customers who smoke in violation of the law to stop smoking.
C. Enforcement could be incorporated into Chapter 12 of the State Sanitary Code.

10. Indoor Public Places, P.L. 1985, C. 318

A. In all structurally enclosed areas generally accessible to the public, the authority in control of the public place shall designate as nonsmoking all areas which people must use to conduct business or participate in the activities of the place.
B. Smoking-permitted areas may be created, but only if the areas are separately ventilated and not areas people must use to participate in the intended purposes of the public place.
C. Specifically named public places shall include department stores, all other retail stores except tobacco stores, malls, banks, savings and loan institutions, churches, synagogues, other places of religious assembly, retail optical outlets, gymnasiums, and laundromats. The current exceptions and inclusions shall be retained.

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[1]Current efforts to create smokefree health care facilities often incorporate a limited exception which permits smoking by inpatients under certain circumstances. Generally, such exceptions require the concurrence of medical and nursing personnel, and may only be considered in certain situations, for instance, in the case of confused or terminally ill patients. The Commission acknowledges the appropriateness of these limited exceptions in some hospitals at this time. In practice, the exception to policy is rarely invoked and is functionally nearly equivalent to the facility's being smokefree.

Psychiatric inpatient facilities and inpatient chemical dependency treatment units have been relatively reluctant to become smokefree. There are no data which indicate that these facilities should be exempted from smokefree policies, and there is a growing number of examples of psychiatric and drug treatment facilities which have successfully become smokefree.

II. Areas Unprotected by Existing Laws

1. All indoor educational, recreational, and custodial facilities where children are present, including day care centers, licensed after-school facilities, nursery school, YMCAs, YWCAs, YMHAs, teen centers, places of extracurricular instruction (dance schools, sports schools), and Police Athletic Leagues, shall be entirely smokefree.
2. Hotels and motels shall designate all their common areas, for example, lobbies, hallways, etc., as nonsmoking, except for dining areas, which shall be subject to the restaurant law, and bars and casinos, which should be separately ventilated and have warning signs posted. Hotels and motels must set aside a number of guest rooms as nonsmoking, in quantity sufficient to meet the demand. (More than three-quarters of the population do no smoke.) Ventilation systems should be adjusted to keep tobacco smoke pollution from nonsmoking areas.
3. Control of tobacco smoke pollution in apartment houses, condominiums, and other multiple-unit residences shall be under the jurisdiction of local health departments. The State Department of Health shall set standards for maximum levels of particulates, carbon monoxide and other components of tobacco smoke pollution, including detectable odor, which shall be allowed to enter one unit from another unit.

4. Any indoor area where smoking is allowed except for homes and private clubs must post warning signs reading "Warning—Hazardous Area—Tobacco Smoke Pollution."

III. Non-legislative Recommendations

1. Federal institutions and interstate authorities in New Jersey, particularly the Port Authority, shall be asked to adhere to the standards established in New Jersey law.
2. The New Jersey Department of Health should award grants and contracts for public health related services only to recipients with smokefree premises.

EXHIBIT C

1990 CON-Approved CT Utilization by LAB Area

	Scans	Units	Scans Per Unit	Scans Per 1000 pop.
LAB I	64,750	15	4,317	59.0
LAB II	83,538	18	4,641	60.6
LAB III	84,695	19	4,458	66.6
LAB IV	68,589	14	4,899	51.0
LAB V	73,152	17	4,303	54.9
LAB VI	60,660	12	5,055	46.5
TOTAL	435,384	95	4,583	56.3

Private, Non-CON Approved CTs By LAB Region 1990

LAB I	9
LAB II	17
LAB III	12
LAB IV	10
LAB V	14
LAB VI	16
Statewide Private CT Total	78

Non-CON-Approved

	CON-Approved MRI Units	Existing	Under Construction	Total Number MRI Units
LAB Area I	4 (1)	7	1	12
LAB Area II	2 (0)	9	1	12
LAB Area III	3 (0)	10	0	13
LAB Area IV	3 (0)	8	2	13
LAB Area V	4 (3)	10	1	15
LAB Area VI	2 (1)	8	0	10
Statewide Totals:	18	52	5	75

NOTE: Numbers in parentheses () are mobile units.

LAB Area I	(Morris, Passaic, Sussex and Warren Counties)
LAB Area II	(Bergen and Hudson Counties)
LAB Area III	(Essex and Union Counties)
LAB Area IV	(Hunterdon, Mercer, Middlesex and Somerset Counties)
LAB Area V	(Burlington, Camden, Cumberland, Gloucester, and Salem Counties)
LAB Area VI	(Atlantic, Cape May, Monmouth and Ocean Counties)

EXHIBIT D

1990 RADIATION ONCOLOGY CN APPROVED PROGRAM UTILIZATION

PROGRAM	EQUIPMENT	PATIENTS	PT. VISIT
LAB AREA I			
Beth Israel Hosp.	1 LA	438	10,039
St. Joseph Med. Ctr.	1 LA	456	9,548
Dover General Hosp. & MC	1 Cobalt 60		
	1 LA	404	11,070
Morristown Memorial Hosp.	2 LA	660	14,812
TOTAL: 4	5 LA's	1,958	45,469

CON Approved Units Per 1,000,000 Population:	5.47***	(1990)
Population Per Approved Unit:	182,827***	(1990)
Total Units Per 1,000,000 Population:	10.03	
Population Per Units	99,723	

NEW UNITS APPROVED BUT NOT YET INSTALLED
Beth Israel Hospital: 1 Additional Linear Accelerator
Chilton Memorial Hospital: 1 Linear Accelerator
St. Joseph's Hospital: 1 Additional Linear Accelertor

LAB AREA II			
Bergen Pines Hosp.	1 Cobalt 60	5	52
Englewood Hosp.	1 Cobalt 60		
	1 LA	488	9,408
Hackensack Med. Ctr.	1 Cobalt 60		
	1 LA	874	14,234
Valley Hosp.	2 LA's	711	17,380
Christ Hospital	2 LA's	655	12,378
TOTAL: 5	6 LA's		
	3 Cobalt 60's	2,743	53,452

CON Approved Units Per 1,000,000 Population:	6.53***	(1990)
Population Per Approved Unit:	153,124***	(1990)
Total Units Per 1,000,000 Population:	8.71	
Population Per Units	114,843	

NEW UNITS APPROVED BUT NOT YET INSTALLED
Pascack Valey Hospital: 1 Linear Accelerator
Bayonne Hospital: 1 Linear Accelerator

PROGRAM	EQUIPMENT	PATIENTS	PT. VISIT
LAB AREA III			
Clara Maass Med. Ctr.	2 LA's	456	8,706
University Hosp.	1 LA	269	4,450
Hosp. Center @ Orange	1 Cobalt 60	209	2,547
Mountainside Hosp.	2 LA's	533	11,111
Newark Beth Israel Med. Ctr.	1 LA	274	5,386
St. Barnabas Med. Ctr.	3 LA's	827	17,110
United Hospitals Med. Ctr.	1 LA	308	5,691
Elizabeth General Med. Ctr.	1 LA	210	4,282
Muhlenberg Regional Med. Ctr.	1 Cobalt 60	56	422
Overlook Hospital	2 LA's	553	11,451
St. Elizabeth Hospital	1 LA	258	5,155
TOTAL: 11	14 LA's		
	2 Cobalt 60's	3,953	76,311

CON Approved Units Per 1,000,000 Population:	12.58***	(1990)
Population Per Approved Unit:	79,493***	(1990)
Total Units Per 1,000,000 Population:	12.58	
Population Per Units	79,493	

NEW UNITS APPROVED BUT NOT YET INSTALLED
None

LAB AREA IV			
Medical Center @ Princeton	1 LA		
	1 Cobalt 60**	531	10,858
Mercer Med. Ctr.	1 LA	412	6,401
St. Francis Med. Ctr.	1 LA		
	1 Cobalt 60	306	7,297
JFK Med. Ctr.	2 LA's	717	13,999
	1 LA		
St. Peter's Med. Ctr.	1 Cobalt 60	828	14,686
TOTAL: 5	6 LA's		
	2 Cobalt 60's	2,794	53,241

CON Approved Units Per 1,000,000 Population:	5.54***	(1990)
Population Per Approved Unit:	168,207***	(1990)
Total Units Per 1,000,000 Population:	6.69	
Population Per Units	149,517	

NEW UNITS APPROVED BUT NOT YET INSTALLED
None

PROGRAM	EQUIPMENT	PATIENTS	PT. VISIT
LAB AREA V			
Memorial Hosp. of Burlington	2 LA's	500	11,161
Cooper Hospital	3 LA's	1,128	23,328
South Jersey Hosp. System	1 LA	442	9,620
TOTAL: 3	6 LA's	2,070	44,109

CON Approved Units Per 1,000,000 Population:	4.51	(1990)
Population Per Approved Unit:	221,887	(1990)
Total Units Per 1,000,000 Population:	6.76	
Population Per Units	147,924	

NEW UNITS APPROVED BUT NOT YET INSTALLED
None

LAB AREA VI

Jersey Shore Med. Ctr.	1 LA 1 Cobalt 60	512	7,114
Monmouth Med. Ctr.	2 LA's	452	7,655
Riverview Med. Ctr.	1 LA 1 Cobalt 60**	409	4,109
Community Memorial Hosp.	2 LA's	644	19,297
Atlantic City Med. Ctr.	2 LA's	532	11,502
TOTAL: 5	8 LA's 1 Cobalt 60	2,549	49,677

CON Approved Units Per 1,000,000 Population:	6.82
Population Per Approved Unit:	145,083
Total Units Per 1,000,000 Population:	8.42
Population Per Units	118,704

NEW UNITS APPROVED BUT NOT YET INSTALLED
Shore Memorial Hospital: 1 Linear Accelerator

STATE TOTALS

33	45 LA's 9 Cobalt 60's 54	16,067	322,259

CON Approved Units Per 1,000,000 Population:	6.99	(1990)
Population Per Approved Unit:	143,143	(1990)
Total Units Per 1,000,000 Population:	8.80	
Population Per Units	113,627	

*1 Megavoltage Unit:	300 Patients or 6,200 Patient Visits
2 Megavoltage Units:	600 Patients **and** 10,500 Patient Visits
3 Megavoltage Units:	900 Patients or 16,000 Patient Visits

** To be removed from service, not counted in inventory
***Source: 1990 Census Summary Data, U.S. Bureau of Census

State Population:	7,730,188
LAB AREA I:	1,096,963
LAB AREA II:	1,378,479
LAB AREA III:	1,272,025
LAB AREA IV:	1,345,659
LAB AREA V:	1,331,319
LAB AREA VI:	1,305,743

Source of Utilization Data: New Jersey State Department of Health—Center for Health Statistics

DRAFT STATE HEALTH PLAN

SURGERY AND RENAL DIALYSIS SERVICES CHAPTER

EXECUTIVE SUMMARY

This chapter of the State Health Plan (SHP) seeks to consolidate two seemingly disparate health care services that have been the subject of considerable debate over the course of the past decade within the health care community. The public policy debate regarding these two services has centered on the need to provide appropriate access to these services while also providing assurances of the quality and cost effectiveness of service provision. The need to continue Departmental oversight of these services has been based largely on these access quality and cost issues.

On the surface, renal dialysis services and surgical services would appear to be totally distinct health care services that are provided by widely divergent physician specialists to different population groups in distinctly different settings. A more detailed review of the issues surrounding these two service categories as contained in this chapter, however, reveals a relatively large number of similarities. These similarities not only include the manner in which these services are provided, but the regulatory dilemmas associated with the provision of each of these services (e.g., need assessment criteria, equipment capability and capacity, statewide licensed inventories of existing resources).

For example, both of these services are provided in a variety of licensed health care settings (i.e., hospital-based and free-standing surgery and renal dialysis facilities). They have both been significantly impacted by advances in technology that have altered the provision of services. These services have also been considered as likely targets for deregulation by the Department of Health in the past. In each instance, the Department has been persuaded that such policies would negatively impact the overall cost of providing these services and could jeopardize patient safety by minimizing the degree of oversight on services that can result in serious complications associated with their performance.

The draft chapter will briefly summarize some of the major technological changes associated with each service (e.g., laparoscopic and laser surgery; high flux and rapid high-efficiency hemodialysis) in order to reveal the difficulties involved in seeking to establish patient throughput and resource capacity estimates for these services.

In each case, these services have also been regulated in the state through the application of a quantitative need methodology that has become increasingly difficult to apply because of problems that have arisen with the statewide inventory and statewide utilization statistics for each service. The draft chapter proposes a number of specific recommendations aimed at updating the state's surgery and ESRD inventories, utilization statistics and need formulas. Implementation of these proposed recommendations will permit a more accurate and timely assessment of existing statewide resources and future needs for surgery and renal dialysis services.

The Department of Health, with the assistance of the State Health Planning Board and the State's local advisory boards, will therefore seek to implement the recommendations regarding surgical services and renal dialysis services that are contained in this chapter in order to achieve the following access, quality, and cost containment goals for the citizens of New Jersey:

1. To ensure equal access to a full range of needed surgical and renal dialysis services for the citizens of New Jersey;
2. To promote cost effectiveness and cost containment in capital investment by carefully analyzing the need for renovation, replacement, expansion, and addition of surgical resources and/or services and renal dialysis services;

3. To ensure optimal safety and quality of surgical services and renal services for all New Jersey residents contemplating surgery or requiring renal dialysis treatment;
4. To develop and promote policies and standards for surgical facilities and renal dialysis services which will promote and maintain the health status of the people of New Jersey;
5. To obtain and maintain an accurate, complete, and timely data base which will serve as a basis for rational future resource allocation by establishing significant utilization trends and surgical and renal dialysis resource need in New Jersey.

In addition to these goals, the Department of Health will seek to implement the major public health objective contained in the *Healthy New Jersey 2000* report regarding end-stage renal disease (ESRD) services. This objective sought:

1. Reduction by 10 percent in the incidence rate of End-Stage Renal Disease as a complication of hypertension and diabetes.

A. SURGICAL FACILITIES AND SERVICES IN NEW JERSEY

I. INTRODUCTION

Surgery is defined as any operative or manual procedure undertaken for the diagnosis or treatment of a disease or other disorder; or the branch of medicine concerned with diseases which require or are responsive to such treatment. Historically, surgery required a stay in a hospital. However, recent trends in the delivery of health care are expanding the range of diagnostic and therapeutic health care services to ambulatory settings wherever it is clinically appropriate. For many types of diagnosis or treatment services, including many surgical techniques, technological innovation has permitted a far greater range of services previously requiring hospitalization to be performed on an ambulatory basis. The need for exploratory surgery, for example, has been greatly reduced over time as a more extensive array of non-invasive diagnostic technologies has been added to the health care armamentarium. The end result of these advances has been a shift in the types of patients who require hospitalization and a greater number of ambulatory health care settings, some of which remain hospital-based or hospital-sponsored but many of which are free-standing facilities.

The high technology chapter of this plan deals extensively with diagnostic services such as computerized tomography (CT) and magnetic resonance imaging (MRI) which abound in free-standing settings in New Jersey. The same chapter discusses the extent that lithotripsy technology, unavailable a decade ago, has greatly reduced the need for surgical removal of kidney stones for many patients. The attempt to expand lithotripsy technology to gallstones, however, has been largely curtailed by the development of a less invasive surgical technique, laparoscopic cholecystectomy, which has greatly reduced the recovery and recuperative time needed for conventional surgical removal of the gallbladder.

Historically, minor surgical procedures requiring little or no anesthesia have largely been performed in private physician practice, as well as in hospital minor procedure rooms and emergency rooms. In recent years, free-standing urgicenters or walk-in clinics have emerged as an additional setting for the performance of minor surgical services. In short, minor types of surgical procedures have traditionally been performed in a wide range of settings, many of which are not regulated by the Department of Health. As the number and variety of surgical treatment settings escalates, and the nature of the surgical procedures expands to substitute for invasive procedures that are associated with greater degrees of morbidity and mortality, the scope of regulatory activity appropriate for these settings needs to be examined in the interest of patient safety, equitable access, and its impact on the health care delivery system.

Statewide hospital data contained in this section of the chapter will indicate that an increasing percentage of surgery being performed in hospitals is being performed on an ambulatory basis. The statewide data indicate a twenty percent growth in ambulatory surgery, together with a six percent decline in inpatient surgery, from 1985-1988. Overall hospital surgery volume in New Jersey increased by three percent during this period, or approximately one percent per year. While this increasing hospital-based surgical volume does not appear to be considerable in terms of available statewide surgical capacity, the technical complexity of surgery that continues to be performed and the degree that resources are being consumed by these surgical patients must be closely monitored in the future. The need for costly inpatient surgical resources must also be closely examined in order to assess the need to shift these resources to less costly ambulatory settings.

The nationwide trend toward ambulatory procedures is fueled by technological innovation that can be expected to continue in the future. The trend toward less invasive surgery techniques (e.g., laparoscopic procedures) must be closely examined to determine the overall impact on future operating room utilization and resource consumption. It is therefore essential to closely monitor surgical utilization in all settings in the coming years to determine the impact of clinical surgical advances on the extent and variety of surgical resources that may be required in the future. It is equally essential to monitor the performance of these advanced surgical techniques in comparison to conventional techniques from a quality perspective (e.g., mortality and morbidity with the procedures).

This section of the chapter therefore seeks to identify future statewide surgical resource need by examining the existing surgical data sources, what these data sources reveal in terms of statewide surgical trends, and the statewide inventory of resources devoted to surgery in general, and ambulatory or same day surgery (SDS) in particular, in New Jersey.

The Department of Health has historically recognized the importance of maintaining a full range of surgical services that provide high quality, state-of-the-art surgical techniques. The goals and objectives that are included in this portion of the chapter are written with this in mind, while simultaneously attempting to recommend statewide policies that are intended to assure safe and effective surgical services to all who are in need at an affordable cost.

II. RECOMMENDATIONS

1. The Department of Health, with the assistance and support of the state's local advisory boards, should collect and assess meaningful surgical utilization, cost, and outcome data from all surgical facilities regardless of licensing status (i.e., certified, free-standing, hospital-based) in order to provide a uniform and complete data base for future need determination.
2. Certificates of need for **new** free-standing ambulatory surgery centers should **not** be processed by the Department of Health until a survey of all licensed ambulatory surgery centers has been completed and each of the Local Advisory Boards has determined its individual areawide surgical rates and resource needs. Certificate of Need applications may be submitted for free-standing ambulatory surgery centers at a maximum of six months following the adoption of rules pertaining to surgical services.
3. Certificates of need for the **expansion** or **replacement** of existing free-standing ambulatory surgery centers should be processed by the Department of Health utilizing the policies regarding ambulatory surgery facilities contained in this chapter, and the criteria and standards that will be initiated by the Department as a new surgical facility rule.
4. Certificates of need for the expansion or replacement of hospital inpatient or ambulatory surgery operating rooms should be processed by the Department of Health utilizing the policies regarding ambulatory surgery facilities contained in this chapter and the criteria and standards contained in the State's surgical facility rule which will be promulgated subsequent to the approval of this chapter. In addition to these policies, requirements contained in the Hospital Acute Care Chapter of the Plan and the Hospital Policy Manual (N.J.A.C. 8:43I) should also be applied to hospital-based or sponsored projects that involve surgery resources.
5. The Department of Health, with the assistance of the Medical Society of New Jersey, the New Jersey Hospital Association, and the State Health Planning Board, should review the statewide performance of laparoscopic surgical procedures with a view toward seeking to establish minimum credentialing requirements for physicians performing and seeking to perform laparoscopic surgical procedures.
6. The Department of Health should establish future regulatory policy regarding ambulatory surgery resources based upon the intent of the potential surgical provider to seek third-party reimbursement as an "ambulatory surgical facility or center". The development of new surgical facility rules should incorporate this reimbursement-based definition of an ambulatory surgical facility.

III. CURRENT STATUS AND TRENDS

Statewide data regarding surgical services in New Jersey is incomplete, due to the extensive number and variety of clinical settings where surgery is performed. The surgical data contained in this section of the chapter is largely restricted to hospital-based surgical services. Since the unavail-

ability of a complete surgical data base has been identified as a major problem in seeking to establish statewide surgical policy, the recommendations contained in this section include the establishment of an ongoing statewide surgical data acquisition system. This section provides a complete statewide inventory of licensed surgical resources which can serve as a baseline for a comparison of current licensed surgical resource use throughout the state in the future.

Surgical services are provided in a variety of settings in New Jersey. These settings include:

1. Hospital-based surgical services
   a. dedicated inpatient operating rooms
   b. mixed (i.e., inpatient and ambulatory/SDS) operating rooms
   c. ambulatory or same day operating rooms
   d. endoscopy and cystoscopy rooms
   e. outpatient procedure rooms
2. free-standing surgical facilities
   a. hospital-sponsored facilities
   b. physician or investor-owned facilities
3. private practice settings
   a. private physician practice
   b. group physician practice
   c. urgicenter or walk-in facility

The allocation of surgical resources in the past has been guided by the standards and criteria contained in the state's surgical facilities rule (N.J.A.C. 8:33A), which expired on February 20, 1992 pursuant to the sunset provisions of Executive Order 66(1978). This rule contained a surgical need methodology and additional criteria and standards for the consideration of new, expanded, or replacement surgical services and became effective in April, 1985. The rule included a provision which permitted hospitals to exchange inpatient operating rooms for ambulatory surgery operating rooms without application of the State's need methodology, in recognition of the national trend toward ambulatory surgery. The expiration of this rule, therefore, magnifies the need to develop a rational methodology for future surgical resource allocation in this chapter that can then be refined by additional surgical data in future iterations of the State Health Plan.

The increased use of ambulatory surgery, both in New Jersey and nationally, can be attributed to a number of innovations that include improvements in anesthesia technology and clinical advances in laser, laparoscopic, lithotripsy, and other equipment and technology. As a result of these advances, patients have been able to undergo far more invasive surgical interventions on an ambulatory basis as these improved surgical methods have permitted more rapid recovery with minimal related tissue injury. Technological improvements have also expanded the capacity of physicians to perform minor surgical procedures not requiring complicated anesthesia or personnel to assist the physician, thereby increasing the capability and capacity of non-regulated physican practice in the performance of outpatient surgical procedures. In many cases, these minor surgical procedures do not require an operating room and are not scheduled in advance of the physician visit.

However, with the advent of technological advances which have eliminated the need for inpatient hospitalization for many procedures, free-standing ambulatory surgical centers have expanded considerably. These ambulatory surgery facilities routinely consist of operating rooms, same day preparation and recovery areas, intake areas, and support storage and personnel space. They do not necessarily require administration by an acute care hospital, although in many cases they may be sponsored by or affiliated with such an institution.

1. Hospital-based surgical services

The vast majority of New Jersey's hospital inpatient operating rooms have historically mixed inpatient and ambulatory or same day surgery (SDS) patients. Apart from the dedication of operating rooms at a relatively small number of specialized regional centers for tertiary care (e.g., cardiac surgery, trauma), hospital operating rooms have routinely been used for a variety of inpatient and ambulatory surgical cases. This historic trend was based on the dominance of inpatient surgery needs of the hospital's patient-mix and the limited number of surgical procedures which could be performed on an ambulatory basis. Technological innovations in the health care field in the past two decades have greatly expanded the range of surgical interventions that can be performed safely and effectively on an ambulatory basis. Regardless of the type of surgical setting, however, there remains a need to assure the safety and welfare of patients undergoing surgical procedures.

In recent years a number of hospitals (6) have taken advantage of statewide surgical policy that permitted the conversion of hospital inpatient operating rooms to dedicated same day surgery operating rooms. While these conversions, together with the addition of several additional SDS operating rooms at hospitals, have increased the percentage of the state's operating room inventory that is dedicated to SDS, the vast majority of the state's operating rooms (see Table I below) mix inpatients and ambulatory patients.

Minimally Invasive Surgery (MIS)

The development and rapid dissemination of revolutionary surgical techniques, such as laparoscopic procedures or minimally invasive surgery (MIS), is substantially altering the manner in which major surgery will be performed in the future. Through the use of a laparoscope (video camera) and other miniaturized instrumentation, MIS has greatly reduced the need for large surgical wounds required for conventional surgery. By minimizing the invasiveness of surgery for many treatments, MIS has not only reduced the need for the patient to remain in the hospital for an extended stay, but it has also reduced the patient's overall recuperative period.

While MIS has been in use for many years for gynecological and orthopedic surgery, its use for major surgery (e.g., gall-bladder removal, appendectomies, hysterectomy) has been a relatively new but rapidly expanding application of these techniques. By the end of this decade, the average hospital stay is projected to decline by as much as 50 to 70 percent for some of the most common surgical procedures commonly performed in this country (e.g., gall-bladder removal or cholecystectomy, hysterectomy). In the future, it is clear that MIS will reduce the overall utilization of inpatient services by reducing overall lengths of stay for MIS patients. At the same time it may very well require a further examination of operating room standards, in terms of both patient volume capacity and physical plant requirements. In fact, national efforts are currently underway to increase the minimum square footage requirements for same day surgery operating rooms to accommodate the more extensive spatial needs for MIS and laser surgery equipment.

There have also been disturbing reports in recent months, however, regarding the incidence of serious and life-threatening complications from these laparoscopic procedures. Reports of patients bleeding to death and others requiring multiple re-operations to repair and reconstruct organs and tissues damaged in this type of surgery have caused both the New York State Department of Health and the Society of American Gastrointestinal Endoscopic Surgeons to recommend minimum requirements for the performance of these new surgical techniques. The particular concern voiced by regulators and physicians alike in this matter is the practice of educating physicians in the technique through training seminars of short duration which are often sponsored by surgical equipment manufacturers that provide little practical application of the surgical technique. There is understandably considerable economic pressure being placed on hospital credentialing committees to credential surgeons in a procedure that is in such great demand. A recommendation is therefore included in this chapter to examine the laparoscopic issue in general with a view toward establishing statewide credentialing requirements for these procedures in New Jersey.

Surgical trends within hospital-based surgical facilities have shown increased use of ambulatory surgery and corresponding declines in inpatient surgery. Table I illustrates these shifting surgical trends from 1985 to 1988. During this three year period, same day surgery cases rose from 35.1 percent of all surgery to 40.9 percent.

TABLE I

HOSPITAL-BASED SURGERY IN NEW JERSEY*
1984-1988

	1984	1985	1988
Same Day	115,396	161,417	194,304
% Increase		39.88%	68.83%
Inpatient	337,552	298,729	281,264
% Increase		-11.50%	-16.67%
Overall	452,948	460,146	475,568
% Increase		+1.80%	+4.99%

*Surgery data included in this table are based on cases from only those centers reporting which are in hospitals or same day surgery facilities under the administration of an acute care hospital. No free-standing or unlicensed one operating room facilities connected to private practices are included because of the unavailability of comparable data.

IV. ASSOCIATED HEALTH ISSUES

Surgery comprises a large proportion of acute care treatment activity. During 1988, surgery cases accounted for 36.8 percent of total hospital discharges. The potential for error and harm to the patient requires careful consideration prior to the surgical intervention. The safety of the setting, the skill and credentials of the surgeon and support staff, the follow-up required during recovery, the expected improvement in function for the patient, are all matters to be examined by the public collectively and the patient contemplating surgery individually. The mere presence of an appropriately equipped operating room and appropriately credentialed surgeons does not guarantee the maintenance or enhancement of the health status of a population. The availability of and access to surgery does not assure patients improved outcome and does not avoid unnecessary surgical procedures.

Surgery rates have been found to fluctuate considerably by geographic area. Many studies have been conducted to determine the reasons for these wide geographic variations. These studies have investigated a number of possible factors such as: (1) bed supply, (2) physician supply, (3) socioeconomic and demographic factors, (4) patient characteristics. Of these factors, physician supply has been found to be the most powerful predictor of surgical utilization.

a.) Physician Supply and Surgical Rate Variation

The supply of physicians is rapidly expanding in the United States. The supply of active, posttraining patient-care physicians is projected to increase from a ratio of 144/100,000 in 1986 to 176/100,000 population by the year 2000. Since a number of studies have suggested that a key element in the evaluation of differential surgery rates in any given area is the amount or number of surgeons practicing in the area, this projected increase in physician availability can be expected to influence future surgical rates.

Data from the American Medical Association (AMA) indicate that a total of 20,045 physicians were in practice in New Jersey in 1989. Of this number, surgical specialties were distributed as follows:

General Surgeons	1,327
Colon/Rectal Surgeons	45
Neurological Surgeons	99
Orthopaedic Surgeons	592
Urologic Surgeons	322
Plastic Surgeons	146
Thoracic Surgeons	78
TOTAL	2,609

The board certification status of the surgical specialties of New Jersey physicians varies considerably. For instance, 678 of the 1,341 general surgeons listed for New Jersey have one board specialty certification, 58 are certified in two board specialties and 605 (45 percent) have not as yet achieved board-certification.

In New Jersey, as elsewhere, physician availability is a leading indicator of the rate of surgery that is performed in an area. In effect, the more surgeons locating their practice in an area, the higher the rate of surgery that can be expected to be performed in that area. Tables IV and V in Appendix B of this section summarize the availability of surgeons by county and provide a comparison of surgeon availability and rate of surgery by LAB region.

The projected increase in supply of physicians over the next decade, combined with the potential dangers and costs associated with surgical treatment, require greater emphasis on the orderly growth of licensed surgical facilities in New Jersey. Medical care has become increasingly complex, making it increasingly difficult to evaluate the medical necessity of these services.

b.) The population will be older and larger.

A description of the broad trends in surgical service would not be complete without considering the impact and implications of surgical practice on the rapidly increasing elderly population in New Jersey.

ELDERLY POPULATION INCREASES IN NEW JERSEY

Ages	Year 1990	Year 2000	% Change
75-84	328,100	407,500	28
85+	99,500	137,700	39[5]

Recent National Center for Health Statistics (NCHS) data indicate a surgery rate twice as high for individuals in the 65 and over age category for procedures for inpatients discharged from short stay hospitals in the United States.[6]

There are unique concerns relating to surgery as it may pertain to the constantly enlarging elderly population in New Jersey. There will be an expected 633,600 people in the 65-74 year-old age cohort by the year 2000, another 407,500 in the 75-84 year-old group and a 137,700 in the 85+ group, this last group represents a 39 percent increase. The total population in the 65 and over age category estimated here is 1,178,800 or 14% of the total estimated population of New Jersey in the year 2000. Particular attention should therefore be given to the needs of the elderly population within the state in terms of allocating future surgical resources.

VI. Existing Health Care Delivery System

The current acute care delivery system in New Jersey consists of surgical services provided on a local as well as a regional basis. General surgical services are provided in virtually every community acute care hospital in New Jersey. Currently there are 97 general acute care hospital locations in New Jersey. The geographic distribution of the state's hospital-based operating room inventory is provided by LAB region in Tables II and III below. LAB region III contains the largest number of operating room resources per population.

TABLE II

HOSPITAL-BASED SURGICAL RESOURCES BY LAB AREA*

LAB	COUNTY	# OF FAC.	MIXED	NUMBER OF ORs SAME-DAY
LAB I	Morris	5	21	5
	Passaic	6	31	7
	Sussex	2	5	0
	Warren	2	6	1
	Total	**15**	**63**	**13**
LAB II	Hudson	8	45	6
	Bergen	7	53	6
	Total	**16**	**98**	**12**
LAB III	Essex	13	78	12
	Union	7	42	2
	Total	**20**	**120**	**14**
LAB IV	Hunterdon	1	4	1
	Mercer	5	35	4
	Middlesex	6	32	5
	Somerset	1	10	0
	Total	**13**	**79**	**10**
LAB V	Burlington	4	22	1 (3**)
	Camden	7	34	9
	Cumberland	3	12	2
	Gloucester	2	9	3
	Salem	2	6	4
	Total	**18**	**83**	**19**
LAB IV	Atlantic	4	19	2
	Cape May	1	3	0
	Ocean	5	27	4
	Monmouth	5	35	6
	Total	**15**	**84**	**12**

*Adjusted totals using Department of Health certificate of need and licensing and inspection records.

**Pending final CON approval of a change in project cost/scope.

As Table II above indicates, the number of operating rooms that are available within acute care institutions throughout the state is considerable, ranging from 76 total operating rooms in LAB I to 134 operating rooms in LAB III. In terms of population, the following distribution of hospital-based operating rooms is available within each LAB region.

TABLE III

LICENSED HOSPITAL-BASED OPERATING ROOMS

LAB REGION	Total ORs	1990 LAB Population	Population Per OR
LAB I	76	1,096,963	14,433
LAB II	110	1,378,119	12,528
LAB III	134	1,271,895	9,492
LAB IV	89	1,345,659	13,193
LAB V	102	1,331,319	13,052
LAB VI	96	1,305,743	13,602
Statewide Total	607	7,729,689	12,692

Some of these hospital-based surgical resources are also serving as regional centers for specialized services such as cardiac surgery, transplant surgery, and trauma centers. These specialized services are technically sophisticated, requiring costly staffing, equipment and training to maintain the specified service. As a result of these regional requirements, inpatient operating rooms dedicated to the provision of these tertiary services are also present at these institutions. (See State Health Plan High Technology Chapter for listing of facilities performing various transplants in New Jersey; Cardiovascular Chapter for Cardiac Surgery Centers, and Trauma/Injury Chapter for Trauma Center listing.) These dedicated inpatient operating rooms are excluded from this general surgery inventory.

2. Licensed Ambulatory Surgery Facilities

In addition to hospital-based surgical services, there are 16 licensed, certificate of need-approved free-standing surgical centers in the state, which perform same day surgery and 18 single operating room (OR) facilities that are associated with physician private practice. (Three of the 16 licensed facilities are designated to perform a limited specialized range of surgical services.) The single OR facilities have been certified by Medicare to perform same day surgery. The state's licensed free-standing surgical centers are routinely inspected by the Department of Health's Licensing and Inspection program for compliance with state licensing requirements for this licensing category. In a similar fashion, the state's licensing program also performs certification inspections for Medicare based on federal requirements.

The statewide distribution of these licensed or certified surgical resources by LAB region is contained in TABLES IV and V below. Several of the tables that follow will also include surgical case capacity estimates that are based on historical surgical service performance levels which are discussed later in this chapter.

TABLE IV

LICENSED FREE-STANDING AMBULATORY SURGICAL CENTERS

LAB REGION	# OF FACILITIES	# OF ORs	CAPACITY (1500 cases/OR)
I	1*	2*	3,000
II	2	6	9,000
III	4	13	19,500
IV	3	7	10,500
V	2	9	13,500
VI	0	0	—
Statewide	12	37	55,500

*The Commissioner has indicated an intent to approve a facility with two ORs. This CON application is currently being contested.

If these additional free-standing surgical facilities are added to the statewide inventory of hospital-based operating rooms, the following OR distribution per capita adjustments (TABLE V) result:

TABLE V

LICENSED HOSPITAL-BASED AND FREE-STANDING SURGERY ORs

	Total ORs	1990 Lab Population	Population Per OR
LAB I	78	1,096,963	14,064
LAB II	116	1,378,119	11,880
LAB III	147	1,271,895	8,652
LAB IV	96	1,345,659	14,017
LAB V	111	1,331,319	11,994
LAB VI	96	1,305,743	13,601
Statewide	644	7,729,689	12,003

The technical capacity of the licensed operating rooms in the state, therefore, amounts to 752,930 patients per year. This figure, however, does not include a statewide total of 18 unlicensed, single operating room facilities in the State that have managed to achieve Medicare certification. Table VI below accounts for the distribution of these certified surgical resources by LAB area.

TABLE VI

UNLICENSED* SINGLE OPERATING ROOM MEDICARE-CERTIFIED FACILITIES

LAB REGION	# OF FACILITIES	# OF ORs	CAPACITY (1500 cases/OR)
I	3	3	4,500
II	2	2	3,000
III	4	4	6,000
IV	1	1	1,500
V	1	1	1,500
VI	7	7	10,500
Statewide Total	18	18	27,000

*All "unlicensed" facilities tabulated above Medicare certified by HCFA. Capacity tabulated here is also in addition to licensed free-standing and licensed hospital OR capacity.

As the above inventory of licensed and certified ambulatory surgery providers indicates, the entire range of providers is available in all of the LAB areas, although there is considerable geographic variation in their availability. A further examination of this variability should be conducted in the future by both the Department and the LBAs.

Operating Room (OR) Capacity

Operating room (OR) capacity has been the subject of considerable debate in New Jersey as well as in the rest of the country. In the past, the Department has defined operating room capacity on the basis of a specific number of surgical procedures that could be expected to be performed within an operating room based on the type of patient, type of case, and type of OR. The use of surgical procedures as opposed to cases, however, is misleading to a large degree because of the considerable number of surgical patients that experience multiple procedures during the same hospitalization. The literature clearly evaluates operating room utilization on the basis of the number and type of **cases**, rather than the amount of **procedures** that are performed.

Several recent studies have appeared in the literature which indicate that average surgical case time has remained relatively unchanged. Despite claims to the contrary, do not appear to have significantly altered by technological advances that have taken place in surgical instrumentation and techniques. The average number of minutes per case as reported in a survey conducted by the Maryland Health Resources Planning Commission (1987-1989) ranged from 49.9 minutes to 54.3 minutes. Surgical minutes per case as reported by the American Hospital Association's Surgitrends report (1991), which admittedly is based on a small sample size, have not shown significant increases over the past several quarterly reporting periods (July/September 1990-April/June 1991). These median surgical case times have ranged from 51.9 to 55.3 minutes per case.

An examination of statewide hospital surgical case volume for 1988 has also indicated that a large percentage of the state's acute care institutions have reported annual case volumes that approach and sometimes exceed the capacity surgical volumes that are being proposed below.

Based on statewide OR data and studies of surgical services appearing in the literature, the following operating room capacities are proposed for each category of operating room available in New Jersey:

(1.) **Inpatient operating rooms**—considered to be operating at optimal capacity when they perform 1,000 cases per/year. This computes to approximately four surgery cases per day per five day week on a fifty week a year basis.

(2.) **Mixed operating rooms**—are considered to be operating at optimal capacity when 1,090 cases are performed a year. This category of surgery is maintained for those facilities which perform inpatient surgery and same day surgery in the same operating rooms. The most effective use of hospitals which perform both inpatient and same day surgery in the same OR's, occurs when separate patient flow and recovery facilities for each type of surgery performed is maintained.

(3.) **Same day surgical**—facilities are considered to operate at optimal capacity when 1,500 cases are performed a year. This is comparable to thirty (30) cases per week or six (6) cases per day for a five day week on a 50 week a year basis. This is a reasonable measure considering the American Hospital Association's new **HAS/Surgitrends** data base calculates free-standing facilities average approximately 42.3 surgical minutes per case.[10] Same day surgery takes place in hospitals, in free-standing facilities, and in one operating room facilities connected with the private practice of medicine.

All three operating room categories are described in terms of their optimal capacity as a means of quantifying utilization of a facility's operating rooms. These capacity levels will have to be carefully monitored in the future, particularly with respect to inpatient operating room capacity, as MIS becomes standard surgical practice.

These capacity levels exclude minor surgical procedures or outpatient procedures, since they are not performed in licensed operating rooms. Separate areas are commonly designated for the performance of these relatively minor surgical procedures and are commonly referred to as procedure rooms. They generally do not require elaborate or general anesthesia, nor long advance scheduling and preparation for their use.

VI. Unmet Health Care Needs

In order to accurately assess the amount of surgical capacity needed to serve the State's population, a complete data base needs to be developed which includes all pertinent information needed for planning from all surgical services in New Jersey. As a first order of priority, the Department of Health should survey all licensed and certified surgical providers in the state to determine the full extent of surgical service utilization in the state. Until that survey is complete, consideration of additional surgical resources should concentrate on an evaluation of existing data and the extent that the criteria and standards that will be proposed subsequent to this chapter are addressed by potential providers seeking to initiate surgical services, or to renovate or expand existing resources.

Based on the number of operating rooms available within each LAB region and the estimated capacity of each category of operating room that comprises the total OR inventory in each LAB region, the following surgical capacity estimates can be said to be present in the State:

TABLE VII

1988 ANNUAL TOTAL HOSPITAL SURGICAL CASE CAPACITY AVAILABLE BY LAB REGION*

LAB	# OF MIXED ORs	# OF SAME DAY SURGICAL ORs	CAPACITY
I	63 (68,670)	13 (19,500)	88,170
II	98 (106,820)	12 (18,000)	124,820
III	120 (130,800)	14 (21,000)	151,800
IV	79 (86,110)	10 (15,000)	101,110
V	83 (90,470)	19 (28,500)	118,970
VI	84 (91,560)	12 (18,000)	109,560
Statewide	527 (574,430)	80 (120,000)	694,430

TABLE VIII

1988 LICENSED HOSPITAL OR UTILIZATION AND PERCENT CAPACITY

LAB	OR Capacity	OR Utilization	% of Capacity Utilized
I	88,170	71,290	80.8%
II	124,820	81,702	65.45%
III	151,800	90,539	59.6%
IV	101,110	75,116	74.2%
V	118,970	77,650	65.26%
VI	109,560	79,271	72.30%
Statewide	694,430	475,568	68.48%

Based on the most recent surgical case volume available (1988) as indicated by TABLE VIII above and the surgical case OR capacity levels defined earlier in this chapter, statewide utilization of its hospital-based operating rooms is approximately 68.5 percent of statewide capacity.

TABLE IX below projects the State's surgical inventory will approach seventy-five (75) percent for 1993. This projection assumes incremental annual surgical caseload increases based on statewide historical increases in surgical cases and no further increases in surgical resources.

TABLE IX

ESTIMATED 1993 LICENSED HOSPITAL OR UTILIZATION AND PERCENT CAPACITY

LAB	OR Capacity	Estimated OR Utilization 1993	Estimated % of Capacity Utilized
I	88,170	77,207	88.0%
II	124,820	88,483	71.0%
III	151,800	98,053	64.0%
IV	101,110	81,560	79.0%
V	118,970	84,095	71.0%
VI	109,560	85,850	78.0%
Statewide	694,430	515,248	74.2%

In addition to the hospital-based surgical capacity noted above, there are 12 existing or certificate of need-approved free-standing ambulatory surgical centers in the State, with a total of 39 existing or approved operating rooms. These additional resources add still greater capacity to the statewide surgical resource inventory. Utilization data for these resources is not yet available. A greater effort to collect utilization, cost and outcome data is being recommended in this chapter in an effort to evaluate future resource need for surgical services.

Surgical Need Methodology

The following need methodology, based on the operating room capacities proposed earlier in this chapter, shall be applied to additional surgical operating rooms in the future.

(a) Information that must be provided by all applicants includes, but is not limited to, the following: The DOH will determine prior to the initiation of each call for surgical applications (facility batching cycle), the most recent statewide and county specific surgical data to be used in calculating the surgical need methodology outlined below, as well as identifying the population data and operating room inventory that are to be used to satisfy the surgical need methodology that follows. Copies of this information can be obtained by contacting the Certificate of Need Program.

1. The potential need or demand for the proposed surgical facility or proposed change in the number of operating rooms, shall be based on the surgical need methodology specified below. The application shall contain, at a minimum, the following:
   - i. The total capacity of the surgical OR's located within the county(ies) proposed to be served by the surgical facility. The capacity of each type of licensed OR is to be calculated as follows:
     - (1) inpatient OR's = 1,000 surgical cases annually;
     - (2) mixed (inpatient/outpatient) OR = 1,090 surgical cases;
     - (3) dedicated SDS OR = 1,500 surgical cases annually.
   - ii. The number of surgical cases performed within licensed OR's located in the county to be served by the proposed additional OR capacity for the most recent year of data available to the Department.
   - iii. The surgical use rate, both statewide and countywide, is to be calculated for the most recent annual surgical data reported to the Department (derived from the Uniform Billing Patient Summary form) and using the most recent annual state and county population estimates available from the State Department of Labor. The surgical use rate is determined when the number of surgical patients originating from each county is divided by the estimated population of that county.
   - iv. The projected surgical demand is calculated for five years in the future, using the latest available population projection for the county(ies) to be served by the proposed surgical applicant (and assuming the surgical use rate derived in iii above). The surgical rate is multiplied by the five year population projection to derive projected surgical demand for the proposed service area.
   - v. The need for additional ORs is determined by subtracting the existing surgical capacity (i) from the projected surgical demand for the county(ies) five years into the future (iv) to

derive the need for additional OR's for the proposed service area. The number of ORs needed, if any, is determined by dividing the additional future demand for surgical services in the service area (over and above the service area's OR capacity) by the respective capacity(ies) for the type(s) of ORs being sought by the applicant(s) (i.e., inpatient, mixed, ambulatory/SDS).

NEED METHODOLOGY FORMULA (as example);

Where: Total licensed service area surgical capacity = C

and:

Total Number of Proposed Service Area Mixed ORs = M
Total Number of Proposed Service Area Ambulatory/SDS ORs = A
Total Number of Proposed Service Area Inpatient ORs = I

Existing Inpatient OR Surgical Capacity = I × 1,000
Existing Mixed OR Surgical Capacity = M × 1,090
Existing Ambulatory/SDS OR Capacity = A × 1,500

(i) Existing Service Area Surgical Capacity (C) = (I × 1,000) + (M × 1,090) + (A × 1,500)
(ii) Number of Surgical Cases Performed in the Proposed Service Area = S
(iii) Proposed Service Area Surgical Use Rate = S / P; where, P = Latest Available Labor Department Population Estimate, and
P+5 = Service Area Population Five Years in Advance
(iv) Projected Surgical Demand = D = (S/P) × (P+5) - (C)
(v) Estimated Service Area OR Need = N = D/# ORs Requested × Individual OR Capacity

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EXHIBIT A

TABLE I*

NEW JERSEY MEDICAL ADMISSIONS 1988*

		ADM/1000 POP	LOS	$ADM	$DAY
Total Cases	434,914	56.40	6.41	$4,820	$750
NSD Surgery	276,950	35.92	9.50	$6,900	$730

NSD=No Same Day Surgery

TABLE II*

THREE STATE COMPARISON WITHOUT SAME DAY SURGERY

1988

		ADM/1000 POP	LOS	$ADM	$DAY
Massachusetts	200,030	33.83	9.18	$9650	$1050.00
New York	590,740	32.78	10.24	$9910	$ 970.00
New Jersey	269,875	34.31	9.32	$7300	$ 780.00

*1991 Codman Research Group, Inc.

TABLE III

THREE STATE COMPARISON FOR SELECTED PROCEDURES

Lens Operations

1988

	Adm./1000 Pop.	LOS	$/ADM	$/DAY
Massachusetts	0.17	2.26	$3730	$165.00
New Jersey	0.46	1.52	$2720	$179.00
New York	0.82	1.96	$3590	$183.00

Cesarean Section

1988

	Per/1000 Births	LOS	$/ADM	$/DAY
Massachusetts	239.1	5.3	$3640	$ 690
New Jersey	275.4	5.4	$3660	$ 670
New York	250.5	5.6	$4420	$ 790

Hysterectomy and Associated Surgery

1988

	Adm/1000*	LOS*	$/ADM*	$/DAY*
Massachusetts	0.34	8.29	$8350	$1010
	2.03*	5.11*	$4940*	$ 970*
New Jersey	0.36	8.81	$5950	$ 680
	2.06*	5.69*	$4130*	$ 730*
New York	0.35	9.47	$8360	$ 880
	1.94*	5.88*	$5100*	$ 870*

*Hysterectomy non-malignant conditions

Transurethral Prostatectomy

1988

	Adm/1000	LOS	$/ADM	$/DAY
Massachusetts	1.13	6.09	$4760	$ 780
New Jersey	1.11	7.58	$4410	$ 580
New York	1.12	7.69	$4780	$ 620

All Comparative State Data—Codman Research Group, Inc.

TABLE IV
SURGEON SUPPLY IN NEW JERSEY

LAB	COUNTY	GENERAL	ORTHOPEDIC	PLASTIC	UROLOGIC	OTHER*
I	SUSSEX	12	7	0	3	1
	PASSAIC	65	33	5	20	9
	MORRIS	84	36	19	20	16
	WARREN	10	6	0	2	0
	TOTAL	**171**	**82**	**24**	**45**	**26**
II	BERGEN	210	94	32	49	34
	HUDSON	84	31	4	26	11
	TOTAL	**294**	**125**	**36**	**75**	**45**
III	ESSEX	190	91	20	44	41
	UNION	94	39	12	29	16
	TOTAL	**284**	**130**	**32**	**73**	**57**
IV	HUNTERDON	4	6	1	3	2
	MERCER	59	31	9	17	14
	SOMERSET	40	19	2	5	7
	MIDDLESEX	111	50	10	19	16
	TOTAL	**214**	**106**	**22**	**44**	**39**
V	BURLINGTON	52	15	2	13	9
	CAMDEN	100	27	12	20	14
	GLOUCESTER	12	6	2	2	0
	SALEM	7	2	0	1	0
	CUMBERLAND	17	7	1	4	3
	TOTAL	**188**	**57**	**13**	**40**	**26**
VI	CAPE MAY	5	3	1	2	2
	ATLANTIC	29	15	4	7	6
	OCEAN	54	21	2	15	5
	MONMOUTH	88	53	9	21	15
	TOTAL	**176**	**92**	**16**	**45**	**28**
	STATEWIDE	**1,327**	**592**	**147**	**322**	**221**

*Includes—Neurological Surgery—Thoracic Surgery—Colon Rectal Surgery

TABLE V
SURGEON SUPPLY BY LAB COMPARED TO SURGICAL RATE/ 100,000 BY LAB REGION

LAB	# of Surgeons*	Surgeon Rate Per 100,000*	Surgical Case Rate Per 100,000 Pop.+
LAB I Pop. 1,096,963	348	31.48	6498.
LAB II Pop. 1,378,119	575	41.72	5929.
LAB III Pop. 1,271,895	576	45.31	7118.
LAB IV Pop. 1,345,659	425	31.44	5582.
LAB V Pop. 1,331,319	328	22.83	5834.
LAB VI Pop. 1,305,743	357	27.35	6071.
STATEWIDE Pop. 7,729,698	2609	34.0	6152.5

Source: *January 1989—American Medical Association Data, *Characteristics of Physicians: New Jersey*
*1988—UBPS Data—NJDOH

B. END-STAGE RENAL DISEASE (ESRD) SERVICES

I. INTRODUCTION

End-Stage Renal Disease (ESRD) is defined in basic terms as progressive chronic kidney failure that requires maintenance dialysis or transplantation. In effect, it is the loss of kidney function due to some form of renal failure that results in the inability of the remaining renal function to sustain life. The kidney's function of filtering waste products from the blood and removing fluid and salts from the body is essential for life; consequently the failure to treat ESRD results in death.

There are two major treatment alternatives for the ESRD patient—kidney transplantation and some form of renal dialysis. Hemodialysis is the process by which an artificial kidney machine cleanses metabolic waste products, fluids, and salts from the bloodstream. Peritoneal dialysis, on the other hand, utilizes the patient's abdominal membrane to exchange waste products from the patient's bloodstream to the dialyzing fluid that is placed in the abdominal cavity through a plastic tube. In either of these cases, the kidney machine or the peritoneal dialysis process mimics normal kidney function. Kidney transplantation, on the other hand, requires the surgical implantation of a healthy kidney from either a living donor or cadaver donor.

This chapter will describe the acute and chronic renal services that are available in New Jersey, the policies that have been followed in the past regarding the distribution of statewide renal services, recent developments in the clinical management of renal patients, an evaluation of current need and future demand for renal services, and recommendations regarding the future direction of renal care resource allocation.

During the preparation of this portion of the chapter, the Department of Health sought the assistance of an ad hoc panel of technical experts in the field of renal disease to assure that the document is reflective of state-of-the-art clinical practice. While the Department did not seek or receive the endorsement of this panel in the final preparation of the chapter, we wish to acknowledge their valuable contributions that have greatly enhanced the contents of this section of the Plan.

II. RECOMMENDATIONS

1. A Task Force should be formed to evaluate the reasons for New Jersey's number-one national ranking in incidence rate for ESRD, with emphasis on the role of diabetes and hypertension as risk factors.
2. The Centers for Disease Control guidelines on the prevention, detection and treatment of diabetic nephropathy (as described in **The Prevention and Treatment of Complications of Diabetes Mellitus, A Guide for Primary Care Practitioners**) should be actively promoted to primary care physicians in light of New Jersey's ranking in incidence rate of ESRD and its high percentage of cases (63 percent) with a primary diagnosis of diabetes and/or hypertension.
3. Future certificates of need for ESRD services should be evaluated based on the methodology described in the State Health Plan and the criteria and standards contained in the state's ESRD rule (N.J.A.C. 8:33F) as amended by recommendations contained in this chapter. It must be emphasized, however, that the strict application of the renal need methodology is to be considered a necessary but not sufficient test to evaluate the need for additional renal services, particularly in the event that the existing array of services has sufficient unused capacity to meet the need proposed to be served by a potential new provider.
4. The Department of Health, in conjunction with the State Health Planning Board (SHPB) and renal care providers, should embark on a renal service reconciliation study that will seek to derive a more precise inventory of renal dialysis equipment capability and the full extent of hi-flux, high efficiency, and conventional dialysis taking place in the State. Future iterations of the Plan and subsequent renal need methodologies should reflect the results of this study.
5. Existing ESRD providers seeking to expand their services on-site should be required to document the extent of their center's or facility's compliance with current ESRD Network 3 (Trans-Atlantic Renal Council) Goals. Potential new ESRD providers must provide a detailed strategic plan aimed at compliance with the Goals of the Council. The current (1992) Goals are included as Exhibit H of this chapter.
6. The existing ESRD rule (N.J.A.C. 8:33F) should be amended to increase the minimum facility size at any one ESRD location from six to **nine** stations. A companion amendment should be proposed to establish a maximum ESRD facility size at any one ESRD location of 42 stations for future resource allocation decision-making.
7. Existing ESRD providers should be permitted to increase the number of ESRD stations at its existing center or facility location through an expedited certificate of need review process, provided that waiver criteria contained in the methodology section of this chapter are achieved.
8. The Department of Health should closely monitor the provision of acute inpatient dialysis services to assure that chronic dialysis patients are not being provided chronic services by non-ESRD approved providers.

III. GOALS AND OBJECTIVES

The public health agenda established by the Department of Health in **Healthy New Jersey 2000** clearly establishes improved infant survival, reductions in disease incidence and prevalence, and improved infant survival, and improved management of acute and chronic illnesses as major strategies for the 1990s. End-Stage Renal Disease is among the diseases that are identified since it is linked to both diabetes and cardiovascular disease. The major objective for End-Stage Renal Disease, set by **Healthy New Jersey 2000,** is as follows:

1. Reduction by 10 percent in the incidence rate of End-Stage Renal Disease as a complication of hypertension and diabetes.

In addition to this objective, however, there are a number of issues that have surfaced over the years related to End-Stage Renal Disease that are deserving of further discussion. These issues include:

1. The impact of technological innovation on dialysis outcomes and treatment capacity.
2. The impact of renal dialysis facility size on treatment access, cost and outcome.
3. The feasibility of deregulating renal dialysis services to the extent that certificates of need would no longer be required to initiate and/or to expand ESRD services in the future.

To the extent possible, the Department has examined the literature and the experience of other states in order to provide a preliminary assessment of these issues. Among the recommendations contained in this chapter, however, is a continuing review of all of these issues in the future that will be a collaborative effort between the Department of Health, local advisory boards (LABs), renal care providers, and the Trans-Atlantic Renal Council. Such a joint approach will permit a more detailed evaluation of updated clinical data that would incorporate the experience of New Jersey's ESRD facilities to a greater extent than this current study.

IV. CURRENT STATUS AND TRENDS IN END-STAGE RENAL DISEASE

a. Renal Disease in New Jersey

New Jersey has the highest age-, race-, and sex-adjusted incidence rate of end-stage renal disease (ESRD) in the nation. In 1991 there were approximately 1800 incident cases.

Of all New Jersey ESRD cases reported to Medicare in the 10-year period 1979-1988, the average crude ESRD incidence was four times higher for blacks (39.2 per 100,000) than whites (9.4 per 100,000), with the highest for black males (45.1 per 100,000) and the lowest for white females (7.2 per 100,000). The racial composition of ESRD patients during 1991 is provided in Exhibit C of this chapter, indicating the considerable numbers and percentages of Blacks that comprise the statewide ESRD patient population.

Diabetes and hypertension are well-documented risk factors for ESRD, and in New Jersey, they are the cause of 63% of all current ESRD cases. The risk of developing ESRD in New Jersey residents with either of these conditions can be calculated by dividing the incidence of ESRD attributed to diabetes or hypertension by the population cohort with diabetes or hypertension. Using New Jersey specific data, the risk of developing ESRD due to diabetes is 185 per 100,000 diabetic persons; the risk of developing ESRD among the hypertensive population is 36 per 100,000.

When national prevalence data are adjusted for the risks of ESRD based on the prevalence of diabetic and hypertensive persons in New Jersey, black diabetics have a higher age-adjusted incidence (males 288.9, females 233.2 per 100,000 diabetics/year) than whites (males 195.1, females 108.2). Black hypertensives also have a higher incidence (males 53.9, females 33.5 per 100,000 hypertensives/year) than whites (males 9.2, females 4.9). According to the 1990 Annual Data Report recently released by the United States Renal Data System (USRDS), ESRD patients with a primary diagnosis of diabetes and hypertension have more hospitalizations than patients with other diseases.

A landmark document released in June, 1991 by the Institute of Medicine (IOM), **Kidney Failure and the Federal Government,** underscores the link between ESRD and cardiovascular disease. According to the IOM report, diabetic ESRD patients have higher adjusted mortality rates and more comorbidities than other major diagnostic groups. Hypertension is present in two out of three diabetic patients, and vascular disease, blindness and peripheral neuritis are also major comorbid conditions. The increased severity of illness of diabetic patients inevitably leads to increased hospitalization and higher overall medical costs. It is estimated that approximately 50 percent of patients with diabetic ESRD die of coronary heart disease within five years of the onset of ESRD treatment.

The report also stressed the importance of identifying risk factors for the development of diabetic nephropathy, with emphasis on those which are known to be responsive to such interventions as strict glucose control and microalbuminuria screening. It also recommended the development of measures to distinguish between IDDM (insulin dependent diabetes mellitus) and NIDDM (non-insulin dependent diabetes mellitus), as well as to classify comorbidities, including hypertension and cardiovascular diseases, and the incorporation of the findings in the ESRD data systems at HCFA in order to maximize prevention and intervention.

Hypertension can cause renal failure; renal disease can cause hypertension. Although the prevalence of hypertension in the United States has decreased with improvements in treatment, a greater proportion of hypertensive patients progress to renal failure. The IOM report recommended greater efforts at identifying the relationship between hypertension and the decline in renal function at varying levels of blood pressure, as well as the effect of control of blood pressure, hyperlipidemia, and other cardiovascular disease risk factors on ESRD incidence. It also recommended that a high priority should be given to evaluating the causes of excess hypertensive ESRD among blacks.

The report calculated the number of people expected to develop hypertensive renal disease between 1990 and 1995. For the three diastolic blood pressure groups, 90-104 mmHG, 105-114 mmHG, and greater than 115 mmHG, the report estimated approximately 320,000, 80,000 and 47,000 new cases respectively. According to these calculations, **two-thirds** of these new renal disease cases were expected in the patients in the **lowest** blood pressure group (DBP 90-104 mmHG). This is due to the fact that the number of persons with mild diastolic hypertension is much greater than the number in the higher strata. The report concluded: "To substantially reduce the national burden of hypertension-related kidney disease, intervention strategies must include the large number of people with mild hypertension".

Soberingly, preliminary data from an ESRD Prevention Project in progress at the UMDNJ New Jersey Medical School indicates that in a group of 100 black hypertensive diabetics being evaluated for early signs of ESRD, **almost half** have tested positive for microalbuminuria, a strong predictor of impending ESRD.

Morbidity

End-stage renal disease is the terminal stage of a number of diseases of the kidney. These may take different forms—some immediately serious and some becoming serious over a prolonged period of time because of progressive damage to the kidney tissue. The most common diseases that lead to full or partial renal failure are pyelonephritis, glomerulonephritis, diabetes, and malignant hypertension. All of these kidney diseases are frequently asymptomatic for many years, with slow but progressive damage to the glomeruli; the inevitable result is uremia or the accumulation of body waste products in the blood. There is no known treatment which will eradicate the disease. Malignant hypertension is one of the more common causes of kidney disease in the Black population which results from the progression of another disease outside the urinary tract.

In the past, the National Kidney Foundation has indicated that over 8 million Americans suffer with kidney-related disease and over 50,000 die in this country each year from some form of disease of the kidney. Due to the difficulties of renal treatment and the frequent presence of additional chronic diseases, many individuals are not considered acceptable candidates for successful treatment. Experts estimate that at least 3,300,000 Americans have unrecognized and undiagnosed diseases of the kidneys. Because there are so many types of kidney diseases, and because of inadequacies in reporting disease figures, it has not been possible to compile complete and accurate statistics on the incidence of kidney disease.

Incidence

Incidence rates refer to the number of patients per unit of population initially treated for ESRD during a given year. There are various estimates of the incidence of persons requiring treatment for chronic renal failure. This rate applies to overall **new** or incident ESRD patients that can be expected to be dialyzed in a given year rather than the expected number of incident cases of renal disease. Utilizing 1990 census data for New Jersey, this would result in between 147 and 464 new ESRD patients each year in this State that can be expected to be added to the statewide ESRD caseload. The incidence of ESRD varies widely owing to substantial differences in the distribution of population by age, sex, and race. New Jersey's total of approximately 1800 new incident cases, for example, results in an overall incidence rate of 23.4 per 100,000.

For the purpose of determining the statewide population at risk in New Jersey, the historical increases in ESRD patient volume exhibited in Table 1 in this chapter indicates that the number of patients entering dialysis treatment on an annual basis has increased considerably during the past three years. While the statewide average since 1982 has been 350 additional patients annually, the average over the past three years is 461 additional ESRD patients per year. Given the wide range in incidence rates that have appeared in the literature, the Department has historically depended upon ESRD patients in treatment as the primary indicator in determining future need for ESRD resources.

Many factors have contributed to the dramatic rise in the number of new ESRD patients in the 1970s and 1980s, not the least of which is the continued availability of Medicare financial coverage for ESRD treatment. Other factors contributing to the growth in the patient population in the last decade include a continually aging population, an increasing incidence of ESRD among AIDS and drug abuse patients, an increasing incidence of treatable ESRD, and an increasing trend toward providing dialysis treatments to patients, who, because of age or other physical impairments, were at one time considered medically unsuitable for dialysis.

b. Acute and Chronic Renal Dialysis Services

Renal disease services involve the care of patients with acute renal failure resulting from injury, disease, certain types of poisons or drug overdose, or the care of those with chronic renal failure and permanent loss of function of both kidneys. In the case of acute kidney failure, such problems may be transient or reversible, and for these patients conservative medical treatment, with or possibly without dialysis support as indicated, will allow the kidneys to return to normal function.

In New Jersey as of 1992, acute renal dialysis services are currently approved to be provided at a relatively large number of the state's acute care hospitals. A total of 29 hospitals provide this service in conjunction with their approved chronic renal dialysis service. An additional 12 hospitals are approved to provide only acute dialysis services, largely by virtue of the fact that they have satisfied the state's regulatory requirements in terms of sufficient annual casemix and the availability of back-up and support services. In addition to these providers, an additional 16 hospitals provide acute dialysis by virtue of an Inter-Hospital Outreach Program (IHOP) agreement, with the dialysis being provided by arrangement with an approved hospital chronic dialysis provider. In all, a total of 57 hospitals in the state are approved to provide acute dialysis treatment within their respective institutions.

Acute Dialysis

Acute hemodialysis is defined at N.J.A.C. 8:33F-1.4 as the rendering of dialysis to a non-ESRD patient with previously life supporting renal function. The amount of time required to prepare both the patient and equipment for services is generally adequate to transfer most patients to a hospital ESRD dialysis center. Therefore, the Department of Health generally does not support the provision of acute hemodialysis in non-ESRD approved facilities, as this service is provided in all hospital-based dialysis centers.

Back-up Dialysis

"Back-up" dialysis as developed in the Federal ESRD regulations was meant to provide ESRD services in areas where patients could not gain adequate access to approved chronic dialysis facilities. Back-up dialysis is provided through an approved ESRD dialysis center which provides both acute and chronic hemodialysis. The current renal dialysis regulations in New Jersey do allow non-ESRD hospitals to provide acute and/or back-up dialysis when certain specific criteria are satisfied.

Federal regulations established the conditions for participation that a facility must meet to receive Medicare reimbursement. The designation of ESRD network areas which cover the whole country is contained in these regulations. These networks have been designed primarily to assure, through the establishment of a network coordinating council, that every network contains a sufficient number of ESRD facilities to guarantee every ESRD patient access to all the ESRD services he or she may potentially require. In addition, through the establishment of medical review boards, networks are designed to allow effective peer review of the quality of care rendered to each ESRD patient. The State of New Jersey has been designated as Council #3.

c. End-Stage Renal Disease Treatment Services

Hemodialysis and kidney transplantation are presently the two forms of life-saving treatment available to ESRD patients. For patients who are both medically and psychologically appropriate, transplantation is generally the treatment of choice. However, the difficulty of procuring suitable organs, particularly in those patients with pre-formed antibodies, resulting in the problem of acute and chronic rejection of the transplanted kidney make hemodialysis a necessary and acceptable alternative. The problems associated with organ procurement activities in New Jersey are discussed in the High Technology chapter of the State Health Plan.

(1) Hemodialysis

Dialysis consists of artifically "cleansing" the body's blood when the kidney becomes incapable of doing so. It is the process by which metabolic waste products or toxins are removed from the blood by diffusion from one fluid compartment to another across a semipermeable membrane. Two types of dialysis are in common usage, hemodialysis and peritoneal dialysis. Hemodialysis is the technique most widely used to ameliorate uremic symptoms; a patient's blood is circulated for removal of uremic poisons in acute and chronic renal failure or for the removal of drugs in certain types of cases of drug overdose. In hemodialysis, a

machine functions in some respects as human kidneys. Blood, pumped by the heart, leaves the patient's body through tubes called a fistula or graft in the artery and vein of an extremity, and is passed through an artificial kidney machine. The waste products from the bloodstream diffuse across a man-made semipermeable membrane into a bath solution known as a dialysate, after which the purified blood is returned to the patient's body.

Patients now may receive routine maintenance hemodialysis treatments in a hospital center, in their home or in a free-standing facility which is an out-of-hospital dialysis facility that provides chronic maintenance dialysis to stabilized ambulatory patients. Self-dialysis is routine maintenance dialysis performed by the patient at home or in a dialysis facility, which requires special training of the patient and the availability of an assistant (normally a spouse or significant other). Where the patient receives dialysis treatments depends upon the extent of professional attention and related support required. Patients on maintenance dialysis, whether performed in the hospital, the home, or in a free-standing facility, are often able to carry on their ordinary daily activities, many times continuing to work at their usual occupation.

(2) Peritoneal Dialysis

Intermittent Peritoneal Dialysis (IPD) utilizes the lining of the abdominal cavity between the patient's blood and dialysate. IPD requires 8-10 hours of treatment time by machine (called a cycler). Continuous ambulatory peritoneal dialysis (CAPD) has developed as the preferred treatment to patients with kidney failure. Since the CAPD procedure is one which the patient can carry out in any location, training and support services are the only facility services involved. Patients still require monitoring for medical, psychological, and nutritional risks as with other forms of dialysis. However, dietary restrictions are reduced and CAPD is a home therapy which is easily learned.

(3) Home Dialysis

Home dialysis treatment represents a situation where the cost of dialysis is significantly reduced while improving the potential availability of treatment. Whenever medical, psychological, and social conditions permit, home dialysis represents the most advantageous type of treatment for patients with end-stage renal disease. Evidence regarding the benefits of home dialysis versus facility dialysis indicate that survival rates are better on home dialysis, and that morbidity, especially the incidence of hepatitis, is less for persons on home dialysis. Such treatment contributes to the rehabilitation of the patient while at the same time controlling the rapidly rising cost of providing ESRD services.

In an attempt to encourage an increase in the number of patients choosing home dialysis, P.L. 95-292, eliminated previously existing financial disincentives and substituted specific incentives to encourage patients to elect home dialysis over facility maintenance dialysis. Essentially, this bill allows for Medicare entitlement for home dialysis patients during the first month of treatment and payment to dialysis facilities up to 70 percent of the adjusted national average fee for in-center dialysis. The payment represents a screen for the cost of home dialysis supplies and equipment furnished to home dialysis patients whose care is under the direct supervision of approved facilities, including, where necessary, the services of trained home dialysis aides. P.L. 95-292 calls for reasonable goals for home dialysis patients to be established by ESRD networks and matches them against national goals. Whatever methodology regarding future need for ESRD stations, therefore by necessity must consider the extent that home dialysis is being made available within each LAB region since this factor markedly reduces the number of stations needed in the State for facility maintenance dialysis.

(4) Kidney Transplantation

As stated in the High Technology chapter of the Plan, organ transplantation differs from other medical services because volume is totally dependent on the number of organs donated. Many more organs are needed than are retrieved. The availability of donor organs falls far short of supplying patient needs and the operating capacities of the transplant centers in New Jersey.

Both federal and state law require hospitals to identify potential transplant donors and inform the next of kin of the opportunity to donate. Amendments to the Social Security Act in the Omnibus Budget Reconciliation Act of 1986 specify that, as of November 1987, hospitals must "establish written protocols for the identification of potential organ donors" in order to receive payments for Medicare and Medicaid. The New Jersey Assured Option Law (P.L. 1987 Ch.244) requires that hospitals offer the opportunity of organ donation to the families of suitable candidates and record the same on an organ donation option certificate attached to the death certificate. Hospital death certificates are not certified as complete unless a completed organ donor option certificate is attached.

Organ Procurement Organizations (OPOs) are private non-profit agencies that facilitate and coordinate the organ donation process. Their services are reimbursed under Medicare and Medicaid because of the need to identify potential donors, transport organs, obtain histocompatibility testing, and maintain registries of the tissue characteristics of potential recipients. Federal regulations preclude more than one OPO in each service area. The OPOs meet national standards and criteria of organization, performance and organ allocation.

Both the N.J. Organ and Tissue Sharing Network (Network), based in Springfield, New Jersey, and the Delaware Valley Transplant Program (DVTP), based in Philadelphia, are OPOs responsible for service areas which include New Jersey counties. This is the result of a federal rule against the splitting or dividing of a Standard Metropolitan Statistical Area. Network was assigned 13 counties (Sussex, Passaic, Bergen, Morris, Essex, Hudson, Hunterdon, Somerset, Union, Middlesex, Monmouth, Mercer, and Ocean), and DVTP eight (Burlington, Camden, Gloucester, Salem, Atlantic, Cape May, Cumberland and Warren).

National guidelines limit priority distribution of organs retrieved by organ procurement agencies to those transplant programs operating in their own federally designated areas. All New Jersey transplant programs are members of the N.J. Organ and Tissue Sharing Network, and their supply of organs is largely limited to those donated locally and distributed by it.

Organ distribution must be in accordance with national United Network for Organ Sharing (UNOS) standards. All potential recipients are placed on a national computer system waiting list. Except for perfect matches of kidneys, which are shared nationally, there is a standardized point system for distributing organs which begins with the procurement agency's area.

UNOS guidelines specify three criteria for recipient selection: waiting time, quality of antigen match, and degree of pre-sensitization. First preference is given to use of the retrieved organ in the local area. Organs not used in the local area are then offered to the procurement region, and those not used there are placed in the national reservoir and are available to the country's nine other regions. Local and regional utilization is preferred because it reduces ischemia (anemia which limits the organ's viability) and improves transplantation outcome.

Transplantation of the human kidney has become an accepted therapy for kidney failure. It is the only procedure which can potentially cure patients with end-stage renal disease and afford them maximum potential for resumption of normal activity. In addition, quality of life in the successfully transplanted patient is vastly superior to that of the patient who must undergo lifelong dialysis with its attending disability.

The National Organ Transplant Act of 1984 provided for the establishment of a National Task Force on Organ Transplantation, composed of recognized experts in all aspects of organ procurement and transplantation. The Task Force advises the Secretary of Health and Human Services on implementation of the Act. The report of the Task Force, issued in 1986, provided a rationale and set of recommendations for the creation of a national transplantation network.

The 1984 Act also created the Organ Procurement and Transplantation Network (OPTN), administered by the Secretary of Health and Human Services by means of a contract with a private, nonprofit entity not engaged in any activity unrelated to organ procurement and transplantation. The OPTN established a national recipient registry system to match organs with recipients; to establish membership criteria for member organizations; to determine medical criteria for organ allocation; to adopt standards of quality for the acquisition, preservation and transportation of donated organs; and to collect, analyze and publish data regarding all transplant activities in the United States.

The United Network for Organ Sharing, headquartered in Richmond, Virginia, was awarded the contract to operate the OPTN. The contract calls for UNOS to maintain membership requirements for institutional members (transplant centers, independent organ procurement organizations and histocompatibility laboratories), and to monitor compliance with membership requirements. These requirements are now the consensus national standards for transplant centers, and are the basis for the current New Jersey planning regulation for solid organ transplantation (N.J.A.C. 8:33Q-1).

UNOS has also developed a computerized national registry which provides data on volume and outcomes of all types of transplant

procedures from every transplant center in the U.S. A recent UNOS "White Paper" summarizes the most recent data.

Kidney transplantation has the longest clinical experience of all transplant procedures, with the initial transplant performed in Boston in 1954. The first kidney transplant procedure in New Jersey was performed in 1968. Since that time, approximately 1200 kidney transplant procedures have been performed at the state's three kidney transplantation programs listed below. New Jersey residents also migrate to nearby out-of-state organ transplant centers, for the most part located in New York City, Philadelphia, and Pittsburgh.

Significant advances in kidney transplantation are now possible because of increased understanding and control of rejection, better systems for histocompatibility testing of donors and recipients, improved efficiency of distribution networks, increased public and professional awareness of the benefits of transplantation, and the discovery and use of cyclosporine. The morbidity and mortality associated with kidney transplantation have been so reduced that kidney transplantation is more advantageous, both in terms of quality of life and economics, than dialysis. One-year patient survival rates in the 1988 UNOS study were 92 percent for cadaveric donors and 97 percent for living related donors, while graft survival rates were 81 percent (cadaveric) and 91 percent (living related).

In New Jersey, kidney transplantation is currently provided at three acute care hospitals. These hospitals are:

1. Newark Beth Israel Medical Center in Newark (LAB III)
2. St. Barnabas Medical Center in Livingston (LAB III)
3. Our Lady of Lourdes Medical Center in Camden (LAB V)

d. Cost of End-Stage Renal Disease

ESRD is one of the few disease conditions where it is possible to evaluate the cost/benefit ratio of prevention initiatives. End-stage renal disease can represent high medical costs for the duration of a patient's life. Dialysis treatments are extremely expensive, largely because they are repetitive and lifelong. Costs include charges from facilities and major suppliers of home dialysis equipment and bills for physicians' and laboratory services. As a result, even if the very high cost of prevention initiatives is significantly underestimated, prevention is definitely more cost-effective than treatment.

According to the USRDS, in 1989 the estimated cost for chronic dialysis treatments for one patient for one year was $37,800. Moreover, this figure does not include a number of costs such as patient travel, outpatient drugs, and lost labor production in and out of the home. If this baseline figure is multiplied by the approximately 5500 New Jersey residents currently on chronic dialysis, one arrives at an estimated annual cost to the health care system of **$205 million.**

According to the U.S. Department of Human Services, hospital charges for a kidney transplant total $51,000 dollars, exclusive of physician's charges, anti-rejection medication costs, and other postoperative care.

It has been estimated by the Social Security Administration that more than 90 percent of the nation's population having renal disease qualify for coverage under the Medicare program, making it the principal payor for most renal services rendered. Provision for end-stage renal disease services is one of the most costly of the Medicare program. Originally, Congress anticipated spending $500 million on the ESRD Program. According to the U.S. Renal Data System's 1991 Annual Report, cost estimates for ESRD services total **$6 billion**. These cost are largely attributable to the increase in the volume of patients, as the cost of dialysis per patient has basically remained unchanged since the inception of the Medicare ESRD Program. Effective cost containment should address the movement of patients into less costly levels of care such as home dialysis and transplantation.

The New Jersey Health Services Program (Medicaid), administered by the Division of Medical Assistance and Health Services under the Department of Human Services, reimburses approved chronic renal dialysis services rendered to persons eligible under the Program and received from any one of the renal dialysis centers approved by the New Jersey Health Department to provide this service. Other sources of payment for treatment of chronic renal failure are private health insurance, the Veterans Administration, the Indian Health Service, or a Federal employee's health plan.

The Statute which created the Chronic Renal Disease Program and it's 11 member Advisory Committee in 1969, (NJSA 26:2-89), predated Medicare coverage of end-stage renal disease (ESRD). New Jersey was one of the first states to pass legislation for ESRD. At the time the bill was passed it was estimated that 59 patients were receiving hemodialysis at 8 area New Jersey Hospitals which represented 10% of patients in New Jersey who could benefit from dialysis. The State estimated that hemodialysis for patients averaged $10,000 for the first year and $5000 annually in subsequent years.

The original appropriation in 1969 was for $250,000. Emphasis was on the funding and support of home dialysis. With the enactment of section 2991 of P.L. 92-603 (Amendments to Social Security Act of 1972), Medicare coverage was extended to persons with ESRD effective July 1, 1973. Renal Program funds were then used to pay for the uncovered 20% co-insurance for outpatient charges, and the first three months of chronic dialysis treatments not covered by Medicare. The assistance was provided through Health Service Grants with most of the approved dialysis centers. The appropriation was tripled to $750,000.00 in FY 79; it was subsequently reduced to $520,000.00 in FY 85, and $438,000.00 in FY 86. The appropriation has remained at $438,000.00 through FY 92.

In 1992 there are approximately 5500 New Jersey residents receiving chronic dialysis treatments at 38 hospital-based and free-standing centers with an estimated annual cost per patient of $37,800.00. There are four additional chronic dialysis providers that have gained certificate of need approval but are not as yet operational. The annual cost per patient figures noted above include the 80% coverage by Medicare and the 20% co-pay by public or private insurance plans. It does not include patient travel costs, outpatient drugs, and prescription drugs not covered by the composite rate Medicare pays per dialysis treatment. It is estimated that 93% of ESRD patients are eligible for Medicare. The remainder are ineligible because they did not contribute to the social security system (e.g., self-employed).

State renal program funds are now used to provide financial assistance for medications and nutritional supplements for chronic dialysis patients, with a documented financial need, who are ineligible for any other assistance or insurance programs. The assistance is provided through Letters of Agreement with licensed chronic dialysis centers. Available funds for this initiative are $241,000.00; approximately 20% of the current caseload receive assistance. The balance of renal program funds, $197,000.00, is used to fund two ESRD Prevention Projects targeted at high risk hypertensives/diabetics; sixty-three percent of current ESRD cases in New Jersey are due to either hypertension or diabetes.

e. ESRD Resource Allocation

Initiation and/or expansion of any one or combination of ESRD services is addressed in the "Standards and General Criteria for the Planning and Certificaton of Need for Regional End Stage Renal Disease Services", N.J.A.C. 8:33F-1.1 et seq. This administrative rule was originally adopted on October 16, 1977 and has remained in effect, as amended, since that time. These rules have provided the framework for the consideration of new and expanded renal dialysis services on a regional basis, permitting the addition of renal dialysis stations based on demonstrated need and compliance with all other aspects of the rule. Among the recommendations included in this plan is the continued use of this rule with amendments in future renal dialysis resource allocation decisions.

The provision of state-of-the-art ESRD services at a hospital-based center or free-standing renal dialysis facility requires a total institutional commitment of adequate space, costly equipment, and highly qualified personnel; an ongoing training program for staff, patients, and families; and access to all necessary ancillary and alternative services. Of particular importance is the need for coordination with a regional kidney transplantation center.

Planning efforts in the field of renal care should properly be directed at matching ESRD resources with the increasing demands for ESRD services that the state has historically experienced and expects to continue to experience into the future.

V. UNMET HEALTH CARE NEEDS

a. ESRD Patient/Treatment Trends

ESRD statewide patient volume has steadily increased during the past decade. As the statewide ESRD patient levels summarized in Table 1 below indicate, the rate of increase has averaged 12 percent annually during the past nine years or a 108 percent increase since 1982. As the information that follows will indicate, however, there has been considerable investment in additional ESRD resources during this time that has provided reasonable access to these services throughout the state.

TABLE 1
New Jersey ESRD Patients
in Chronic Renal Therapy
1982-1992

Year	Total Number Of ESRD Patients	Annual Increase	Percent Increase Annual	Percent Increase Cumulative
1982	2,867	–	–	–
1983	3,221	354	12.3%	12.3%
1984	3,461	240	7.5%	20.7%
1985	3,733	272	7.9%	30.2%
1986	4,019	286	7.7%	40.2%
1987	4,289	270	6.7%	49.6%
1988	4,588	299	7.0%	60.0%
1989	4,969	391	8.3%	73.3%
1990	5,413	444	8.9%	88.8%
1991	5,963	550	10.2%	108.0%

SOURCE: Trans-Atlantic Renal Council

The most recent patient and treatment figures by LAB region, made available by the Trans-Atlantic Renal Council for calendar year 1991, are presented in Tables 2 and 3 below.

TABLE 2
NUMBER AND TYPE OF DIALYSIS PATIENTS IN
NEW JERSEY BY LAB REGION

	HOME DIALYSIS						IN UNIT*	
LAB	#IP	#CC	#CA	#HE	TOT	Self	Staff Assist	TOTAL
I	10	15	182	15	222	0	519	761
II	1	40	119	18	178	26	631	835
III	3	31	158	60	252	2	1191	1445
IV	2	70	93	2	167	0	524	691
V	1	33	148	14	196	0	321	517
VI	1	15	121	19	156	15	710	881
State	18	304	821	128	1171	63	3896	5130

* "In Unit" Dialysis is all hemodialysis.
IP = Intermittent Peritoneal Dialysis
CA = Continuous Ambulatory Peritoneal Dialysis
CC = Continuous Chronic Peritoneal Dialysis
HE = Hemodialysis

TABLE 3
1991
STATEWIDE DIALYSIS TREATMENTS (NUMBER AND TYPE) BY LAB REGION

	TOTAL HEMODIALYSIS (H)	TOTAL PERITONEAL (P)	TOTAL TRAINING (T)	%H	%P	%T
LAB I	67130	0	1303	98.1	0	1.9
LAB II	82369	0	784	99.1	0	.9
LAB III	157740	3624	811	97.3	2.2	.5
LAB IV	70823	0	718	99.0	0	1.0
LAB V	43493	862	652	97.3	1.4	1.9
LAB VI	95582	1547	918	97.6	1.6	.9
STATEWIDE	517137	6033	5186	97.9	1.1	1.0

Source: Annual ESRD Facility Survey, Trans-Atlantic Renal Council

As the data above indicate, hemodialysis treatment constitutes the vast majority of chronic ESRD treatment. Recent statewide utilization trends indicate even greater usage of hemodialysis stations as statewide peritoneal and training treatment levels decline. In spite of an 8.5 percent increase in total chronic renal station treatments in the past year (517,137 in 1991 compared to 487,140 in 1990), peritoneal treatments declined 23.7 percent during this period (7,902 peritoneal treatments in 1990 compared to 6,033 in 1991). Statewide training treatments also declined by 7.4 percent in 1991. Hemodialysis treatments, on the other hand, increased by 43,500 treatments in 1991 (9.2 percent increase from 1990). The overall statewide percentage of existing capacity of the state's existing and approved hemodialysis resources increased from 70.3 percent in 1990 to 76.9 percent in 1991 (based on 3 shifts per station per day).

TABLE 4
1990 vs. 1991
STATEWIDE DIALYSIS TREATMENTS (NUMBER AND TYPE)

	TOTAL HEMODIALYSIS (H)	TOTAL PERITONEAL (P)	TOTAL TRAINING (T)	PERCENT OF TOTAL %H	%P	%T
1990	473637	7902	5601	97.2	1.6	1.2
1991	517137	6033	5186	97.9	1.1	1.0

b. **ESRD Resources in New Jersey**

In 1990 there were 42 approved renal dialysis facilities serving New Jersey with a combined total of 751 dialysis stations (694 hemodialysis stations; 57 peritoneal dialysis stations). This total includes four approved chronic renal services that have not been implemented to date. All of the facilities that have implemented their certificate of need approval have final Federal approval as suppliers of ESRD services. Most of the facilities are also approved for participation in the New Jersey Health Services Program (Medicaid). Of the above, 28 are designated as hospital-sponsored renal dialysis centers or facilities and 14 are designated as free-standing or ambulatory care dialysis facilities. As discussed earlier in this chapter, three of the hospital-based renal dialysis centers are also renal transplantation centers.

Exhibit F provides an overview of existing, approved ESRD services in New Jersey by facility and LAB region as of December 1991. The number of Federally approved renal stations is presented, as well as the types of services provided and their date of authorization. The 1991 statewide data indicate that overall utilization of the state's 717 approved chronic hemodialysis stations was 76.9 percent of capacity (using the current standard of 3 shifts per station). Table 5 below provides a distribution of the state's renal dialysis stations by LAB region.

TABLE 5
1991 STATEWIDE OUTPATIENT ESRD UTILIZATION

ESRD Resource Location	HEMO* Stations	PD* Stations	HEMO† Util.	HEMO†† Util.	PD††† Util.
LAB I	92	0	78.0%	65.0%	-
LAB II	103	0	85.4%	71.2%	-
LAB III	224	16	75.2%	62.7%	72.6%
LAB IV	89	0	85.0%	70.9%	-
LAB V	67	2	69.4%	57.8%	138.1%
LAB VI	142	15	71.9%	59.9%	33.1%
STATE TOTAL	717	33	76.9%	64.1%	58.6%

*Includes both existing and CON approved but not yet implemented
†Based on 3 shifts (936 treatments per machine per year)
††Based on 3.2 shifts (1123 treatments per machine per year)
†††Based on 312 treatments per year

The Appendix to this Chapter includes a number of exhibits which provide a complete picture of renal dialysis resources in New Jersey. Exhibit C indicates those hospitals approved by the Department of Health to provide acute dialysis treatment only. Exhibit D presents those hospitals in the state that are providing acute ESRD services through an Inter-Hospital Outreach Program (IHOP) agreement. This information is included in order to allow for a complete overview of services currently available in New Jersey. Exhibits E and F provide 1990 and 1991 ESRD utilization data by HSA area (Exhibit E) and by LAB area (Exhibit F).

In terms of the relative availability of ESRD stations to the state's population is concerned, Table 6 provides a comparison of station to population ratios from both a physical location (within the boundaries of each LAB region) and patient origin perspective. From this standpoint, one can see that the relatively high ratio of station availability that exists in LAB region III is providing ESRD services to a wide geographic area that transcends several LAB regions.

TABLE 6
RELATIVE HEMODIALYSIS STATION AVAILABILITY
ESRD STATIONS PER 100,000
POPULATION BY LAB AREA

	Total ESRD Hemodialysis Stations	Total ESRD Stations Per 100,000 Pop.	Patient's Originating in Lab Area per Hemodialysis Machines Available
LAB I	92	8.4	8.3
LAB II	103	7.5	8.0
LAB III	224	17.6	6.4
LAB IV	89	6.6	7.8
LAB V	68	5.0	7.8
LAB VI	142	10.9	6.2
State Total	717	9.3	7.1

The types of ESRD facilities operating in New Jersey include:

1. Renal Transplantation Center—A hospital unit which is approved to furnish directly transplantation and other medical and surgical specialty services required for the care of the ESRD transplant patients, including inpatient dialysis furnished directly or under arrangement. A renal transplantation center may also be a renal dialysis center.
2. Renal Dialysis Center—A hospital unit which is approved to furnish the full spectrum of diagnostic, therapeutic (including inpatient dialysis, furnished directly or under arrangement), and rehabilitation services, except renal transplantation, required for the care of ESRD dialysis patients.
3. Renal Dialysis Facility—A unit which is approved to furnish dialysis service to ESRD patients.

c. Changes in ESRD Service Delivery

A number of relatively recent developments have occurred in the delivery of end-stage renal dialysis service delivery that have had an impact on the capacity of ESRD providers to meet increased patient demand. Technological changes in equipment have increased the cost of the equipment but improved patient throughput, resulting in an increase in the capacity of each upgraded renal station. These technological changes are summarized below, with a more detailed description of these treatment techniques contained in Exhibit G.

1. **High-Flux Hemodialysis (HF)**—This form of dialysis is accomplished with the use of highly permeable and highly biocompatible dialyzer membranes. Due to the efficiency and smoothness of the dialysis treatment with high-flux membranes, some patients may be able to be treated in a shorter period of time. The length of the treatment, however, does not make it a high-flux dialysis but rather the type of material comprising the dialyzer membrane. In order to assure that the amount of fluid removed from the patient is safe or comfortable for the patient, volumetric control dialysis machinery is needed when using high flux membranes.
2. **Rapid High-Efficiency Hemodialysis (RHED)**—High efficiency hemodialysis uses a dialyzer membrane that exceeds the index of urea clearance capability of 3 milliliters per minute per kilogram of body weight. It should be noted that not all high efficiency dialysis membranes are either biocompatible or high flux (See Exhibit G for a detailed explanation of biocompatible and high flux membranes).
3. **Short Time Hemodialysis**—Short time hemodialysis (<3-3.5 hours) is not synonymous with either high efficiency or high flux treatments. However, for some patients, with monitoring of dialysis adequacy through kinetic modeling, treatment times may be safely reduced with dialyzer membranes and equipment that produce more efficient waste product and fluid removal.
4. **Urea Kinetic Modeling**—An analytic technique that uses precise mathematics to quantitatively access whether one of the many aspects of the treatment prescription or the delivery of the prescription (e.g., dialyzer used, the average blood flow rate, the dialysate flow rate, the time in minutes of the treatment, the pre and post dialysis blood urea nitrogen levels) needs to be adjusted.

One of the end products of these technological innovations in dialysis treatment is a reduction in dialysis treatment time from the four hour industry standard of five years ago (three times weekly) to as low as two hours of treatment for high flux treatment. While not all dialysis patients are clinically suitable for hi-flux or rapid high-efficiency treatment, it is estimated that as much as 40 percent of conventional hemodialysis patients can benefit from some form of advanced treatment regimen. Informal surveys of existing New Jersey renal providers results in a range of from 0 to 70 percent of patients currently being dialyzed in this manner.

The impact of this increased patient throughout using HF or RHED treatment regimens is to increase renal station capacity significantly, with the exact capacity increase dependent on the number of renal stations capable of providing these treatment regimens and the percentage of patients at each facility ammenable to such treatment. Any analysis of potential need for future dialysis station need, however, must account for the increased capability of today's state-of-the-art dialysis equipment. As a preliminary step, the Department is proposing an interim technology factor as one of its alternative methodologies (Alternative II).

d. Impact of Deregulation of ESRD

A number of states have chosen to implement deregulation policies regarding ESRD services, because reimbursement is largely controlled by a single payer (Medicare) once a patient is on a chronic regimen for a period of three months. In theory, deregulation would improve access to care and encourage development of services in settings less

expensive than hospital-based programs. The fear inherent in such a deregulated environment is the absence of control over the expansion of services that would encourage the proliferation of redundant services that would be competing for a relatively small number of patients and professional staff. Hospital-based ESRD providers would be particularly vulnerable since these facilities provide dialysis services to all patients regardless of medical condition and ability to pay.

The impact of such deregulation, however, could be significant in terms of the quality of care provided. Table 7 below indicates the extent that renal dialysis programs have increased in selected states and the nation as a whole.

TABLE 7
GROWTH OF HHS
APPROVED ESRD FACILITIES
1982-1990

	1982	1990	PCT Increase
New Jersey	26	37	42.3%
New York	89	117	31.5%
Pennsylvania	74	98	32.4%
Maryland	24	49	104.2%
Virginia	39	69	76.9%
Florida	71	140	97.2%
Tennessee	26	61	134.6%
Texas	78	144	84.6%
Arizona	19	39	105.3%
California	140	232	65.7%
North Carolina	20	62	210.0%
United States	1207	2061	70.8%

Of particular interest in reviewing this information is the fact that states such as Maryland and Tennessee, which deregulated ESRD services in the past, have experienced substantial growth in new ESRD programs in the past decade. While this information is insufficient to make a determination regarding the provision of ESRD services as a result of the addition of large numbers of programs in any given state, it does raise concerns regarding the likelihood that deregulation would not contribute to the orderly development of ESRD services in the future. The major concern over possible ESRD service proliferation is the fact that larger ESRD centers and facilities have been found to be associated with lower mortality and morbidity.[2] A proliferation of small ESRD services may very well reduce the volume of patients at any given ESRD facility and possibly diminish the quality of treatment provided overall.

e. Revised ESRD Need Methodology

New Jersey's population according to the 1990 census was 7,701,333. Since the state's population is estimated to continue to grow and age in the foreseeable future, increased incidence of ESRD can be expected to continue as well. In order to determine if the existing ESRD centers and facilities can accommodate the corresponding increase in patient load, a renal dialysis need methodology was developed in the late 1970's and has been included in several iterations of the New Jersey State Health Plan over the years. This methodological approach has been used during the past two decades, without significant change, to anticipate ESRD station need and to assist in certificate of need decision-making for the allocation of ESRD resources.

In recent years this methodological approach has been unable to accurately match existing ESRD capacity with future need, as the application of the methodology has continually indicated need within regional service areas where existing providers were operating well below optimal utilization levels.

In an effort to provide a more relevant methodological approach, Department staff have reviewed the state's existing ESRD station methodology and have developed a need determination approach that relies more heavily on actual observed ESRD utilization wherever possible. The alternative methodology included in this preliminary draft differs from the previous methodology in two ways. First, the methodology substitutes actual observed treatments per patient rather than assuming that all ESRD patients will be treated for the maximum possible number of treatments (156) during the year.

Table 8 below indicates the results of an analysis of statewide ESRD patient and treatment data from 1988-1991. The data reflect relatively stable statewide treatment per patient ratios over time. The ratios are also well below the 156 treatment average that has been used by the Department over the years to estimate future ESRD station need. By substituting actual treatment experience, the methodology can be expected to more accurately predict future need for these services.

TABLE 8
ESRD Outpatient Hemodialysis
Statewide Average Number of
Treatments per Patient
1988-1991

	Number of Patients	Number of Treatments	Ratio of Treatments/ Patients
1988	3,047	407,400	133.7
1989	3,270	434,507	132.9
1990	3,647	473,637	129.9
1991	3,896	517,137	132.7

The second modification to the previous methodology adds a factor (20 percent) that allows for the increased efficiency and patient throughout of "hi-flux" and RHED treatment capability. Since the previous methodology was established well before the development of this type of treatment, the availability and use of this more efficient treatment alternative has never been factored into the state's need calculations.

In examining future need, the projected number of patients expected to seek renal dialysis services is to be calculated by examining the past three years of actual New Jersey ESRD patient utilization as reported by the Trans-Atlantic Renal Council. As in past methodological approaches to renal station need in New Jersey, a constant growth model is used to estimate future need for ESRD patients. ESRD patient estimates are to be made three years into the future to allow adequate time for implementation of the additional resources. As in the past, need is to be calculated by local planning regions—in this case local advisory board (LAB) regions. The following formula is proposed:

A = Average annual number of chronic renal dialysis patients by LAB region over the preceeding three (3) calendar years (using Trans-Atlantic Renal Council data).

H = Average annual number of chronic renal dialysis patients on home dialysis over the preceeding 3 calendar years (using Trans-Atlantic Renal Council data).

Nh = Number of existing and state-approved **chronic** hemodialysis stations in all service categories (i.e., back-up chronic inpatient, home and self-care training, and isolation stations) by LAB region.

Np = Number of existing and state-approved **chronic** peritoneal dialysis stations in all service categories (i.e., back-up chronic inpatient, home and self-care training, and isolation stations) by LAB region.

HSDC = Hemo Dialysis Station Capacity by LAB region.*

PSDC = Peritoneal Station Capacity by LAB region.*

RDSC = Regional Dialysis Station Capacity by LAB region.*

RDSN = Regional Dialysis Station Need by LAB region.*

RDPC = Regional Dialysis Patient Capacity by LAB region.

AODP = Annual Observed Dialysis per Patient by LAB region.

PRDT = Projected Renal Dialysis Treatments by LAB region.

RDTC = Regional Dialysis Treatment Capacity at 85% occupancy by LAB.

RDTC = (HSDC + PSDC) (.85)

RHDP = Annual Percentage of Home Dialysis Patients by LAB (as reported by the Trans-Atlantic Renal Council in its most recent annual report).

RSDC = Nh × 998
(Hemodialysis station capacity is equal to the number of approved hemodialysis stations multipled by 998 (3.2 shifts × 6 days per week × 52 weeks per year)).

PSDC = Np × 312
(Peritoneal Station Capacity is equal to the number of approved peritoneal dialysis stations multipled by 312 (1 peritoneal shift × 6 days per week × 52 weeks per year)).

PRDP = Projected number of chronic renal dialysis patients projected for the year you are calculating 3 years in advanced based on average statewide increase over the past three calendar years (using Trans-Atlantic Renal Council Data) by LAB region.

Using the above variables, the following formulas are then used to derive future chronic renal station need within each local advisory board region:

$$(1) \quad RDPC = \frac{(HSDC + PSDC)\ (.85)}{AODP}$$

$$(2) \quad PRDT = (PRDP) - (RHDP) \times (AODP)$$

$$(3) \quad RDSN = \frac{PRDT - RDTC}{(998) \times (.85)}$$

The proposed methodology would account for the fact that high flux and high efficiency treatment has reduced treatment times and permitted 4 shifts for at least 20 percent of the state's hemodialysis stations (based on informal communications and surveys of state dialysis providers). In order to develop a more precise need methodology in the future, however, the Department, the Trans-Atlantic Renal Council, renal providers, and local advisory boards must formalize the entire inventory of conventional and high efficiency equipment that comprise the state's chronic renal dialysis inventory and establish the full extent that this equipment is being used to provide more highly efficient services. Armed with this more detailed data and the extent of subsequent increases in regional and statewide ESRD utilization, future refinements to the proposed need methodology can be considered.

NOTE: For purposes of this methodology and this draft chapter of the State Health Plan, "station" is defined as a certificate of need approved machine or single area utilized for the performance of either chronic hemodialysis or chronic peritoneal dialysis.

f. ESRD Need Methodology Waiver Criteria

The Department is also proposing to continue the historic practice of including waiver provisions to the need methodology to assure that there is appropriate access to ESRD services for all patients in need of these services. The waiver provisions are as follows:

A. Existing ESRD centers and facilities may be considered for a waiver from the station need methodology through the Certificate of Need process under the following conditions:
   1. Data from the Trans-Atlantic Renal Council, indicates that an existing ESRD center or facility, applying for additional stations has operated existing certificate of need approved stations at a 90% utilization rate (based on a minimum of 3 shifts per day if high efficiency equipment is unavailable; 3.2 shifts if available) for the modality of treatment for which additional stations are being requested (hemo and/or peritoneal dialysis; total outpatient treatments) for the last year in which official data supplied by Trans-Atlantic Renal Council is available.

      This exemption is intended to accommodate providers who need to expand their stations on site because of heavy caseloads.
   2. The application is limited to the number of stations that would reduce utilization to 80% at the ESRD center or facility. Calculation of utilization must be based on three and two-tenths (3.2) shifts/day for hemodialysis stations and one (1) shift/day for peritoneal dialysis stations. Applicants must differentiate station requests between hemodialysis and peritoneal dialysis.
   3. For those providers approved for home dialysis, the number of patients on home dialysis should be at or above the latest statewide average for home dialysis as reported by the Trans-Atlantic Renal Council. In addition, each applicant must document continued annual home training activity.
   4. The number of stations approved under this waiver will be counted as existing resources in the determination of LAB station need. This waiver request will be approved only for applicants with existing certificate of need approved ESRD units.
   5. All other applicable provisions of this plan and the ESRD Rule (N.J.A.C. 8:33F) are met.
   6. The waiver request must be included as part of the certificate of need application.
      a. The station need methodology described in this plan is inappropriate because of circumstances unique to a given population or area.
      b. The utilization of existing ESRD provider resources in the region will not be negatively impacted.
      c. Systems costs will not be increased in excess of costs for current providers.
      d. Access benefits will be achieved which would not be otherwise realized for populations experiencing hardship.
      e. Referral agreements are available from existing area hospitals.
      f. All other applicable provisions of this plan and the ESRD Rule (N.J.A.C. 8:33F) are met.
      g. Utilization of existing providers in terms of number of shifts and the effect on the quality of services indicates an inability to provide the appropriate access to ESRD services.

Proposed Need Methodology

E.S.R.D. Need Calculation Worksheet

1. The number of Hemodialysis stations in the **LAB** (state total) × (998 the total number of treatments that can be administered by (1) one station 100% per (1) year utilization). (1)_____
2. The total number of peritoneal stations in the **LAB** (state total) × 312 (the total number of treatments that can be administered by (1) station 100% utilization for (1) year). (2)_____
3. Add line (1) and line (2) (3)_____
4. Multiply × .85 for 85% utilization (average) × number on line (3) (4)_____
5. Divide line (4) by the statewide number of total treatments per patient for the previous calendar year as supplied by the Trans-Atlantic Renal Council to the DOH. (5)_____
6. Total number of patients projected for year you are calculating using straight line projection based on last 3 years of Trans-Atlantic Renal Council data and projecting 3 years into the future. (6)_____
7. Multiply by percentage of home based Hemodialysis and Peritoneal Dialysis (Use Renal Network figures only) for number of home based patients being served in the LAB area. (7)_____
8. Subtract the number on line (7) from line (6) for number of patients to be served in the LAB in outpatient facilities. (8)_____
9. Multiply the number on line (8) the statewide number of total treatments per patient for the previous calendar year as supplied by the Trans-Atlantic Renal Council to the DOH (total number of actual treatments) for the number of projected treatments needed in the LAB. (9)_____
10. Subtract line (4) from line (9) for difference in number of patients currently using ESRD and projected number of patients. (10)_____
11. Divide by 848.6 (Number of treatments at 85% utilization of (1) station for the total number of stations needed. (11)_____
12. Round off decimals .5 or higher = 1 (12)_____

RESOURCES

1. Philip J. Held, *et al.*, "Mortality and Duration of Hemodialysis Treatment", *Journal of the American Medical Association,* February 20, 1991, Vol. 265, No. 7, pp. 871-875.
2. Philip J. Held, *et al.*, "Survival Analysis of Patients Undergoing Dialysis", *Journal of the American Medical Association,* February 6, 1987, Vol. 257, No. 5, pp. 645-650.
3. Trans-Atlantic Renal Council, New Jersey Renal Dialysis Facility Utilization—1991.
4. Institute of Medicine, *Kidney Failure and the Federal Government,* National Academy Press, Washington, DC, 1991.
5. "Diabetic Nephropathy," The Prevention and Treatment of Complications of Diabetes: A Guide for Primary Care Practitioners, U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, (1990), pp. 6-1 to 6-5.
6. U.S. Renal Data System, *USRDS 1991 Annual Data Report.* The National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, August 1991.

EXHIBIT A

1991 NEW JERSEY
CHRONIC DIALYSIS PATIENTS BY COUNTY OF ORIGIN & LAB REGION
ACCORDING TO PRIMARY DIAGNOSIS

	1	2	3	4	5	All Other	Total Patients
LAB I							
Morris	40	52	60	17	2	28	199
Passaic	139	79	103	10	31	41	403
Sussex	10	15	14	2	0	6	47
Warren	5	8	3	0	1	2	19
TOTAL	199	154	180	29	34	77	668
LAB II							
Bergen	108	123	116	28	23	75	473
Hudson	123	101	124	15	11	35	409
TOTAL	231	224	240	43	34	110	882
LAB III							
Essex	311	253	251	27	20	172	1034
Union	112	105	110	24	5	41	397
TOTAL	423	358	361	51	25	213	1431
LAB IV							
Hunterdon	8	6	11	1	0	8	34
Mercer	91	51	66	8	9	23	248
Middlesex	62	90	121	17	10	45	345
Somerset	13	37	35	3	2	21	111
TOTAL	174	184	233	29	21	97	738
LAB V							
Burlington	44	32	51	4	7	16	154
Camden	73	34	63	7	2	23	202
Cumberland	36	16	23	6	1	6	88
Gloucester	28	15	24	2	0	6	75
Salem	8	4	4	0	1	1	18
TOTAL	189	101	165	19	11	52	537
LAB VI							
Atlantic	68	60	45	11	3	18	205
Cape May	18	14	9	0	0	5	46
Monmouth	88	87	129	25	12	55	396
Ocean	75	61	62	12	2	25	237
TOTAL	249	222	245	48	17	103	884
Statewide	1476	1257	1438	220	151	657	5199

KEY 1. = Hypertensive Disease
2. = Glomerulonephritis
3, = Diabetic Nephropathy
4. = Polycystic Kidney Disease
5. = Unknown

For details on inclusions in data refer to Pg. 41 Trans-Atlantic Renal Council Report on New Jersey patients—2/27/92.

For ICD-9-CM codes included *ibid.*

EXHIBIT B

PROPORTION OF DIALYSIS PATIENTS BY RACE COMPARED TO POPULATION COMPOSITION

LAB	Race	% Population	% Dialysis Patients	# Dialysis Patients
LAB I				
Pop. 1,096,963	White	84.7%	64%	488
	Black	7.4%	18%	139
	Other	7.9%	18%	134
LAB II				
Pop.* 1,378,119	White	79.7%	64%	531+
	Black	8.7%	28%	227
	Other	11.6%	8%	67
LAB III				
Pop. 1,271,895	White	60.2%	37%	527
	Black	32.2%	58%	831
	Other	7.6%	5%	75
LAB IV				
Pop. 1,345,659	White	82.5%	63%	436
	Black	9.8%	31%	218
	Other	7.7%	6%	38
LAB V				
Pop. 1,331,319	White	80.5%	55%	285
	Black	14.3%	41%	215
	Other	5.2%	4%	20
LAB VI				
Pop. 1,305,743	White	85.5%	65%	580
	Black	7.9%	31%	270
	Other	3.6%	3%	31

*Population data based on 1990 census.
+Dialysis data based on 1991 Trans-Atlantic Renal Council data/some discrepancy noted in reporting race/vs. total dialysis patient count.

EXHIBIT C

State Approved Acute Dialysis Services

LAB II
Pascack Valley Hospital, Westwood
Valley Hospital, Ridgewood

LAB III
Clara Maass, Belleville
Mountainside Hospital, Montclair
Christ Hospital, Jersey City
Franciscan Health System
St. Francis Community Health Center, Jersey City

LAB IV
Hunterdon Medical Center, Flemington
St. Francis Medical Center, Trenton

LAB V
Kennedy Memorial Hospitals/University Medical Center, Stratford
Cooper Hospital/University Medical Center, Camden

LAB VI
Medical Center of Ocean County
Brick Hospital Division, Bricktown
Point Pleasant Division, Pt. Pleasant

SOURCE: New Jersey Department of Health
Health Systems Review

EXHIBIT D

State Approved Acute Dialysis Programs via InterHospital Outreach Program (IHOP) Arrangement

Community Memorial Hospital, Toms River
Kimball Medical Center, Lakewood
Deborah Heart and Lung Center
So. Ocean County Hospital, Manahawkin

Jersey Shore Medical Center, Neptune
Freehold Area Hospital

Raritan Bay Health Services Corporation, Perth Amboy
Rahway Hospital
Somerset Medical Center, Somerville
United Hospitals Medical Center, Newark
J.F. Kennedy Medical Center, Edison
Hospital Center at Orange
So. Amboy Memorial Hospital

Morristown Memorial Hospital
Dover General Hospital and Medical Center
St. Clare's/Riverside

St. Barnabas Medical Center, Livingston
Columbus Hospital, Newark
Union Memorial Hospital, Union
Irvington General Hospital

Robert Wood Johnson—University Hospital, New Brunswick
St. Peter's Medical Center, New Brunswick

SOURCE: New Jersey Department of Health
Health Systems Review

EXHIBIT E
1990 RENAL DIALYSIS UTILIZATION

Facility	HEMO* Stations	PD* Stations	ISO* Stations	HEMO Utili.	PD Utili.
HSA I					
Englewood Hospital	6	0	0	84.9%	—
Hackensack Hospital	9	0	0	86.8%	—
Holy Name Hospital	41	0	2	63.9%	—
St. Joseph's Hospital	51	0	4	72.7%	—
TOTAL—4	107	0	6	71.1%	—
HSA II					
BMA-East Orange	14	0	0	76.4%	—
BMA-Hillside	32	0	0	67.5%	—
BMA-Irvington	20	0	0	80.4%	—
BMA-Pine Brook	20	0	0	72.2%	—
East Orange General	10	7	4	73.1%	—
Elizabeth General MC	12	7	1	113.9%	55.0%
Morristown Memorial**	9	0	0	79.4%	—
Dialysis Center of NW New Jersey	12	0	0	—	—
Muhlenberg Regional MC	19	3	3	67.0%	—
NJ Dialysis Center	8	0	0	—	—
Newark Beth Israel MC	23	7	2	73.2%	64.5%
Parkside Dialysis Ctr.	18	0	0	101.2%	—
Overlook Hospital	12	0	0	58.9%	—
St. Barnabas MC***	12	8	2	43.1%	0%
St. Barnabas Satellite	14	0	0	—	—
St. Michael's MC	10	1	0	83.7%	150.0%
University Hospital	6	3	0	98.1%	63.9%
TOTAL—17	251	36	12	73.4%	51.5%
HSA III					
BMA-Jersey City	30	0	2	82.4%	—
Bayonne Hospital	6	0	0	32.2%	—
Jersey City Med. Ctr.	11	0	1	57.8%	—
TOTAL—3	47	0	3	70.5%	—
HSA IV					
BMA-Trenton	20	0	0	101.5%	—
Bayshore	10	0	0	39.5%	—
Community Memorial	13	2	1	83.5%	41.0%
Center State Dialysis	9	0	0	97.3%	—
Garden State Dialysis	12	0	0	64.8%	—
Helene Fuld MC	10	2	3	65.0%	0%
Jersey Shore MC	27	9	1	67.2%	89.4%
Monmouth Medical Ctr.	21	4	1	94.9%	12.7%
R.W. Johnson MC	8	0	1	71.2%	—
Raritan Bay MC	29	0	1	85.3%	—
Riverview MC	6	0	0	01.5%****	—
University Dialysis	10	0	0	—	—
TOTAL—12	175	17	8	73.3%	52.7%
HSA V					
Atlantic City MC	10	0	0	32.2%	—
Bridgeton Hospital	9	0	0	85.2%	—
Burlington County Dialysis Center	14	0	0	44.0%	—
Courthouse Dialysis	6	0	0	—	—
Kennedy Memorial Hosp.	8	0	0	—	—
Our Lady of Lourdes MC	30	1	0	95.4%	—
Shore Memorial Hosp.	33	1	2	63.1%	63.8%
TOTAL—7	116	2	2		
STATE TOTAL—43	696	55	31	70.3%	53.5%

*Includes both existing and CON approved Stations
**Includes Dialysis Center of North West N.J. in total
***Includes Satellite in total
****Opened December, 1990

Source: Trans-Atlantic Renal Network #3 and Certificate of Need files and approval letters

EXHIBIT F
1991 STATEWIDE OUTPATIENT ESRD UTILIZATION

Facility	HEMO* Stations	PD* Stations	PERCENT OF STATION CAPACITY HEMO+ Utili.	HEMO++ Utili.	PD+++ Utili.
LAB I					
BMA-Pine Brook	20	0	69.8%	58.1%	—
Morristown Memorial Hospital**	21	0	85.0%	70.8%	—
St. Joseph's Med. Ctr.	51	0	78.3%	65.2%	—
TOTAL	92	0	78.0%	65.0%	—
LAB II					
Bayonne Hospital	6	0	96.6%	80.6%	—
BMA-Jersey City	30	0	94.9%	79.1%	—
Englewood Hospital	6	0	101.3%	84.5%	—
Hackensack Hospital	9	0	90.7%	75.6%	—
Holy Name Hospital	41	0	77.4%	64.5%	—
Jersey City Med. Ctr.	11	0	68.6%	58.5%	—
TOTAL	103	0	85.4%	71.2%	—
LAB III					
BMA-East Orange	14	0	87.9%	73.3%	—
BMA-Hillside	32	0	73.0%	60.8%	—
BMA-Irvington	20	0	88.2%	73.5%	—
East Orange Gen'l Hosp.	17	3	57.2%	47.7%	83.8%
Elizabeth General MC	24	1	76.3%	63.6%	23.7%
Muhlenberg Regional MC	22	0	70.4%	58.6%	—
Newark Beth Israel MC	23	7	70.6%	58.9%	65.0%
Overlook Hospital	12	0	54.4%	45.4%	—
Parkside Dialysis Ctr.	18	0	105.2%	87.7%	—
St. Barnabas MC***	26	0	59.9%	50.0%	—
St. Michaels Med. Ctr.	10	2	74.2%	61.8%	87.8%
University Hospital	6	3	117.0%	97.5%	85.3%
TOTAL	224	16	75.2%	62.7%	72.6%
LAB IV					
BMA-Trenton	20	0	103.5%	86.3%	—
Garden State Dialysis	12	0	90.0%	75.0%	—
Helene Fuld MC	10	0	106.8%	89.0%	—
Raritan Bay Med. Ctr.	29	0	90.6%	75.5%	—
RWJ Medical Center	8	0	89.9%	74.9%	—
University Dialysis	10	0	0%	0%	—
TOTAL	89	0	85.0%	70.9%	—
LAB V					
Bridgeton Hospital	9	1	91.7%	76.4%	135.6%
Burlington County Dialysis Center	14	0	65.2%	54.4%	—
Kennedy Memorial***	8	0	0	0	—
Our Lady of Lourdes MC	30	1	96.9%	80.8%	140.7%
Cooper-Salem City***	6	0	0	0	—
TOTAL	67	2	69.4%	57.8%	138.1%
LAB VI					
Atlantic City MC	10	0	75.1%	62.6%	—
Bayshore Dialysis Ctr.	11	0	64.8%	54.0%	—
Center State Dialysis	9	0	92.3%	76.9%	—
Community Med. Ctr.	13	2	95.5%	79.6%	09.6%
Courthouse Dialysis***	6	0	—	—	—
Jersey Shore Med. Ctr.	27	9	82.1%	68.5%	49.9%
Kessler Hospital***	6	0	—	—	—
Monmouth Medical Ctr.	21	4	94.9%	79.1%	07.0%
Riverview Medical Ctr.	6	0	37.7%	31.4%	—
Shore Memorial MC	33	0	67.8%	56.5%	—
TOTAL	142	15	71.9%	59.9%	33.1%
STATE TOTAL	717	33	76.9%	64.1%	58.6%

*Includes both existing and CON approved but not yet implemented
**Combined Morristown Memorial Hospital and Northwest NJ Renal Dialysis Center
***Approved, but not yet operational
+Based on 3 shifts (936 treatments per machine per year)
++Based on 3.2 shifts (1123 treatments per machine per year)
+++Based on 312 treatments per year

EXHIBIT G

ESRD High Technology Services

The following is a more detailed explanation of technological developments that have been introduced in recent years in order to increase the effectiveness and efficiency or ESRD services. These technological changes include:

1. **High-Flux Hemodialysis (HF)**—This form of dialysis is accomplished with the use of highly permeable and highly biocompatible dialyzer membranes with intrinsically high clearance characteristics. To maximize the value of these membranes during a dialysis treatment, higher blood flow rates (>300 ml/minute) and higher dialysate flow rates (>500 ml/minute) are often employed if the patient's circulatory access can provide the blood flow.

   Due to the efficiency and smoothness of the dialysis treatment with high-flux membranes, some patients may be able to achieve the same or better clearances of waste products and fluid removal in a shorter period of time. Again, the length of the treatment does not make it a high-flux dialysis but rather the type of material comprising the dialyzer membrane. Examples of membranes which are "high flux" are polysulfone and polyacrylonitrile.

   These open or highly permeable membranes must be used with bicarbonate dialysate not acetate, since there is a significant increase in the incidence of side effects and complications during hemodialysis for which acetate is used as the buffer source when the dialyzer urea clearance exceeds 3 ml/minute per kilogram of body weight.

   Volumetric control dialysis machinery is needed when using high flux membranes so that more fluid is not removed then would be safe or comfortable for the patient. These membranes are highly permeable and ultrafiltration of fluid from the patient's bloodstream can be considerable if not controlled.

   One of the stated benefits of high flux dialysis is that "relative to dialysis with conventional cellulosic membranes, high-flux membranes have the potential to remove larger amounts of beta 2 microglobulin which has been associated with osteoarthropathy and carpal tunnel syndrome in long-term dialysis patients."

   The term biocompatability when used in relation to hemodialysis membranes refers to the interactions between the ESRD patient's blood and the artificial materials comprising the dialyzer. The interactions may produce symptoms that the patient can feel at the early part of the dialysis treatment and/or may produce chemical reactions that could have negative effects on the patient's health over time. If the interactions are either mild or well tolerated, the membrane is said to be biocompatible. High-flux membranes are different in chemical structure and surface charges from cellulose-based membranes and do not have polysaccharides. These differences are believed to be important determinates in biocompatibility.
2. **Rapid High-Efficiency Hemodialysis (RHED)**—High efficiency hemodialysis uses a dialyzer membrane that exceeds the index of urea clearance capability of 3 milliliters per minute per kilogram of body weight. Note: Not all high efficiency dialysis membranes are either biocompatible or high flux.
3. **Short Time Hemodialysis**—Short time hemodialysis (<3-3.5 hours) is not synonymous with either high efficiency or high flux treatments. However, for some patients, with monitoring of dialysis adequacy through kinetic modeling, treatment times may be safely reduced with dialyzer membranes and equipment that produce more efficient waste product and fluid removal. Inability to achieve higher extracorporeal blood flows (>300 ml/min) due to recirculation in the access and those for whom the arterial line collapses with higher blood flow rates may make short time dialysis impractical. Nevertheless, patients could still potentially benefit from being treated on either a high-efficiency or high-flux dialyzer membrane.
4. **Urea Kinetic Modeling**—An analytic technique that uses precise mathematics to quantitatively assess each parameter in a modeled system. When applied to the clinical management of a hemodialysis patient, one can measure the amount of low molecular weight dialyzer clearance prescribed and delivered to an individual patient. When the measurements are known, one can determine whether one of the many aspects of the treatment prescription or the delivery of the prescription needs to be adjusted.

   The result of kinetic modeling of a dialysis treatment is a number such as Kt/V = 1.0 where K = the clearance characteristics of the dialyzer, t = the time or duration of the dialysis session in minutes, and V = the volume of distribution of the substance being modeled (such as urea) in the ESRD patient's body. One study has indicated that for conventional dialyzers (cellulosic membranes) a Kt/V > 0.8 was predictive of increased risk of both morbidity and mortality. In common usage, a Kt/V for a conventional dialysis is said to be "adequate" if it is at least 1.0. However, there is still much to be learned about application of kinetic modeling as a tool for evaluation of adequate dialysis in high-efficiency and high-flux membrane dialysis. Some suggest that a slightly higher number than 1.0 would be needed to be considered "adequate" but this is still under discussion in the nephrology community.

   The Kt/V number is derived after inputting data into a computer mathematical model. The data elements that are inputed may include the dialyzer used and its performance characteristics, the average blood flow rate, the dialysate flow rate, the time in minutes of the treatment, the pre and post dialysis blood urea nitrogen levels, as well as other treatment variables.

DRAFT STATE HEALTH PLAN
MENTAL HEALTH CHAPTER
EXECUTIVE SUMMARY

Over the course of a lifetime, one in three Americans will experience a psychiatric disorder and only one in five of them will receive treatment. Untreated disorders contribute to high rates of suicide, crime, homelessness, addiction and a multitude of other health and welfare problems.

Although some mental illnesses appear to have genetic and biochemical bases, other forms of mental illness can be decreased by reducing environmental stressors, such as racism, sexism, homophobia, poverty and powerlessness. Some human psychopathology can be prevented by improving environments and optimizing learning experiences. Model primary prevention programs are reviewed.

Recognizing the impossibility of providing treatment to all those in need, several suggestions are made:

1. Increase awareness and prevention programs with a goal of decreasing prevalence.
2. Increase intervention and screening techniques to allow for service to begin early. Short-term psychotherapy can be effective early in the onset of symptoms, especially during primary care contacts.
3. Focus government services on the most severely disabled one to one and one half percent and stress in-home or near-home located services.
4. Use new psychopharmacological agents to restore functioning to who need it, including psychotherapy to enhance successful therapeutic outcomes.
5. Increase medical health aspects of mental health training of psychiatrists, and increase the role of allied mental health professionals including increasing specialty training.
6. Improve mental health care in primary health care settings and primary health care in mental health settings and strengthen interagency referral arrangements to promote coordination of care to the whole person.
7. Support and encourage family, consumer, and advocacy participation and leadership in service delivery and planning, including support to families who care for mentally ill persons at home.
8. Ensure access to health and mental health care for all persons regardless of ethnicity, race, gender, age, sexual orientation, disability status and ability to pay.

The chapter contains the mental illness prevalence data by region, demographic descriptive information and a discussion of the various diagnostic categories, including admissions by diagnosis in local, county, and state hospitals. Suicide as related to psychiatric illness is discussed and prevention programs are described.

The complex, interconnected regulatory responsibilities of the Department of Health and the Department of Human Services, with regard to mental health services is explained, including a description of services. The trend away from inpatient care in favor of outpatient care and community based residences is demonstrated. The cost of mental illness and expenditures for it are provided.

The Department of Health will authorize development of additional mental health services in all areas where need still exists using former planning regulations. Only intermediate care will continue to experience

a moratorium due to the need to clarify bed categories and examine declining occupancy reports.

An agenda of joint activities is set forth for accomplishment by the two departments to achieve the Year 2000 targets and the purposes of the chapter. An interdepartmental prevention committee will promote prevention programs and a set of interagency training and coordinating activities will be undertaken.

MENTAL HEALTH

INTRODUCTION

Mental health means not merely the absence of mental disorders, but also the ability of an individual to negotiate the daily challenges and social interactions of life without experiencing cognitive, emotional, or behavioral dysfunction (**Healthy People 2000**). Optimal mental health enables one to take joy in relationships, work, and play and contribute to the ennoblement of life.

Mental illness, or mental disorder, assumes many forms from minor, rather innocuous symptoms causing the patient little or no distress, to serious, life-threatening events. In many respects, the symptoms of mental illness are exaggerated thoughts, behaviors, and feelings that are normally present in everyone. Suspicion becomes paranoia; sadness becomes depression; happiness, mania; meticulousness, obsession; illusion, hallucination.

While the precise causes are still unknown, some of the mysteries about the origins of mental illness are being unravelled. Mental illness is affected by heredity, imbalances in brain chemistry, and environmental situations and stressors, including early life experiences. Traumatic events, such as the death of one's child or the loss of a job can trigger mental disorders. Societal ills, such as violence, sexual abuse, and poverty contribute to emotional problems.

The concept of a preventive approach to mental illness has not yet achieved full credibility and visibility in American society. Like physical disorders, first line prevention begins with a society in which basic needs for shelter, nutrition, and safety are met. Achievement of most optimal mental health is enhanced by nurturing relationships and a rich exposure to growth-enhancing experiences.

It is, however, widely accepted that a portion of the population will develop mental disorders, no matter how favorable their life circumstances. Most mental illnesses can be accurately diagnosed and effectively treated. Even persons with the most serious and persistent mental disorders can modify behaviors, improve functioning, and learn to manage their symptoms. Enhancing and stabilizing living conditions can help to control the disabling effects of serious mental disorders. Social supports can be effective in decreasing symptomatic behavior and increasing coping skills.

Mental illness carries a stigma all by itself. One study showed that reluctance to seek care was a function of attitudes about mental illness, not finances, time, or access. But when a mentally ill person is also elderly, disabled, addicted, has AIDS or HIV infection, is homeless, a child, a minority or in trouble with the law, problems can be overwhelming. The Department of Health and the Department of Human Services are committed to helping overcome special obstacles these persons experience, increasing outreach, and developing programs which are sensitive to special needs.

Historically, governmental programs have concentrated on mental illness problems which cause the greatest degree of social, emotional, and physical incapacitation. At the present time, the cornerstone for the development of comprehensive mental health services in New Jersey is community-based care, especially for persons with serious mental illness and their loved ones.

The Department of Health and the Department of Human Services are committed to improving the lives of mentally ill persons by promoting an accessible, comprehensive continuum of services. These services are highlighted by community-based care resulting from collaborative efforts among agencies, professionals, providers, consumers, families, and mental health advocates.

MENTAL HEALTH OBJECTIVES FOR THE YEAR 2000

1. Reduce suicides to fewer than 6.5 per 100,000 people for the total population, 7.5 for youth age 15-24, and 39.2 for elderly white men:

	1988	2000
Total (age adjusted)	7.2	6.5
Youth aged 15-24	9.3	7.5
White men aged 65+		39.2

Source: Center for Health Statistics, Department of Health

2. Maintain the 21 county Screening Centers and increase the number of Short-Term Care Facilities from eight to 21, thereby implementing the Screening and Commitment Law (P.L. 1987, Ch. 116).

Screening Centers	21	21
Short Term Care Facilities	8	21

Source: Division of Mental Health and Hospitals, the Department of Human Services

3. Increase to 90% the proportion of adults with serious mental illness (SMI) enrolled in community mental health programs who receive adequate primary health and dental care. (Baseline data not available.)
4. In 90% of publicly funded clinics providing primary health care, conduct mental health screening, referral, and follow-up. (Baseline data not available.)
5. Increase by 25% the number of seriously mentally ill people age 18 and older who receive treatment from publicly funded community programs.

Community Programs	45,062	56,250

Source: Division of Mental Health and Hospitals, the Department of Human Services

PURPOSES

The purpose of the Mental Health Chapter is to outline a plan that will decrease morbidity and mortality due to mental illness and emotional disorders by:

1. Preventing the onset of emotional disorders and reducing the extent of disability due to mental illness;
2. Screening and referral for mental health evaluation for at risk persons during primary health care contacts;
3. Providing referral for primary health care services, including specialty or sub-specialty care for co-existing medical and surgical problems, for persons with mental illness;
4. Providing appropriate mental health intervention as early as possible in the least costly and least restrictive setting;
5. Promoting the development of consumer oriented, operated, and owned mental health programs;
6. Promoting the development of a community-based continuum of care providing support for persons with mental illness and for their family members;
7. Ensuring universal access to health and mental health services, regardless of ethnicity, race, gender, age, sexual orientation, disability status, or ability to pay;
8. Promoting the development of mental health services which accommodate the special needs of underserved populations, such as mentally ill chemical abusers, minorities, youth, the elderly, persons with AIDS, handicapped, and homeless persons with mental illness, and survivors of trauma such as homicide and suicide;
9. Promoting the involvement of the self-help, family and consumer empowerment movements, assuring participation in treatment planning, service provision, recovery, medication decisions, advocacy, and mental health planning;
10. Ensuring adequate access to pharmaco-therapists and psychotherapy including follow-up to ensure that the treatment plan and medication regimen are carried out;
11. Promoting health care coordination, for example, medical case management, provided by primary care and specialty physicians, ambulatory care practice sites, and hospitals which care for a substantial number of persons with mental illness;
12. Removing the stigma of mental illness through better education of health providers and the public.

TRENDS AND ANALYSIS

Incidence and Prevalence

According to the Epidemiological Catchment Area Analysis (ECAA) conducted in the mid-1980's by the National Institute of Mental Health (NIMH), 16.5% of the adult population and 12% of children and adolescents suffer from a diagnosable mental disorder. Women show slightly higher rates of mental disorder (16.6%) than men (14%). The highest rates for any disorder are among young adults age 18 to 44. The age groups 45 to 64, and 65 and over, had significantly lower rates.

Using the ECAA rates, it is estimated that 978,570 adults and 215,935 youths in New Jersey experienced an emotional or mental disorder in 1990. Tables One and Two show the mental illness prevalence by Local Advisory Board region.

One and one half percent of the adult population (i.e., about 89,000 New Jerseyans in 1990) suffer from serious and persistent mental illness such as schizophrenia and affective disorders. Eighteen thousand young persons, or 1%, of the population under age 18 experienced serious mental illness in 1990.

Over the course of a lifetime, one in three individuals experiences psychiatric disability. However, 80% will not receive treatment since affected persons are often undiagnosed or misdiagnosed. Many do not seek medical or psychiatric care. Only one tenth to one third get services, and often these are inappropriate.

Consistent with New Jersey's projected population growth of 11% during the decade of the nineties, an increase in the number of mental illness cases is expected. Assuming prevalence rates remain at the current level, approximately 10,000 new cases of serious mental illness are expected to occur. By the year 2000, one million New Jersey residents will experience a mental disorder. If unemployment, addictions, violence, and family dissolution persist or worsen, mental health problems could be exacerbated rendering affected individuals more severely disabled.

Assuming steady or increasing addiction rates in the adult population, the number of births affected by alcohol, drugs, and nicotine will increase. Common results of such births include: attention deficit disorder, conduct disorder and hyperactivity.

TABLE 1
Estimates of Adult Mental Illness by Local Advisory Board
1990 and 2000

Local Advisory Board Area	Year	18 and Over Population	% Change	Serious Mental Illness (SMI) Prevalence (1.5%)	Mental Illness Prevalence (16.5%)
I	1990	832,888		12,493	137,427
	2000	917,536	10.2	13,763	151,393
II	1990	1,087,628		16,314	179,459
	2000	1,117,664	2.8	16,765	184,415
III	1990	975,300		14,630	160,925
	2000	959,983	-1.6	14,400	158,397
IV	1990	1,048,852		15,733	173,061
	2000	1,248,051	19.0	18,721	205,928
V	1990	985,792		14,787	162,656
	2000	1,120,744	13.7	16,811	184,923
VI	1990	1,000,266		15,004	165,044
	2000	1,219,988	22.0	18,300	201,298
TOTAL	1990	5,930,726		88,961	978,570
	2000	6,583,966	11.0	98,759	1,086,354

SOURCE: ECAA Study and 1990 Census

TABLE 2
Estimates of Mental Illness Among persons under age 19 By Local Advisory Board
1990 and 2000

Local Advisory Board Area	Year	Under 18 Population	% Change	Serious Mental Illness (SMI) Prevalence (1.0%)	Mental Illness Prevalence (12.0%)
I	1990	264,075		2,641	31,689
	2000	232,674	-11.9	2,327	27,921
II	1990	290,851		2,909	34,902
	2000	245,944	-15.4	2,459	29,513
III	1990	296,725		2,967	35,607
	2000	241,652	-18.6	2,416	28,998
IV	1990	296,807		2,968	35,617
	2000	281,633	-5.1	2,816	33,796
V	1990	345,527		3,455	41,463
	2000	327,487	-5.2	3,275	39,298
VI	1990	305,477		3,055	36,657
	2000	305,474	0.0	3,055	36,657
TOTAL	1990	1,799,462		17,995	215,935
	2000	1,634,864	-9.1	16,349	196,184

SOURCE: ECAA Study and 1990 Census

Major Types of Mental Illness

Many illnesses are included in the definition of mental or emotional disorder. Schizophrenia, affective disorders including depression and bipolar disorder, anxiety disorders, and other cognitive, emotional, or behavioral disorders interfere with functioning in all aspects of life.

Anxiety disorders include phobias, panic disorders, and obsessive-compulsive disorders, and they are the most prevalent of all major groups of diagnosed mental illness. Affecting an estimated 8% of the population, anxiety disorders are found twice as often in women as men. One in 75 adults suffers from panic disorder during their lifetime.

Schizophrenia is a disease that produces complex functional disabilities. One percent of the United States population is schizophrenic. There are no significant gender differences in the risk for developing this disease. The age of onset is variable, but it is most common during late adolescence and early adulthood. Some individuals with schizophrenia require intensive care, while others function well with the help of regular medication and community support services.

Affective disorders are characterized by prominent and persistent disturbance of mood, usually depression or mania. Depression, significantly more prevalent among women than men, afflicts approximately 5% of the population. Onset usually occurs during the most productive years of life, between the ages of 25 and 44. Bipolar mental disorder is characterized by severe mood swings (from manic to depressive), has an equal gender distribution, and tends to cluster in the younger age groups of 18 to 24 and 25 to 44. Affective disorders are more likely to be episodic than chronic.

Suicide and Homicide

Suicide and homicide are the most serious potential consequences of mental disorders. Ninety percent of suicide attempters demonstrate psychiatric symptomatology, especially affective disorders. Fortunately, densely populated states like New Jersey tend to have low suicide rates. Rates are higher in Western states and Alaska than in the Southern, Northern, Central, or Northeastern states.

New Jersey's suicide rates have been stable during the last decade at 8.7 per 100,000 population, compared to a national rate of 11.2 per 100,000 population. Nonetheless, about one hundred preventable deaths occur in New Jersey per year from suicide. In 1989, suicide attempts comprised 22% of admissions to state and county psychiatric hospitals (1,555 admissions) and 18% of persons using community mental health programs (16,352 people).

The most consistent demographic variables related to suicide are sex, race, marital status, and age. Suicide rates generally increase with age. However, nationally and in New Jersey, rates for the young have increased dramatically since the 1950's, while rates for the elderly have been declining since the 1930's. Just the same, suicide rates remain highest for persons over age 65.

In New Jersey, suicide and homicide are, respectively, the second and third leading causes of death for teenagers. These causes are surpassed only by motor vehicle accidents, 34 percent of which are alcohol-related. Overall, homicide accounts for approximately 500 deaths per year. Between 1968 and 1985, in the United States the suicide rate almost tripled among 10 to 14 year olds (from 6 to 16 million) and doubled among 15 to 19 year olds (from 50 to 100 per million). During the same period, the homicide rate doubled among 10 to 14 year olds (from 8 to 15 per million) and increased 20% among 15 to 19 year olds (from 69 to 86 per million).

There are disparities in homicide and suicide rates according to race/ethnicity. Homicide rates are five times higher among minorities than Whites. Suicide rates in Whites are higher—in some areas, double the rate among African Americans at all ages. The suicide rate for Hispanics is proportional to the number of Hispanics in the total population.

Although women make more suicide attempts than men (25:3), women, of all ages, complete suicide much less often than men (1:3). Men are most likely to use motor vehicle carbon monoxide poisoning in all age groups. Overdose is the leading method of suicide among persons age 20-24 and 45-49. Married women make more suicide attempts than single women while unmarried men make more attempts than married men.

Drug and alcohol use and the availability of a specific method, like firearms, are factors in homicide and suicide rates. Households that have a gun are five times as likely to have a family member commit suicide using that gun than households with no guns.

Multiple suicide attempters are significantly different from first time suicide attempters. They are more likely to have a family history of addiction, a family history of suicide, high lethality and depression scores, more impulsivity and more in-patient treatment referrals.

PRIMARY PREVENTION OF MENTAL ILLNESS

Primary prevention entails reducing people's risk or vulnerablity to developing mental illness. Consequently, promotion of mental well being is an integral part of primary prevention. This level of prevention can only be effective **before** the symptoms and effects of mental illness appear.

Strategies to reduce the risk for mental disorders span the range from comprehensive perinatal care, to genetics research, to support services for disaster and trauma survivors. Efforts to eliminate poverty and racism, to limit availability of alcohol and firearms, to provide programs to assist families and children to remain in their homes, and to teach non-violent conflict resolution can all play a role in creating healthy people and preventing the onset of mental disorders.

Genetic make-up and biochemical factors can make an individual physically vulnerable to mental illness. In vulnerable persons, organic or biological "stressors" sometimes lead to mental and physical symptoms. A variety of neurologic, endocrine, metabolic, and cardiovascular diseases have commonly been linked to mental and emotional disorders. Prevention of some mental and emotional problems can be achieved by attacking organic causes. Known organic causes that can be ameliorated and prevented include vitamin deficiencies, lead poisoning, brain damage from accidents, prenatal exposure to rubella, and fetal alcohol and nicotine syndromes.

Environmental stressors sometimes precipitate mental health problems. For example, in a society organized like ours, family instability, absence of or dysfunctional child nurturing, bereavement, marital disruption, or unemployment become significant stressors. The dissolution of stable communities and the lack of proximity of extended families has left many people with inadequate support systems to deal with the stressors. To some extent, other social structures such as churches, work places, and schools can offer effective support, thereby promoting mental wellness.

The ability to form and maintain caring relationships preserves emotional health. This ability is developed in part through early relationships with caregivers. However, self-nurturing can be learned at any time as can child rearing skills. Early experiences of accomplishment contribute to competence as an adult, enhancing the individual's sense of personal control or power and self-esteem.

Education and specific types of training can be used to prevent mental illness. Psychosocial skills can be explicitly taught. Problem solving, negotiating, limit-setting, and conflict resolution are examples of skills that serve as protective buffers in the effort to prevent the onset or relapse to mental illness. Teaching the caregivers of children to anticipate developmental stages, behaviors and responses can give them a greater sense of confidence about child-rearing, as well as help them to nurture the mental health of children.

In many cases, stressors and risk factors which contribute to the onset of mental disorders can be addressed in primary health care settings. Through the provision of primary care to prenatal patients, for example, the mental health of an unborn child can be positively affected. Prevention of damage to the brain and neurological system, improved nutrition, prevention of accidents, physical and sexual abuse, and the elimination of exposure to alcohol, nicotine, drugs or environmental hazards can be accomplished with the individual in a primary care setting.

The workplace can be altered to reduce stress. Wellness programs in employment settings often include stress management with other mental health promotion efforts. Stress management is valuable for those with diagnosed physical conditions, such as high blood pressure and heart disease, for persons with mental disorders, and for individuals at risk of physical, mental, or emotional illness. There is evidence that providing certain types of employee benefits such as family leave and health promotion activities results in increased employee loyalty and productivity and decreases use of sick days and other health benefits including mental health benefits. Examples of employers offering these benefits are Johnson and Johnson and Merck.

Programs which address problems that are seemingly unrelated to mental illness prevention, such as hunger, are essential to mental illness prevention. Nutrition programs are critical to the mental health of children. Poor nutrition leads to developmental delays and educational deficits, which are correlated with mental disorders in children. In the United States, five million poor children go to bed hungry. Newark has the 15th highest child poverty rate in the nation at almost 38%. Almost

one quarter million New Jersey youngsters participate in the federal school lunch program for children living in poverty. However, over the summer in 1992, only 29% were able to receive food supplementation.

Early childhood screening and intervention for emotional and neurological difficulties can prevent serious emotional disability later. Learning disabilities refer to a variety of disorders characterized by significant difficulties in acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. They prevent 7% to 20% of elementary school children from learning using traditional educational approaches. In cases where such disorders are due to nervous system dysfunction, patterning treatment modalities are successful. In other cases sensitivity to alternative learning approaches can achieve the same goal. Early intervention can prevent lowered self-esteem and secondary emotional problems associated with frustration, failure, and disappointment.

Model Mental Illness Prevention Programs

Prevention programs can take place in a variety of settings. These include schools, churches, health care centers, and worksites. Furthermore, a vast range of programs, life events, and circumstances may directly or indirectly contribute to individual mental wellness.

Communities can undertake programs of education, community organization, health policy/social control, and assertive community treatment that positively affect residents' wellbeing. Among other beneficial outcome, these activities have been shown to decrease state hospital admissions, decrease police contacts, and save money. A national model of community organizing that has the effect of preventing mental illness is Assertive Community Treatment. A form of this has been implemented through two broad-based programs in New Jersey: the Statewide Community Organization Program (SCOP) and the Governor's Alliance for a Drug-free New Jersey.

The effectiveness of mental illness prevention has been demonstrated in New Jersey and elsewhere throughout the nation. The Community Mental Health Center of University of Medicine and Dentistry of New Jersey (UMDNJ) provides problem solving training to administrators, teachers and custodians in 20 schools to promote self-control, calmness and clear thinking in the face of difficulty. The model program has received an award from the National Mental Health Association and new funding to expand to urban schools from Robert Wood Johnson Foundation.

The states of Virginia and Vermont have recognized the value of prevention in public policy. Both states have passed laws and set aside funds to ensure prevention has a role in health, mental health and addiction service planning, coordination and delivery. In Virginia every county has prevention staff, programs, data collection and evaluation.

In Belle Meade, New Jersey, the Bright Futures for Kids Program, sponsored by the Junior League, offers prevention for high risk children by addressing feelings through puppetry. In Michigan and New Jersey, family preservation programs provide intensive in home counseling and practical support to troubled families. These programs cost approximately $4,500 each year per family, and can prevent annual foster care costs of $12,000 per family. Other programs support teen mothers through postnatal classes and school-based child care. They have been effective in helping young women finish school, secure employment, avoid welfare, and prevent future unwanted pregnancies.

Alaska has undertaken a statewide suicide prevention project characterized by a high degree of local control and diverse intervention strategies. The project seeks to impact self-destructive behaviors and addiction problems as well as spouse and child abuse. Community action and cultural and recreational alternatives are developed. One does wilderness camping with high risk native Alaskan youth. Counseling and crisis intervention has evolved as a needed service. Coordination of local mental health care has resulted.

Currently, three regional suicide prevention projects are administered by local mental health agencies and school districts in New Jersey. Parent and teacher training, outreach and crisis intervention are provided. Suicide prevention programs are improved when mental health, hospitals and schools cooperate to achieve local goals. Information about the warning signs of youth suicide tends to improve identification of at risk youth.

Further research is needed both to better understand the root causes of mental illness and to evaluate the effectiveness of programs aimed at preventing mental illness. The latter would be especially useful in justifying allocation of resources to increase preventive care.

SECONDARY PREVENTION

Early detection and the prompt treatment of mental illness in its nascent stage are the hallmarks of secondary prevention. Among people with risk factors and early symptoms of mental illness, intervention can prevent progression to a diagnosable mental illness. Many effective treatment regimens exist to assist in the care of persons with diagnosable mental illness.

Although the use of psychiatric diagnostic instruments has been advocated even in general populations, the Department of Health does not advocate this option. Quick and simple screening which is carefully targeted is a more efficient approach to identifying individuals who are at risk for or in the early stages of mental illness. While screening is not intended to be diagnostic, it is useful in rapidly determining which people require referral for a more thorough diagnostic work-up.

For children, the Early Periodic Screening and Diagnostic Testing program is effective at early detection and treatment of a whole host of disorders, with the exception of mental illness. The protocol could be revised to incorporate mental health screening, to result in referral for evaluation and diagnosis for children found to be at risk for emotional problems. This kind of project would pay for itself for a year on just two prevented hospitalizations in a medium-sized community. Medicaid expansion to cover services should be justifiable in the same way.

TERTIARY PREVENTION

Tertiary prevention refers to activities that limit disability and rehabilitate an individual in order to restore wellness after the person has been diagnosed with mental illness. Two types of interventions have been proven to be effective in the treatment of mental disorders—psychotherapy and psychopharmacology (drug therapy). These interventions can be provided in a variety of inpatient and outpatient settings. While this section will highlight some of the problems with providing and accessing tertiary care, the reader is referred to Appendix A for a detailed description of the existing delivery system.

Counseling interventions range from informal supportive relationships with friends, family, clergy and self-help groups to formal psychotherapy under supervision of a trained mental health clinician. Psychotherapy can be effective alone or in combination with medication.

Drugs are often successful in offsetting severe mental disorders, including depression and anxiety. However, progress in treating schizophrenia with medication has been painfully slow. About half of America's three million schizophrenic patients respond poorly to the standard treatment of Thorazine, Haldol, and similar drugs. Those who respond favorably to these medications remain disabled with serious and sometimes humiliating side effects, which include dulled or blunted emotions, clumsy gait, known as the thorzaine shuffle, compulsive foot tapping, restlessness, and a severe irreversible syndrome called Tardive dyskinesia. Tardive dyskinesia is characterized by jerky movements of the extremities and may involve the facial muscle and tongue.

New drugs which are now available include Clozapine, Buspur and Prozac, which have assisted individuals to maintain an improved quality of life. Clozapine has enjoyed dramatic success, bringing about an almost miraculous relief from symptoms of schizophrenia for about one-third of users. However, some individuals develop a rare and dangerous blood condition causing them to have to discontinue the medication. Another down-side to this drug is its extremely high cost. This makes the treatment inaccessible to many who need it, particularly when some insurance companies resist paying for the drug and physician monitoring.

A new psycho-pharmacologic to control schizophrenia is on the rise. Risperidone appears to be safer than Clozapine and has a similar mechanism of action. Because research and testing is incomplete, this drug is at least two years from the market.

Other mental illnesses, such as depression, anxiety disorders, and adjustment disorders are improved with the new pharmacologies. Prozac significantly reduces depression, although it has potentially serious side effects. Manic depressive treatment with lithium is being fine-tuned, using anticonvulsives and pharmacologicals that ameliorate side effects.

With the success of psychopharmacology, some mental health costs increase; others decline. If we are to treat those in need of mental health services appropriately, access must be ensured regardless of ability to pay and pay.

Table 3
Percent of Psychiatric Hospital Admissions by Diagnosis

Diagnosis	State Psych Hospital	County Psych Hospital	Licensed General Hospital
Affective Psychosis (including depression)	17.7	16.0	34.7
Schizophrenic Disorder	53.6	38.7	28.8
Adjustment Reaction Disorder	4.9	8.8	9.3
Neurotic Disorders	3.0	1.1	7.8
Other Nonorganic Psychosis	4.1	3.7	5.2
Organic Psychotic Conditions	.7	1.5	3.0
Depressive Disorder (not otherwise coded)	1.3	.8	2.0
Personality Disorder	.4	1.8	1.9
Transient Organic Psychosis	1.0	.4	1.5
Nonpsychotic Mental Disorders	.3	.6	1.2
All others	13.0	26.6	4.6
Total Number of Admissions for Selected Diagnoses	4,624	2,556	27,427

International Classification of Diseases—9, 1990

Outpatient Tertiary Care

Much tertiary preventive care can be provided in a community-based, outpatient setting. With mental illness, outpatient and partial hospital services have been shown to decrease hospitalizations and lengths of stay. Unfortunately, access to outpatient care is filled with obstacles. Additional capacity is needed for these services. Long waiting lists are the norm.

More than one in five of those who experience a major depression are not seen in any service setting. Fifty-six percent are seen by physicians, but without receiving mental health services.

The Department of Health and Human Services recognize the need to review the distribution of existing resources in relation to the demand for care. Recommendations regarding need methodologies urge a greater emphasis on the development of outpatient and partial hospital care alternatives to traditional inpatient settings. Some outpatient mental health care providers find the $5,000 application fee for a certificate of need a significant hardship. The Department is investigating methods of waiving or decreasing this fee in the case of community based organizations with small budgets. A disincentive to develop and offer community-based services is not desirable.

Inpatient Care

In general, State psychiatric hospitals serve the most seriously disabled. Table 3 (page 13) details the percentage of admissions for various mental illnesses in State, county, and acute care hospitals. Of those admitted to State hospitals, 54% are diagnosed with schizophrenia, compared to 39% in county psychiatric hospitals, and 29% in acute care hospitals.

The largest proportion of admissions to acute care hospitals are for affective disorders (35%). These disorders comprise 18% and 16% of State and county psychiatric hospital admissions, respectively. These percentages underestimate the size of the problem because they do not include admissions of children and adolescents.

Local community hospitals are playing an increasing role in replacing state sponsored services for acute psychiatric care in local areas. The Department of Health supports that trend. Of interest, community opposition tends to crystallize against use of residential housing for the care of mentally ill persons, but not hospital based programs.

Managed care is the term used to describe payer determinations of eligibility of service for payment. Some of the decisions which have been made by managed care providers have been harmful to patient care. In some cases, unscrupulous mental health service providers have manipulated documentation to "get all they could" from the managed care payer. Perhaps as a backlash, the payers have imposed a hardship on some patients by refusing to pay for needed care. The Department of Health supports regulation of the managed care industry. Criteria for decision making about mental health coverage should be made public. Decisions should be timely and not retroactive. Qualified professionals should conduct the review and persons who believe they have been mistreated should have the right to a hearing by an impartial party. Legislation has been proposed which would achieve these objectives.

Five special hospitals in New Jersey serve the needs of persons with psychiatric disorders and their family members. Ramapo Ridge Psychiatric Hospital, Fair Oaks Hospital, Rutgers Community Mental Health Center, Carrier Clinic, Hampton Hospital and Shoreline provide almost 1,000 beds for acute and intermediate care of children and adults. Although privately insured patients comprise the majority of persons served, Medicaid and Medicare insured patients under 18 and over 65 are seen, and facilities have a ten percent set-aside indigent care requirement as a condition of Certificate of Need.

Continuum of Tertiary Care Services

Mental Health services in New Jersey are confusing to classify. Old and new categories of treatment have combined to make accuracy and uniformity increasingly questionable. Almost every listing in the bed inventory has an explanation of a special circumstance. A uniform taxonomy is much needed to allow for clearer determinations of needed services. Bed categories need to be more rigorously defined and catchment areas established before new intermediate care bed development is authorized.

Planning regulations define the continuum of care within the local community hospital care system. Every county should have emergency screening, short term care facilities with closed beds, short term care in open beds and outpatient care services for adults and children. Some counties have achieved this mix, and if occupancy is high, expansion needs to be considered. Other areas are without units of service necessary for a continuum of care.

Intermediate bed providers tend to serve a statewide catchment area. The distinction between open acute care beds in licensed general hospitals and intermediate care beds is obscure. Intermediate care providers include: Carrier, Christian Health Care Center, Bergen Pines, Fair Oaks Hospital, Hampton Hospital, South Amboy Hospital, Zurburgg Hospital and Shoreline which opens October 1, 1992. In recent months, some of these facilities have reported occupancy problems due to insurance authorization declines for inpatient psychiatric care. These hospitals report that some managed care providers refuse to pay for inpatient care until outpatient has failed.

The Department is promoting the development of open acute beds in conjunction with closed acute beds in order to assure continuity of care.

Many patients who occupy Short-Term Care Facility (STCF) beds for intensive care can be transferred to an open acute bed as a "step down." Occupancy in existing open acute units has consistently increased with the development of STCF beds. It is important to maintain an adequate number of open acute beds as a "step down" for STCF beds.

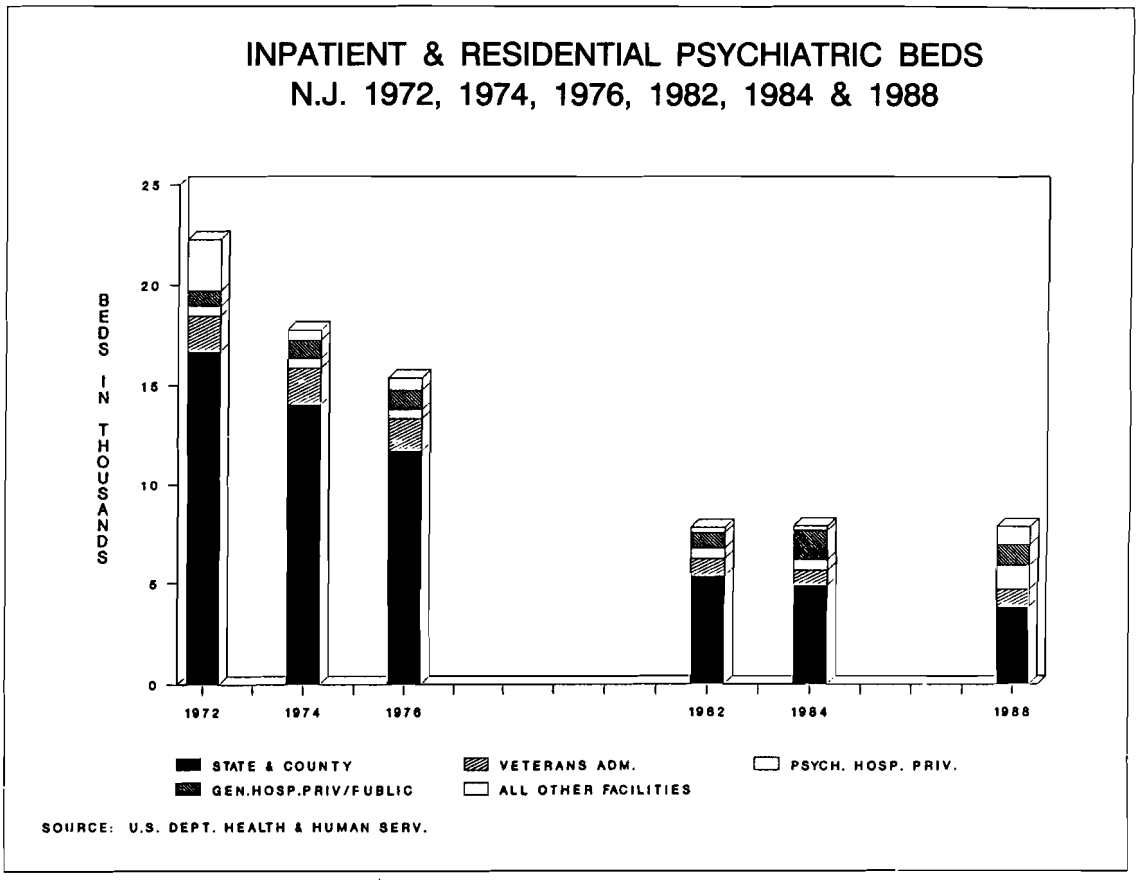
Local health planning will be strengthened by coordination with county mental health and children's services planners and providers, including patients, families, advocates and the public. Overlapping board memberships and joint training might improve communication, coordination, and control. Data needs are many and diverse at all levels.

An estimated half of mental health care is provided by the private sector. These services are uncoordinated with public sector care. A summary of the contraction of inpatient public sector programs accompanied by an increase in private sector programs between 1972 and 1988 in New Jersey follows on page 16A. And yet, to estimate need for new services, and control health costs, forecasting volume of private care is necessary. These are areas for future study, data gathering, and policy development.

RELATIONSHIP BETWEEN MENTAL ILLNESS AND PHYSICAL HEALTH

A veritable schism between mental and physical health care can impair the well-being of people who need both types of service. Mental health professionals frequently overlook medical sources of mental illness, and general practice physicians often ignore psychiatric problems. Although many mental and physical health practitioners develop effective referral relationships, it is generally necessary for each type of provider to have a working knowledge of both medical and psychiatric diagnoses and treatment. Fragmented health care delivery can be reduced if patients' various problems can be addressed in a comprehensive manner.

Paradoxically, people experiencing mental illness symptoms are not likely to turn to mental health care professionals for diagnosis and treatment. Only one in five individuals is served by psychologists,



psychiatrists, psychiatric nurses, or social workers. Most individuals (54%) are served by their primary care provider, while the rest (25%) seek assistance from clergy, other non-medical counselors, and groups.

Symptoms of stress or emotional problems are present in 50% to 85% of people who seek help for a medical problem. Recently the American Journal of Psychiatry reported that one half of over 18,000 residents surveyed in five U.S. communities, who had reported five or more physical symptoms, had a diagnosable and treatable mental disorder. Sixty-three percent reported symptoms of psychological distress.

Several studies cite the prevalence of medical utilization by people with undiagnosed mental disorders, especially anxiety and depression. These patients are heavy users of medical treatment, many times in the most expensive settings. Over-utilization of medical treatment can be reversed for mentally ill patients who are treated for mental illness. In one study, persons who received no intervention for their mental illness increased medical utilization by 60% annually. By comparison, those who were mentally ill and received treatment increased medical utilization by only 10%.

Many medical conditions produce psychopathology. For example, some patients exhibit psychosis related to epilepsy, amphetamine or cocaine use that is indistinguishable from schizophrenia. Other examples of illnesses which can produce psychiatric symptoms are Tourettes Syndrome, diabetes, toxic reaction to drug, alcohol, or lead poisoning, infections, cancer, AIDS and anemia.

In cases where effective treatment for the medical problem exists, if irreversible damage has not occurred, the psychiatric symptom may disappear. Even if damage already exists, psychiatric symptoms will improve with treatment of the medical problem. It is vital that mental health providers be aware of these potential causes of symptoms, treat and refer for appropriate mental health treatment.

People with mental disorders are at higher risk for some physical illnesses. Schizophrenic patients are overrepresented among persons with diabetes, lung disease and peptic ulcers. Depressed patients experience higher rates of infections, cancer, and cardiovascular disease. The physical symptoms of heart disease such as thickness of arteries and cholesterol levels of depressed smokers are significantly elevated when compared to non-depressed smokers. In one study, treatment for depression was shown to decrease the risk of heart attack, especially if other risk factors are present such as smoking and high cholesterol levels. Smoking by itself is a deadly activity as is breathing secondary smoke, yet many mental health facilities are not yet smoke free.

All licensed general hospitals in New Jersey became smoke free no later than January 1, 1992. The Department of Health became smoke free in November of 1987. The Department of Human Services became smoke free in Spring 1992. Consistent with recommendations in the Addictions chapter, all Department of Health or Department of Human Services licensed or contracted facilities, including mental health facilities will become smoke free following a three year phase-in period.

A medical problem could be triggered or exacerbated by the psychiatric illness or its treatment. Conversely, psychiatric problems may be triggered by physical illness. It is also likely that a nonsupportive response to medical problems by significant others and/or the community can trigger psychological problems.

Symptoms of a psychiatric disorder can mimic a physical health problem. In one study, 58 percent of patients referred for a coronary evaluation had normal heart function tests, but were diagnosed with panic disorder. Appropriate psychotherapy and medication is effective in eliminating symptoms in 70% to 90% of persons with panic disorders. However, the majority of persons with panic disorders are never diagnosed and therefore, not referred for mental health treatment.

For some people, psychotropic drug therapy causes physical illnesses such as hypothyroidism, diabetes, sexual difficulties, systemic lupus erythematosus, and liver disease. Medical monitoring of the effects of drug therapy is essential. It alerts the practitioner to abnormal laboratory values, an atypical psychiatric picture, positive clues in physical examination, atypical or lack of response to treatment.

Health and mental health professionals are beginning to recognize the interdependence between emotional states and physical well being. A new field of study, psychoneuroimmunology (PNI), has developed to measure the impact of mental states on the function of the immune system as mediated by the central nervous system. There is good evidence that the immune system is responsive to emotional states.

A study of medical/surgery patients found that biofeedback used for reduction of pain resulted in decreasing lengths of stay as much as 72%, and outpatient utilization by 63%. Healthy psychological states improve recovery rates from illness and decrease associated medical costs.

The effectiveness of both medical and mental health interventions would be greatly enhanced by interdisciplinary cooperation. Many obstacles need to be overcome before this will happen. Factors which contribute to overlooking physical illness in mentally ill patients as well as overlooking psychiatric disability in medically ill patients include the following:

1. The philosophical view of the separation of physical illness from psychiatric illness impedes treatment of the whole person;
2. Some psychiatric patients have difficulty providing an accurate medical history; some psychotic patients are unable to communicate regarding discomfort or pain, even when suffering from acute illness;
3. Psychiatric patients are sometimes refused medical examination and are referred to forensic or psychiatric providers, who are not skilled in and do not provide routine medical assessment;
4. Patients with organic brain syndrome, HIV/AIDS, and suicidal ideation are discriminated against by medical care givers;
5. Medical referrals from psychiatric or social agencies have incorrect physical diagnoses in as many as two-thirds of cases; psychiatric referrals from social service and psychiatric agencies have physical illnesses in as many as 80% of cases;
6. Psychiatric residents do not perform physical examinations;
7. Emergency room residents frequently omit physical exams for persons admitted for psychiatric problems, however, when provided, useful information was discovered in up to 92% of cases;
8. 90% of treatment for mental illness occurs in sites without backup services for complete physical assessment and even when seen in a psychiatric hospital, limited medical staff is available to perform physical examinations;
9. Psychotropic drugs that patients receive often mask symptoms of physical illness;
10. Specialists focus on a particular organ system; psychiatrists are perceived as specialists in psychiatric symptoms without a medical basis. As a result medical referrals from psychiatric caregivers of mentally ill persons are disbelieved;
11. Psychiatric patients are often misdiagnosed if a new physical condition presents because the symptom is attributed to the psychiatric disability;
12. Medical floors rarely accept psychiatric patients and psychiatric floors rarely have medical patients, resulting in physicians of each group having limited exposure. This lack of experience reinforces and maintains the problem; and
13. Medical follow up and consultation for psychiatric patients are essentially non-existent.

MENTAL ILLNESS AMONG SPECIAL POPULATIONS

Persons in need of mental health services include special populations with unique needs. These populations include children and teenagers, the elderly, racial and ethnic minorities, mentally ill chemical abusers (MICA), individuals with developmental disabilities, persons with involvement in the criminal justice system, persons with AIDS, trauma survivors, those with Alzheimer's disease, and the homeless.

Access to mental health programs and services is frequently a problem for these special populations. Once afforded access, services provided often do not take into account special concerns of underserved persons, and those with additional, non-psychiatric disabilities.

Children and Teenagers

In the United States it is estimated that five million children and teens have mental health problems but do not receive mental health services. Often, serious psychological problems are undetected because adults assume that mood swings, changes in friendship groups, and fluctuations in grades are to be expected in adolescence, rather than representing warning signs of underlying emotional problems.

Mental disorders account for 32% of all causes of disability among 10 to 18 year olds. Psychoses, anxiety and personality disorders, substance dependence syndromes, and mental retardation are the leading types of disabilities. The prevalence of depression in prepubertal children is about 2% and almost 5% among 14 to 16 year olds. An estimated six out of ten youngsters in psychiatric hospitals have depression.

The top three diagnoses recorded for youth seen in Children's Crisis Intervention Services (CCIS) units are: major depression, impulse control disorder, and intermittent explosive disorder. Some are served by the Division of Youth and Family Services' (DYFS) 65K program, which offers a set of in-home services to avert placement. These services differ from county to county.

Attention deficit hyperactivity disorder affects 3% to 5% of primary school children. Almost one in ten males and 2% of females under age 18 have a conduct disorder. Social phobias, schizophrenic disorders, and obsessive compulsive disorders generally begin in early adolescence.

More teenagers who are seriously troubled and more very young children with multiple problems are now entering the mental health, child welfare, and juvenile justice systems. The number of children classified as "Emotionally Disturbed" by the Division of Special Education in the Department of Education increased by 42% between 1980 and 1989. Problems such as maternal alcohol or crack addiction have increased the number of newborns at risk of later developing mental problems. It is estimated that one in ten live births per year are exposed prenatally to alcohol or drugs, including crack.

There is also considerable controversy concerning the overdiagnosis and use of drugs for children labelled with behavioral problems.

The number of substantiated cases of child abuse and neglect tripled between 1982 and 1989. Mentally ill persons are many times more likely to have a history of being abused as children, compared to the population as a whole. The number of youngsters under supervision by the Department of Corrections Division of Juvenile Justice Services rose by 44% between 1984 and 1990. Children who come from homes which use physical punishments are more likely to resort to violence in problem solving.

New Jersey does not have an adequate community-based continuum of care for emotionally disturbed children, youths, and their families. Many in need receive partial or no services. Too often they receive care from the least trained professionals for timeframes that are too short. Long term care placements do not exist. The Division of Youth and Family Services and juvenile detention authorities are the public service delivery systems. Since services are not under the control of a single agency or authority, care is fragmented.

There are fewer than 100 child and adolescent psychiatrists to treat the 200,000 mentally ill children in New Jersey. Loan forgiveness and other programs could be used to increase this supply. In particular, recruiting and retaining qualified staff is problematic in urban areas, but there are rural areas in the west and south of the state where professionals are not available to provide mental health services in the public or the private sector. Publicly funded services are unattractive due to the volume of the work, the severity of the illnesses and low pay compared to private practice in more wealthy areas.

The Children's Commitment Law has been under development for some time and is much needed. The breadth and depth of access to care will need to be much improved before the statute can be realistically implemented. Children's crisis intervention and stabilization units have not been established as needed. Primary care providers are often inadequately trained in the warning signs of mental illness in children. Pediatricians are inadequately trained in psychopharmacology for even the commonest disorders such as attention deficit disorder and hyperactivity, yet they are the primary caregivers.

Current planning efforts build upon a regional plan drafted in 1988. This plan provides for program development targeted to local county programs to build a comprehensive system of care for children and adolescents. There are problems with assessing the need for services, coordination, and access to the ones that exist. For a detailed description of the existing delivery system as it pertains to children, see Appendix A (page 42).

Community based educational alternatives are needed for emotionally disturbed youth. A referral system for young people who reach their 18th or 21st birthday and leave the public caregiving system is a high priority need. The present system does not allow for coordination ncessary for a timely transfer from services under youth auspices to agencies which take over for the adult status.

Elderly

Growth of the elderly population in New Jersey over the next decade will result in two major issues related to the provision of mental health services. First, more seriously mentally ill (SMI) persons will grow older. They will experience health conditions related to the aging process. Second, due to overall growth of the elderly population, it can be expected that there will also be growth in the incidence of mental disorders most associated with the elderly. Transportation is a significant problem for this population and underlines the need for additional community based assessment and treatment programs.

The risk of onset of serious mental illness, including schizophrenia, decreases with age. However, depression and suicide risk remain significant problems among the elderly. Isolation, chronic disease, and life transitions contribute to depression. Programs such as foster grandparents which encourage the elderly to continue to contribute are important primary prevention tools. These programs should be expanded.

In 1990, persons age 65 and over, who comprise 14% of the population in New Jersey, received about 8% of the total adult episodes of care provided in community mental health agencies (12,880 episodes). This represented a slight increase from 7% in FY 88. See Table 16, SMHP.

The prevalence of severe dementia among the elderly is approximately 4%. Over the next twenty years, organic mental illness resulting in dementia and other sequelae will become an increasing concern to health care providers and family members. Organic mental illness is transient or permanent dysfunction of the brain caused by disturbance of physiologic functioning of brain tissue. Aging, toxic substances, and physical disorders cause structural, hormonal or biochemical dysfunction.

Within the mental health community there is a concern that elderly persons with organic syndromes are inappropriately referred to mental health treatment settings for management of difficult behavior. On the other hand, those making the referrals may feel that there are no other options available. Individuals with severe behavioral problems due to dementia or other organic syndromes do not "fit" well in settings such as nursing homes which are not staffed or equipped to deal with wandering, aggressive or combative behavior. However, organic mental disorders do not usually respond to psychiatric care. Mental health consultation services should be accessible to assist health care providers in managing the behavior problems of individuals with organic syndromes.

Most of those aged 65 and older in State psychiatric hospitals do not have difficult behavior management problems, but they do require nursing care, including psychiatric nursing. Persons in this age group are vulnerable to chronic illnesses and physical disabilities. They tend to remain in the hospital beyond the average length of stay, often over two years. A concerted effort has been made to place these elderly persons with physical disabilities in nursing homes.

In 1983, Certificate of Need conditions for nursing homes were modified to require that a percentage of new bed capacity be set aside for elderly state and county psychiatric hospital patients. Since this program began, over 300 persons have been moved from State and county psychiatric hospitals to less restrictive, less costly, more appropriate settings in nursing homes. This public policy will be maintained. In addition, behavior management programs for dementia will be expanded and promoted.

Access to care will be studied and, where necessary, specialized bed units for patients needing close supervision will be authorized for development.

Members of Minority Racial and Ethnic Groups

The population in New Jersey is becoming increasingly pluralistic and multi-ethnic. By the year 2000, significant increases are expected in minority populations of all age groups. Culturally sensitive and appropriate services are no longer a luxury, but a necessity. However, the current accessibility and cultural sensitivity of mental health programs are limited.

There are cultural differences in perception about symptoms of mental illness. A behavior that is clearly regarded as a symptom of disease in one culture may be so widespread as to be accepted as the norm in another.

A wide range of cultural perspectives and needs influence the utilization and effectiveness of mental health services.

The major multicultural groups of concern to mental health providers in New Jersey are: African Americans, Hispanics, and Asian and Pacific Islanders. Minority groups are over-represented in mental health settings. Minority populations received 35% of adult episodes of care in 1990 at DMH&H-funded programs. By comparison, members of racial and ethnic groups comprise 17% of the population of the state. More information about minority composition is detailed in Table 16 of the State Mental Health Plan.

The over-representation of individuals from minority groups may reflect greater reliance on public sector facilities due to the financial inability to access private providers. Minority populations have disproportionately high relapse rates which may be due to short lengths of stay as well as misdiagnosis. High rates are due, in part, to lack of culturally sensitive services, lack of resources, and lack of means to access services. Members of minority groups disproportionately experience the effects of "stressors" such as poor health, isolation, poverty, unemployment, violence, family dissolution, discrimination, and lack of access to many of the goods and services that others enjoy.

Minority children are more likely to be suspended from school. They represent 27% of the total school enrollment, but 37% of the suspensions. These children at greater risk of becoming troubled or troublesome to themselves, their families, and their communities. Identification of services available, and how to access them is a challenge to the public and professionals. This is an area in which primary prevention programs aimed at eliminating poverty, racism and a two-tiered education system might have significant results.

Table 16

Episodes of Care (Duplicated Counts) of Adult Clients Aged 18+ In Community Agencies and State and County Hospitals, FY 1988 to 1990

Service Setting	18+ Total Episodes of care	% Elderly	% Minority	% MICA	% DDD	% CJ
Fiscal Year 1988						
Community Programs	156,957	7.5	34.5	11.9	1.8	15.3
Screening/Emergency	61,267	34.7	46.9	62.7	26.1	38.1
Other	95,690	65.1	53.1	37.3	73.9	69.1
State Hospitals	9,167	10.1	35.1	19.1	3.5	16.0
County Hospitals	4,337	10.7	29.3	34.9	1.8	27.2
Total 1988	170,461	7.7	34.4	12.9	1.9	15.6
Fiscal Year 1990						
Community Programs	165,152	7.8	35.5	11.7	2.1	13.2
Screening/Emergency	62,097	29.9	40.9	54.0	25.9	28.5
Other	103,055	70.1	51.1	46.0	74.1	71.5
State Hospitals	9,310	11.5	36.9	14.8	3.3	10.6
County Hospitals	3,195	15.2	26.9	24.8	2.4	9.5
Total 1990	177,657	8.1	35.4	12.1	2.2	13.0

Source: DMH&H USTF data, FY 1988 to Estimated FY 1990 (Based on 6 months)

Definitions:
SMI— GLOF less than or equal to 05 (Community) or Involuntary commitment status (Hospitals).
Minority— Race not equal to Non-Hispanic White.
MICA— GLOF less than or equal to 05 and a Diagnosis of drug or alcohol or a service history or service need of drug or alcohol.
DDD— Presenting problem of DD/MR.
CJ— Referral source of detention center, JINS or Legal/justice system or presenting problem of legal/justice system.

Mentally Ill Chemical Abusers

Mentally Ill Chemical Abusers (MICA) have both a major psychiatric diagnosis and a substance dependence diagnosis. The prevalence of MICA appears to be widespread. A large survey of psychiatric disorders in the general population found 13% had experienced alcoholism, and half of this group also had a psychiatric disorder. All psychiatric disorders were over-represented among alcoholic persons, compared to the general population. For example, among alcoholics, schizophrenia occurs three times as often as in the general population. Conversely, schizophrenics have triple the rate of alcoholism. Rates of mental illness are also higher among persons diagnosed with other psychoactive substance abuse disorders.

In 1990, 12% of persons served in mental health agencies were identified as MICA. A recent one-month study of admissions at the four State psychiatric hospitals (Nov. 15 to Dec. 15, 1991), conducted by certified alcohol and drug counselors, found that 65% to 76% of hospital admissions require MICA interventions. Previous studies identified 30% to 40% of hospital patients as MICA cases. The lack of access to addiction services has further strained the mental health system.

The prevalence of co-morbidity reinforces the need for primary care practitioners, mental health providers, and addiction professionals to assess both psychiatric and addiction symptoms and to co-manage care and treatment. Persons with dual diagnoses of mental illness and chemical abuse or dependence often require a variety of services from health care, addictions, and mental health agencies and professionals. Specialized intervention and differential diagnosis are needed.

The Department of Health, Division of Alcoholism, Drug Abuse and Addiction Services and the Department of Human Services, Division of Mental Health and Hospitals work together to develop programs for persons who are mentally ill chemical abusers. Existing programs are funded by direct State appropriations, or through a combination of State funds and Federal Alcohol, Drug and Mental Health Block Grant (ADMHBG) funds. Although New Jersey is recognized as a national leader in advocating for MICA and developing model MICA programs, most regions lack a continuum of MICA integrated services. Poor coordination between mental health and addiction services at the local level make it difficult to respond to the needs of MICA individuals.

Adolescents who are mentally ill and addicted are discriminated against by both systems. Sometimes they are lost in a flurry of referrals to each other. Other times they are given contradictory treatment advice. Clinicians are seldom trained in MICA issues for adults, much less for children. The Department of Health can advise contractors and licensees that such clients are protected by law against discrimination and that model programs for their care exist. If the advisories fail, other penalties such as fines can be imposed. The Department can also promote development of training of clinicians in this area.

Persons with HIV Infection and AIDS

By the end of 1993, 390,000 to 500,000 cases of AIDS will have been diagnosed in the United States since the epidemic began. HIV and AIDS continue to pose a growing threat to the health of the nation.

There has been little emphasis on psycho-social interventions appropriate for persons with HIV infection and AIDS. The development and delivery of preventive and comprehensive HIV/AIDS training activities are critical to preparing physicians to meet the psychiatric, neuropsychiatric and mental health challenges AIDS present. It has been suggested that an integrated treatment approach works best.

Counseling is essential to assist infected individuals to adopt behaviors that prevent them from infecting others, to prevent adverse psychological reactions, to assist family members of infected individuals to adopt infection-preventing behaviors, and to provide infected individuals with early psychological support coordinated with medical care.

Challenges are presented by the multiplicity of linguistic, cultural, racial and ethnic characteristics of various minority groups with HIV and AIDS. HIV and AIDS infected persons are often disadvantaged economically, educationally and socially. They are also underserved by the health and mental health care systems.

Dr. Walcott of UCLA has listed nine tasks for physicians who treat HIV/AIDS patients. They are:

1. Understand the psychosocial stresses and problems of HIV infected persons and their families.
2. Provide ongoing psychosocial support while encouraging hope, determination and autonomy.
3. Provide accurate information concerning treatment alternatives.
4. Recognize and treat mental health problems including anxiety, anger, anticipating grief, guilt and depression.
5. Recognize and treat any organic mental disorders.
6. Coordinate the medical system's response to the psychosocial distress and symptoms experienced by family, friends and partners.
7. Work to minimize the stress experienced by the other members of the AIDS care team.

The establishment of interdisciplinary care teams, task forces or case management systems for the care of persons with HIV spectrum illness does not automatically solve other problems inherent in service delivery. The stigma and discrimination patients experience requires attention, especially to the confidentiality of medical records.

Another consideration in treatment of HIV infected individuals is that those who have significant cognitive impairment due to AIDS-induced dementia will have difficulty complying with the treatment regimens. Close collaboration among community service organizations is necessary to provide in-home assistance. For example, providing transportation can frequently make outpatient treatment possible.

It should also be noted that AIDS often leads to mental health problems for the patient's family. Private insurers often discontinue the policies of AIDS patients making access to primary care and mental health services more difficult.

Developmentally Disabled Persons

The Department of Human Services, the Division of Developmental Disabilities (DDD), which administers services for persons with developmental disabilities, has an ongoing cooperative agreement with the Division of Mental Health and Hospitals to meet the mental health needs of the developmentally disabled. Over 300 State hospital patients (12%) have a primary or secondary diagnosis of mental retardation.

With a shift in the locus of care from specialized hospitals to community-based care, more than 500 formerly institutionalized developmentally disabled citizens now reside in community homes. As persons with developmental disabilities have been placed in the community, utilization of mental health programs by the developmentally disabled has increased. For example, developmentally disabled persons served in community mental health agencies increased by 23% between 1988 and 1990. Specialized programs are required to address their unique needs and disabilities.

Criminal Justice Offenders

Mental health needs have been historically neglected by the criminal justice system. This neglect has become acute as the rehabilitation role of the criminal justice system has been replaced by an increasingly punitive role over the last decade. Although courts frequently mandate that jails conduct mental health evaluations, many do not follow through. The courts may stipulate that mentally ill prisoners receive treatment for mental disorders, however most prisoners are untreated.

At a time when we know mental health needs of persons in prisons are increasing, services provided are decreasing. Between 1988 and 1990, annual episodes of care involving criminal justice-referred persons decreased by 2,174 in community mental health agencies. In State psychiatric hospitals in 1990, only two-thirds as many incarcerated persons were seen as in 1988. Outreach contacts from emergency screening services to persons in jails decreased during 1991 by 24% or 5,645 fewer outreach contacts (calculated from Table 16 SMHP).

The size of the prison population has been growing rapidly. In 1990, combined federal and state prisons were operating at 116% of their capacity. The United States has a larger proportion of its citizens in jail than any other developed country with the possible exception of countries included in the Soviet Union for which no data is available. There is no disagreement about the existence of overcrowding in the prison system.

Crowding is often identified with increased likelihood of mental disorders and behavioral disturbances due to excess stimulation, high stress levels, and lack of privacy. Crowding can precipitate an acute episode of mental illness and can increase the severity of a pre-exisitng mental disorder. It is not known whether overcrowding by itself is a sufficient stressor to cause mental illness. Animal studies show increased aggression and antisocial behavior when crowding exists.

One study found that two-thirds of persons confined to jail suffer from some form of mental disorder. Another survey in the mid-1980's found that almost 30% had an antisocial personality disorder, 17% had anxiety

disorders, 7% affective disorders and 1.5% were schizophrenic. An estimated 31,000 persons are in prisons in the United States, not for having committed a crime, but for displaying the symptoms of mental illness.

The Department of Psychiatry at Northwestern University Medical School found that a significant population of mentally ill, substance abusing persons are in prisons due to failures in the health and mental care systems. Persons with co-occurring psychiatric and addiction disabilities are over-represented compared to other settings.

Suicide is the leading cause of death among the prison population. Although minorities make up a large percentage of those incarcerated, the demographic profile of an inmate suicide victim is an unmarried, white male between 20 and 35 years of age. The highest risk period for suicide is the time immediately after admission. Another high risk time is after adjudication, and after experience of a humiliation or rejection.

Standards for prisons regarding suicide have been developed by 36 states. Only eight of these have standards specifically related to screening for suicidal behavior in initial assessment. Fewer than 12 states have policies and procedures regarding suicide prevention.

New Jersey has a "state of the art" detailed suicide regulation with several levels of intervention authorized. Two training packages are delivered to correctional officers at State, county, and juvenile detention facilities in two levels: primary training as a condition for newly hired personnel on suicide prevention and intervention and an advanced package based on understanding risk management for veteran officers, superintendents, and custody chiefs.

The State of New Jersey operates the Forensic Psychiatric Hospital (FPH) for persons judged not guilty by reason of insanity (NGRI) or incompetent to stand trial (IST) for any of seven serious crimes. Referrals to the FPH and other state psychiatric hospitals are made for evaluations of inmates from state prisons and county jails. The adult state psychiatric hospitals have patients with similar legal status, but for less serious crimes.

In the community, emergency screening centers provide mental health screening services for municipal and county jails and prisons. Emergency screening centers have established cooperative relationships with local police departments to educate police officers about the needs of the mentally ill and to coordinate outreach services.

Homeless Mentally Ill Persons

Mental disorders appear to be both a cause and a consequence of homelessness. Estimates of the prevalence of current mental illness among homeless persons range from 25% to 50%. A number of these people are former state mental hospital patients. The number of homeless persons has increased in part due to the discharge of state and county hospital patients, without an adequate community support network. An infrastructure of outpatient mental health services is sorely lacking. Comorbidity of mental illness, alcoholism, and drug addiction is high among the homeless.

Many homeless people are disconnected from supportive relationships and caretaking institutions. It is estimated that 7,800 homeless mentally ill adults live in New Jersey. They need a wide array of support services including psychosocial rehabilitation, outreach, case management, health care, and job training as well as the need for shelter, safety and nutrition.

Access to services is limited. Programs are overburdened by the growing needs and numbers of homeless persons in New Jersey. Programs for the homeless mentally ill served approximately 3,400 persons in 1991, compared to 2,000 served in 1990. This number represents less than one half of those in need, using DMH&H data sources. Reported contacts reflect admission to a service, not the adequacy of the service to meet individual needs.

Federal fiscal support for homeless programs, always inadequate, has moved up and down in recent years. In 1990, New Jersey received $1.7 million in federal funds for the homeless mentally ill. In 1991, $1.2 million was allocated. Related social services, not focused on the homeless, have not filled the gap.

The Mental Health Services to the Homeless Block Grant (MHSBG) funds mental health, social, and support services for persons who are mentally ill and homeless. The Division of Mental Health and Hospitals contracts with 22 agencies in 21 counties to provide outreach, crisis intervention, information and referral, case management, training, on-site residential staff, and drop-in centers.

Because New Jersey is one of only two states that has given top priority to the mentally ill for receipt of Section 8 housing certificates, the number of rental subsidies available to persons with mental illness has increased from approximately 1,100 in 1990 to over 2,000 in 1991. The receipt of such certificates by no means guarantees housing.

To better serve the homeless mentally ill, a consortium of government and private parties is necessary. As the state's economy has worsened due to recession, homeless shelters and programs across the State have experienced reductions in individual and organizational contributions. Unemployment is increasing and the number of homeless persons is rising at the same time that federal and local spending for homeless programs is declining.

PROFESSIONAL DEVELOPMENT

Six major health care professions serve the needs of persons with mental illness. They are nursing, psychiatry, primary care medicine, psychology, recreational and occupational therapy, and social work. Wages and benefits are less for health care professionals who work in mental health settings than for those who work in medical settings. Working conditions are less favorable, and for those who work in the public sector, these disparities are even greater. Graduate school curricula do not focus on the organization or need for service delivery in the public mental health sector.

Efforts to develop collaboration between state agencies, hospitals and universities have been neglected in New Jersey. Over the past thirty years universities and medical schools have relied upon university teaching hospitals and clinics for training of health care professionals. In the absence of education and experience in the public agency settings, an estrangement from the public sector has developed.

Public agencies experience mental health personnel shortages and lose the benefit of research approaches to program development and evaluation on behalf of persons with serious mental illness. In contrast, the private sector tends to attract graduates because of familiarity and higher pay.

For many consumers, the stigma associated with mental illness makes the use of mental health services a last resort. Help from family members, general and religious practitioners, or folk remedies are usually sought first. Professional services are sought only when problems become severe or when external pressure is applied.

Underutilization of mental health services has been linked to cultural and value differences between mental health staff and consumers from ethnically and culturally diverse backgrounds. Three types of shortages limit the availability of culturally sensitive services. All three must be addressed in order to offer effective mental health services to the increasingly diverse population in New Jersey. The shortages are:

1. Most public agencies have insufficient numbers of trained staff who can bridge cultural and language differences.
2. There is a shortage of ethnically diverse representation in professional and management positions.
3. The proportion of ethnically diverse populations enrolling in and graduating from academic training programs in the mental health and medical professions has not increased and in some cases has decreased over the past ten years, although presence of ethnically diverse staff in hospitals and public mental health agencies has proven to have a positive effect on utilization of mental health services by ethnically diverse persons.

FINANCING AND THE ECONOMIC IMPACT OF MENTAL ILLNESS

According to the National Institute of Mental Health (NIMH) mental illness costs the country $129 billion annually. Schizophrenia alone costs $50 billion in psychopharmacology and physician visits and $29 billion in lost income. Family crisis services account for the rest.

Sources of financing mental health in New Jersey are varied and not well coordinated. Funding sources include but are not limited to: State funds allocated to DMH&H, and the University of Medicine and Dentistry of New Jersey; State match for federal Medicaid dollars; federal grants; federal Medicaid and Medicare funding; county and municipal funds; third party insurance; self payers; charitable organizations; and the Trust Fund.

The range of mental health providers that receive public funds includes: non-profit community agencies, State-operated psychiatric hospitals, county-operated psychiatric hospitals, University of Medicine and Dentistry of New Jersey inpatient and outpatient services, and general hospitals.

In FY 1992, operating the public mental health system in New Jersey will require $817 million. The state of New Jersey finances 61% of these expenditures. Federal funds will support 18% of these costs, third party

insurance and private pay will contribute 10%, the Trust Fund will pay for 5% and other sources will account for 6% of the total funding. (Figures 9, 10 and 11 of the SMHP detail these financing sources.)

The funding of primary prevention programs comes mainly from public health, human services and education budgets. Almost none of these services are funded by the mental health budget described above. The funds and programs for publicly supported mental health patients are administered by the Department of Human Services where the emphasis is on decreasing inpatient care and increasing community support to the seriously mentally ill. However, the Department of Health is committed to a partial shifting of emphasis and resources from tertiary care to primary prevention activities. The two Departments have different aspects of mental health care which they oversee and regulate. Forging an agreed-upon agenda in the area of mental health resource allocation is a challenge.

Intensive 24-hour inpatient care in hospital settings is more costly than outpatient care. Although 81% of episodes of care are provided in community mental health agency settings, 71% of expenditures support psychiatric care in acute care, state, and county hospital settings. (See Figure 9.) Fiscal and human resources are re-directed as appropriate to support community based care for persons experiencing mental and emotional disorders.

The Trust Fund which supports hospital and other medical care for uninsured persons is in a refinancing crisis. The theme of providing less costly care in less costly settings remains a cornerstone of all discussion. Outpatient and partial hospital care constitute these services. They have been shown to save dollars. As the Trust Fund is reconceptualized the Department will support and promote demonstration projects which illustrate how mental health cost savings can be achieved.

In spite of the demonstrated cost-effectiveness of mental health intervention, employers and insurers are reluctant to provide mental health benefits, citing the potential for excessive use and lack of predictability. However, studies have shown that utilization of mental health services is predictable and stable and not likely to increase dramatically when added as a covered benefit.

Figure 9

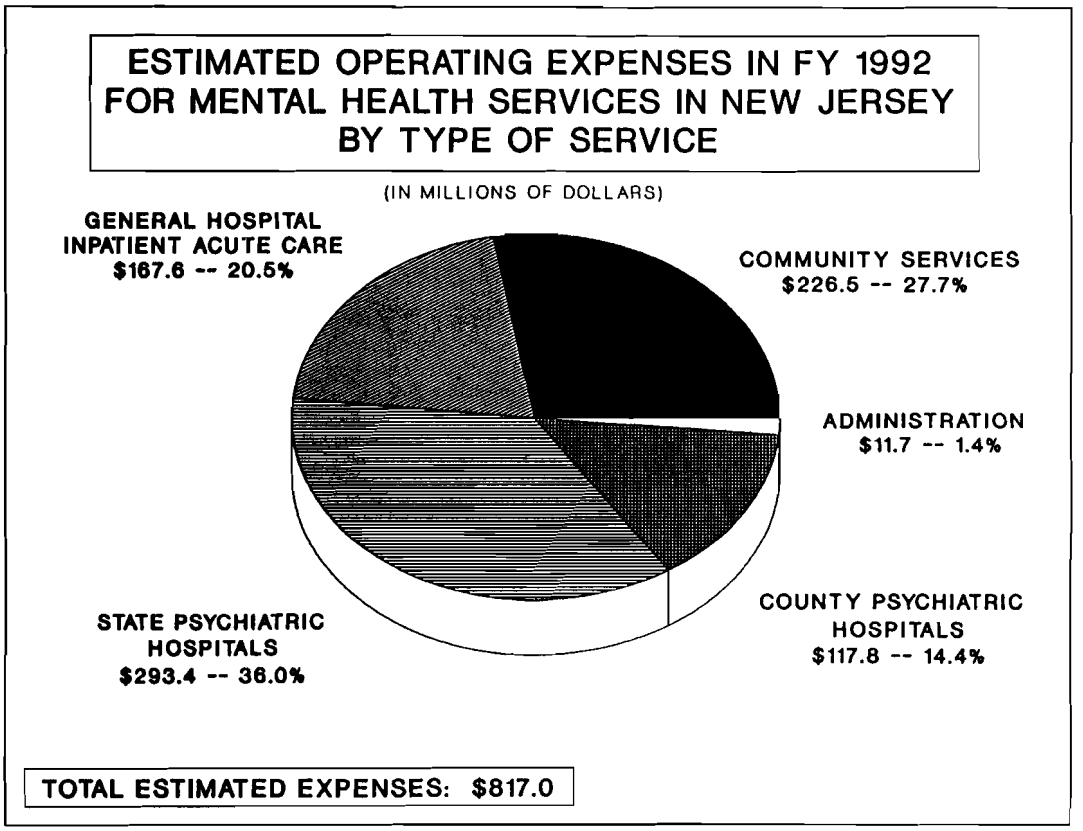


Figure 10

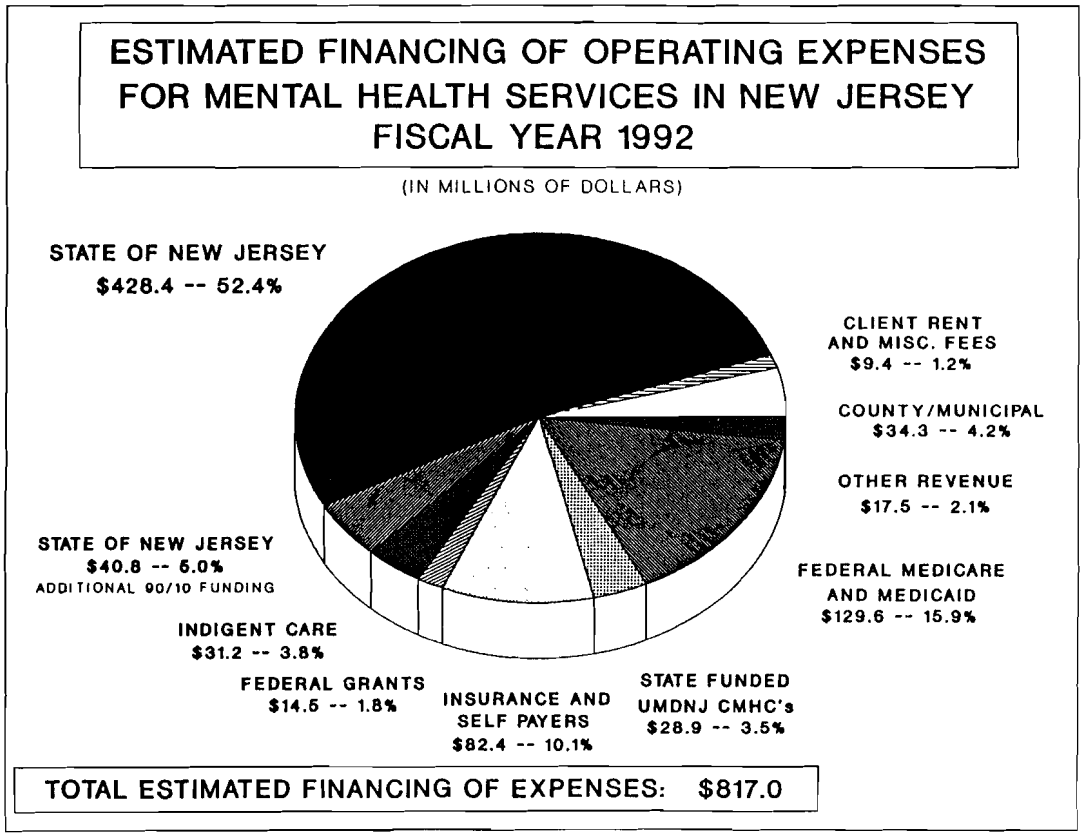


Figure 11

TOTAL ESTIMATED FINANCING OF EXPENSES IN FY 1992 FOR MENTAL HEALTH SERVICES IN NEW JERSEY

REVENUE SOURCE	AMOUNT	PERCENT
STATE OF NEW JERSEY	$469.2	57.4
DIV. OF MENTAL HEALTH AND HOSP. FUNDING	$377.8	
ADDITIONAL 90/10 FUNDING	40.8	
STATE MEDICAID SHARE	48.5	
OTHER	2.1	
FEDERAL MEDICARE/MEDICAID	129.6	15.9
MEDICARE	$81.1	
MEDICAID	48.5	
INSURANCE AND SELF PAYERS	82.4	10.1
COUNTY/MUNICIPAL	34.3	4.2
INDIGENT CARE	31.2	4.8
STATE FUNDED UMDNJ CMHC's	28.9	3.5
OTHER REVENUE	17.5	2.1
FEDERAL GRANTS	14.5	1.8
CLIENT RENT AND MISC. FEES	9.4	1.2
TOTAL REVENUES - ALL SOURCES	$817.0	100.0

(in millions)

A study designed by the Rand Corporation found that those who most need psychological services are the most likely to seek the help regardless of insurance coverage. That is, people access mental health services because they need them, not because the services are covered by insurance. Another study revealed that after a slight initial increase, federal employees use of mental health services did not vary more than .5% in the eleven years following Blue Cross and Blue Shield inclusion of mental health benefits.

When originated, Medicaid and Medicare specifically would not make payments to "institutions for mental diseases". In 1972 the Social Security Act was modified to include persons under 21 for reimbursement. Medicare pays for those 65 and over. The net effect is omission of coverage for state, county and some private institutions for persons 22 to 64. Any expansion of benefits and services has to take into consideration the unique lack of coverage for this age group.

The Coalition for Comprehensive Health Care of New Jersey represents ten mental health, addiction and health care groups. In January 1992, a comprehensive report was published assessing the impact of the erosion of insurance coverage for mental health and addiction. Among the findings are the following:

1. The prevalence of serious mental illness may be one-third greater among the uninsured than among the insured; mental health coverage should be included in any health plan for the uninsured.
2. Total economic costs of mental illness and addiction in New Jersey is $8.3 to $9.7 billion.
3. Although only one in 20 discharges from hospitals is for mental illness and addiction, one in seven discharges eventually covered by the uncompensated care trust fund was for mental illness or addiction.
4. The average length of a mental health or addiction hospital stay is substantially shorter for people who are self-pay or charity care leading to the conclusion that either the insured are kept too long or the uninsured are released too soon.
5. Insurers may wish to authorize various levels of care based on type of mental illness.
6. Mental health and addiction coverage is subject to restrictions not applied for other illnesses, especially outpatient benefits are less generous, although evidence suggests outpatient reduces use of inpatient care.
7. Mental health and addictions comprise 10-15% of health care costs, and appropriate managed care can successfully control these costs.
8. Use of outpatient mental health care is more responsive to cost sharing than use of physical health services. Control of spending must be balanced with maintaining access.
9. Insurance coverage of effective treatment alternatives to expensive hospital care, such as counseling by non-medical professionals and halfway houses, and can result in significant cost savings.
10. Health care use declines following expanded use of mental health and addiction services.

There is a need to follow up on the Commission's report and the above-referenced points, to promote the coverage of appropriate mental health care as a means of controlling overall health spending as well as promoting individual wellbeing.

DESCRIPTION OF EXISTING SERVICE DELIVERY SYSTEM

A description of existing mental health services and providers is contained in Appendix A.

RECOMMENDATIONS

Primary Prevention

1. Support and develop public policies and programs as well as private initiatives aimed at meeting New Jerseyans' basic needs including housing, safety, and nutrition. The disproportionately high rates of mental illness among impoverished and homeless populations attests to the need for an aggressive attack on those societal problems.

2. Establish educational programs in schools and other community settings which teach coping skills such as conflict resolution, and stress management.

3. Support basic research into the causes of mental illness and applied research to evaluate the effectiveness of interventions aimed at preventing mental disorders.

4. Promote the development of community services which substitute for the supports that are traditionally available to individuals through the close proximity of extended family and a stable community. These services include, for example, child care, grief counseling, and tutoring.

5. Increase the availability of primary health care. This is outlined more specifically in the Prevention and Primary Care Chapter.

6. Expand the number of sites for the School-Based Youth Services Program, with new sites targeted to underserved areas of the State.

Secondary Prevention

1. Increase the public's ability to recognize warning signs of mental illness and increase awareness of screening and use of treatment resources;

2. Provide non-judgmental mental health screening as appropriate when there is a medical contact for illness or injury. Specific recommendations to implement this recommendation include:

   a. Select a reliable and valid screening instrument; conduct field testing as necessary.
   b. Develop mental health screening curriculum, films, and training for health care professionals regarding use of the screening instrument.
   c. Select one Local Advisory Board area to conduct a demonstration of the screening in health care provider patient contacts.
   d. Implement assessment and referral training for employees of health care institutions and programs within two years of the completion of the training curriculum.
   e. Incorporate ongoing continuing education components at the University of Medicine and Dentistry of New Jersey, the New Jersey Hospital Association, the New Jersey Medical Society, the New Jersey Mental Health Association, and the Academy of Medicine.
   f. Include a mental health screening as part of the twelve hour evaluation process in Intoxicated Driver Resource Centers.
   g. Cooperate with the Department of Human Service's Division of Mental Health and Hospitals, and the Governor's Council on Alcoholism and Drug Abuse in the development of a comprehensive assessment tool for determining mentally ill chemical abusers for use by both systems.
   h. Cooperate with the Department of Education to train student assistance counselors in grades K-12 to recognize the symptoms of depression and to intervene and refer for treatment students at risk for mental illness as distinct from those in need of special education. Training should be supported by policy changes by the Department of Education encouraging the expansion of services to students at risk of mental illness.
   i. The Departments of Health, Human Services, and Corrections should establish protocols for assessing suicidal behaviors and ensuring mental health follow up in correctional institutions.
   j. The Department of Health, in cooperation with the Department of Human Services, will ensure that addiction screening described in N.J.A.C. 8:100-8.3 is expanded to the 21 county mental health screening centers.

3. Develop Early Periodic Screening and Diagnostic Testing (EPSDT) as a broader mechanism to screen for mental illness in children.

4. Through early assessment, diagnosis, and treatment, reduce the prevalence of mental disorders among children and adolescents.

Tertiary Prevention

1. Primary health care services should be available for all mentally ill persons. Given the interaction of various mental states and treatments with physical ailments, a cross-referral network for appropriate consultation and follow-up is vital to the achievement of this goal.

   a. Dissemination of information about where primary care can be located.
   b. Ensuring that mental health patient record keeping reflects regular primary health care service provision, as appropriate.
   c. Encouragement of interagency referral agreements to specify terms and conditions of transfer of information in compliance with confidentiality laws, rules and regulations concerning patient records.

2. Use the least restrictive setting for treatment of persons with mental illness, as described in the State Mental Health Plan, under the terms of P.L. 99-660, and the Department of Human Services Facilities Master Plan (1992). To achieve this goal the following steps are recommended.

a. Community-based outpatient mental health services should be expanded.
b. Outpatient services must be affordable to all, regardless of economic or insurance status.
c. Review the respective roles of the public outpatient care services at community mental health agencies, local hospitals, and private outpatient facilities.
d. Develop a method of ensuring continued access to out-patient mental health services and continued psychopharmacological care as appropriate for those who cannot afford to pay.
e. The Department of Health, in consultation with the Department of Human Services and the Department of Insurance, should review health insurance policies and make recommendations regarding minimal coverage as it relates to mental health.
f. The Department of Health encourages the Department of Human Services and the Department of Insurance to review insurer criteria and protocol related to inpatient psychiatric care to insure that quality of care is a standard in addition to cost savings.
g. The Department of Health, in cooperation with the Departments of Human Services and Insurance, supports model legislation to assure the responsible practice of utilization review providers, thereby protecting mental health patients from harmful practices such as inappropriate referrals, reimbursement decisions made by unskilled individuals without patient contact, and use of decision-making criteria which are not public.

3. Inpatient care for the mentally ill should be developed as a community centered and coordinated system as follows:
a. The Department of Health should request Certificate of Need Applications for Short Term Care Facilities in the eight counties that have a bed need up to the 102 bed formula contained in the mental health planning rules.
b. The Department of Health should request Certificate of Need Applications for Open Acute Beds to accompany Short Term Care Facility beds as specified in the planning rules.
c. The Department of Health should permit Certificate of Need Applications for Child and Adolescent Acute Psychiatric beds in facilities with over ninety percent occupancy during one year prior to submission of application.
d. The Department of Health should permit Certificate of Need Applications for Adult Closed Acute Psychiatric beds (STCF's) from facilities with over ninety percent occupancy, during one year prior to submission of the application.
e. The Department of Health should promote full implementation of child and adolescent intermediate psychiatric beds, as previously authorized and under development, by evaluating those not implemented and removing barriers, or revoking authorization as appropriate.
f. The Department of Health should not receive applications for the establishment of adult intermediate and specialty beds pending a thorough review of the definition of need for and the distribution of beds for this level of care and subsequent revision of appropriate planning rules.
g. The Department of Health and the Department of Human Services should amend existing planning rules to authorize establishment of a Uniform Mental Health Taxonomy of regulated beds.
h. The Department of Health should amend the planning rules for adult closed acute psychiatric beds to change the requirement for adult open acute psychiatric beds from 90% occupancy to 80% occupancy prior to adding closed acute beds, if the applicant can demonstrate that the unit will be at 90% occupancy within two years.
i. The Department of Health, in cooperation with the Department of Human Services, will develop planning rules for child and adolescent beds, using the evaluation of the two demonstration projects, by 1995.
j. The Department of Health and the Department of Human Services will review data to determine need for geropsychiatric in-patient and out-patient services.
k. The Department of Health supports the Department of Human Services Facilities Master Plan to consolidate State Psychiatric Hospitals, with forward funding of community-based alternatives.
l. The Department of Health and the Department of Human Services should issue advisories and training to mental health provider agencies to achieve compliance with the smoking ban extension to health care facilities proposed in N.J.A.C. 8:100-8.2(g)6.

Planning and Coordination of Health and Mental Health Services

1. The Department of Health and the Department of Human Services will conduct a review of Trust Fund utilization for mental health services and make recommendations to increase earlier and less restrictive care. Consideration will be given to extending reimbursement to non-hospital based providers, especially primary health care services for mentally ill and addicted homeless persons, as appropriate and consistent with the plan.

2. The Department of Health or the Department of Human Services licensed or contracted mental health agencies and all state psychiatric hospitals will be smoke free no later than January 1, 1996.

3. The Department of Health and the Department of Human Services should promote comprehensive local and regional mental health services review and planning as follows:
a. Local Advisory Boards should consult with County Mental Health Boards regarding Certificate of Need Applications from their respective counties.
b. Local Advisory Boards should consult with County Mental Health Boards when proposing revisions to the State Health Plan in the area of mental health.
c. Local Advisory Boards should appoint a member of a County Mental Health Board in the Region or designee, to the Board or Plan Committee.
d. The two Departments will foster and encourage joint training events and planning sessions for mental health planners, leaders, consumers, and families with staff and board members of LAB's, especially promoting the development of locally determined needs data for psychotropic drug access and psychotherapeutic treatment services availability.
e. The Department of Health shall promote the redesignation of acute care beds for use, as locally determined needs data suggest, as psychiatric and addiction treatment services, rather than the building of new beds.
f. The two Departments will provide training to county and regional health and mental health planners on the State Mental Health Plan for Children and Adults and the Mental Health Chapter of the State Health Plan.
g. The LABs are encouraged and advised to appoint consumers and family members of consumers of mental health and addiction programs to LAB board and committee positions.

4. The Department of Health and the Department of Human Services recognize the need for data and research to improve mental health and health care planning and to support demonstration projects, with particular emphasis in the areas of epidemiology, medical effectiveness and patient outcomes, technology, clinical practice guidelines, database development, information dissemination, and biostatistics.

Underserved Populations

The Department of Health in cooperation with the Department of Human Services is committed to overcoming the unique obstacles to care experienced by the elderly, the disabled, persons with AIDS and HIV infection, minorities, women and children, the homeless, persons with addiction, survivors of trauma, and mentally ill persons who are in the criminal justice system.

1. The Department of Health should maintain and extend the availability of the seven percent setaside of nursing home beds for the geriatric population with mental illness for use by nursing homes and short term care facilities.

2. The Department of Health in cooperation with the Department of Human Services should seek to find and replicate effective models of care for persons with organic brain syndrome, dementia, and other related problems.

3. The two Departments should promote psychiatric evaluations in long term care facilities and propose a placement need methodology for establishment of regional geropsychiatric units, which may include the establishment of a new category of care for psychiatric nursing home placement.

4. The Department of Health, in cooperation with the Department of Human Services, will establish a bed need methodology for establishing regional bed need for specialized services for mentally ill

chemical abusers, and psychiatric patients with HIV infection or AIDS, to supplement specialized services within generic units.

5. The two Departments will evaluate the impact of lack of access to addiction treatment for addicted persons, whether they are mentally ill or not, especially as it leads to inappropriate use of mental health services.

6. The Departments of Health, Human Services and Corrections will develop a means of ensuring follow up care for persons who are diagnosed with mental illness, and those with mental illness and HIV infection and AIDS, in correctional facilities to ensure access to psychopharmacological support and psychotherapy as appropriate.

7. Maintain and enhance the infrastructure necessary for the future implementation of the Children's Commitment Law which is currently under development to address mental health screening and commitment of children and emergency service provision in acute care hospitals.

8. Increase the number of designated mental health Screening Centers employing child psychiatrists.

9. Monitor the re-evaluation of the adequacy of community Children's Crisis Intervention and Stabilization (CCIS) bed need methodology and revise as necessary.

10. Monitor the assessment and evaluation of children who are in need of psychopharmacological treatment by pediatricians versus services provided by child psychiatrists.

11. Increase the proportion of providers of primary care for children offering assessment of cognitive, emotional and parent-child functioning, with appropriate counseling, referral, and follow-up.

12. Increase the number of counties that monitor service systems for children at risk of hospitalization.

13. Explore additional financing including a Community Services Waiver to allow and encourage the use of community services in lieu of in-patient services for Medicaid eligible children and adolescents.

14. Enhance the availability and accessibility of services for mentally ill chemical abusers (MICA) under the age of eighteen.

a. Increase the number of clinicians trained in MICA services for children and adolescents.
b. Design and pilot a transitional "halfway house" model as an alternative to the Arthur Brisbane Child Treatment Center for MICA children and adolescents on psychotropic medication. Conduct a needs assessment to determine the location.
c. Develop an affiliation agreement between the Department of Health and the Department of Human Services to require that approval of future applications for Certificates of Need for addictions require non-discrimination in admission of children and adolescents on psychotropic medication, and to affirm that the MICA population under eighteen years of age will be a priority for prevention and early intervention services and funds.
d. Implement two previously approved Certificates of Need involving child and adolescent Intermediate Beds in acute care hospitals to ensure that appropriate, least restrictive, levels of care are available in the community.

Professional Development

1. The Department of Health and the Department of Human Services are experiencing the consequences of shortages of qualified health and mental health professionals to serve persons with mental illness, especially children and adolescents. The two Departments will prepare a plan, or legislative proposal, containing incentives for treating Medicaid covered and uninsured persons with mental illness. This plan should be prepared in cooperation with appropriate professional associations and educational institutions.

2. The Department of Health, in cooperation with the Department of Human Services, will promote the development of collaborative efforts with the University of Medicine and Dentistry of New Jersey in the areas of initial assessment of mental health service need, education and training of professionals to provide community based prevention, intervention, treatment and support to persons with mental illness, professional development, and research.

a. Promote the development of curricula in the area of health care needs of mentally ill persons.
b. Support family practice and primary care residency positions at sites which care for large numbers of mentally ill persons.
c. Support primary care mental health fellowships at post residency level to ensure comprehensive training for physicians who will care for children, adolescents, adults, and elders with mental illness.
d. Develop continuing medical educational activities on primary care and subspecialty clinical topics related to mental illness.
e. Promote educational mental health programs at the undergraduate, graduate, post-graduate, and continuing education level for allied health care professionals, including physician's assistants, nurses, social workers, psychologists, pharmacists and other health and mental health workers.
f. Develop a mental health educational pathway in the Family Health Track of the New Jersey Graduate Program in Public Health (UMDNJ, RWJ Medical School and Rutgers University) to allow for a mental health concentration for MPH students.

APPENDIX A: DESCRIPTION OF EXISTING SERVICE DELIVERY SYSTEM

Only in the late twentieth century have mental disorders become accepted as mainstream health care concerns. In the current generation, persons with these illnesses have been regarded as sick, instead of bad or even criminal. Persons in recovery from mental illness, their friends and families, and the professionals who serve them are protective of this newfound acceptance. However, psychiatric services remain ancillary to the mainstream health care delivery system and, not surprisingly, a two-tiered system of care has evolved: one for those who are insured, and one for those who are not.

Historical Overview

Mental illness first received attention in New Jersey in the early 1800's. Concerned persons, distressed by deplorable conditions in the care of mentally ill persons, attempted to convince the Legislature that the State government had a responsibility to the mentally ill. The principle of public responsibility for progressive, humane care of the mentally ill was established in New Jersey.

Dorothea Lynd Dix, founder of the movement to improve care for mentally ill persons, visited almshouses and jails, publicizing the offensive conditions she found there. Her "Memorial to the New Jersey Legislature" led to the 1845 enactment of legislation to create Trenton Psychiatric Hospital.

Overcrowding at Trenton Psychiatric Hospital led to establishment of New Jersey's second institution, Greystone Park Psychiatric Hospital. In 1876, President Ulysses S. Grant presided at the opening of Greystone Hospital, which had a capacity for 600 patients. Essex County Hospital was established in 1872 as a temporary poorhouse and barracks. Hudson County's first asylum was established in 1873, and the Camden County asylum was established in 1879.

The county psychiatric hospitals arose in response to the high cost of state sponsored institutional care. County officials provided shelter and care for indigent mentally ill residents efficiently, and at less expense, than in State facilities. County facilities operated as poorhouses in early days, providing little medical or mental health treatment.

The next wave of psychiatric facility construction took place during the first half of the twentieth century. Two adult State psychiatric facilities were built. In 1931, Marlboro Psychiatric Hospital was opened to relieve overcrowding at Greystone, and Ancora Psychiatric Hospital was opened in 1955 to relieve overcrowding at the other three facilities.

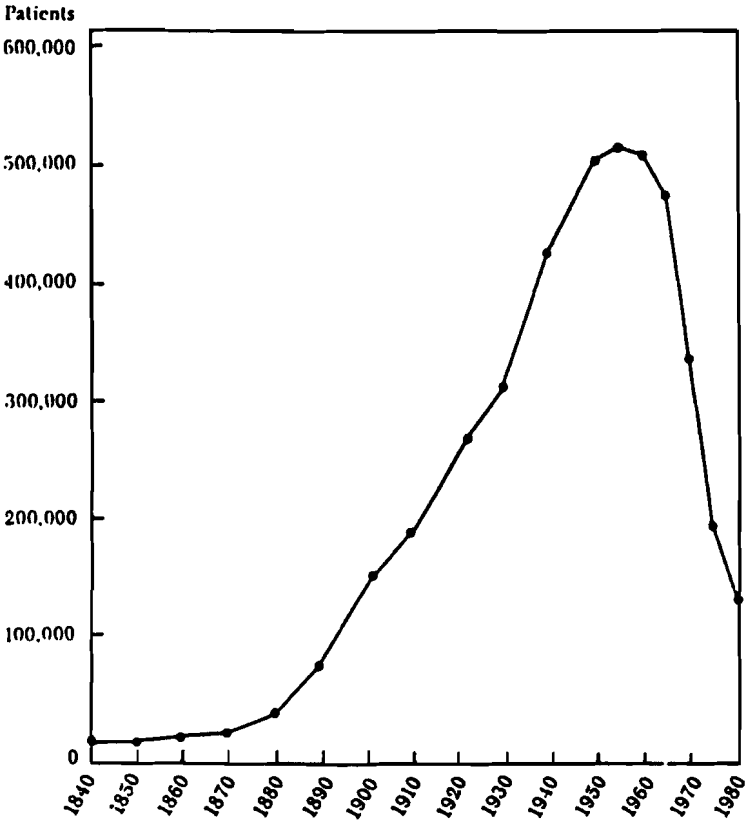
Although most of the facility construction and growth in New Jersey occurred prior to 1950, patient census peaked in the 1950's. In 1963, the average resident population in State hospitals in New Jersey was 14,047 persons. Trenton Psychiatric Hospital, which served 86 patients in 1846, reached an average daily census of over 4,000 patients in the 1950's. In 1955, state hospital census, nationally, peaked at about one half million persons. See the chart ("The Mass Exodus"), showing national trends in state hospital occupancy in this time period.

From Institutional to Community Care

In the last half of this century, the theme in mental health services has been the substitution of a community-based mental health network for institutional care. In the fifties, the National Institute of Mental Health (NIMH) presented the national plan for "deinstitutionalizing" persons with mental illness. Institutions were to be replaced with community-based treatment. Over the past 15 years, average yearly resident population of state and county psychiatric hospitals has decreased steadily.

Concurrently, mental health care across the country was altered by four simultaneous developments. First, neuro-leptic medications were discovered providing control over the disturbing symptoms of mental illness. Second, advocates voiced concern about the deplorable conditions

The Mass Exodus: Inpatients in Public Mental Hospitals
1840–1980



NUMBER OF COMMUNITY BASED SERVICES BY HEALTH PLANNING AREA
FY 88 TO FY 91

PROGRAM ELEMENT	FY 88 AREA I	II	III	IV	V	VI	Total	FY 91 AREA I	II	III	IV	V	VI	Total
STCF Units	0	0	0	0	0	0	0	2	2	2	0	2	0	8
Designated Screening	0	0	0	0	0	0	0	4	2	4	4	5	4	23
Emergency Services	10	11	11	10	5	10	57	9	11	7	5	0	3	37 *
Case Management	4	2	5	6	6	7	30	9	6	6	11	11	10	53
Liaison	7	14	9	6	7	7	50	8	10	7	6	6	7	44
Partial Care	14	13	14	11	13	16	81	13	11	13	11	15	13	78 *
Residential	13	11	7	6	7	9	53	16	10	9	6	10	12	69 *
Outpatient	12	13	13	10	8	11	67	15	11	15	11	9	14	78 *
Systems/Advocacy	4	3	5	2	1	6	24 *	5	3	5	3	1	5	23 *
Supported Employment	0	0	1	0	0	0	1	2	0	2	0	3	2	9
Consumer Drop-in Centers	1	1	1	0	2	2	7	2	1	2	2	2	2	11
Family Support	0	0	0	0	0	0	0	0	0	1	1	3	3	8
Consultation & Education	6	10	7	6	4	4	39 *	4	9	7	4	3	4	35 *

Source: DMH&H, August 1991.
* Totals include statewide programs.

in State hospital systems. Third, psychosocial therapeutic methods and rehabilitative techniques made community care alternatives possible. Fourth, mental health providers documented evidence of the debilitative effect of long term institutionalization on patients.

Between 1988 and 1991, community-based services expanded. The chart ("Number of Community Based Services") illustrates recent changes in the range and number of programs to serve the SMI in New Jersey, with substantial increases in case management, outpatient, supported employment, and family support programs. Although emergency services decreased, they were supplanted by newly created, designated screening centers. Table 7 shows changes in admissions to community programs and hospital inpatient services. The rate of admissions to community agencies increased from 177 per 10,000 resident population in 1988 to 208 per 10,000 population in 1991, while the rate of patients in State and county psychiatric hospitals decreased slightly.

Admissions to acute (nongovernmental) hospital inpatient units have increased. Progress has been achieved in reducing inappropriate admissions to State and county psychiatric hospitals. Increased community-based inpatient and outpatient treatment services are now available to individuals in need of crisis stabilization and acute care.

Respective State Department's Roles

In most states, there is a single agency to manage all mental health services. New Jersey is unique in that two Departments, Health (DOH) and Human Services (DHS) share joint authority in the regulation and planning of mental health systems.

The Division of Mental Health Hospitals (DMH&H) of the DHS is recognized as the "State Mental Health Authority" by the U.S. Public Health Service, and is responsible for the operating, funding, and regulating of mental health facilities, under the terms of Title 30, N.J.S.A. In New Jersey, the Division of Mental Health and Hospitals provides services in four adult psychiatric and three specialty hospitals.

As recommended in the 1976 Manual for Reform the role of DMH&H has shifted from primary provider of direct mental health care to that of designing, purchasing, and regulating a decentralized system for providing mental health services. DMH&H has expanded the range of community mental health programs by using public funds to purchase services for seriously mentally ill persons from private, non-profit community agencies.

DMH&H is responsible for the State Mental Health Plan as required by federal law (P.L. 99-660). In 1986, President Reagan signed P.L. 99-660, Title V, the Comprehensive State Mental Health Services Act, mandating State planning for community mental health services for persons with severe and persistent mental illness. The law requires each State to update the plan annually for the National Institute of Mental Health (NIMH).

The purpose of the State Mental Health Planning Council is to develop the State Mental Health Plan. State agencies, whose policies and programs have an impact on the quality of life of the mentally ill, are required to participate in the development of the Plan. The Department of Health is represented on the Mental Health Planning Council.

The DOH is responsible for planning and rationalizing the growth of the health care system. The DOH, with advice and support from DHS, is responsible for certificate of need approval, licensing inspection, and some rate setting of non-State operated health care facilities under N.J.S.A. 26.

The State Health Planning Board, an advisory board to the Commissioner of Health, is responsible for preparing the State Health Plan and recommending Certificate of Need approvals in cooperation with the Local Advisory Boards. The Department of Human Services is represented on the State Health Planning Board.

Mental health services provided by licensed general hospitals are the most regulated by DOH (CN, licensing and rates). Mental health services provided by private psychiatric hospitals are somewhat regulated by DOH (CN and licensing). Mental health services provided by local community out-patient programs are almost unregulated by DOH (licensing). State hospitals are not regulated by DOH.

DOH licensed health care facilities that provide mental health services and receive third party reimbursement must receive a Certificate of Need before making expenditures above prescribed limits. In order to maintain a valid New Jersey license, facilities must be inspected annually. The DHS supports these regulatory activities with staff of the DMH&H, who help review CN applications and conduct licensure inspections of mental health facilities. The Screening and Commitment Law (P.L. 1987, Chapter 116) acknowledges the overlap in the authority of the two departments in mandating the development of Short Term Care Facilities (STCFs) within general acute care hospitals. The Screening and Commitment Law authorizes the Commissioner of Human Services to designate the STCFs in mental health regions "in consultation with the Commissioner of Health."

A Short Term Care Facility (STCF) must meet Certificate of Need requirements and be licensed by the DOH "in accordance with standards developed jointly with the Commissioner of Human Services." The two departments have shared a collaborative relationship in developing policy and implementing a community based system of mental health care. An interdepartmental agreement, established in 1985, describes the joint policy of both departments to encourage the statewide growth of needed STCF beds.

The Mental Health Chapter of the State Health Plan is a product of the continuing close interdepartmental coordination between the DOH and the DHS. It is designed to provide guidance in priority setting and policy development for mental health services. Many of the policy and service planning issues and recommendations presented in this chapter of the State Health Plan also appear in the State Mental Health Plan, prepared and updated annually by DMH&H, and the Facilities Master Plan of DHS, prepared in Feburary, 1992.

Regional and County Role

Each county has a Mental Health Board and Mental Health Administrator mandated by legislation and responsible to DHS to determine local mental health planning needs. Local Advisory Boards (LABs) are responsible to DOH for health planning in multi-county regions designated by the Governor. LABs review Certificate of Need applications and develop the state Health Plan for the region (Chapter 187, 1991).

Historically, DOH regulations mandated Mental Health Board review and comment on Certificate of Need (CN) applications for mental health services. This consultative relationship in regional planning and CN review is expected to continue, in cooperation with the LABs.

Human Services Advisory Councils (HSACs) coordinate human services activities in each of the twenty-one counties in New Jersey. HSACs oversee all DHS expenditures in each county.

To be effective, mental health planning and evaluations require the informed participation of health and mental health planners, providers, the public, and experts. County Mental Health Boards and Human Services Advisory Councils are encouraged to seek and to provide liaison membership to LAB's and committees; in addition, LABs are encouraged to seek HSAC and Mental Health Board representation on the Local Advisory Board and committees.

Examples of collaboration include the following: prevention activities, access, uncompensated care, insurance coverage for mental health, human resources, bed needs, conversion strategies (especially psychiatric inpatient), health care needs of persons with serious mental illness, primary care needs of children and adolescents, and other underserved groups such as, the elderly, homeless persons, racial and ethnic minorities, and mentally ill chemical abusers (MICA).

Distribution of Mental Health Services

Designated Screening Centers, Short Term Care Facilities, Supported Employment programs, consumer drop-in centers, and intensive family support programs are new services that have been developed during recent years. Designated Screening Centers are located in every county, as required by law; most other programs are not yet evenly distributed throughout the state. Nonetheless, almost all counties have at least one community support program, such as case management, liaison, partial care, residential care, or outpatient services.

Short Term Care Facilities, critical to implementation of the Screening and Commitment Law, are the entry component of the community based mental health acute care system; however, they currently exist in only seven counties. Other community support programs for persons with mental illness that are not easily quantifiable include: self-help groups, family support groups, home care programs, and private sector services.

The "Adult Psychiatric Bed Inventory—1990" which follows the chapter is divided into acute care hospital, county hospital and special hospital providers. They are further divided by the type of psychiatric service that is provided (adult, child/adolescent bed categories). The "Other" category includes special hospitals, MICA, and sub-acute psychiatric beds.

Between 1975 and 1991 (see Table 14, "Average Yearly Resident Population") average yearly resident population in state and county psychiatric hospitals decreased from 9,129 to 3,575. This trend is expected to continue with the master plan forecasting the closing of all adult state mental hospitals by the year 2000.

As the size of the resident population in public psychiatric hospitals has decreased, the complexity of the treatment and rehabilitation needs of patients have increased. The State hospital system is prepared to provide acute, intermediate, and long term care, for persons who are seriously mentally ill and not appropriate for community inpatient settings.

Table 14

AVERAGE YEARLY RESIDENT POPULATION
STATE AND COUNTY PSYCHIATRIC HOSPITALS
FISCAL YEARS 1975-1991

AVERAGE RESIDENT POPULATION

FISCAL YEAR	STATE HOSPITALS	COUNTY HOSPITALS	TOTAL
1975	5,430	3,699	9,129
1976	4,858	3,247	8,105
1977	4,367	2,829	7,196
1978	4,187	2,302	6,489
1979	4,011	2,193	6,204
1980	3,938	1,992	5,930
1981	3,622	1,795	5,417
1982	3,569	1,547	5,116
1983	3,553	1,389	4,942
1984	3,557	1,296	4,853
1985	3,318	1,230	4,548
1986	3,117	1,181	4,298
1987	3,086	1,088	4,174
1988	3,068	1,064	4,132
1989	3,063	835	3,898
1990	2,940	765	3,705
1991	2,853	722	3,575

Source: DMH&H unpublished data, FY 1975-1991

State hospitals provide several distinct services as follows:

1. Separate and serve patients with aggressive behaviors apart from withdrawn or self-destructive individuals;
2. Establish a forensic continuum that provides service to individuals acquitted of violent crimes by reason of insanity, or, who are incapable of standing trial;
3. Specialized medical/psychiatric units for persons whose medical conditions warrant isolation;
4. Care and treatment for those who require active mental health treatment; and
5. Support for families of hospitalized individuals.

Despite improvements over the past 15 years, maintenance of these facilities, in accordance with life-safety codes and licensure standards, is an extraordinary and expensive feat. Despite declining census figures over the past several decades, efficient and effective operation of large, antiquated institutional facilities remains costly. The three oldest facilities in the state are the most expensive to operate.

Improved quality of care for patients and family members cost money. For example, specialized psychiatric units have enriched staffing patterns compared to general medical surgical bed units, however, the staffing required is still less than national professional bodies recommend. Other factors which contribute to the increasing costs of care are: inflation, employee salary and benefit upgrades, provision of better treatment services, capital improvements, facility modernization, accreditation requirements, and special problems resulting from patient populations which have more complex needs.

Due to the initiatives of the Department of Human Services and the Department of Health, New Jersey is below the national average rate of admission to state and county hospitals (123 per 100,000 vs. 112 per 100,000). As an indication of this State's success in moving toward a community-based system of care, New Jersey is above that national rate for psychiatric admissions to acute care hospitals. Nationally, 355 persons per 100,000 are admitted to general hospital psychiatric services, while New Jersey admits 401 persons per 100,000. Table 15 "New Jersey National Rates of Admission" provides detailed information for the years 1984 through 1990. The number of new psychiatric beds in licensed general hospitals in New Jersey has been steadily increasing since the passage of the screening law in 1987.

Over the past fifteen years average yearly resident population of the State and county psychiatric hospitals has decreased by 61%, in large part due to the development of community support programs and advances in methodologies to treat mental illness. (See Tables 14 and 15 SMHP.) Progress has been achieved in reducing inappropriate admissions to State and county psychiatric hospitals. Department of Human Services initiatives to achieve more community based care and less institution based care are contained in The Facilities Master Plan (1992) and the New Jersey State Mental Health Plan (1991).

Two projects initiated in 1991 by the Department of Human Services impact planning for intermediate and long-term psychiatric care in community, and State and county hospital settings. First, the Department of Human Services Master Plan was developed. Long range bed need for State and county psychiatric facilities was forecast. Second, an assessment of State hospital patients was conducted in January 1991, as groundwork for the implementation of the 450 Plan to develop community placements for 450 State hospital residents appropriate for discharge to community settings.

The Department of Human Services 450 Plan and Facilities Master Plan promote the continued development of community alternatives and further reduction in the average daily census of the state's psychiatric hospitals. Initiatives to reduce inappropriate state psychiatric hospitalizations include: the Department of Human Services Northern Region Expansion Project to reduce the census at Greystone Park Psychiatric Hospital; the Department of Health 7% set aside which provides nursing home beds for placement of appropriate state psychiatric hospital patients; and implementation of the 1987 Screening and Commitment Law (N.J.S.A. 30:4-27.1 et seq.).

As with primary health care, a coordinated system of community based care for mental illness is in its infancy. With the closing of the rest of the state hospital beds, a greatly expanded community care system must be developed. Further, the lack of basic needs for shelter food and safety must be addressed in conjunction with supplying mental health services.

Outpatient Services

Outpatient services comprise the largest part of the mental health delivery system in New Jersey. Publicly funded community mental health settings provide the only primary mental health care available to persons with mental illness. Most seriously mentally ill individuals do not have health insurance or private resources to pay for care from the private mental health sector.

Of one quarter of a million episodes of care provided in 1989, 81% were in community based settings. Thirteen percent of contacts were

Table 15

NEW JERSEY AND NATIONAL RATES OF ADMISSION
PSYCHIATRIC INPATIENT HOSPITAL SERVICES
RATES PER 100,000 POPULATION

	New Jersey		United States	
Year	State and County Psychiatric Hospitals	General Hospital Psychiatric Services	State and County Psychiatric Hospitals	General Hospital Psychiatric Services
1984	112.6	336.6	146.0	336.8
1986	106.7	397.5	137.3	350.3
1988	112.4	400.8	122.9	354.6
1990	99.2	428.7	NA	NA

Source: DMH&H, Department of Health and NIMH unpublished data.
Note: Admission rates equal admissions plus transfers.

in acute hospital inpatient care. Six percent of contacts took place in state or county psychiatric hospitals. Outpatient care in community based settings includes the following services: outpatient, partial care, case management, advocacy programs, residential, crisis stabilization and emergency care.

Persons over 65 years of age received 5% of DMH&H funded episodes of care in 1989. See Table 16 (page 19A). Children and youth under the age of 18, received 14% of DMH&H funded episodes of care in 1989. In 1990, males and females were served in nearly equal proportion, 51% male and 49% female in community settings. Gender differences are greater in state and county hospital settings where 64% of the episodes of care were male and 36% female.

Racial and ethnic minorities, 21% of the general population, were highly represented among community services clients at 36% of treatment episodes. All recipients of services have mental illness as a primary diagnosis. Special needs result from other diagnoses: for example, 2% were developmentally disabled, and 12% had a diagnosis of alcohol/drug abuse disorders.

The Comprehensive Mental Health System Model

Seriously mentally ill persons are the "heaviest users" of mental health services. These individuals need acute care programs and long term support services in order to maintain and maximize living at home. Coordination of services and continuity of care are major issues in service provision. Case management programs assist with these issues.

The Comprehensive Mental Health System Model was promoted by the federal government and is used in New Jersey. Comprehensive mental health services are developed according to three levels of care: (1) Acute Care Programs are comprised of crisis intervention and stabilization, (2) Intermediate Care Programs provide rehabilitation, and (3) Extended Care includes ongoing support programs. Other necessary components are: case management, including service procurement, liaison programs, clinical case management programs, and medication monitoring.

Interventions are intended to promote wellness, and recovery from illness, depending on individual needs of consumers. Results include: (1) crisis resolution and stabilization; (2) recovery from illness, symptoms, habilitation and rehabilitation; and (3) extended support to prevent decompensation and to maintain a normal and productive life.

Accessible services are developed by geographic area and across the three levels of care. Programs are developed to meet the unique mental health needs of special target populations, such as: mentally ill chemical abusers, persons who are involved in the criminal justice system, persons with AIDS, members of minority groups, elderly persons, the deaf and hearing impaired, persons with disabilities, and persons with developmental disabilities.

Community Mental Health Agencies

There are over 130 private, not-for-profit community mental health agencies supported by a variety of funding sources in New Jersey. Mental health services include: case management, emergency screening, outpatient, partial care, consultation and education, advocacy, residential care, and liaison services. Large, multi-service agencies receive revenue from DMH&H, Medicaid, Medicare, county government, third party insurance, private fees, and voluntary charities. Community agencies provide the most services to the most people and their role is growing. See Table 7 ("Admissions to Public Mental Health Service Settings").

Tremendous growth in consumer and family support programs and self-help groups has occurred over the past four years. Many state departments and divisions provide essential community supports for the mentally ill including housing, vocational, and financial entitlement programs.

Consumer and Family Members

Consumers have been operating mental health services since 1985. A powerful grassroots movement has evolved over the past five years, assuming leadership in advocacy and service provision. Consumers and family members actively participate in the State and local planning and delivery of mental health services.

Self-help groups have developed rapidly and have become an integral part of New Jersey's mental health system. There is strength in shared experience. Successful consumer groups share practical information and coping skills, examine and challenge treatment and lifestyle alternatives, help each other to use resources, and advocate for improved services and a better quality of life.

A self-help group provides an opportunity to talk in a safe place. At the heart of mutual aid is the profound empathy communicated among individuals who share the bond of having lived with a mental illness. Through this communication, a community of support and empowerment is created. Consumers give and receive support, unconditional acceptance, and compassion.

Professionals and consumers are opening to a dynamic new partnership characterized by honest dialogue and careful listening. A few providers and professionals do not accept consumer self-help and advocacy and do not incorporate consumer views into their practices, but this becomes increasingly self defeating.

Family members have a major role in the mental health system in New Jersey. The following strategies have been used to empower family members:

(1) self-help support and advocacy;
(2) education and support initiatives for families and professionals;
(3) collaboration in policy and planning; and
(4) monitoring and quality assurance roles.

Family members are involved in the treatment of children with emotional disorders to improve service provision. Family members monitor local services, plan for community services to treat children, and work with legislators and State representatives to develop a more coordinated local system of care.

Services for Children and Teenagers

Mental health services for children and teenagers in New Jersey range from the least restrictive, outpatient and self-help groups to the most intensive restrictive hospital-based services. Included are the following:

—Parent Support, Advocacy groups
—Crisis Management/Mobile Outreach Services
—Day Treatment/Partial Care Programs
—Case Management
—Respite Care Services
—Alternative Care Facilities
—Acute Psychiatric Inpatient Services (CCIS)
—Intermediate and Long-Term Psychiatric Inpatient Services
—Specialized Psychiatric Program for Five to Ten Year Olds

Counties have developed the components of a comprehensive continuum of care. Many have developed support groups for parents. Psychiatric screening, crisis intervention, and mobile outreach are available statewide by designated screening centers. Some agencies offer outpatient mental health treatment and special units to serve children

Table 7

ADMISSIONS TO PUBLIC MENTAL HEALTH SERVICE SETTINGS
PERSONS OF ALL AGES, 1988-1991
RATE PER 10,000 POPULATION

Setting	1988		1989		1990		1991	
	N	Rate	N	Rate	N	Rate	N	Rate
Community Agency	136,435	177.39	152,025	197.16	151,601	196.12	161,221	208.04
State Hospitals	5,324	6.92	5,432	7.04	5,249	6.79	4,895	6.32
County Hospitals	3,325	4.32	2,562	3.32	2,773	3.50	2,795	3.61
Acute Care Hospitals	30,831	40.08	32,352	41.96	33,137	42.87	Not Available	
Population	7,691,396		7,710,702		7,730,188		7,749,514	

Source: DMH&H and NJ Department of Health, August 1991.

and adolescents. Other agencies receive funding to treat child abuse and neglect.

Following Michigan's lead, short-term intensive family preservation programs and/or long-term family treatment programs prevent out-of-home residential placements. Partial care programs serve children and adolescents after school.

Residential treatment centers are provided on a regional basis. Some treat seriously emotionally disturbed children and adolescents. The County Mental Health Board, the Youth Services Commission, and the County Human Services Advisory Council work together to plan, develop, and coordinate care in each county. Each county provides youth case management programs, targeting children and adolescents from regional and state psychiatric hospitals.

The Division of Youth and Family Services (DYFS), is the state social service agency for children, families and adults. DYFS investigates child abuse allegations, provides protective services, and provides substitute health and housing care, psychological and therapeutic services, transportation, and homemaker services. DYFS provides residential programs for emotionally disturbed youth.

There is a trend in the part of schools to withdraw youngsters from special programs for the ED in favor of providing these services locally. The disadvantage of this approach has been the significant decline in hours of psychiatric care per week, 12 to 14 hours/week is the norm. In school district based programming, it is possible to have two to four hours per month of the psychiatric contact given to the youngster.

Child-serving agencies participating in a fragmented system of care include: New Jersey's Departments of Human Services, Corrections, Education and Health; the Children's Coordinating Council; each County's Youth Service Commission, the family office of the New Jersey Superior Court, Human Services Advisory Council, Division of Alcoholism, Drug Abuse and Addiction Services, County Superintendent's Office of the Department of Education, Juvenile Detention Center Planning Office, the Mental Health Association, and community mental health agencies and professionals involved in serving seriously emotionally disturbed children and adolescents.

The Department of Health and the Department of Human Services recognize changes made in the children's mental health system during recent years. The State Mental Health Plan for Children and Adolescents reflects inter-agency strategies which are being pursued at the state and county levels. Challenge Grants, sponsored by the Division of Mental Health and Hospitals (DMH&H), established cross-system approaches to providing services to emotionally disturbed children and teenagers in four counties.

The Division of Youth and Family Services (DYFS) directed about $2 million, historically used to support out-of-state residential placements, to support the expansion of in-home and community services for high risk youth. The Division of Developmental Disabilities (DDD) has developed specialized procedures and resources to expedite appropriate aftercare placements of developmentally disabled clients upon discharge from the Arthur Brisbane Child Treatment Center).

Services for children and families have been improved by involved community groups through the New Jersey Multi-Service Coordinating Council for Children and Youth with Special Emotional Needs (Children's Coordinating Council). Formerly the Statewide Children's Mental Health Advisory Committee, this group developed a blueprint for cross-system service planning and client assessment at the county level and created a forum for advocates to develop an agenda on behalf of children and their families.

The Children's Coordinating Council and the Children's Mental Health Plan set forth an ambitious agenda to overcome the fragmentation. Building upon goals in the Challenge Grant and Pilot County Concept Proposals, the Divisions of Mental Health and Hospitals and Youth and Family Services funds were consolidated to establish the following incentive program for improving services to youth with special emotional needs throughout the State of New Jersey, rather than only in pilot projects in selected counties.

The Youth Incentive Program is a statewide initiative established for children and youth with special emotional needs. The primary goals are:

- enhance cross-system service planning and client case assessment in each county; enhance core community services;
- reduce reliance on institutional care, especially out-of-state residential placements; and
- allow for individualized, time-limited client-centered wrap-around services.

In response to incentive program funding, each county is required to establish a County Inter-Agency Coordinating Council (CIACC) and a Case Assessment/Resource Team (CART) in accordance with standards, to plan for the use of funds, and to reduce reliance on residential/institutional care. Each county must reduce out-of-state residential placements by a specific percentage of the total to pay for the continuation of wrap-around services.

School Based Youth Services Program

The School Based Youth Services Program of the Department of Human Services provides comprehensive services on a one-stop shopping basis to youth, children, and families. This program is located in or near a school in thirty-six sites throughout the state.

The School Based Program has received national recognition including receipt of the Ford Foundation/Harvard Kennedy School of Government Innovations Award, and the program has been replicated by Iowa and Kentucky. During difficult fiscal times in the last budget year, the School Based Youth Services Program was the only Department of Human Services program to receive additional funds to allow for expansion. The Department of Health supports the program through an interagency agreement to provide enhanced addiction services at some sites.

The program offers caring adults to assist young people with concerns that could develop into more serious problems if unaddressed. The services are non-stigmatized and offered without cost. All programs offer primary interventions and use existing resources in the community, including referrals to acute or intermediate care. The program helps prevent mental health problems by building self-esteem and confidence in the individuals it serves.

The School Based Program served over 18,000 teens in 1990. More than 5,000 youth were characterized as having an emotional disorder, usually depression and/or having a family crisis. Of all the core services, mental health services were most needed and used, followed by primary health care services. Mental health services include individual, group, family and crisis counseling, and information, referral, and placement. Local programs have effectively intervened in student suicide threat situations when a cluster suicide phenomena was possible.

Mental health and family counseling, primary and preventive health care, employment, and addiction counseling services are offered in the School Based Youth Services high schools. Mental health and health care are provided in the elementary and middle schools. In addition to the above core services, local sites provide recreation, transportation, teen parenting education, academic assistance, family planning, and information and referral services.

The recreation services provide a forum for developing relationships with staff that permit youth and children to talk about what is bothering them. The staff act as advisers, counselors, and someone who cares about the young person. At the majority of programs, most referrals come from other students or are self-referral. This suggests a high level of trust and confidence and the absence of other support services.

The School Based Youth Services programs have a strong emphasis on family involvement. Family counseling is available and many programs make home visits in order to engage the entire family in resolving difficult family situations. The programs are well integrated in the school system and school personnel have come to rely on School Based staff to provide services to students they view as having emotional or other difficulty. The integration of social services with education has improved the school environment, student behavior, academic performance, and has prevented problems from becoming worse.

Inpatient Psychiatric Services

Over half (50) of the acute care hospitals in New Jersey provide a total of 1,788 licensed beds in psychiatric units. Four private psychiatric hospitals provide an additional 540 beds for inpatient services. These units currently provide care to voluntarily and involuntarily hospitalized patients. To complete implementation of New Jersey's Screening and Commitment Law and to divert inappropriate admissions from the State and county hospitals, the Departments of Health and Human Services are committed to the establishment of Short Term Care Facilities in general hospitals to provide acute care for patients meeting the State's Commitment Standards.

Short Term Care Facilities consist of adult closed acute psychiatric bed units in acute care hospitals, licensed by the Department of Health and designated by the Department of Human Services. DMH&H and the Department of Health have developed joint standards for STCFs and Certificate of Need applications for their development. STCFs

provide assessment services and short term, intensive psychiatric care to acutely mentally ill patients.

Persons deemed dangerous to self or others are admitted to STCFs, as well as state and county psychiatric hospitals, through Designated Screening Centers, which determine whether a patient meets the new commitment standard. Mental illness and danger to self or others, and absence of services in the community determine eligibility for the patient. The goal of STCFs is to resolve the psychiatric emergency that precipitated admission and to rapidly restore an individual to a level of functioning that promotes return to the community residence with treatment, as appropriate.

STCFs lessen inappropriate reliance on state and county psychiatric hospitals for acute care, so that these hospitals can provide intermediate and long term rehabilitative care needed by mentally ill persons who are severely disabled. With the expansion of STCFs, many patients who previously were admitted or transferred to state and county hospitals bypass those facilities altogether, and remain in their own community for treatment and care. Eight Short Term Care Facilities represent 101 new beds. The remaining statewide unmet need for STCF beds is 199. Certificates of Need will be authorized to allow the remaining beds to be established in accordance with the bed need formula contained in the planning regulations of DOH.

The tables contained in the appendix illustrate the psychiatric bed inventory, by Local Advisory Board. Occupancy rates for beds that have been implemented for longer time periods are relatively high. Newly implemented beds are expected to take up to two years to meet established occupancy rates of 75% to 85% necessary in actue care hospitals.

Occupancy rates for child/adolescent psychiatric beds are relatively high in special hospitals in comparison to acute care hospitals. This can be attributed to the fact that most child/adolescent psychiatric beds in acute care hospitals have only recently been approved and are therefore not fully implemented.

The inpatient psychiatric service is a necessary component of comprehensive care for children. Children's Crisis Intervention Services (CCIS units) were established throughout the state for acute stays of 28 days or less. Additional intermediate care units (for stays in excess of 28 days but not of a long term nature) are the next component in a comprehensive continuum of care.

Inpatient care is the most restrictive end of the continuum. Coordinated community-based programs complete the continuum. These programs include: in-home supportive and prevention services; therapeutic, foster, teaching family, and group homes; case management, outpatient, mobile outreach, and emergency services; and other services designed to meet the needs of seriously emotionally disturbed children and youth in the least restrictive, appropriate setting as close as possible to the child's home.

Regional CCIS units have been established to serve children and adolescents from the ages of 5 through 17 who have received an initial screening by a designated mental health emergency screening service, have a primary psychiatric diagnosis, and whose level of personal and social functioning is impaired to the extent that inpatient psychiatric crisis intervention and treatment services are necessary.

The CCISs are regulated by the Department of Health and are located in hospitals or free-standing facilities which provide screening, stabilization, assessment, and short-term intensive treatment. The maximum length of stay on the unit is 28 days.

Regional Intermediate Psychiatric Inpatient Units have been established to serve patients who require continued hospitalization post-CCIS, but are not clinically appropriate for admission to ABCTC. The intermediate psychiatric inpatient beds, regulated by the Department of Health, are located in specialty and/or county hospitals. The need for expanding the availability of these beds requires development.

Youth who require a longer term inpatient stay in a structured setting are served by the Arthur Brisbane Child Treatment Center (ABCTC). The ABCTC accepts, as appropriate, direct court ordered commitments. The estimate of future need arrived at in 1987 (40 beds) has proven to be inadequate. Forty beds were designated when the number of CCIS admissions was 875. CCIS admissions increased by 53% in FY'90. A proportional increase at ABCTC would bring the bed total to 61, approximately the average census over FY'91.

Inpatient psychiatric care in licensed general hospitals was given to 27,427 patients at a cost of $141,426,000 in 1989. The cost is almost $173,000,000 in 1992. On average, these patients were hospitalized for 13 days.

Inpatient psychiatric care in licensed general hospitals represented $141,426,000 in 1989. In 1992 dollars, the cost is almost one-hundred and seventy three million dollars. In 1989, 27,427 persons were admitted for an average of 12.8 days at an average of $520.00 per day.

Because New Jersey is a heavily regulated state, fewer private psychiatric hospitals are available. Certificate of Need and rate setting requirements are perceived as disincentives to developers, especially proprietary health care providers.

State and County Hospitals

The Division of Mental Health and Hospitals operates seven state psychiatric hospitals. These facilities include four regional adult hospitals and three specialized facilities. The four regional State hospitals (Ancora, Greystone, Marlboro, and Trenton) provide inpatient services to adults needing acute, intermediate, transitional and long-term care and for whom there are no available appropriate community services.

The three State specialty hospitals (Arthur Brisbane Child Treatment Center, Senator Garret W. Hagedorn Center for Geriatrics, and Forensic Psychiatric Hospital) provide services for patients who, by reason of age, clinical condition, or special security needs, cannot be treated in the regional hospitals. These three facilities draw their population from the entire State.

New Jersey has five county-operated hospitals providing psychiatric inpatient services, with approximately 725 maintained beds in 1991. These five facilities are: Meadowview Hospital in Hudson; Bergen Pines in Bergen; Essex County Hospital Center in Essex; Buttonwood in Burlington; and Camden County Health Services Center in Camden.

County facilities are operated voluntarily by the counties and are not under the direct authority of the Division of Mental Health and Hospitals. Recent State legislation (P.L. 1990, Chapter 73), increases the State's share of costs for indigent care in State and county hospitals. This legislation clarifies and enhances the role of the Division of Mental Health and Hospitals in providing oversight of county psychiatric hospitals.

In the past, the cost of charity patient care in both state and county psychiatric hospitals has been shared 50/50 by state and county governments. Recent legislation, effective January 1, 1991, shifts the formula for the cost of indigent care in both types of facilities, so that the state pays 90% and the county of residence pays 10% of the cost of indigent care. Regulations include program expectations, rate setting, fiscal, and management plans.

Veterans' Administration Psychiatric Hospitals

Veterans' Administration hospitals provide psychiatric inpatient (750 beds) and outpatient services to residents who are armed services veterans or dependents of veterans. The Veterans' Administration facilities are located in the northern and central regions of the State, in Bergen, Passaic, and Somerset counties. Like private sector psychiatric services, little is known about these facilities and sometimes different data sources have conflicting information about bed categories and services provided.

Screening and Commitment Law (N.J.S.A. 30:4-27.1, 1987)

The Screening Law establishes a local acute care service system and standards to govern the utilization of acute psychiatric hospital services by persons with acute and severe mental illness. The Screening Law mandates the creation of Designated Screening Centers, Short Term Care Facilities (SCTFs), and System Review Committees (SRCs) to provide and coordinate acute care psychiatric services in specific geographic areas throughout the state.

Designated Screening Centers serve as the entry point for the publicly supported mental health system, including STCFs. Screening Centers are staffed by certified screeners, crisis intervention specialists, and psychiatrists with specialized knowledge of the Screening Law and community-based acute care services. These professionals certify eligibility for STCF, state and county hospital placement, using definitions of mental illness and dangerousness specified by statute.

Screening Center standards mandate mobile outreach services. Standards encourage the participation of liaisons in discharge planning and linkage to aftercare for STCF patients. Liaisons are employees of DMH&H funded community mental health agencies, who serve as a bridge between the community and the STCF patient. Liaisons ensure that patients are referred to, and linked with, planned aftercare services. Liaisons may "follow" a given patient for up to 60 days after hospital discharge.

Designated Screening Centers admit patients who meet commitment standards voluntarily. Local care and community based linkages create

a single, unified acute care delivery system. This system supports a range of changing patient conditions and treatment needs. Through affiliation agreements with Screening Centers, liaison programs, and other agencies, STCFs are linked with the continuum of publicly supported mental health services.

Prior to the implementation of the Screening Law in 1989, there were no STCFs or Designated Screening Centers in New Jersey's 21 counties. At present, at least one Designated Screening Center is established in every county (statewide total of 23).

ADULT PSYCHIATRIC BED INVENTORY—1990

ACUTE HOSPITALS
TABLE I

Facility	Adult Open Acute	% Occ.	Adult Closed Acute	% Occ.	Adult Inter-mediate	% Occ.	Other	% Occ.
LAB AREA I								
Morris County								
Chilton Mem. Hosp.	20	75.4						
Morristown Mem.	30	71.1						
St. Clare's/ Riverside Hosp.	28	91.9	12	90.8			12	
Passaic County								
Barnert Mem. Hosp.	26	79.9						
St. Joseph M.C.	49	71.2						
St. Mary's Hosp.	23	95.9	9	92.6				
	1*		6*					
Sussex County								
Newton Hosp.	16	82.0	4*					
Warren County								
Warren Hosp.	16	73.0						
LAB TOTAL	208	79.9	21	91.4			12	
	1*		10*					

*CON-APPROVED BUT NOT OPERATIONAL IN 1990; THEREFORE NOT COUNTED IN INVENTORY
+TOTAL INCLUDES 3 72-HOUR SCREENING BEDS TO BE CONVERTED TO CLOSED BEDS

Facility	Adult Open Acute	% Occ.	Adult Closed Acute	% Occ.	Adult Inter-mediate	% Occ.	Other	% Occ.
LAB AREA II								
Bergen County								
Englewood Hosp.	23	76.5						
Hackensack M.C.	24	86.1						
Holy Name Hosp.	23	74.0						
Valley Hosp.	20	63.5						
Hudson County								
Bayonne Hosp.	15	81.9						
Christ Hosp.	20	87.7						
Jersey City M.C.	20	85.5	14*					
St. Francis M.C.	17	78.8						
St. Mary Hosp.	30	51.4						
LAB TOTAL	192	81.6						
			14*					

*CON-APPROVED BUT NOT OPERATIONAL IN 1990; THEREFORE NOT COUNTED IN INVENTORY

Facility	Adult Open Acute	% Occ.	Adult Closed Acute	% Occ.	Adult Inter-mediate	% Occ.	Other	% Occ.
LAB AREA III								
Essex County								
Clara Maass Hosp.	24	70.3						
East Orange Gen'l	24	79.1	12**	69.2				
Mountainside Hosp.	16	104.3	4**					
Newark Beth Israel	15	69.5	8	81.1				
St. Barnabas M.C.	30	60.0	0					
St. Michaels M.C.	21	63.1	0					
University Hosp.	28	85.6	6	85.6				
Mt. Carmel Guild	20***							
Union County								
Elizabeth Gen'l	32	98.8	12*					
Muhlenberg RMC	18	95.8	6*					
Overlook Hosp.	21	70.6	0					
LAB TOTAL	249	81.2	30 14*	55.6				

*CON-APPROVED BUT NOT OPERATIONAL IN 1990; THEREFORE NOT COUNTED IN INVENTORY
**72 HR SCREENING BEDS
***BED DESIGNATION UNDER REVIEW

Facility	Adult Open Acute	% Occ.	Adult Closed Acute	% Occ.	Adult Inter-mediate	% Occ.	Other	% Occ.
LAB AREA IV								
Hunterdon County								
Hunterdon M.C.	14	53.4						
Mercer County								
Helene Fuld M.C.	24#	96.0	4*					
M.C. @ Princeton	30	43.4					12	
St. Francis M.C.	24	70.6						
Middlesex County								
Raritan Bay M.C.	35***	72.9						
South Amboy Hosp.	16	92.7					16*	
Somerset M.C.	30	72.4						
LAB TOTAL	173	72.6	4*				12 16*	

*CON-APPROVED BUT NOT OPERATIONAL IN 1990; THEREFORE NOT COUNTED IN INVENTORY
+CON-APPROVED TO REDUCE LICENSED BEDS TO 70 TO COMPLY WITH MINIMUM UTILIZATION REQUIREMENTS
***UNDER REVIEW, 15 BEDS USED AS SUBSTANCE ABUSE
#MC @ PRINCETON BEDS UNDER REVIEW

Facility	Adult Open Acute	% Occ.	Adult Closed Acute	% Occ.	Adult Inter-mediate	% Occ.	Other	% Occ.
LAB AREA V								
Burlington County								
Memorial Hosp. of Burlington Co.	22	85.2						
Zurbrugg Riverside					24*			
Zurbrugg-Rancocas	24	63.3						
Camden County								
Cooper Med. Ctr.	16	69.5						
JFK-Cherry Hill	19	98.7	12*					
Our Lady of Lourdes M.C.	18	82.0						
Cumberland County								
South Jersey Hosp. Sys. (Bridgeton)	17	75.9	12	75.9				
Gloucester County								
Underwood Hosp.	16	72.5	6***					
LAB TOTAL	132	84.9	12 18*	75.9	24*			

*CON-APPROVED BUT NOT OPERATIONAL IN 1990; THEREFORE NOT COUNTED IN INVENTORY
**BASED ON 9 MONTHS UTILIZATION
***UNIMPLEMENTED CON PERMITS CONVERSION OF 6 OPEN ACUTE BEDS TO CLOSED ACUTE BEDS

Facility	Adult Open Acute	% Occ.	Adult Closed Acute	% Occ.	Adult Inter-mediate	% Occ.	Other	% Occ.
LAB AREA VI								
Atlantic County								
Atlantic City	25	84.8	6	84.8				
Monmouth County								
Centra State M.C.	12**	89.8	4**	34.2**				
Jersey Shore M.C.	30	82.0						
Monmouth M.C.	30	70.3						
Riverview M.C.	31	80.0						
Ocean County								
Paul Kimball M.C.	45***							
	(30)	88.3	15*					
LAB TOTAL	158	80.8	6	84.8				
	15***		15*					
			4**	34.2**				
STATEWIDE TOTAL	1112	80.2	114	78.1	24			

*CON-APPROVED BUT NOT OPERATIONAL IN 1990; THEREFORE NOT COUNTED IN INVENTORY
**OCCUPANCY BASED ON 3 MONTHS DATA
***30 BEDS OPEN IN 1990—ADDITIONAL 15 NOT COUNTED IN INVENTORY

COUNTY HOSPITALS
ADULT PSYCHIATRIC BED
INVENTORY—1990

Facility	Adult Open Acute	% Occ.	Adult Closed Acute	% Occ.	Adult Inter-mediate	% Occ.	Other	% Occ.
LAB AREA I								
NONE								
LAB AREA II								
Bergen Pines	68	82.6+	40	82.6+	20	82.6+	164	82.6+
Hudson County								
Meadowview							70	93.5
LAB AREA III								
Essex County								
Essex Co. Hosp. Ctr.							675**	
Union County								
John E. Runnells							17	59.2
							3*	
LAB AREA IV								
NONE								
LAB AREA V								
Burlington County								
Buttonwood Hosp.							30	
Camden County								
Health Svcs. Ctr.							281	
LAB AREA VI								
NONE								
STATEWIDE	68		40		260		1237	
							3*	

*CON-APPROVED BUT NOT OPERATIONAL IN 1990; THEREFORE NOT COUNTED IN INVENTORY
**CON APPROVAL TO DECREASE LICENSED BEDS TO 400 IN 1992
+OCCUPANCY FIGURES FOR BERGEN PINES ARE BASED ON THIS COUNTY HOSPITAL'S TOTAL PSYCHIATRIC BED COMPLEMENT (221); SEPARATE UTILIZATION FIGURES AVAILABLE AS OF 1991 TOTAL INCLUDES 59 BEDS COMPRISED OF 20 MICA; 20 GERIATRIC PSYCH; 8 FORENSIC; AND 11 PSYCH ICU

SPECIAL HOSPITALS PSYCHIATRIC BED INVENTORY—1990

Facility	Adult Open Acute	% Occ.	Adult Closed Acute	% Occ.	Adult Inter-mediate	% Occ.	Other	% Occ.	Child/ Adoles. Acute	Child/ Adoles. Inter.
LAB AREA I										
NONE										
LAB AREA II										
Bergen County										
Christian Hlth Care					20	87.9	46		14	
LAB AREA III										
Union County										
Fair Oaks Hosp.	27	80.5			29		115+			
LAB AREA IV										
Middlesex County										
Community Mental Health Ctr.	24	78.8								14
Somerset County										
Carrier Clinic					156	71.7	129++			36
LAB AREA V										
Burlington County										
Hampton Hosp.					50		35	100.5		15
LAB AREA VI										
Shoreline Hosp.*							100*			
STATEWIDE TOTAL	51	79.7			255		425		14	51

*CON-APPROVED BUT NOT OPERATIONAL IN 1990; THEREFORE NOT COUNTED IN INVENTORY
+TOTAL OF 115 BEDS COMPRISED OF 41 MICA; 16 EATING DISORDER; AND 58 OTHER BEDS
++TOTAL OF 129 BEDS COMPRISED OF 56 MICA; 16 EATING DISORDER; 32 GERIATRIC; AND 25 OTHER BEDS

CHILD/ADOLESCENT PSYCHIATRIC BED INVENTORY—1990

Facility	Child Adoles. Acute	% Occ.	Child Inter-mediate	% Occ.
LAB AREA I				
Served by Morris County CCIS				
St. Clare's/ Riverside Hosp.	26*	47.8		
LAB TOTAL	26*	47.8		
LAB AREA II				
Bergen County				
Bergen Pines Hosp.	15	65.6	14	59.1
Hudson County				
St. Mary Hosp.	19*			
LAB TOTAL	34	65.6	14	59.1
LAB AREA III				
Essex County	4			
Newark Beth Israel	10**	08.1		
Union County				
Elizabeth Gen'l	20	87.2	20*	
LAB TOTAL	34	54.8	20*	

*NOT OPEN IN 1990 AND NOT COUNTED IN INVENTORY
**4 BEDS ON LINE IN 1990

Facility	Child Adoles. Acute	% Occ.	Child Inter-mediate	% Occ.
LAB AREA IV*				
Served by UMDNJ				
Piscataway CCIS	26		14	
LAB TOTAL	26		14	

*LAB AREA SERVED BY UMDNJ-PISCATAWAY

LAB V				
Camden County				
JFK—Cherry Hill**	14	73.4**		
Cumberland County				
South Jersey Hosp. Sys—(Bridgeton)	14+			
LAB TOTAL	28	73.4**		

+NOT OPEN IN 1990 AND NOT COUNTED INVENTORY
**BASED ON 9 MONTHS UTILIZATION

LAB AREA VI				
Served by Cumberland County CCIS				
Monmouth County				
Monmouth M.C.	19*			
Ocean County				
Served by Monmouth CCIS				
LAB TOTAL				

*NOT OPEN IN 1990 AND NOT COUNTED IN INVENTORY

DRAFT STATE HEALTH PLAN: ENVIRONMENTAL AND OCCUPATIONAL HEALTH

EXECUTIVE SUMMARY

New Jersey is one of the most industrialized and densely populated states in the nation. As such, occupational and environmental health issues have become very important to New Jersey. Just as scientific knowledge has risen regarding occupational and environmental hazards, so has media attention and public awareness. An array of problems has served to heighten the public's awareness regarding occupational and environmental health hazards: lead and asbestos in workplaces, homes, and schools, worker and community exposure to chromium in Hudson County, and ozone air pollution during the summer. More recently, attention is being directed toward the disproportionate number of minorities being exposed to hazards in the workplace and community.

Occupational and environmental diseases encompass a broad range of human illnesses including cancer, respiratory disease, damage to the nervous system, and reproductive and immunological impairments. Occupational diseases affect thousands of workers in New Jersey. The annual costs of only five occupational diseases are estimated to be over $280 million. Annual costs of total occupational disease in New Jersey are well in excess of this sum. Understanding and defining environmental causes of disease and disability are not as well defined or quantifiable as other causative agents. Because of these difficulties, the financial impact of environmental hazards on the health care system in New Jersey cannot be fully estimated.

This chapter of the State Health Plan discusses the importance of occupational and environmental issues and offers goals, objectives, and recommendations for addressing areas of need for occupational and environmental health services in the state. The following goals have been developed in an attempt to address the multitude of occupational and environmental health issues which New Jersey is confronted with today:

1. To conduct **education and training programs** in occupational and environmental health and safety, thereby enhancing the quantity and quality of information available to health providers, workers, employers, educators, emergency responders and community residents so that they will be appropriately empowered to make well-informed choices to protect their health.
2. To develop a **comprehensive surveillance system** for occupational illnesses and injuries that allows the collection, analysis and follow-up on all races (as defined by the Federal Government and the New Jersey Department of Health, Office of Minority Health).
3. To facilitate the establishment of a **statewide network of occupational/environmental health clinics** to provide access to diagnostic and preventive health services for workers and the public.
4. To increase the number and expand the scope of **field investigations** conducted: (1) to identify and/or evaluate occupational/environmental hazards in workplaces, communities and schools, and (2) to monitor compliance with regulations.
5. To increase the number of public and private worksites that provide employees a wide variety of **health promotion** activities.

Recommendations to meet these goals are outlined at the end of the chapter.

HEALTHY NEW JERSEY YEAR 2000 OBJECTIVES:

A. Reduce deaths from work-related injuries to no more than 10 per 100,000 full time construction workers.
B. Eliminate exposures which result in workers having blood lead concentrations greater than 25 ug/dl of whole blood.
C. Reduce by 50 percent the numbers of workers with exposures leading to hospitalizations for acute occupational lung diseases.
D. Increase to 350 the number of sites evaluated for human exposure pathways to hazardous waste.
E. Reduce the number of children aged 9 months to 5 years with blood lead levels exceeding 10 ug/dl.
F. Increase to 100 percent the number of school buildings with asbestos management plans approved by the Department of Health which have had asbestos either properly managed or removed.

I. PROBLEM IDENTIFICATION

The areas of environmental and occupational problems are vast and complex. Some hazards which constitute the leading health concerns for at-risk populations, such as lead and asbestos, are present in both the environmental and occupational setting. However, other contaminants, such as ozone (environmental) and silica (occupational) are specific to that setting. Even when the hazards are similar, issues related to the identification of the at-risk population, intensity and means of exposure, as well as methods to address the problem, are often very different.

For these reasons, it is best to treat these distinct fields of public health individually. Consequently, environmental and occupational issues will be discussed separately in this section.

A. ENVIRONMENTAL HEALTH PROBLEMS

Everyone is exposed to environmental hazards to some extent, but not all experience symptoms of related illness. It is hard to determine the number of people affected by environmental hazards due to a number of factors, including misdiagnosis, long latency periods for some diseases such as cancer, and lack of reporting. Arriving at an estimate of the incidence or prevalence of environmentally-induced illness is made

all the more difficult when the majority of health-care practitioners do not think to consider environmental exposures as contributing factors.

Environmental hazards are associated with a variety of adverse health effects. Community exposures to hazardous agents have been known to cause cancer, damage to the nervous system, reproductive and immunological impairment, chemical dermatitis and respiratory disease. Acute effects caused by exposure to hazardous agents range from headaches, nausea, eye and skin irritation to respiratory distress, convulsions and even death. There are some estimates that environmental exposures may be responsible for 5-20% of all cancer cases.

The causal relationship between many exposures and diseases remains unclear. Establishing relationships is confounded by the enormous number of factors which interact in any study of environmental cause-and-effect. Detailed information about personal behaviors, occupational history, duration of contact with the hazard, and so forth must be carefully weighed when attempting to link an environmental exposure to disease. Nevertheless, these are critically important issues for New Jerseyans, given our long industrial history and growing concerns about worksite hazards, toxic pollutants and other dangers.

Minority Health Issues. In some cases, minorities are disproportionately exposed to environmental contaminants. For example, many of the hazardous waste sites in New Jersey are located in the densely populated northeast corridor of the state. Residents of Jersey City are experiencing adverse health effects from exposure to chromium. Lead and asbestos were used extensively in urban housing and other buildings. In the urban communities throughout the state, minorities comprise a large percentage of the population and therefore, are at high risk for exposure to environmental contaminants.

Cost Issues. Environmental hazards place a great financial burden on communities and the consumer. There are economic consequences not only in terms of health care expenses and reduced personal income due to disability, but as well, in the high cost of removing hazards from the environment.

For example, estimates have put the expense of asbestos abatement in the schools well into the millions. In New Jersey, removing asbestos from a home is estimated to cost between $1,500-2,000 per house. Abating lead from a home, based on a study by the federal Department of Housing and Urban Development, is estimated to be between $2,500-$7,500, depending upon the extent of the contamination and the type of remediation needed. There are some lending institutions in the state requiring that environmental assessments be conducted before the sale of residential property. Property values are affected when environmental issues are involved.

This chapter will focus on a select number of the leading environmental hazards and their effects on the health of New Jerseyans. The hazards presented below are by no means all inclusive, but they have been given priority here due to the concerns expressed by the public.

1. Lead

Lead is a neurotoxin, a material which can damage the central nervous system. Lead poisoning is one of the leading and most preventable exposure-related diseases, particularly among children for whom it has created a silent epidemic. Consumption of lead in young children, especially those who are malnourished or anemic, can lead to serious consequences, such as inflammation of the brain and, in some cases, even death. It is a known preventable cause of mental retardation and learning disabilities. Studies have shown that among other effects, lead poisoning can halve the expected number of children with an I.Q. greater than 125 and double the number with an I.Q. lower than 80. It is estimated that nearly 65% of New Jersey children ages three and four years old have blood lead levels over 10 ug/dl.

Although the use of lead-based paint was banned 20 years ago, many homes still contain hazardous amounts of it. Based on the age of the housing alone, the Department of Health has ranked 69 out of the State's 567 municipalities at highest priority of risk to lead exposure (See Table 1). Lead persists in the environment as a result of lead contaminated drinking water, past lead-paint removal practices, the past use of leaded gasoline, and continued use in and contamination of homes and industrial sites. Improperly performed lead assessment and abatement create serious health and safety hazards which are detrimental to the public health of New Jersey.

2. Asbestos

Abestos-containing materials are present in many schools, homes, public, and commercial buildings. Asbestos was widely used in the past in a variety of construction products, including ceiling tiles, floor tiles, pipe and boiler insulation, sprayed and troweled on ceiling materials, roofing, and siding materials. It is estimated that 80% of the residential homes in New Jersey contain some asbestos. Thousands of schools throughout the State are known to contain asbestos and the potential exists for every student to be exposed.

Asbestos is a known cause of cancer. Although risks associated with non-occupational, low-level exposure are not known, efforts to minimize exposures, as outlined in the 1985 "Asbestos Policy Report to the Governor" must be continued. An indication of the public's concern about asbestos exposure is reflected in the volume of telephone calls received by the Department of Health. Of the 5,044 calls taken by the Department's Environmental Health Service Program for the calendar year 1991, 75% were seeking advice on how to safely and effectively manage the asbestos in their homes.

TABLE 1

HIGH PRIORITY MUNICIPALITIES FOR LEAD EXPOSURE

COUNTY	MUNICIPALITY
Atlantic	Atlantic City
	Pleasantville
	Egg Harbor City
Bergen	Englewood
	Hackensack
Burlington	Wrightstown Boro
	Pemberton Boro
	New Hanover Twp.
	Mt. Holly Twp.
	North Hanover Twp.
	Burlington City
	Pemberton Twp.
	Burlington Twp.
	Bordentown City
	Beverly
Camden	Camden City
	Lawnside Boro
	Chesilhurst Boro
	Hi-Nella Boro
	Lindenwold
Cape May	Woodbine Boro
	Wildwood City
Cumberland	Bridgeton City
	Fairfield Twp.
	Commercial
	Deerfield
Essex	Newark
	East Orange
	Orange
	Irvington
Gloucester	Paulsboro Boro
	Clayton
	Glassboro
	Swedesboro
	Woodbury
	National Park
Hudson	Jersey City
	Hoboken
	Union City
	East Newark Boro
	West New York Town
	Weehawkin Twp.
Hunterdon	
Mercer	Trenton City
Middlesex	New Brunswick
	Perth Amboy
	Jamesburg
Monmouth	Asbury Park
	Long Branch
	Shrewsbury Twp.
	Bradley Beach
	Red Bank
	Keansburg
	Neptune Twp.
	Freehold Boro

COUNTY	MUNICIPALITY
Morris	Victory Gardens Boro
	Morristown
Ocean	Seaside Heights Boro
	Lakewood Twp.
	Lakehurst Boro
Passaic	Paterson
	Passaic
Salem	Salem City
	Penns Grove
Somerset	
Sussex	Sussex Boro
Union	Plainfield
	Elizabeth
	Roselle
	Hillside
	Winfield
Warren	

3. Ozone

Ground level ozone air pollution represents a serious and widespread public health problem in New Jersey. Ozone, an important component of smog, is formed in the lower atmosphere by the reaction of sunlight with certain pollutants such as nitrous oxide and hydrocarbons from car exhaust, industrial emissions, and consumer products. Because ozone is formed in the atmosphere, it is a regional air pollutant, generally covering a large area at a time. Thus, when ozone levels are high, large numbers of people are exposed.

Ozone is a respiratory irritant that can cause inflammation and irritation of the throat and lungs, wheezing, coughing, tightness of the chest, pain and difficulty in breathing. Ozone can also affect lung function, making normal activities more difficult. All of those health effects have been documented to occur in otherwise healthy children and adults at levels typically found in New Jersey during the summer.

Between May and September, the entire State of New Jersey is out of compliance with ozone ambient air for periods of time, and thus every resident is exposed to unhealthful levels of ozone. From 1983 to 1991, between 18% and 55% of the summer days had unhealthful levels of ozone somewhere in New Jersey (see Table 2). Furthermore, ozone levels in New Jersey have been documented to exceed the federal occupational standard for ozone on multiple days each summer. Consequently, children and others who spend a good deal of time outdoors may be exposed to higher levels of ozone than are permissible in a workplace setting.

In general, the acute effects of ozone are temporary and reversible, with symptoms disappearing and lung function returning to normal within several hours to a week after exposures have decreased. The long term risk of ozone exposure is less well understood. There is evidence that long-time residents of areas with high ozone levels have a greater permanent loss of lung function than residents in less polluted areas. New medical evidence indicates that on days with high ozone, hospital visits and admissions for asthma increase by 30%. Ozone appears to increase an asthmatic's responsiveness to allergens that trigger asthma attacks. The American Lung Association estimates that approximately 300,000 people in New Jersey suffer from asthma. The prevalence and severity of asthma are steadily increasing. Deaths due to asthma have risen nearly 30% in the general population and nearly 68% in urban minority populations.

4. Pesticides

The chemicals contained in pesticides can be toxic or poisonous. Twenty-four of the more than 300 active ingredients, encompassing over 400 pesticide products, have been classified as known or probable carcinogens by the federal Environmental Protection Agency (E.P.A.). Pesticides are neurotoxins which can produce serious health effects affecting the central and peripheral nervous systems and may produce headaches, convulsions, coma, and in some cases, even death. If ingested, severe nausea and vomiting commonly result. It is estimated that 20,000 new cases of cancer nationwide may be caused each year from pesticide residues which occur in only 15 commonly eaten foods. The E.P.A. currently lists 100 pesticide active ingredients as oncogens or suspect oncogens. Sixty-five pesticides have demonstrated that they are reproductive hazards in animals.

In New Jersey, one out of every 15 calls to the New Jersey Poison Information and Education System (NJPIES) involves pesticides. A survey of 65 emergency rooms by the Consumer Product Safety Commission indicates that pesticides are the second leading cause of poisoning in children, after medicines. Discharge records from participating hospitals in New Jersey indicate that there are at least 100 hospitalizations per year due to diagnosed pesticide exposures. It has been reported that nationally, 20,000 persons are annually taken to the emergency room due to suspected or actual exposures to toxic levels of pesticides. Inquiries to the Department regarding the health effects of pesticides have risen ten-fold over the past three years.

5. Chromium

Chromium is a naturally occurring element found in several chemical forms. Occupational exposures to hexavalent chromium have been associated with lung cancer, kidney dysfunction, nasal perforation, skin irritation, and ulceration.

From 1900 to 1970, three chromite processing facilities in Hudson County produced chromium for commercial use. As a by-product, large quantities of waste material were generated into the surrounding community environment. To date, approximately 150 sites have been identified in Hudson County and adjacent areas. To address the medical and environmental concerns of the public, the Environmental Health Service working with Department of Environmental Protection and Energy (DEPE) and the University of Medicine and Dentistry have developed a program to identify residents and workers with potential exposure to chromium wastes, and to conduct a limited medical screening for selected residents and workers.

The magnitude of human exposure and the impact on public health have not been fully established. Preliminary investigations indicate that human exposure to chromium has occurred. Pilot medical evaluations and exposure monitoring investigations have been conducted in both residental and industrial areas contaminated with chromium dust. Results of these investigations justify the ongoing clean-up of contaminated areas.

6. Hazardous Waste

Some chemicals found at hazardous waste sites are known to be capable of causing adverse health effects such as cancer, acute and chronic respiratory disease, neurological impairment, reproductive dysfunction, and chemical dermatitis. However, much remains unknown about specific unsafe levels of exposure, potential human exposure pathways, the duration of exposure, or time subsequent to initial exposure that adverse health effects become identifiable. Only when these issues are better understood will the full health implications of waste sites be known.

TABLE 2
OZONE EXCEEDENCE DAYS PER TIME PERIOD

YEAR	JUNE-AUGUST NO.	PERCENTAGE	MAY-SEPTEMBER NO.	PERCENTAGE
1991	24	26.1%	26	17.0%
1990	20	21.7%	22	14.4%
1989	18	19.6%	18	11.8%
1988	39	42.4%	45	29.4%
1987	27	29.3%	31	20.3%
1986	17	18.5%	21	13.7%
1985	21	22.8%	29	19.0%
1984	29	31.5%	30	19.6%
1983	51	55.4%	61	39.9%

TABLE 3
HAZARDOUS WASTE SITES IN NEW JERSEY, FY 1990-1991

COUNTY	NO. OF SITES	COUNTY	NO. OF SITES
ATLANTIC	15	MIDDLESEX	73
BERGEN	53	MONMOUTH	2
BURLINGTON	31	MORRIS	48
CAMDEN	20	OCEAN	22
CAPE MAY	4	PASSAIC	26
CUMBERLAND	7	SALEM	5
ESSEX	40	SOMERSET	21
GLOUCESTER	27	SUSSEX	11
HUDSON	55	UNION	40
HUNTERDON	8	WARREN	9
MERCER	15	**TOTAL**	**556**

Currently, 114 of the approximately 1,000 hazardous waste sites on the National Priority List (NPL) are in New Jersey. These sites are distributed throughout the densely populated state and many of them are known to contain heavy metals, industrial solvents, and other chemical wastes.

Health assessments of hazardous waste sites on the NPL, as designated by the federal Environmental Protection Agency, have been conducted by either the United States Agency for Toxic Substance and Disease Registry (ATSDR) or the New Jersey Department of Health. These assessments determine what specific hazardous materials are present at the site and what potential human exposure pathways exist that may result in exposure now or in the future and recommendations are made to reduce the potential for exposure, health hazards, and related costs. Nearly haf of the more than 100 sites evaluated to date have been identified as indicating the need for further investigation.

By the Year 2000, additional NPL waste sites are also likely to be designated in New Jersey by the E.P.A. In FY'90 to '91, 556 sites were identified in New Jersey as hazardous waste sites by DEPE. These include, but are not limited to, NPL sites (see Figure 1 and Table 3).

B. OCCUPATIONAL HEALTH PROBLEMS

Occupational diseases are a serious public health concern. They are not rare; they are not confined to a limited number of factory workers exposed to exotic chemicals under unusual working conditions. Occupational diseases encompass a broad range of human illness. For example, they include lung cancer and mesothelioma in asbestos workers, cancer of the bladder in dye workers, leukemia in workers exposed to benzene, chronic bronchitis in workers exposed to dusts, disorders of the nervous system in workers exposed to solvents, chronic kidney disease in workers exposed to lead, premature senility in workers with chronic exposure to neurotoxins, heart disease in workers exposed to carbon monoxide, impairment of reproductive function in men and women exposed to lead and pesticides, and chronic disease of the musculoskeletal system in workers who suffer repetitive trauma. Such illnesses afflict many thousands of workers in New Jersey.

Prevention. Occupational diseases are highly preventable. Because they arise from human-made conditions, they can be prevented through alteration of those conditions. Primary prevention of occupational disease requires the elimination or reduction of hazardous exposures. In the event that a hazardous substance can not be eliminated, workers may be protected from ill effects if they are adequately informed and equipped to do so.

Secondary prevention refers to the early detection of occupational disease in the presymptomatic stages when it can still be controlled or cured. This level of prevention depends on the ability of health practitioners to efficiently and effectively screen workers at high risk for occupational disease.

Finally, tertiary prevention, the prevention of complications and disability from already existing illness, depends on development and wide application of appropriate diagnostic and treatment strategies. Prevention on all three levels requires a solid information base on the effects of specific occupational exposures and data on where and by whom hazardous substances are used.

Like the communicable diseases, the appearance of a single case of occupational disease often heralds the existence of other individuals with the same illness, or at least indicates that others are at risk. Attempts to prevent or reduce occupational disease and injuries nationally and in New Jersey are often impeded by a gamut of factors: lack of information on the potential toxicity and health effects of most synthetic chemicals, inadequate education of physicians, workers, and employers, incomplete surveillance of workplace hazards and work-related diseases and injuries, limited resources to enforce health and safety standards, and insufficient health promotion activities in the workplace.

Minority Health Issues. Minority workers are particularly afflicted by occupational illnesses. They are disproportionately represented in the most hazardous jobs, and as a result, are at high risk of developing diseases or sustaining injuries related to their occupation as evidenced in the construction industry, for example (Figure 2). Economic pressures often make it difficult for a minority worker to refuse hazardous employment. A high percentage of personal service industry (janitorial, housekeeping, laundry services) and transportation industry (driving of commercial or publicly-owned vehicles) jobs are held by black men and women. There is also a disproportionate percentage of Hispanic men and women in the manufacturing and agricultural industries (e.g., migrant farm workers). Individuals in the aforementioned occupations are exposed to a variety of hazards, yet they often do not receive health insurance benefits from their employers. This means they are likely to have reduced access to care in the event of illness induced by work or other causes.

Costs Issues. In New Jersey, the annual direct and indirect costs of only five occupational diseases (occupational cancer, chronic respiratory disease, pneumoconioses, cerebrovascular and cardiovascular disease, and end-stage renal failure) are estimated to be over $280 million (in 1988 dollars). Annual costs of **total** occupational disease in New Jersey are well in excess of this sum.

Current problems and trends in the area of occupational health and safety in New Jersey are described below under the following headings: (1) the workplace and exposure to occupational hazards, (2) occupational mortality, and (3) economic and social impact.

1. The Workplace and Exposure to Occupational Hazards

The number of workers in manufacturing jobs has dropped during recent decades, but there are still presently over 500,000 workers in this sector. Between 107,000 and 396,000 workers in New Jersey were employed in the fifty most hazardous industries in the state according to two hazard index models developed using 1988 data. These industries encompassed 4,800 to 17,300 workplaces.

In selected high-risk industries, the federal Occupational Safety and Health Agency (OSHA) has commonly found over-exposures to lead, silica, and several known carcinogens. Other workplaces present opportunities for potentially serious exposure to additional toxic materials, such as formaldehyde, benzene and methylene chloride, all of which are widely used in large quantities in New Jersey.

The U.S. Bureau of Labor Statistics estimated that 240,700 occupational illnesses were reported by the private sector nationwide in 1988, up from the 124,800 illnesses reported for 1984. The highest number of reported illnesses (115,400) in 1988 were associated with repeated trauma. Table 4 gives a summary of cases of key occupational illnesses and injuries reported to the Department of Health's Occupational Health Service over the past several years.

Increased recognition of the occupational hazards faced by public workers has helped to refute the commonly held notion that occupational hazards are restricted to manufacturing facilities. In 1985, there were 531,000 workers employed in the public (government) sector. Significant occupational hazards exist for these workers, who include hospital employees, firefighters, police and toll officers, sanitation workers, pesticide applicators, and office workers. Recent statistics from the New Jersey Department of Labor show that there were nearly 51,000 incidents

FIGURE 1

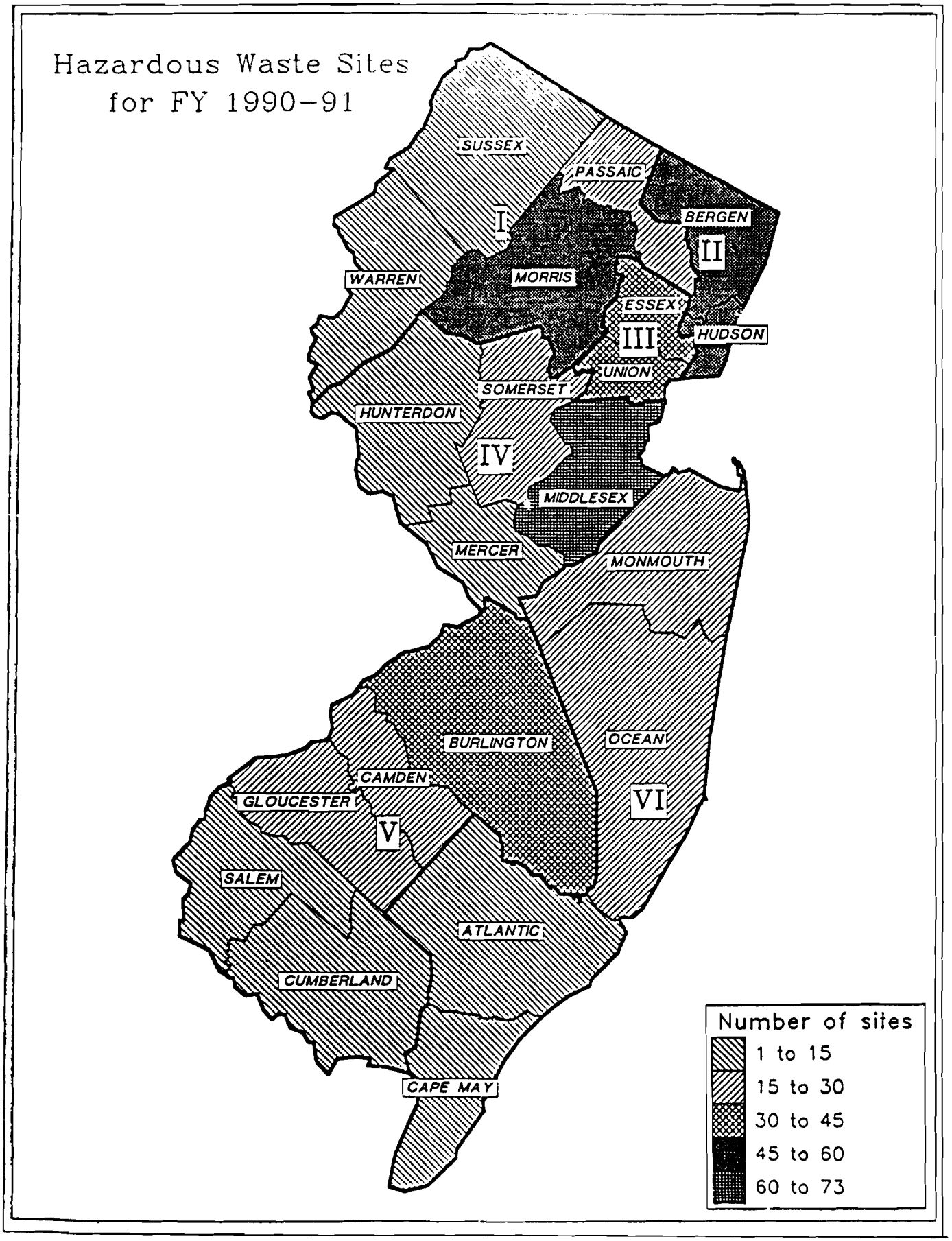

Hazardous Waste Sites
for FY 1990-91
SUSSEX
PASSAIC
BERGEN
I
II
WARREN
MORRIS
ESSEX
III
HUDSON
UNION
SOMERSET
HUNTERDON
IV
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
CAMDEN
GLOUCESTER
V
VI
SALEM
ATLANTIC
CUMBERLAND
CAPE MAY
Number of sites
1 to 15
15 to 30
30 to 45
45 to 60
60 to 73

FIGURE 2

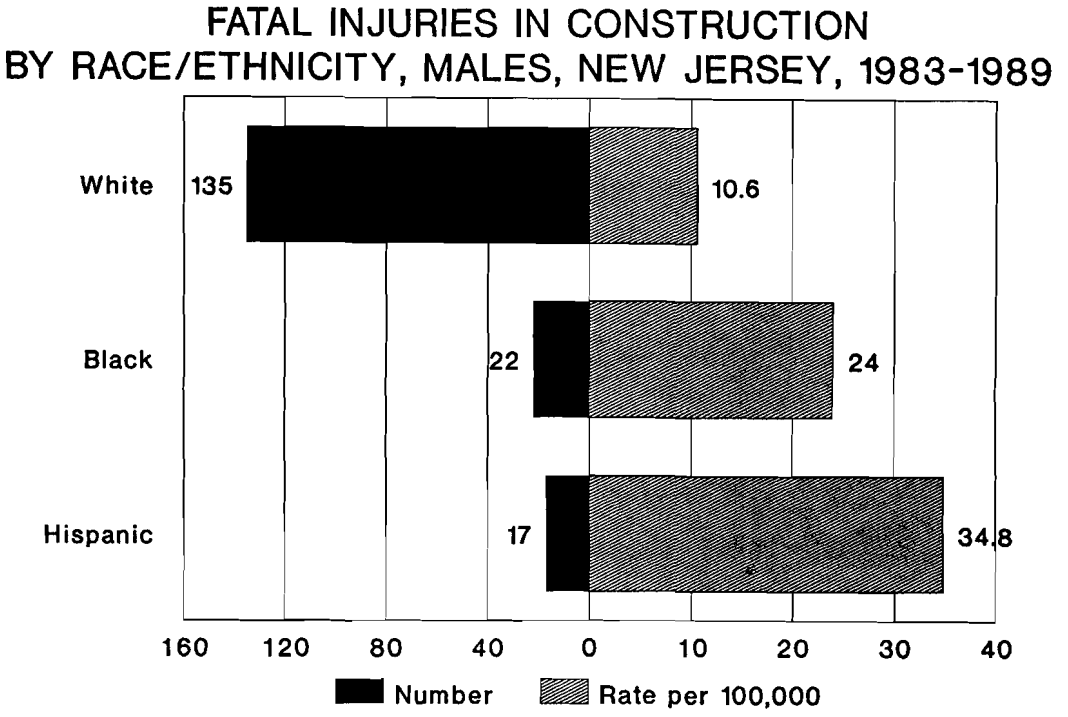


FIGURE 3

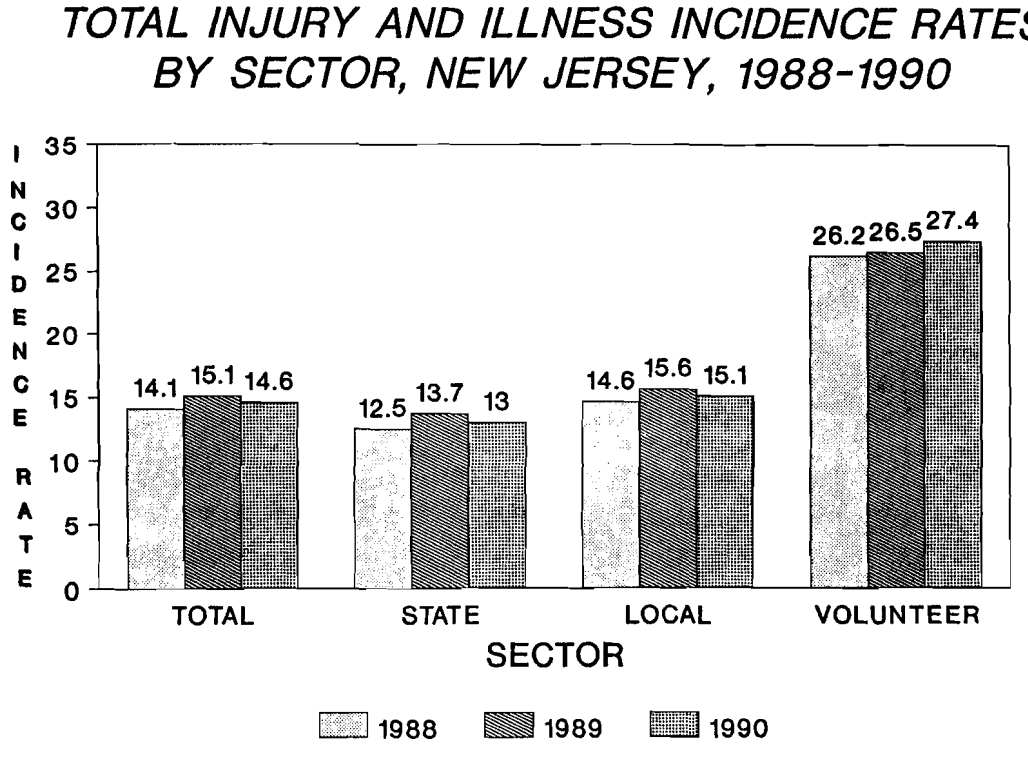


TABLE 4
OCCUPATIONAL ILLNESS AND INJURY REPORTING TO NJDOH, 1/1988—12/1991

NUMBER NEW CASES REPORTED

CONDITION	From Beginning of Reporting through 1988	1989	1990	1991	Cumulative Total
Fatalities[1]	583	100	73	126	882
Occupational asthma[2]	29	40	60	54	183
Silicosis[3]	663	39	31	17	750
Other Pneumoconioses[4]	1883	801	760	926	4370
Acute lung conditions[4]	271	154	115	85	625
Chemical poisonings[4]	894	257	248	316	1715
Elevated blood and urine lead levels (adults)[5]	2284	607	600	368	3859
Elevated blood and urine mercury levels (adults)[5]	213	24	84	58	379

1. Data sources: death certificates, medical examiners reports, OSHA, workers compensation reports Reporting began in 1983; deaths for 1991 include homicides, suicides and heart attacks on the job
2. Data sources: physician, hospital reports. Reporting began in 1988
3. Data sources: hospital reports, physician reports, death certificates. Reporting began in 1979
4. Data source: hospital reports. Reporting began in 1985
5. Data source: laboratory reports. Reporting began in 1985

involving injury and illness to state, local and volunteer agency employees for an incidence rate of 14.6 per 100 full-time equivalent employees. Incidence rates for 1988 and 1989 are similar (Figure 3).

The State's Public Employees' Occupational Safety and Health Program (PEOSH) conducts on-site inspections in response to employee complaints, referrals from other government agencies, accidents and fatalities. Table 5 presents the categories of complaints and referrals received during 1990.

TABLE 5
PEOSH Complaint and Referrals Received in 1990

Complaint	Number	% of Total
Poor indoor air quality	53	29%
Diesel exhaust exposure	47	25%
Asbestos exposure	28	15%
Lack of emergency eye wash and/or shower	19	10%
Chemical exposure	17	9%
Improper respiratory protection	10	5%
Other	11	6%
Total	185	100%

Table 6 presents the results of several targeted investigations conducted by the PEOSH Program from 1987 to 1991. Some investigations concerned lead exposure in indoor firing ranges, improper respiratory protection practices among firefighters, noise, emergency eyewashes at vocational education schools, and asbestos exposure during auto repair and building maintenance operations. From 1979-1985 the NJDOH identified and inspected 53 police indoor firing ranges. The results of all these inspections indicated serious deficiencies in work practices and engineering controls in all ranges. Various hazards were evaluated at high hazard worksites such as vehicle repair garages, hospitals, and several water treatment plants.

Common hazards to which workers in New Jersey are exposed are presented below:

Exposure to Lead: The potential for lead exposure exists in over 100 occupations. Workers most likely to be exposed are found in operations where lead is melted and fumes released or where lead is used in powdered form. Many exposed workers are found in the primary metal industries and the manufacturing of metal products. Workers in recycling industries are also exposed to lead. Other exposed groups include construction workers such as painters, steel, plumbers, printers, workers who repair radiators or service batteries, and workers who are involved with the manufacture of gasoline anti-knock additives. Occupational lead exposure endangers not only the worker, but can harm his/her family members, particularly young children, as well, if the lead is carried home on the work clothes or tools.

Eighty-seven New Jersey private workplaces were inspected by OSHA between 1980 and 1985 in the 15 industries most frequently inspected by OSHA for compliance with the lead standard. Excessive occupational exposure to lead was found at one-half (46%) of these worksites. Not surprisingly, the Department of Health's surveillance efforts clearly demonstrate that occupational lead exposure is a public health problem in New Jersey.

TABLE 6
Results of Targeted Inspections Programs of PEOSH 1987-1991

Industry/Workplaces	Hazard Assessed	Time Period Inspections Conducted	No. of Workplaces Inspected with Potential Exposure	Number (%) of Workplaces with Violations
Indoor Firing Ranges	Lead	1/87-6/91	49	44 (90)
Fire Departments	Adequacy of Respiratory Protection Program (smoke)	3/87-6/90	17	9 (90)
Brake & Clutch Repair	Asbestos	1/88-6/88	32	29 (91)
Bldg. Maintenance	Asbestos	6/88-8/88	12	7 (58)
Vehicle Repair Garages	Various	12/88-6/89	9	7 (78)
Various	Noise	3/90-3/91	8	2 (25)
Vocational Educational Schools	Eye wash (corrosives)	2/90-3/90	6	1 (17)
Hospitals	Various	7/90-12/90	2	2 (100)
Sewerage Treatment Plants	Various	8/90-4/91	8	8 (100)

Between October 1985 and December 1991, NJDOH received 16,674 laboratory reports of blood lead levels on 3,643 adult individuals (Figure 4). Thirty-two percent of the individuals had blood lead levels of 40 ug/dl or higher, a level suggested as requiring medical evaluation; 14% had levels of 50 ug/dl or higher, a level which often requires a mandatory job transfer for lead exposed workers under the federal Occupational Safety and Health (OSHA) lead standard; 3% had levels of 70 ug/dl or higher, a level which involves medical intervention (Figure 5).

Exposure to Asbestos: Asbestos is a known cause of cancer, and exposed asbestos workers have been shown to have an increased risk of lung cancer, asbestosis (a restrictive pulmonary disease), and mesothelioma (a rare cancer of the lining of the chest or abdominal cavity). There is a synergistic effect between asbestos exposure and cigarette smoking. A worker exposed to asbestos and who smokes cigarettes has a risk 92 times higher than someone who doesn't smoke and is not exposed to asbestos.

Surveillance activities for asbestosis are based on a Department of Health regulation (N.J.A.C. 8:57-3.1) requiring hospitals to report patients hospitalized with the diagnosis of asbestosis (ICD-501). The burden of asbestosis is evident from morbidity data collected by the Department. In 1988, the Occupational Health Service (OHS) received 1,038 reports of adults diagnosed with asbestosis. Trend data analysis has shown that there is an increase in the number of first hospitalizations for asbestosis in New Jersey (Figure 6).

Exposure to Silica: Sand, which is largely quartz, is used as an abrasive in sandblasting and for polishing and cutting glass, stone, and metal. The sand industry in the southern part of New Jersey is a leading producer of sand for foundries, glass manufacturers, road and building construction, and the ceramic industry. Workers in these industries are exposed to silica when dusts are generated, as in grinding or milling. Other workers are exposed during the manufacturing of abrasive soaps, rubber, and plastic, as well as in cement production.

OSHA inspection data from 1980 to 1985 indicate that excessive silica exposure still occurs throughout New Jersey. Of 230 samples for airborne silica taken by OSHA in New Jersey during this six-year time period, the concentration in over one-quarter (27%) were above the permissible exposure level set as the legal standard by OSHA. One-half (47%) were above 50% of the permissible exposure limit.

Despite being perceived as a problem of the past, and despite much information about the detrimental health effects of silica, exposure to this mineral quartz remains an ongoing hazard to workers in New Jersey in affected industries. Silicosis is a serious occupational lung disease caused by the inhalation of silica dust. A total of 733 cases have been identified between 1979 and 1990 (Table 7). Completed work histories identified 270 facilities as the suspect sources of silica exposure. Fifty-six of these are known to be currently operating facilities with on-going silica exposure.

TABLE 7

SILICOSIS REGISTER: Sources of Case Identification (1979-1990)

Source	Number of Cases
Hospital discharge data	670 (91%)
Death certificates	14 (2%)
Worksite follow-up	46 (6%)
Physician reports	3 (1%)
Total	733 (100%)

Exposure to Mercury: Mercury, like lead, has been used since prehistoric times. In modern industry, use of mercury and mercury compounds is widespread. Exposure to mercury occurs during the manufacturing of medical and scientific instruments, and in the electrical industry during the manufacturing of light switches, batteries, and fluorescent lamps. Exposed workers can also be found in the hospital, dental, pharmaceutical and chemical industries. Mercury exposure also occurs during the manufacture and use of pigments, paints, and dyes and during evaluation and remediation of some hazardous waste sites.

Few laboratory reports are received by the Department of Health for mercury, as well as other metals including arsenic, and cadmium exposure than are received for lead exposure (Table 8). The small number of reports for these metals reflects, in part, the fact that OSHA does not require biological monitoring for these metals. With mercury, about 10% of reports analyzed by the Department of Health have been found to reflect non-occupational exposures such as fish ingestion, dental amalgams, herbal medicines and community contamination.

FIGURE 4

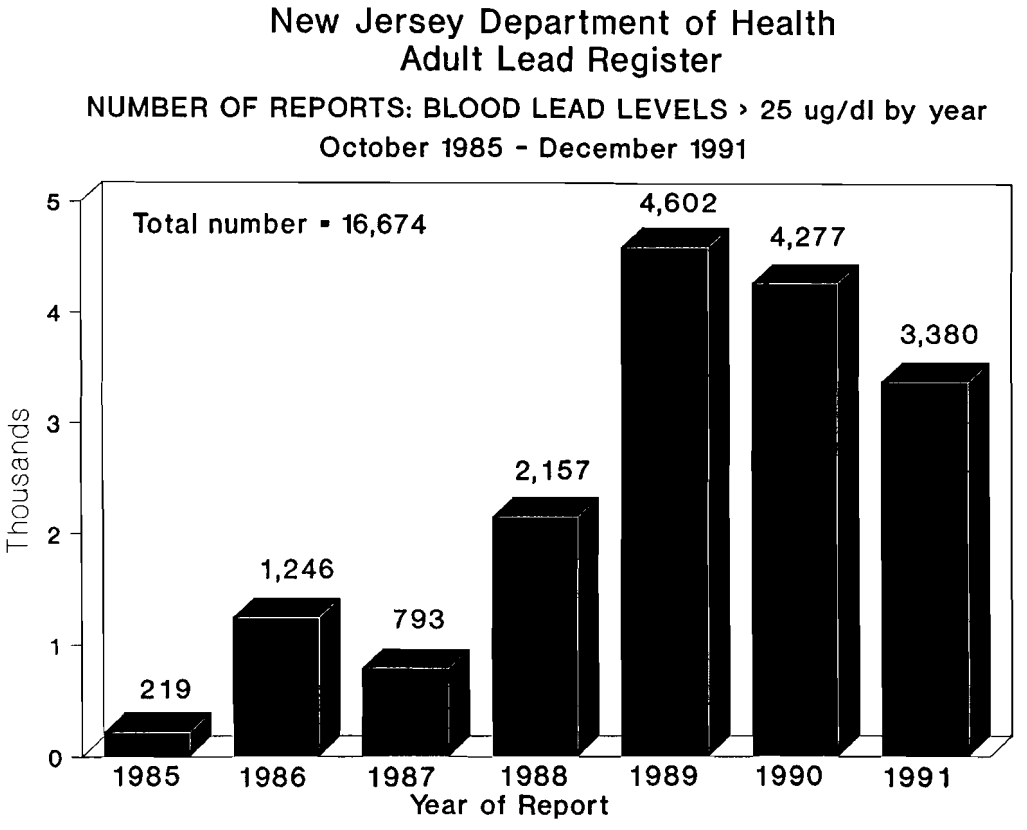


FIGURE 5

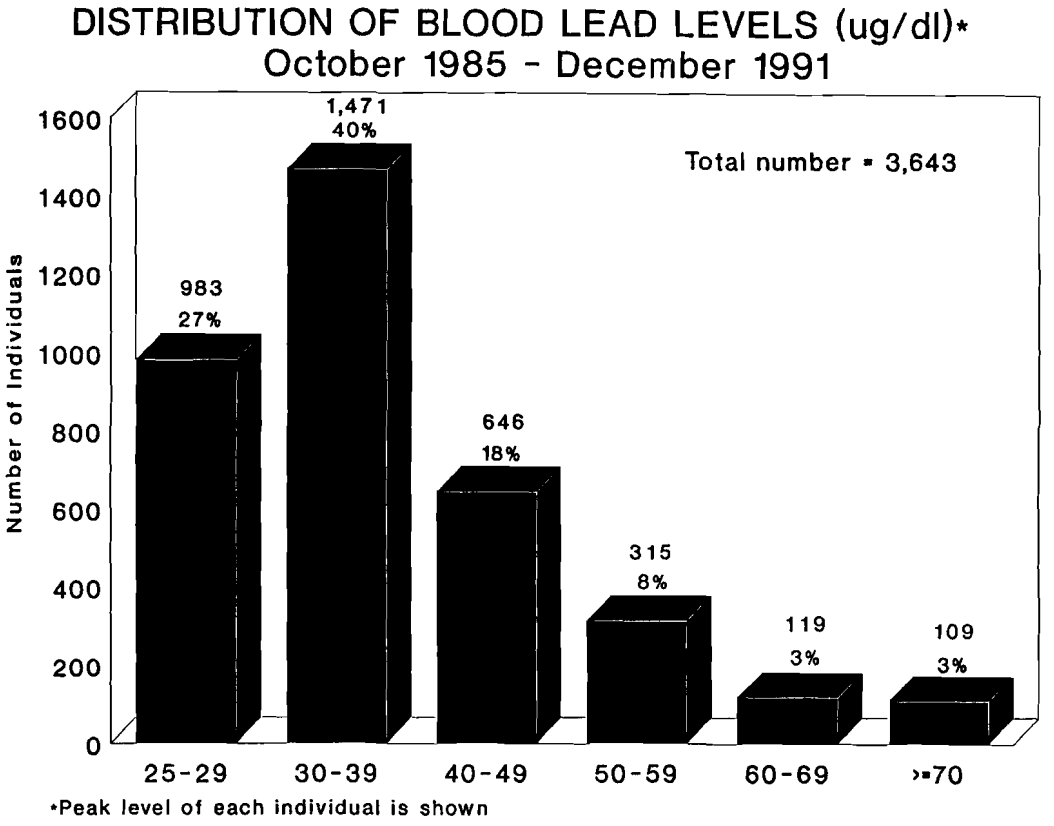


FIGURE 6

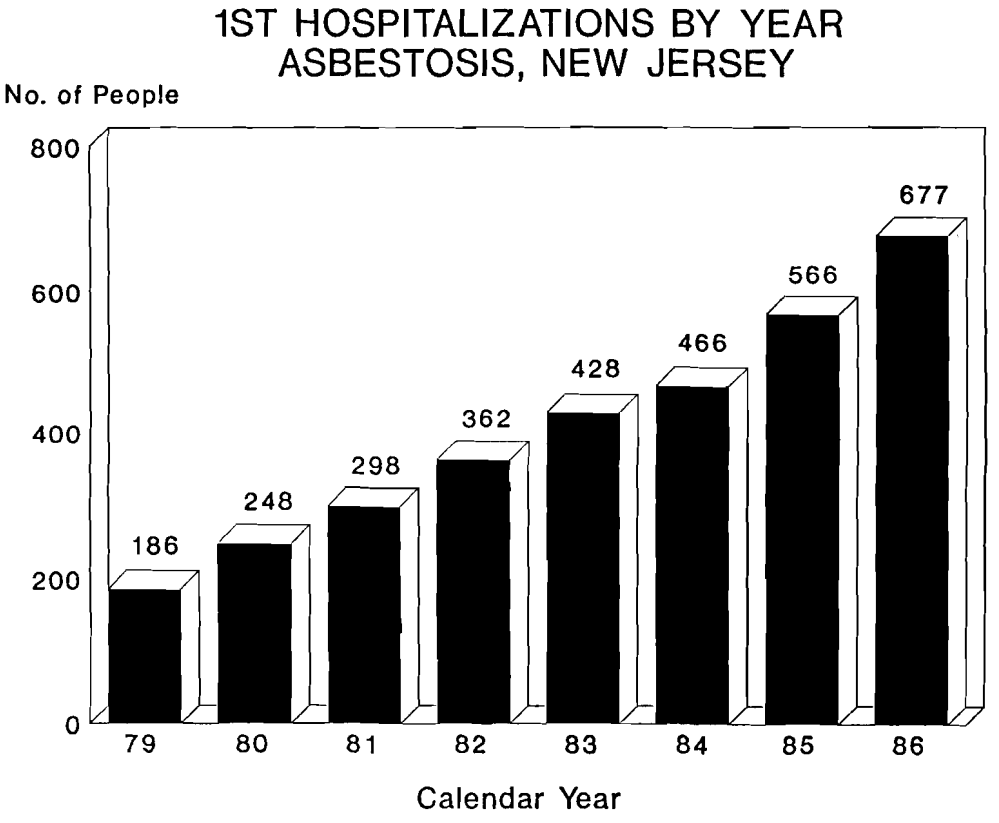


TABLE 8
NUMBER OF ADULTS REPORTED TO THE DEPARTMENT OF HEALTH FOR EXPOSURE TO MERCURY, ARSENIC, AND CADMIUM
OCTOBER 1985—DECEMBER 1991

	Number of Reports Received	Number of Individuals
Mercury	606	356
Metal Arsenic	112	102
Cadmium	290	112

Exposure to Asthma-Inducing substances. In New Jersey, it is estimated that at least 165,000 individuals are exposed to workplace substances that can cause or exacerbate asthma. In October 1987, with support from National Institute for Occupational Safety and Health (NIOSH), surveillance of occupational asthma was initiated using physician reporting as the primary source of case identification. Active case reporting began in June of 1988. As of December 1991, 184 cases of occupational asthma have been reported to the Occupational Health Service.

Exposure to Human Carcinogens: How many workers in New Jersey are over-exposed to chemical agents which have been documented to cause human cancer? Table 9 presents the results of OSHA inspections in the private sector for the nine human carcinogens that were most frequently inspected for by OSHA between 1980 and 1985. In 20% of the inspections, exposure to a carcinogen was measured to be above the OSHA's Permissible Exposure Limit (PEL). For industries at high risk for exposure to human carcinogens, the frequency of worker over-exposure is even higher. Table 10 shows OSHA inspection results for the 10 New Jersey industries which have been most frequently inspected by OSHA for exposure to human carcinogens. In one-half (28) of the 58 inspections conducted, exposure in excess of the PEL was found.

2. Occupational Mortality

Death Due to Occupational Injuries. Nationally, occupational accidents are responsible for a large number of disabling injuries and fatalities. Unfortunately, an adequate measure of the magnitude of the problem does not exist. The U.S. Bureau of Labor Statistics' estimate of 3,750 fatal occupational injuries in the United States each year contrasts with the National Safety Council's estimate of 10,700 fatal injuries. The National Safety Council's estimate, which is based on different data sources, different groups of workers, and experiences in a wider range of workplaces, is believed to be more accurate.

Between 1983 and 1990, 756 traumatic, unintentional occupational fatalities were recorded. Of these, 733 cases (97%) were men and 23 (3%) were women. Six hundred and twenty-three (623) cases (82.4%) were White, 118 (15.6%) were Black, and the remainder, 15 (2%) were of unknown race. The age of the individuals ranged from 15 to 85.

The distribution of fatalities by cause is shown in Figure 7. Motor vehicle accidents were responsible for nearly one quarter of all identified as occupational fatalities. The type of industry where the individuals were employed was determined for 739 of the fatalities. These cases were distributed among all major industry groups (Figure 8). The construction industry in New Jersey accounted for one-third (31%) of all traumatic occupational fatalities.

Death Due to Occupational Diseases. At present, there is no complete source of information on the extent of work-related death from occupational diseases in New Jersey. Analysis of the best available data (1985-1987) indicates, however, that at a minimum 2,170 to 2,870 deaths result each year in New Jersey from occupational diseases (Table 11). These diseases include occupational cancers, dust diseases of the lung (pneumoconioses), cardiovascular diseases, chronic respiratory diseases, and neurologic disorders. This range of estimates is considered conservative (a low estimate) because proportional risks were applied to deaths from only six conditions (cancer, pneumoconioses (dust diseases of the lung), cardiovascular disease, chronic respiratory (lung) disease, neurologic illness, and renal (kidney) disease) and for each condition, conservative proportional risk estimates were used.

It is important to consider these figures in the context of data on overall mortality. There were 71,200 deaths annually in New Jersey from 1985 to 1987. The estimated 2,172 to 2,873 deaths attributable to work-related exposures constitute 3-4% of these total deaths.

TABLE 9
OSHA INSPECTION RESULTS FOR SELECTED HUMAN CARCINOGENS IN NEW JERSEY
1980-1985

SUBSTANCE	NO. OF INSPECTIONS	INSPECTION>	PEL*	INSPECTION>	AL*
Asbestos	126	30	(24)	33	(26)
Nickel	59	5	(8)	5	(8)
Coal Tar Pitch	26	8	(31)	13	(50)
Chromium	23	0	(0)	1	(4)
Arsenic	14	3	(21)	5	(36)
Formaldehyde	13	3	(23)	7	(54)
Ethylene Oxide	6	3	(50)	3	(50)
Benzene	5	2	(40)	2	(4)
Vinyl Chloride	3	0	(0)	0	(0)
Total	275	54	(20%)	69	(25)

*PEL = permissible exposure level, AL = action level (50% of PEL)

Source: OSHA Management Information System data tape, 1980-1985; New Jersey Department of Labor.

TABLE 10
NEW JERSEY INDUSTRIES MOST FREQUENTLY INSPECTED BY OSHA FOR EXPOSURE TO HUMAN CARCINOGENS, 1980-1985

Industry	SIC Code	Total No. of Workplaces	No. OSHA Inspections	No. (%) of Inspections with > PEL
Motor veh. parts & access.	3714	50	50	4 (12)
Roofing, sheet metal	1761	885	11	5 (45)
Special trade, NEC	1799	722	9	4 (44)
Surg. Appliances & Suppl.	3842	55	7	1 (14)
Plaster dry wall & insul.	1742	351	6	1 (17)
Asphalt felt & coatings	2952	12	6	4 (67)
Asbestos products	3292	5	4	3 (67)
Adhesive sealants	2891	57	4	2 (12)
Metal foil & lead	3947	17	3	2 (75)
Paring, mixtures & blocks	2951	31	2	2 (100)
Total		2,185	58	28 (48)

Source: OSHA Management Information System data tape, 1980-1985; New Jersey Department of Labor

FIGURE 7

DISTRIBUTION BY CAUSE OF UNINTENTIONAL OCCUPATIONAL FATALITIES IN NJ, 1983-1990

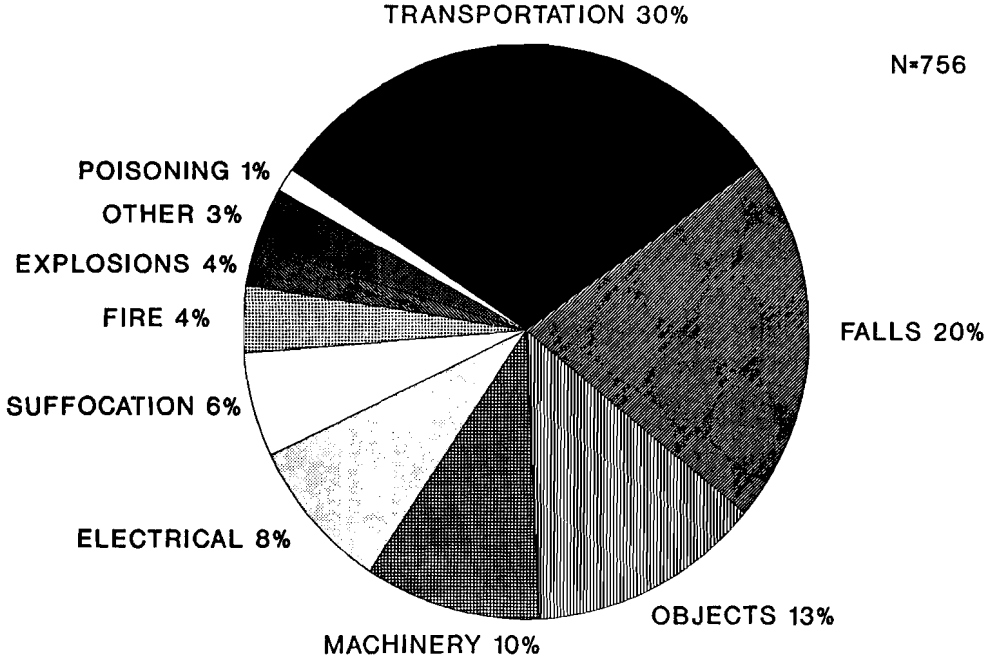


FIGURE 8

NUMBER OF OCCUPATIONAL FATALITIES BY INDUSTRY IN NEW JERSEY, 1983-1990

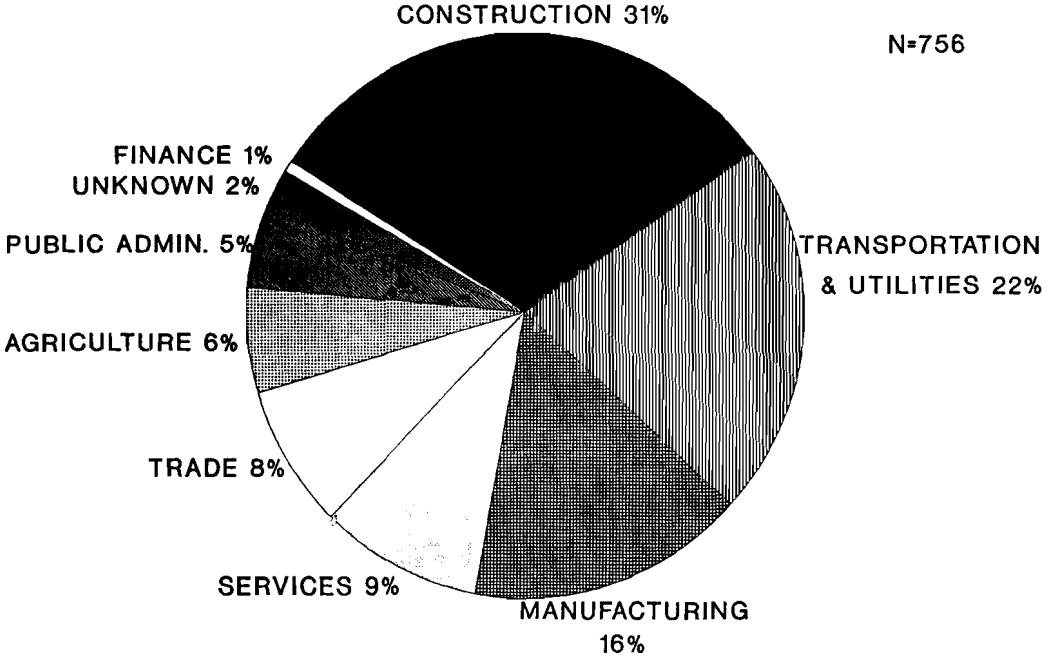


TABLE 11
Occupational Disease Mortality Estimates—New Jersey

Cause of Death	Average Total Amount Mortality, NJ 1985-1987	Estimated Proportion and Number of Deaths With Occupation		Average Annual Occupational Disease and Injury Deaths Reported by Workers Compensation 1985-1987
		Percent	Number	
Cancer	17,309	10%	1,731	—
Pneumoconioses	28	100%	28	—
Chronic Respiratory Disease*	2,489	5-10%	125-249	—
Cardiovascular Disease, Renal Disease, & Neurological Disorders	28,835	1-3%	288-865	—
Other Conditions	22,569	—	—	—
Total	71,230	—	2,172-2,873	58

*Includes emphysema, asthma, bronchitis, bronchiectasis, and allergic alveolitis (ICD 490-496)

Sources: Vital Statistics of New Jersey, New Jersey Department of Health; Workers' Compensation Board, New Jersey Department of Labor.

3. Economic/Social Impact of Selected Occupational Diseases

Cancer

Annual total economic costs associated with the incidence of occupational cancer in New Jersey are estimated to be $260 million (1988 dollars). These costs are made up of $87 million in direct treatment costs and $170 million in indirect productivity losses. As staggering as these annual costs are, they are underestimates. The true costs of occupational cancer are higher by an amount equal to the pain and suffering of all the victims and their families.

Chronic Respiratory Disease

Between 125 and 249 deaths per year in New Jersey are attributable to occupationally-related chronic respiratory disease. In a recent study of the cost of care for patients with chronic lung disease in Seattle, Washington, investigators found that the average patient used a total of $6,979 in health care resources over one year. Approximately one-half of these costs were for hospital care where hospital days per patient year averaged 10.1 days. Adjusting these data to New Jersey prices, between $1,107,500 and $2,206,140 is a conservative estimate of direct medical care expenses for occupationally-related chronic lung disease deaths in New Jersey.

Pneumoconioses

Pneumoconioses are lung diseases found in workers exposed to dusts found in the workplace, such as asbestos fibers and silica. In New Jersey, the average annual number of hospital discharges for the pneumoconioses is 1,049 (ICD codes 500-505). Hospitalization for pneumoconioses cost $5,936,721 in 1988 in New Jersey.

In conclusion, incidence-based, hospital cost, and prevalence-based estimates of the annual costs of occupational disease show only a small portion of the total economic costs that would go into a total estimate of occupational disease costs in New Jersey. They are meant to be illustrative, to provide a glimpse of the total magnitude of the cost of occupational disease currently known to be borne in New Jersey. Until better data exist, the costs of occupational disease will likely remain underestimated.

II. EXISTING HEALTH DELIVERY SYSTEM

A. INSTITUTIONAL RESOURCES

1. New Jersey Department of Health

Over the past several years, the New Jersey Department of Health has instituted special programs to describe and respond to occupational and environmental illnesses, injuries, and hazards in our State. The activities under these programs are carried out by staff in the Environmental Health Service and the Occupational Health Service. The specific activities of the two Services are described below:

Environmental Health Service

The primary goal of the Environmental Health Service (EHS) is to protect New Jersey citizens from adverse health effects related to environmental hazards. This is accomplished by building upon scientific knowledge of the relationship between environmental exposures and human health, improving communications with the public, and promoting public health policies that are aimed at early identification and prevention of exposure to environmental contaminants. The EHS's activities focus on delivering services to the public and health professionals, basing these services on existing information or investigations conducted by EHS to address environmental health concerns specifically in New Jersey. To provide these services, the EHS works closely with other State departments, such as Department of Environmental Protection and Energy and Department of Labor, local health departments and academic institutions.

A new initiative of the EHS is the establishment of a training and certification system for lead abatement industry, as outlined in the NJDOH's Policy Statement on Preventing Lead Toxicity in New Jersey (see Appendix A). The EHS is in a unique position to implement such a system because of its existing asbestos certification program for workers and supervisors within the Environmental Technical and Training Program. Currently, the EHS is working with the USEPA on a lead Accreditation Plan which includes the development of a training curriculum and relevant model training courses, development of State program capabilities, development and administration of national examinations, and development of regional program capabilities to assist states, contractors, and the general public. A model accreditation program, similar to the asbestos program, will be given to states for implementation.

Three programs comprise the Service: 1) Public Response, 2) Environmental Training and Technical, and 3) Specially Funded Health Evaluations.

Public Response Program

The main goal of the Public Response Program is to provide information and investigation services to New Jersey residents concerning adverse health effects of environmental contaminants. This is primarily accomplished through conducting outreach and education activities to promote environmental hazard exposure prevention through public information and policy recommendations. Through a coordinated program, the EHS attempts to mitigate the harmful effects of existing environmental hazards or community-wide public health emergencies through field response preparedness and on-site evaluation and follow-up. The Public Response Program responds to telephone and written requests for information on a variety of environmental issues from citizens, private industry, health professionals, and local officials. For the calendar year 1991, the EHS received 5,044 telephone inquiries and distributed 21,730 pieces of educational materials. The Program also provides consultation and technical support services, to school health and safety personnel, local health officers, medical professionals, as well as various local and State government officials. The Program further conducts hazardous materials training for emergency response personnel and coordinates the Department's planning for response to State-wide emergencies. The Program performs oversight of asbestos management in schools and (NJDOH) owned/leased buildings to include monitoring and assessment

activities and through administrative action ensures compliance with regulations.

Environmental Technical and Training

The program's goal is to evaluate the public health impact of human exposure to environmental contaminants including cancer investigations. This is achieved by assessing and providing information on environmental contaminants and their effect on human health. In addition, the program is responsible for the enforcement of N.J.A.C. 12:120-8:60 Asbestos Licenses and Permits. This standard empowers the Department to regulate the asbestos abatement training industry in New Jersey. Through this standard, the impact on human health due to the exposure to asbestos is minimized. Since 1985, the Program has certified over 23,000 individuals who have completed asbestos abatement training courses approved by the EHS. The program also provides direct training for individuals seeking certification as Asbestos Safety Technicians (AST) and to date have trained over 1,700 individuals. The EHS has an ongoing program of intensive monitoring and evaluation of the asbestos abatement industry and investigative studies into abatement techniques and other state-of-the-art technologies.

Specially Funded Health Evaluations Programs

The goals of these programs are to prevent toxic exposures Statewide and resulting health problems from water contaminants, hazardous waste, and chromium and to prevent adverse reproductive outcomes associated with environmental exposures. These goals are pursued by increasing knowledge about links between exposures and outcomes, identifying pathways by which humans are exposed to sources of toxics in New Jersey, conducting community education on exposures and hazards, and promoting protective policies on environmental contaminants. In some cases, the EHS provides clinical and laboratory services to residential and worksite populations potentially exposed to environmental contaminants such as chromium and evaluates the data for the purposes of reducing individual and community exposures.

Occupational Health Service

Since 1982, the Occupational Health Service has experienced a significant increase in the scope of its activities, including regulation and surveillance. The overall objective of the Service is to decrease the magnitude of occupational diseases and injuries in the State.

The activities of the Service are administratively organized in three programs: Right to Know, Public Employees Occupational Safety and Health and Occupational Disease Surveillance.

Right to Know Program

The New Jersey Worker and Community Right to Know Act provides individuals with the right to know the full range of the risks they face from hazardous chemicals so they can make reasoned decisions and take informed action concerning their employment and their living conditions, and provides a mechanism for the receipt of this information. Responsibilities for the implementation of the Act are divided between the Department of Health (public workplace and emergency services provisions of the Act), Department of Environmental Protection and Energy (community and emergency services provisions of the Act), and Department of Labor (worker discrimination and collection of Right to Know fee assessment).

The Right to Know (RTK) Program is responsible for enforcing provisions of the law which require public employers to report all hazardous substances present at their facilities, label all containers to identify the hazardous and non-hazardous substance ingredients, and provide employees with education and training on hazardous substances. The Program also enforces the provision which requires private employers to label all containers to identify the hazardous and non-hazardous substance ingredients.

The Worker and Community Right to Know Act also mandates the preparation and distribution of Hazardous Substance Fact Sheets by The Department of Health. To date, more than one thousand fact sheets have been prepared. Information dissemination also includes sending surveys and fact sheets to employees and members of the public, speaking at meetings, seminars, workshops, and conferences, and the preparation of Right to Know education and training materials. The program has also developed a comprehensive database on the types and quantities of hazardous substances present in public workplaces and the number of public employees exposed to them. The Program certifies the instructors and training programs of private consultants and administers Right to Know outreach grants to all 21 counties.

Public Employees Occupational Safety and Health Program

This program has the responsibility to implement the Department of Health's mandate under the 1984 New Jersey Public Employees Occupational Safety and Health Act (PEOSHA). This mandate is to develop and enforce occupational health standards for public employees throughout the State, and to encourage employers and employees in their efforts to improve the working environment.

The Department of Labor is the lead agency for this legislation and is responsible for enforcing the safety provisions of the law.

The Department of Health activities under PEOSHA can be divided into three main areas: 1) workplace investigations—Investigations are made in response to complaints from public employees, to reports of accidents and fatalities, and to target certain high risk workplaces. The high risk workplaces targeted for scheduled investigations include indoor firing ranges, public work departments, hospitals and institutions, maintenance departments, school laboratories, art rooms and vocational shops and fire departments; 2) technical assistance—The staff has been involved in an extensive educational effort to inform State, county and municipal agencies and employees regarding the provisions and requirements of this law and health standards. The PEOSH staff spends a considerable amount of time responding to phone calls and letters from employers and employees who have questions about health hazards and the law; and 3) education—Members of the staff present education and training programs to employer and employee groups about the law and the health standards. The Program has developed fact sheets, reports, and videos on indoor firing ranges, firefighter protective equipment, diesel exhaust, indoor air quality, AIDS, school hazards, and other relevant topics.

Surveillance Program

The major activity of this program is to develop and conduct surveillance activities which identify individuals at high risk of developing occupational disease. A second responsibility of program staff is to provide expertise in the areas of epidemiology and biostatistics to the Service.

The program has identified databases that are available and important for occupational disease and injury surveillance. Currently there are several ongoing projects which are using or evaluating the utility of these databases, which include hospital and laboratory reports, death certificates, hospital discharge records, medical examiner's reports, workers' compensation data, and health insurance data.

Under a cooperative agreement with NIOSH/CDC, the program has developed a physician reporting system for silicosis and occupational asthma ("Sentinel Event Notification System for Occupational Risks" or "SENSOR"). A surveillance system for traumatic occupational fatalities in New Jersey has also been developed.

From various data sources, facilities where employees are exposed to lead, mercury, silica, and asthma-causing agents are identified. Staff conduct industrial hygiene evaluations, which include a walkthrough of the workplace, interviews with employees and employers and distribution of educational materials. Recommendations regarding control strategies are made in a report that is prepared on each evaluation.

2. Occupational/Environmental Medicine Clinics and Services

The Occupational Health Division of the Environmental and Occupational Health Services Institute operates a clinical center which offers evaluation for those who may have been exposed to a toxic substance. The clinic is staffed by physicians, nurses, and medical technicians and can call on psychologists, industrial hygienists, and toxicologists as needed.

Patients are referred to the clinic by employees, family doctors, local and State health departments and Federal agencies. The clinic also holds sessions for medical surveillance of hazardous waste workers and asbestos-exposed groups. Clinical occupational health services are also available at the Cooper Hospital University Medical Center which has recently established an Occupational and Environmental Medicine Section. Another clinic is under development at the University Medical Center in Newark. Similar types of services are also available through occupational medicine and other specialists who operate in hospital-based or free-standing clinics or from their private offices. The Occupational Health Service is in the process of compiling a directory of clinical facilities that offer occupational medicine services in the state of New Jersey.

3. Corporate Medical Departments

Many companies in New Jersey employ a nurse or physician to provide medical services within company facilities. The spectrum of services includes treatment of minor acute injuries, preemployment physical examinations, periodic evaluations, primary care, and employee counseling programs. The occupational illnesses seen by the plant medical service are usually obvious mishaps such as eye splashes or skin rashes. Diagnosis of chronic occupational diseases such as major lung disease, cancer, or neurologic disorders has not constituted a major activity of such medical departments.

The extent to which in-plant health services are presently available in New Jersey is not known. Based on nationwide data from the National Institute for Occupational Safety and Health, however, it is estimated that in New Jersey 14% of industrial plants had onsite health units in the 1970's. As expected, the size of the workplace was the principal determinant of the presence of in-plant health services. Large industries more frequently had in-plant services: 80% of large industries (more than 500 employees on site) versus 25% of smaller industries (100 to 499 employees) had in-plant health services.

The NIOSH study was repeated in 1981-1983 and found that 24% of all industries sampled had in-plant health services, an increase of 10% from the earlier decade. For small (1-99 employees) and medium-size (100-499 employees) industries, rates of established health facilities were approximately 5% and 35%, respectively. Although these proportions represent a mild increase for small and medium sized industries compared to a decade previous, it is still a minority of such plants that have on-site health facilities. Less than 1% of all New Jersey workplaces have 500 or more employees: an additional 2% of workplaces in New Jersey have 100-499 workers. Hence, although access to some type of health services within the plant has improved overall, most workers are still not employed in a plant with on-site health services. Therefore, with the notable and important exceptions of large private employers, it is probable that many workers in New Jersey do not have access to health care services in their workplaces nor would it be economical or feasible to provide such services in the vast majority of small and medium-sized workplaces.

B. HEALTH PROFESSIONALS

1. Occupational Medicine Physicians

The measure of proficiency for a physician in any medical specialty is board certification. Specialty certification in occupational medicine requires one year of training in a clinical internship, one to three years of training in an approved residency in Occupational Medicine, one year of practice in the field, a MPH or equivalent and successful completion of an examination given by the American Board of Preventive Medicine. Physicians who train in internal medicine, family practice or other primary care specialties generally receive little or no training in occupational medicine.

New Jersey has few occupational medicine specialists. A large number of physicians identify occupational medicine as one of the principal foci of their medical practice regardless of whether they are board-certified in occupational medicine. In New Jersey, 140 physicians who are involved in direct patient care list their primary or secondary specialty as occupational medicine. The vast majority (69%) of these physicians are not board-certified in any specialty or at least do not list board certification in any specialty in the various physician directories. One-fifth of the 140 physicians are board certified in one of the primary care specialties, internal medicine, pediatrics, or family practice. Regardless of whether they are qualified to diagnose occupational disease, many self-designated occupational medicine physicians spend much time performing preemployment physical examinations or periodic evaluations, treating acute occupational injuries, or delivering general medical care in an occupational setting or to identified occupational groups. While these activities are important and necessary, they do not constitute a practice which focuses on the diagnosis and treatment of occupational diseases. Hence, it is unlikely that this larger group of self-designated occupational medicine physicians significantly increases the availability of services established specifically for the diagnosis and treatment of occupational disease.

2. Environmentally Trained Physicians

Historically, there have been very few programs in medical schools that train physicians to recognize and treat environmental illnesses. However, this is changing with the support of Federal agencies, such as ATSDR and CDC. Grants are being awarded to states for developing and implementing post-doctoral and continuing education programs to educate physicians and health professionals concerned with environmental exposure to hazardous substances.

3. Occupational Health Nurses

Accurate statistics on the number of occupational health nurses are more difficult to obtain than comparable data for physicians and industrial hygienists. According to an official of the New Jersey Association of Occupational Health Nurses (NJAOHN), there are 550 registered nurses who are working in occupational settings, mostly in private industry, and are members of this organization. No estimate of the proportion of all practicing occupational health nurses that belong to this association is available. At least one-half of the members of the NJAOHN are certified in occupational health nursing, which requires completing 75 credit hours of course work in occupational health nursing, passing an eight hour examination, and having a minimum of five years of experience in the field. On the other hand, very few occupational health nurses have completed a masters in occupational health nursing.

The lack of complete data on the quantity and quality of occupational health nurses in New Jersey is unfortunate, particularly in smaller workplaces, for worker populations with special needs (i.e. minority or high risk groups) and for initial screening, because they can potentially play a vital role in the prevention of occupational disease. First, they are probably the most commonly found occupational health professional based in the workplace in New Jersey. Second, the orientation of nursing towards education and health maintenance would facilitate a preventative approach to occupational health in the workplace.

4. Industrial Hygienists

Industrial hygienists are divided into two categories of expertise: certified and uncertified. Certification requires a baccalaureate degree in the sciences or engineering, five years of practical industrial hygiene experience, and successful completion of a two-day written examination given by the American Board of Industrial Hygiene. Industrial hygienists without certification practice industrial hygiene by relying on their skills, training and expertise but do not meet any minimum standards established by a professional or governmental organization.

The 1987-88 directory of the American Industrial Hygiene Association (AIHA), the major professional organization of industrial hygienists, lists 344 active industrial hygienists in New Jersey, including 119 certified industrial hygienists. Since most industrial hygienists are members of AIHA, the number of AIHA members can serve as an estimate of the number of industrial hygienists in New Jersey. Over 70% of industrial hygienists in New Jersey are employed by corporations. Various levels of government employ another 10% of the industrial hygienists. Most of the remaining (50, or 15%) are private consultants or work for consulting firms.

5. Health Officers and Sanitarians

Health officers and sanitarians are employed by State and local health departments. There are currently 113 local health departments throughout the State. Health officers generally oversee the activities and services that the local health departments provide. Sanitarians perform field inspection services ranging from inspecting food establishments to ensuring compliance with State and local environmental regulations. In the spring of 1988, a survey was distributed to all health officers within the State of New Jersey to assess their perceptions as to areas of need regarding environmental health issues. The results indicated that there was a strong need for public and staff education on environmental health issues. The health officers expressed a concern for comprehensive environmental health education including classroom instruction, presentations, telephone information or referral, and the development of educational materials. This survey has aided the service in determining its priorities and direction.

III. UNMET HEALTH CARE NEEDS

A. INADEQUATE EDUCATIONAL AND TRAINING RESOURCES

Primary prevention, especially in the form of education, is critical to reducing and preventing illness from environmental hazards. A well informed public is better equipped to make educated choices and to protect their health from such hazards.

The field of occupational and environmental health is ever evolving as scientific knowledge increases and advances are made. This rapid growth in information must be disseminated to health professionals and

the public at a more rapid pace than current resources permit in New Jersey. Prevention of occupational and environmental diseases is best accomplished by empowering health professionals and the public with occupational and environmental health information, education and preventive health recommendations to enable them to take steps to safeguard their own and the public's health. In addition, minorities who work and reside in New Jersey carry a disproportionate burden of occupational and environmental illnesses and injuries. It is therefore imperative that the training and education of management, workers, and health professionals incorporate strategies that are sensitive to cultural and racial issues. Minority health care providers are severely underrepresented in the field of occupational and environmental health.

The prevention of occupational disease and injury requires as an essential element the development of management and workers who are educated about occupational hazards and are committed to continuing education. The paramount importance of a knowledgeable work force has been recognized in New Jersey and throughout the United States by the passage of Right to Know laws in the 1980's. These laws establish the obligation of employers to provide information and training to workers concerning workplace hazards and controls.

Establishing a legal right to know and its correlate, a mandated duty to educate has resulted in increased awareness, but, has not necessarily resulted in an informed management and work force. Many companies and public agencies do not have the resources or the expertise to develop an appropriate and comprehensive worker education program. This deficiency applies to public employers as well. Labor organizations, which are well-positioned to be effective in working with management to inform workers of occupational risks, similarly do not have occupational health and safety specialists on their staffs and cannot mount suitable educational programs for their members. Hence, despite newly established laws, resource constraints have limited the success in achieving the goals of these laws.

Physicians generally do not receive adequate training in occupational and environmental medicine. Less than one hour per year is currently devoted in American medical schools to teaching physicians to recognize the symptoms of known toxins or to recall the known associations between exposures such as asbestos or mercury and their outcomes, such as impaired lung function and neurologic disorders.

Physicians do not generally suspect work as a cause of disease, while some readily attribute symptoms to environmental factors based on sketchy knowledge and thus provide limited consultation to their patients. Most physicians do not routinely obtain histories of residential or occupational exposure for their patients that would allow them to identify the occupational/environmental origin of disease. Recent surveys indicate that adequate occupational histories are recorded on fewer than 10 percent of hospital charts. Consequently, many diseases of occupational origin are mistakenly assigned to other causes and opportunities for appropriate early prevention or treatment are missed.

New Jersey lacks a comprehensive environmental health education and outreach program that enables health providers (especially physicians) to identify environmental illness. The vast majority of health-care providers are not trained in recognizing the contribution of environmental exposures to the development of disease and therefore, these providers are not equipped to provide occupational or environmental risk reduction counseling.

Due to dwindling resources and reduction in staff, the Department of Health's ability to provide these services to health-care providers is severely limited.

There is a need for the Department to foster an expansion of environmental health education to residents and students in the State so that individual citizens and communities are made aware of environmental hazards in their homes and communities, and how personal behavior can affect their health. By integrating environmental health education into curricula, students will be made more aware of environmental issues and how environmental hazards can affect their health and quality of life. In the home environment, toxic substances in consumer products, air contamination, exposure to lead, asbestos, and radon, and the generation of household hazardous wastes are all problems which needed to be addressed through outreach and education. The State needs a more informed and empowered public better equipped to make effective choices to minimize their exposure to environmental hazards.

With the lowering of CDC's lead level of concern from 25 ug/dl to 10 ug/dl, identifying and abating environmental sources of lead becomes increasingly important. These sources include paint, plumbing, contaminated work, ceramics, soil, food, and hobbies. Follow-up of cases identified through the DOH's lead registries to determine the sources of lead exposure continues to be extremely important in reducing and preventing additional exposures to lead. There is a need for financial support to local health departments that will provide them with resources needed to conduct appropriate follow-up, identify environmental sources of lead, and oversee case management. Just as important is the need for a certified, trained work force to conduct lead abatement and a strong State program to oversee the certification and training of the work force.

B. INADEQUATE SURVEILLANCE/DATA SOURCES

Although New Jersey is recognized as having one of the best occupational surveillance systems in the nation, there is still the need for more accurate reporting of occupational diseases by health care providers, laboratories, and hospitals in New Jersey. In many cases, the role of occupational exposures are not recognized or addressed by practitioners.

Recent efforts by several agencies of State government to enhance programs to track occupational diseases and hazards deserve recognition and praise. The Occupational Health Service's Disease Surveillance Program is among the most comprehensive surveillance systems in the country. The Heavy Metals Registry (which includes the reporting of adult lead poisoning cases), the fatal injury registry, and the silicosis surveillance project of the Department of Health are excellent examples of both the types of accurate data that can be collected and of the intervention and disease control that are made possible by surveillance systems. The Department of Health's recent study on occupational cancer incidence, the analyses of hospital discharge data and the asthma identification project suggest promising new approaches to measuring the burden of occupational disease in the State. The Right to Know surveys conducted jointly by the Department of Environmental Protection and Energy (DEPE) and the Department of Health are unique, State-specific sources of information about the distribution of potential hazards throughout New Jersey.

For several reasons, existing sources of data are not sufficient to enumerate the magnitude of all occupational lung diseases in New Jersey. First, the signs and symptoms of many occupational diseases are nonspecific, and, in the cases of pneumoconioses, disease often occurs many years after exposure has taken place. Thus, physicians who do not investigate occupational causes when seeing patients with respiratory symptoms may not make the correct diagnosis, and the patient's disease will not be recorded in the data system. Second, the data sources omit cases that are not serious enough to cause hospitalization or death. Third, without interviewing all patients and reviewing medical records, it is not possible to determine which conditions occurred because of workplace exposures. These limitations restrict the ability of the Department of Health to implement public health prevention and control activities. More accurate and complete sources of information need to be developed and evaluated including:

- —Laboratory reports from out-of-State laboratories
- —OSHA Integrated Management Information Systems (IMIS) data (databases summarizing OSHA inspection results)
- —NIOSH National Occupational Exposure Survey (NOES) data
- —Poison Control Center data
- —Physician reporting on pesticide exposures and repetitive motion injuries
- —Workers Compensation data for public and private employees

C. INSUFFICIENT CLINICS/NEED FOR NETWORK

The number of clinics which provide specialized diagnostic and preventive occupational/environmental health services in New Jersey is unknown. Current organizations operate independently; there is no consistency in protocols, no referral network, no oversight or analysis of the exposure data which have been collected. The lack of a network among such facilities leaves clinics isolated and results in unrealized benefits to the overall public and workers at risk. A network of these clinics is needed to facilitate the exchange of resources, data, and expertise.

New Jersey suffers a severe shortage of board-certified occupational medicine physicians, especially those involved in direct patient care. In 1988, only 33 of the more than 43,683 licensed physicians in New Jersey were board-certified in occupational medicine. Many additional physicians actually practice occupational or environmental medicine, but it is impossible to assess their clinical competence or the quality of care that they offer. A third group of physicians, including specialists such as pulmonary physicians, dermatologists, neurologists, allergists, immunologists, and orthopedists, also provide care for patients with occupa-

tional or environmental illnesses as part of their routine practice. However, in general, these physicians lack the necessary knowledge of public health and preventive medicine to identify the effective interventions to ameliorate hazardous conditions in the workplace or home and to prevent others from becoming ill.

Because of the lack of health providers knowledgeable about occupational disease, workers do not learn the true nature of their illnesses and may not receive appropriate treatment. Compensation for occupational diseases will not occur if the diseases are not identified as occupational in origin.

Assembling information from these individual encounters to obtain an accurate and precise description of the total burden of occupational disease in New Jersey is precluded; diseases not diagnosed cannot be reported to the State Health Department. Prevention efforts are limited, because they cannot be focused on industries and workplaces where occupational diseases have not been identified. Finally, the efficacy of preventive efforts cannot be measured without knowing the rate at which occupational disease occurred prior to instituting these efforts.

D. INADEQUATE HAZARD ASSESSMENTS/RESOURCES

The conduct of on-site regulatory inspections and consultative industrial hygiene evaluations at private and public workplaces is a proven effective method to reduce employee exposure to hazardous substances and safety hazards.

The Occupational Surveillance Program in the Occupational Health Service conducts consultative industrial hygiene and safety evaluations in private workplaces. The evaluations are conducted in response to reports of occupational diseases and fatal injuries received through the service's surveillance efforts. Because of the limited number of industrial hygienists in the Surveillance Program, the program currently is able to conduct evaluations at only 10 percent of the workplaces identified through the surveillance reports.

The Right to Know Program in the Occupational Health Service conducts inspections 1) to enforce the workplace provisions of the Right to Know law in 10,400 public facilities; 2) to enforce the labeling requirements of the Right to Know law in 33,000 private facilities; and 3) to enforce the training program certifications granted to consulting agencies and trainers. Because of the limited number of inspectors, the program is only able to inspect approximately 1% of all covered total workplaces each year.

The Public Employees Occupational Safety and Health Program in the Occupational Health Service conducts inspections to enforce the health provisions of the PEOSH Act for over 500,000 public employees and emergency responders. With current staffing levels, the program is only able to conduct on-site investigations in response to approximately 50% of the complaints received and a limited number of targeted inspections at facilities with high risk exposures. The PEOSH Program is unable to develop educational materials and training programs for employees and employers regarding all the health standards. Additionally, the program is unable to offer on-site consultative services to employers to help them comply with the PEOSH Standards.

Because of its limited resources, OSHA evaluates exposure to a limited number of workplace chemicals. Seventy-two percent of all samples collected during Federal OSHA inspections in New Jersey between 1980 and 1982 measured exposures to only 17 substances. Records of inspections in New Jersey also show that OSHA conducts infrequent workplace inspections in specific industries where, according to its own data, a serious problem of over-exposure to a well recognized toxin exists. OSHA is only able to conduct a limited number of inspections in New Jersey industries at high risk for producing such hazards as silica.

Presently, environmental field investigations are limited to Asbestos Hazard Emergency Response Act (AHERA)-related quality assurance inspections of schools, response to emergencies involving environmental hazards, evaluating the content of lead in drinking water, and hazardous waste sites which are currently listed on the National Priority List.

The Environmental Health Service (EHS) is frequently called upon to conduct medical evaluations, health investigations, or studies related to environmental health concerns throughout the State. Often there is an immediate need for EHS's evaluation of health concerns from exposures to environmental contaminants. In addition, this information is invaluable to the Department of Environmental Protection and Energy's (DEPE) remediation efforts as it can serve to guide and target the scope and sequence of remediation activities. There is no mechanism in place that provides the DOH with funding to conduct such investigations on an immediate or ongoing basis.

When new environmental hazards are identified as having the potential for a substantial impact upon human health, public health investigations related to such hazards must be conducted expeditiously. There is a need to have a dedicated funding base in New Jersey that can be quickly accessed by public health scientists to conduct urgent environmental health investigations so that the impact of such hazards on public health can be evaluated and steps taken to reduce human exposure and illness. Without such funding, experience has shown that public health investigations had to be delayed (as much as four to five years) or they could not be conducted at all. As a result, the potential for public exposure to environmental hazards continued.

E. INSUFFICIENT HEALTH PROMOTION/NEED FOR WELLNESS PROGRAMS

Comprehensive occupational health and safety programs should provide worksite hazard identification, medical management or referral of employees for health problems, a hazards communication program, and an employee health insurance program. Other desirable components include a smoking cessation program; an employee assistance program for substance abuse and personal counseling; a health promotion program addressing exercise, nutrition, cholesterol, and stress; worker education on injury prevention; and a routine medical surveillance program.

The worksite is an ideal location for teaching individuals about positive health practices. Increasing attention to occupational health issues is apparent among employers, employees, and the health community, all of whom have strong incentives to implement worksite health promotion activities. Employers indicate that healthy employees are absent less, are more productive, and use fewer medical benefits; company image, recruitment, and morale are also enhanced. Employees gain not only a safe work environment but also direct access to services that improve their health at a convenient location, sometimes during work hours, with the employer often paying for the service. The workplace offers health care providers an opportunity to affect the health practices of a significant portion of the population, including dependents and retirees.

In 1985, the national Survey of Worksite Health Promotion Activities found that nearly 66 percent of worksites with more than 50 employees had at least one healthy promotion activity. The most frequently cited categories of activities included:

—smoking control (35.6% of worksites)
—health risk management (29.5%)
—back care (28.6%)
—stress management (26.6%)
—exercise/fitness (22.1%)
—off-the-job accident prevention (19.8%)
—weight control (14.7%)
—high blood pressure control (16.5%)
—nutrition education (16.8%)

According to the Hay/Huggins Benefits Reports 1989, 79 percent of the employers surveyed offered health promotions programs. These surveys clearly demonstrate that there is increasing acceptance of health promotion activities by major employers. The data also show that smaller worksites were less likely to have health promotion activities. The size of a worksite has been shown to be an important determinant for the presence of all categories of activities. The surveys demonstrated the need for expanding the number and variety of health promotion activities available, particularly in the smaller worksites.

IV. GOALS AND RECOMMENDATIONS

MISSION:

TO REDUCE THE INCIDENCE AND PREVALENCE OF DISEASE CAUSED BY ENVIRONMENTAL AND OCCUPATIONAL EXPOSURES TO HAZARDOUS AGENTS.

A. GOAL 1: EDUCATION AND TRAINING

To conduct education and training programs in occupational and environmental health and safety, thereby enhancing the quantity and quality of information available to health providers, workers, employers, educators, emergency responders and community residents. These education programs would include technical consultation, development and dissemination of educational materials, presentations, public service announcements and certification of trainers and workers.

Recommendations:

Environmental Health

1. Enhance and expand working relationships with community, industry and health professional advisory groups in order to develop more comprehensive and effective educational and outreach campaigns on environmental health issues.
2. Develop media outreach materials (including public service announcements, videos, newspaper columns, brochures, newsletters, etc.) which focus on groups especially at-risk for environmentally caused illness such as children, the elderly, and reproductive-age women.
3. Develop liaisons with minority health groups in order to more effectively reach minorities on environmental health issues through media techniques more specific to their needs (i.e., bilingual informational materials, audio-visual presentations, etc.).
4. Develop public/private sector partnerships (e.g., with realtors) in order to economize on the printing and distribution costs associated with public outreach efforts on consumer awareness related to environmental health issues.
5. Monitor developments in the field of emerging public health problems such as electromagnetic fields and second-hand smoke and tailor response activities to the level of public concern and appropriateness for State-level actions.
6. Develop working relationship with education agencies, parent/teacher organizations, institutions of higher learning in order to: a) sponsor student interns (high school or college) to gain experience in working on environmental issues; b) expedite distribution and implementation of existing environmental health curricula; c) provide opportunities for EHS personnel to present lectures on environmental health issues; and d) provide health education/promotion expertise to NJDOH public response initiatives.
7. Identify and develop needed informational and guidance documents to support local and county health department efforts to investigate and address environmental health hazards in communities.
8. Distribute informational materials and/or resource lists to health-care providers which detail what is currently known about specific environmental hazards or provide up-to-date contacts and selected references.
9. Work in conjunction with the New Jersey Academy of Medicine and the New Jersey Medical Association's Environment Committee to offer conferences, seminars, training, informational pieces for their publications and continuing education credits on environmental illness.
10. Provide course materials, student internships, and lecturers to the State's medical and nursing schools on environmental health problems and prevention.
11. Expand on the Department's existing authority, expertise, and infrastructure to develop a lead training and certification program.
12. Evaluate national examinations as measures of exit competencies for training courses designed to certify lead abatement workers, supervisors and related professionals and accept those which meet the State's public health needs.
13. Provide a "School Wellness" program of training and technical support for school health and safety personnel on the identification, remediation and prevention of environmental contaminant exposure related to school buildings.

Occupational Health

1. Support adoption of the proposed bill—Occupational Health Education Act—introduced in the 1990 legislative session. The bill creates an occupational health education program to provide grants to employers, labor organizations, trade associations, non-profit organizations and educational institutions for the implementation of occupational health education projects.
2. Provide educational materials to all individuals reported to the occupational disease and injury registries and to their employers.
3. Issue an Occupational Health Surveillance Annual Report to individuals and organizations known to be concerned with occupational health and to high risk target groups.
4. Develop a consultation project to provide expanded consultation services to public agencies.
5. Expand education, training and consultation activities to develop education materials and make presentations on **all** PEOSH health standards to a larger number of public employers and employees.
6. Expand the presentation of Right to Know Train-the-Trainer programs, certification of consultants who provide Right to Know training, consultations to public and private employers, and preparation, revision and Spanish translation of Hazardous Substance Fact Sheets.
7. Private and public employers should be urged to establish joint management-labor health and safety committees. Training programs for Health and Safety Committees should be developed and presented in cooperation with public and private employers, trade associations and labor unions.
8. Form a Task Force with representatives from the Occupational Health Service, the Office of Minority Health, and the medical profession to develop a collaborative educational strategy. The educational plan to enhance occupational health services would address a variety of clinical specialists and physicians-in-training and would include efforts to increase the number of minorities in this field.
9. Promote increased training in occupational health to health providers through financial and programmatic support by the Department of Health to the New Jersey Academy of Medicine and to the three medical schools in the State. Sponsor medical student rotations in a medical school or hospital-based occupational health clinical facility. Develop a training program specifically tailored to the needs of primary care providers who want to acquire clinical competence in occupational medicine.

B. GOAL 2: SURVEILLANCE

To develop a comprehensive surveillance system for occupational illnesses and injuries. The surveillance system must include reporting by health-care providers, laboratories, and hospitals to improve the monitoring of the incidence and prevalence of specified occupationally related diseases and conditions, (e.g., fatal injuries, lead toxicity and cumulative trauma disorders). The quality of the data sources should be improved and the number of data sources increased. Collection of racially and ethnically specific data should be an essential element of this surveillance system. To reduce disease and injury rates, appropriate follow-up activities must be an integral component of the surveillance system.

Recommendations:

Occupational Health

1. Establish a mandated occupational health surveillance program in the Department of Health through adoption of a law by the Legislature.
2. Designate the Department of Health (DOH) as the principal agency to coordinate an interagency task force that will develop methods to standardize, exchange, and make accessible data relevant for the surveillance of occupational and environmental health hazards, including data from the Right to Know survey, Workers' Compensation records, hospital discharge records, and other data sources.
3. Expand sources of data for surveillance by mandating the reporting of occupational information on hospital records, requiring reporting of industrial hygiene and biological monitoring data by employers and standardizing and expanding access to Workers' Compensation information and New Jersey Poison Information and Education System data.
4. Improve the existing mandated physician reporting by revising the physician reporting regulation and by implementing major outreach to physicians in New Jersey.
5. Assess the quality and quantity of all currently available databases on workplace inventories of hazardous substances and obtain appropriate computerized data. Link the computerized data and produce profiles of hazards by workplace that establish priorities for appropriate public health intervention.
6. Develop and implement a surveillance system for case reports of farm workers exposed to pesticides.
7. Establish a system to identify and monitor public employees who have or are at risk of developing an occupational disease or injury. An active surveillance for public employees using Department of Labor's first reports for illness and injury should be developed. The information collected from these surveillance systems can be used to target agencies for education and enforcement efforts.

C. GOAL 3: OCCUPATIONAL AND ENVIRONMENTAL HEALTH CLINICS

To facilitate the establishment of a statewide network of occupational/environmental health clinics in New Jersey. The clinics would provide access to diagnostic and preventive health services for workers and residents with an occupational or environmental disease or with exposure to occupational or environmental hazards. The implementation of this model in New Jersey would involve (1) transformation of existing facilities with limited programs into comprehensive occupational/environmental health clinics, (2) establishment of additional centers in those parts of the state which currently lack even limited occupational/environmental health clinics, and (3) establishment of an office in the Department of Health to coordinate network activities and serve as a referral center.

Recommendations:

1. The State of New Jersey should initiate a demonstration project establishing a statewide network of occupational and environmental health centers. These clinical centers should be located in the northern, central, and southern regions of the State and should be coordinated through a central office within the Department of Health. These centers should provide diagnostic, preventive, and treatment services for workers and residents in New Jersey who suffer from occupational disease or injury or environmental illness, or who have been exposed to occupational or environmental hazards.
2. Develop this network by means of a five-year demonstration project consisting of three phases: planning, implementation and evaluation.

D. GOAL 4: HAZARD AND ENFORCEMENT INVESTIGATIONS

To increase the number and expand the scope of field investigations conducted (a) to identify and/or evaluate occupational/environmental hazards in workplaces, communities and schools and (b) to monitor compliance with rules and regulations. The types of hazards and enforcement that would be addressed by these investigations include: (1) asbestos in schools; (2) pesticides in schools, communities, and residencies; (3) indoor air quality complaints; (4) community access to information on hazardous substances; (5) response to complaints from public employees regarding exposures to such hazards as carbon monoxide, lead, formaldehyde, and asbestos; (6) community-wide environmental hazard emergencies; (7) evaluating hazardous waste sites for potential human exposure pathways; (8) hazard communication to public employees; and (9) enforcement of the Bloodborne Pathogen Standard.

Recommendations:

Environmental Health

1. Establish a fund through the Legislature for the DOH to conduct specialized urgent environmental health investigations as the public health need demands.
2. Identify and prioritize in coordination with ATSDR and DEPE non-NPL hazardous waste sites for evaluation and mitigation of adverse human health effects resulting from exposure to hazardous substances in the environment associated with the site.
3. Coalesce site-specific environmental, toxicological, epidemiological, and demographic data into a comprehensive health assessment of the site(s).

Occupational Health

1. Submit a State Plan for PEOSH by the Department of Labor to federal OSHA which would enable the State to receive federal support for up to 50% of the funding for the Program conducted in the Departments of Health (DOH), Labor and Community Affairs for public employees.
2. Authorize the PEOSH Program to hire additional staff to educate and enforce the new health standards including the Indoor Air Quality Standard, Bloodborne Pathogen Standard, Firefighters Standard and the Occupational Exposure to Hazardous Chemicals in Laboratories Standard.
3. Conduct an on-site inspection in response to every PEOSH complaint received as mandated by law and expand the number of targeted PEOSH inspections of high risk workplaces.
4. Compile a comprehensive database of hazardous substance usage by identified New Jersey workplaces.
5. Enhance the capacity of the New Jersey Cancer Registry to provide basic data for investigations of suspected occupational hazards and populations at risk.
6. Increase the number of consultative industrial hygiene surveys conducted as follow-up to reports of occupational injuries and illnesses.
7. Increase the number of consultations regarding control technologies provided by NIOSH and OHS to industries identified with highest exposure risks.

E. GOAL 5: WORKSITE WELLNESS

To increase the number of public and private worksites that provide employees a wide variety of health promotion activities. Facilitate the establishment of a Wellness Council in the State and encourage the availability of health promotion activities in public worksites.

Recommendations:

Occupational Health

1. Appropriate individuals in the Department should be appointed members of the Task Force.
2. The Task Force should develop goals, objectives and a work plan with specific activities and objectives.
3. The Task Force should review the available information on worksite wellness and make recommendations to the Commissioner regarding the efficacy of health promotion activities and their associated benefits.
4. The Departments of Personnel and Health should become members of the National Association for Public Employee Wellness.
5. The Committee should develop a work plan and identify resources for the implementation of the plan.
6. Representatives from the Department of Health should meet with representatives from various business and trade associations to encourage the formation of a New Jersey Business Group.
7. Potential members of the New Jersey Business Group should be identified, including representatives from the New Jersey Business and Industry Association, Chemical Industrial Council, and the New Jersey Health Products Council.
8. The DOH should become a member of the New Jersey Business Group and actively participate on the committees formed by the Group.

APPENDIX A

NJDOH's Policy Statement on Preventing Lead Toxicity in New Jersey

PREVENTING LEAD TOXICITY IN NEW JERSEY

POLICY STATEMENT AND IMPLEMENTATION STRATEGY
NEW JERSEY STATE DEPARTMENT OF HEALTH

August 1992

Dear Colleague:

I am very pleased to present the Department's Policy Statement and Implementation Strategy for Preventing Lead Toxicity in New Jersey. The New Jersey Department of Health has a long history of leadership in speaking out and caring for children and workers exposed to lead reaching back to 1956. The department first dedicated a program to the concern for childhood lead poisoning in 1967, before the first legislative mandate in 1971 and amended statute in 1985. Federal dollars went directly to project cities until 1981, when federal categorical money ceased. The State Department of Health elected to use federal Maternal and Child Health Block Grant dollars to maintain the project cities programs. The Department of Health's persistent requests for state dollars resulted in an appropriation with the amendments of 1985. This was also the year that the department began to collect statistics on lead workers.

One of the greatest frustrations of public health workers in the area of lead poisoning is our inability to isolate the poisoned individuals from their lead burden. Individuals are exposed to lead in literally all facets of their environment. Although lead paint has been the traditional poison of the child, lead is ubiquitous and reaches people through the food and water they eat and drink and the air they breathe. It comes in the form of contaminated soil and is leached from water pipes and solder in canned goods. Manufacturing industries, indoor firing ranges, battery repair shops, bridge construction and repair sites, hobby and craft activities are a few places where lead is found in our workplaces.

In the face of the research which has determined that levels of lead as low as 10 ug/dl, are harmful to the developing brain, CDC has recommended that medical intervention be instituted earlier. This means we need to be even more vigorous in our outreach and determination to find children who are exposed. Further we must advocate more strenuously for primary prevention. I am therefore recommending a comprehensive lead poisoning prevention policy which strives for a lead free environment for all our children.

However, we realize that our work is not complete. As we move forward in implementing these strategies we would like to include in an expanded report the input and comments from other departments of state government, local health departments, and community groups. The cooperation of all is needed to ensure that all New Jersey citizens are free of adverse health affects associated with lead. Recognizing that the primary prevention of lead toxicity by elimination of lead in the environment is the ideal, the Department of Health will promote policies and advocate for the removal of existing lead in the environment and for not allowing any additional lead to enter.

We welcome your support for this comprehensive policy and implementation strategy. Please send your comments by October 30, 1992 to Mr. James Brownlee, New Jersey State Department of Health, Division of Epidemiology, Occupational and Environmental Health Services, CN 360, Trenton, New Jersey 08625-0360.

Sincerely,



Frances J. Dunston, M.D., M.P.H.
State Commissioner of Health

EXECUTIVE SUMMARY

The attached report describes the New Jersey State Department of Health's Lead Policy Statement and Implementation Strategy which addresses the prevention of lead poisoning in a comprehensive strategy. The major goals of this strategy include:

Universal screening to determine the risk of lead toxicity for all children. Every effort should be made to ensure that all children are screened at six months of age and repeated prior to their second birthday. In addition, all workers at risk shall be screened annually. All elevated blood lead levels shall be reported to the New Jersey State Department of Health.

Children less than six years of age with blood lead > **20 ug/dL** shall receive case management medical intervention, parent education, environmental investigation and hazard abatement.

All employees in the private and public sector with occupational lead exposure shall be screened in accordance with the requirements of the federal and state lead standards. Employees (16 years and older) with blood lead > 25 ug/dL shall be case managed.

Medical consultation will be provided to the affected individuals and their private physicians; referrals for medical treatment will be made, if appropriate.

Educational materials about the health hazards of lead will be provided to the families of affected children, affected workers and their employees, and physicians.

Workplace facilities identified with workers at risk of exposure to lead shall be evaluated for the presence of lead hazards and recommendations will be made for appropriate workplace interventions to reduce exposures.

Educational materials as to sources of environmental lead, methods to minimize or prevent exposure, and what to do if they need assistance in dealing with an environmental source of lead shall be provided to the public.

A competently trained and certified workforce with governmental oversight shall be established to ensure that lead is being properly identified, and removed, encapsulated or maintained.

To implement these recommendations will require increased financial resources. This need is quantified by major recommendation in the attached charts.

CHART I
COSTS OF RECOMMENDATIONS FOR SCREENING FOR CHILDHOOD LEAD POISONING

Recommendation	Annual Cost
Screen 600,000 children < age 6	$18.0 million
Screen 177,000 children at highest risk	$5.3 million
Screen 240,000 children at 6 months and 2 years by blood lead. This is the preferred recommendation.	$7.2 million
Current level of screening 65,000 children—by new screening test (blood lead)	$2.2 million
Current level of screening 65,000 by current screening method (EP test with confirmatory blood lead)	$1.7 million

CHART II
COSTS OF RECOMMENDATIONS IN POLICY STATEMENT

	Recommendation	Annual Cost
A.	Childhood Lead Screening Maintaining the level of screening at 65,000 children, but changing the test to blood lead (See page 11)	$2.2 Million
	Childhood Lead Screening Screen 240,000 children at 6 months and 2 years by blood lead (See page 9)	$7.2 Million
	Occupational Lead Screening Maintaining existing system	$0.1 Million
	Meeting Recommendation for Improved Surveillance and Follow-up. (See pages 10 and 11)	
B.	Education Outreach Comprehensive education/outreach (See page 13)	Can cost from $750,000 to $1 Million
C.	Case Management	$1.5 Million
D.	Inspection & Remediation Apply to HUD for Demonstration Grant (See pages 16 thru 20)	—
E.	Laboratory Costs	See Screening Costs Above

I. BACKGROUND

Responding to the publication of the Department of Health and Human Services' **Strategic Plan for the Elimination of Childhood Lead Poisoning and the CDC's statement Preventing Lead Poisoning in Young Children,** the New Jersey State Department of Health formulated a policy statement and implementation strategy for Preventing Lead Toxicity in New Jersey. The New Jersey document addresses both childhood and occupational concerns for risk of lead exposure and toxicity.

CHILDHOOD LEAD POISONING PROGRAM:

The New Jersey State Department of Health (NJSDH) has been concerned about childhood lead poisoning since 1956. In response to increasing numbers of children being identified with lead encephalopathy, the Department of Health organized the Accident Prevention and Poison Control Program in 1967. This program worked cooperatively with federally designated lead project cities which received federal grants until 1981.

At this time, when the categorical federal funds ended, the State Department of Health chose to continue to fund the federally designated lead projects with Maternal and Child Health Block Grant funding and assumed the administration of grants to these cities/counties.

The Accident Prevention and Poison Control Program (APPC) currently provides grants to 14 local health departments for childhood lead poisoning screening, prevention education, and case management activities. In addition, it provides grants to support medical services for lead poisoned children in Newark and New Brunswick. It also provides technical assistance to local health departments to assist them in meeting the requirements of the Minimum Standards related to childhood lead poisoning. The Program also works with other NJSDH programs, local health departments and private providers to encourage screening of children for lead by Child Health Conferences, WIC programs, and Pediatric Primary Care clinics.

The NJSDH Laboratory reports the results of all lead tests of children it performs to APPC. All private laboratories in the state are required to report the results of all elevated blood lead tests of children to APPC. For every confirmed elevated blood lead test reported to it, APPC issues an investigation and Abatement Order to the local health department in whose jurisdiction the child lives. This order triggers the requirement of Chapter 13 for the local health department to investigate the child's principal residence and/or other probable source of exposure to lead and, if a lead hazard is found, to order the abatement of the hazard.

The legal basis for the department's activities in childhood lead poisoning prevention and abatement can be found in:

N.J.S.A. 26:2-130.137 which established the Department's responsibility for the development, implementation and coordination of a program to control lead poisoning and to abate identified lead hazards.

N.J.S.A. 24:A-1.11 which defines lead based paint exceeding 1.0% in dwellings or properties as a hazard and authorizes local boards of health to require its abatement. It also requires that such lead hazards be abated in a dwelling when a child is identified with lead poisoning.

N.J.S.A. 8:51-1.8.3 (CHAPTER XIII of the State Sanitary Code) which requires local health departments in Priority I and II cities to maintain a childhood lead poisoning program, and establishes procedures for local program operations and for the abatement of identified lead hazards.

ENVIRONMENTAL LEAD PREVENTION PROJECT:

As CDC continues to lower the action level for lead, environmental sources of lead become more significant. Lead in paint and soil are considered to be two of the greatest sources of environmental exposure. Lead can also be found in drinking water (from lead pipes, soldered plumbing, or water coolers); in food (from lead soldered cans or lead glazed pottery); and in folk remedies or cosmetics from other cultures. In addition, lead often used in hobbies or crafts such as pottery making, stained-glass, electronics (soldering), painting, etc. Also, occupational exposures can become environmental exposures when workers bring lead-contaminated clothing or materials home and expose their households and families.

Education is very important to minimizing and preventing exposure to environmental sources of lead. The Environmental Health Service (EHS) has been actively working on developing and disseminating educational information on lead in drinking water. In addition, telephone consultations are provided to the public when they call in with questions as to environmental sources of lead and where they can be referred for additional assistance with a specific problem or concern.

EHS staff are working with the federal Environmental Protection Agency (EPA) to develop a comprehensive training and certification strategy for all worker categories in lead identification and abatement. To do this, curricula for training the workforce will be developed and given to training providers and university-based training centers for implementation. The EHS role is to oversee this entire process including examination development and administration.

OCCUPATIONAL LEAD SURVEILLANCE PROJECT:

The New Jersey Department of Health has been conducting surveillance of occupational lead exposure since 1985. The lead surveillance project in the Occupational Health Service has the following objectives:

- Determine the risk of exposure to lead among private and public workers in New Jersey by collection and analysis of laboratory and physician reports.
- Define the number and type of workplaces that use lead and the number of exposed employees in these workplaces.
- Carry out and evaluate intervention strategies for reducing exposure to lead.
- Provide workers with educational information and, where appropriate, medical consultation.
- Provide physicians with information about the prevention of adverse health effects caused by lead exposure.

The primary sources of data for the occupational lead surveillance project are:

- laboratory reports of blood lead levels equal to or greater than 25 ug/dL and urine lead levels equal to or greater than 80 ug/dL in individuals (16 years and older); and
- physician reporting of lead poisoning.

The public health response provided by the Occupational Health Service includes the collection and computerization of the data from the reports and follow-up activities are:

- medical consultations to affected individuals and their private physicians;
- industrial hygiene evaluations at workplaces identified as sources of exposure; and
- educational efforts for affected individuals, their employers and physicians.

The legal basis for the Department activities in occupational lead surveillance can be found in N.J.A.C. 8:44-2.11 which requires clinical laboratories to report results of biological tests for lead to the Department of Health and N.J.A.C. 8:57-3.2 which requires physicians to report cases of lead poisoning to the Department of Health.

II. POLICY STATEMENT FOR 1992

The New Jersey State Department of Health advocates for a state policy and strategy to ensure that all New Jersey citizens be free of adverse health affects associated with lead. Recognizing that the primary prevention of lead toxicity by elimination of lead in the environment is not possible, the Department of Health aims to assess the risk of lead toxicity to the residents of the state. Further, the Department of Health pledges to work with the Department of Environmental Protection and Energy and the Department of Community Affairs to promote policies and to advocate for the removal of existing lead in the environment and to not allow any additional lead to enter.

To determine the risk of lead toxicity, all children less than six years of age shall be screened. Every effort should be made to ensure that all children are screened prior to their second birthday. In addition, all workers at risk shall be screened annually. All elevated blood lead levels shall be reported to the New Jersey State Department of Health.

Children less than six years of age with blood lead > **20 ug/dL** shall receive case management medical intervention, parent education, environmental investigation and hazard abatement.

All employees in the private and public sector with occupational lead exposure shall be screened in accordance with the requirements of the federal and state lead standards. Employees (16 years and older) with blood lead ≥ 25 ug/dL shall be case managed.

Medical consultation will be provided to the affected individuals and their private physicians; referrals for medical treatment will be made, if appropriate.

Educational materials about the health hazards of lead will be provided to affected children and their families, affected workers and their employers, and physicians.

Workplace facilities identified with workers at risk of exposure to lead shall be evaluated for the presence of lead hazards and recommendations will be made for appropriate workplace interventions to reduce exposures.

Educational materials as to sources of environmental lead, methods to minimize or prevent exposure, and what to do if they need assistance in dealing with an environmental source of lead shall be provided to the public.

A competently trained and certified workforce with governmental oversight shall be established to ensure that lead is being properly identified, and removed, encapsulated or maintained.

III. IMPLEMENTATION STRATEGY

A. CASE IDENTIFICATION

PEDIATRIC

Statement of Charge

To make recommendations on the level of lead exposure, as measured by blood lead determination, at which public health interventions will be initiated;

To make recommendations as to how all children should be screened;

To make recommendations as to how a surveillance system can be established to insure appropriate public intervention occurs for identified children.

Estimate of State's Needs

Based on the position in CDC's statement that all children under age 6 are at risk, there are 625,300 children at risk in New Jersey. Of this number, approximately 64,000 children are screened each year and the results reported to the NJSDH. This is approximately 10% of the population of children under age 6. Of the children whose screening is reported, approximately 1,600 each year (2.5%) had blood lead levels > 25 ug/dL, which is the current threshold for the initiation of medical and environmental intervention. Although an unknown number of additional children are screened by local health departments and private medical providers, it is estimated that there are between 500,000 and 550,000 children with unknown blood lead levels in the state.

Lead's most serious impact on young children is its toxic effect on the developing neurological system. It is therefore imperative that elevated levels of lead exposure be identified, the source of lead exposure be identified and eliminated, and medical intervention be initiated as soon as possible, before the neurological damage is severe and irreversible. In addition, the normal exploratory behavior of toddlers makes them most likely to come into contact with, and ingest, lead in their environment. Therefore, the highest priority should be to screen children 6 months to two years of age. There are approximately 240,000 children two years of age or younger in New Jersey.

Objectives

a. As a concerted statewide effort, **all** children should be screened for blood lead between 6 months and one year of age, and again by two years of age. Any child under the age of 6 who has not been screened should also be tested.
   Periodic retesting of children at risk should be done as needed through age 5.
b. All elevated lead tests should be fully reported to the Department of Health in a timely manner.
c. All reports of elevated blood lead in children should be quickly entered into a case management system for follow-up medical and environmental management. A case management data base should be established to insure that appropriate interventions occur and to serve as the basis for epidemiologic analysis and service planning.
d. A mechanism shall be established to obtain reporting to the Department of Health on the results of all tests done each year by commercial laboratories to generate estimates of the number of children screened by county, municipality, age, and other parameters to be set by the Department.

Recommended Methods for Achieving Results

Recommended Action #1—The recommended screening test for lead toxicity in children should be a **capillary blood lead** determination that is integrated with routine screening for childhood anemia. The Department recommends continuation of screening for anemia through the use of the **EP test,** especially in high risk populations (WIC, Child Health Conferences, Medicaid). Any elevated lead test result from a capillary sample must be confirmed by a second lead test using a **venous** sample before medical and environmental actions are taken.

Rationale—The current policy is to screen children using the EP test, then do a blood lead test if the EP test is elevated. This method provides a rapid and inexpensive means of screening for high lead levels. However, EP is not a sensitive indicator of lead at levels < 25 ug/dL. With recent evidence that lead can cause adverse effects at lower blood concentrations, the recommended action level has been reduced to 20 ug/dL. Blood lead testing is required to obtain accurate measures at this lower level. Capillary samples are much easier to obtain from young children, but are easily contaminated and therefore must be confirmed by a venous sample.

However, EP testing in addition is still recommended. The role of nutritional status, particularly iron deficiency anemia, in altering lead absorption is clear from the research. Long-term iron deficiency increases absorption and retention of lead. Knowing the EP contributes to determining severity of exposure and proper medical management. Iron deficiency is also a major health concern in its own right, even in the absence of lead toxicity. Both tests can be obtained from the same capillary sample. Combined screening is consistent with the Department's philosophy of emphasizing integrated primary care.

Recommended Action #2—In order to insure that all children are screened, the following actions should be taken:

- The Department will take the initiative to educate pediatricians and other primary care physicians about the CDC and NJSDH recommendations on preventing lead toxicity in young children and urge them to screen all children in their care in compliance with these recommendations.
- In the development of the Planning Regulations for the Pediatric Plan element for the MCH consortia, there should be a specific requirement that the consortia develop a strategy to insure universal screening of children in each region. This strategy should include a review of all existing MCH-funded outreach initiatives to explore opportunities for cross training of staff so that lead screening activities could be integrated with outreach done by Healthy Mothers, Healthy Babies, Immunizations, and related special projects.
- The Department will take responsibility for, and direct available public funding to, screening of those children at highest risk and with least access to medical services. To this end, the Department will seek funding to maintain, and, if possible, expand projects at local health departments in the highest risk communities.

- The Department will recommend that childhood lead poisoning prevention activities, including screening, case management and environmental investigation, be maintained as part of the required Minimum Standards for all local health departments.
- The state WIC program will work with its local agencies to ensure that their medical risk screening includes lead screening.
- The Department will work with the Department of Human Services to expand EPDST screening, including lead screening, under Medicaid to reach 85% of eligible children.
- The Department will develop an initiative to inform all Head Start, preschool and day care providers of the dangers of lead and the need for lead screening, and urge them to take steps to insure that all their children are screened.

Rationale—Screening all children who should be screened will be beyond the resources of the Department. In addition, emphasizing lead screening as a stand-alone activity is counter to the Department's philosophy of integrated primary care. Therefore, a public/private partnership will be necessary to achieve these goals. However, the Department will take the initiative to educate and motivate private medical and preschool/day care providers to be active participants in this campaign.

Public funding available for these activities should be targeted to those children who are least likely to be tested by the private sector. Because these children are living in poverty, they are also the children most likely to be at high risk because they live in deteriorated housing and/or polluted neighborhoods. Lead Poisoning Prevention projects in local health departments, operated with funds provided by the Department, have a proven track record in reaching the highest risk children, and need to be maintained and expanded. Additional projects in other high risk cities need to be funded.

Medicaid can be an important contributor in this effort. With the recent expansion of Medicaid eligibility in young children to 185% of poverty level, many of the highest risk children will be Medicaid eligible. The Medicaid EPSDT program includes lead screening and **should**, by federal regulation, be made available to all Medicaid recipient children.

Recommended Action #3—It is recommended that the State adopt 20 ug/dL as the threshold for reporting and public health action. Any child with a blood lead level greater than or equal to this level would receive active case management, medical evaluation and appropriate intervention, environmental investigation, and appropriate hazard abatement.

Rationale—This level is the level recommended by CDC for medical and environmental intervention. Although the CDC guidelines recommend individual follow-up if the level is ≥ 15 ug/dL, there is no **public health** action that is recommended at this level.

Recommended Action #4—It is recommended that the State develop and adopt regulations which require physicians and health care facilities to report cases where children have blood lead levels (screening or confirmatory) over 20 ug/dL.

Rationale—The current reporting by laboratories is incomplete both in terms of children and in terms of data elements. The Division of Epidemiology, Environmental and Occupational Health Services now requires this type of reporting for adults. The major concern is quickly getting an accurate residential address for the reported child. The testing laboratories do not usually have this information. The treating facility or physician does. The design of the reporting process will be integrated with the laboratory reporting process so that case reports from labs that have no addresses will be routinely submitted to the physician/facility who will be required to supply the address and other client information.

Recommended Action #5—The NJSDH-Public Health and Environmental Laboratories will develop a system to directly report the results of samples submitted to it for lead testing directly to the submitting provider, with priority to reporting of elevated results. It will also establish electronic data transfer capability with APPC to enable APPC to quickly initiate orders for investigation and abatement.

Recommended Action #6—The NJSDH will require and provide technical support for all funded childhood lead poisoning prevention projects to implement the case management data system that has been developed by CDC (STELLAR). The Department will also encourage the use of STELLAR by any other health department that screens a large number of children for lead, and will assist any other local health department or medical provider that may desire the software in acquiring it. When a local agency or provider receives a report on an elevated blood lead test, it will create a file on that child using the STELLAR system and use it to track the progress of each child in case management.

Rationale—Evaluation of the effectiveness of the implementation of this policy is possible only with universal reporting of **all** blood lead tests. Only in this way can the Department determine how many children are being screened, and how close we are to meeting our objective of screening all one and two year olds.

In addition, the CDC Guidelines recommend that increased attention and public education be addressed to communities with concentrations of large numbers of children who have blood lead levels greater than 10 ug/dL. Identification of such communities will be possible only with universal reporting of results.

Costs

Two of the recommendations of this section will have a significant cost to implement:

- increase in screening from targeted screening of high risk children to universal screening of all one and two-year-olds.
- change in screening test from EP to capillary blood lead.

Based on the experience of the NJSDH-funded projects, the cost per child of blood lead screening will be $30. That cost covers both laboratory testing (average cost $12) and the infrastructure cost of identifying the child, drawing the blood and tracking the result. Universal screening of all 600,000 children under six years of age in the state would therefore cost approximately $18 million. Targeted screening of all of the 177,000 children at highest risk (that is, those that live in Priority 1 communities) would cost $5.3 million.

This document recommends screening of all children between 6 months and one year of age, and a second screening of all children before their second birthday. The total cost of screening all 240,000 one and two-year-olds would be $7.2 million per year. Medicaid could have a major role in covering these costs. It is estimated that 70,000 of these children would be Medicaid eligible, so Medicaid could contribute up to $2.1 million of these costs. The parents of many additional children will be able to cover the cost of testing as part of routine pediatric care. This would be an out-of-pocket expense, as no insurance company that we know of, including the State Health Benefits Plan, reimburses for lead testing, although some group practice model HMO's may include it in preventive care. However, significant **public** funds will be needed to screen high risk, low-income children who are the responsibility of state and local health departments. Screening all of the estimated 71,000 high risk children who are under two years old and live in Priority 1 communities would cost more than $2 million.

As with any screening initiative, there is a cost/benefit trade-off between the population coverage of the screening and the specificity of the screening method used. Screening by blood lead test, instead of by EP test with blood lead testing only done if the EP is elevated, will cost significantly more. Most of the funded screening projects possess the equipment for EP testing, so they can do it for very little cost per specimen. To obtain a blood lead result, all specimens will have to be sent to the state lab or a commercial laboratory. Currently, most laboratory testing by these projects is paid for with local municipal or county funds. Any increase in local contribution is constrained by tight local budgets and the state municipal budget cap law. If public funding remains at the current level, the recommendation that blood lead testing be done will result in fewer children being screened. To maintain screening at the current annual level of 65,000 children under six years old will require an increase in public (federal, state, and/or local) funds of at least $520,000 just to cover the increased laboratory costs.

Evaluation

All programs funded by the Accident Prevention and Poison Control Program are required to do a needs assessment as part of their annual application for funding. They are also required to submit a quarterly report to the Program. These reports are used to evaluate the effectiveness of programs funded by APPC in screening high risk children in Priority 1 communities. The reports enable the Program to determine the number of children screened, methods used to reach children for screening, screening test used (blood lead and/or EP), the results of the screening tests, number of children in case management, and the results of steps taken to identify and eliminate the source of the lead.

If a goal of universal screening is adopted, evaluation of efforts to reach this goal will be possible only if all laboratories are required to report the results of **all** blood lead tests of children, as recommended in Objective d.

OCCUPATIONAL LEAD TOXICITY

Statement of Charge

To establish the level of lead exposure as measured by blood lead determination at which public health interventions will be initiated;

To make recommendations for the policy on screening of at-risk workers.

To make recommendations as to how a surveillance system could be established and/or maintained to ensure appropriate public intervention occurs for identified workers.

Estimate of State's Needs

The NJSDH Occupational Lead Register has identified 3,655 employees as exposed to lead (blood lead greater than 25 micrograms per deciliter) from October 1985 to December 1991. In addition, 102,000 employees in New Jersey have been identified as potentially exposed to lead based upon data extrapolated from the National Institute of Occupational Safety and Health (NIOSH) Occupational Exposure Survey, and 285,000 employees have been identified as potentially exposed to lead based upon New Jersey Department of Labor employment information. The number of employers in New Jersey that are involved in industries where lead is being used is estimated to be 8,300. Currently there are 30 major labor unions representing potentially exposed employees in New Jersey.

Objectives

a. To screen with blood lead all adults at risk of occupational lead exposure.
b. To report all blood lead test defined as elevated to the Department of Health in a timely manner.
c. To establish and maintain electronic case management data bases to ensure appropriate follow-up and to serve as the basis for epidemiologic analysis and service planning.

Recommended Methods for Achieving Results

Recommended Action #1—Revise the current laboratory reporting regulation to mandate reporting of employer or other agency who ordered the blood or urine lead test.

Recommended Action #2—Revise the current physician reporting regulation to mandate reports of all patients with blood lead levels equal or greater than 25 ug/dL.

Recommended Action #3—Establish an electronic data reporting system for all clinical laboratories to report lead reports to the NJSDH.

Recommended Action #4—Maintain current occupational lead surveillance reporting and data management system. Identify and contact lead using employers not currently reported to the occupational lead register to encourage lead screening and reporting.

Recommended Action #5—Develop and implement a regulation requiring employers to report results of all lead tests in employees upon request.

Recommended Action #6—Develop and implement a laboratory certification program requiring out of state laboratories to report to the NJSDH lead test results of New Jersey residents.

Recommended Action #7—Develop and implement a regulation requiring medical clinics who provide occupational health services to be certified; and that a necessary condition of certification be in compliance with state reporting requirements.

Costs

There is need for a data system manager, a Public Health Representative and a Principal Data Entry Clerk to manage the Occupational Lead Surveillance data management system and to conduct outreach to improve reporting according to the above methods. Approximate cost $100,000.

Evaluation

An annual report on occupational lead toxicity will be issued. The report will include an analysis of surveillance data and progress in achieving programmatic and regulatory objectives. Approximate Cost $10,000.

B. EDUCATION

Statement of Charge (Major Area of Concern)

To inform and educate all residents and workers in New Jersey about the real and potential hazards of exposure to lead in their environment with emphasis on high risk and special needs groups.

Estimate of State's Need

A great number of individuals of all ages are at risk of exposure to lead. Children are especially at risk. It is currently estimated that 10 to 20% of children between the ages of one to five in New Jersey may have blood lead levels greater than 15 micrograms per deciliter.

The NJSDH Occupational Lead Register has identified 3,655 employees as exposed to lead (blood lead greater than 25 micrograms per deciliter) from October 1985 to December 1990. In addition, 102,000 employees in New Jersey have been identified as potentially exposed to lead based upon data extrapolated from the National Institute of Occupational Safety and Health (NIOSH) Occupational Exposure Survey, and 285,000 employees have been identified as potentially exposed to lead based upon New Jersey Department of Labor employment information. The number of employers in New Jersey that are involved in industries where lead is being used totals 8,300. Currently there are 30 major labor unions representing potentially exposed employees in New Jersey.

Clearly, there is a definite need in the State to educate people as to the dangers of exposure to lead; the sources of lead contamination, who is most at risk, and how residents, workers, public health providers, communities, and commercial entities can deal with this problem.

Objectives

a. To conduct outreach to identify populations at risk to ensure that screening and appropriate services are provided to high risk target populations.
b. To develop and conduct a coordinated, continuous, public education effort (that builds on efforts of the Office of Prevention of Mental Retardation and Developmental Disabilities and which utilizes resources within and outside of the Department of Health) targeted to specific audiences to increase the recognition and abatement of occupational and environmental lead hazards.
c. To raise the consciousness of the public and policy makers on the need to prioritize lead as a public health issue of significance.

Recommended Methods for Achieving Results

(Options are presented in a suggested order of priority and are linked with the above referenced objectives by citation in parentheses following each recommendation.)

Recommended Action #1—Increase outreach efforts to bring highest risk children from Priority 1 areas in for screening. (a)

Recommended Action #2—Integrate outreach to high risk children and blood lead screening into other child health outreach service activities (specifically, Healthy Mothers/Healthy Babies, WIC, Maternal and Child Health Conferences, the MCH Consortia, community health centers, immunization programs, and drug treatment centers). (a)

Recommended Action #3—Establish an 800 number that individuals can call for information, brochures, and referrals. (a, b, c)

Recommended Action #4—Identify what educational materials are already available. (b)

Recommended Action #5—Develop a series of brochures and posters for different target audiences. (a, b)

Recommended Action #6—Develop and distribute a point-of-purchase display that can be placed in home improvement stores and in places where permits are issued (in municipalities). Seek financial backing from industry. (a, b)

Recommended Action #7—Develop a media campaign.
—Develop and distribute 30 second videos and/or audio Public Service Announcements (PSAs) to heighten public awareness as to the hazards and sources of lead (general message). (a, b, c)
—Develop a 10-12 minute video on potential sources of lead in the home and what homeowners can do to protect themselves and their family during remediation. (b)
—Develop a press kit of information and brochures which will be sent to newspapers, radio stations, etc. (a, b)

—Develop talking points for the department's leadership to use to focus on lead as a public health priority in speeches, talks, etc. (c)

Recommended Action #8—Develop and distribute information on the Lead Standard and control strategies to employers and employees in workplaces with a high risk of lead exposure. (b)

Recommended Action #9—Facilitate training for high risk worker groups. (a, b)

Recommended Action #10—Facilitate the development and presentation of education seminars and written materials for physicians and other health professionals to educate them regarding identification, prevention, diagnosis, treatment and remediation of lead exposed patients. (b)

Recommended Action #11—Identify, develop and distribute educational messages through non-routine creative routes (e.g. on food bags, inserts for utility bills, etc.). (b)

Recommended Action #12—Increase lead education at home improvement shows, realty conferences, etc. (b)

Costs

It is important to note that most of the recommendations described above will require that additional funding be obtained by the Department of Health. Current resources will not permit the development of a comprehensive educational and outreach effort as described above. It is estimated that the cost of the educational/outreach program described above would range between $700,000 and $1,000,000 (some of this being one-time costs and most being annual recurring costs).

Materials should be developed by those agencies that have the best expertise in developing the products or delivering the services selected from the recommendations above. Some of these recommendations may best be accomplished within the DOH; some may need to be developed by academic institutions such as UMDNJ; others may need to be directed to the interagency task force.

Methods of Evaluation

Methods of evaluation will be identified and tailored for each of the recommendations described above that are funded for implementation.

One effective method of evaluation is to have an advisory group provide input into the development and dissemination of educational materials, and to provide feedback as to the success of the materials and services in reducing exposure to lead. This advisory board should include representation from professional, labor, and community groups as well as key NJSDH staffers. This could be an off-shoot of an already existing group such as the Interagency Lead Task Force, or a specially created task force or advisory board specific to assisting the NJSDH with the implementation of the NJSDH lead plan.

C. CASE MANAGEMENT

Statement of Charge

To make recommendations as to the components of case management for children and adults exposed to lead at levels associated with lead toxicity.

To make recommendations as to how a coordinated state-wide case management system could be established to ensure that appropriate public health interventions occur in a timely manner to reduce lead exposure and further adverse effects from this toxin.

Estimate of State's Need

There are currently (as of September 30, 1991) 2,323 children in New Jersey under management for lead toxicity. Of these, 933 were new cases identified in 1991 with confirmed blood levels >25 ug/dL (micrograms per deciliter). It is projected that the number of children who will require medical management at blood lead levels of 20 ug/dL or above will increase the total caseload to 5,000.

The NJDOH Occupational Lead Register has identified 3,655 employees as exposed to lead (blood lead greater than 25 micrograms per deciliter) from October 1985 to December 1990. In addition, 102,000 employees in New Jersey have been identified as potentially exposed to lead based upon data extrapolated from the National Institute of Occupational Safety and Health (NIOSH) Occupational Exposure Survey, and 285,000 employees have been identified as potentially exposed to lead based upon New Jersey Department of Labor employment information. The number of employers in New Jersey that are involved in industries where lead is being used is estimated to be 8,300. Currently there are 30 major labor unions representing potentially exposed employees in New Jersey.

Objectives

a. Ensure that all children with confirmed blood lead levels ≥20 ug/dL receive complete diagnostic evaluation and appropriate medical treatment and follow-up, including careful environmental investigation and remediation in accordance with the October, 1991 Centers for Disease Control Statement.
b. Develop and maintain a coordinated statewide case management system to ensure that confirmed cases in children receive the necessary clinical, environmental, nutritional, social service and educational interventions in a time frame which supports a positive outcome for the individual child.
c. Ensure that all adults with blood lead levels 25 ug/dL receive appropriate diagnostic evaluation, medical treatment and education. Ensure that all workplaces identified as sources of exposure are evaluated for lead hazards.

Recommended Methods for Achieving Results

Recommended Action #1—The Department should complete and distribute, under the Commissioner of Health's signature, a revised Algorithm for the evaluation and management of children screened for lead poisoning which reflects the 1991 CDC recommendations.

The pediatric Algorithm should be developed cooperatively with the New Jersey Chapter of The American Academy of Pediatrics and should be distributed to all pediatric care providers and local health departments.

Recommended Action #2—The Department needs to strengthen, expand and coordinate the existing referral and treatment network at the local, county and regional level. Possible strategies include:

- Expand the Special Child Health Case Management System to include every child with a confirmed blood lead level of ≥20 ug/dL or higher.
- Direct all child health clinics, Community Health Centers, pediatric primary care and HealthStart providers under the Department's jurisdiction to provide recommended follow-up and appropriate referral for children requiring lead case management.
- Direct local health departments to ensure that every child with a confirmed blood lead level ≥20 ug/dL will have a home visit by a public health nurse to complete an epidemiologic assessment, provide nursing intervention and coordinate a therapeutic plan of care with physician, environmental remediation team and related community agencies. These home visits could be integrated into a coordinated statewide MCH support initiative to new parents to promote health child development and parenting education, if such a model was developed in New Jersey.
- Provide continued support to existing specialized diagnostic and treatment centers for children with lead poisoning (St. Peter's and NJ Lead Consortium) and evaluate the need for additional regional centers.
- Review linkages with WIC to ensure that every child screened for lead is enrolled, if eligible, with priority given to those children under active case management or with identified risk factors associated with increased lead absorption.

Recommended Action #3—The Department will collect and computerize the data from the reports of adults with elevated blood lead levels and will provide follow-up activities including:

- Medical consultation to affected individuals and their private physicians.
- Industrial hygiene evaluations at the work place identified as the source of exposure.
- Educational efforts for affected individuals, their employers and physicians.

Costs

Current Resources

- MCH Block Grant funds 14 local lead projects and two specialized treatment facilities which are functioning as resource centers for neighboring health departments and pediatric care providers.
- CDC Grant is expanding efforts in a 3-city target area and provides additional monies for educational outreach initiatives statewide.

- CDC STELLAR program is a computerized case management system available free to lead projects and other agencies with computer capability.
- Expanded Medicaid/HealthStart coverage will assist in meeting laboratory, hospitalization, oral chelation and follow-up costs (including limited public health nurse visits) for an increasing number of high-risk families.
- NJSDH funds in the Division of Epidemiology, Environmental, and Occupational Health Services to support the occupational lead surveillance project.

Projected Needs

- Additional staff in local health departments and community agencies serving high-risk areas; especially public health nurses and sanitarians.
- Specialized training (home inspection, venipuncture certification, risk, developmental and epidemiologic related assessments, etc.).
- Support to specialized treatment centers (staff, improved diagnostic equipment).
- Protection of child under treatment (Safe House, Relocation funds).
- Additional financial support for clinical evaluations of adults with lead poisoning, for epidemiological support to the NJSDH lead register and for follow-up activities provided by local health departments.

Evaluation

- Statistical analysis of collected data.
- CDC Quarterly Report.
- On-site visits to local projects and treatment centers—record audit of selected cases.

D. INSPECTION AND REMEDIATION

Statement of Charge (Major Area of Concern)

To identify and reduce sources of lead that present actual and potential health hazards to the state population, particularly children and workers.

Estimate of State's Need

Presently in New Jersey, efforts to reduce potential sources of lead exposure among the general population have been directed primarily to urban cities where children have been diagnosed with elevated blood lead levels (EBL). Most of this effort has been addressed through MCH and CDC funding of local health department lead projects. This effort only addresses lead-based paint and dust in homes. Only a small fraction of the housing units with lead-based paint have had the lead abated. More importantly is that improper techniques were used in many past abatement projects. The high levels of lead in dust generated during abatement result in poisoning of workers and their families, and particularly children left in their homes during abatement. Inadequate abatement and cleanup procedures also result in children being re-poisoned upon returning to their "deleaded" homes. To date, over 63,000 children under the age of 6 years old have been screened.

The NJSDH Occupational Lead Register has identified 3,655 employees as exposed to lead (blood lead greater than 25 micrograms per deciliter) from October 1985 to December 1990. In addition, 102,000 employees in New Jersey have been identified as potentially exposed to lead based upon data extrapolated from the National Institute of Occupational Safety and Health (NIOSH) Occupational Exposure Survey, and 285,000 employees have been identified as potentially exposed to lead based upon New Jersey Department of Labor employment information. The number of employers in New Jersey that are involved in industries where lead is being used totals 8,300. Currently, there are 30 major labor unions representing potentially exposed employees in New Jersey. It is clear that a large number of potentially exposed New Jersey workers need to be screened and those found to be at elevated exposure levels need appropriate health and remediation services.

Our focus in addressing the state's need is not different from the federal focuses set by EPA, DHHS, and HUD. The state infrastructure needs are:

- **Hazard identification in communities and worksites**
  - —Paint
  - —Soil
  - —Dust
  - —Drinking Water
  - —Worksites
  - —Consumer Products
- Environmental Remediation
- Testing and abatement guidelines
- Worker training and certification programs
- Methods to evaluate emerging abatement technology
- Laboratory accreditation program
- Insurance for contractors
- Available relocation housing for residents during abatement
- Guidelines for disposal of abatement debris;
- Other means of source reduction

Objectives

a. To develop a comprehensive lead exposure identification and reduction program, based on the public health needs of New Jersey's worker and resident populations.
b. To ensure the lead inspection and abatement workforce in the state is adequately trained in the health hazards and the necessary protective measures to be used in the conduct of inspection and abatement work.
c. To evaluate lead abatement and personal protective equipment protocols and technologies to ensure that (1) public health protection is provided and (2) that no health hazards are generated by the methods or equipment use protocols.

Recommended Methods for Achieving Results

Recommended Action #1—Improve methods of inspection for source identification and characterization through:

- —Evaluation of existing inspection methods for paint, soil, water, etc.,
- —Evaluation and (possibly) use of federal models, and
- —Development of effective methods to protect public health, particularly high-risk groups.

HUD and EPA are currently working together to develop and disseminate cost-effective methods and tools to abate "in place" lead exposure sources. EPA is also coordinating with the National Institute for Standards and Technology to develop protocols to evaluate lead-based paint home/field test kits, including performance criteria. It is recommended that we look to these federal agencies for guidance in this area.

Recommended Action #2—Improve methods of lead exposure reduction through

- —Evaluation of existing abatement methods,
- —Evaluation and (possibly) use of federal models, and
- —Development of effective methods to prioritize and reduce the greatest health hazards first.

Inspection for Lead Sources and Hazards is the most difficult area to address. We must rely on our existing resources and build upon them. There are several ways to do this. An inspection program will have to be phased in over time that addresses all lead sources. Priorities for inspection and abatement will need to be established. It is recommended that we follow the recommendations of the DHHS and inspect homes of children identified with lead poisoning, homes at high risk of housing children with lead poisoning, and homes with lead-based paint that are being renovated or remodeled for other reasons the first inspection phase.

Recommended Action #3—Train and certify the lead abatement workforce, supervisors and related professionals.

- —Build on the department's existing authority, expertise and infrastructure to develop a trainer and training firm certification program.
- —Develop, utilize any existing federal, model curricula.
- —Evaluate national examinations as measures of exit competencies for courses, and accept those that meet the state's public health standards.

Currently we are working with EPA on a Lead Accreditation Plan. This plan has a number of components which include the development of training curriculum and model training courses, development of state program capabilities, development and administration of national examinations; and development of Regional program capabilities to assist States, contractors, and the public. Inspector and supervisor courses will be completed in early 1992, worker course in late 1992.

It appears that a model accreditation program, similar to the asbestos model, will be handed down to states for implementation. EPA intends to provide seed grants to states to assist in the development of state

lead training programs. One activity that will be a part of the model accreditation plan is the development of model state legislation. This legislation would be designed to assist states in setting up their accreditation system. Model state legislation would help to ensure a minimum level of competency among lead professionals across the nation.

Recommended Action #4—Coordinate high risk worksite identification and enforcement through:

—Implementation of the DOH-OSHA referral system in our existing Memorandum of Agreement,
—Targeting worksite inspections and enforcement where the greatest health hazards are projected, and
—Providing industrial hygiene services to affected employers and employees.

Establish a worksite referral system with the federal Occupational Safety and Health Administration (OSHA) offices in the State. This would allow the Department the leeway to intervene in companies identified by our lead surveillance through a federal agency having a mandate to enforce the requirements under the OSHA Lead Standard. The Department is therefore utilizing the trained personnel in OSHA for worksite intervention of the most serious offenders.

Recommended Action #5—Enhance efforts to reduce exposures among public employees through

—Evaluations of worksites under PEOSH authorities,
—Enforcement of the PEOSH lead standard, and
—Recommendations to employers and employees to implement means to reduce workplace lead exposures and to prevent transport of lead into their homes.

Continue worksite evaluations by conducting a target project for public employees and to respond to public employee complaints. The New Jersey Public Employees Occupational Safety and Health Program will enforce the PEOSH lead standard and issue recommendations to reduce lead exposure to employees. (29 CFR 1912.1025)

Recommended Action #6—Foster joint labor-management initiatives to

—Identify and screen workers at potential risk,
—Identify sources of worksite exposure and of transport from the worksite to homes, and
—Implement effective means to reduce exposures in accordance with federal and state standards and in the best interests of their health.

Recommended Action #7—Foster and/or draft appropriate legislation to prevent hazards through improved inspection, source identification and reduction strategies in government and the private sector.

Costs

The cost associated with each option must still be explored and developed. The U.S. Department of Health and Human Services has explored costs associated with lead poisoning prevention, including abatement in its *Strategic Plan for the Elimination of Childhood Lead Poisoning.*

Most of the costs associated with certification and training will be incurred by the Private Sector. Department costs for approving training agencies to conduct training and examination administration can be offset by the collection of fees. This will have to be explored further.

Methods of Evaluation

Evaluating the infrastructure, both public and private must be built into each program component for inspection and remediation. To do this, each phase of the strategy must be developed with a self-evaluation program and consistent oversight by the state agencies involved with lead poisoning prevention. This section must also be further developed.

E. LABORATORY CAPABILITY

Statement of Charge (Major Area of Concern)

To identify potential problems that may arise, in the area of laboratory testing capabilities and capacities, as a result of the implementation of the previously discussed Case Identification, Case Management, and Inspection and Remediation strategies.

Estimate of State's Need

• Case Identification

As discussed earlier, this strategy will require the blood lead testing of all children by one (1) year of age and repeat by two (2) years of age. This requirement will significantly increase the number of blood lead tests performed annually to over 250,000 samples per year. In addition, laboratories performing the blood lead analyses will be required to detect and report all blood lead levels down to 20 ug/dL. The erythrocyte protoporhryn assay will no longer be permitted as a preliminary screening technique for blood lead testing. The recommended screening test for lead toxicity in children is the capillary lead.

In addition to the Department of Health Laboratories, there are only eight laboratories currently licensed by this Department to perform blood lead analysis, five by anodic stripping voltametry, one by graphite furnace atomic absorption spectroscopy, and one by Delves-cup flame atomic absorption spectroscopy. To meet this new demand for lower measuring of lead in blood levels, as well as the high potential for a significant increase in the number of tests performed annually, will require a substantial increase in the capacity of the analytical community to perform blood lead testing.

• Case Management

No change in the current testing frequency or technique is anticipated for occupational blood lead monitoring.

•Inspection and Remediation

The process of investigating potential sources of lead contamination and abating known contaminated areas will require an unknown number of samples to be collected and analyzed. These samples will be in the form of soil, paint chips, wipes and air samples. These types of samples are typically analyzed in an environmental testing laboratory. There are currently 169 commercial laboratories certified by the New Jersey Department of Environmental Protection and Energy for the analysis of lead in water, of which 62 are located in New Jersey. The instrumentation used for the analysis of lead in water is similar, if not the same, as that which would be used for the analysis of soil, paint chips, wipes and air samples. Therefore, the methodology implementation for such testing should not present a problem. The capacity of the lead throughout the state. The current laboratories will depend on the scope and extent of the investigation and abatement.

Method(s) of Accomplishing Need (Objectives)

Ensure that a sufficient number of laboratories are qualified and capable of performing the clinical and environmental testing required by the strategies outlined in this document.

Recommended Options for Achieving Results

Recommended Action #1—Educate laboratories that will be analyzing blood and environmental samples through the appropriate laboratory licensure program in order to disseminate information concerning proper analytical methodologies, quality control procedures and licensure requirements.

Recommended Action #2—Solicit the support of the New Jersey Department of Environmental Protection and Energy to expand their environmental laboratory certification program to include licensure requirements for the analysis of lead in soil, wipe and air samples.

Recommended Action #3—Provide for the licensure of laboratories that are changing their blood lead testing procedure from ASV to GFAAS or are adding the GFAAS test procedure to their list of clinical test services through the Clinical Laboratory Improvement Service.

Recommended Action #4—Encourage laboratories to develop laboratory automation systems and require that the laboratories provide all blood lead testing data in an electronic format to the Department.

Recommended Action #5—Maintain a Reference Laboratory.

The Clinical Laboratory Improvement Service utilizes proficiency test samples for the evaluation of the ability of the licensed laboratory to perform the blood lead test accurately. Historically, the NJSDH Blood Lead Laboratory has been the program's Reference Laboratory and has been responsible for the preassessment of the validity of the proficiency samples. The NJSDH can maintain this role provided it maintains its active participation as a blood lead testing laboratory.

IV. GLOSSARY OF LEAD TERMS

Blood Lead Level: The concentration of lead circulating in the blood, measured in micrograms per deciliter (ug/dl). This reflects only the current circulating level; and goes up and down rapidly, depending on amount and time of lead ingestion. Blood lead level does not reflect the total body burden of lead.

Capillary (Micro) Blood Lead Sampling: The collection of capillary blood obtained by fingerstick. This is usually done for initial screening. (Capillary samples are easily contaminated by lead found on hands and in the environment. If the screening test was done on capillary blood, a venous blood lead test must be done to confirm screening test results.)

CDC: Centers for Disease Control (Atlanta, Georgia). CDC issued the statement, **Preventing Lead Poisoning in Young Children** in 1975 with revisions in 1978, 1985, and 1991.

Chelation (key-la-shun): Treatment of lead poisoning with compounds (known as chelating agents) which have the ability to bind lead, thereby removing the metal from tissues and making it available for excretion through the kidney and/or gastrointestinal tract. The chelating agents commonly used are: calcium disodium EDTA (by intramuscular injection or intravenous infusion); BAL (by I.M. injection); penicillamine (orally); and succimar (orally). Chelation therapy increases the potential for intestinal absorption of lead; therefore it is advisable to be sure that lead sources are not available to the child during or after therapy. (Chisolm, 1982 pp. 172-173.) Chelation therapy protocols are described in the CDC Statement.

Diagnostic Evaluation: A process of reviewing the individual child's positive screening results to assess the extent and seriousness of exposure. This process includes taking a detailed history (possible sources of lead in the child's environment, presence of predisposing factors, presence of risk factors, etc.), a physical assessment and laboratory tests. On many occasions, this process may require serial blood lead and EP determinations over a period of time.

Elevated Blood Lead Level: A confirmed concentration of lead in whole blood of 10 micrograms per deciliter (ug/dl) or greater.

Elevated EP Level: An EP level of 35 micrograms per deciliter or greater. In the presence of elevated blood lead, EP greater than or equal to 35 micrograms per deciliter, is an indicator of biochemical lead toxicity. EP is also elevated in iron deficiency states.

EP Level: The concentration of erythrocyte protoporphyrin measured in a venous or capillary whole blood sample, expressed in micrograms per deciliter.

Erythrocyte Protoporphyrin (EP): A precursor of hemoglobin synthesis with which iron is incorporated through a reaction catalyzed by the enzyme "ferrochelatase." Lead has an inhibiting effect on this enzyme consequently resulting in increasing levels of the precursor protoporphyrin. This protoporphyrin binds with zinc (zinc protoporphyrin) which fluoresces and can be measured fluorometrically.

Follow-up: The carrying out of all clinical and environmental activities necessary for diagnostic evaluation, treatment and surveillance of children with elevated blood lead and EP levels.

Hematofluorometer: An instrument which measures the EP level on a fresh whole blood sample, giving a digital read-out in micrograms per deciliter. This permits instant EP results to be reviewed while the child is still available for obtaining a venous confirmatory blood lead sample, if EP is positive. Screening may also be conducted by collecting capillary samples and transporting them to the hematofluorometer for later analysis. (Piomelli and Craziano, 1980.)

Lead Belt: A term referring to the urban and rural areas of the northeastern USA in which there is much deteriorating older painted housing and concomitant high prevalence of elevated blood lead levels in children.

Lead Body Burden: The total amount of lead in all tissues of the body, including bone and soft tissues. (Chisolm, 1975, p. 1685).

Lead Encephalopathy:

1. **Acute:** A condition in which lead-induced massive cerebral edema (in the absence of classic signs of intracranial pressure) produces sudden onset of persistent vomiting, ataxia, impairment of consciousness, coma, seizures, or bizarre behavior.
2. **Chronic:** The presence of severe central nervous system manifestations such as seizure disorders, hyperkinetic and aggressive behavior disorder, developmental regression and progressive loss of speech. These occur most often after age two and may result either from an episode of acute encephalopathy or from current excessive lead intake. (Chisolm, 1975, pl. 1686.)

Lead Based Paint Hazard: The presence of lead-based paint on the interior of any dwelling, or on any exterior surface, readily accessible to children. Flaking, peeling paint and plaster in housing painted before 1960 is considered the most severe hazard. Any painted, chewable surface should also be suspect.

Lead Lines: Broad bands of increased bone density (not lead deposits) at the metaphyses of the long bones, detected by posterior-anterior x-ray views of the distal ends of the radius, ulna and the knee. These do not indicate current ingestion, but rather prolonged previous lead intake, and are difficult to detect in children under twenty-four months of age. Absence of lead lines does not rule out lead poisoning. (Chisolm, 1975, p. 1687).

Lead Mobilization Test: The administration of a single dose of the chelating agent, calcium disodium EDTA, followed by collection of urine over an eight-to-twenty-four hour period, to estimate the amount of lead which can be chelated. (Graef, J.W. in Chisolm (ed.), 1982, p. 157-9).

Lead Source: Anything containing lead which can be ingested or inhaled. Sources particularly hazardous to children include:

- —leaded paint, in the form of flaked paint chips or chewable surfaces (housing built before 1960 has the most lead);
- —soil, dirt, and dust, in which children play;
- —leaded gasoline;
- —newspapers and magazines containing leaded colored pigments;
- —foods stored in lead-soldered cans, improperly glazed pottery, leaded crystal;
- —certain folk remedies containing lead;
- —airborne lead around paint sources;
- —occupations and hobbies of parents or adults children may be exposed to;
- —drinking water.

Pica: The habit of ingesting non-food substances.

Priority I: Any municipality designated by Chapter XIII of the State Sanitary Code (N.J.A.C. 8:51-8) as the highest risk for lead poisoning among its children;

Priority II: Any municipality designated by Chapter XIII of the State Sanitary Code (N.J.A.C. 8:51-8) as a moderate risk for lead poisoning among its children;

Priority III: Any municipality designated by Chapter XIII of the State Sanitary Code as a low risk for lead poisoning among its children.

Rebound Phenomenon: An increase in the blood lead concentration subsequent to its reduction by chelation therapy in the absence of re-exposure to a lead source. This phenomenon is brought about by re-distribution of lead from bone stores into blood and soft tissues. A rapid and/or severe rebound phenomenon is taken as an indication for repeat chelation.

Screening: The application of detection techniques to identify asymptomatic lead poisoned children in order to interview as quickly as possible to reduce their blood lead levels and to prevent other children from being exposed to the same sources of lead.

Venous (Macro) Blood Lead Sampling: The collection of blood obtained by venipuncture for a diagnostic confirmation of an elevated capillary blood lead screening test.

X-Ray Fluorescent (XRF) Analyzer: A portable instrument containing a radiosotopic source that stimulates lead atoms in paint, causing them to fluoresce. Fluorescence is measured in milligrams of lead per square centimeter (mg Pb/cm^t) of paint surface.

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DRAFT STATE HEALTH PLAN: INJURIES AND EMERGENCY CARE CHAPTER

EXECUTIVE SUMMARY

For too long, injuries were viewed as "accidents," subject to random events and human error and happening by chance. This resulted in a failure to properly recognize injury as the major public health problem that it is. Ideally, since injury is not a chance event or an insoluble problem, there are many opportunities to understand, predict, and prevent its occurrence. There are further opportunities to reduce the effects

of injuries, once they occur. By discovering these opportunities and taking advantage of them, it is possible to save or improve the lives of many New Jerseyans who might die or become disabled to some degree because of injury. Therefore, when reviewing resources to address the problem of intentional and unintentional injury, it is necessary to view the situation from both the preventive and treatment standpoints.

This chapter points out that "all injury deaths" (those occurring from unintentional injuries, suicide and homicide) are the leading cause of "years of potential life lost" (YPPL) before the age of 65. Further, the unintentional injury death rate is higher for males than for females and higher for African-Americans than for Caucasians. Trauma, which includes both intentional and unintentional injuries, takes a staggering emotional and economic toll on our society, not only in terms of premature deaths, but also short- and long-term impairments and permanent physical and cognitive disabilities, as well.

Injury events are now being viewed as the products of environmental, behavioral, developmental and socioeconomic factors which contribute to both their occurrences and outcomes. In New Jersey, injury events occur disproportionately among the young and the elderly. Injury events include motor vehicle crashes, other transportation accidents, falls, drug and alcohol abuse/overdose, poisonings, fires, drowning, suffocation, homicides, suicides, child abuse, domestic violence, rape, and occupational injuries. The four leading causes of injury deaths for all ages in New Jersey are motor vehicle trauma, falls among the elderly, homicide and suicide. Research has demonstrated that alcohol and drug use is a critical variable in a great proportion of fatal and nonfatal injury.

Of emerging concern to the public health community is the growing epidemic of youth violence. The etiology of this problem is complex, not only reflecting typical adolescent risk-taking and power testing, but also factors in the community, such as failure to react effectively against violent and/or criminal behavior and easy access to illegal drugs, alcohol, and weapons. Successful approaches to preventing youth violence among high-risk groups must be coordinated, multidisciplinary, and culturally sensitive.

Data on the types and numbers of injuries and their outcomes are imprecise, mainly because many nonfatal injuries are treated at home, in physician's offices, in hospital emergency departments, or in outpatient services. Better data are available regarding conditions leading to hospital admission or to the death of the victim. However, it is estimated that, for each death due to injury, there are 16 hospital admissions and an additional 380 people who seek medical attention.

Despite the difficulty of collecting injury data, the potential for reducing the number and severity of injuries is great. Mortality costs per injury death ($335,000) are almost four times that for cancer and six times the costs associated with cardiovascular disease. Nationally, approximately 12% ($1-billion) of the total $8.3-billion uncompensated care costs went to cover trauma care in 1990. Since the cost of uncompensated care in New Jersey is in excess of $754-million, extrapolating the 12% figure to our state would mean that the portion paid to injury is $80-million.

Although the Department of Health and other governmental, professional, and private organizations are taking an active role in injury prevention, the efforts lack coordination and a central focus. The state's emergency medical services system is becoming stronger, but a more coordinated, integrated system of appropriate manpower, facilities, and equipment is needed.

In order to provide a comprehensive, focused approach to preventing and treating injuries, nearly 30 separate recommendations have been made in this chapter. Key recommendations include:

1. Establish an Injury Prevention and Control Program within the Department of Health with appropriate resources
2. Promote educational and informational programs designed to prevent and control injuries
3. Promote cooperation between public and private agencies concerned with preventing and treating injuries
4. Promote legislative and regulatory changes to prevent and control injuries and to better care for those who are injured
5. Improve prehospital care through protocols, training and quality assurance measures
6. Improve emergency department care
7. Enhance EMS system capabilities in the areas of trauma, burns, spinal cord and traumatic brain injuries, and poisoning
8. Improve emergency injury care for children, the elderly and minorities
9. Interface with managed care services, urgent care centers, and rehabilitative care
10. Implement uniform data collection, reporting, and surveillance, including use of E- and N-codes.

The story is told of a magnificent view to be had from a steep and dangerous cliff. The panoramic vista was so stunning it attracted scores of visitors. Some, unfortunately, stepped too close to the edge and plunged to the bottom of the valley, there to die or to be seriously injured. The town fathers decided to take drastic measures and passed an ordinance to set up and fund an ambulance service in the valley to treat the injured and to transport the injured to an appropriately equipped hospital. This emergency care system, while effective, was costly. And, there was still the unresolved and unsettling issue of those who died immediately. Finally, a newcomer to town made a startling suggestion—install a fence at the top of the cliff. This would limit the number of people who might fall off. The officials were assured the emergency services would still be needed (there would always be those who got too close to the edge), but since the emergency services would be used less, costs could be reduced. This chapter is about the fence at the top of the cliff and the ambulance down in the valley—prevention and emergency care services working as a team to reduce the numbers of those injured and the severity and long-term consequences of their injuries.

I. STATEMENT OF GOALS

As stated in *Healthy New Jersey 2000: A Public Health Agenda for the 1990's,* the goals and objectives to prevent and control injuries are:

1. Reduce the death rate for motor vehicle crashes from 12.7 to 11.4 per 100,000 in the total population (age-adjusted rates), from 25.8 to 23.0 for youth aged 15-24 and from 24.6 to 20.0 for people aged 70 and over (1988 baseline).
2. Increase the use of seat belts by persons 18 and over "always" or "nearly always" when driving or riding in a car to 75.0% (baseline not available).
3. Decrease the death rate due to falls and fall-related injuries per 100,000 population from 13.0 to 12.0 for people aged 65-84 years and from 117.7 to 105.0 for people aged 85 years and over (1988 baseline).
4. Decrease homicide deaths for minority males aged 15-44 from 48.9 to 39.0 per 100,000 population and for minority females aged 15-44 from 9.2 to 7.0 per 100,000 population (1988 baseline).
5. Reduce suicides per 100,000 population from 9.3 to 7.5 for youth aged 15-24 and reduce suicides for white men aged 65 and over to 39.2 per 100,000 (1988 baseline for youth, not available for white men aged 65 and over).
6. Decrease the incidence of head and spinal cord injuries per 100,000 population by 15.0% (baseline not available). (Objective modified from *Healthy 2000.*)
7. Reduce work-related injury deaths per 100,000 for full-time, male construction workers from 15.0 to 10.0 (1983-1989 baseline).

II. RECOMMENDATIONS

In order to provide a comprehensive, focused approach to preventing and treating injuries, the following recommendations are made, based upon the current status of injuries in New Jersey and the existing services to prevent injuries and to assist those who are injured:

Coordination

1. The Department of Health should establish an Injury Prevention and Control Program with appropriate resources. This program should interact with all involved programs within the Department of Health (such as: Health Promotion/Disease Prevention, Emergency Medical Services, Office of Minority Health, and Occupational Health). Other Departments should be encouraged to participate (such as: Human Services, Education, Community Affairs, Transportation, Law and Public Safety, and Labor). Relevant boards, councils, citizen groups, community-based organizations, and advocacy groups should be contacted and urged to become involved.
2. Responsibilities of the Injury Prevention and Control Program should include a wide range of prevention and educational programming designed to prevent and control injuries and to coordinate injury-related activities. These should include efforts to increase public awareness about the importance of injuries (including that which is related to violence) as a public health problem, to reduce intentional and unintentional injuries to children, to prevent suicides and homicides, and to avoid duplication of effort

among groups and agencies concerned with preventing and/or controlling injuries.

Legislative Initiatives

3. The Department of Health should support the following legislative changes as appropriate:
   a. Firearms:
      —Require home security (including either trigger locks, locked cabinets, or home alarm systems) and a weapons safety course as a condition of firearm purchase;
      —Implement a centralized data system for a mental health and criminal background check statewide (individuals already waive the right to privacy on the application for purchase of a firearm);
      —Raise the minimum age requirement for purchase of a firearm in New Jersey to 21 years of age, regardless of purchase source;
      —Review the current assault weapons legislation to ascertain if it includes specific penalties for use during a crime or illegal possession on the street; revise, if necessary;
      —Review current legislation to ascertain if penalties are severe enough to reduce the criminal use of handguns; and
      —Urge federal firearm legislation to require a waiting period, background checks, and education.
   b. Motor vehicle safety issues:
      —Require seat restraint systems to be worn by all individuals, regardless of age, in the back seat of vehicles;
      —Permit law enforcement officials to enforce seat belt and/or safety seat requirements for all individuals, regardless of age, as a primary offense; and
      —Require school buses to have and enforce the use of seat restraint systems in accordance with provisions of recently passed legislation. Encourage incorporation of other proven safety devices (e.g., additional escape hatches, high-back seats) into specifications for bus design (as provided in other newly enacted legislation) and adequate standards and training for school bus drivers.
   c. Bicycle helmets:
      —Require all individuals, regardless of age, to use bicycle helmets.
   d. Provision of emergency services:
      Require that municipalities provide (either directly or through contract) or arrange for provision of (e.g., with a volunteer first aid squad) around-the-clock emergency medical services coverage (currently, only police and fire protection are mandated public services).
   e. Prevention of falls:
      Require the installation of safety guards on all windows in high-rise buildings and an education program focusing on the proper use of the devices and their role in injury prevention.
   f. Occupational Safety:
      Allow right-of-entry by the Department of Health to all workplaces.
   g. Concerns of the Elderly:
      —Require reporting of suspected abuse for non-institutionalized elderly persons.
      —Require some form of patient information/pharmacist oversight to address the problems of multiple medication use in the elderly.

Planning and Licensing

4. The Department of Health should promulgate licensing rules, to support planning rules, for trauma designation, including the issue of requiring hospital emergency departments to transport severely or critically injured trauma patients for more appropriate care at higher level facilities and to discourage inappropriate transfers of less critical and/or non-insured patients, using systemwide trauma triage guidelines.
5. The Department of Health should complete the review of the pending Certificate-of-Need applications for designation as Level II Trauma Centers, contingent on the submission of updated data. No new certificates-of-need should be accepted or reviewed until triage guidelines governing the transport of trauma victims are instituted, recommendations regarding the trauma registry are implemented, and a need methodology is developed following evaluation of this registry data.
6. Final designation of Level II Trauma Centers already approved with some conditions should proceed.
7. Reimbursement rules should be revised in order to link reimbursement for trauma care to hospitals with an appropriate level of designation. The review methodology should include trauma morbidity and mortality rates with comparisons to the Injury Severity Score (ISS) and expected outcomes, as a disincentive for non-trauma centers to inappropriately hold critical trauma patients.
8. The Department of Health should promulgate planning rules for designation of burn care facilities. Parameters for all levels of burn care, including pediatric, should be developed, utilizing American Burn Association (ABA) guidelines. No certificates-of-need for burn level designation should be accepted or reviewed until planning regulations and a New Jersey-specific need methodology have been developed. The related issue of hyperbaric treatment facilities should also be explored.
9. The Department of Health should review and revise as necessary licensing rules for all emergency departments regarding minimum staffing, equipment, and services requirements, including pediatric, should encourage the development of additional residency training sites to increase the supply of trained emergency physicians, and should review the preparation of emergency nurses to ascertain if requiring the Trauma Nurse Core Course and the Pediatric Nurse Core Course of the Emergency Nurses Association would improve patient care.
10. The Department of Health should develop hospital licensing rules to standardize procedures for the management of sexual assault victim care (including children), with input from the Department of Law and Public Safety.
11. The Department of Health should promulgate pediatric emergency medical services planning and licensure rules (consistent with provisions of S.408) which should include:
    a. Appropriate training of providers (prehospital and emergency department personnel);
    b. Standards for emergency departments, such as Emergency Departments Approved for Pediatrics (EDAP) protocols;
    c. Appropriate triage protocols, especially for pediatric trauma; and
    d. Requirements for Pediatric Trauma Centers, including requirements for the currently designated trauma centers, as well as other appropriate facilities, to address the special needs of traumatized children.
12. The Department of Health should amend licensing rules for advanced life support prehospital services (N.J.A.C. 8:41) to develop a critical care transport system in New Jersey.

Prehospital EMS

13. To ensure that proper triage is conducted in the field, the Department should develop basic and advanced life support field treatment and triage protocols for trauma patient care, including universal field measures of injury severity. Appropriate triage protocols for each of the other critical patient groups should also be developed, in order to provide state-of-the-art care and to conserve costs.
14. The Department of Health, in cooperation with other applicable agencies and groups, should develop formalized educational, certification, and recertification programs for regulated and volunteer EMTs and paramedics which will include basic life support skills, advanced life support skills, EMT-Defibrillator skills, Advanced Cardiac Life Support, Advanced Trauma Life Support, driver training, appropriate triage and transport protocols (including specific modules on pediatric EMS), and data collection. All programs should be based on national curricula whenever available. Additionally, special consideration should be given to sensitizing EMS providers to the cultural and linguistic differences (e.g., reporting, describing, and reacting to emergency situations) within the populations they serve.
15. The Department of Health should assess the immunization status, relative to Hepatitis B, of health care workers and first responders (e.g., police and fire personnel) within the emergency care system. The Department should assure that guidelines and protocols

(currently being developed at the state level) for avoiding contact with blood-borne pathogens receive wide dissemination.

16. Uniform standards for rescue services should be developed and implemented. These standards should require special training in equipment use.
17. The issue of diversion should be reexamined for appropriate updating.
18. The Department of Health should study response times of basic life support and advanced life support EMS services in New Jersey to ascertain if the perceived issue of delayed response is real and to make recommendations accordingly.
19. The Enhanced 9-1-1 telephone and emergency dispatch system implementation needs to be completed. Teletype (TTY) access for the deaf and hearing-impaired to this system should be provided. More thorough education on how the public can access the EMS system needs to be provided.

Quality Assurance

20. All regulated prehospital EMS vehicles should be required to maintain standardized EMS service run forms and to submit reports on a regular basis to an appropriate agency, in order to provide an ongoing mechanism for quality assurance, accountability, and research. Volunteer services should be encouraged to also participate in this effort.
21. Each basic and advanced life support prehospital service should adhere to standard triage/treatment protocols promulgated by the Department and should have a quality assurance plan, including a local medical director.
22. The Department of Health should require hospitals to share hard-copy information (including information on hospitalization and from medical examiners, if patients die) from the charts of patients whom the New Jersey Poison Information and Education System (NJPIES) was involved in treating. A comprehensive study should be done to assess the capabilities of the state's hospitals to treat severely poisoned patients.

Data Collection

23. The Department of Health should develop and implement a uniform reporting and surveillance system which includes:
    - —centralized trauma data collection (i.e. trauma registry) including E- and N-codes and appropriate reimbursement to support the coding effort from all hospitals and other applicable sources);
    - —a surveillance system for monitoring selected injuries, their causes, and their short- and long-term consequences;
    - —routine coding of location of injury for all intentional and unintentional injury deaths on the Department's single-cause-of-death data files;
    - —uniform injury data collection, including racial and ethnicity data, for analysis and data sharing;
    - —defined case inclusion; and
    - —defined case identification methodology.
24. The Department of Health and the State Medical Examiner's Office should develop a joint policy for:
    - —consistent and mandatory E- and N-coding on death certificates and UB-82 data to include external cause and place of death;
    - —more definitive analysis of hospital discharge data, including outpatient and emergency department data;
    - —more consistent data collection of causal factors in injuries, such as drugs (including specific drugs), alcohol, personal risk behaviors, use and type of firearms, fire, or occupational injury;
    - —more consistent data collection on deaths involving domestic disputes and sexual assaults;
    - —providing autopsy reports on trauma victims to the trauma centers as part of ongoing quality assurance and injury prevention programs; and
    - —providing autopsy reports on poisoning victims to the New Jersey Poison Information and Education System as part of ongoing quality assurance and injury prevention programs.

Youth Violence

25. Encourage the existing cabinet level juvenile justice action group to include a focus on youth violence prevention and be sure its activities continue to include the Department of Health.

Preventing Abuse and Neglect

26. The Department of Health should encourage home visiting at the local level on a routine basis, involving public health nurses and using Nursing Child Assessment Training (NCAST) to decrease child abuse and neglect and *Guidelines for Identifying Victims of Elderly Abuse* to evaluate the signs of elder abuse and neglect.

Managed and Urgent Care and Emergencies

27. The Department of Health should undertake a review of Health Maintenance Organizations (HMOs) and other managed care organizations' policies regarding use and appropriateness of emergency services.
28. The Department of Health, in conjunction with the New Jersey Board of Medical Examiners and the Medical Society of New Jersey, should evaluate the need to define and develop standards for urgent care centers so they can continue to serve as a viable part of the EMS system, consistent with quality of care.

Rehabilitative Care

29. The Department of Health should evaluate the effectiveness of rehabilitative care statewide as follows:
    a. Design research studies to determine the scope and effectiveness of rehabilitative care, including rehabilitative care for children and those on Medicaid;
    b. Expand outcome measures and do not limit "success" by defining it in terms of return to employment, school or household maintenance; and
    c. Include community-based programs, independent living centers and related rehabilitation industries when developing research and evaluation studies.

III. PROBLEM IDENTIFICATION—CURRENT STATUS AND TRENDS

Epidemiology

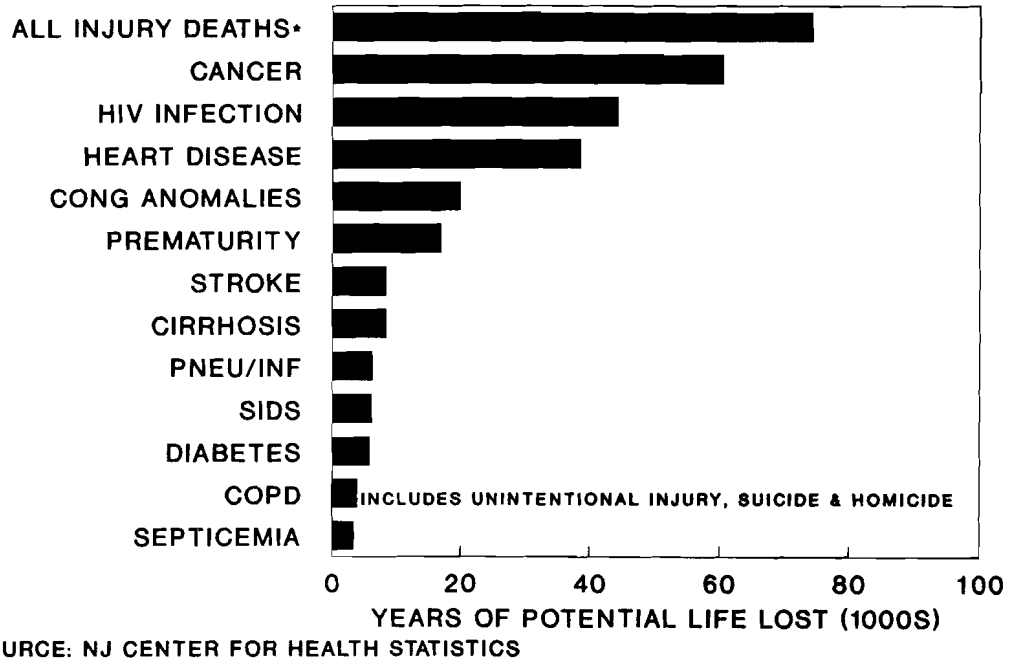
Injuries of all kinds have a profound effect upon the lives of New Jerseyans each year. When all injury, both intentional and unintentional, is grouped, injury becomes the leading cause of years of potential life lost (YPLL) before age 65 (Exhibit 1) (Cancer is the single leading illness-related cause of death.) Intentional and unintentional injuries are also leading causes of death per 100,000 population overall (Exhibits 2 and 3). Nationally, injuries kill more than 142,000 Americans each year. In 1990, there were 3,209 injury deaths in New Jersey and 51,578 (11%) of all New Jersey hospital admissions were attributed to injury. Trauma, which includes both intentional and unintentional injuries, takes a staggering emotional and economic toll on our society in terms of premature death, impairment and permanent physical and cognitive disabilities. In New Jersey, motor vehicle crashes account for approximately one-half of the deaths from unintentional injuries, followed by falls, poisonings, suffocation, and residential fires (Exhibit 4). For each death due to injury, there are an estimated 16 hospital admissions and an additional 380 people who seek medical attention.

Historically, injury posed a "grim paradox," standing as one of the most preventable causes of death and disability, yet the least understood. Part of the problem still lies in the public perception that injuries are random events growing largely out of human error or risk-taking behaviors. However, the focus on injury has dramatically shifted in recent years. Through the expansion of traditional epidemiologic methodology and investigative techniques, researchers now recognize that injuries, like classic infectious diseases, are characterized by episodic and seasonal variations, long-term trends and demographic distributions. More importantly, injury events are now viewed as the products of environmental, behavioral, developmental and socioeconomic factors that contribute to both their occurrences and outcomes.

Injury events occur disproportionately among the young and the elderly in New Jersey. According to the Department's Center for Health Statistics, in 1990 over half (59%) of all injury deaths in New Jersey occurred among people aged 44 and younger. Unintentional injuries are the leading cause of death in New Jersey for children aged 1-4, for school-aged children (ages 5-14), and for adolescents and young adults (ages 15-24). For each injury death among children 14 years and younger, there are an estimated 45 hospitalizations and an additional 1,300 who seek emergency room treatment. Unintentional injuries are the third leading cause of death, after HIV infection and malignant neoplasms, for New Jerseyans ages 25-44 years. When taking into account years of potential life lost (YPLL), or the number of years that an individual

EXHIBIT 1

TOTAL YPLL BEFORE AGE 65, BY CAUSE NEW JERSEY, 1990



SOURCE: NJ CENTER FOR HEALTH STATISTICS

CRUDE AND AGE-ADJUSTED RANKINGS FOR LEADING CAUSES OF DEATH NEW JERSEY, 1989

CAUSE GROUP (ICD-9 CODES)	RANKING CRUDE	RANKING AGE-ADJUSTED*
DISEASES OF THE HEART (390-398, 402, 404-429)	1	1
MALIGNANT NEOPLASMS (140-208)	2	2
CEREBROVASCULAR DISEASES (9430-438)	3	3
COPD (490-496)	4	6
PNEUMONIA/INFLUENZA (480-487)	5	8
DIABETES MELLITUS (250)	6	7
UNINTENTIONAL INJURIES (E800-E949)	7	4
HIV INFECTION (42-44)	8	5
SEPTICEMIA (38)	9	10
SUICIDE, HOMICIDE & LEGAL INTERVENTION (E950-E978)	10	9

*USING THE AGE DISTRIBUTION OF THE 1940 U.S. POPULATION AS A STANDARD

UNINTENTIONAL INJURIES AGE-ADJUSTED DEATH RATES, BY RACE AND SEX NEW JERSEY, 1989

RACE		SEX	
WHITE	BLACK	MALE	FEMALE
21.4	36.5	33.7	13.0

would have been productive in the absence of injury or impairment, injuries take on tragic dimensions.

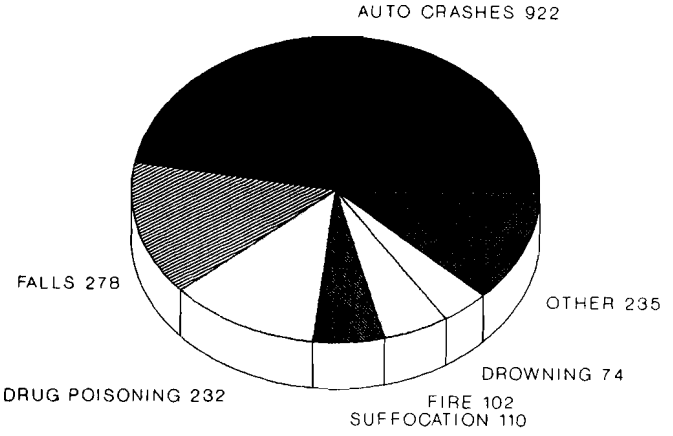
In the years 1988 and 1989, permanent impairments suffered on the job rose from 60,000 to over 70,000 nationally. From 1983 to 1990, New Jersey recorded 756 occupational deaths, according to the Department's Occupational Health Service unit. Labor unions and welfare records reveal that the highest occupational fatality rate was among married males, who had a median age of 45 years and at least one dependent. This group represented 77% of occupational deaths. Of the major causes, one-third (33%) involved motor vehicles and other transportation-related incidents and 20% were due to falls. Nearly all occurred among males (97%). Although the number of fatal occupational injuries has gradually declined in recent years, nonfatal injuries appear to be increasing. There were a total of 49,851 cases of nonfatal occupational injury in 1989 and 49,112 in 1990, with incidence rates of 14.6 injuries per 100 full-time equivalent (FTE) employees and 14.1 injuries per 100 FTE, respectively, reported by public employers in New Jersey (New Jersey Public Employees Occupational Injuries & Illnesses: 1988-1990). Statistics on nonfatal injuries in the private sector in New Jersey are not available, but nationwide the nonfatal occupational injury rate was 8.3 injuries per 100 FTE in 1990.

Although people aged 75 years and older represent fewer than 7% of the total U.S. population, their injury mortality and hospitalization rates are nearly three times higher than for all other age groups combined. The principle cause of death for the elderly is falls and complications due to falls, such as pneumonia and respiratory failure.

Factors in all injury-related deaths, and in nonfatal injuries as well, include motor vehicle crashes, other transportation accidents, falls, drug and alcohol abuse/overdose, poisonings, fires, drowning, suffocation, homicides, suicides, child abuse, domestic violence, rape, and occupational injuries. These factors are sometimes grouped for discussion purposes as traffic injuries, residential injuries, recreational injuries, occupational injuries, violence and injury, assaultive injuries, child abuse, domestic violence, elder abuse, rape and sexual assault, suicide, and firearm injuries. The types of injuries which can then result include trauma, burns, spinal cord injury, head injury, and poisoning, as well

EXHIBIT 4

UNINTENTIONAL INJURY DEATHS BY TYPE NEW JERSEY, 1990



SOURCE: NJ CENTER FOR HEALTH STATISTICS

as the accompanying mental health complications (e.g., depression, anxiety) which can result from being injured. According to **Health New Jersey 2000**, the four leading types of injury deaths for all ages in New Jersey are motor vehicle trauma, falls among the elderly, homicide and suicide. Research has demonstrated that alcohol and drug use is a critical variable in a great proportion of fatal and nonfatal injury.

Because many nonfatal injuries are treated at home, in physicians' offices, in hospital emergency departments, or outpatient services, data on the types, numbers, and outcomes of injuries are imprecise. Better data are available regarding conditions leading to hospital admission or to the death of the victim.

Urbanicity and Injury

Although injuries affect all segments of society, the burden is increasingly borne by minorities and those in urban areas of New Jersey. New Jersey is the most densely populated state and ranks ninth in total population. Newark, Passaic, Jersey City, and Elizabeth are contained in the largest Consolidated Metropolitan Statistical Area in the country (New York-Northern New Jersey-Long Island), according to the U.S. Census. Trenton and Camden are contained in the fifth largest Consolidated Metropolitan Statistical Area (Philadelphia-Wilmington-Trenton). The hazards of living in crowded and deteriorating urban areas, along with other economic and social factors attendant to poverty, exacerbate an already wide disparity in the injury rates between whites and those of racial and ethnic minorities. Cities and suburban communities with populations of 30,000 and over have significantly higher injury death rates than those communities of under 30,000 (47.7 per 100,000 vs. 36.6 respectively). Black injury death rates exceed those of whites by an overall ratio of two to one (70.2 per 100,000 vs. 30.4 respectively). For Hispanics, unintentional injuries rank within the top five causes of death for both males and females (1989, Exhibit 5).

New Jersey's children are among the most vulnerable in the nation for deaths due to fires, according to a study by Johns Hopkins University. The fire-related death rate significantly exceeds that for motor vehicle-related injury deaths among children 14 years and younger. Children most at risk are between the ages of one to four years, accounting for 49% of all childhood fire deaths between 1980 and 1985. Newark, with some of the oldest housing stock and manufacturing facilities in the state, also has the highest fire death rate with 9.2 deaths per 100,000 population compared to the statewide rate of 2.3 deaths per 100,000.

Urban areas are traditionally hazardous for pedestrians because of their close proximity to heavily trafficked roads and higher speed highway arteries. According to the New Jersey Division of Highway Traffic Safety, in 1988 there were 6,368 pedestrian injuries, 227 (4%) of which were fatal and 880 (14%) of which were identified as incapacitating injuries. Children, primarily males, between the ages of 10 and 14 years experienced the highest death rate among the young (4.5 deaths per 100,000 population). The pedestrian death rate is highest, however, among males (8.9 per 100,000) and females (5.5 per 100,000) age 65 years and older.

Inner city areas tend to have higher rates of homicides and assaultive crime than do suburban and rural areas. The negative conditions (e.g., poverty, the lack of employment opportunities, and crowding) that characterize many minority communities often lead to higher homicide rates. Today, in the United States, and in New Jersey as well, firearm violence occurs mostly in minority and disadvantaged populations. In 1990, there were 394 homicides and 23,095 assaults in New Jersey. Handguns were used in nearly half (46%) of all homicides. Black males between the ages of 18 and 25 years have a homicide rate approximately five times that of white males of the same age group. Deaths related to firearms are only part of the problem, though. Nationally, it is estimated that for each firearm death, there are 7.5 nonfatal shootings. In New Jersey, few data are available on the number or morbidity prevalence of firearm injuries.

Youth Violence

Juvenile arrests for violent index offenses have been on the increase in recent years with a 36% rise between 1989 and 1991, according to figures from the Juvenile Delinquency Commission. "Index offenses" include violent offenses (murder, rape, robbery and aggravated assault) and property offenses (burglary, larceny-theft and motor vehicle theft.) Juveniles now account for approximately one-fifth of all violent offense arrests in New Jersey, including approximately 10% of the murders, 15% of the rapes, and 15% of the aggravated assaults. Young people also

Five Leading Causes Of Death By Sex Among Persons of Hispanic Origin
New Jersey, 1989

Cause Group	Males		Females	
	Deaths	Rank	Deaths	Rank
Diseases of the Heart (390-398, 402, 404-429)	878	1	741	1
Malignant Neoplasms (140-208)	737	2	736	2
HIV Infection (42-44)	259	3	69	7
Unintentional Injuries (E800-E949)	245	4	101	4
Cerebrovascular Diseases (430-438)	128	5	146	3
Early Infant Mortality (760-779)	83	8	71	5.5 (TIE)
Chronic Obstructive Pulmonary Diseases (490-496)	75	9	71	5.5 (TIE)

bear the brunt of the violence to a substantial degree, with the perpetrator commonly being an acquaintance or friend of the victim in cases of interpersonal violence.

The highest rate of homicide in New Jersey occurs among persons ages 15-24, and these homicide deaths account for nearly one-fourth of all homicide deaths in the state.

Costs

The potential for reducing the number and severity of injuries is great. Mortality costs per injury death ($335,000) are almost four times that of the costs for cancer ($88,000) and more than six times the costs associated with cardiovascular disease ($51,000) (*The Cost of Injury in the United States: A Report to Congress, 1989*). It is apparent that injury, one of the leading public health problems, is receiving a disproportionately small share of research and prevention funding.

Whether or not a patient has medical insurance is a significant factor in determining subsequent care and the quality of that care. There is a growing number of children and young adults who are not covered by medical insurance. Half of all uninsured Americans are now under the age of 25. In New Jersey, 800,000 individuals are currently uninsured and this number continues to increase. National data show that more than 70% of the cost burden of injury is borne by the private sector through private insurance (34%), Workers' Compensation (17%), uninsured care (17%) and self-payment (5%). A study of head injury among children and young adults 24 years and younger, conducted by the New Jersey Office for Prevention of Mental Retardation and Developmental Disabilities (1991), found that 55% of those who were hospitalized for mild head injury had an average length of stay of two days and over half (55%) had no medical insurance.

Nationally, the overall cost of uncompensated care has been estimated at $8.3 billion in 1990. Trauma care makes up approximately 12% ($1 billion) of this cost. In New Jersey, the cost of uncompensated care is in excess of $754 million. Extrapolating the 12% injury figure to New Jersey's uncompensated care costs would mean that the portion paid to injury is approximately $80 million. This should alarm both the public and private sectors given that, as demonstrated, trauma patients are typically adolescents and young adults who are least likely to have commercial insurance or to be eligible for public assistance programs. This can have dire implications for specialized trauma centers and acute care facilities that routinely handle injured persons because it results in uncompensated care reimbursement for direct and indirect costs.

Costs in the acute phase of injury is not the only monetary cost of injury. Short- and long-term disability and chronic impairment are also costly. According to information presented in the Long-Term Care chapter of this plan, long-term skilled nursing home care averages approximately $30,0000 per patient per year. One-hour visits by a home health nurse can cost $75 and a live-in home health aide may cost up to $54,750 per year. Information from the Northern New Jersey Spinal Cord Injury System indicates that orthopedic rehabilitation in a rehabilitation facility averages $700-$800 a day; care for someone who is ventilator-dependent is approximately $1,200 daily. A typical amputee may stay 3-4 weeks in a rehabilitation facility; a person with paraplegia may stay 8-12 weeks. Persons with quadriplegia may stay 3-6 months (these stays may be even longer if the spinal cord injured quadriplegic develops pneumonia or bedsores and must go back to an acute care facility—delays in the rehabilitation continuum of care typically cost $35,000). There are additional costs, such as home care, outpatient physical therapy, and special transportation, after discharge. Many of these are ongoing costs for those who become seriously disabled.

Demographics of Injury Mortality

Males are three times more likely than females to die of injuries (2,270 vs. 939 respectively in 1990) with the highest injury death rate occurring between the ages of 15 to 24 years. Black injury death rates exceed those of whites and Hispanics by a ratio of nearly two to one (Exhibits 6, 7, 8). There is little state data available on injuries to Native Americans (there are about 15,000 Native Americans in New Jersey) or those of Asian descent and more must be learned in this regard. Cities and suburban communities with populations over 30,000 have a significantly higher injury death rate than those communities under 30,000 (47.7 vs. 36.6 per 100,000).

Motor Vehicle and Related Injury Deaths

The U.S. has experienced fewer motor vehicle deaths in recent years. Traffic deaths in 1991 were 8% lower than those for 1990 (34,380 vs. 37,424). The New Jersey highway system stands as one of the safest in the nation, experiencing a 15% decrease in motor vehicle deaths during this same period. Nationally, the death rate is 19.5 per 100,000. The New Jersey rate is significantly lower at 12.0 per 100,000. Nevertheless, 731 New Jerseyans died in motor vehicle crashes in 1991. While lower than the national figures, males aged 15 to 19 have the highest fatality rate (16.5) in the state. In this group, male drivers are twice as likely as females to die in a motor vehicle crash. Females in all age groupings, however, approximate males in the number of passenger fatalities (i.e. 79 male; 83 female) (Exhibit 9).

Typical contributing factors in automotive fatal and nonfatal crashes include driver error (i.e., inattentiveness, failure to yield the right of way, and unsafe speeds), which accounts for over half (57%) of all crashes. Poor or inadequate road designs and vehicle defects account for fewer than one in seven (13%) crashes. In 1991, one in five motor vehicle deaths in New Jersey involved the use of alcohol. Nationally, fewer than half (47%) of all drivers consistently wear seat belts. In New Jersey, seat belt usage is six out of ten, or 59%, according to the New Jersey Division of Highway Traffic Safety. However, in 1991, 75% of all motor vehicle fatality victims did not use a safety restraint at all.

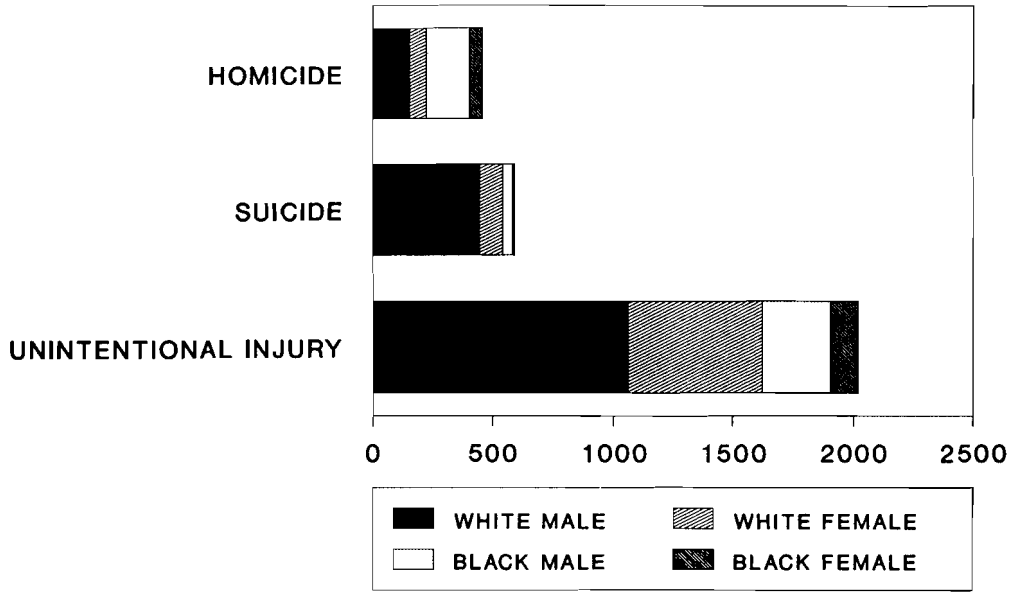
Of children aged 0 to 4 who died in car crashes between 1988 and 1989, half were not in safety seats or had no safety restraint at all and for another one-third (35%), the safety restraint was improperly used. The child safety seat legislation, along with increased public awareness of motor vehicle safety, has had a significant effect in reducing infant and child mortality. There were four fatalities among children four years old and under in 1991, compared to eight in 1990. Studies have demonstrated that child safety seats, when used correctly, are 71% effective in reducing mortality and 67% effective in preventing injuries requiring hospitalization.

Of the 46 motor vehicle-related deaths among New Jersey children aged 14 years and under, about 11% were motor vehicle occupants. However, over half (54%) were pedestrian injury deaths. Males between the age of 10 and 14 are the most vulnerable children, representing nearly one-quarter (24%) of all injury deaths of young people in New Jersey. Elderly males, age 65 years and older, have the highest pedestrian death rate (8.9) more than double the New Jersey overall pedestrian death rate of 3.9 per 100,000.

About 14% of motor vehicle fatalities in the age group 14 years and younger were bicycle-related. Males between the ages of five and nine had the highest bicycle injury death rate (1.2 vs. 0.5 deaths per 100,000). Nationally, fewer than 3% of all children age 14 and under wear a bicycle helmet. In a sampling of New Jersey head injured patients between the ages 0 to 24, roughly 17% of those hospitalizations were bicycle injuries. None of those cyclists wore a protective helmet.

EXHIBIT 6

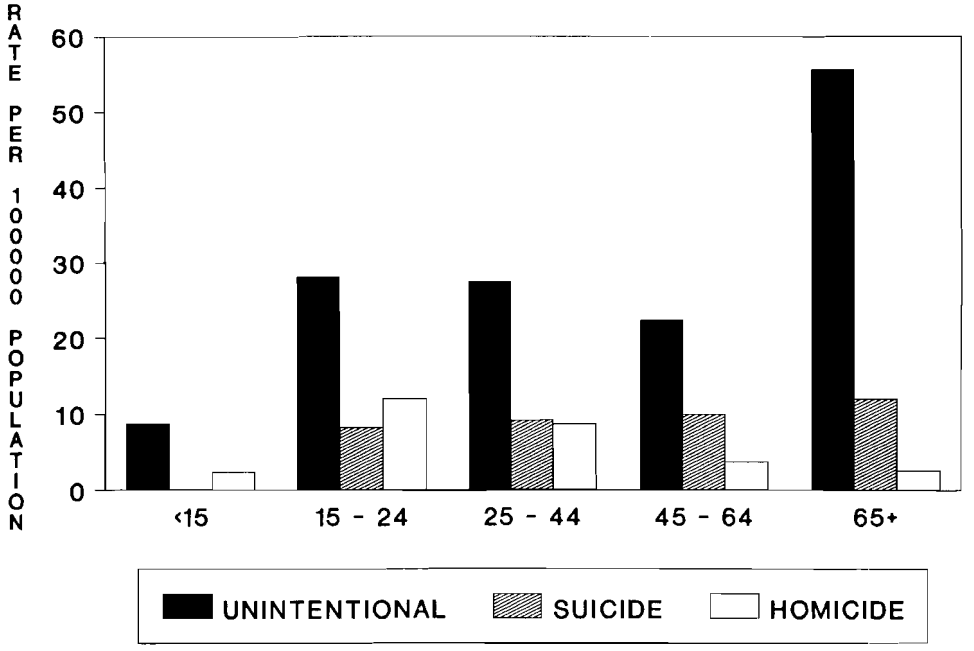
INJURY DEATHS BY TYPE, WHITE AND BLACK BY SEX, NEW JERSEY, 1989



SOURCE: NJ CENTER FOR HEALTH STATISTICS

EXHIBIT 7

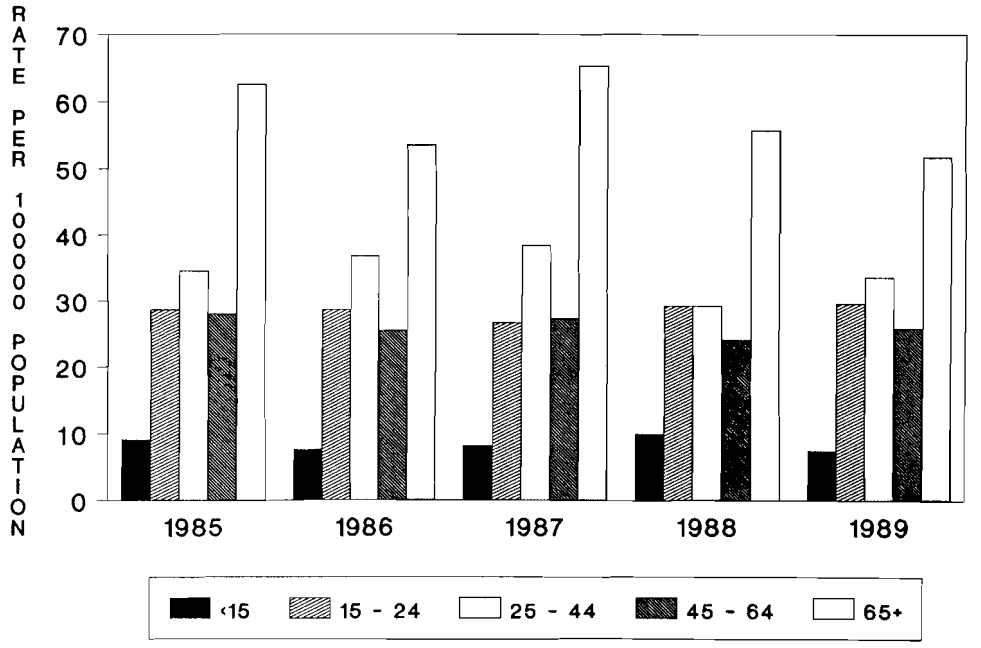
INJURY DEATHS BY TYPE AND AGE GROUP NEW JERSEY, 1989



SOURCE: NJ CENTER FOR HEALTH STATISTICS

EXHIBIT 8

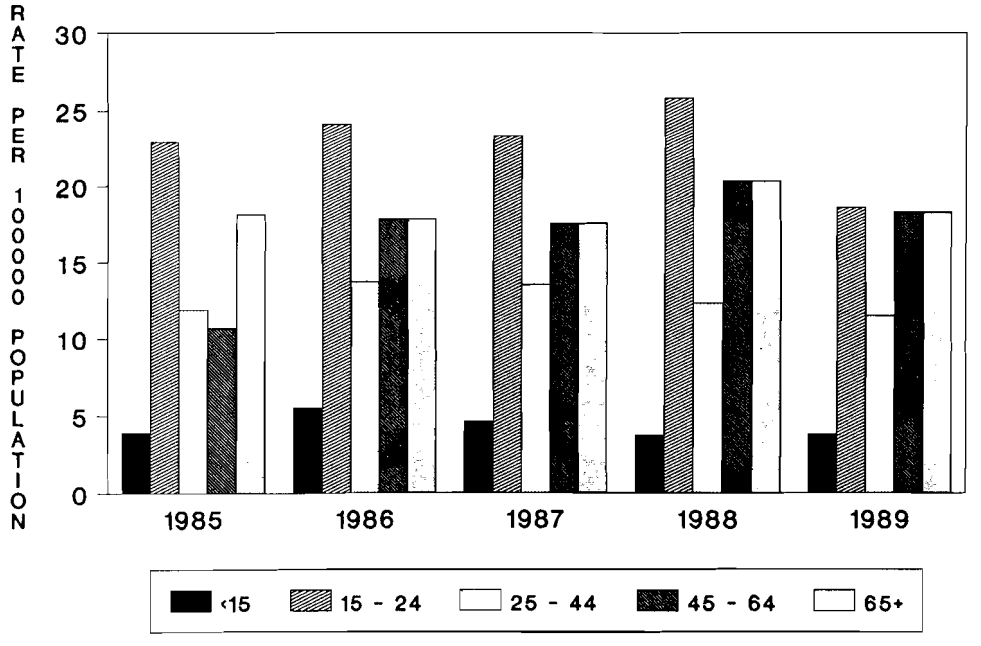
NON-AUTO INJURY DEATHS BY AGE GROUP
NEW JERSEY, 1985-1989



SOURCE: NJ CENTER FOR HEALTH STATISTICS

EXHIBIT 9

AUTO CRASH DEATHS BY AGE GROUP
NEW JERSEY, 1985-1989



SOURCE: NJ CENTER FOR HEALTH STATISTICS

Firearms

Injuries caused by interpersonal aggression can be characterized as "intentional" or "unintentional," in contrast with consistent labeling of recreational or occupational injuries as unintentional. Public health officials are often reluctant to make absolute distinctions about injuries based solely in terms of intentionality. Nowhere is this dilemma more evident than in the areas of suicide and homicide. For example, studies of inner city firearm deaths among adolescents show that rarely does a youth want to murder. Rather, the possession of a handgun most often is intended to seek control in groups or to provide "protection" from threats to safety, not necessarily to inflict injury. In the criminal justice system, the charge of manslaughter is most often used when intentionality cannot be determined.

Nationally, injuries resulting from either the unintentional or intentional use of firearms now constitute the second leading cause of injury death. In New Jersey, there were 420 identified deaths involving the use of a firearm. For all ages, 46% of firearm deaths are homicides and 54% are suicides. The risk of firearm death is highest among males aged 15 through 44. In New Jersey, minority males are five times more likely to die of an inflicted firearm wound than are white males of the same age group. Firearms are also used for other violent crimes, e.g., 14% of all aggravated assaults and 30% of all robberies (1990).

Suicide

According to 1988 figures, there were 613 suicides among New Jersey residents. Consistent with national findings, elderly white males aged 65 and over and white males aged 15 to 44 are most at risk for both suicide and suicide attempts. Risk factors most often associated with suicide include alcohol and drug use or dependency, depression, social isolation and access to a firearm (Exhibits 10, 11, 12).

Homicide

In 1990 there were 432 homicides reported to New Jersey law enforcement agencies, a 10% increase from 1989. The age group of 25 to 29 accounted for 18% of all murder victims. Firearms, predominantly handguns, were used in 37% of all homicides. Knives or a cutting instrument were used in 30% of all reported cases, blunt objects in 9% and physical force in 12% (Exhibit 13). Among children aged one year and under, homicide is now the leading cause of injury death, occurring mostly among black females. Overall, murder victims less than the age of 10 accounted for 8% of all homicides.

Thirty-seven percent of the known offenders were friends or acquaintances, 14% were relatives and 17% were strangers. Males were victims in 72% of all cases. Adult females were more likely to be murdered by their spouse or boyfriend (30% of female homicide deaths). Men, teenagers and young adults, and minority group members are most likely to be murder victims and the rate for minorities is approximately five times the rate for whites. Most homicides are not random events and usually occur during an argument.

Falls

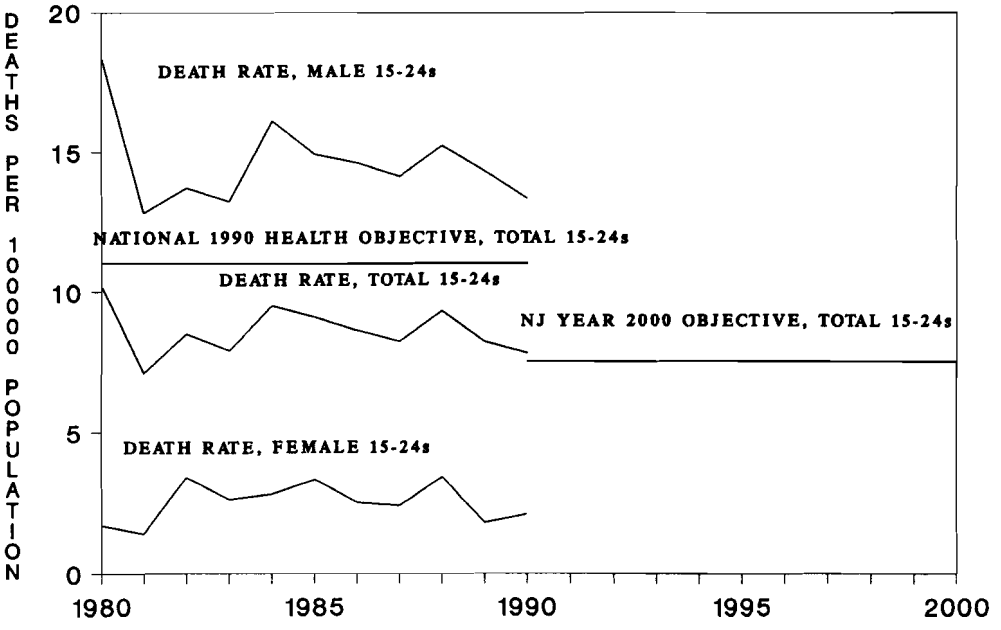
Falls accounted for 278 deaths in 1990. About one-fifth (22%) of all falls occurred on stairs or steps. However, nearly half (47%) of all falls are of unknown circumstance or nature. Most falls among the elderly tend to involve a trip or fall on a level surface. By all accounts, the number of fall deaths may be an underestimation of true incidence, because of the many factors associated with aging. Osteoporosis in white females and other medical conditions such as impairments in vision, gait and balance, and the use of medications are correlated with falls. The direct bearing of these variables on the nature and severity of the injuries is not understood well. Elderly persons have a far greater risk of complications, such as pneumonia, associated with falls, even when the injury is minor or moderate. Hip and leg fractures often signal the end to independent living for many. It is not surprising then, that falls are a significant risk among residents of nursing or chronic care facilities.

Poisoning

In 1990, 276 New Jerseyans died of poisonings, which emcompass a wide range of substances and a variety of risks associated with different age groups. For example, deaths among adults most commonly involve carbon monoxide from motor vehicle exhaust and overdoses of narcotics, alcohol, and prescription drugs, such as tranquilizers, barbiturates and antidepressants. The New Jersey Poison Information and Education System (NJPIES) also reports that it has identified a large number of lead-poisoned workers, representing a significant morbidity and even mortality and coincidental costs of lost wages, etc. While children age 14 and under are at high risk for hospitalization due to ingestion or inhalation of toxic substances, deaths in this age group due to poisoning represent only 4% of all injury fatalities.

EXHIBIT 10

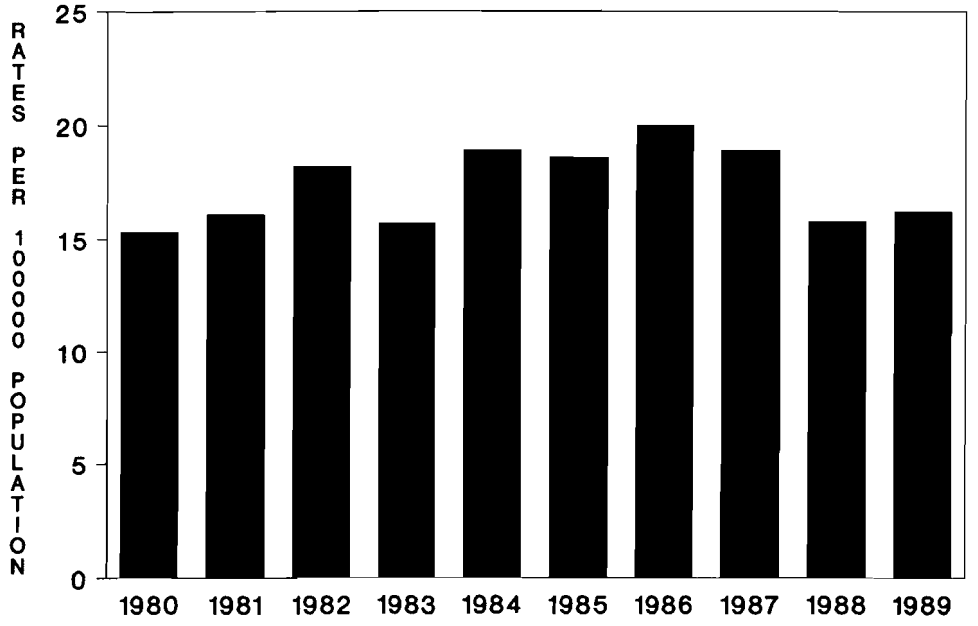
NEW JERSEY SUICIDE DEATHS AGED 15-24 1980-1990 AND HEALTH OBJECTIVES



SOURCE: NJ CENTER FOR HEALTH STATISTICS

EXHIBIT 11

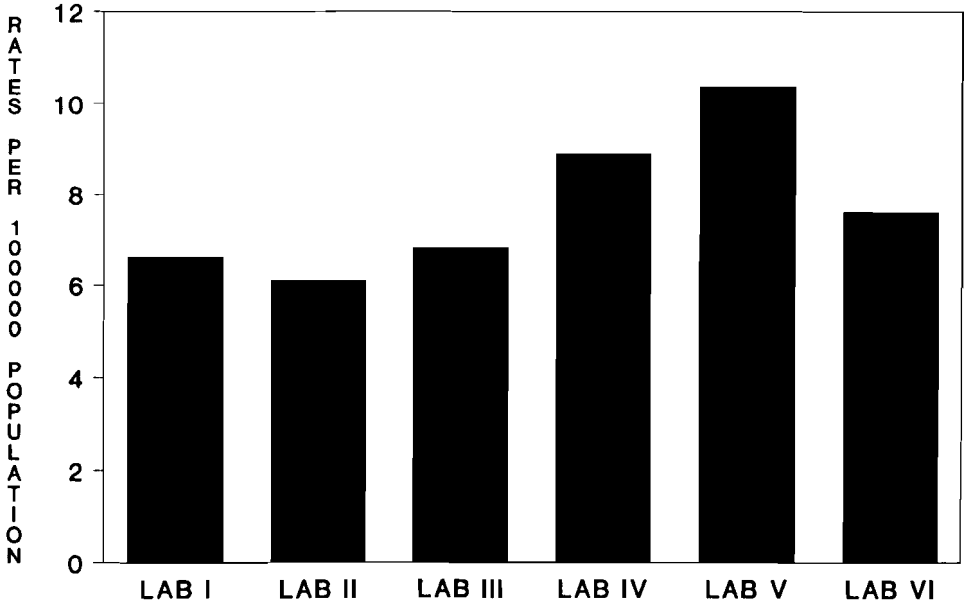
SUICIDE RATES FOR WHITE MALES,AGES 25-44 NEW JERSEY, 1980-1989



SOURCE: NJ CENTER FOR HEALTH STATISTICS

EXHIBIT 12

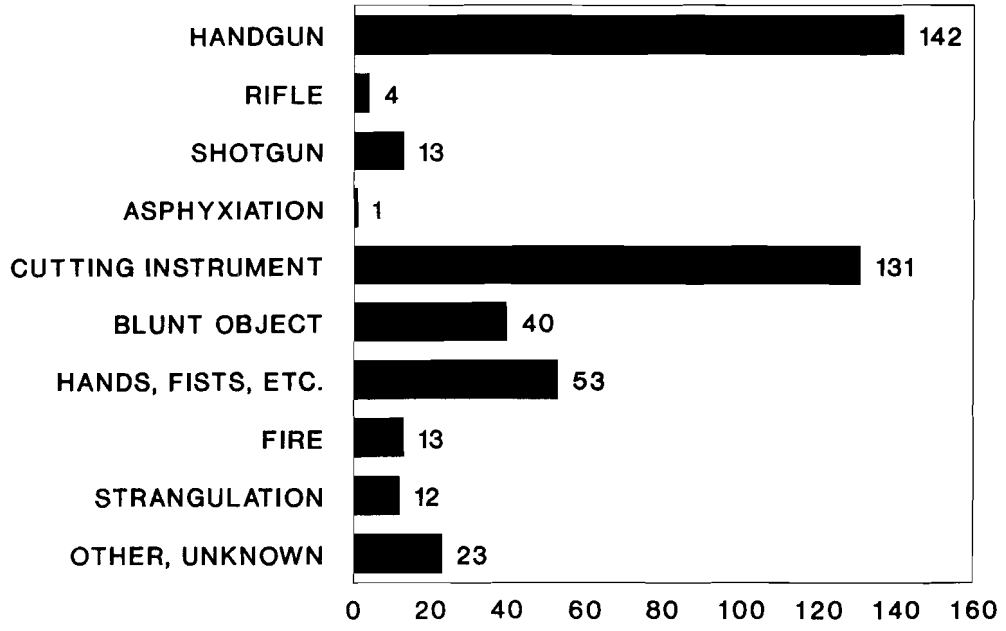
SUICIDE RATES FOR LAB REGIONS NEW JERSEY, 1989



SOURCE: NJ CENTER FOR HEALTH STATISTICS

EXHIBIT 13

HOMICIDE BY TYPE OF WEAPON NEW JERSEY, 1990



SOURCE: UNIFORM CRIME REPORT

Fires and Burns

New Jersey's children are among the most vulnerable in the nation for deaths due to fires. About one in ten (11%) injury deaths among children 14 years and under were attributed to house fires in 1990. Smoke inhalation is the principle cause of death in nearly two-thirds of the 104 fire deaths. According to the most recent report of the New Jersey Fire Bureau (1990), careless smoking (21%) appears to be the leading cause of all fatal residential fires, followed by arson and suspicious fires (18%), and electrical distribution (12%). A substantial proportion of fires (27%), however, are of undetermined origin.

Upon closer examination, it was found that materials related to tobacco smoking accounted for more than one-third of fire fatalities. Children playing with matches and lighters accounted for nearly four in ten fire deaths. New Jerseyans continue to ignore the benefits of early fire warning which can be provided by smoke detectors. In nearly two-thirds (62%) of all residential fire deaths, a smoke detector was not present or was not operating. It is estimated that the risk of dying in a fire can be effectively halved when a smoke detector is installed in the home.

Newark had the highest fire death rate in the state with 9.2 deaths per 100,000 compared with the statewide average of 2.3 per 100,000 residents. The fire death rates in Camden and Trenton were also high.

Drownings

Nearly all (90%) drownings in the U.S. each year occur among the very young. One hundred seventy-seven (177) children drowned in New Jersey between 1980 and 1985. Of this, almost half (44%) were aged 0 to 4 years. Risks often associated with drownings include non-supervision and the lack of entrance barriers, such as fences and self-latching gates, to swimming areas and pooled water. Although New Jersey is an ocean and waterway state, little is known about the incidence of boating hazards and drownings.

Demographics of Injury Morbidity

Medical and surgical advances in the acute phase of trauma treatment, combined with the implementation of specialized regional trauma transport and care, have contributed to a substantial decrease in injury fatalities and fatality rates and have shifted the survival patterns in lives of persons who sustain life-threatening injury. Experts in injury estimate that for each fatality, there are 99 survivors.

The impressive gains in injury survival should not be confused with absolute success and recovery. Increasing numbers of survivors incur lengthy interruptions in routine activities, face long and painful rehabilitation, or sustain lifelong impairments and functional limitations that diminish their ability to realize personal goals and ambitions. Today the overwhelming burden of disability falls upon the young. Two types of injury, traumatic brain injury (TBI) and spinal cord injury (SCI), are the most devastating to individuals, their families, and society.

Traumatic Brain Injury (TBI)

Epidemiologic inquiries in the past decade have reported annual incidence rates for TBI ranging from a low of 180 per 100,000 population to as many as 367 per 100,000. Differences in TBI incidence rates can be attributed to: (1) variations in case definition, (2) variations in case identification methodologies, and (3) demographics of a particular population under study. The only national data available from which to draw estimates is provided by the National Head and Spinal Cord Injury Survey (1980), which estimated a rate of 200 hospitalizations per year per 100,000 people. Using current census figures for New Jersey, this translates into 15,942 new TBI cases for 1992. While the majority (70% to 80%) of individuals hospitalized are diagnosed with mild, uncomplicated closed head injury, little is known about the sequelae of mild head injury. Three months after the initial injury, many victims may still suffer from persistent headaches, memory difficulties and difficulties resuming work activities.

Much more is known about moderate (10% to 15% of cases) and severe (2% to 5% of cases) head injury. Again, in terms of New Jersey's population, a conservative estimate is that roughly 320 individuals may sustain a brain injury severe enough to cause long-term or lifetime disability. Recent studies show that only one in three (29%) of those moderately or severely injured will return to work within a year.

Profiles of individuals who are at high risk of sustaining TBI are consistent across studies. Youth and adults aged 15 to 24 are at the highest risk. The elderly, aged 65 and over and the young (aged 15 to 19 years) are also at high risk. Demographic analysis shows that TBI

incidence rates are highest for nonwhite, urban populations, Males (70%) are twice as likely as females (30%) to experience a brain injury.

Motor vehicle crashes (37%) are the leading cause of TBI; falls account for 20-30% of all incidences. The contribution of assaultive crimes to head injury statistics is unclear, owing to regional variations in data collection. In children fifteen years and under, sports and recreational activities were the third highest cause, with the most common subtype due to bicycle mishaps not involving a motor vehicle.

Spinal Cord Injury (SCI)

SCI incidence also varies among populations and from study to study with estimates ranging from 2.8 to 5.0 per 100,000 people annually. Conservative estimates for New Jersey are that over 200 individuals will sustain a spinal cord injury in 1992. In contrast to TBI, the major impairments associated with spinal injury are muscle paralysis and incomplete or total loss of sensation. Distinction is made between paralysis involving both arms and legs (quadriplegia) and that for the legs only (paraplegia). Half of all SCI cases are classified as multiple trauma. That is, more than one body region or vital organ system have been injured. Upwards of 20% of SCI victims may also sustain a head injury as well. However, because of difficulties and variations in coding for multiple trauma, this information is not readily accessible for researchers or for program planning.

Adolescents and young adults are at high risk for SCI, accounting for up to 60% of all cases. Little is known about ethnic or racial variations. Motor vehicles (30% to 60%) are the leading cause of SCI followed by falls (20% to 30%) and acts of violence, primarily involving firearms (5% to 20%). Diving is the major cause of all sports-related spinal injury, implicated in nearly two-thirds of all cases for that category.

The extent or severity of impairment for SCI is highly correlated to cause: about 30% of falls and motor vehicle spinal injuries result in complete quadriplegia; an additional 15% to 20% result in complete quadriplegia. Gunshot wounds to the spinal cord are also devastating, often resulting in neurologically complete paraplegia.

Domestic Violence

In 1990, there were 50,823 domestic violence offenses reported to the police. Physical assaults occurred in 63% of these cases. Children were involved or present during 54% of all domestic violence offenses, with 10% involved in the episode and 44% observing. The use of alcohol and drugs was a factor in almost half (46%) of these cases. Murders increased 16% in 1990 (57) when compared to 1989 (49). Persons age 60 and over were victims in 3% (1,393) of domestic violence cases during this time. In these cases, more than two-thirds (67%) involved assault upon females.

In 1982, the Domestic Violence Act was instituted to protect victims of battering and to study the complex problems that lead to aggressive behaviors. This legislation also provided the opportunity to identify the causes of violence in the home and put forth a more comprehensive effort to combat domestic violence. More attention should focus on domestic violence and health care in the future. This is a problem that crosses all ages and socioeconomic groups. The health care community should recognize that domestic violence is a major public health concern.

Rape and Sexual Assault

There were 2,308 reported rapes in New Jersey in 1990. According to experts, only half of all rape incidences are reported to the police. Few state figures are available concerning whether other injuries occurred with rapes or whether weapons were involved.

Bias Incidents

A bias incident is defined as any suspected or confirmed offense or unlawful act which occurs to a person, private property, or public property on the basis of race, color, creed, ethnicity, religion or sexual orientation. An offense is bias-based if the motive for the commission of the offense or unlawful act is racial, religious, ethnic or sexual oriented in nature. In 1990 there were a total of 824 bias incidents in New Jersey, 20% resulting in either homicide or assault. This is an increase from 607 incidents in 1989. Of these incidents, 323 (39%) were directed toward African-Americans and/or their properties. Twenty-three percent (191) were directed at individuals and/or properties connected with the Jewish religion.

IV. THE EXISTING HEALTH DELIVERY SYSTEM

Preventive/Educational/Advocacy Efforts

There are three levels of "injury prevention." Primary prevention works to forestall events, such as motor vehicle crashes, that could result in injury. Secondary prevention is directed toward mitigating the consequences of events to prevent or reduce the severity of injury (such as airbags which inflate upon impact and cushion occupants during motor vehicle crashes). Tertiary prevention involves the roles of acute medical care and rehabilitation, following injury, in treating and returning the functioning patient to society. This section looks at the first two levels of injury prevention; injury treatment will be addressed separately.

Injuries can be prevented initially by a variety of strategies, including persuasion, requiring behavior change, and passive or automatic protection. Examples of persuasion include programs to induce people to use seatbelts or install smoke detectors for their own self-interest or self-protection. Laws can require behavior changes, such as the law which required all motor vehicle drivers and front seat passengers must use their seatbelts or that all new buildings must have smoke detectors or face legal sanctions. Finally, products can be developed which automatically protect individuals (e.g., "automatic" seatbelts, sprinkler systems built into construction, etc.). Research has shown that requiring behavior change will generally be more effective than education/persuasion, but that automatic protection will probably be the most effective of all the strategies. This is because high-risk individuals are hardest to influence when an approach involves voluntary or mandated changes in behavior.

Department of Health Efforts

In New Jersey, the New Jersey Department of Health is taking an active role in injury prevention. The Department of Health has instituted a prevention program in its Health Promotion and Disease Prevention Services (HPDP) unit. The mission statement of HPDP is "to improve health awareness and promote a healthy lifestyle for all individuals and families through coordinated strategies aimed at health promotion, injury prevention, consumer education, and the early detection, prevention and treatment of chronic disease entities, based on the Year 2000 national health objectives." HPDP also contains a gerontology program (see below) and a sexual assault/rape care program (see below) which have injury-related components. Other Departmental educational and prevention efforts with injury control components include activities related to lead poisoning, maternal and child health, emergency medical services for children, alcohol and drug abuse, and occupational health (see below).

HPDP will be funding prevention projects in communities with high rates of youth violence. The aim of these projects is to reduce violence-related injuries and deaths by increasing referrals of youth-at-risk to community-based programs in violence prevention and youth development. Strategies to prevent youth violence are expected to include mentoring, conflict resolution training, problem solving training, skill building, community services, rites of passage, and cultural/arts programs. In addition the Department of Health is working collaboratively with the Juvenile Delinquency Commission to identify funding for interventions that address youth violence at the community level.

The Health Promotion/Disease Prevention unit's Gerontology Program has been involved with several initiatives to improve the health and safety of elderly persons. There was a 12-hour training course for family caregivers which trained over 1,000 persons annually. The program emphasis was on home safety and home modification (including information from the federal Consumer Product Safety Commission on assessing the home for safety). The state's 10 Geriatric Assessment Centers aided elderly persons who experienced difficulties living in the community. Among the factors reviewed were the person's health status, the person's caregiver, and the home environment. A review of medications was performed (this census found a significant problem with overmedication and inappropriate medication). Medication problems may lead to mental confusion, dizziness, unsteady gait, and other complications which can increase a person's susceptibility to motor vehicle accidents, falls and other injuries. Under the FY93 state budget, both the training program and the Geriatric Assessment Centers have been defunded; therefore, these services are no longer available. The Gerontology Program still has an osteoporosis-related grant from the federal government.

The Health Promotion/Disease Prevention unit's Rape Care Program funds rape crisis centers in each of the 21 counties. Rape care services in New Jersey include a 24-hour hotline and crisis intervention; individual and group counseling for victims of sexual assault and their families;

accompaniment of victims to police, prosecutor's offices, hospitals and court; advocacy on behalf of victims; training for volunteers; distribution of information on sexual assault, abuse and rape; community education programs; and public relations programs to increase community awareness of the problems of sexual assault. The Rape Care Program works with the New Jersey Coalition Against Sexual Assault, the Governor's Task Force on Child Abuse and Neglect, and the New Jersey Prosecutor's Victim/Witness Association. The Governor's Office is currently working to coordinate issues related to violence against women and has established a State Office on the Prevention of Violence Against Women.

The New Jersey Department of Health's Occupational Health Service has several programs and projects related to occupational injury prevention and surveillance. A register of fatal occupational injuries, beginning in 1983, uses information from death certificates, medical examiner reports, workers' compensation forms, and federal Occupational Safety and Health Administration (OSHA) worksite investigation reports. Special areas of investigation are fatal falls, confined space deaths, and electrocutions, under a National Institute of Occupational Safety and Health (NIOSH) funded program. The Occupational Health Service disseminates written materials, based on these investigations, to selected labor unions, trade associations, and company management. The Occupational Health Service works closely with OSHA and the Public Employees Occupational Safety and Health (PEOSH) program in the Department of Labor.

Initiatives which target juveniles who abuse drugs and alcohol and who have a history of violent behavior have increased through Department of Health efforts in the Division of Alcoholism, Drug Abuse, and Addiction Services.

Required "core activities" for local health departments from *Recognized Public Health Activities and Minimum Standards of Performance for Local Boards of Health in New Jersey* (N.J.A.C. 8:52, effective Jan. 1, 1987) include health promotion components in the areas of alcohol abuse control, drug abuse control, smoking prevention and cessation, nutrition, injury control, and physical fitness and exercise. Other core activities related to oversight of recreational bathing facilities, camps, occupational health, and public health nuisances and to programs on childhood lead poisoning prevention and control, may also have injury prevention overtones. Elective injury-related activities include evaluation of and work with local emergency medical services providers, ambulatory health care for adults and children, school health, alcoholism control and drug abuse control.

Other State Government Efforts

Department of Human Services.

Other departments within state government are also involved in injury prevention. The Office for Prevention of Mental Retardation and Developmental Disabilities (OPMRDD) was formed under N.J.S.A. 30:1AA et seq. in 1987 in the Department of Human Services. OPMRDD has had an injury control grant (cooperative agreement) from the federal Centers for Disease Control since 1988. The current grant includes initiation of an osteoporosis prevention program in the Department of Health and support for two epidemiologists who will develop or enhance surveillance systems for developmental disabilities and for injury control. Other activities include developing a trauma registry specific to Cooper Hospital/University Medical Center in Camden, implementing a health promotion and wellness program among the Centers for Independent Living, and implementing a child seat loan program and seat belt education study. OPMRDD staff will also be training case workers in the Division of Youth and Family Services to recognize developmental disabilities among children who are maltreated. A study of hospital perceptions of barriers to E-coding hospital records has been completed.

The Division of Youth and Family Services (DYFS) in the Department of Human Service supports domestic violence "core services" in each county. Core services include "24 hour hotline and emergency response; 24 hour shelter entry; legal, financial and housing advocacy services; counseling for victims, children and perpetrators; community networking; community education and awareness; and children's services." There are 20 battered women's shelters in operation throughout the state (two in Essex County). The Division also provides funding to five non-shelter domestic violence support programs, two of which will provide a base for future shelter development in counties where none currently exist (Cape May and Cumberland). Individual and group counseling services are offered to perpetrators of domestic violence through 19 DYFS funded batterers' programs. The high correlation between child abuse and neglect and domestic violence has influenced many agencies to expand program focus to include development of children's services components.

The Division of Medical Assistance and Health Services' Medicaid program (in the Department of Human Services) reports on patient injuries. The Department of Human Services also funds youth violence prevention activities through several programs, including a Schoolbased Youth Services program and a minority male initiative.

Department of Law and Public Safety

The Division of Highway Traffic Safety in the Department of Law and Public Safety is New Jersey's lead agency for efforts funded by the U.S. Department of Transportation's National Highway Traffic Safety Administration. These include an extensive array of programs to reduce the number of fatalities and injuries related to motor vehicle crashes: (1) promoting safety programs to combat driving under the influence of alcohol or drugs, including Project Graduation (for graduating high school seniors celebrating at substance-free parties), grants for police departments (training to recognize DUI drivers, special patrols and roadblocks, DUI public awareness programs for schools and community groups), and educational campaigns (Host Liability Campaign, local educational programs and events, college peer educator training); (2) training for police officers and others on presenting educational programs on seat belts, child car seats and airbags, enforcement campaigns, and corporate seatbelt education programs; (3) funding for enforcement patrols to apprehend speeding motorists, those following too closely, or committing other dangerous moving violations, and funding for specialized training in accident investigation; (4) funding for a variety of traffic engineering projects to make roadways safer to travel; (5) funding grants to agencies to conduct traffic safety programs within the community to promote identification of needs and implementation of projects to address those needs; (6) funding activities in the Department of Health, Office of Emergency Medical Services related to training prehospital EMS providers and improving the EMS system so that care at the scene of a motor vehicle crash is improved; (7) providing funding for traffic records improvement in state, county, and municipal agencies so that types and locations of accidents can be better identified; (8) promoting motorcycle safety, such as the Alternate Motorcycle Skill Test administered by the Division of Motor Vehicles to identify applicants who lack appropriate skills to operate a motorcycle safely; and (9) providing printed materials, technical assistance, statistical data, highway safety and driver education films and videos, and other materials for use in educating the public about highway safety.

Mass casualty incidents fall under the auspices of the Office of Emergency Management, Division of State Police, Department of Law and Public Safety. Each county and municipality in New Jersey (under a series of statutes and directives) is required to have an emergency management coordinator and deputy coordinator and an emergency operating plan. There are 15 annexes to each local plan, including an emergency medical services annex. Plans are approved by the Office of Emergency Management. When a municipality or county feels it cannot handle an incident on its own, it can request state assistance (and through the state, federal assistance, if necessary). Department of Health rules for paid, municipal and hospital-based ambulance services which do "street work," require that each ambulance carry a copy of the local EMS Annex and a package of 50 triage tags. Some hospital emergency departments (especially those in the vicinity of the state's nuclear generating facilities) have decontamination capability; more of these types of facilities may be needed. Critical Incident Stress Debriefing services are also available statewide to EMS and other public safety providers to help them deal with the stresses associated with working at a mass casualty scene.

A cabinet level action group has been formed to deal with the law enforcement issues related to juvenile justice. The group, chaired by the Attorney General, includes representatives from eight departments of state government.

Department of Community Affairs

The Division on Aging in the Department of Community Affairs does not fund direct health services, but is interested in health promotion focused on the elderly (e.g., senior nutrition sites funded by the Division on Aging are often used as locations for health promotion programming, the Division is sponsoring a conference on health promotion for the Hispanic elderly, special health promotion interests include preventing falls and the roles of exercise and good nutrition in assuring the overall health of the elderly).

The Division on Women in the Department of Community Affairs was "established by statute in 1974 to serve as state government's central permanent agency for the coordination of programs and services for women." Among the toll-free, 24-hour telephone hotlines which the Division sponsors is a Domestic Violence Hotline (1-800-572-SAFE) which provides both crisis and information services. The hotline is bilingual (English and Spanish) and is accessible to the hearing-impaired through a TDD connection. The Division has been a major participant in initiatives dealing with domestic violence prevention, including working to pass the Prevention of Domestic Violence Act of 1990. The domestic violence prevention program has conducted an extensive public education campaign and trained thousands of law enforcement, medical and other professionals.

The Ombudsman for the Institutionalized Elderly in, but not of, the Department of Community Affairs promotes, advocates, and insures the quality of care and life experienced by elderly patients, residents, or clients within facilities or institutions, public or private, which offer health or health-related services for the institutionalized elderly; and investigates reports of suspected abuse or exploitation.

Department of Education

Department of Education rules (N.J.A.C. 6:29-4) set general requirements for school health education offerings. School districts develop their own policies on which topics are taught in which grades and what the courses will include and are not expected to cover all topics each year. Topics related to injury prevention include accident prevention and safety, community and environmental health, substance abuse and control, and risk behavior. For instance, elementary level offerings often include bicycle safety, pedestrian safety, and home safety. High school programs include driver education, first aid and CPR. The Department has developed curriculum guides for some, but not all, subject areas. The Department of Education is also addressing the growing youth violence epidemic through schoolbased programs to prevent handgun violence, specifically the Straight Talk About Risks (STAR) program being implemented in 28 middle schools.

Department of Labor

The Department of Labor targets occupational injuries and illnesses which occur to the workers in the state. It compiles data on closed Workers' Compensation cases of all types, and in the case of the public sector, also uses the Employer's First Report of Accidental Injury or Occupational Disease forms as a source of information. Those data show that injuries and illnesses inflict a substantial toll on the working population of New Jersey.

Private and Civic Injury Prevention and Control Efforts

New Jersey has a number of private initiatives to prevent injuries. The National SAFE KIDS Campaign, a long-term effort to prevent childhood injury through grassroots prevention campaigns, has an active program in our state through the New Jersey SAFE KIDS coalition. The New Jersey State Safety Council and Children's Hospital of New Jersey are the lead organizations for the campaign in New Jersey. Many organizations around the state, such as county Associations for Retarded Citizens, the St. Barnabas Burn Foundation, the National Burn Victim Foundation, fire departments, police departments, day care and preschool centers, and hospitals, as well as state governmental organizations, participate. Child Health Month is another multi-agency effort including a wide range of state, county and local public, private, and not-for-profit groups.

The Association for Children of New Jersey is an independent, nonprofit child advocacy organization which seeks to be a voice for children and families throughout New Jersey on a wide range of issues affecting them, including health and safety. The New Jersey Head Injury Association provides educational programs related to head injury prevention and a helpline for persons with traumatic brain injury and their families. The Emergency Medical Services for Children Coalition was formed to act as an advocacy group for children's place in the EMS system. The coalition was the primary impetus behind S.408, the EMS for Children legislation which passed both the Senate and the Assembly and was signed in law by Governor Florio on Sept. 10, 1992.

The New Jersey State Safety Council, a private organization supported almost entirely by business and industry, works to prevent injuries on the job, on the highways and at home. Programs "assist employers in maintaining a safe and healthy work environment, protect the family from hazards in and around the home, promote bicycle and pedestrian safety—especially for children and senior citizens, improve occupant crash protection, and train both professionals and volunteers in all aspects of safety, from prevention and program administration to improved techniques in firefighting, law enforcement and defensive driving."

Several coalitions, such as the New Jersey Coalition for Prevention of Developmental Disabilities and the Healthy Mothers/Healthy Babies Coalition, are also interested in injury prevention. Civic and service organizations (e.g., Kiwanis and various Junior League organizations) often have children's issues, including injury prevention, as special focuses. The American Red Cross has an extensive involvement with safety programs of all kinds (e.g., swimming lessons, first aid, CPR). The American Heart Association is another source of CPR education. Youth groups, such as the Girl Scouts, Boy Scouts, and Camp Fire Girls and Boys, include safety and injury control activities within their programming. School parent-teacher organizations and church-related service groups often participate in activities or sponsor educational and/or prevention campaigns about injury control.

Several groups for older citizens, such as the American Association for Retired Persons, have injury prevention programs. Seniors Count, an Englewood, NJ group, is the first counseling program in the state, and possibly in the country, to address drug and alcohol problems in older adults.

Preventing Youth Violence

In addition to the efforts of the various departments of state government (mentioned earlier) to prevent youth violence, the medical community is also responding to this growing public health problem. The University of Medicine and Dentistry of New Jersey (UMDNJ), through support from the Robert Wood Johnson Foundation, is expanding its Social Problem Solving Program in communities such as Newark and Asbury Park. The UMDNJ Prevention Center is developing a Saturday program that emphasizes self-awareness, group pride, social problem solving, and stress and anger management in inner-city communities. Efforts, such as the Young Father's program at UMDNJ in Newark, aim to prevent violent behavior among high-risk youth. The Pediatric Rehabilitation unit in the Department of Physical Medical and Rehabilitation at Cooper Hospital/University Medical Center, Camden, has initiated research on pediatric gunshot injuries.

Several community coalitions and organizations throughout New Jersey, particularly in the African-American and Latino communities, are responding to the need for youth development programs. Newark Fighting Back and the Perth Amboy Partnership for Youth are two examples of community mobilizing efforts to combat problems with drugs, as well as addressing interpersonal violence and crime in general. Mentoring programs are increasingly being sponsored by the corporate community, church groups (e.g., the North Jersey Committee of Black Churchmen), and civic groups.

Hotlines and Self-Help Groups

There are numerous hotlines for persons to talk about or seek assistance related to suicide prevention. Inpatient and outpatient programs (e.g., at hospitals, clinics, and counseling services) provide treatment for those who have threatened or attempted suicide.

Self-Help groups should not be overlooked as a local injury prevention advocacy resource. Many groups can support people in crisis (e.g., those with domestic violence issues or rape victims). Others can lend a source of manpower to prevention campaigns, usually those surrounding their area of interest. Overall, self-help groups provide a caring "family" within the community, while at the same time emphasizing self-reliance as they face similar difficult life situations together. Because self-help groups can assist in coping with a stressful situation, thus helping to relieve some of the stress, they can help to prevent further illness and distress. In New Jersey, self-help groups exist for those with disabilities (e.g., amputations, burns, blindness, hearing impairments, head injury, learning disabilities, mental retardation, physically disabled), people facing bereavement (e.g., loss of a child or spouse, loss of someone through suicide), addictions/dependencies (a key factor in many injuries), mental health (assistance in working through problems or dealing with family problems associated with mental illness), parenting/family (including parenting disabled children, parenting adolescents, marriage/family issues), physical and emotional abuse (e.g., child, spouse), and crime victims. Other special interest groups which exist include Mothers Against Drunk Driving, the New Jersey Victims Coalition, and Parents of Murdered Children.

Historical Perspective: Emergency Medical Services (EMS) System Response

National Perspective

When primary and secondary prevention efforts fail and people become victims of either intentional or unintentional injury, they enter the state's emergency medical services system. For the purpose of this plan, emergency medical services are defined as services utilized in responding to an individual's perceived need for immediate medical care to prevent death or aggravation of physiological or psychological illness or injury.

The importance of developing a coordinated, integrated system of appropriate manpower, facilities and equipment to provide emergency medical care to those who are seriously ill or injured has been recognized for over 25 years. The landmark 1966 National Academy of Sciences report, **Accidental Death and Disability: The Neglected Disease of Modern Society,** documented the needless loss of life resulting from inadequate or unavailable emergency medical care. Also in 1966, the National Highway Safety Act authorized the Department of Transportation to provide funds for ambulances, communications, training programs, and statewide planning. This initiative began major development of local and state basic life support systems around the country.

The Department of Health, Education and Welfare allocated funding to seven statewide, regional and local EMS system demonstration projects in 1972. The federal Emergency Medical Services Systems Act was passed in 1973 (P.L. 93-154). The Act defined EMS as "a system which provides for the arrangement of personnel, facilities, and equipment for the effective and coordinated delivery in an appropriate geographical area of health care services under emergency conditions (occurring either as a result of the patient's condition or of natural disasters or similar situations)." By 1978, 304 EMS regions had been identified across the nation.

From the start, emergency medical care programs were urged to use a systems approach for providing emergency response and medical care. The approach (first publicized in the 1970s) centered around 15 systems components and seven critical care patient groups. The 15 components were: manpower, training, communications, transportation, facilities, critical care units, public safety agencies, consumer participation, access to care, patient transfer, coordinated patient recordkeeping, public information and education, review and evaluation, disaster planning, and mutual aid. The seven critical patient groups were: trauma victims, burn victims, spinal cord injury victims, poisoning victims, acute cardiac victims, high risk infants, and behavioral emergencies (alcohol, drug, psychiatric, and related victims). Emphasis was also given to regionalization, medical control, facility categorization, treatment protocols, and long-term EMS system stability. Although the 15 components have been modified somewhat over time, expanding and contracting as new concerns arise (e.g., current emphasis on the care of pediatric patients) and older ones appear to be adequately addressed, they still serve as the background for EMS system development.

The National Academy of Sciences-National Research Council issued a report, **Emergency Medical Services at Midpassage,** in 1978. The report examined the status of EMS in the United States and noted the promulgation of standards by federal agencies and professional groups. Emergency medicine was recognized as a new area of practice by the American Medical Association in 1970. In 1979, the American Board of Medical Specialties designated "emergency medicine" as its twenty-third medical specialty, making emergency medicine a recognized component of the whole medical care system. In addition to established professional groups recognizing the importance of emergency medical services, new groups were formed to take an active role in EMS. These included the American Trauma Society, the American College of Emergency Physicians, the Emergency Nurses Association, and the National Association of Emergency Medical Technicians.

New Jersey Perspective

New Jersey has a long EMS history. The New Jersey State First Aid Council, the largest organization of volunteer basic life support services in the state, has been in existence for nearly 60 years.

In 1967, the Commissioner of Health established the Office of Emergency Medical Services (OEMS). Through the years, this office has sought to develop a quality, cost-effective EMS system in New Jersey. In the late 1970s, seven critical care task forces were created to review the status of special areas of the system and to make recommendations for the future. These task forces on trauma, burn care, spinal cord and head injury, cardiac care, poison control, behavioral emergencies, and neonatology/perinatology coincided with the seven critical care patient groups identified earlier by the U.S. Department of Health, Education and Welfare's Division of Emergency Medical Services as focal points for EMS system development.

The Governor's Council on Emergency Medical Services was created in 1986. The Council's 33 members, representing a broad spectrum of viewpoints and expertise, presented its final report in November 1988. That report contained 35 recommendations which offered directions for developing and implementing an EMS system that would be among the best in the nation. Many of the recommendations either directly or indirectly impact upon the delivery of appropriate care to victims of intentional and unintentional injury.

The Emergency Medical Services Interim Committee was formed by a Commissioner's Executive Order in December 1989. The Interim Committee was charged with the task of reporting to the incoming Commissioner the status of issues and recommendations regarding future development and implementation of the state's EMS system, using the final recommendations of the Governor's EMS Council. The Committee:

- —recommended that a permanent statewide EMS Council be developed
- —identified additional EMS issues (stable funding for EMS, hospital diversion, and heavy rescue and extrication training) for future discussion
- —discussed the need to specifically address the pediatric component of the state's EMS system
- —recommended creation of a state trauma advisory group to aid in the development of New Jersey's "trauma system."

Emergency medical services are provided at the scene of an accident or illness, during transport to definitive care, in hospital emergency departments, and in hospital inpatient, specialty and critical care units. The existence of a well-organized and effective EMS system is critical to the developmental of systematic care for those who are severely injured, even though truma accounts for only 10-15% of EMS activity. The National Highway Traffic Safety Administration defines a trauma care system as "a system of health care delivery [that combines] prehospital EMS resources and hospital resources to optimize the care, and, therefore, the outcome of traumatically injured patients." The trauma care system is, therefore, only one of several elements included in an effective EMS system, but it cannot operate well unless the entire system is working correctly.

Trauma

Appropriate trauma care requires prompt attention in the field to the victim's airway, any external bleeding, and possible spinal cord injury. And, while it is important to receive proper basic and advanced life support field care, most traumatic injuries require prompt transport to an appropriately staffed and equipped hospital. In fact, this importance has been underscored in the concept of "The Golden Hour," wherein severely injured trauma victims are treated in the field, transported to the appropriate hospital (i.e., a trauma center), and arrive in surgery within an hour. These individuals have a better rate of survival and a quicker recovery than victims whose definitive care was delayed.

Trauma Centers

In October 1981, the first trauma centers were designated in New Jersey. College Hospital (now University Hospital) in Newark and Cooper Medical Center (now Cooper Hospital/University Medical Center) received demonstration status as Level I Trauma Centers. Over the years, individual hospitals and various task forces questioned the need for or made recommendations about additional trauma centers. Certificate-of-need regulations adopted in February 1990 (N.J.A.C. 8:33P) set criteria for designation as a Level I or Level II Trauma Center and set deadlines for submission of applications. This process led to the designation of an additional Level I Trauma Center at Robert Wood Johnson University Hospital and the reconfirmation of University Hospital and Cooper Hospital/University Medical Center. Five Level II Trauma Centers were also named: Hackensack Medical Center, Morristown Memorial Hospital, St. Joseph's Hospital and Medical Center, Jersey Shore Medical Center, and Atlantic City Medical Center (Exhibit 14).

Under the rules of the New Jersey Health Department, both Level I and Level II Trauma Centers must have an organized trauma service, including staff with special training and expertise. Specific surgical specialties and services, such as orthopedic and neurologic must be available, as well as non-surgical specialties, such as emergency medicine and anesthesiology. There must be special capabilities and/or facilities and resources in the emergency department, operating rooms, trauma

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AEROMEDICAL / TRAUMA CENTERS

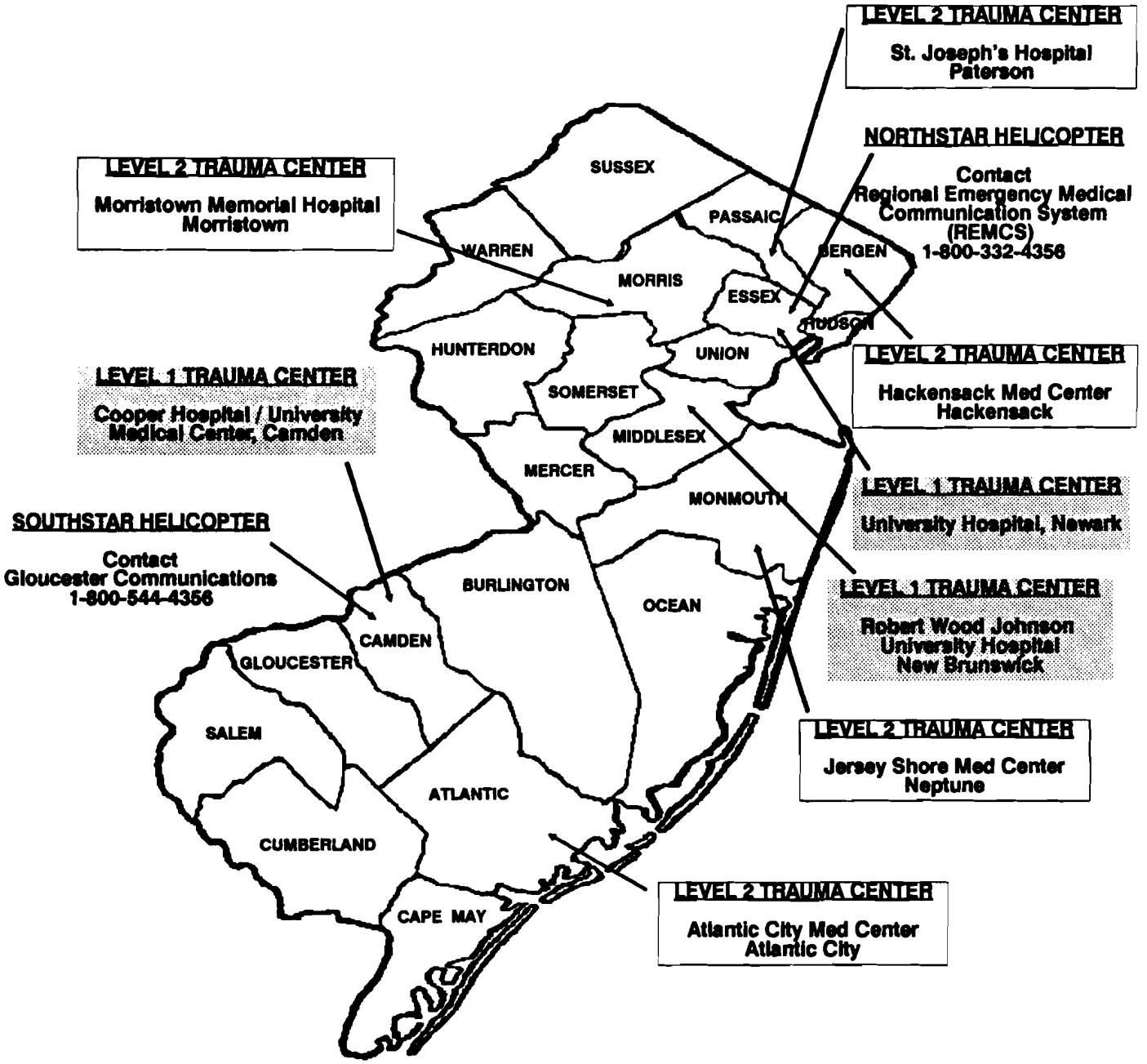


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intensive care unit, laboratory, acute hemodialysis, and radiology. There must be organized plans to care for patients with burns, spinal cord injuries, and head injuries. Plans must be made for rehabilitation and for social services. Whether these items are "essential" inhouse, "promptly available," or "on-call" varies by the type of capability being discussed and whether the trauma center is designated as Level I or Level II. Level I centers also have regional coordination and research responsibilities.

A trauma decision scheme helps field personnel decide whether patients should be taken to a trauma center or whether their injuries can be treated appropriately in a local community hospital. Chief among indicators that the patient should go to a trauma center are a Glasgow Coma Score below 13 (the Score is a field measure of trauma severity), a systolic blood pressure less than 90, or a respiratory rate less than 10 or over 29. Particular injuries, such as penetrating injuries to the chest, abdomen, neck or groin; paralysis; injuries sustained in a crash with a speed of 20 miles per hour and a 30-inch deformity of the vehicle; ejection of the victim from a motor vehicle; a death of a same car occupant; entrapment during a motor vehicle crash; and pedestrians hit by a vehicle traveling at 20 miles per hour or more, indicate the patient should be taken to a trauma center.

A trauma registry is an important part of assuring that quality trauma care is being delivered. N.J.A.C. 8:33P requires the Level I and Level II Trauma Centers to have an organized quality assurance program, including a registry of "all major trauma admissions with pertinent treatment and outcome data, as determined by the New Jersey State Department of Health, Office of Emergency Medical Services." The Office of Emergency Medical Services (OEMS) is currently working with the trauma centers to finalize a statewide trauma data collection process. This data will not only assist OEMS in monitoring the work of the trauma centers, but aggregated data can be made available for studies related to injury surveillance.

Trauma prevention programs are also in place in various parts of the state. These include the Traumasaur Program (offered by Cooper Hospital/University Medical Center) and Tommy Trauma (offered by the American Trauma Society), as well as programs of various public and private agencies.

Advanced Life Support Trauma Care Services

The State's aeromedical helicopter system, a joint project between the Department of Health and the New Jersey State Police, is available to treat and transport victims of trauma. The service provides both on-scene landings and interhospital transfers in Sikorsky S76-A helicopters which have been specially configured for aeromedical use. In addition to the two State Police pilots, the crew consists of two flight paramedics and/or flight nurses who have been specifically trained to work in the aeromedical environment. The training of the crews has been heavily oriented toward treating trauma and most of the patients who have used the helicopter have been trauma victims although other patients can be accommodated, however. The helicopters operate 16 hours a day, flying at speeds up to 175 miles per hour. The availability of advanced level onscene care and the speed of the helicopters increases patients' chances of survival.

The State's mobile intensive care units (MICUs) also play a vital role in caring for trauma patients. Staffed by specially trained paramedics and/or mobile intensive care nurses, MICU service is available statewide (expect for a small part of Warren County). MICU staff are skilled in advanced life support procedures, such as cardiac monitoring, cardiac defibrillation, telemetered electrocardiography, administration of antiarrhythmic agents, intravenous therapy, administration of specific medications, drugs, and solutions, use of adjunctive ventilation devices, and trauma care. In 1991, the MICUs treated over 105,000 patients, about 10% of whom were trauma victims. There are 33 MICU programs, operating 71 vehicles (Exhibit 15).

Burn Care

There are no State-designated "burn centers" in New Jersey. St. Barnabas Medical Center was approved by the Department of Health to operate a "burn unit" in 1976. Specialized burn care services are allegedly being provided at other hospitals; these may be subject to certificate-of-need requirements, although no other institution has received certificate-of-need approval to operate a "burn unit." Many local hospitals are capable of treating patients with mild to moderate burns. Such care does not require a certificate-of-need, if specialty burn care claims are not made and seriously burned patients are transferred appropriately. There is a group of Pennsylvania burn facilities (St. Agnes Hospitals and Crozer-Chester Medical Center—Delaware Valley Burn Foundation) which often serves seriously burned patients from southern New Jersey; patients also travel to New York City.

Current trauma triage protocols note that it is inappropriate to take burned patients with multiple trauma directly to St. Barnabas. These patients should be taken first to a trauma center. However, patients with burns covering greater than 20% body surface and whose trauma injuries are less severe should go to St. Barnabas or to a trauma center, whichever is closer. The emergency medical services trauma registry being developed will include data on burn victims taken to member hospitals in the trauma system.

Nationally recognized standards for specialized burn care are the "Guidelines for Development and Operation of Burn Centers" which were developed by the Committee on Organization and Delivery of Burn Care and accepted by the American Burn Association (ABA) in 1988.

A related issue is hyperbaric oxygen treatment. Now, out-of-state facilities are used when necessary, although an in-state facility is being discussed. Hyperbaric facilities are useful in treating burns, smoke inhalation, certain infections and "the bends" (a diving-related condition).

Spinal Cord Injury (SCI) Care

Trauma center care is appropriate for every individual with spinal cord injuries (SCI), because such injuries often occur in conjunction with multiple trauma. SCI patients should be transferred as quickly as possible (once life threatening conditions have been stabilized) to appropriate rehabilitation facilities. All designated trauma centers, as a condition of designation, must have transfer agreements with licensed rehabilitation facilities. The goal of SCI care is to achieve the maximum physical, emotional, psychosocial, and vocational potential of the injured individual.

The University of Medicine and Dentistry-New Jersey Medical School and Kessler Institute for Rehabilitation comprise the Northern New Jersey Spinal Cord Injury System (NNJSCIS). NNJSCIS is one of only 13 federally designated Model Spinal Cord Injury Systems in the country, and the only system in New Jersey. The system was funded in September 1991 for five years by the National Institute on Disability and Rehabilitation Research. A "model system" combines the efforts of an acute care hospital (University Hospital) and a rehabilitation hospital (Kessler) to assure that spinal cord injury survivors receive continuity of care. Quality care begins at the scene of the injury and continues through acute care and rehabilitation to re-integration into the community. The model system provides: spinal cord injury expertise, a ventilator dependent quadriplegia program, early transfer from acute care to rehabilitation, prevention of secondary complications through daily care by an SCI team, support groups, peer counseling, work monitoring and home programs, a comprehensive educational program for patients and families, and a public awareness/SCI prevention program. The system is designed to provide optimal care for SCI patients, while at the same time controlling costs.

A Spinal Cord Injury Early Notification System has existed in New Jersey for approximately seven years. It began as a joint project between the Department of Health's Office of Emergency Medical Services and the Kessler Institute for Rehabilitation, under a one year federal grant. When the grant ended, Kessler continued the spinal cord injury registry on a voluntary basis. Approximately 150 SCI patients are reported to the registry each year; estimates are that this represents about 75-90% of the spinal cord injuries occurring in New Jersey. Data are collected on the type of injury, initial deficit, nature of injury, the name of the reporting hospital and the patient's name. Data are aggregated for semi-annual reports. Through a cooperative agreement, New Jersey patients treated out-of-State at Thomas Jefferson University Hospital/Magee Rehabilitation in Pennsylvania are also entered into the system. Once a mandated statewide trauma registry mechanism has been developed, data from the spinal cord injury registry will be merged with it.

Head Injury Care

Treatment of traumatic brain injury (TBI) varies according to the severity and type of injury. Triage criteria for trauma center care include paralysis, coma, penetrating trauma to the head, ejection from a vehicle, or being thrown from a bicycle or motorcycle. A complicating factor is that some victims of head injury may also have spinal cord injury and/or multiple system trauma as well. All of the designated trauma centers are capable of caring for head injured patients. Less severe head injury cases may be treated in local hospitals, although there is a great deal of unpredictability associated with brain injury outcomes.

The Eastern Traumatic Brain Injury Network (TBI-NET) links the resources of 10 organizations in New York, New Jersey and Connecticut

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MOBILE INTENSIVE CARE UNITS

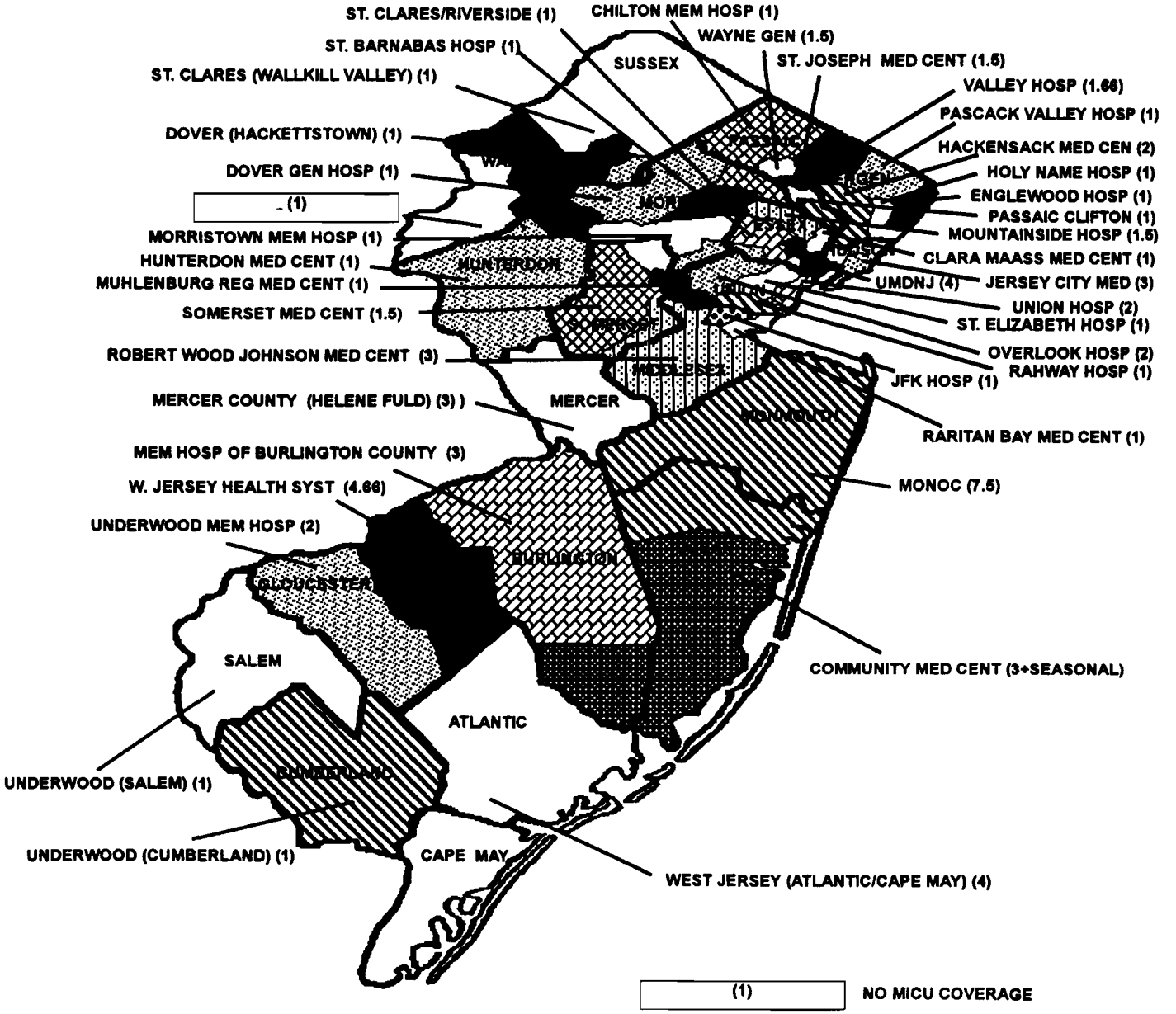


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with each other and with the vocational rehabilitation agency in each of the three states and Puerto Rico. It is one of four Regional Traumatic Brain Injury Rehabilitation and Prevention Centers nationwide which are funded by the federal government. Eastern TBI-NET is a regional system of care and a regional resource center for individuals with TBI.

The New Jersey Head Injury Association, mentioned earlier, provides educational programs and suppport for victims of traumatic brain injury and their families.

Poisoning Control

Regional poison control centers have been proven effective in reducing emergency department visits for suspected poisoning. Several studies have shown that regional centers also provide better poison information than nonregional centers. New Jersey has had such a center since February 1983. Pursuant to N.J.S.A. 26:2-121, the Commissioner of Health was authorized to establish a statewide program of poison control and drug information. This became the New Jersey Poison Information and Education System (NJPIES). The system is available around-the-clock to poisoned or poison-exposed individuals. NJPIES is a member of the American Association of Poison Control Centers.

Present poison-related functions include poison center activities, educational programs for health care professionals and the public, research, and drug information. Additionally, NJPIES is involved with lead poison education and treatment, including involvement in a compassionate-study protocol for a new oral chelator for treating lead poisoning.

The New Jersey Poison Information and Education System has handled over a half-million telephone calls and distributed over a million pieces of educational material, since its inception. In 1991, poison-related call volume was nearly 75,000 calls. Children under five years of age represented the largest group of victims (slightly over 50%). Most of these were as a result of the child placing objects and substances into his/her mouth. Fortunately, children usually took a sip, bite or lick of the substance and seldom took a sufficient amount to cause serious toxicity. By and large, these are the most easily preventable ingestions (using cabinet safety locks, child-resistant closures, supervising children at play); syrup of ipecac should also be kept in the home and the NJPIES telephone sticker (1-800-962-1253) should be on each telephone.

NJPIES found the following types of products involved in all 1991 poisonings and overdoses reported to it: medications (37.9%), home products (37.8%), industrial products (12.3%), food (4.2%), and "other" (7.8%). Less than 2% of the victims suffered major complications or died as the result of their reported poisoning. Adults died primarily as a result of suicide or drug abuse. Nearly 30% of reported victims suffered either no ill effect or only minor symptoms.

All New Jersey hospitals are now part of the poison prevention and treatment system through a membership fee which is part of each hospital's reimbursement rate. All can participate in educational seminars and receive literature. As always, telephone therapeutic advice (and sometimes on-site assistance) is available to health care professoinals to enable them to appropriately treat poisoning victims.

Delivery of Prehospital Care

There are a number of issues which impact the delivery of emergency medical services care in New Jersey.

Personnel Training Standards

The Office of Emergency Medical Services is the certifying agency for personnel trained following the U.S. Department of Transportation courses for First Responders, Emergency Medical Technician-Ambulance, and Emergency Medical Technician-Paramedic. Further, OEMS has a certifying mechanism for flight paramedics and flight nurses. Individual hospitals set standards for physicians and nurses practicing in the emergency department; however, OEMS strongly recommends that these persons have Advanced Cardiac Life Support training and other specialty training. The Department of Health sets standards of training for certain levels of prehospital EMS providers working on regulated basic life support and advanced life support services. Volunteer basic life support services are exempted by law from regulation. While the New Jersey State First Aid Council sets standards for its members, these are voluntary standards; the highest consequence is expulsion from the Council. For those not affiliated with the Council there is no higher oversight group or consequence for failure to meet standards or to provide quality care.

Standards for EMS Services

OEMS licenses proprietary, municipal, and hospital-based basic life support ambulances and invalid coaches. Licensing standards include criteria for equipment and supplies carried on the vehicles. There are approximately 190 potentially licensable providers who operate around 850 vehicles of these types. The volunteer basic life support first aid and rescue squads are exempt from regulation by law. Of the approximately 600 local volunteer EMS agencies, about 80% are members of the New Jersey State First Aid Council; the Council does have minimum standards for its members. However, the remaining volunteer services which are "non-affiliated" are not overseen by any outside agency.

EMS Run Forms

The regulated basic life support services must collect a minimum set of data, which is spelled out in N.J.A.C. 8:40, but there is no requirement to send this information (either by individual patient or aggregated) to the OEMS. Run forms may be reviewed during provider inspections by OEMS. Many of the volunteer squads also have run reports. Most often a copy is given to the emergency department staff at the receiving hospital and a copy is kept by the service. Again, there is no requirement to report specific data. The mobile intensive care programs must keep a minimum data set and report aggregated data to OEMS quarterly; this form has recently been revised. MICU run reports (and their accompanying audiotapes) are audited periodically by OEMS. MICU data show that trauma cases are about 10% of their runs.

Timely Response

A timely response by appropriate prehospital personnel is essential to good patient care in the field. However, it appears that volunteer services are finding it increasingly difficult to man vehicles during the day. There are many reasons for this, including more people working outside their communities and the need for both husband and wife to work. Some communities have attempted to address the situation by hiring paid daytime personnel to supplement to volunteers; the services then are manned by volunteers in the evening and on weekends. Other communities have mutual aid with surrounding areas; when a local ambulance cannot respond, a neighboring one is called. However, this can lead to delays of up to 15 minutes in putting a vehicle on the road. In urban areas, the paid services which serve most of New Jersey's cities are often overtaxed. This leads to delays in responding to some calls. Mobile intensive care services do have backup agreements with neighboring services.

Critical Care Transport Arrangements

There is no systematic approach to interhospital transfers of critically ill or injured persons. Transports are made to the best of everyone's ability, but they are limited by the constraints of the existing system. The limited availability of volunteer EMS services during the daytime means that these services are reluctant to leave their communities without "street EMS" in order to accept a transfer run. There are provisions within the basic life support ambulance rules (N.J.A.C. 8:40) for regulated vehicles to be used for interhospital transports. However, the staffing requirements mandate that appropriate hospital staff supplement the basic life support EMT crew. Hospitals are often reluctant to have staff leave the facility, since their absence may leave the facility shorthanded. Paramedics may be used as transport crew members, providing the transport is associated with a mobile intensive care program. However, most MICU vehicles are response units, not transport vehicles. Sometimes the aeromedical helicopter service is used for transfers, but this is quite expensive and is not appropriate for transferring the majority of stable patients. This means that many patients, who should have been transferred to a specialty center, are not transferred; this means they may have poorer outcomes or be hospitalized for longer periods.

Rescue Services

There are no present standards for "rescue services." These services help to extricate persons who are entrapped (e.g., in automobile crashes, cave-ins); most of these persons have traumatic injuries. Rescue services vary by community. Some services may have limited rescue capability, others may have a fully equipped rescue vehicle. However, training in use of the equipment is given locally and there is no uniformity. Therefore, someone needing rescue service may receive a widely divergent type of care, depending on where he or she is.

Communications/Access

Until the victim or a witness can access the EMS system, appropriate help cannot be sent. Until recently, most local communities had several

different numbers for police, fire and ambulance and these numbers were different from community to community. Legislation to implement a statewide enhanced 9-1-1 telephone system became effective in 1989. Counties are in the process of implementing their systems. Gloucester and Cape May are already online and the remainder should be operational by 1993. E-911 provides for a centralized dispatching point and can also identify the caller's telephone number and location so that help can be sent even if the person cannot stay on the line, is confused, or becomes unable to speak.

Radio communications are a problem in New Jersey between ambulances and hospitals and between mobile intensive care units and their medical control points. There are only 10 UHF MED channels (8 for telemetry and 2 for dispatch/business) which must be used by all 33 MICU programs. These same frequencies are also used by advanced life support services in neighboring states. This leads to proliferation of services on the channels and to "crowding." To partially alleviate the crowding problem for mobile intensive care programs, eight MICU communications centers have been formed; these centers assign frequencies to MICUs in their areas. However, ambulances are not the only services using the VHF "emergency services" frequencies; non-emergency services, such as school buses, are also assigned to use the same frequencies by the Federal Communications Commission (FCC). There is a national movement to identify frequencies which will be reserved specifically for EMS. But, changing to other frequencies may mean that replacement radios or different radio crystals might be required to modify existing communications systems. In the future, new technologies should enable EMS to have interference-free, dedicated frequencies. The use of cellular telephones for some EMS uses also seems promising.

Facility Care

When discussing the emergency medical services system as a whole, there are a number of issues that should be considered.

Hospital and Emergency Department Capabilities

Emergency care is becoming more sophisticated and hospitals are moving more and more into specialization. No longer is "a hospital a hospital." Taking a patient to the closest hospital in an emergency could lead to needless delays in reaching appropriate definitive care. Specialty centers for trauma and burns already exist. Some hospitals have been building competency in particular specialty areas. Information regarding services provided by individual hospitals needs to be generally known.

Urgent Care Centers

Freestanding urgent care centers offer neighborhood care for minor illnesses or injuries which do not require the full range of services offered by a hospital emergency department. In most cases, they offer a viable alternative to such care and serve an important function in the emergency medical services and ambulatory care systems. However, in addition to the issue of whether these centers negatively affect the patient volume in nearby emergency departments (thus raising the cost of delivering care in the emergency department) is the important issue of quality of service offered by the urgent care centers. There are no current standards for these facilities. A related issue is whether these centers may pose some level of threat to public safety, especially if they misrepresent their capabilities and routinely agree to treat the more emergent patient (e.g., multiple trauma or heart attack).

Impact of Managed Care

Managed care plans, such as Health Maintenance Organizations (HMOs), have helped to deliver high quality health care at a reasonable cost to subscribers. Most such plans also emphasize prevention of illness and unintentional injuries and "wellness." However, some HMOs have policies that subscribers need special clearance from their primary physician or the plan before initiating treatment. In an extreme emergency (e.g., heart attack, stroke, major trauma), delaying care in order to obtain clearance can be detrimental to the patient's wellbeing and may well increase the costs of medical care. These people need to be taken to definitive medical care immediately.

Rehabilitation Facilities

Rehabilitation of injured patients should begin as soon as the patient arrives in the emergency department. There are a number of rehabilitation facilities in New Jersey which can provide appropriate resources; however, home care and residential services are not nearly enough to meet the demand. In addition, insurors may not cover rehabilitative services to the degree required for home maintenance. The emergency medical services trauma registry being developed will include data on head injured patients taken to member hospitals in the trauma system, but not discharged home. Kessler is one facility providing definitive spinal cord injury rehabilitation. Childrens Specialized Hospital in Mountainside also provides comprehensive rehabilitative services for children.

Services for Special Needs Populations

New Jersey has a number of special needs populations, including children, the elderly, handicapped individuals, and minorities. Any injury prevention program or plan to treat injuries and trauma must take their special needs into consideration.

Pediatric EMS

Pediatric emergency medical services are presently provided in a fragmented fashion in New Jersey. The problem has been recognized for several years (including recommendations made in 1988 by the Governor's Council on Emergency Medical Services). New Jersey recently received a two-year, $500,000 award from the federal Department of Health and Human Services' Maternal and Child Health Bureau. The grant will enable the state to begin to develop a coordinated EMS response to ill and injured children. New Jersey joins 26 other states which now have, or formerly had, funding; together they form a nationwide Emergency Medical Services for Children network. The Office of Emergency Medical Services will coordinate statewide efforts under the grant. Portions of the grant will also be used to train EMS providers to better care for children, to develop standards for pediatric emergency care in the field and in hospital emergency departments, and to emphasize injury prevention through educational programs on seatbelt and carseat use and the use of bicycle helmets. The recent enactment of S.408, the EMS for Children legislation, as P.L. 1992, c.96 will help to ensure these and other activities will continue once federal funding expires. New Jersey is the first state in the nation to legislatively create a comprehensive EMS program for children.

The Elderly

The number of elderly New Jerseyans is growing each year. Additionally, New Jersey is becoming a major retirement destination and "adult communities" are springing up around the state, particularly in Monmouth and Ocean Counties. However, most counties and larger municipalities have "senior citizen complexes" and retirement high rises or villages. The EMS system must learn to deal with the impact of large numbers of elderly persons in its service area, as well as the increased risk of heart problems, falls and other trauma at home, and burns which this population represents.

Special Needs of the Disabled

Local EMS agencies need to work with physically and developmentally disabled individuals and groups representing these individuals to identify their special EMS needs. Some communities have begun EMS registries of residents with special health problems. Others have taught parents of handicapped children how to access the EMS system. As Enhanced 9-1-1 is implemented across the State, provisions should be made for installing TTY access for the deaf and hearing disabled.

Minority Access

New Jersey has a racially/ethnically, culturally, and linguistically diverse population. Because of this diversity, perceptions about emergency services needs may vary on the part of both the providers of services and the recipients. Research should be undertaken to ensure that minorities receive comparable response times, care, and transport to definitive care as nonminorities. As an example, a 1987 study (using 1985 data; 2,169 incidences; 2,124 with racial information) of cardiac arrest survival rates showed that blacks were slightly underrepresented in the survey population of those suffering cardiac arrest (12.5% of the state's population and 10.4% of the survey patients). Blacks did significantly worse than whites in survival to hospital admission following a cardiac arrest (11.4% and 19.7% respectively). But, for cases for which there was discharge information, the survival to discharge rate for blacks was not significantly different from that of whites (17.2% versus 17.6% respectively). Further research would be needed to ascertain the source of these types of differences.

Some efforts are already being made to assure access for linguistic minorities. For instance, although the call volume into the New Jersey Poison Information and Education System from each county in the state is in direct proportion to the county's population density, it appears that there is a slight underutilization of services from primarily Spanish-speaking areas. To counteract the possible influence of language, NJPIES has increased its Spanish-speaking staff and will be aggressively promot-

ing its services in Spanish-speaking areas. NJPIES also subscribes to the AT&T Language Line which provides speakers in over 100 different languages and dialects.

V. UNMET NEEDS

Coordination

As described in Section IV, The Existing Health Services Delivery System, which depicts the injury prevention, control and treatment services provided in New Jersey by government, private foundations, industry, and community organizations, each organization delineates its mission, priorities, and plans. However, there is no responsibility or authority for coordinating the injury surveillance, education, prevention, control or treatment efforts statewide. Leadership to bridge the gap between recognizing injury as a problem and planning a program of prevention is lacking.

As Injury Prevention and Control Program needs to be established in the Department of Health to serve as a focus for injury-related activities. This program would work to coordinate injury prevention and control activities throughout the Department of Health and would work with other agencies and organizations concerned with injury. The nucleus for such a program currently exists in the Department's Division of Family Health Services, but needs to be expanded and supported with appropriate resources.

The existing Governor's Council on Prevention of Mental Retardation and Developmental Disabilities, which works with the Office for Prevention of Mental Retardation and Developmental Disabilities (which is associated with the Department of Human Services) and which has an injury control grant from the federal Centers for Disease Control, has an advisory group which contains many organizations with an interest in injury prevention and control. In the interest of not duplicating efforts, such an organization could serve as a forum for injury-related discussion, although we recognize its legislative mandate is limited in scope and the Department of Health has the statutory authority to work to prevent injuries and to oversee services for those who are injured.

Possible activities for the Department of Health's Injury Prevention and Control Program, in collaboration with applicable agencies and groups, may include:

1. Increasing public awareness about the importance of injury as a public health problem in New Jersey so that injury prevention and treatment become public priorities;
2. Developing comprehensive targeted programs to improve parenting skills in order to reduce unintentional injuries to children;
3. Developing training modules for teachers in order that they might recognize abuse and neglect in children, including child sexual abuse;
4. Developing a training program for appropriate identification, diagnosis, reporting and management of child abuse and neglect (including child sexual abuse) for medical and emergency department personnel (note—board certified emergency physicians and certified emergency nurses already have such training);
5. Developing a comprehensive conflict management program aimed toward violence reduction (including fighting, homicide and sexual assault) in children and adolescents (ages 5-14) and containing information educating parents regarding the effects of exposure to TV violence. The Department of Health should collaborate with local coalitions for adolescent intervention, community-based organizations, and churches with input from the Office of Minority Health;
6. Increasing coordination between law enforcement and the public health community regarding the development and implementation of youth violence prevention activities;
7. Developing mechanisms for sharing data collected by the Department of Law and Public Safety with the Department of Health's Injury Prevention and Control program;
8. Expanding injury prevention and control education in the comprehensive school health education curriculum;
9. Developing formal media campaigns broadcasting on prime time, major print media campaigns, targeted campaigns, and other mechanisms on a broad spectrum of safety issues, including the education of parents on child safety issues, use of bicycle helmets, seatbelt restraints, infant seats, safe toys, safe play behaviors, and smoke detectors;
10. Developing educational strategies and community-based interventions to reduce the number of childhood injuries and deaths due to fires;
11. Developing educational interventions to control youthful firesetters;
12. Developing educational modules for young adults on osteoporosis prevention, for the elderly on home safety, and for families and providers providing daily care to the elderly in order to reduce elder abuse;
13. Developing comprehensive training modules for targeted employers (using information from the Department of Labor) on risk reduction for occupational injuries;
14. Reassessing information regarding appropriate suicide prevention strategies, including the Bergenfield model;
15. Developing community intervention strategies to prevent suicide clusters, especially in adolescents, as well as interventions to prevent suicide in the elderly;
16. Disseminating educational programs aimed at reducing the incidence of head and spinal cord injuries (to lower the number of both nonfatal and fatal injuries);
17. Coordinating educational and media campaigns outlined in this chapter with those mentioned in other chapters of the State Health Plan; and
18. Pro-actively seeking Federal and other grant resources.

Prevention of injury is not currently perceived as a public priority in New Jersey. Individual rights and "home rule" interfere with efforts to promote prevention programs. Examples are when a primary seatbelt law or bicycle helmet law is seen as an infringement of individual rights or as an opportunity for police harrassment. Often, results of prevention programs are hard to measure, especially in the short-term and because a myriad of local factors cannot always be controlled. At the present time, there is little money in, or for, prevention. There is a great need to promote individual responsibility, modifications to the environment, and targeted educational programs. Where education appears ineffective, legislation may be needed.

Data Needs

A centralized data collection mechanism does not exist. Data problems include duplicative collection methodologies, inconsistent or incomplete coding systems, lack of race/ethnic specific data, and varying responsible State agencies. While each data collection effort should meet the immediate needs and purposes of the agency collecting the data, the information should be collected in such a manner that it can be shared with others (at least as aggregated information). New Jersey also lacks an integrated data approach which can be applied in the private sector, especially institutions involved in health care services, health care management, and services such as the insurance industry, hospitals, clinics and rehabilitation facilities.

Nationally, Public Law 101-96, an amendment to the Public Health Act, requires all designated trauma centers to collect data on the nature of all injury (N-Codes) and external cause (E-Codes) of injury. How this law will be implemented in New Jersey has not yet been decided, as a methodology still has to be developed. A trauma registry will collect data on all serious trauma (mostly through the hospital system with some input from other segments in the continuum of care). It will not include data on injuries treated in physicians' offices or urgent care centers. The recording and reporting of such information is a necessary step in designing an electronic surveillance system across the state. This system will not only enhance injury research, it will also enhance the quality of data needed for comprehensive health care management.

Currently, fewer than 10% of all New Jersey acute care facilities code the external causes of injury consistently. Like most hospital reporting systems, New Jersey's was designed chiefly for reimbursement purposes and is not readily useful for basic and applied injury research purposes. To develop several registries for a host of injuries would further burden an already taxed health care system. Having multiple information banks invites inaccuracy, redundancy and waste in terms of costs and human resources.

Enhancing existing data collection systems by adding more complete and useful information on inpatient and ambulatory care would be cost beneficial. In the long term, this approach will encourage consistent reporting over time, regardless of normal changes in personnel and policies. It may also be helpful to require that information in medical records for the initial emergency department and trauma center care portions be typed to supplement typed discharge summaries; however, the cost-benefit of having complete, legible records needs to be explored.

Establishing accurate incidence and prevalence figures for injury depends largely on establishing clear inclusionary definitions and guidelines on those elements that constitute a particular medical event or condition,

such as brain and spinal cord injuries. While researchers acknowledge that the responsibility largely rests on federal agencies, such as the U.S. Department of Health and Human Services, to provide clear guidelines, states can facilitate accurate and orderly reporting before such guidelines are instituted by regulating and legislating minimum data requirements. When establishing ongoing systems for reporting incidence of injury, the minimum data set to be used by all New Jersey hospitals should include (1) N-Codes which permit conversion of the International Classification of Diseases (ICD) to the Abbreviated Injury Scale (AIS), and (2) E-Codes which should include two fields: the first for the principle external cause of injury and the second for the locality where the injury occurred, thus providing comprehensive information on which body areas of the patient were affected, how severely the patient was injured (survivability), and in what geographic location the patient sustained the injury.

More definitive analysis of hospital discharge data, including outpatient data (emergency room), is needed. Data from New York, Delaware, and Pennsylvania on injuries to New Jersey residents who are treated in neighboring states are needed. Improved accuracy in reporting the cause of violent deaths is essential.

Intentional Injury

Violence, resulting in intentional injury, needs to be identified as a public health issue regardless of type. Types of violence include (1) injuries committed or sustained in the course of crimes, such as homicides, rapes, robberies, aggravated assaults, burglaries, larcenies, arsons, bias-related crimes, or motor vehicle thefts; (2) injuries committed in the context of the family, such as in domestic violence, child abuse, elder abuse, and sexual abuse; and (3) injuries which are intentionally self-inflicted by the victim, as in the case of poisonings, suicide attempts and suicide. New Jersey State Police estimate that every 24 hours one murder, six rapes, 64 robberies, and 66 aggravated assaults are committed in New Jersey. In addition to the physical injuries inflicted upon these victims of crime, substantial documented psychological damage is also inflicted.

Epidemiologic techniques, surveillance and other data collection systems, the identification of high risk groups, and the development and implementation of preventive strategies need to be applied to injury resulting from interpersonal violence and suicide. Risk factors associated with particular types of violence need to be understood. The use of firearms, the role of alcohol, drugs, and other factors (such as racial discrimination, poverty, self-esteem, and disparities in socioeconomic status) require further study. The factors of poverty and religious, ethnic, racial, or gender bias have been proven to lead to bias or hate crimes. According to the New Jersey State Police, there was a 36% increase in bias incident offenses in 1990, as compared to 1989.

Likewise, more subtle factors (such as child rearing practices, family and group dynamics, and acceptance of violence on television or in the movies) should also be explored. Community-based violence prevention and youth development programs, such as violence prevention counseling, assessment, education, and evaluation should be supported. Parent training, conflict resolution, drug and alcohol prevention, and rehabilitation programs directed at children and youth need to be implemented, monitored, and evaluated.

Collaboration between specialists in the fields of criminal justice, health care, public health, social services, education, and mental health is critical. Surveillance activities must be established to describe the health impact of violence-related injuries. Information regarding monitoring and evaluating ongoing programs that address violence either directly (violence prevention curricula) or indirectly (parenting programs, youth development programs, etc.) should be centralized to allow for information sharing. Interdisciplinary communication and cooperation among agencies involved should be mandatory in order to address all of these issues.

Firearms

According to the **Uniform Crime Report,** many guns recovered by law enforcement officials, following the commission of a violent crime, were originally purchased legally. These guns are usually high quality weapons which are not required to be secured, except to prevent access to minors (P.L. 1991, c.397).

The procedure currently used by police in New Jersey, when investigating a firearms purchase application, requires that the applicant complete and sign a waiver to the right to privacy for a mental health and criminal background check. Although the criminal background investigation is done through a centralized system at the New Jersey State Police and the Federal Bureau of Investigation, the mental health background check is not performed in the same manner. The request for the mental health check is forwarded to the county adjuster, but only for the county where the applicant currently resides, asking for confirmation that the individual has never had a mental health hospitalization. Because the information received applies only to the current county of residence, there is no way to know if the applicant may have been hospitalized elsewhere.

Current State and Federal laws require applicants to be at least 21 years of age in order to purchase a handgun from a federally licensed firearms dealer. However, state law allows a person 18 years old to purchase a handgun from a private individual. The age requirement is frequently circumvented by having a 21-year-old purchase a handgun legally from a dealer and then sell it to an 18-year-old with a purchase permit. State legislation should be amended so that the minimum age to purchase a firearm is 21, regardless of purchase source. Federal legislation should be enacted to require a waiting period, in order to complete a uniform background investigation. The State of New Jersey should support such legislation federally. In the absence of a Federal waiting period, New Jersey should adopt its own.

New Jersey has some of the toughest gun control laws in the country. Under the Graves Act (1982), there are mandatory penalties for use of a firearm during commission of a crime. Two years ago, Governor Florio signed a law to make penalties stronger when the weapon used was an assault weapon. The law also contained provisions to disarm or sell existing assault weapons. There have been repeated efforts to weaken or repeal the assault weapons provisions; the Governor has vetoed the most recent attempt, but efforts are being made to override that veto. The situation must be reviewed, if changes in the law occur.

Licensing and instruction are required for driving a vehicle, but not for firearm licensure. The National Rifle Association currently has a Hunter Safety course which is required for children 14 years old or younger who want to hunt. A similar course should be developed for the initial purchase of a firearm; brochures listing firearm safety and storage procedures should be developed and distributed with each permit and each firearm.

Domestic Violence

Home visiting programs, utilizing Nursing Child Assessment Training (NCAST), need to be included in a comprehensive system of child abuse prevention for "at risk" parents. Parent aid programs should be funded for caregivers of children at risk for maltreatment. Training programs for health care professionals, day care workers, school health specialists and teachers need to be developed for appropriate identification, reporting, and management of potential child abuse, neglect, and child sexual assault/abuse and rape. Worksite policies which may help to reduce child abuse, such as flexible time, parental leave policies, employer-supported child care and workplace-based parent education and support programs should be studied. These innovations offer flexibility and support to parents and help to reduce the tensions and stress associated with parenting.

Protocols for identifying and treating spousal abuse and inter-agency communication and reporting need to be standardized in New Jersey in order to recognize and work with battered women. N.J.S.A. 2C:25-17, the Prevention of Domestic Violence Act, requires that law enforcement officers arrest any spouse or partner suspected of causing an injury due to an act of domestic violence, regardless of whether the victim initiates the complaint. However, legal intervention is not supported by other community resources and is, therefore, unlikely to effect long-term behavioral changes. Legal measures should be tied to educational opportunities, access to family and individual counseling, and other supportive activities which would enable the abuser to change his/her behavior. Support is also needed for the victims of abuse, including temporary shelters and programs to help victims rebuild their lives.

Youth Violence

Significant gaps remain in New Jersey's effort to prevent youth violence and youth violence needs to be recognized as a major public health issue in our state. There is a statewide need to fund multifaceted community level youth violence interventions, including mentorships, conflict resolution, skills training, and recreational activities. Prevention strategies should include early interventions that target children/youth who witness violence and children generally exposed to violence, as well as victims of child abuse. There should be a targeted initiative to address the problem, particularly among African-American, Hispanic/Latino, and Native American/American Indian males. The Department of Health should support efforts to increase training opportunities for health care professionals in identifying, treating and referring youth injured as a

result of violent behavior. The public health community in general should take the lead to strengthen collaboration among government agencies responding to the youth violence epidemic.

Rape and Sexual Assault

Sexual assault/abuse and rape care services (including hotlines, crisis intervention, guidelines for sexually transmitted diseases, HIV/AIDS referrals, counseling, accompaniment to police, court, and hospitals, and prevention education) are available in each of New Jersey's 21 counties. Because of the great demand for services, more resources are needed. Likewise, services need to continue to be targeted to ethnic minority groups, children, the elderly, individuals with developmental or physical disabilities, and victims of date rape. New target populations need to be identified, such as potential victims in youth detention facilities and prisons, where other forms of sexual assault or abuse are known to be prevalent.

The level of training received by volunteer rape counselors needs to be upgraded. Professional staff training courses on post-rape traumatic stress needs to be developed. The services need to be advertised in order to motivate victims to obtain proper medical care and counseling. Additional training in medical evidence gathering and a uniform system for collecting and storing evidence of rape are needed.

Standardized protocols for gathering medical evidence in child and adult sexual victimization cases is especially critical. Different sexual assault victim evidence collection kits ("rape kits") are being used in New Jersey emergency rooms.

There is a need to develop a cadre of specialized law enforcement personnel to deal with the problems of sexual assault. Improved basic training must be provided to local law enforcement personnel regarding the needs of sexual assault/rape victims and the role of rape crisis center staffs. Investigators should be assigned to sex crime units, based upon professional capability and expertise in the field. Advanced training opportunities should regularly and consistently be provided to law enforcement and criminal justice personnel regarding the proper handling of sexual assault cases. Better enforcement of P.L. 1987, c.327, which covers rape and sexual assault, is needed to ensure that local police departments and hospitals inform victims about the services of the local rape crisis centers. Consistent medical prophylactic treatment for rape survivors to mitigate sexually transmitted diseases, pregnancy and HIV/AIDS is needed.

Suicide

In the United States, suicide is increasingly a problem of adolescents and the elderly. A national survey of 14,000 Native American and Alaskan Native youths in reservation communities found their death rates to be twice that of adolescents of other racial/ethnic backgrounds; unintentional injuries and suicides accounted for nearly 75% of their total death rate. The risk of suicide in the elderly should also be addressed; it appears that depression, a common precursor to elderly suicides, is not always recognized by health care professionals. There should also be programs to assist the survivors of suicide—the families, friends and loved ones left behind.

Some suicide prevention hotlines and treatment services are listed in county or local resource directories and the Department of Human Services published a 1992 directory of mental health services that inventories every emergency and non-emergency mental health service in the state. These materials need wide dissemination. Handgun control efforts and educational programs may have a positive effect upon the numbers of suicides and "accidental" deaths involving firearms. Model guidelines for the prevention of youth suicide clusters need to be put into practice in high risk communities and educational settings.

Unintentional Injury

Motor Vehicle-Related Injuries

Reducing the number of alcohol and other drug impaired drivers on the highways would decrease deaths and injuries from motor vehicle crashes for all age groups. Therefore, efforts to reduce motor vehicle crashes caused by alcohol consumption and drug use need to be increased. This includes linking legislation and enforcement with education and behavioral changes. Educational programs should build upon the prior efforts of groups such as Mothers Against Drunk Drivers (MADD), the American Trauma Society and other appropriate expert services with prevention and education programming.

It is important to recognize that not all fatal head injuries or spinal cord injuries, regardless of cause, actually are unpreventable deaths. Further, a reduction in the **nonfatal** hospitalization rate could well reflect an **increase** in the death rate. Therefore, a goal of overall reduction of head and spinal injury is warranted and the statement in **Healthy New Jersey 2000** should be modified to reflect a goal of reducing the incidence of head and spinal cord injuries and not just reducing the number of hospitalizations for nonfatal injuries.

Seatbelt use has markedly reduced mortality associated with motor vehicle crashes. However, in New Jersey only about half (the Division of Highway Traffic Safety estimates 59%) of all drivers wear seat belts consistently. Seventy-five percent of all motor vehicle fatality victims in 1991 were not using any safety restraints. Seatbelts are not required for occupants over the age of five in the back seat; this exemption should be changed so that seatbelts are mandatory for all vehicle occupants. Also, under current laws, law enforcement officials may only issue summons for failure to wear a seatbelt to occupants over the age of 5, if the vehicle has been stopped for another offense. Law enforcement officials should be able to enforce seatbelt requirements for all individuals, regardless of age, as a primary, rather than a secondary, offense.

According to recently enacted legislation, new school buses are required to be equipped with seat belts or other types of child restraint systems. This legislation is an important step toward ensuring the safety of the State's children. Moreover, bus design should also incorporate additional escape hatches, firmly anchored high-back seats, and other proven safety devices; these provisions may be covered under other new legislation. The existing programs for educating school bus drivers should also be reviewed to see if there are ways to further reduce school bus-related injuries.

Residential Injuries

Falls, fires and burns, poisonings, suffocation/asphyxiation, and unintentional firearm injuries, especially in the young and the old require further investigation to determine the magnitude of the problem and to identify high risk groups. Comprehensive targeted campaigns related to smoke detectors, hot water heater temperatures, and poisons (ingestion or inhalation of toxic substances) need to be developed and supported.

Recreational Injuries

The State Uniform Construction Code requires appropriate fencing to reduce drowning rates associated with residential swimming pools. Not all municipalities and counties have the resources to monitor and enforce this ordinance.

Comprehensive sports injury control programs need to be used, monitored, and evaluated for their effect on injury rates and severity.

Occupational Injuries

Because occupational injuries arise from hazards in the workplace, they can be prevented. The prevention of occupational injuries rests on the basic principles of control technology: engineering controls, work practices, personal protective equipment, and workplace monitoring for emerging hazards. Overall occupational health concerns are discussed more fully in the chapter on Occupational and Environmental Health.

Substance Abuse

Abuse of alcohol and other drugs is a risk factor for early death and disability. As well as being toxic to the body, use of alcohol and drugs impairs motor functions and increases the likelihood of injury. In New Jersey, an estimated 25% of hospitalizations (about 300,000 annually) are alcohol-related. Drug and alcohol use is also prevalent in those coming to hospital emergency departments. Some studies have shown that almost half of fatally injured drivers and a substantial number of adult passengers and pedestrians killed in motor vehicle crashes, as well as those killed in falls, drownings, fires, assaults, and suicides, have blood-alcohol concentrations of .010% or higher. About three people a day die in New Jersey from alcohol-related motor vehicle crashes, suicides, homicides, drownings, falls and fires. About half of all suicides and homicides are preceded by alcohol use. Further, alcohol use impairs an individual's judgment and can exacerbate the effects of serious injury because it depresses normal body functioning and alters the effects of many medications which may be given.

New Jersey does have programs to address the issue of drug- and/or alcohol-impaired driving through a combination of education, enforcement and treatment. However, in 1990, 207 people died in New Jersey from alcohol-related motor vehicle crashes. Alcohol-related motor vehicle crashes are a leading cause of death and disability among young

people aged 15-24; this is especially tragic because the legal drinking age in New Jersey is 21 and many of these young people were underage drinkers.

Measures to discourage young people from using alcohol and other drugs are continually needed, including school-based prevention programs, education on the dangers of drug and alcohol use, intervention and assistance to those already using drugs or alcohol, identification of at-risk youths and their families. When these efforts fail, there should be treatment facilities which are available to all persons, regardless of health insurance coverage status. There should also be societal changes, such as discouraging promotion of public and sports events by alcohol-related companies, restricting the use of celebrity and "character" endorsements (both of which serve to "legitimize" alcohol use), and limiting reduced price "happy hours" at restaurants and bars. Criminal penalties should be strictly enforced for drug dealers and others involved in illegal drug trafficking.

Deliberate or unintentional misuse of prescription drugs and over-the-counter preparations is another form of substance abuse. Medications account for about 38% of all the calls to the New Jersey Poison Information and Education System, the state's poison control center, which also has a drug information component accessible by health care professionals and the general public. The question of whether someone who is taking medication should also drink alcohol is a common one (alcohol use may cause an adverse reaction with some medications or disease states). Many individual county pharmacists' groups run medication awareness programs and "brown bag" sessions in which a person can bring in his/her medications and discuss them. There is an annual Medication Awareness Conference sponsored by the New Jersey Pharmacists Association, and co-sponsored by the Pharmacists' Institute of New Jersey, which is held in two to three regional sites and attended by 300-500 persons per site. The lectures, aimed at senior citizens, focus on abuse, misuse and diversion of medications. More of these types of activities are needed.

Special Needs Populations

Special efforts must be made to address the injury prevention needs of minorities and individuals with developmental or physical disabilities. These individuals may need culturally and linguistically sensitive educational materials. Individuals with physical or developmental disabilities may need greater public sensitivity to problems of access (e.g., teletype (TTY) telephone lines, building ramps, Braille labeling and written materials) and to individual physical limitations. In some instances, automatic injury protection devices and devices to make normal everyday tasks easier for disabled persons may be already commercially available, but information about them may not be generally known.

Pediatric Needs

Presently, in New Jersey there is no coordination of emergency pediatric care. Pediatric emergency medical services are provided in a fragmented fashion, resulting in the inappropriate triage and treatment of seriously ill and injured children. A coordinated system of emergency pediatric care in the state includes several key elements.

Primary components of a quality pediatric emergency medical system are the standardization and integration of its facilities. It is necessary to identify which facilities are qualified to treat seriously ill and injured children and to ensure that children are appropriately transferred to these facilities. Towards that end, the State needs to adopt and implement the Emergency Department Approved for Pediatrics (EDAP) concept. Further, licensing and planning standards need to be in place for other levels of pediatric emergency care, including Level I and Level II Pediatric Trauma Centers and Pediatric Critical Care Centers. Inquiry needs to be made as to whether children sustaining spinal cord and head injuries are being cared for appropriately in a system largely designed for adults.

In order for pediatric emergency care facilities, at all levels, to be effective, the individual providers of such care, both prehospital and in-hospital, need to be properly trained. It is important to remember that children are not "little adults"; protocols for their medical treatment are usually different from those for adults. Failure to recognize those differences can result in serious, even tragic, consequences. Prehospital providers need to know how to treat a pediatric emergency case and where to take that child. To support this goal, the Department should develop and implement an Emergency Medical Technician (EMT) continuing education module to enhance the information available in the basic EMT course on appropriate care of children who are sick or injured. Similarly, educational programs on pediatric emergency care for paramedics and emergency department physicians and nurses should be developed and implemented. In addition to the education and training of providers, treatment and triage protocols for pediatric patients should be in place which will assure appropriate care in the field and delivery to an appropriate level of definitive care.

The treatment of pediatric burn cases is an area which also lacks systemization. At present, St. Barnabas Medical Center, as the only state-designated burn unit in New Jersey, treats both children and adults. There are no units in the state which are designated specifically as pediatric burn units, even though burns are a particular problem for New Jersey's children. As recommended in Chapter 4, Maternal and Child Health, the Pediatric Clinical Advisory Committee (in conjunction with appropriate EMS-related advisory groups) should examine the issue of pediatric burn care as part of its tasks. Should it be determined that a need exists, the Department should then develop standards and regulations for the provision of pediatric burn care in designated pediatric burn care units. In the interim, efforts should be made to systematize protocols for the appropriate transfer of pediatric burn patients to the St. Barnabas unit.

There is also a need to develop, in collaboration with the Department of Human Services, a training program for the appropriate identification, diagnosis, reporting and management of child abuse and neglect (including child sexual abuse) targeted to medical and emergency department personnel.

Vigorous educational programs, including mass media and targeted campaigns, and strict enforcement measures are central to promoting child safety issues (seatbelt restraints, infant seats, safe toys, safe play behaviors, smoke detectors, pedestrian safety, bicycle helmet use, and accidental poisoning). Injury prevention education must be an integral component of a comprehensive school health curriculum.

Bicycle helmet legislation in New Jersey applies only to children and youth up to age 14, but should apply to all ages. Education regarding this issue needs to be added to school curricula. Campaigns to increase bicycle helmet use by all age groups need to be developed.

See also further references to the needs of children in the discussions on intentional violence, domestic violence, rape and sexual assault, suicide, motor vehicle injuries, substance abuse, and poison control. Refer also to Section III, "Problem Identification—Current Status and Trends," and to Section IV, "The Existing Health Delivery System," for a more indepth discussion on many pediatric-related issues.

Needs of Older New Jerseyans

The field of geriatrics has helped to identify risk factors for falls and to develop a corresponding series of risk reduction strategies. These strategies include educational programs designed to help professionals and individuals identify hazards in the home environment; geriatric assessments performed on high risk individuals to identify risks associated with medication use (many senior citizens take multiple prescriptions and over-the-counter preparations—multiple drug use has a high potential for morbidity and even mortality), alcohol use, living quarters, and gait and balance disorders; exercise programs for the elderly designed to improve balance, gait, and muscle mass; and closer monitoring of older adults during transition to and through long-term care facilities. These geriatric assessments and risk reduction strategies need to be expanded.

Underlying medical disorders, which make certain persons (often elderly) incapable of driving motor vehicles may go undetected in terms of licensure. These medical conditions may include legal blindness of gradual onset, risks of fainting or seizure disorders, cardiac disease, and diabetes, all of which can affect a person's ability to operate a motor vehicle safely. The Division of Motor Vehicles (DMV) does have a mechanism for evaluating and re-examining persons referred to it as potentially unfit to drive. Once the DMV receives a written, signed complaint, the DMV sends a letter and a form to the individual, asking for pertinent information and a medical report (failure to comply with the request leads to automatic suspension of driving privileges). This information is then presented to a DMV medical panel to make a final determination. A more equitable mechanism might be periodic demonstrations (e.g., every five years) of continued competency to drive. This would not place someone's friends or relatives in the awkward position of reporting a loved one and would assure that unfit persons, regardless of age, would not be allowed to drive.

Osteoporotic fractures, particularly in white females, are correlated with falls among the elderly. It is estimated that more than 50% of women over 45 years of age and 90% of women over 75 years of age have some degree of osteoporosis. Prevention of osteoporosis is best achieved through age-appropriate educational interventions that begin

early in life. These curricula should include programs on nutrition and exercise. Interventions which focus on potential causes of falls in the elderly (e.g., neuromuscular function, medication use, and household factors) also need to be developed.

The critical needs in the area of domestic violence against the elderly include improved data and heightened public and professional awareness of the problem. Programs to educate health care workers, so they improve their recognition of elder abuse, are needed. Reporting elder abuse to law enforcement officials is optional, based on individual hospital policy. However, suspected elder abuse/neglect must be reported to the Ombudsman for the Institutionalized Elderly, if the victim is 60 years of age or older and is a patient, resident or client of any health care institution for the elderly. For noninstitutionalized elderly, suspected cases of elder abuse/neglect should be reported to the Adult Protective Services Unit of the local County Board of Social Services, as soon as enough information is gathered to make a referral. Expansion is needed for both community-based and worksite-based caregiver education programs. Training programs and respite care, such as adult day care, for family members caring for the elderly or persons with disabilities need to be expanded. See Chapter 18 for more discussion on the needs of the elderly.

General Emergency Care

Appropriate Triage and Transfer

There is a need to strengthen the existing Level I and Level II Trauma Center system, whereby patients requiring higher levels of care are triaged from the field to the most appropriate facility. Too often, seriously and/or critically injured patients are taken to the nearest hospital which may or may not be equipped to treat that patient, yet the hospital ends up keeping the patient. To encourage proper triage and transfer, criteria indicating the need for specialized trauma center care should be widely disseminated. The Department also may wish to consider creating financial disincentives or imposing sanctions on hospitals which inappropriately keep patients. To ensure that proper patient triage is conducted in the field, the Department needs to develop basic and advanced life support field treatment and triage protocols for trauma patient care, including universal field measures of injury severity.

Standards for EMS Services

To assure that all New Jerseyans receive quality emergency medical services care, standards are needed for all levels and types of providers. This includes training standards for first responders, basic life support ambulance personnel, advanced life support personnel, aeromedical staff, and emergency department physicians and nurses. When available, national standards and training curricula should be used. Additionally, EMS providers should be sensitized to the cultural and linguistic differences among the populations they serve. Perceptual differences in reporting, responding to, and describing an event can potentially turn a "simple emergency" into a life-threatening situation.

The emergency department standards in N.J.A.C. 8:43G have been upgraded to include, as of July 1, 1992, requirements for emergency department physicians regarding specialty training and certification in Advanced Cardiac Life Support (ACLS) and Advanced Trauma Life Support within 12 months of initial assignment. There are no corresponding requirements for nurses or other personnel, except that one registered nurse in the emergency department must have ACLS certification. This may limit the effectiveness of other staff during a cardiac emergency.

The Department of Health's Office of Emergency Medical Services (OEMS) licenses proprietary, municipal, and hospital-based basic life support ambulances and invalid coaches. However, the volunteer basic life support first aid and rescue squads are exempt from regulation by law; therefore, the Department has no oversight responsibility for any of the volunteer agencies. This is not generally known to the public. Legislation should be adopted which mandates that municipalities must provide (either directly or through contract) or arrange to have provided (e.g., through agreements with volunteer first aid squads) around-the-clock emergency medical service coverage for their citizens. Currently, police and fire protection are the only mandated public services. The issue of fair market reimbursement by Medicaid, Medicare, and third party insurers for ambulance and invalid coach services needs to be supported in order to assure that services continue to be available to all segments of the population.

An appropriately trained cadre of instructors and evaluators is important to assuring that candidates for certification meet minimum standards. Further, there should be minimum standards for equipment and supplies which are available at each level of care. Because volunteer basic life support services are exempt by law from regulation, the quality of prehospital care given in New Jersey varies from community to community. Some method or methods of quality assurance and accountability should be devised to assure that all basic life support services, whether regulated or volunteer, are delivering a minimum standard of care.

There is also an overwhelming need to have hospital and emergency department capabilities known to prehospital providers and to the public. This information could be disseminated in a services report, by facility, which would be updated periodically. Such information could tie into implementation of triage and transfer protocols and assure that patients would be more likely to receive appropriate care.

In addition to not having licensure authority over all prehospital providers, there is no statewide EMS service run form requirement. The regulated basic life support services must collect a minimum data set, which is spelled out in N.J.A.C. 8:40, but there is no requirement to send this information (either by individual patient or aggregated) to an appropriate agency. Many of the volunteer squads have run reports and most often a copy is given to the emergency department at the receiving hospital; however, there is no requirement to report specific data. By contrast, MICU programs must keep a minimum data set and report aggregated data to OEMS quarterly; these run reports are audited periodically. Run reports should be completed at all levels. Run forms are appropriate quality assurance tools with which to evaluate the care given by all components of the EMS system. If a method of compiling data and sending it to an appropriate data gathering point were developed, run form information could also help to map out health problems around the state, help to target specific training needs, and target prevention programs to regions where they would be of most interest. More study is needed to address the issue of perceived delays in response; run form data would be extremely helpful in this regard. At a minimum, EMS services should be able to have a crew on scene within 8-10 minutes in urban settings and within 15-20 minutes in suburban/rural settings. Timely response is important not only to victims of injury and trauma, but to all patients.

Critical Care Transport

Presently, there is no systematic approach to interhospital transfers of critically ill or injured persons. While interhospital transports are made to the best of everyone's ability, they are constrained by the existing "nonsystem." The limited availability of volunteer EMS services during the daytime means that these services are reluctant to accept transfer runs, which leaves their communities without coverage. There are provisions within the basic life support ambulance regulations (N.J.A.C. 8:40) for regulated vehicles to be used for interhospital transports. However, the staffing requirements mandate that appropriate hospital staff supplement the basic lfie support EMT crew. Hospitals are often reluctant to have staff leave the facility, since their absence may leave the facility short-handed. Sometimes the aeromedical helicopter service is used for interhospital transfers, but this is quite expensive and is not appropriate for transferring the majority of stable patients. This means that many patients (including those who have been injured), who should have been transferred to a specialty center, are not transferred, potentially resulting in poorer outcomes or lengthier hospitalizations. A critical care transport system is urgently needed. Such a system would have appropriately trained staff, specially configured vehicles, and the equipment necessary to provide critical care transfers safely and effectively.

Rescue Services

At this time there are no standards for "rescue services." These services help to extricate persons who are entrapped (e.g., in automobile crashes, cave-ins); most of these persons have traumatic injuries. Rescue services vary by community. Some services may have limited rescue capability, others may have a fully equipped rescue vehicle. Moreover, training in use of the equipment is given locally and there is no uniformity. Therefore, people needing rescue service may receive a widely divergent type of care, depending on where they are. There is an urgent need to develop statewide standards for rescue services, including both equipment and providers.

Communications/Access

Until the victim or a witness can access the EMS system, appropriate help cannot be sent. The public needs to know how to access the EMS system, what to expect from EMS, how to ask for help, how to give directions, and what to do until help arrives. Extensive public education

programs should be implemented locally, in conjunction with local or countywide implementation of the enhanced 9-1-1 system. Teletype access for the deaf and hearing-impaired to this system should also be provided.

Trauma Care

New Jersey's trauma care system presently contains three Level I (tertiary) and five Level II trauma centers (several undergoing final designation steps). These facilities are organizing a coordinated effort to appropriately address trauma care statewide. Trauma triage guidelines are being developed and data points for a trauma registry are being finalized. Proper triage will assure that patients are taken to a trauma center when they have serious injuries or to a local community hospital when their injuries can be appropriately treated there. A statewide trauma data collection process will not only assist in monitoring the work of the trauma centers, but will also allow aggregated data to be used for injury surveillance studies.

It appears that some minimally injured indigent patients may be inappropriately transferred to trauma centers, while similarly injured insured patients are treated locally. Indigent care must be addressed, especially if hospital reimbursement for indigent care is reduced with anticipated changes to the Uncompensated Care Trust Fund. The future of the trauma centers should not be jeopardized by economically-driven changes in patient flow patterns.

To make the best use of the emerging trauma care system, several steps should be taken:

1. Licensing rules need to be developed to support planning regulations for trauma center designation and operation;
2. The trauma triage guidelines need to be adopted throughout the EMS and health care systems;
3. E- and N-codes need to be universally included on hospital records and death certificates;
4. Autopsy reports need to be supplied to the trauma centers to aid in quality assurance and injury prevention programs; and
5. A need methodology must be developed before any new certificate-of-need applications for trauma designation are accepted by the Department.

Poison Control

Of the 75,000 poison-related calls to the New Jersey Poison Information and Education System (NJPIES) in 1991, over 50% involved children under the age of five. Most of these were as a result of the child placing objects and substances into his/her mouth. By and large, these ingestions are easily preventable by using cabinet safety locks, child-resistant closures, and supervising children at play. Also, Syrup of Ipecac should be kept in the home and the NJPIES telephone sticker (1-800-962-1253) should be on each telephone.

All New Jersey hospitals are now part of the statewide poison prevention and treatment system. However, for the system to work most effectively, two changes must be made. First, a comprehensive study should be done to assess the capability of the state's hospitals to treat severely poisoned patients. For instance, anecdotal information suggests that some hospitals may not have appropriate laboratory testing available, especially during "off peak" hours. Second, hospitals should be required to share hard copy information (including information on hospitalization and from medical examiners, if patients expire) from the charts of individuals whom NJPIES was involved in treating. Confidentiality should not be an issue, because NJPIES medical and/or nursing staff was serving in a direct consultative role with these patients. Lack of such information seriously hampers NJPIES' quality assurance program and its ability to compare treatment and outcomes for similar patients.

Burn Care

The Department of Health has not developed regional planning regulations applicable to burn care services (generally provided at three specialty levels—burn program, burn unit, and burn center), although some preliminary research has been done. The nationally recognized standards for specialized burn care are the "Guidelines for Development and Operation of Burn Centers," which were adopted by the American Burn Association (ABA) in 1988. Additionally, there are other issues which are unique to New Jersey, such as integration of burn care into the New Jersey EMS and trauma systems, volume/utilization data by level of severity, access for indigent patients, followup care for all burn patients, and costs and charges for burn care which would have to be addressed in any plan which might be developed.

Triage and transfer protocols need to be written and promoted throughout the health care system in order to ensure appropriate transfer of burn patients. Presently, St. Barnabas Medical Center is the only state-designated burn facility in New Jersey. The need to establish additional burn unit(s)/centers should be explored. Any designated burn unit(s)/centers plan should take into consideration the existence of out-of-state burn centers which treat New Jersey patients, i.e. St. Agnes Hospitals, Crozier-Chester Medical Center in Pennsylvania.

The issue of hyperbaric service need and availability should also be explored. Hyperbaric facilities are useful in diving-related injuries (especially in treating "the bends") and in smoke inhalation treatment.

Urgent Care Centers

For primary care and minor emergencies, urgent care centers represent an alternative to a physician's office or emergency department care. However, for all injuries or critical illnesses, urgent care centers should have a contractual relationship with a nearby hospital to immediately receive patients who may require admission. To prevent misrepresentation and possible harm to patients, protocols should be established to prohibit emergency ambulance crews from transporting patients to urgent care centers. Further, the centers should be prohibited from using the word "emergency" in their names or in any advertising. The public also needs to understand that these centers do not provide the full range of care available in a hospital emergency department. The nature of practice of urgent care centers should be reviewed to determine whether they are health care facilities, which are regulated by the Department of Health, or private physician's offices, which are regulated by the New Jersey Board of Medical Examiners, and their role in the health care continuum of care.

Managed Care

Although managed care systems usually require prior approval for medical treatment, most Health Maintenance Organizations (HMOs) understand that potentially life threatening emergencies cannot wait. Some, though, when reviewing records after the fact, refuse to pay for an ambulance, a mobile intensive care unit, or an emergency department visit, because, ultimately, the problem was not "serious," even though it appeared to be at the time. Patients should not be penalized for using emergency services appropriate for the presenting circumstances. A thorough review of HMO and managed care organizations' policies in this regard should be undertaken. Nor should someone delay care because he/she cannot reach his/her primary physician. Managed care carriers should be responsible for paying emergency department claims for treating injuries for which the hospital can document that it has been unable to obtain a preauthorization for treatment within 30 minutes of the hospital's contacting the managed care service's designated representative or the patient's primary physician.

Rehabilitation Needs

Systems for post-rehabilitation services (i.e., home care services and residential programs), particularly for individuals with severe head trauma, are not well developed and the demand often exceeds the supply.

Indigency appears to provide a nearly absolute block to rehabilitation services. Most rehabilitation services will not accept patients without some guarantee of payment. Medicaid currently mandates a three-month minimum wait before considering a patient for support of rehabilitative services. This means indigent patients in acute care hospitals may have to wait for three months and more after their injury before being placed in a rehabilitation setting. Many of those persons are ready for rehabilitation placement one to two weeks after injury. The delay causes permanent loss of rehabilitation potential, increases the overall costs to government, and increases the likelihood that the person will never return to his/her former level of functioning. The issue of indigency and loss of potential is especially pressing in head and spinal cord-injured patients, may of whom are young and uninsured. Medicare's policy toward reimbursing for rehabilitation should also be explored to see if it has a negative impact upon the injured elderly and permanently disabled.

Psychiatric Screening Centers

Psychiatric screening centers and emergency centers play an important role in preventing injury. Each county has at least one designated screening center and many emergency mental health services. These services need to be more widely publicized.

Diversion

The Diversion Task Force of the Governor's Council on Emergency Medical Services submitted a report to the Department of Health in May 1988. In that report, the group said: (1) there is a lack of a standard definition of the term diversion; (2) there is a misuse/abuse of emergency departments; (3) there is a lack of specific data about diversion; (4) there is a lack of hospital planning and procedures in cases of bypass and diversion; (5) there are procedures which hospitals should follow which might prevent or alleviate the need for declaring a bypass or diversion; (6) there is a lack of effective working agreements between hospitals and the prehospital emergency care system; (7) there is a lack of coordinated communication; and (8) there is a lack of trained health care providers. This framework was built upon and enhanced in a publication entitled, "A Full House: Hospital Diversion Guidelines," from the New Jersey Hospital Association (April 1990). In the publication, "bypass" was defined as applying strictly to the hospital emergency department and meaning, "the emergency department cannot accept any additional patients transported by ambulance." "Diversion" was defined to mean "that the hospital is unable to admit additional inpatients who require a specific service." Diversion consists of three categories, "total care divert" in which no inpatient beds of any kind are available, "critical care divert" in which no intensive care unit or critical care unit beds are available, and "specialty services divert" in which no beds for a certain medical specialty are available. The issues of bypass and diversion should be reexamined to determine the present scope of the problem, if any; appropriate recommendations can then be made.

Associated Health Issues

For several years, the Federal Centers for Disease Control has recommended that health care providers use "universal precautions" when treating patients, in order to eliminate the provider's exposure to the patient's blood and body fluids, thus reducing the risk to exposure of HIV/AIDS and Hepatitis B. These precautions call for health care providers to use protective gloves, eyewear and clothing when treating patients, for use of disposable equipment and supplies whenever possible, and for appropriate disinfection of reusable equipment. More recently, the Federal government issued OSHA standards for dealing with bloodborne pathogens. A special working group has been convened in New Jersey, through the Public Employees Occupational Safety and Health program, to develop guidelines and protocols to be used in our State. Once the State standards are developed, they should receive wide dissemination in the health care and EMS communities. All health care workers and first responders (e.g., police and fire personnel) within the emergency system should be immunized for Hepatitis B.

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DRAFT STATE HEALTH PLAN: COMMUNICABLE DISEASE CONTROL CHAPTER

OVERVIEW AND PURPOSE

Over the course of history, communicable diseases have taken their toll on countless individuals and on society in general. Until the latter part of the nineteenth century, the chief causes of death in all parts of the world were tuberculosis, smallpox, dysentery (diarrheal diseases), typhoid, and diphtheria. Little or nothing was known about the etiology or cause of these diseases, or how they were transmitted. No effective treatments were available, and little was known about disease prevention.

For any population, 80 percent or more died in early childhood from communicable diseases. Waves of disease would sweep across the world. For example, six pandemic waves of cholera swept through the world beginning in 1817, causing widespread sickness and death. Cholera created a panic in the United States in 1832. Uncounted hundreds died of cholera in New York City, and out of the population of 200,000, 70,000 fled the city, taking the disease with them to upstate New York, New Jersey, and Connecticut. Spanish Influenza arrived in the United States in 1918, afflicting over 20 million people and causing 500,000 deaths, more deaths than claimed by 4 years of the first World War.

John Snow is often credited with being the father of epidemiology, the study of the distribution and determinants of disease. It was during a cholera pandemic in London in the 1850's that Snow suspected that cholera might be a waterborne illness. He mapped out the residence location of individuals dying of cholera and noted that most lived near the Broad Street water pump. This pump drew water from a source on the Thames River which was heavily contaminated with sewage. Residents who lived in the neighborhood but obtained their water from another pump were spared. Snow believed that this indicated that the disease was carried by something in the water, and he recommended to the city fathers that the pump be put out of use. Thus, the Broad Street pump handle was removed, and cholera subsequently disappeared from the neighborhood. This represents an example of a very successful, early public health intervention.

Statewide Public Health in New Jersey began with the establishment of a State Sanitary Commission appointed by the Legislature of 1865-6. It was the duty of the Commission to furnish a report as to "the general sanitary condition of the state and as to the prevention of epidemic and contagious diseases; as to the vaccination of the indigent, the condition of the insane in township and county houses, and all such other facts and particulars with such suggestions and advice as will, in their opinion, conduce to future enlightened action for the promotion of the public health." This was followed by the appointment of a Board of Health by the Legislature of 1876-7. This Board established the following committees which would indicate the primary concerns of the day:

1. A registry of Births, Marriages and Deaths,
2. The duty the State owes to children as to their protection from impairment of health in the Home, at the School and in the Workshop,
3. A brief summary of directions to families as to the more common domiciliary influences and surroundings productive of disease, and the means of detecting, neutralizing or preventing the same
4. A statement of endemics or epidemics that have occurred since 1870 in the State, and their causes,
5. Localities which stand in special need of sanitary improvement,
6. A statement of the climatology at various points in our State and of the diseases apparently dependent thereupon.

The New Jersey State Legislature of 1876 was convinced that a formal organization charged with specific duties, and consisting of individuals with specific skills was needed to control communicable diseases in the State and improve the public's health. They were convinced that if communicable diseases were studied in the manner originated by John Snow, by enumerating the facts about those individuals who have contracted diseases and the facts about the conditions which surrounded those individuals, information about how those diseases were transmitted could be discovered and appropriate control measures could be identified and implemented. The Health of all citizens could be significantly improved through these efforts.

During the past century, a great deal has been learned about communicable diseases. The etiologic agents (microorganisms which produce disease) of major diseases were discovered, new methods and techniques for the diagnosis of communicable disease were developed, and successful treatment modalities (especially the development of antibiotics) were formulated. The epidemiology of infectious diseases has been studied and described, leading to the adoption of effective control and prevention strategies.

Modern medicine has made great scientific strides toward eradicating many communicable illnesses. But at least as important as the discovery of effective treatment and technologic advances in controlling communicable diseases has been the rise in the population's general standard of living. Very basic factors such as improved nutrition and personal hygiene, less crowded housing, better working conditions, and child labor laws have played a major—if indirect—role in reducing the incidence of communicable diseases during the last 100 years.

Nonetheless, communicable diseases have not been completely conquered and controlled. New diseases can still arise and demand a vigorous public health response. For example, in the summer of 1981, the Los Angeles Times reported the occurrence of a rare, but known, cancer in four young, gay men over a period of a few months in the City of Los Angeles. The oddity of the occurrence was that the cancer, known as Kaposi's sarcoma, was previously known to occur exclusively among older (65 years and above) men of eastern European descent. It was unknown, in young (25-35 year olds) otherwise healthy men within our culture. In addition, the cancer was rarely fatal, however within this sub-group there were several deaths.

Today, some eleven years, 200,000 cases, and 130,000 deaths later, we have come to know only too well the devastation of AIDS. Medical and epidemiologic research has provided us with a wealth of knowledge and information. Much of this information has been discovered through the efforts of public health institutions established by our forefathers. These institutions continue to study how communicable diseases are transmitted as well as to conduct research on the development of vaccines and effective treatment, and the improvement of diagnostic techniques. By understanding the determinants and complexities of human behavior involved in disease, public health agencies are in a position to implement control and prevention strategies.

AIDS is not the only communicable disease of concern to today's health officials. Tuberculosis, once thought of as a disease of the past, has re-emerged as a major public health problem. After decades of declining incidence at almost 5% per year, reported tuberculosis cases have increased markedly over the past five years. In New Jersey, TB cases increased by more than 30% between 1986 and 1990.

At the present time, our concerns are focused upon the problem of multiple drug-resistant tuberculosis (MDRTB). These resistant strains appear to be associated either directly or indirectly with HIV infection. Should our public health system fail to recognize or respond to this emerging problem, TB will once again be the killer disease it was at the turn of the 20th century when one in every four deaths was a result of TB.

Other organisms have also developed resistance to previously effective antibiotic therapy and pose a significant health threat to our citizenry. For example, staphylococcal disease within the hospital setting (nosocomial) has become predominantly resistant to penicillin (85-90% of strains of *Staphylococcus aureus*) and increasing proportions resistant to semi-synthetic penicillin (e.g., methicillin). The uncontrolled spread of antibiotic-resistant organisms within a hospital setting can potentially result in severe morbidity and substantial mortality in hospital patients. In addition, there is also the potential for transmission and spread of virulent, antibiotic-resistant strains of micro-organisms beyond the hospital into the community.

Although we can describe certain populations and sub-groups that are adversely affected by communicable diseases, there are no distinctions that would protect any one particular age, race, sex, culture or socio-economic class from a communicable disease. Therefore, it would be impossible to predict the trends or population groups that might be affected by future communicable disease problems. It could be a re-emerging childhood disease (e.g., measles), or one that would

predominantly affect young adults (e.g., HIV infection), or perhaps one that would affect older adults (e.g., Legionnaire's disease) or hospitalized individuals (e.g., nosocomial *Staphylococcus aureus)*, or possibly one that only affects women (e.g., toxic shock) or men. However, we can predict that there will be future challenges from communicable diseases, and an organized response will be needed to successfully prevent outbreaks of disease and death.

EXISTING DELIVERY ROOM

There are more than 100 different illnesses that can be classified as communicable diseases. Each illness is caused by a unique microorganism and has a unique disease reservoir and mode of transmission. Thus the delivery system for the prevention of each communicable disease will be different. The delivery system for the study and prevention of these diseases will need to be both comprehensive and flexible to be able to successfully meet these challenges.

New Jersey's current system requires the active participation of public health officials, clinics, hospitals, private and public long term care facilities, physicians, nurses, and elected officials. In general, physicians and other direct providers of health care are in the best position to identify the presence of a communicable disease. They are also in the best position to provide prevention activities on an individual level.

The New Jersey Administrative Code (N.J.A.C. 8:57-1) requires these health professionals to report 55 communicable diseases to the State Health Department. These diseases were selected because they cause significant morbidity and/or mortality, and because there are effective public health prevention methods which, if implemented, result in significant decreases in that morbidity and mortality.

Unfortunately, a failure to recognize and/or report unusual events within the medical/health care delivery system diminishes the effectiveness of public health response to potential communicable disease outbreaks. This problem can be attributed to a variety of factors. With adverse health outcomes, there are distinct possibilities of adverse litigation against the health care provider and/or the institution. This possibility discourages the needed communication links and open dialogue between the private medical community, hospitals and the State Health Department.

The communication gap between the clinical medical community (private physicians, private clinics and acute care hospitals) and the State Department of Health needs to be bridged. Information has to flow freely back and forth between these key institutions and providers. The clinicians providing diagnostic and therapeutic services to individuals who are afflicted with infectious diseases must be motivated and guided to maintain an on-going dialogue with the Department.

Those communications consist of reporting communicable diseases, as mentioned above. Also, consultation and technical advice should be sought or a report made on unusual events of disease/illness that affect more than one isolated case. The Department must then maintain the medical and epidemiologic expertise to begin a follow-up investigation immediately. In addition, the Department needs to communicate and reach out to this community through regular bulletins, newsletters, conference/meetings, and feedback of aggregated data that has been reported.

At the public level, the state has health officials who are responsible for identifying, developing, and directing prevention methods on a community or statewide scale, in concert with direct health care providers, research and educational institutions, health care advocacy groups, drug companies, and other medical and health care suppliers. Individuals with a wide variety of skills including physicians, nurses, epidemiologists, statisticians, laboratory technicians, health planners, social workers, trained disease investigators, health educators, record clerks, data entry and clerical staff are necessary to complete the task of clearly identifying problems, developing appropriate solutions, informing health care providers and the public, and ensuring that the identified prevention efforts are understood, accepted, funded, and carried out.

Elected officials are responsible for providing the legal framework and authority to enable the prevention methods to be completed in a manner that is medically appropriate and that does not conflict with other state laws or policies.

GENERAL GOALS

(a) To prevent and control communicable diseases that adversely affect New Jerseyans in terms of mortality, disability, health care costs and quality of life.

(b) To ensure that communicable disease control and prevention services are available to all New Jerseyans regardless of their ability to pay.

(c) To operate surveillance systems for communicable diseases that are sensitive, accurate and timely.

(d) To conduct education and training that will provide information to health care providers, local public health employees and the general community, and that will impart the necessary skills to carry out disease control responsibilities.

(e) To operate communicable disease control and prevention programs that are cost effective.

(f) To scientifically investigate new and more effective approaches to communicable disease control, and to operate programs that can adapt their activities to these different approaches.

(g) To coordinate activities and functions with other agencies/organizations in order to maximize efficiency and effectiveness.

(h) To respond to new emerging, catastrophic illnesses with cost effective disease prevention and control strategies.

GENERAL RECOMMENDATIONS

A. Surveillance

1. The New Jersey Department of Health (NJDOH), Communicable Disease Control Service (CDCS) should expand its data and information services using the latest technology.
2. The Department should develop and implement an active surveillance system which would include regular site visits to private laboratories, hospitals and local health agencies to monitor reporting compliance and quality of follow up.
3. The NJDOH should develop ways to effectively communicate with all private medical providers and the public health system within the state.
4. Communications between practicing physicians and the State Health Department in reporting rare and/or unusual health events should be improved.
5. The CDCS should selectively expand the present surveillance systems in order to change them from passive systems to active systems.
6. Data collection and analysis should be improved. Data are useful only when they are communicated to the key individuals responsible for making decisions and taking action. Therefore, the mere aggregation and analysis of data are not sufficient, but those data should be communicated and shared via newsletters, reports, etc. to the practicing health care providers, professional organizations and the media.

B. Education and Training

1. The public's consciousness about disease prevention should be heightened.
2. The CDCS should build a comprehensive education program that would improve the quality and quantity of disease prevention/control information disseminated to health care professionals and the general public.
3. The CDCS should expand its professional training in disease control methodologies, and arrange for other technical training (e.g., medical, behavioral, managerial) with the appropriate experts.

C. Control Programs

1. Communicable disease control programs should provide services that are client friendly, acceptable to the different cultures of citizens at risk for disease, and effective in preventing disease transmission.
2. A quality assurance system for communicable disease control should be established throughout the State.

D. Financing

1. The Legislative and Executive branches of New Jersey government, along with the DOH and the private sector, should seek alternate ways of financing disease control/prevention services for poor and disenfranchised citizens that are afflicted with, or exposed to, preventable communicable diseases.
2. Medicaid reimbursement should be provided to local health agencies delivering medical care and prevention services for sexually transmitted diseases, tuberculosis and immunizations.
3. Health insurance should cover proven cost-effective prevention services (e.g. childhood immunizations).

E. Investigation and Adaptability

1. The Division of Epidemiology, Environmental, and Occupational Health Services should develop an organizational structure and supporting policies that will allow for the investigation of new and better approaches to communicable disease prevention/control and, to this end, promote the adoption of an improved mode of service delivery.
2. The Division/Service should develop an effective network with the academic community in order to collaborate on investigations of operational effectiveness.
3. The Division/Service should seek alternate funding mechanisms including private foundations to support this investigational approach.
4. The communicable disease control programs should be supported better by expanding their funding base at the local and state level.
5. Local health agencies should form coalitions for communicable disease control to establish efficient economies of scale that can provide comprehensive services to the areas of greatest need.

Coordination

1. The Department should facilitate coordination of projects that cut across organizational lines through improved communication technology and organizational development techniques.
2. Personnel should be encouraged to attend management training, interdisciplinary meetings and be assigned to project teams to ensure coordinated efforts both within the organization and with associated external organizations.
3. Memoranda of Agreement should be established routinely between the Department of Health and the Departments of Human Services, Corrections, Education and Insurance to address disease control policies and services delivered to populations routinely served by those agencies.
4. Communication, coordination and inter-relationships with other agencies that can impact on the health of new Jersey citizens should be improved.
5. Permanent data and voice communication links to all acute care hospitals and large private laboratories should be established.

G. Operational Evaluation

1. The Department should develop relationships with research institutions that possess the expertise to perform cost effectiveness studies on prevention and control activities to maximize the impact of available resources.

PRIORITY DISEASES

Although there are more than 100 different illnesses that can be classified as communicable disease, seven diseases/issues were selected to include in the State Health Plan. These cause the greatest amount of illness (morbidity) and/or the most severe adverse health effects (e.g., disability and death). They have effective treatments and prevention methods and, if implemented, would result in the most cost effective improvement to the quality of life for New Jerseyans. The seven diseases/issues are:

1. Tuberculosis
2. Measles and Other Vaccine Preventable Diseases
3. Hospital Acquired Infections
4. Lyme Disease
5. Sexually Transmitted Diseases
6. Rabies
7. Food and Waterborne Diseases

1. TUBERCULOSIS

A. Overview

Tuberculosis (TB) is a mycobacterial disease that is transmitted from person to person through the airborne route. The initial infection usually goes unnoticed, however it will progress to active disease (pulmonary and/or extrapulmonary) in 5% of infected individuals within two years. Ten percent of infected individuals will experience active disease at some point during their lifetime. Serious outcomes of the initial infection are more frequent in infants, adolescents, young adults, and those individuals with immunocompromising illnesses or conditions.

At the turn of the century before the development of effective antituberculous medications, one in every four deaths was caused by tuberculosis. Medical research and active public health programs in the 1950's, 60's, and 70's produce a decline in TB cases at the rate of 5% per year. By the mid 1980's, however, a reversal of this declining trend appeared, due to the increasing prevalence of HIV/AIDS. **Exhibit 1** illustrates the fact that, over the past 6 years, there have been approximately 2,000 more cases of TB diagnosed and reported in New Jersey than we would have expected had the disease been better controlled. The number of tuberculosis cases reported to the New Jersey Department of Health began growing in 1985 and over the past six years has increased by 80% (from 545 to 983 cases). The largest number of cases is found in adults age 25 to 44 (see **Exhibit 2,** "Active Tuberculosis Morbidity by Age Distribution").

Particularly hard hit by the increases in cases have been the large urban centers of the state, which are heavily populated by minorities and the poor. **Exhibit 3** indicates that in 1991, over 40% of all New Jersey TB cases were residents in seven cities.

In 1991 the City of Newark had the largest number of cases of any city in New Jersey and the second highest TB case rate for any city in the United States with a population of 250,000 or more. The cities of Paterson, Elizabeth and Jersey City also experience rates that are many times higher than the State average. As a state, New Jersey had the seventh highest TB case rate in the nation in 1991. The recent occurrences of multi-drug resistant tuberculosis (MDR-TB) in our northern urban centers poses serious threats to our efforts to prevent death and disability resulting from this disease. The prevention of the spread of MDR-TB in New Jersey is paramount to any other TB control activities.

We have long known that individuals with weakened immune systems (the elderly and the immunocompromised) are much more susceptible to tuberculosis. The introduction of HIV into a drug-abusing population has become fertile ground for tuberculosis to increase rapidly. Also, it has increased in population groups that are much more difficult to follow-up and ensure that adequate antibiotic prevention therapy has been completed. Treatment for TB is lengthy, sometimes extending beyond one year. Continuous treatment is crucial to the destruction of TB bacteria, and incomplete or inadequate treatment leads to the development of resistant strains. Resistant TB strains cannot be cured easily, and can result in significant disability and mortality.

As a result of the interaction between TB and AIDS, New Jersey's TB patients are much younger than they were a decade ago. Although TB is now occurring in certain restricted populations, since the disease is spread through the airborne route, without aggressive public health outreach and follow-up programs, TB will undoubtedly spread outward from New Jersey's urban centers to virtually every population group.

Not more than twenty years ago, TB control efforts centered around treatment centers known as the TB Sanitorium. This was a type of long-term care facility, usually located in areas of sunshine and fresh air, where TB patients could either be provided medications or given good nutrition and rest so that their immune system could be strengthened to fight the disease. This cure was costly, and with the advent of better antibiotic therapeutic agents, TB treatment was accomplished through outpatient primary care. The increasing prevalence of TB strains that are resistant to these effective therapeutic agents could ultimately force the health care industry to re-create the more costly TB sanitoria of the past. This would be highly undesirable outcome, and it points to the need for vigilance in controlling and preventing this disease.

The objectives of tuberculosis control are to eliminate death, to decrease and eliminate disability, and to interrupt and prevent transmission of the tubercle bacilli. Tuberculosis control is based upon the principles of surveillance and containment. Surveillance concerns those activities related to finding cases, guiding them into the health care system and tracking them over time. Containment relates to those activities involved with treatment and prevention.

B. Goal: To reduce TB morbidity to 4.4 cases/100,000 population.

C. Objectives

1. 95% of high-priority TB patients (*) will complete treatment.
   (*) Diseased patients
   HIV-infected patient with concomitant TB infection
   Close-contacts
   Recently infected individuals (infected within 12 months)
2. Eliminate tuberculosis and multi-drug resistant tuberculosis in New Jersey.

D. Recommendations

—All patients with symptoms suggestive of TB, or at high risk of TB, should receive appropriate laboratory and/or diagnostic tests to detect TB infection and/or disease. Individuals whose tests suggest suspected or diagnosed TB disease must be reported in accordance with the requirements included in the State Sanitary Code.
—Environmental conditions that sustain the transmission of TB must be modified to interrupt the transmission of TB in accordance with state-of-the-art environmental engineering.
—A system for identifying non-compliant patients should be developed.
—A plan of action for assuring treatment compliance should be developed.
—Non-compliant patients should be assigned to progressively more intensive case follow-up measures.
—A TB Center of Excellence should be established to promote clinical research and state-of-the-art treatment for patients with TB.
—Establish a system of laboratory services for processing specimens for TB using state-of-the-art methodology and equipment.
—Monitor reporting of tuberculosis cases and suspects and positive laboratory findings suggestive of TB with appropriate sanctions for those providers who are non-compliant.
—Distribute a list of symptoms suggestive of TB to all health care providers.
—Establish standards for TB care with appropriate sanctions for those providers who are non-compliant.
—Institutions not in compliance with these guidelines should be sanctioned.
—Develop the Tuberculosis Advisory Committee of the American Lung Association of New Jersey as the primary planning group for TB control.

2. MEASLES AND OTHER VACCINE PREVENTABLE DISEASES

A. Overview

Measles and other childhood vaccine-preventable diseases (except for Hepatitis B) are highly infectious illnesses which result in severe morbidity, disability and mortality when introduced into susceptible populations. Prior to the advent of highly effective vaccines, rubeola (measles), rubella (German measles), pertussis (whooping cough), diphtheria, and polio were major causes of disability, hospitalization and premature death in our country. It was not that long ago that individuals walked on crutches due to the ravages of polio. Others were confined to iron lungs just so that they could continue to breathe. Deafness in children as a result of measles infection was common.

The vast majority of these afflictions can be prevented today with vaccines. There is no more cost effective means to prevent disease, death and disability than to immunize our children. Vaccines are highly effective, achieving rates of 90%-100% protection against specific diseases. By raising immunization rates in our children to 80-90%, these diseases can be virtually eliminated.

Unfortunately, many of our pre-school aged children are not appropriately vaccinated for their age. Retrospective studies performed on school children's records reveal unacceptable vaccination rates of 60-70% for measles in our suburban and rural areas, and even worse rates of 20-40% in our inner cities. **Exhibit 4** shows the findings of the aforementioned study; in 1991, only 15% of children up to age five had been vaccinated in the cities of Atlantic City, Camden, Elizabeth, Jersey City, Newark, and Paterson. With these low rates, it is no wonder that New Jersey has experienced 5 major measles outbreaks in the last 6 years. After a decade of declining morbidity, measles in the United States and New Jersey began a resurgence in 1986. **Exhibit 5,** "Measles Cases by Calendar Year, 1980-1991," graphically illustrates New Jersey's outbreaks during this period.

Most recent outbreaks in New Jersey have begun in the unimmunized **preschool-aged population** and spread into the older populations. In 1991, 67 percent of all measles cases were reported in children age 5 and younger. Unless this susceptible pool of unimmunized preschool-aged children is immunized against measles at 15 months of age, measles outbreaks will continue. The attainment of this goal is directly dependent upon the attainment of the goal to have 90 percent of all children immunized by age 2.

Poor immunization rates are indicative of a failing system of primary health care in our State. This underscores the importance of a well conceived and coordinated plan to improve not only the delivery of vaccines to our children, but the access to quality primary care and preventive health services. Studies have shown that for each dollar spent on childhood vaccinations, ten dollars of hospitalization or acute medical care costs are saved. We should invest in our future generations by investing in their health through proven cost-effective preventive technology.

In 1991, 68 percent of measles cases were minority children, most of whom resided in inner-city urban settings. Exhibit 6, "Percentage of Measles Cases Among Children 5 Years of Age or Younger," indicates that roughly 40% of the New Jersey cases in 1991 were Hispanic, with a slightly lower percentage for blacks and only 13% for whites. These trends among minorities are likely to continue unless efforts to raise immunization levels are successful.

Measles outbreaks are difficult to control in any age group, especially the preschool-aged children. Prevention is the key. Measles has hospitalization rates as high as 40 percent and measles related deaths have occurred. In order to prevent these costs, it is necessary that all children receive routine preventive pediatric primary care during the first two years of life and are appropriately immunized for their age.

B. Goal: Zero cases of vaccine-preventable diseases (*) will occur by the year 2000.
*vaccine-preventable diseases are:
Measles, diphtheria, pertussis, tetanus, mumps, rubella, polio and preventable cases of Hepatitis B and Haemophilus Influenza B.

C. Objectives

1. 90% of children in New Jersey will be appropriately (*) immunized by 24 months of age.
   *appropriate immunizations by age two are:
   4 DTP, 3 Polio, 1 MMR
2. 95% of new school entrants will have received a second measles or MMR vaccination.
3. 95% of individuals with high risk of percutaneous and mucosal exposure to Hepatitis B will be fully immunized.
4. By year 2000, 90% of all newborns will be immunized against Hepatitis B.

D. Recommendations

—Ensure that all pre-school children have access to a primary care provider.
—Outreach efforts should be provided to identify and follow up on those pre-schoolers not availing themselves of immunization services.
—Chapter 14 of the State Sanitary Code (N.J.A.C. 8:57-4) should be modified to assure that children receive a second dose of measles or MMR at the appropriate time.
—All types of pediatric immunizations should be covered by insurance.
—Establish an Immunization Standard of Care and provide for sanctions against parents or guardians for failure to immunize pre-school children.
—All public agencies/programs caring for pre-school children should ensure that those children are appropriately immunized for their age.
—Develop and/or enforce health care worker immunization regulations.
—High-risk contacts of individuals infected with Hepatitis B should be appropriately tested and treated.
—Ensure screening for ALL pregnant women. Identify HBV surface-antigen positive women, and perform necessary follow-up on them and their family members and sexual contacts.
—Implement a Statewide Immunization Action Plan by building cooperative service delivery arrangements with other public and private agencies.

3. HOSPITAL ACQUIRED INFECTIONS

A. Overview

Hospital acquired infections, also known as nosocomial infections, are infections that develop as a result of being hospitalized, and that were not present at the time of admission. Patients can also develop

nosocomial infections while in a non-acute care setting such as a nursing home or other long-term care facility. These infections present a major public health problem. It is estimated that they affect 2 million hospitalized people annually in the United States, contribute to 80,000 deaths, and cost 5 to 10 billion dollars. In New Jersey 65,000-130,000 hospitalized patients develop a nosocomial infection annually.

The problem presented by nosocomial infections is two-fold: the number of cases with resulting morbidity and mortality and the increasing resistance of the etiologic agents to antibiotic therapy. These increasingly resistant organisms are more expensive to treat with newly developed antibiotics which have more severe side effects and a lower probability of successful treatment than those used for non-multiply antibiotic resistant organisms. Multiple drug resistant tuberculosis is an example of what happens when resistant microorganisms are not effectively managed.

One-third nosocomial infections are preventable using infection control techniques such as good hand-washing and protective barrier techniques. The keys to preventing nosocomial infections are the construction and implementation of an effective infection control approach and the enforcement of this approach.

Establishment of a cost effective approach to the prevention of nosocomial infections should increase the quality of medical care while concurrently decreasing the cost of health care and the result in less morbidity and mortality for New Jersey patients.

B. Goals:

1. Decrease the number of nosocomial infections by 25%.
2. Decrease the nosocomial spread of multiple antibiotic resistant bacteria by 25%.
3. Establish a cost-effective infection control approach to prevent transmission of infectious diseases in acute and long-term care facilities, ambulatory care facilities, among health care workers and the public such that for each dollar spent at least two dollars should be saved.

C. Objectives

1. To have all health care providers implement effective infection control practices to prevent nosocomial infections.
2. Maintain infection control expertise in the state to monitor surveillance, identify outbreaks, support in investigations of outbreaks, and participate in evaluation studies to enhance infection control practices.

D. Recommendations

—Develop professional expertise in infection control for those infection control practices that can not be standardized.
—Provide infection control education to hospital and long-term care facility infection control practitioners.
—Promulgate and revise as necessary in a timely manner hospital, long-term care, and outpatient infection control standards as needed to prevent transmission of nosocomial infections.
—Encourage development of innovative, up-to-date practices to prevent the transmission of nosocomial infections.
—Establish, refine, and maintain a surveillance system to monitor effectiveness of infection control.
—Perform a statewide study to determine cost-effective infection control practices.
—Develop information for physicians and facilities regarding the cost-effectiveness of appropriate antimicrobial regimens.

4. LYME DISEASE

A. Overview

Lyme disease is a tick-mediated, spirochete-induced, multi-systemic disease that was first reported in New Jersey in 1978 (Ward 1981). Since that time, Lyme disease has become the most common vectorborne illness in the United States (CDC 1985). Since Lyme Disease became reportable to the State Department of Health in New Jersey in 1980, the number of cases has steadily increased each year for a decade. The number of confirmed cases reported in New Jersey and nationwide during 1991 were similar to those reported in 1990, suggesting that Lyme disease transmission has reached a plateau. Nonetheless, Lyme disease continues to pose a significant threat to public health. New Jersey remains one of the eight states that together report over 90% of all U.S. cases.

Because the symptoms of Lyme disease are varied, non-specific and can mimic symptoms of other illness, the diagnosis of the disease can be difficult. Serological tests can help identify the disease. However, the tests are not reliable in the early stages of the disease or if the patient is, or has been, on antibiotic therapy at the time of testing. Treatment is also problematic. Currently there is no standard treatment for Lyme Disease, although several regimens have received general acceptance in the medical community. Since early detection and treatment of the disease is critical, emphasis on education and community awareness efforts, targeting both the medical community and the public are of high priority in the prevention of the disease.

The incidence of Lyme Disease according to LAB region is presented in Exhibit 7, covering the years 1988 through 1991. The largest number of cases has consistently been reported in LAB VI, where Monmouth and Ocean Counties have the greatest numbers in the State (133 and 131 respectively, in 1991). However, other counties, such as Somerset and Hunterdon, in LAB V have the highest rates per 100,000 population.

B. Goal: To reduce the occurrence of Lyme disease with ECM by 50% by the year 2000.

C. Objectives and Methodologies

1. Develop better diagnostic capabilities.
2. Evaluate the effectiveness of treatment regimens using the scientific method.
3. Improve accessibility to diagnostic and treatment services through insurance.
4. Improve primary prevention of Lyme Disease through education.
5. Develop better screening tools.

D. Recommendations

—Encourage pharmaceutical research and development of effective therapeutic agents.
—Collaborate with research institutions to study the natural course of the disease and describe accurately its sequelae.
—Collaborate with and encourage researchers to develop accurate diagnostic methodologies.
—Organize and coordinate data and results from scientific investigations and translate them into appropriate public policy and insurance coverage.
—Evaluate the cost effectiveness of screening techniques, when those tools become available.
—Promote prevention and control of Lyme disease through consultations, general informational materials, training materials, public service announcements, and primary and secondary school curricula.
—Conduct basic and applied research projects investigating tick/ecological control in hyperendemic and residential areas.
—Collaborate written medical, environmental, park service, and public health professionals to develop prevention and control training materials and conferences.
—Perform observational studies to evaluate behavior related to Lyme disease prevention by visitors to selected hyperendemic state parks.
—Perform active surveillance for ECM at sentinel physician offices in selected hyperendemic areas.
—Incorporate pre and post testing into all training sessions.
—Evaluate passive surveillance system for trends.

5. SEXUALLY TRANSMITTED DISEASES

A. Overview

Sexually transmitted diseases (STD's) adversely affect the health of New Jersey's young sexually active population (15 to 45 years of age). There are more than twenty diseases and syndromes that are classified as STD's, ranging from the very severe to rather innocuous nuisance diseases. The burden of the consequences of STD's disproportionally fall upon women, minorities, and children. Syphilis was once a major cause of mortality, insanity and disability because of the inability to medically treat it effectively. The development of antibiotics and public health follow-up programs have significantly reduced the serious long-term sequelae of sexually-acquired syphilis. However, the occurrence of congenital syphilis has increased dramatically over the past 6 years. Again, the impact of the AIDS epidemic has been felt by New Jersey's syphilis control program. In 1990, there were more early infectious syphilis cases reported in New Jersey than in any other year since 1947.

A decade ago, there were approximately 3 syphilis cases occurring in men for each one case in women. Today because of the impact of AIDS

on the homosexual community, there is approximately one syphilis case occurring in men for each case occurring in females. The removal of the homosexual transmission of syphilis has been supplanted by an explosive increase in transmission amongst the heterosexual minority population in our major urban areas.

With more females in the child-bearing age infected with syphilis, we would expect to see such increases in congenital syphilis. However upon closer study, we also see a failure of women to access proper pre-natal care. Congenital syphilis is fatal approximately 40% of the time, and those infants who survive are at high risk for lifetime disabilities and dependent care. Congenital syphilis is completely preventable with appropriate pre-natal care and treatment.

Gonorrhea and chlamydia are major causes of sterility and ectopic pregnancies in women. These diseases are among the most prevalent, certainly the most reported diseases within New Jersey. Just 10 years ago chlamydia was basically unknown to many health professionals. We can expect that approximately 20% of women not adequately diagnosed and treated for gonorrhea should develop chronic pelvic inflammatory disease or reproductive failure requiring costly surgery. Infants born to infected mothers are at high risk of developing ophthalmic disease and blindness, or life-threatening pneumonia or meningitis.

The treatment for STD's can well be accomplished through primary care. However, clinicians should be made aware of their existence and prevalence with the community. Targeted large-scale screening programs to identify those persons infected but not yet symptomatic are needed to prevent the later consequences of disease. The aggressive pursuit of exposed and at-risk sexual partners is needed through outreach into the community in order to bring the infected and exposed population into the medical care system. These efforts should prevent continued disease transmission and stop the progression of the disease process in individuals. Cooperative programs between social services, maternal-child health, and communicable disease control programs are needed to ensure adequate pre-natal care for high risk populations.

STDs have historically been and continue to be a major health problem in New Jersey. The problem is especially acute among the young, and among the ethnic and racial minorities in the inner cities of Newark, Paterson, Jersey City, Trenton, and Camden. Statewide averages mask extremely high case rates in many urban areas. For example, in 1990, Newark reported a primary and secondary syphilis case rate of 172 per 100,000 and a gonorrhea case rate of 1,100 per 100,000. Both of these case rates were much higher than those reported by other major cities in the United States (primary and secondary syphilis = 41.5 per 100,000 and gonorrhea = 545.5 per 100,000). In 1990 the cities of Newark, Paterson, Jersey City, Trenton, and Camden reported 52% of the STD cases in New Jersey, even though they comprised only 10.6% of the total population.

Between 1985 and 1990, primary and secondary syphilis rates have increased only slightly among white males (from 4.4 cases per 100,000 population to 4.5). On the other hand, the rates among minority males have more than doubled from 45.0 per 100,000 in 1985 to 97.4 in 1990 (see Attachment 2).

B. Goals:

1. Reduce the incidence of primary and secondary syphilis to 10 cases per 100,000 population.
2. Reduce congenital syphilis to 30 cases per 100,000 live births.
3. Reduce gonorrhea to 175 cases per 100,000 population.
4. Reduce chlamydia to 170 cases per 100,000 population.

C. Objectives

1. Follow up 90% of early infections syphilis cases ensuring that at least 1.0 case is prevented (*) for each case followed.
   *a case prevented is the treatment of previously unknown infected individual or the provision of preventive treatment to an individual exposed to an infectious case of primary and secondary syphilis within the 90 day period prior to examination.
2. Screen at least 100,000 women of childbearing age for gonorrhea each year.
3. Develop a screening program for chlamydia.
4. Improve screening for congenital syphilis and develop effective interventions.

D. Recommendations

—Determine and apply the most cost effective strategy from which to identify, examine and treat high-risk patients.
—Determine and utilize the most effective strategies for changing high-risk behaviors.
—Improve surveillance systems and reporting from laboratories and medical providers.
—Improve screening for STD using the latest technology and applying that to the highest risk groups.
—Improve educational efforts targeted to our youth.
—Develop a standard screening, diagnosis and care for congenital syphilis and promulgate appropriate rules.

6. RABIES

A. Overview

Rabies, one of the most terrifying diseases known to man, is a severe acute viral infection of the central nervous system. All warm blooded mammals including humans are susceptible. With few exceptions, rabies is caused by a bite of a rabies infected animal whose saliva is laden with the rabies virus. Unbroken skin protects against the virus, but cuts, flesh wounds, and mucous membranes allow the virus to enter the body. Once entry has been gained the virus travels along the peripheral nerves towards the spinal cord reaching the brain tissue leading to bizarre behavior, paralysis, coma, and death.

Historically, during the 1930's and 1940's, rabid dogs were the major source of human rabies in New Jersey. The enactment of laws requiring licensing and stray animal control coupled with mass immunization programs successfully controlled the canine epizootic with the last case of dog rabies in New Jersey reported in 1956. In 1960, rabies in bats was first confirmed in New Jersey. Although an average of 18 cases of bat rabies have been detected annually during the time frame of 1960-1989, only rarely have bats transmitted rabies to other animals.

For the first time in over 30 years, rabies is spreading in New Jersey's terrestrial (ground) animals. The Mid-Atlantic raccoon rabies epizootic reached New Jersey in November 1989, and has continued to spread into 18 of the 21 counties. Raccoon rabies is a particular threat to humans because raccoons can adapt and coexist with humans in densely populated urban and suburban population areas. Although 83 percent of the 2,000 confirmed cases in terrestrial animals since 1989 are in raccoons, (as of June 1992) the disease has affected other species, including skunks, cats, groundhogs, foxes, deer, rabbits, opossum, beaver, bear, cattle, sheep, and horses. The incidence of rabies in cats accounts for over 90 percent of the domestic animal cases, and each rabid cat exposes an average of six people to this fatal disease.

Rabies post-exposure treatment is highly effective in preventing disease in people exposed to the rabies virus, although the average cost per treatment is $1,138. It is estimated that as the epizootic spreads throughout the state, as many as 5,000 individuals should require rabies post-exposure treatment at a total cost of $5,690,000. After the epizootic spreads throughout the State and rabies becomes enzootic, the rate of human treatment should decrease, but should remain significantly higher than the rate prior to 1989.

B. Goal: Prevent the transmission of rabies from raccoons and other animals to humans.

C. Objectives

1. To establish and maintain a rabies immunity barrier in the domestic pet population by sponsoring 567 municipal dog and cat immunization clinics.
2. To protect the citizens of this state from exposure to rabies via domestic animals.
3. To ensure the expedient and proper administration of rabies post-exposure treatment, when necessary.
4. To promote rabies education programs through community outreach and school programs in 21 counties in New Jersey.
5. To reduce the incidence of rabies in the raccoon population by utilizing an oral rabies vaccine for raccoons.

D. Recommendations

- Provide vaccine, syringes, and other materials to municipalities for the annual vaccination of 150,000 dogs and cats at immunization clinics.
- Maintain reports of dogs and cats vaccinated at municipal immunization clinics and annual dog canvas reports.
- Promote the passage of municipal cat licensing ordinances requiring rabies vaccination; support statewide cat licensing.
- Encourage the seizure and impoundment of stray and abandoned dogs and cats by certified animal control officers and administer

a program to control stray and unwanted pet populations through spaying and neutering.
- Provide direct consultation to local health departments, animal control officers, veterinarians, medical doctors, and private citizens.
- Analyze specimens submitted to the State Rabies Laboratory to determine the presence of the rabies virus.
- Provide 24 hour rabies consultation through the New Jersey Poison Information and Education System (NJPIES) utilizing an algorithm developed by state personnel.
- Lecture at the certified animal control officers course, conferences and meetings of professional groups, and health fairs and other public events.
- Develop, update, and distribute pamphlets and other educational materials.
- Provide experts for media consultation (newspapers and magazine articles) and appearances (TV and radio programs).
- Collaborate with the United States Department of Agriculture, Thomas Jefferson University (Philadelphia, Pennsylvania), and the New Jersey Departments of Agriculture and Environmental Protection and Energy to conduct a limited field trial of an oral recombinant rabies vaccine (V-RG) for raccoons.
- Develop a plan for the use of the oral vaccine for raccoons, if proven effective, in other areas of the state to reduce or possibly eliminate rabies from raccoons in New Jersey by 1993.

7. FOOD AND WATERBORNE DISEASES

A. Overview

Food and waterborne diseases or source-associated communicable diseases are a significant cause of preventable disease in New Jersey. The control of these diseases is the bedrock on which public health has been built. The major mode of transmission of these illnesses are contaminated food and water.

Diseases such as staphyloccal poisoning, hepatitis A, listeriosis, salmonellosis, and botulism are caused by the ingestion of contaminated food and may result in serious health consequences including death, lost wages to thousands of people, and significant health care costs. The problem is of particular concern to the elderly, the young, those who have been compromised by other illnesses and immune deficiency.

Waterborne illnesses may occur from sewage contamination of the drinking water supply, or from swallowing contaminated water during recreational pursuits on New Jersey's lakes, streams, or shores. Because of the heavy use of New Jersey's natural bodies of water for primary contact recreational purposes, the Department of Health should continue to administer a program to monitor and evaluate water quality, and close beaches to swimming if water quality is unsafe.

Foodborne illnesses may occur from the improper preparation and/or handling of food, either commercially or in the home. Foodborne illnesses cover a wide range of symptoms, from mild diarrhea to death, cover a broad range of bacterial and chemical causes, and have varied prevention techniques, including proper cooking and cooling of food, and proper cleansing of cooking utensils and proper hygiene of food handlers. It is essential that commercial food establishments be monitored to ensure clean food sources and proper food preparation and handling. Education is also necessary to ensure proper food handling in the home. Botulism, which can be deadly, occurs more often from home preserved food than from commercial products.

It has been shown that the reporting of infectious disease, including source-associated illnesses, is significantly under-reported. However, the Division of Epidemiology investigates an average of 45 source-associated outbreaks yearly. In 1991, 42 were foodborne and 2 were waterborne. The average number of reported cases of foodborne illnesses is approximately 3,000 per year. Emphasis on prevention and control of source-associated diseases is imperative.

B. Goal: **Reduce the incidence of source associated infectious diseases by 25%.**

C. Objectives

1. Educate New Jersey citizens to prevent and control illness due to foodborne and waterborne diseases.
2. Investigate source-associated outbreaks and provide public health professionals and local health agencies support and technical assistance to establish effective disease prevention controls.
3. Improve surveillance and data collection efforts.
4. Enforce regulations and monitor compliance.

D. Recommendations

- Develop and distribute public education materials and food curriculum materials to enhance the consuming public's awareness and knowledge of food safety issues and applicable public health precautions.
- Support and augment public education and outreach efforts of the Department of Enviromental Protection and Energy, the U.S. Environmental Protection Agency, and various environmental groups aimed at eliminating sources of pollution and contamination (e.g., commercial boating discharges, etc.) that contribute to the impairment of this state's coastal waters.
- Continue and enhance swimming related illness surveillance in cooperation with the health care community as recommended in the department's "Ocean Health Study: A Study of the Relationship Between Illness and Ocean Beach Water Quality in New Jersey", dated September 1990.
- Effectively communicate to the public accurate and timely information on the quality and degree of safety of the state's recreational waters.
- Train 25% of food handlers in New Jersey through standardized foodhandler training. Establish a regulatory framework which mandates foodhandler training.
- Work with other governmental and private organizations to eliminate pollution and protect the State's Coastal waters.
- Assist Federal and other State officials to develop more reliable indicators of human fecal contamination of recreational waters.
- Develop monthly communications to public health professionals and health care providers.
- Develop active surveillance to ensure that health care providers, laboratories and public health professionals report source-associated disease.
- Communicate summaries, analysis and rcommendations to health care professionals and the public.
- State Department of Health statutory inspectional and enforcement efforts focus on food commodities of concern such as milk and milk products, shellfish, and others as determined through assessing state and national intelligence on food contamination and foodborne illness trends to ensure a safe food supply for the consuming public.
- Encourage the implementation of Hazard Analysis Critical Control Point (HACCP) inspection by local health departments in high risk (*) food establishments.
  *High risk food establishments are those which have menus involving **advance preparation** of potentially hazardous foods several hours or days before serving. This category would also include establishments preparing foods for susceptible populations such as the elderly, the very young and the sick. This category may include but not be limited to full-service restaurants, banquet halls, caterers, health care facilities, schools, youth camps, and church/civic organizations.
- Require local health departments to direct their resources to the inspection of "high risk" retail food establishments to ensure compliance with applicable laws and regulations governing the safe and sanitary operation of food establishments.
- Continue operations of the Cooperative Coastal Monitoring Program to assess, in a coordinated and consistent manner, water quality of public recreational coastal waters.
- Enforce established water quality standards for all public recreational places through the conduct of sanitary surveys, sampling programs, and compliance inspections by local, county, and state public health agencies; and facilitate remedial action, when necessary, to protect the health of the public in cases where contaminated waters are found.

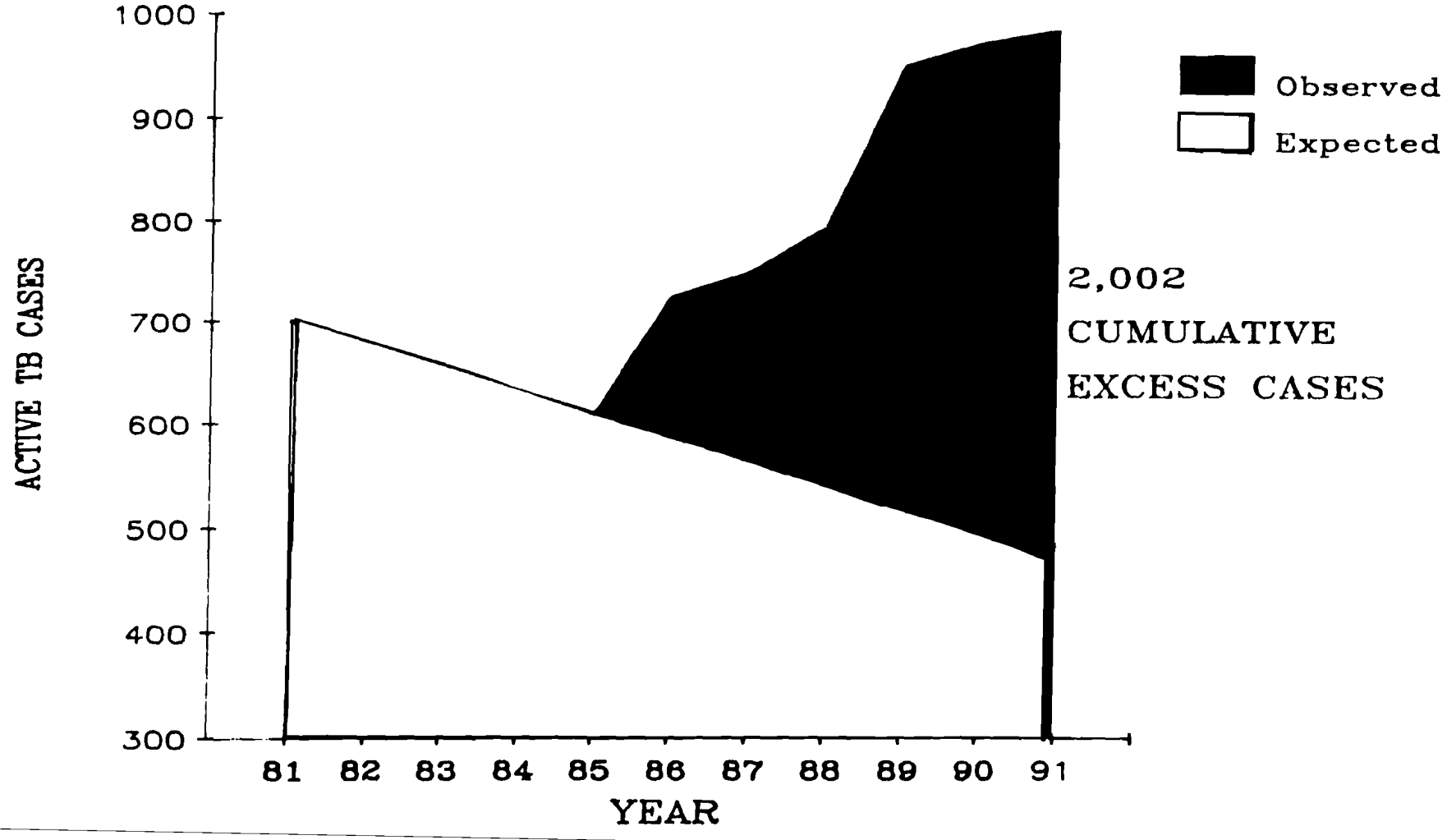
8. CONCLUSION: NEW EMERGING COMMUNICABLE DISEASES

As presented at the beginning of this chapter, history is filled with examples of the evolution of disease in human beings. New diseases have appeared and spread throughout all of recorded history. This evolutionary process will continue, and mankind and New Jersey will be challenged to respond. We need to evaluate and make improvements and changes to our health care system where necessary to meet the future unknown disease challenges.

The problem of new emerging communicable diseases is not one of inadequate health care or accessibility, but rather one of information

EXHIBIT I

OBSERVED AND EXPECTED ACTIVE TUBERCULOSIS CASES NEW JERSEY, 1981 - 1991



and problem recognition. The Department of Health must improve the existing formal passive surveillance system and expand into new areas of concern. We need to enhance our current passive surveillance system with an active surveillance system. We also need to develop sentinel systems and informal systems in order to stay abreast of the most current events and developments in clinical practice. This should enable the Department to coordinate community, county and/or statewide communicable disease efforts rapidly, identify new problems, and provide guidance to the medical and lay communities regarding prevention and control.

EXHIBIT 2

ACTIVE TUBERCULOSIS MORBIDITY BY AGE DISTRIBUTION NEW JERSEY: 1979-1991

		AGE GROUPS							
YEAR	NO. CASES	0-4	5-14	15-24	25-44	45-64	65+	% UNDER 15	% 45 AND OVER
1991	983	33	19	81	479	201	170	5.3	37.7
1990	970	27	28	72	444	225	174	5.7	41.1
1989	949	22	26	67	456	210	168	5.1	39.8
1988	793	16	19	63	357	181	157	4.4	42.6
1987	748	24	24	69	314	179	138	6.4	42.4
1986	724	19	24	52	319	167	143	5.9	42.8
1985	545	7	4	34	238	139	123	2.0	48.1
1984	790	25	20	56	283	222	184	5.7	51.4
1983	809	29	28	52	279	257	164	7.0	52.0
1982	804	21	25	56	286	237	179	5.7	51.7
1981	927	30	25	67	290	273	242	5.9	55.6
1980	906	18	24	79	294	291	200	4.6	54.2
1979	933	27	16	76	288	276	250	4.6	56.4

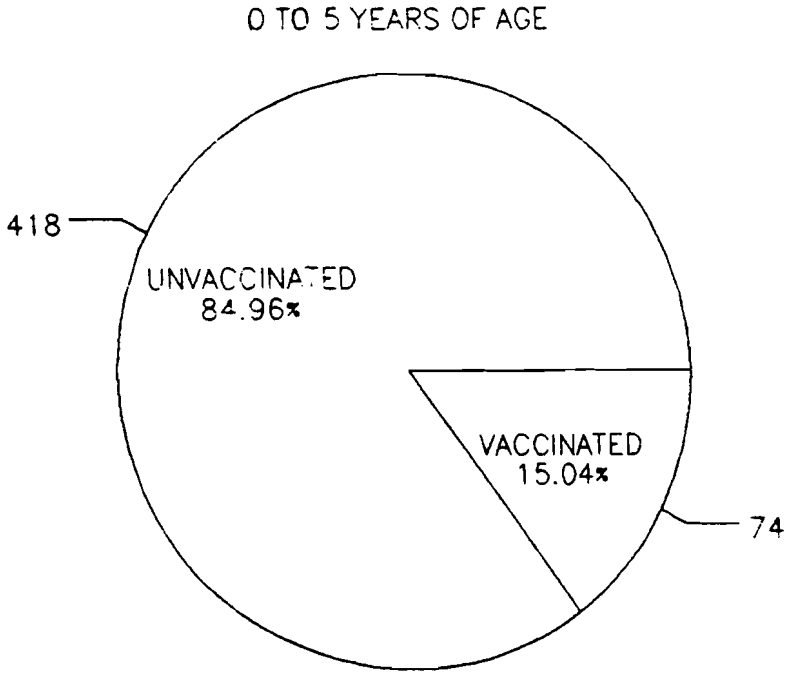
EXHIBIT 3

ACTIVE TUBERCULOSIS MORBIDITY SELECTED CITIES IN NEW JERSEY 1979-1991

YEAR	A.C.	CAMD	ELIZTH	JER C	NWK	PAT	TRTN	TOTAL	% OF STATE CASES
1991	7	15	14	84	196	69	20	405	41.2
1990	14	12	28	74	188	81	20	417	43.0
1989	14	16	32	71	208	73	27	441	46.4
1988	12	18	29	67	154	81	20	381	48.0
1987	20	10	33	64	124	54	24	329	44.0
1986	11	6	36	74	119	53	29	328	45.3
1985	16	10	19	38	108	40	10	241	44.2
1984	16	11	32	75	141	49	24	348	44.1
1983	11	5	27	87	159	39	31	359	44.4
1982	14	27	34	72	145	37	22	351	43.7
1981	19	25	34	75	135	75	28	391	42.2
1980	21	20	38	83	148	43	32	385	42.5
1979	24	23	33	98	161	50	34	423	45.3

EXHIBIT 4

Vaccination Status of Measles Cases Among Children in Atlantic City, Camden, Elizabeth, Jersey City, Newark and Paterson, New Jersey During 1991



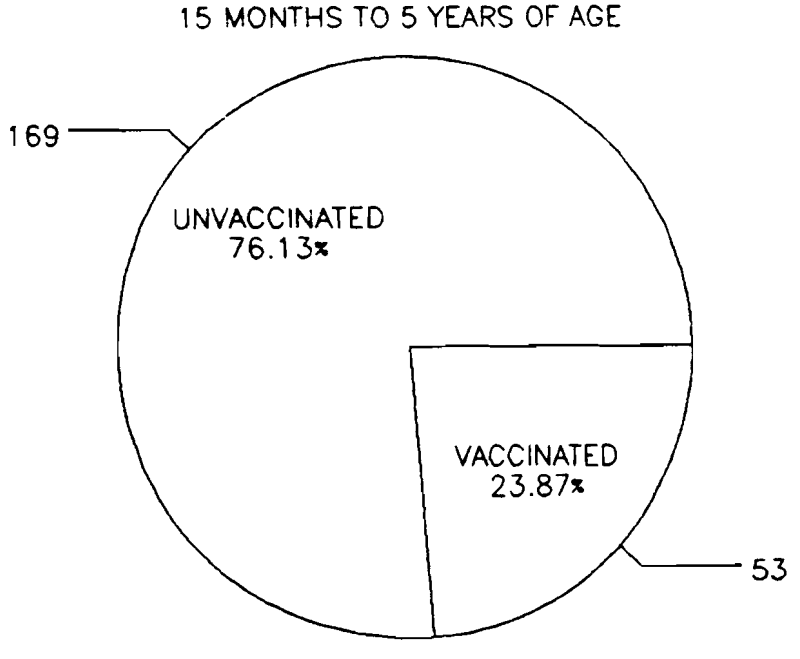


Table 3

EXHIBIT 5

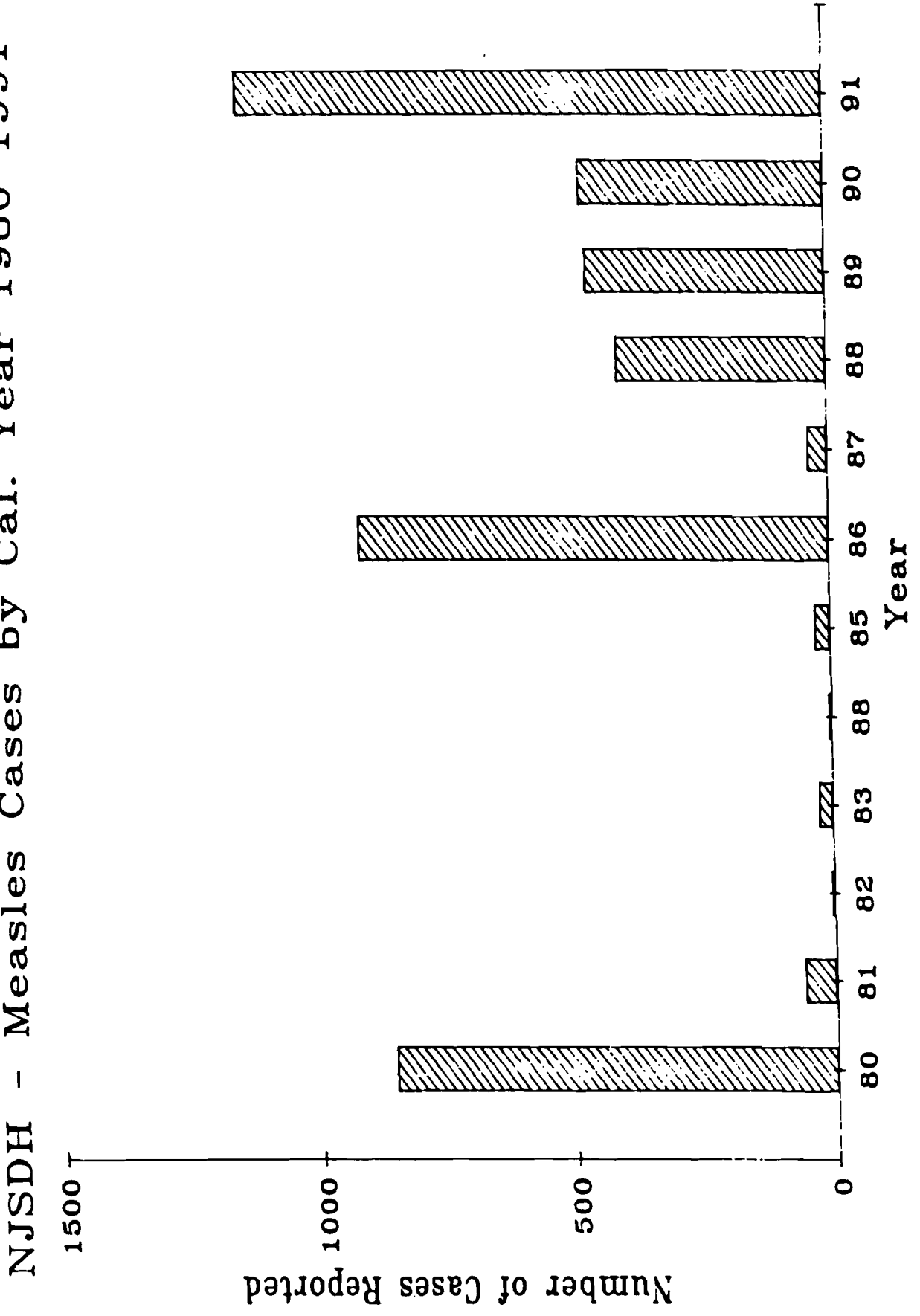


EXHIBIT 6

Percentage of Measles Cases Among Children 5 Years of Age or Younger New Jersey, 1991

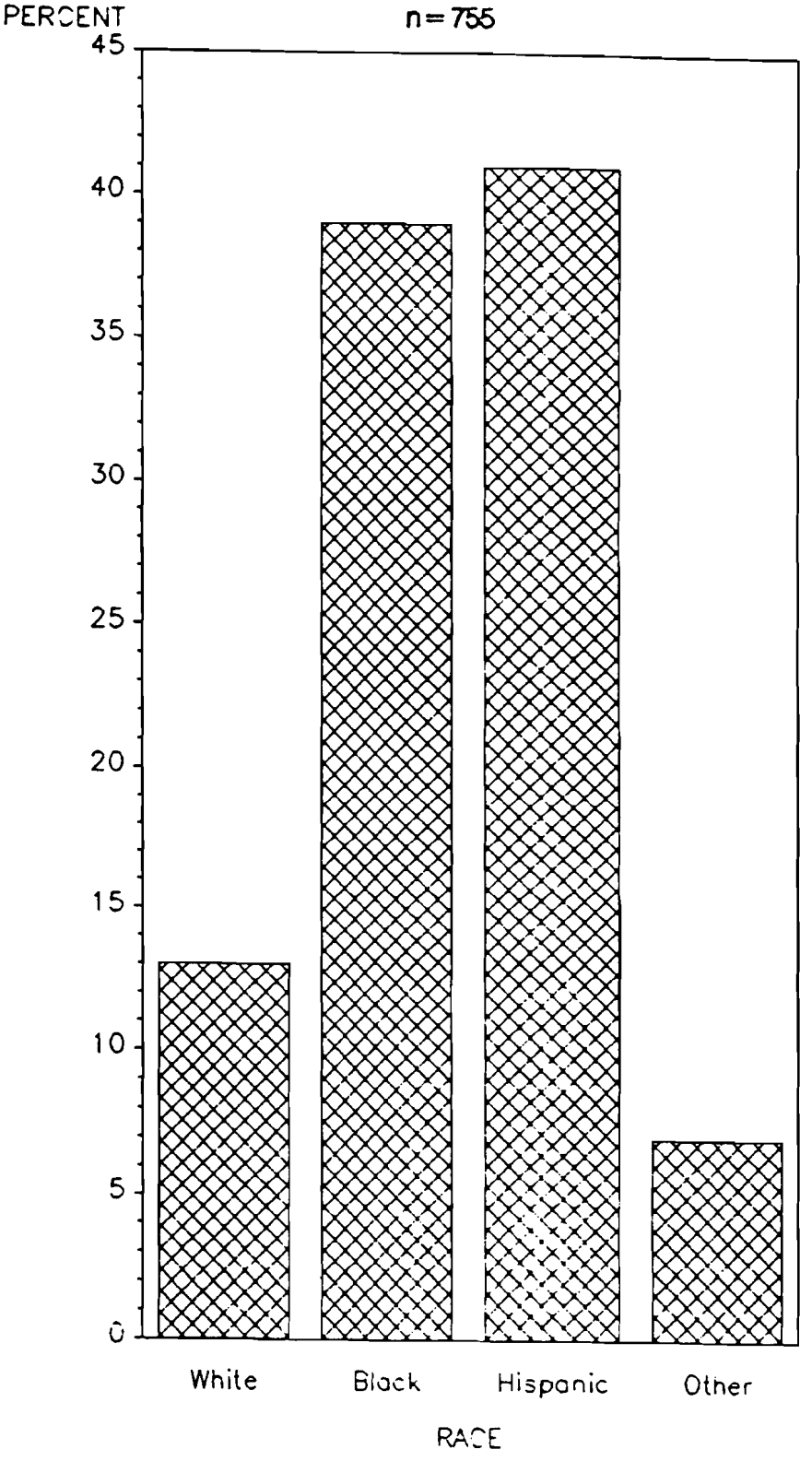


EXHIBIT 7

LYME DISEASE 1988 through 1991

Health Planning Region	# of Cases (Rate/100,000)				
	1988	1989	1990	1991	1992*
REGION 1	29 (2.64)	38 (3.46)	86 (7.84)	122 (11.12)	
Morris	18 (4.28)	20 (4.76)	50 (11.87)	82 (19.46)	63
Passaic	5 (1.08)	2 (0.43)	9 (1.99)	11 (2.43)	4
Sussex	4 (3.17)	13 (10.27)	21 (16.04)	19 (14.51)	4
Warren	2 (2.25)	3 (3.37)	6 (6.55)	10 (10.92)	3
REGION 2	14 (1.02)	2 (0.15)	18 (1.31)	18 (1.31)	
Bergen	8 (0.98)	1 (0.12)	13 (1.58)	16 (1.94)	14
Hudson	6 (1.11)	1 (0.18)	5 (0.90)	2 (0.36)	—
REGION 3	7 (0.55)	11 (0.86)	28 (2.20)	35 (2.75)	
Essex	1 (0.12)	7 (0.83)	19 (2.44)	17 (2.18)	6
Union	6 (1.33)	4 (0.80)	9 (1.82)	18 (3.65)	6
REGION 4	95 (7.06)	56 (4.16)	137 (10.18)	243 (18.06)	
Hunterdon	18 (17.91)	10 (9.95)	46 (42.68)	51 (47.32)	49
Mercer	34 (10.35)	13 (3.92)	30 (9.21)	46 (14.12)	24
Middlesex	21 (3.22)	23 (3.52)	36 (5.36)	59 (8.78)	11
Somerset	22 (9.68)	10 (4.40)	25 (10.40)	87 (36.21)	45
REGION 5	72 (5.41)	118 (8.86)	285 (21.41)	128 (9.61)	
Burlington	50 (12.59)	61 (15.37)	147 (37.21)	55 (13.92)	23
Camden	5 (1.00)	16 (3.20)	40 (7.96)	16 (3.18)	5
Cumberland	10 (7.23)	27 (19.51)	64 (46.36)	38 (27.53)	5
Gloucester	5 (2.29)	13 (5.94)	9 (3.91)	10 (4.35)	11
Salem	2 (3.02)	1 (1.51)	25 (38.29)	9 (13.78)	2
REGION 6	315 (24.12)	411 (31.48)	484 (37.07)	353 (27.03)	
Atlantic	15 (7.05)	104 (44.85)	79 (35.22)	75 (33.43)	25
Cape May	3 (3.12)	16 (16.68)	23 (24.19)	14 (14.72)	5
Monmouth	149 (26.62)	109 (19.47)	162 (29.29)	133 (24.05)	53
Ocean	148 (35.86)	182 (44.07)	220 (50.78)	131 (30.24)	66
Military	18 N/A	44 N/A	29 N/A	0 N/A	0
TOTAL	550 (7.12)	680 (8.81)	1067 (13.80)	899 (11.63)	426

* = incomplete database (data entered as of 8/17/92)

AGRICULTURE

(a)

DIVISION OF ANIMAL HEALTH

Notice of Extension of Comment Period

Biological Products for Diagnostic or Therapeutic Purposes

Proposed New Rules: N.J.A.C. 2:6

Take notice that the New Jersey Department of Agriculture has received a request for an extension of the comment period on proposed new rules N.J.A.C. 2:6, which were published in the New Jersey Register on September 8, 1992 at 24 N.J.R. 2974(a).

Interested persons may submit written comments on the proposed new rules by November 8, 1992, to:

Ernest W. Zirkle, DVM, Director
Division of Animal Health
New Jersey Department of Agriculture
CN 330
Trenton, New Jersey 08625

All comments submitted by interested persons in response to this notice, within the time limit, shall be considered by the Department.

(b)

DIVISION OF MARKETS

New Jersey Sire Stakes Program
Stallion Standing Full Season

Proposed Amendment: N.J.A.C. 2:32-2.4

Authorized By: Sire Stakes Board of Trustees, Bruce A. Stearns, Executive Director and Arthur R. Brown, Jr., Secretary, Department of Agriculture.

Authority: N.J.S.A. 5:5-91.

Proposal Number: PRN 1992-474.

Submit comments by December 2, 1992 to:

Bruce A. Stearns, Executive Director
New Jersey Sire Stakes Program
Department of Agriculture
Division of Markets
CN 330
Trenton, New Jersey 08625
Telephone: (609) 292-8830

The agency proposal follows:

Summary

N.J.A.C. 2:32-2 contains the majority of the New Jersey Sire Stakes conditions. The amendment proposed for these conditions, at N.J.A.C. 2:32-2.4, is primarily technical and is merely designed to clarify an existing substantive provision. The only substantive change being proposed is to clarify the status of stallions registered to stand at stud in New Jersey by requiring them to stay on the farms which they are registered or to miss two breeding seasons if the stallion does move out of State.

There have been proposals to move stallions registered in New Jersey to Australia and New Zealand during the fall and winter months for breeding purposes and then return them to New Jersey in the spring

for breeding purposes. This is viewed as having a potential negative impact on the Sire Stakes Program in that it could lead to the decrease in fertility of the animals moved and used for breeding in such a way. N.J.A.C. 2:32-2.4 currently requires that the stallion remain on the farm the full calendar year in which he is registered. The amendment will further clarify that section by requiring a clear delineation if a stallion is moved out of State which would not permit that stallion to be reregistered for two calendar years.

A typographical error found in the text of the rule being amended is being corrected as part of this rulemaking. This error could potentially have created the opposite effect of that which was intended.

Social Impact

The Sire Stakes Board of Trustees perceive that this proposed amendment will have little social impact to participants since it is a minor change. However, a small number of participants will be less likely to ship their stallions out of State for short periods of time. By clarifying the rule which requires stallions to stay in New Jersey, the change should have the beneficial effect of keeping more stallions in the program by making it more difficult to move them out of State.

Economic Impact

The proposed amendments should cause little economic impact on the Sire Stakes participants since it does not impose additional fees or payments. However, a small number of participants who may want to ship stallions out of the State could be negatively effected in that they would not be able to collect stud fees in other jurisdictions.

The Sire Stakes Program and other related programs have provided the incentive to make New Jersey the national leader in the number of Standardbreds for the past decade. With a total of between $12,000,000 and $14,000,000 in purses, breeders awards and other incentives available, the Standardbred population in New Jersey is highly dependent on the New Jersey Sire Stakes Program. The program provides many of the horses who race at the New Jersey tracks with upwards of 35 percent of the Standardbreds racing in New Jersey being products of the local breeding program.

Total Sire Stakes purse monies available compare favorably with other states and provinces placing New Jersey at or near the top each year. The results of these programs are to attract top stallions to farms in New Jersey and resulting in a large number of mares sent to New Jersey from out of State locations to be bred to those stallions. Nearly two-thirds of the 3,376 mares bred to New Jersey stallions in 1991 were owned by out-of-state residents, most of whom board their horses at farms in New Jersey. The value of New Jersey sired yearlings produced each year exceeds $30,000,000. The proposed amendment seeks to maintain the integrity of the Sire Stakes program.

Regulatory Flexibility Analysis

Many of the participants in the Sire Stakes Program are small businesses as defined by the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. The purpose of the Sire Stakes Program is to provide competitions for New Jersey-Sired Standardbred horses that are, at once, challenging enough to improve the breed and open enough to encourage the maximum participation of Standardbred, with economic incentives of sufficient magnitude to make participation worthwhile. The number of small businesses participating in the Program has increased each year. Therefore, the Sire Stakes Board of Trustees believes the program is beneficial to such businesses.

The proposed amendment does not impose any reporting or recordkeeping requirements on these small businesses. The compliance requirement imposed, a two calendar year denial of registration, is a sanction that will take place only in the event that the existing requirement that a stallion not be moved from the farm on which he was registered is not observed. Therefore the proposed amendment is not considered of such a burden to the participating small businesses as to require a separate standard based on business size. Further in the interest of competitive fairness and to maintain the integrity of the program, no differing standards, based on business size, are offered.

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

2:32-2.4 Stallion standing full season

A stallion, in order for his foals to be eligible for the New Jersey Sire Stakes Program, must stand for breeding purposes the full season, extending from January 1 through December 31, on a farm in New Jersey, and shall not be moved from the farm on which he was registered without prior permission (excluding medical emergency) of the Sire Stakes Board of Trustees. A stallion shall not be permitted to race during a registered breeding period, that is, January 1 through December 31. **A stallion who is moved to a location outside the State of New Jersey cannot be re-registered for two full calendar years after moving.** The foals of a stallion that does [not] race or is moved without prior permission of the Sire Stakes Board of Trustees during a registered breeding year will not be eligible to the Sire Stakes.

BANKING

(a)

DIVISION OF REGULATORY AFFAIRS

Secondary Mortgage Loan Act Rules

Proposed Readoption: N.J.A.C. 3:18

Authorized By: Jeff Connor, Commissioner, Department of Banking.

Authority: N.J.S.A. 17:11A-54.

Proposal Number: PRN 1992-473.

Submit written comments by December 16, 1992 to:

Rule Comments
Attn: William B. Waits, Regulatory Officer
Department of Banking
CN 040
Trenton, NJ 08625

The agency proposal follows:

Summary

Pursuant to the requirements of Executive Order No. 66(1978), N.J.A.C. 3:18 expires on January 19, 1993. The Department of Banking has reviewed the rules and has determined them to be necessary, reasonable and proper for the purpose for which they were originally promulgated, as required by the Executive Order. The Department recently proposed necessary changes in the rules. See 24 N.J.R. 2760(a), New Jersey Register, August 17, 1992. Accordingly, the Department proposes to readopt these rules without change. The summaries of the subchapters include the proposed amendments previously filed, since it is anticipated that most of these proposed changes will be filed before N.J.A.C. 3:18 is readopted.

Subchapter 1, consistent with the Secondary Mortgage Loan Act, N.J.S.A. 17:11A-34 et seq. (the "Act"), provides that persons engaged in the secondary mortgage loan business must obtain licenses from the Department. Exceptions are made for attorneys, persons making up to two secondary mortgage loans, financial institutions and specified real estate licensees.

Subchapter 2 sets forth the records which a licensee must maintain, and the locations where these records must be kept.

Subchapter 3, consistent with the Act, sets forth the fees which a licensee may charge in addition to interest. In particular, the rules provide that a licensee may charge specified third party fees, late charges, check collection charges and up to three discount points.

Subchapter 4 permits a licensee to offer property insurance on the mortgaged property, but prohibits a licensee from requiring the borrower to obtain insurance from a particular insurance agent or broker. In addition, a licensee may not require a borrower to purchase credit life or accident and health insurance, or credit involuntary unemployment insurance, in connection with a secondary mortgage loan.

Subchapter 5 limits the fees which a licensee may charge a borrower for attorney review. Further, it requires the licensee to issue to the borrower an itemized listing of the specific legal services provided.

Subchapter 6 permits a licensee to pledge secondary mortgage loan receivables as collateral for a commercial loan provided the licensee continues to service all such pledged accounts.

Subchapter 7 concerns the advertising practices of licensees. In general, it prohibits advertising practices which are misleading or deceptive, and requires the licensee to maintain adequate records.

Subchapter 8 requires a licensee to obtain a branch office license from the Commissioner before opening a branch office. In addition, this subchapter limits the locations where a licensee may establish a branch.

Subchapter 9 sets forth the required disclosures which a licensee must make to a borrower at or before closing.

Subchapter 10 defines the license requirements under the Act, including the $1,000 biennial license fee and the examination requirements. In addition, this subchapter sets forth the surety bond requirements, and defines the class of persons eligible to recover under the bond.

Finally, Subchapter 11, as proposed on August 17, 1992, sets forth the registration requirements for assignees of secondary mortgage loans.

Social Impact

These rules set forth a procedure for the initial licensing and continued relicensing of secondary mortgage lenders in this State. The rules have permitted the Department to monitor and examine on a regular basis the books and records of licensees to determine whether the business of the licensee is being conducted in accordance with the Act and rules. Failure to readopt these rules would therefore diminish the Department's ability to determine compliance, and would operate to the detriment of consumers.

Economic Impact

The rules proposed for readoption define with specificity which persons must be licensed under the Act. To the extent that these licensing provisions alert persons that they must obtain a license from the Department of Banking to engage in secondary mortgage lending, and such persons become licensed, the proposed rules will impose on such persons the costs of licensing. Secondary mortgage lenders are required to pay the Department a biennial license fee of $1,000. N.J.A.C. 3:18-10.1. In addition, licensees must reimburse the Department for the cost of examinations at the cost of $325.00 per diem per person. N.J.A.C. 3:18-6.6(b). Finally, pursuant to rules recently proposed, the charge for registering a person to receive assignment of a secondary mortgage loan is set at $100.00, or $500.00 for a registration to receive secondary mortgage loans with servicing rights by other than a chartered or licensed financial institution.

Consistent with the Act, these rules proposed for readoption place limits on the fees which a licensee may charge. This may have a negative economic impact on licensees desiring to charge fees not listed in the Act and in these rules.

Regulatory Flexibility Analysis

Virtually all secondary mortgage loan licensees are small businesses as defined in the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. The rules proposed for readoption impose reporting and compliance requirements on licensees. In particular, a licensee must file an application every two years with the Department, and must submit to examinations. Prior to being licensed, a person must pass a qualifying examination. In addition, a licensee must file an application to establish a branch office. Completion of these applications usually requires the professional assistance of accountants to determine whether the licensee is in compliance with the Act's net worth requirements.

The rules require a licensee to preserve the books, accounts, and records for at least two years after making the final entry on any secondary mortgage loan. The rules also require that the licensee maintain copies of all advertising copy. The records must be maintained at a licensed branch office, or an unlicensed office with the approval of the Commissioner. Further, consistent with the Act, the rules limit the charges which may be imposed by a licensee, limit the methods of computing interest and prohibit a licensee from requiring collateral security. Finally, the rules require that an unlicensed person outside New Jersey register with the Department before receiving assignment of secondary mortgage loans.

No differentiation based on business size is made in these licensing requirements because the State Legislature has directed the Department in the Act to license all secondary mortgage lenders regardless of the size. Small licensees need the same supervision as larger licensees. Regarding the recordkeeping requirements, in order for the Department to determine whether the Act is being complied with, it is necessary that all licensees maintain adequate records. Although the application fee is the same for all licensees, small businesses typically require fewer days of examination, so they are charged a proportionately lower examination charge. To this extent, differentiation in the fees results from the business size.

Full text of the proposed readoption may be found in the New Jersey Administrative Code at N.J.A.C. 3:18 (see, also, 24 N.J.R. 2760(a)).

ENVIRONMENTAL PROTECTION AND ENERGY

(a)

ENVIRONMENTAL REGULATION

Surface Water Quality Standards
Ground Water Quality Standards; Definitions
New Jersey Pollutant Discharge Elimination System
Proposed Recodification with Amendments: N.J.A.C. 7:9-4 to 7:9B-1
Proposed Amendments: N.J.A.C. 7:9-6.3, 7:14A-1.9 and 7:14A-3.14

Authorized By: Scott A. Weiner, Commissioner, Department of Environmental Protection and Energy.

Authority: N.J.S.A. 13:1D-1 et seq., 58:10A-1 et seq., and 58:11A-1 et seq.

DEPE Docket Number: 46-92-09.

Proposal Number: PRN 1992-470.

Public hearings concerning this proposal will be held on:

Wednesday, December 2, 1992 from 4:00 P.M. until the close of testimony, and then again from 6:30 P.M. until the close of testimony, at:

The Municipal Court House
Municipal Court Room
17 North 1st Street
Pleasantville, New Jersey 08232;

Tuesday, December 8, 1992 from 4:00 P.M. until the close of testimony, and then again from 6:30 P.M. until the close of testimony, at:

Lawrence Municipal Building
Lower Level Conference Room
Route 206 at I 295
Lawrenceville, New Jersey 08648; and

Thursday, December 10, 1992 from 4:00 P.M. until the close of testimony, and then again from 6:30 P.M. until the close of testimony, at:

Parsippany Municipal Building
Council Chambers
1001 Parsippany Blvd.
Parsippany, New Jersey 07054

Submit written comments by December 18, 1992 to:

Richard J. McManus
Director, Officer of Legal Affairs
NJ Department of Environmental Protection and Energy
CN 402
Trenton, New Jersey 08625

A more detailed discussion of the proposed changes to the State's Surface Water Quality Standards (SWQS) is contained in the "Basis and Background for the 1992 Proposed Revisions to the Surface Water Quality Standards" (October 1992) which can be obtained from the Office of Administrative Law or by writing to:

Steven P. Lubow
NJ Department of Environmental Protection and Energy
Office of Regulatory Policy
CN 423
Trenton, New Jersey 08625

The agency proposal follows:

Summary

The Federal Water Pollution Control Act, 33 U.S.C.A. 1251 et seq., better known as the Clean Water Act (CWA), requires the states to hold public hearings at least once every three years for the purpose of reviewing, and, as appropriate, modifying and adopting, SWQS (33 U.S.C.A. 1313(c)(1)). New Jersey proposed revisions to its SWQS in July of 1988 (20 N.J.R. 1597(a)). A partial adoption of the proposed revisions occurred in August of 1989 (21 N.J.R. 2302(b)). The delay in adopting the proposed revisions, and the decision to make only a partial adoption, were caused by the need to carefully consider comments submitted criticizing the criteria proposed for selected toxic substances. This proposal contains recalculated criteria for the July 1988 toxic substances,

as well as proposed criteria for additional substances. Adoption of criteria proposed for toxic substances originally contained in the July of 1988 proposal will complete the 1989 triennial review required by the CWA.

N.J.A.C. 7:9-4 is being recodified to N.J.A.C. 7:9B-1, placing the SWQS in its own chapter of the New Jersey Administrative Code. While the CWA requires the review/revision of SWQS at least once every three years, State procedures under Executive Order No. 66(1978) cause each chapter of the Administrative Code to lapse if not reviewed/revised every five years. Because of this combination of mandatory schedules, New Jersey revises and repromulgates the SWQS in a staggered schedule of three years, two years, one year, three years, one year, two years, etc. By recodifying N.J.A.C. 7:9-4, the New Jersey Department of Environmental Protection and Energy (Department) will be able to repromulgate the chapter every three years and avoid the existing confusing and inefficient cycle.

At N.J.A.C. 7:9-4.4, the Department has included a definition of wetlands. The United States Environmental Protection Agency (USEPA) has advised states to apply their water quality standards to wetlands in accordance with the *Agency Operating Guidance, FY 1991,* which states:

By September 30, 1993, States and qualified Indian Tribes must adopt narrative water quality standards that apply directly to wetlands. . . . In adopting water quality standards for wetlands, States and qualified Indian Tribes, at a minimum, shall: (1) define wetlands as "State waters; (2) designate uses that protect the structure and function of wetlands; (3) adopt aesthetic narrative criteria (the "free froms") and appropriate numeric criteria in the standards to protect the designated uses; (4) adopt narrative biological criteria in the standards; and (5) extend the antidegradation policy and implementation methods to wetlands.

Wetlands are included in the Federal definition of "waters of the United States," of which "waters of the State" are a subset, and, therefore, wetlands require water quality standards pursuant to Section 303(c)(2)(A) of the CWA. The proposal of these definitions to explicitly include wetlands is a step toward amending the SWQS to incorporate water quality criteria for wetlands. In the near future, the Department will propose water quality standards for wetlands. Once water quality standards for wetlands, including the proposed definition of wetlands, are fully incorporated into the SWQS, the State's existing Section 401 Water Quality Certification program will become more standardized and predictable.

N.J.A.C. 7:9-4.3, which is presently reserved, is being amended to incorporate a severability statement into the SWQS. This provision is intended to ensure that the entire contents of the chapter are not overturned should a particular subchapter or clause be determined to be unconstitutional or invalid by a court of competent jurisdiction.

N.J.A.C. 7:9-4.5(a)4 is being modified to clarify the Department's approach to regulating the discharge of Group A and B carcinogens. The Department proposes to regulate the discharge of carcinogens utilizing a risk management approach. Carcinogens will be regulated so that instream levels of carcinogens do not exceed a one-in-one million risk level. This approach is consistent with the approach and risk level chosen by the legislature in New Jersey's Safe Drinking Water Act, N.J.S.A. 58:12A-1 et seq. The risk level being proposed is also within the range recommended by the USEPA for development of criteria for surface waters.

In N.J.A.C. 7:9-4.5(c) the Department is proposing a change in design flow from the Minimum Average 7 Consecutive Day flow with a statistical recurrence interval of 10 years (MA7CD10) historically utilized as the design flow for all criteria. Criteria being proposed are designed to protect certain uses of the waters. Specifically, there are criteria for protection of aquatic life from acute and chronic effects of toxics, and protection of human health from carcinogens and from noncarcinogens. The design flows being proposed are intended to reflect the different exposure times associated with the criteria. Acute aquatic protection criteria are designed to protect against short duration exposures and the design flow proposed for use with these criteria is the Minimum Average 1 Consecutive Day flow with a statistical recurrence interval of 10 years (MA1CD10). Chronic aquatic protection criteria are designed to protect against longer term effects resulting from exposure periods greater than one day and less than the lifetime of the aquatic organism. The design flow proposed for chronic aquatic exposure criteria is the MA7CD10. Noncarcinogenic human health-based criteria are developed assuming that effects occur after days or weeks of exposure and the proposed design flow is the Minimum Average 30 Consecutive Day flow with a statistical recurrence interval of five years (MA30CD5). Carcinogenic effect-based criteria are developed assuming exposure over a lifetime (70 years) and the proposed design flow is the long term harmonic mean flow. The Department is proposing the design flows recommended by the USEPA appropriate considering the exposure times associated with the criteria being proposed.

N.J.A.C. 7:9-4.5(e) is being amended to incorporate additional language to reflect the Department's existing authority to grant compliance schedules. The Department has an existing rule on compliance schedules in the New Jersey Pollutant Discharge Elimination System (NJPDES) regulations at N.J.A.C. 7:14A-2.8. This language is being proposed as the result of an Order by the USEPA Administrator in the matter of Star-Kist Caribe (April 16, 1990). In that decision the Administrator stated "schedules of compliance for water quality-based permit limitations may not be included in National Pollutant Discharge Elimination System (NPDES) permits unless explicitly authorized by the State in its water quality standards or implementing regulations." Compliance schedules for water quality standards adopted prior to July 1, 1977 are not allowed because the language of Section 301(b)(1)(C) of the CWA required compliance with limitations necessary to meet those water quality standards by July 1, 1977.

N.J.A.C. 7:9-4.7, which dealt with water quality based effluent limitations as related to water quality management plans, is being proposed for amendment to eliminate outdated or redundant language. In addition, it is being rewritten to address total maximum daily loads, wasteload allocations, and load allocation rather than effluent limitations because of a recent amendment to the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., P.L. 1990, c.28. This difference is reflected in the revised title of that section, "waterway loadings in areawide water quality management plans." The change in language from reference to "effluent limitations" to "total maximum daily loads, wasteload allocations, and load allocation" does not change the effluent restrictions being referred to. It simply changes what they are being called. Before the recent amendments to the Water Pollution Control Act (WPCA) the definition of effluent limitations in the WPCA was broad enough to incorporate all effluent restrictions developed by the Department's various programs. The recent amendments to the WPCA changed the definition of "effluent limitation" so that only those restrictions "established by permit, or imposed as an interim enforcement limit pursuant to an administrative order, including an administrative consent order." This narrowing of the restrictions which fall under the definition of an "effluent limitations" required a change in what restrictions established in water quality management plans were called.

The Department is proposing ambient criteria for certain metals found at N.J.A.C. 7:9-4.14(c) as "total recoverable." The Department's proposed change from "total" to "total recoverable" is intended to allow direct calculation of permit limitations in the form required by the USEPA regulation at 40 CFR Section 122.45(c) which states:

All permit effluent limitations, standards, or prohibitions for a metal shall be expressed in terms of "total recoverable metal."

It is therefore necessary that NJPDES regulations at N.J.A.C. 7:14A-3.14(c), calculating NJPDES permit conditions for metals, be proposed for amendment as well so that effluent limitations based on these criteria are expressed as "total recoverable metal."

N.J.A.C. 7:9-4.14(c), the toxic substances section of the criteria, is being modified by the proposed addition of criteria for 104 toxic substances. In addition, criteria for 18 of the existing 20 toxic substances are proposed for change. Thus, the proposed SWQS contain ambient criteria for 124 toxic substances. Twenty-three of these substances will have criteria for both human health and aquatic protection, 87 substances will have only human health protection criteria, while 15 toxic substances will have only aquatic life protection criteria.

With the exception of un-ionized ammonia and chlorine produced oxidants (CPO), the existing aquatic life protection criteria are proposed for change from single, maximum at any time criteria to a combination of acute criteria, as one-hour averages, and chronic criteria, as four-day averages. This change in the aquatic life protection criteria required a change in the identification of the criteria as acute or chronic. Instead of following criteria with an "(a)" to indicate aquatic protection criteria, the aquatic protection criteria will now be followed by an "(a)" to indicate criteria based on acute aquatic toxicity and a "(c)" to indicate criteria based on chronic aquatic toxicity. The human health criteria remain as anytime maxima criteria and are identified by "(hc)" and "(hcc)" when based on carcinogenic effects and by "(h)" when based on noncarcinogenic effects.

The numerical criteria for un-ionized ammonia are not proposed for a change at this time, but the notation indicating that they are aquatic

life protection criteria is proposed for change. In order to determine the applicable notation, the Department reviewed "Quality Criteria For Water 1976" (the Red Book), the USEPA 1980 304(a) criteria documents, and discussed the criteria with Ken Potts, Office of Criteria and Standards, USEPA, Washington, D.C. in December of 1990. The Red Book indicates that the criteria listed in it were designed to provide an adequate degree of safety to protect against long term effects. Specifically, the Red Book states:

where only 96 hour bioassay data were available, judgmental prudence dictates that a substantial safety factor be employed to protect all life stages of the test organisms in waters of varying quality, as well as to protect associated organisms within the aquatic environment that have not been tested and that many be more sensitive to the test constituent. Application factors have been used to provide the degree of protection required (page 3).

Based on this review and discussion it was determined that the existing ammonia criteria are chronic and will be followed with a "(c)." The Department is working on a proposal to revise the un-ionized ammonia criteria based on work done by consultants hired to evaluate and, if appropriate, recommend revised un-ionized ammonia criteria for New Jersey. It is anticipated that the proposal to revise the un-ionized ammonia criteria will be ready for publication by the end of the year.

The numerical criteria for CPO are not proposed for change. However, they are proposed to change from instantaneous maxima and 24-hour averages to one-hour average and four-day average criteria. This proposed change reflects the recommended periods in the USEPA Section 304(a) criteria document.

Because the Department and the Delaware River Basin Commission (DRBC) do not follow the same rulemaking schedules, the SWQS and the DRBC regulations periodically contain different criteria for the mainstem Delaware River and Delaware Bay. The Department is therefore proposing to change N.J.A.C. 7:9-4.14(d), Surface Water Quality Criteria for the Mainstem Delaware River and Delaware Bay, by replacing the table containing DRBC criteria and incorporating by reference the criteria contained in "Delaware River Basin Commission, Administrative Manual—Part III, Water Quality Regulations," Article 3, to avoid this situation.

In addition, N.J.A.C. 7:9-4.14(d) is being proposed for modification to specifically incorporate by reference criteria at N.J.A.C. 7:9-4.14(c) for toxic substances for which the DRBC has not adopted criteria and to incorporate the use of best available scientific information-based criteria when neither the Department nor the DRBC have adopted criteria. This will clarify which criteria will be used in regulating the discharge of toxics to the Delaware River, as well as provide more uniformity between the member states in their regulation of toxics substances. The DRBC is currently working on a toxics criteria proposal and the public hearings on the DRBC criteria proposal are expected to be held later this year. Finally, the Department is proposing to remove the listed designated uses for the mainstem Delaware River and Delaware Bay at N.J.A.C. 7:9-4.13 and incorporate by reference the designated uses contained within Article 3 of the DRBC regulations.

N.J.A.C. 7:9-4.15, Surface water classifications for the waters of the State of New Jersey, is being amended so that the surface water classification tables are internally consistent and free from incorrect or incomplete listings. Many minor spelling changes are being made to correct errors in town or waterway names. Changes to some creek, roadway and river names are being made from those names commonly used by the Division of Fish, Game and Wildlife, to those names used on United States Geological Survey quadrangle maps. Town names or other descriptive place names are being added to waterways for which no descriptive place name has previously been used. In addition, incorrect place names previously used are being changed to more accurately identify the location of the waterway segment. Many classification descriptions have more precise information added to clarify waterway segment boundaries and to avoid possible confusion that may arise from inconcise descriptions.

In Tables 1 through 5 of N.J.A.C. 7:9-4.15, the names of State parks, forests and wildlife management areas are updated to reflect names currently used by the Department. Names of these areas were previously updated in Table 6 during the 1985 review/revision of the SWQS. Likewise, many descriptions of FW1 waters in Table 6 were clarified and amended during the 1985 review/revision but the same waterway descriptions were not changed in Tables 1 through 5. These revised descriptions are now being made to reflect those descriptions already incorporated into Table 6. Finally, a number of the State's waters are being proposed for designation as Category One (C1). No waters are proposed for reclassification for less restrictive uses in this proposal.

N.J.A.C. 7:9-6.3, the definition section of the Groundwater Quality Standards (GWQS), is being amended to include definitions for surface waters and vadose waters. These changes are being proposed simultaneously in the SWQS, GWQS, and NJPDES rules to maintain regulatory consistency. These additional definitions are being proposed in the SWQS to explicitly include wetlands as waters of the State in recognition of the fact that wetlands are waters of the State for which SWQS will have to be developed.

The proposed modifications to N.J.A.C. 7:14A-1.9, the definition section of the New Jersey Pollution Discharge Elimination System Regulations, are part of the Department's efforts to explicitly include wetlands in the definition waters of the State and to maintain Departmental consistency between regulations.

Social Impact

The proposed amendments are expected to have a generally positive social impact. The various additions and changes being proposed will act together to provide cleaner surface waters, protect existing high quality waters, and provide additional protection of the public's health. Improvements in water quality are expected to provide increased recreational opportunities and improved health to the State's population.

The segment of the population that will be most directly affected by the amendments will be those responsible for discharges as defined in the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-3e). The impacts on this segment of the population are not expected to be disruptive because the USEPA has proposed similar ambient criteria for toxic substances applicable to New Jersey waters and a provision in the existing SWQS already requires the establishment of water quality-based effluent limitations using best available scientific information-based criteria. If the Department fails to adopt ambient criteria for toxic substances, it is expected that the USEPA would promulgate criteria for New Jersey's waters. The impact of this amendment would be limited to those where the criteria adopted by the Department are more stringent than those ultimately adopted by the USEPA. However, it should be noted that any criteria adopted by the Department which are more stringent than the criteria ultimately adopted by the USEPA are identical to the best available scientific information-based criteria which must already be used pursuant to N.J.A.C. 7:9-4.6(c)4iii.

There are no social impacts anticipated from the proposed changes to the definition sections of the GWQS (N.J.A.C. 7:9-6.3) and NJPDES Regulations (N.J.A.C. 7:14A-1.9) because the proposed changes do not modify the scope or regulatory scheme of the subject regulations.

Finally, no social impacts are anticipated as a result of the change in language from "total metal" to "total recoverable metal" at N.J.A.C. 7:14A-3.14. The change from "total metal" to "total recoverable metal" will result in such small changes to permit limitations that social impacts are not expected.

Economic Impact

There are three aspects of the proposed amendments which could be expected to result in economic impacts. These are the proposed changes to the policy on carcinogens at N.J.A.C. 7:9-4.5(a)4, the adoption of chemical specific numerical criteria for toxic substances at N.J.A.C. 7:9B-4.14(c) and 4.14(d), and the designation of additional Category One antidegradation waters.

The changes proposed to the policy on carcinogens will clarify the policy and incorporate a risk management approach which will bring the regulation of carcinogens in line with the approach taken under NPDES for toxic substances while providing a level of protection that is consistent with the level of protection selected by the legislature in New Jersey's Safe Drinking Water Act, N.J.S.A. 58:12A-1 et seq.

When carcinogens are present in an effluent, the level of treatment required to meet water quality-based effluent limitations will generally be the same as would be required if the USEPA adopted criteria for New Jersey waters and will be the same as would be imposed by development of effluent limitations using best available scientific information-based criteria. Where the criteria adopted by the Department are more stringent than those adopted by the USEPA for New Jersey waters, there would be a perceived incremental compliance cost compared to costs associated with the USEPA criteria. There would be no actual increase in compliance costs resulting from these more stringent criteria because the proposed criteria represent best available scientific information-based criteria which must be used under the existing SWQS (N.J.A.C. 7:9-4.6(c)4iii).

Adoption of ambient criteria for toxic substances could also be expected to result in economic impacts. However, New Jersey's SWQS

currently require the use of best available scientific information-based criteria in the development of water quality-based effluent limitations whenever the Department has not adopted numerical criteria for a toxic substance. The criteria being proposed are identical to the best available scientific information-based criteria. Because the criteria are identical, there will be no increased costs associated with adoption of these criteria when compared to costs resulting from application of the existing SWQS (N.J.A.C. 7:9-4 in general and N.J.A.C. 7:9-4.6(c)4iii in particular).

If the requirements of N.J.A.C. 7:9-4.6(c)4iii were ignored, the potential impact of adopting the proposed criteria would be highly variable. There would be no additional costs for sampling, analysis, or reporting because these are currently being required by the Department to satisfy existing Federal regulations whenever permits are initially issued, renewed, or modified. Additional costs, if any, would be mainly attributable to additional actions required to consistently comply with effluent limitations based upon the proposed criteria. Concentrations of these toxic substances in many effluents are expected to be already low enough that no additional actions will be required. In such cases, there would be no additional costs associated with the adoption of the criteria.

Where additional actions will be required to comply with effluent limitations based upon the proposed criteria, the costs will vary widely. The magnitude of the economic impacts will be determined, in part, by the severity of the problem and the approach chosen to comply with the effluent limitations. Possible approaches available for meeting effluent limitations include:

—modification of existing treatment;

—construction and operation of additional treatment units;

—pretreatment at the source(s) of the toxic pollutant(s);

—pollution prevention (for example, substitution of less toxic or nontoxic chemicals for the toxic pollutants at the point of generation); and

—source reduction (for example, reclamation or recycling of toxic pollutants).

Table 1 presents an estimate of the costs associated with upgrading treatment systems to reduce the concentration of toxic pollutants in an effluent. As an example, a hypothetical facility must upgrade its one million gallon per day wastewater treatment plant to remove additional levels of heavy metals and organics as a result of the adoption of this proposal. The existing treatment system consists of equalization, neutralization, chemical precipitation, and activated sludge. It is determined that filtration would improve removal of heavy metals, and chemical oxidation with peroxide would improve removal of organics enough to comply with the effluent limitations for these toxic substances. From the table, capital costs for the new processes would be ((0.13 + 0.17) × \$5.88 × 10^6), or 1.76 million dollars/year. Operating and maintenance costs associated with the additional treatment would be ((0.010 + 0.29) × \$0.69 × 10^6), or 0.21 million dollars/year.

Actual estimates of costs associated with upgrading treatment systems to meet effluent limitations are dependent on pollutant loadings, technology based requirements, categorical requirements, antidegradation requirements, removal of multiple toxic substances by a single type or combination of treatments, and the fate of the pollutants in a specific waterbody. There are so many uncertainties involved in making assumptions for each variable that any estimate could contain such large errors as to make the estimate highly suspect. It is clear that (ignoring the fact that N.J.A.C. 7:9-4.6(c)4iii already requires imposition of the same effluent limitations) the additional costs associated with adoption of the proposed criteria would range from zero for some dischargers to millions of dollars for other dischargers.

Table 1

Incremental Capital Costs for Toxicity Reduction Technologies
(as % of base system cost in 1992 dollars)

	FLOW (a), MGD					
	0.01	0.1	0.5	1	5	10
Activated Sludge (base cost, \$ × 10E6) (b)	1.0 (0.64)	1.0 (1.71)	1.0 (3.53)	1.0 (5.88)	1.0 (14.4)	1.0 (21.2)
Air Stripping	0.12	0.13	0.17	0.2	0.2	0.26
Equalization	0.22	0.15	0.22	0.17	0.15	0.18
Neutralization	0.14	0.11	0.1	0.08	0.07	0.07
Chemical Precipitation	0.38	0.4	0.42	0.4	0.4	0.43
Filtration	0.19	0.2	0.15	0.13	0.12	0.11
Chemical Oxidation (peroxide)	0.2	0.17	0.17	0.17	0.19	0.22
Chemical Oxidation (ozone)	0.39	0.3	0.31	0.3	0.26	0.29
GAC columns (c)	0.37	0.28	0.25	0.22	0.25	0.23
PACT (d)	0.12	0.09	0.13	0.1	0.08	0.07
PAC Regeneration	NA	NA	0.44	0.42	0.48	0.47
Anaerobic Biological Treatment	0.6	0.85	0.9	0.9	0.92	0.91

a— Wastewater, 1,000 mg/l COD, 500 mg/l BOD.
b— Includes Cost of sludge handling and dewatering.
c— Based on carbon utilization rate of 2 lb carbon/1,000 gal.
d— Based on 250 mg/l carbon dose.
ENR Index = 4,885.
NA = Not Applicable.

Incremental Operation and Maintenance Costs for Toxicity Reduction Technologies
(as % of base system cost in 1989 dollars)

	FLOW (a), MGD					
	0.01	0.1	0.5	1	5	10
Activated Sludge (base cost, $ × 10E6) (b)	1.0 (0.07)	1.0 (0.17)	1.0 (0.53)	1.0 (0.69)	1.0 (1.71)	1.0 (2.59)
Air Stripping	0.15	0.25	0.2	0.17	0.18	0.17
Equalization	0.015	0.03	0.03	0.06	0.06	0.07
Neutralization	0.07	0.12	0.16	0.2	0.32	0.34
Chemical Precipitation	0.16	0.2	0.2	0.24	0.33	0.35
Filtration	0.015	0.07	0.07	0.1	0.08	0.14
Chemical Oxidation (peroxide)	0.15	0.25	0.22	0.29	0.43	0.45
Chemical Oxidation (ozone)	0.05	0.09	0.15	0.23	0.45	0.6
GAC columns	0.1	0.12	0.1	0.1	0.09	0.09
GAC Regeneration	0.14	0.012	0.16	0.18	0.31	0.31
PACT (c)	0.35 (d)	0.43 (d)	0.07 (e)	0.11 (e)	0.09 (e)	0.08 (e)
PAC Regeneration	NA	NA	0.22	0.21	0.16	0.17
Anaerobic Biological Treatment	0.14	0.19	0.3	0.34	0.37	0.36

a— Wastewater, 1,000 mg/l COD, 500 mg/l BOD.
b— Includes sludge handling, dewatering, and disposal.
c— PAC dose of 250 mg/l.
d— Includes cost of makeup carbon with no regeneration.
e— Assumes on-site PAC regeneration as a separate cost.
ENR Index = 4,885.
NA = Not Applicable.

Source: Toxicity Reduction in Industrial Effluents, Lankford, P.W. and Eckenfelder, W.W., Van Nostrand Reinhold, 1990. Costs updated to reflect January 27, 1992 ENR Index.

The designation of additional waters as Category One waters would impose additional costs on some existing dischargers. Existing dischargers would receive more stringent effluent limitations if they proposed to increase the volume of their discharge. Prospective dischargers would receive more stringent effluent limitations than would be imposed if the waters retained the Category Two designation. Estimation of what the more stringent limitations would be is dependent on the specific project, pollutant loadings, technology based requirements, categorical requirements, the fate of the pollutants in a specific waterbody, and the available dilution (the ratio of effluent flow to the design flow of the waterbody). In some instances it is anticipated that there will be no costs associated with designation of waters as Category One. In other cases a project may not be allowed, or a discharge might have to be relocated, or state-of-the-art wastewater treatment might be required. Costs associated with not allowing a project, relocating or providing state-of-the-art treatment could run from several hundred thousand dollars to tens of millions of dollars.

Changes being proposed to the definition sections of N.J.A.C. 7:9-6.3 and 7:14A-1.9 are not changing the scope or regulatory scheme of the subject regulations and should not result in any economic impacts. The change from "total metal" to "total recoverable metal" at N.J.A.C. 7:14A-3.14 will result in small differences in regulatory limitations established by the Department which are not expected to result in any significant economic impacts.

Environmental Impact

The proposed amendments to the SWQS are designed to provide the level of protection required for public health, the aquatic biota, and ecological systems associated with the State's waters. In combination with existing provisions of the rules that are not proposed for change, the amendments will restore, maintain, and enhance the chemical, physical and biological integrity of New Jersey's waters; protect scenic and ecological values; and enhance the domestic, municipal, recreational, and other reasonable uses of the State's waters. Accordingly, the overall environmental impacts of the amendments are expected to be beneficial.

Changes proposed to the surface water classifications are either environmentally neutral (clarifying language, updating road and place names, etc.) or beneficial (proposing the designation of waters as Category I). There are no waters proposed for downgrading in this proposal.

The change in the duration of the existing human health protection would appear to allow for an increase in the quantity of these substances which could be discharged when compared to the quantities which could be discharged if the current MA7CD10 design flow was retained for all of the criteria. In practice, limitations imposed because of whole effluent toxicity considerations, antidegradation policies, changes to the actual criteria, and antibacksliding provisions may result in no change or a reduction in the quantities of these substances being discharged.

Currently, the SWQS include adopted criteria for 20 toxic substances. In this proposal, the Department is proposing criteria for 124 toxic substances listed in the tables at N.J.A.C. 7:9B-1.14(c). As discussed earlier, the proposed criteria are identical to the best available scientific information-based criteria which must be used in the development of effluent limitations pursuant to N.J.A.C. 7:9-4.6(c)4iii. Therefore, there should be no change in the quantities of these toxic substances discharged resulting from the adoption of the proposed criteria. There will be a reduction in the total quantities of these toxic substances discharged as the Department issues permits with limitations for additional toxic substances under regulation.

The additional or modified definitions being proposed for N.J.A.C. 7:9-6.3 and 7:14A-1.9 are not expected to result in any environmental impacts. These changes do not modify either the scope or regulatory scheme of the subject regulations. The change in language from "total metal" to "total recoverable metal" at N.J.A.C. 7:14A-3.14 will result in small differences to regulatory limitations established by the Department which are not expected to result in any significant environmental impacts.

Regulatory Flexibility Analysis

The proposed amendments, if adopted, would impose additional requirements on existing or future dischargers to waters being designated as Category One waters. The change to the carcinogen policy and the adoption of the proposed criteria are not expected to impose any additional requirements on small businesses, as the term is defined under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. The additional requirements imposed on dischargers to those waters being designated as Category One waters are expected to be in the form of more stringent effluent limitations upon expansion of the treatment facility. Estimation of what the more stringent limitations would be is dependent on pollutant loadings, technology based requirements, categorical requirements, the fate of the pollutants in a specific waterbody, and the available dilution (the ratio of effluent flow to the design flow of the waterbody). The costs associated with designating additional waters as Category One are projected to range from zero to tens of millions of dollars. Existing small businesses located on waters proposed for reclassification to Category

One which do not change their discharges or treatment facilities are not expected to need to hire additional professional services as a result of the proposed amendments. Existing small businesses that modify their wastewater treatment facility, increase their wastewater flow or increase their pollutant loading would need to hire professional services (for example, engineers, planners, or environmental consultants) to modify their existing treatment facilities with the receiving waters remaining as Category Two. It is anticipated that no additional professional services, above and beyond those necessary to expand/modify existing treatment facilities, would be required by small businesses.

The Department has determined that in order to protect human health and aquatic ecosystems from damage due to the degradation of the waters being designated as Category One, it would not be appropriate to take the size of the business into consideration. In developing the proposed amendments, the Department has balanced the need to protect the environment against the possible future economic impacts of the proposed amendments. Reducing the protection provided by the proposed amendments would endanger the environment, public health, and public safety. Therefore, no specific exemption for small businesses is provided. Small businesses may apply for relief from compliance requirements under the provisions of the NJPDES regulations (N.J.A.C. 7:14A) and the SWQS (N.J.A.C. 7:9-4).

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]:

CHAPTER 9B

SURFACE WATER QUALITY STANDARDS

SUBCHAPTER [4.]1. SURFACE WATER QUALITY STANDARDS

[7:9-4.1]**7:9B-1.1** Scope of subchapter

Unless otherwise provided by rule or statute, this subchapter shall constitute the rules of the Department of Environmental Protection **and Energy** governing matters of policy with respect to the protection and enhancement of surface water resources, class definitions and quality criteria, use designation and quality criteria for the mainstem of the Delaware River including the Delaware Bay, the classification of surface waters of the State, procedures for establishing water quality based effluent limitations, modification of water quality based effluent limitations, procedures for reclassifying specific segments for less restrictive uses and procedures for reclassifying specific segments for more restrictive uses pursuant to N.J.S.A. 13:1D-1 et seq., the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and the Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq.

[7:9-4.2]**7:9B-1.2** Construction

This subchapter shall be liberally construed to permit the [department] **Department** and its various divisions to discharge [its] **their** statutory functions.

[7:9-4.3 (Reserved)] **7:9B-1.3 Severability**

If any subchapter, section, subsection, provision, clause, or portion of this chapter, or the application thereof to any person, is adjudged unconstitutional or invalid by a court of competent jurisdiction, such judgment shall be confined in its operation to the subchapter, section, subsection, clause, portion, or application directly involved in the controversy in which such judgment shall have been rendered and it shall not affect or impair the remainder of this chapter or the application thereof to other persons.

[7:9-4.4]**7:9B-1.4** Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

...

"Category one waters" means those waters designated in the tables in N.J.A.C. [7:9-4.15(c)] **7:9B-1.15(c)** through (h), for purposes of implementing the antidegradation policies in this subchapter, for protection from measurable changes in water quality characteristics because of their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s). These waters may include, but are not limited to:

1. Waters originating wholly within Federal, Interstate, State, County, or Municipal parks, forests, fish and wildlife lands, and other special holdings that have not been designated as FW1 in this subchapter;
2. Waters classified in this subchapter as FW2 Trout production waters and their tributaries;
3. Surface waters classified in this subchapter as FW2 Trout Maintenance or FW2 Nontrout that are upstream of waters classified in this subchapter as FW2 Trout Production;
4. Shellfish waters of exceptional resource value; or
5. Other waters and their tributaries that flow through, or border, Federal, State, County or Municipal parks, forest, fish and wildlife lands, and other special holdings.

...

"Department" means the New Jersey Department of Environmental Protection **and Energy**.

...

"Existing uses" means those uses actually attained in the waterbody on or after November 28, 1975, whether or not they are included in the **Surface** Water Quality Standards.

"Federal Act" means the "Federal Water Pollution Control Act" (33 U.S.C. § 1251 et seq.) including all subsequent supplements and amendments.

...

"FW1" means those fresh waters that originate in and are wholly within Federal or State parks, forests, fish and wildlife lands, and other special holdings, that are to be maintained in their natural state of quality (set aside for posterity) and not subjected to any man-made wastewater discharges, as designated in N.J.A.C. [7:9-4.15(h)] **7:9B-1.15(h)** Table 6.

"FW2" means the general surface water classification applied to those fresh waters that are not designated as FW1 or Pinelands Waters.

"Groundwater" means that portion of water beneath the land surface that is within the zone of saturation (below the water table) where pore spaces are filled with water.

...

"Important species" means species that are commercially valuable (for example, within the top [ten] **10** species landed, by dollar value); recreationally valuable; threatened or endangered; critical to the organization and/or maintenance of the ecosystem; or other species necessary in the food web for the well-being of the species identified in this definition.

...

"Long term harmonic mean flow" means the number of daily flow measurements divided by the sum of reciprocals of the flows; in other words, it is the appropriate design flow for health effects occurring after long term exposures and is calculated by

$$n / \sum_{i=1}^{n} (1/Qi)$$

where n is the number of recorded flows and Q is the combined receiving water and effluent flow.

"MA1CD10" means the minimum average one day flow with a statistical recurrence interval of 10 years.

"MA7CD10" means the minimum average seven consecutive day flow with a statistical recurrence interval of 10 years.

"MA30CD5" means the minimum average 30 consecutive day flow with a statistical recurrence interval of five years.

"Measurable changes" means changes measured or determined by a biological, chemical, physical, analytical method, conducted in accordance with USEPA approved methods as identified in 40 C.F.R. 136 or other analytical methods (for example, mathematical models, ecological indices, etc.) approved by the Department, that might adversely impact a water use (including, but not limited to, aesthetics).

...

"NJPDES" means New Jersey Pollutant Discharge Elimination System.

...

["NJPDES" means New Jersey Pollutant Discharge Elimination System.]

...

"Outstanding National Resource Waters" means high quality waters that constitute an outstanding national resource (for example, waters of National/State Parks and Wildlife Refuges and waters of exceptional recreational or ecological significance) as designated in N.J.A.C. [7:9-4.15(i)] **7:9B-1.15(i)**.

...

"River mile" **or "R.M."** means the distance, measured in statute miles, between two locations on a stream, with the first location designated as mile zero. Mile zero for the Delaware River is located at the intersection of the center line of the navigation channel and a line between the Cape May Light, New Jersey, and the tip of Cape Henlopen, Delaware.

...

"Surface water classifications" means names assigned by the Department in this subchapter to waters having the same designated uses and water quality criteria ([e.g.] **for example**, FW1, PL, FW2-NT, [SEI] **SE1**, SC, Zone 1C).

"Surface Water Quality Standards" means the New Jersey rules which set forth a designated use or uses for the waters of the State, use classifications, water quality criteria for the State's waters based upon such uses, and the Department's policies concerning these uses, classifications and criteria.

"Surface waters" means water at or above the land's surface which is neither groundwater nor contained within the unsaturated zone, including, but not limited to, the ocean and its tributaries, all springs, streams, rivers, lakes, ponds, wetlands, and artificial waterbodies.

...

"Total maximum daily load" means the sum of individual wasteload allocations for point sources and load allocations for nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments.

"Total recoverable metal" means the concentration of metal in an unfiltered sample following treatment with hot dilute mineral acid (as defined in "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1979, incorporated herein by reference).

["TP" means trout production.]

"Toxic substances" **or "toxic pollutants"** means [those substances, or combination of substances,] **any pollutant identified pursuant to the Federal Act, or any pollutant or combination of pollutants, including disease causing agents,** which **after discharge and** upon exposure, ingestion, inhalation or assimilation into any organism, either directly [from the environment] or indirectly **by ingestion** through food chains, will, on the basis of the information available to the Department, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformation, in such organisms or their offspring.

"TP" means trout production.

"Trout maintenance waters" means waters designated in this subchapter for the support of trout throughout the year.

"Trout production waters" means waters designated in this subchapter for use by trout for spawning or nursery purposes during their first summer.

"Unsaturated zone" (vadose zone) means the subsurface volume between the land's surface and the top of the saturated zone (water table), where moisture does not fill all the pore spaces in the formation or soil.

"USEPA" means the United States Environmental Protection Agency.

"Vadose waters" means water contained within the unsaturated zone (vadose zone).

"Wasteload allocation" means the portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution.

"Water quality based effluent limitations" means effluent limitations established so that the quality of the waters receiving a discharge will meet the Water Quality Criteria and Policies of this subchapter after the introduction of the treated wastewaters.

"Wetlands" means those areas that are inundated or saturated by surface water, groundwater, or vadose water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation. The Department shall evaluate the parameters of hydrology, soils, and vegetation to determine the presence and extent of wetlands.

"Zone" means the general surface water classification applied to the mainstem Delaware River and Delaware Bay.

[7:9-4.5]**7:9B-1.5** Statements of policy

(a) General policies are as follows:

1.-3. (No change.)

4. [The introduction of substances into the waters of the State in concentrations that are known to be carcinogenic, mutagenic, or teratogenic shall not be permitted. The Department shall direct its control efforts to require the removal of such substances from wastewater discharges which are shown to contain such substances in concentrations that violate this policy.] **The discharge in domestic or industrial wastewater of carcinogenic, mutagenic, or teratogenic substances is of particular concern to the Department. Human health-based ambient criteria have been established for carcinogenic substances at levels which would result in no greater than a one-in-one-million lifetime excess cancer risk for Group A and B carcinogens, under exposure assumptions appropriate for the designated uses of the waterbody. Criteria for Group C carcinogens, for which reference doses are not available, have been established at levels which would result in no greater than a one-in-one-hundred thousand lifetime excess cancer risk.**

5.-6. (No change.)

(b) Interstate waters policies are as follows:

1. The designated uses and water quality criteria for the fresh and saline waters under the jurisdiction of the Delaware River Basin Commission shall be as established [in this subchapter, or] in accordance with [the prevailing "Basin Regulations—Water Quality" adopted by the Delaware River Basin Commission as part of its comprehensive Plan, whichever are more stringent] **N.J.A.C. 7:9B-1.13, 1.14(c), and 1.14(d).**

2. The designated uses and water quality criteria for waters under the jurisdiction of the Interstate Sanitation Commission in the New Jersey/New York metropolitan area shall be as established in this subchapter, or in accordance with the prevailing Water Quality Regulations of the Interstate Sanitation Commission, **including all amendments and future supplements thereto,** whichever are more stringent.

(c) General technical policies are as follows:

1. The natural water quality shall be used in place of the promulgated Water Quality Criteria of N.J.A.C. [7:9-4.14] **7:9B-1.14** for all water quality characteristics that do not meet the promulgated Water Quality Criteria as a result of natural causes.

2. Water quality criteria are expected to be maintained during periods when [stream flows are at or greater than the MA7CD10 flow.] **nontidal or small tidal stream flows are at or greater than the appropriate design flow. For carcinogenic effect-based human health criteria, the design flow shall be the long term harmonic mean flow. For noncarcinogenic effect-based human health criteria, the design flow shall be the MA30CD5 flow. For acute aquatic life protection criteria, the design flow shall be the MA1CD10 flow. For chronic aquatic life protection criteria the design flow shall be the MA7CD10 flow. The design flow for all other criteria shall be the MA7CD10 flow.**

3. (No change.)

4. Mixing zones policies are as follows:

i.-v. (No change.)

vi. [Adjacent heat dissipation areas:] Where waste discharges would result in heat dissipation areas in such close proximity to each other as to impair protected uses, additional limitations shall be prescribed to avoid such impairment.

vii. (No change.)

5. All analytical data to be incorporated by the Department in water quality monitoring or other activities shall be from laboratories approved or certified by the Department for the analysis of those specific parameters. If certification is not offered for the specific parameter, the laboratory performing the analysis shall, at a minimum, hold certification in the category of certification covering that type of parameter.

(d) Antidegradation policies are as follows:

1.-4. (No change.)

5. Where water quality exceeds levels necessary to support the designated uses, including, but not limited to, propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the Department finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the Department's continuing planning process as set forth in [this subchapter] **the Statewide Water Quality Management Plan (see N.J.A.C. 7:15), which includes, but is not limited to, the NJPDES Regulations (N.J.A.C. 7:14A),** that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

6. These antidegradation policies shall be applied as follows:

i. (No change.)

ii. For Pinelands waters, the Department shall not approve any activity which alone or in combination with any other activities, might cause changes, other than toward natural water quality, in the existing surface water quality characteristics. This policy shall apply as follows:

(1) (No change.)

(2) Dischargers holding valid NJPDES permits as of [the date of promulgation of these regulations] **May 20, 1985** shall be allowed to continue discharging under the terms of their existing NJPDES permits provided that the discharge is not creating any water quality problems and that the designated uses are being attained. If a water quality problem has been created or the designated uses are not being attained, the NJPDES permit shall be modified to eliminate the water quality problem or attain the designated uses.

(3) Existing [descharges] **dischargers** shall be subject to all the provisions of this subchapter when they apply for modification or expansion of their existing discharge.

iii.-iv. (No change.)

7.-8. (No change.)

9. Modifications of water quality based effluent limitations established to implement this antidegradation policy may be granted pursuant to N.J.A.C. [7:9-4.8 and 4.9] **7:9B-1.8 and 1.9.**

(e) Water quality based effluent limitation policies are as follows:

1.-2. (No change.)

3. The Department may establish seasonal effluent limitations when it determines that such seasonal limitations are necessary due to seasonal variations in treatment performance caused by ambient conditions and, that the seasonal limitations will not cause or contribute to violation of the **Surface** Water Quality Standards.

4. (No change.)

5. Modifications of water quality based effluent limitations established to implement the water quality standards (which includes the Antidegradation Policies) granted pursuant to N.J.A.C [7:9-4.8 and 4.9] **7:9B-1.8 and 1.9,** shall provide for effluent limits at least as stringent as those required pursuant to sections 301, 306, and 307 of the Federal Clean Water Act or the Minimum Treatment Requirements of N.J.A.C. 7:9-5.8, where applicable, whichever are more stringent.

6. (No change.)

7. Where the effluent limitations developed pursuant to N.J.A.C. [7:9-4.6] **7:9B-1.6** are below the level of detectability of the procedures in N.J.A.C. 7:18 the Department will use an effluent limitation of nondetectable in any NJPDES permit or DAC.

8. Compliance schedules may be issued in accordance with N.J.A.C. 7:14A-2.8(a)1 when it is demonstrated by a discharger that new or revised water quality-based effluent limitations, based on ambient criteria adopted or revised after July 1, 1977, cannot be consistently met with the facility's existing treatment process. No schedule of compliance may be allowed for parameter specific water quality based effluent limitations where the parameter specific ambient water quality criterion, which was the basis for developing that limitation, was adopted prior to July 1, 1977 and has not been revised since adoption.

(f) Bioassay and biomonitoring policies are as follows:

1. Bioassay test species selection criteria follow[s]:

i.-iii. (No change.)

2. (No change.)

3. The Department, in order to further characterize the toxicity of a discharge, may allow or require the use of other procedures including, but not limited to:

i. Bioaccumulation testing;

ii. Mutagenicity testing; **and**

iii. Measures of the structure and function of the aquatic community in the receiving waters.

4. (No change.)

5. Parameter specific water quality criteria for toxic substances in a waterbody may be established by the Department when adequate data, from appropriate bioassays or scientific literature, [is] **are** available[.] **as follows:**

i. Appropriate bioassays, for purposes of this policy, shall include both acute definitive and chronic definitive bioassays[.]; **and**

ii. The amount of bioassay data or scientific literature needed to support adoption of a parameter specific criterion in a given waterbody will be determined by the Department on a case-by-case basis.

(g) Nutrient policies are as follows:

1.-2. (No change.)

3. The Department may establish site-specific Water Quality Criteria for nutrients in lakes, ponds, reservoirs or streams, in addition to or in place of the criteria in N.J.A.C. [7:9-4.14] **7:9B-1.14,** when necessary to protect existing or designated uses. Such criteria shall become part of these Water Quality Standards.

4.-6. (No change.)

[7:9-4.6]**7:9B-1.6** Establishment of water quality based effluent limitations

(a) Water quality based effluent limitations shall be established where technology based effluent limitations, established pursuant to Sections 301(b) and 306 of the Federal Clean Water Act, or toxic effluent standards, established pursuant to Section 307 of the Federal Clean Water Act, and/or Minimum Treatment Requirements set out in N.J.A.C. 7:9-5.8, are insufficient to attain, maintain and protect the designated and existing uses, water quality criteria and policies of [N.J.A.C. 7:9-4] **this subchapter.**

(b) The conditions of a Draft NJPDES Permit or a Draft DAC shall include any water quality based effluent limitations developed pursuant to (c) below, in addition to any other appropriate conditions. The water quality based effluent limitations may be modified as a result of hearings held on the Draft NJPDES Permit or Draft DAC provided that the water quality based effluent limitations incorporated into the Final NJPDES Permit or DAC must be consistent with the provisions of [N.J.A.C. 7:9-4] this subchapter (including, but not limited to, [7:9-4.5, 4.6(c), 4.8, and 4.9] **N.J.A.C. 7:9B-1.5, 1.6(c), 1.8, and 1.9).**

(c) The Department may develop water quality based effluent limitations for a single point source discharger in response to an application for DAC or NJPDES permit. The procedure to be followed by the Department in developing such effluent limitations shall be as follows:

1. For Category One waters, as defined in N.J.A.C. [7:9-4.4] **7:9B-1.4,** draft water quality based effluent limitations shall be assigned to a point source discharger so as to protect the existing water quality from any measurable or calculable changes. The Department shall establish draft water quality based effluent limitations, as appropriate, for those parameters contained in N.J.A.C. [7:9-4.14] **7:9B-1.14,** as well as any other parameters the Department believes may have a detrimental effect on the designated or existing uses.

2. For Category Two waters, as defined in N.J.A.C. [7:9-4.4] **7:9B-1.4**, draft water quality based effluent limitations shall be assigned to a point source discharge so as to:

i. Maintain water quality characteristics that are generally better than or equal to the water quality standards at a level that will protect the existing and designated uses; and[,]

ii. Bring water quality characteristics that are generally worse than the water quality criteria, except as due to natural conditions, up to the water quality criteria.

3. The following information shall be submitted by the applicant for a water quality based effluent limitation, in addition to any information required pursuant to N.J.A.C. 7:14A:

i. Type of waste (domestic or industrial) to be discharged, accompanied by an analysis of the treated and untreated wastewater characteristics[.];

ii. Type of treatment process and level of treatment being considered[.];

iii. United States Geological Survey Topographic Maps, 7.5 Quadrangle series, showing treatment facility locations, discharge point, and the location of other treatment facilities on the receiving stream within five miles of the proposed discharge[.];

iv. Name and classification of receiving stream including a description of the stream's existing beneficial uses[.]; **and**

v. Stream [analysis] **analyses**, which shall include:

(1) A flow analysis to determine the **appropriate long term harmonic mean, MA30CD5, MA1CD10, or** MA7CD10 flow; and

(2) A water quality analysis program to be developed in coordination with the Department and to include, at a minimum, sampling stations upstream and downstream of all existing discharges, as well as the proposed discharge.

4. The Department will utilize the following methodologies in the development of chemical specific water quality based effluent limitations for point source discharges:

i. (No change.)

ii. Scientifically defensible technical approaches such as calibrated and verified mathematical water quality models developed or adapted for a particular stream, simplified modelling approaches, as outlined in "Water Quality Assessment" (EPA-600/6-82-004), a simple mass balance, or bioassay procedures, as contained in N.J.A.C. 7:[9-]18, shall be utilized by the Department in developing water quality based effluent limitations.

iii. The Department shall utilize the parameter specific criteria contained in N.J.A.C. [7:9-4.14] **7:9B-1.14,** in the development of chemical specific water quality based effluent limitations for point source discharges. Whenever parameter specific criteria have not been adopted, the Department will utilize the best available scientific information in the development of chemical specific water quality based effluent limitations for point source discharges. Ambient criteria published by the United States Environmental Protection Agency pursuant to section 304(a) of the Federal Clean Water Act represent the minimum acceptable best scientific information to be used in the development of water quality based effluent limitations for point source discharges.

5. The following methodologies may be utilized by the Department in developing water quality based whole effluent toxicity limitations for point source discharges:

i. When using acute definitive bioassays as the measure of whole effluent toxicity, the following effluent toxicity limitation formula may be utilized:

$$L_A = \frac{I}{F}(100)$$

Where: L_A = Toxicity limitation expressed as an acute definitive LC50 or EC50, in percent effluent.

F = Application factor, 0.05 where toxicity is due to non-persistent substances or 0.01 where toxicity is known or suspected to be due to persistent substances, or an alternative application factor developed in accordance with N.J.A.C. [7:9-4.5(f)4] **7:9B-1.5(f)4.**

I = Critical instream waste concentration, determined in accordance with the methods in **(c)5** ii below.

(1) A draft limitation must meet the requirements of the effluent standard for toxic discharges found in N.J.A.C. 7:9-5.7.

(2) If the calculated limit, [^{L}A] $\mathbf{L_A}$, is greater than 100 percent effluent, the draft limit shall require that no measurable acute toxicity occur in any bioassay test concentration, including 100 percent effluent, above normal background mortality levels for the test organism population.

ii. The critical instream waste concentration, I, is determined as follows:

(1) For non-tidal streams, or small tidal streams with a cross-sectional area not greater than 1,000 square feet at mean sea level and a freshwater inflow MA7CD10 not greater than 10 cfs:

$$I = \frac{[Q_R]\ Q_E}{Q_E + Q_S}$$

Where: Q_E = Effluent Flow

Q_S = Upstream freshwater MA7CD10 flow

(2) For all other waterbodies the instream concentration, I, will be determined on a case-by-case basis utilizing applicable scientific methods, including, but not limited to, plume models and the mixing zone concept.

iii. When utilizing chronic bioassays as the measure of whole effluent toxicity, the following effluent toxicity limitation formula may be utilized:

$$L_C = I\ (100)$$

Where: L_C = Toxicity limitation expressed as a chronic NOEC in percent effluent.

I = Critical instream waste concentration, determined in accordance with the method of **(c)5**ii above.

iv. If the calculated limit, L_C, is greater than 100 percent effluent, the draft limit shall be 100.

6. Water quality based effluent limits for chlorine produced oxidants based on the criteria in N.J.A.C. [7:9-4.14(c)14] **7:9B-1.14(c)14** are not applicable where:

i. The aquatic community of a waterbody is exposed to one or more point source discharges of non-contact cooling water that is intermittently chlorinated to control condenser biofouling[, and];

ii. The total period of such exposure to chlorinated wastewater is two hours per day or less[.]; **and**

iii. The maximum concentration of chlorine produced oxidants in the effluents of such discharges shall not exceed 200 ug/[l]**L.**

[7:9-4.7 Water quality based effluent limitations and water quality management planning] **7:9B-1.7 Waterway loadings in areawide water quality management plans**

[(a) Water quality based effluent limitations established under the procedures of N.J.A.C. 7:9-4.6 shall be amendments to appropriate Water Quality Management Plans.

1. After adoption of the Statewide Water Quality Management Program Plan, water quality based effluent limitations established as a NJPDES permit condition under N.J.A.C. 7:14A-8.6 shall be adopted as an amendment to the Statewide Plan pursuant to N.J.A.C. 7:15-2.1(c)4 and 2.2(b)2 without further adoption proceedings as long as proper notice is given with the NJPDES notice.

2. Water quality based effluent limitations established as an amendment to the Statewide or appropriate Areawide Plan under N.J.A.C. 7:15-3.4 and 3.5 must be consistent with all of the provisions of this subchapter, and shall be adopted pursuant to N.J.A.C. 7:15-3.5.

(b) The Department shall not issue any permit for a discharge that conflicts with an Areawide Plan.]

Any total maximum daily load, wasteload allocation, or load allocation established as an amendment to an areawide water quality management plan under N.J.A.C. 7:15-3.4 shall be consistent with all of the provisions of this subchapter.

[7:9-4.8] **7:9B-1.8** Procedures for modifying water quality based effluent limitations for individual dischargers to Category One waters

(a) [The criteria for modifying] **An applicant requesting modification of a** water quality based effluent limitation[s], established on a case-by-case basis, [are: 1. The applicant] must demonstrate, to the satisfaction of the Department, after public notice (including notice to affected municipalities) and a public hearing (where sufficient public interest exists), that:

[i.]**1.** Some change in ambient water quality should be allowed because of necessary and justifiable social or economic development; [and]

[ii.]**2.** Alternative effluent limitations, at least as stringent as the technology based effluent limitations required by either sections 301, 306, and 307 of the Federal Clean Water Act, or the effluent limitations resulting from application of the minimum treatment requirements in N.J.A.C. 7:9-5.8 (where applicable), whichever are more stringent, will not interfere nor be injurious to the existing or designated uses; and

[iii.]**3.** Where the requested modified effluent limitations would result in contravention of the water quality criteria or the degradation of the natural water quality, whichever is less stringent:

[(1)]**i.** The water quality criteria are not attainable because of natural background; or

[(2)]**ii.** The water quality criteria are not attainable because of irretrievable man-induced conditions; or

[(3)]**iii.** Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or

[(4)]**iv.** Controls more stringent than those required by Sections 301(b) and 306 of the Federal Clean Water Act would result in substantial and widespread adverse social and economic impact.

(b)-(e) (No change.)

(f) Where water quality criteria are not currently met the Department shall not grant a modification, as set forth in this [sub]section, establishing an effluent limitation less stringent than the limitation(s) in the existing permit, unless the criteria are not met because of natural conditions.

[7:9-4.9] **7:9B-1.9** Procedures for modifying water quality based effluent limitations for individual dischargers to Category Two waters

(a) (No change.)

(b) Where water quality criteria are not currently met the Department shall not grant a modification, as set forth in this [sub]section, establishing an effluent limitation less stringent than the limitation(s) in the existing permit, unless the criteria are not met because of natural conditions.

(c)-(d) (No change.)

[7:9-4.10] **7:9B-1.10** (No change in text.)

[7:9-4.11] **7:9B-1.11** Procedures for reclassifying specific segments for more restrictive uses

(a)-(d) (No change.)

(e) A reclassification for more restrictive uses shall be made whenever:

1. (No change.)

2. Where a reclassification for less restrictive uses has been granted pursuant to N.J.A.C. [7:9-4.10] **7:9B-1.10**, the bases for the reclassification no longer exist; or

3. (No change.)

(f)-(g) (No change.)

[7:9-4.12] **7:9B-1.12** (No change in text.)

[7:9-4.13] **7:9B-1.13** Designated uses of mainstem Delaware River and Delaware Bay [(Summarized from] **as set forth in** the **"Delaware River Basin Commission,**["] Administrative Manual[;]—Part III[; Basin] **Water Quality** Regulations," [Water Quality;] **Article 3, dated May 22, 1991 [Including Amendments Through June 29, 1983")] including all amendments and future supplements thereto**

[(a) The designated uses for Zone 1C, 1D, and 1E are:

1. Agricultural, industrial and public water supply after reasonable treatment;

2. Wildlife;

3. Maintenance and propagation of resident gamefish and other aquatic biota;

4. Spawning and nursery habitat for anadromous fish;

5. Passage of anadromous fish;

6. Primary and secondary contact recreation.

(b) The designated uses for Zone 2 are:

1. Agricultural, industrial and public water supply after reasonable treatment;

2. Wildlife;

3. Maintenance and propagation of resident gamefish and other aquatic biota;

4. Passage of anadromous fish;

5. Primary contact recreation from R.M. 133.4 to R.M. 117.81;

6. Secondary contact recreation from R.M. 133.4 to R.M. 108.4; and

7. Navigation.

(c) The designated uses for Zone 3 are:

1. Agricultural, industrial and public water supply after reasonable treatment;

2. Wildlife;

3. Maintenance of resident fish and other aquatic biota;

4. Migration of anadromous fish;

5. Secondary contact recreation; and

6. Navigation.

(d) The designated uses for Zone 4 are:

1. Industrial water supply after reasonable treatment;

2. Wildlife;

3. Maintenance of resident fish and other aquatic biota;

4. Migration of anadromous fish;

5. Secondary contact recreation; and

6. Navigation.

(e) The designated uses for Zone 5 are:

1. Industrial water supply after reasonable treatment;

2. Wildlife;

3. Migration of anadromous fish;

4. Maintenance of resident fish and other aquatic biota;

5. Propagation of resident fish from R.M. 70.0 to R.M. 48.2;

6. Secondary contact recreation;

7. Primary contact recreation from R.M. 59.5 to R.M. 48.2; and

8. Navigation.

(f) The designated uses for Zone 6 are:

1. Industrial water supply after reasonable treatment;

2. Wildlife;

3. Maintenance and propagation of resident fish, shellfish, and other aquatic biota;

4. Migration of anadromous fish;

5. Primary contact recreation;

6. Secondary contact recreation; and

7. Navigation.]

(a) The designated uses for the mainstem Delaware River and Delaware Bay are those contained in "Delaware River Basin Commission, Water Quality Regulations, Administrative Manual—Part III," Article 3, dated May 22, 1991, including all amendments and future supplements thereto.

(b) The designated uses for other waters under the jurisdiction of the DRBC are as set forth at N.J.A.C. 7:9B-1.15(d).

[7:9-4.14] **7:9B-1.14** Surface water quality criteria

(a) Surface water quality criteria for FW1 [classification] **waters** shall be maintained as to quality in their natural state.

(b) Surface water quality criteria for PL [classification] **waters** are as follows:

1. (No change.)

2. The water quality criteria for existing discharges are the water quality criteria contained in "Surface Water Quality Standards" as adopted in March 1981, except that:

i. The criteria for Nitrate-Nitrogen and pH promulgated in N.J.A.C. [7:9-4.14(b)1] **7:9B-1.14(b)1** for PL waters apply instead of the 1981 criteria; and

ii. The criteria for phosphorous and toxic substances promulgated in N.J.A.C. [7:9-4.14(c)] **7:9B-1.14(c)** apply instead of the 1981 criteria, as though the freshwater portions of the PL waters were classified as FW2 and the saline portions were classified as SE1.

(c) Surface Water Quality Criteria for FW2, SE and SC Waters:

Surface Water Quality Criteria for FW2, SE and SC Waters
(Expressed as maximum concentrations unless otherwise noted)

Substance		Criteria	Classifications
1. Bacterial quality (Counts/100 ml)	i.	Bacterial Indicators shall not exceed, in all shellfish waters, the standard for approved shellfish waters as established by the National Shellfish Sanitation Program as set forth in its current manual of operations.	Shellfish Waters
	ii.	Fecal Coliforms:	
		(1) Fecal coliform levels shall not exceed a geometric average of 50/100 ml.	Within 1500 feet of shoreline in SC waters.
		(2)-(4) (No change.)	
		[(5) The criteria in (2), (3) and (4) above do not apply on tidal tributaries to the Mainstem Delaware River Zones 2, 3 and 4, from their mouth to one-half mile upstream, inclusive, during the period October 1, 1987 to April 30, 1988, unless reinstated earlier by the Commissioner due to elevated bacterial levels which may impair or interfere with existing water uses, or due to cancellation or postponement of the Delaware River Basin Commission's Seasonal Disinfection Study.]	
	iii.-iv.	(No change.)	
[2. Chloride (mg/1)	i.	250	FW2]
[3.]**2.** Dissolved oxygen (mg/1)	i.	Not less than 7.0 at any time[.];	FW2-TP
	ii.	24 hour average not less than 6.0. Not less than 5.0 at any time (see paragraph viii below)[.];	FW2-TM
	iii.	24 hour average not less than 5.0, but not less than 4.0 at any time (see paragraph viii below)[.];	FW2-NT (except as in iv below), SE1
	iv.	Not less than 4.0 at any time[.];	Tidal portions of FW2-NT tributaries to the Delaware River, between Rancocas Creek and Big Timber Creek inclusive.
	v.	Not less than 5.0 at any time[.];	SC
	vi.	Not less than 4.0 at any time[.];	SE2
	vii.	Not less than 3.0 at any time[.]; **and**	SE3
	viii.	Supersaturated dissolved oxygen values shall be expressed as their corresponding 100 percent saturation values for purposes of calculating 24 hour averages.	FW2-TM, FW2-NT, SE1
[4.]**3.** Floating, colloidal, color and settleable solids; petroleum hydrocarbons and other oils and grease	i.	None noticeable in the water or deposited along the shore or on the aquatic substrata in quantities detrimental to the natural biota. None which would render the waters unsuitable for the designated uses[.]; **and**	All Classifications
	ii.	For "Petroleum Hydrocarbons" the goal is none detectable utilizing the Federal EPA Environmental Monitoring and Support Laboratory Method (Freon Extractable—Silica Gel Adsorption—Infrared Measurement); the present criteria, however, are those of paragraph i[.] above.	All Classifications
[5.]**4.** ph (Standard Units) Units)	i.	6.5-8.5.	FW2, All SE
	ii.	Natural pH conditions shall prevail.	SC
[6.]**5.** Phosphorus, Total (mg/l)	i.	*Lakes:* Phosphorus as total P shall not exceed 0.05 in any lake, pond or reservoir, or in a tributary at the point where it enters such bodies of water, except where site-specific criteria are developed pursuant to N.J.A.C. [7:9-4.5(g)3] **7:9B-1.5(g)3.**	FW2
	ii.	*Streams:* Except as necessary to satisfy the more stringent criteria in paragraph i above or where site-specific criteria are developed pursuant to N.J.A.C. [7:9-4.5(g)3] **7:9B-1.5(g)3,** phosphorus as total P shall not exceed 0.1 in any stream, unless it can be demonstrated that total P is not a limiting nutrient and will not otherwise render the waters unsuitable for the designated uses.	FW2
[7.]**6.** Radioactivity	i.	Prevailing regulations **including all amendments and future supplements thereto** adopted by the U.S. Environmental Protection Agency pursuant to Sections 1412, 1445, and 1450 of the Public Health Services Act, as amended by the Safe Drinking Water Act (PL 93-523).	All Classifications
Recodify existing 8.-11. as **7.-10.** (No change in text.)			
[12.]**11.** Temperature and Heat Dissipation Areas	i.	(No change.)	
	ii.	Heat Dissipation Areas	
		(1) Streams	FW2-TM, FW2-NT, All SE
		(i) Not more than one-quarter (1/4) of the cross section and/or volume of the water body at any time[.];	
		(ii) Not more than two-thirds (2/3) of the surface from shore to shore at any time[.]; **and**	

	(iii)	These limits may be exceeded by special permission, on a case-by-case basis, when a discharger can demonstrate that a larger heat dissipation area meets the tests for a waiver under Section 316 of the Federal Clean Water Act.	
	(2)	Lakes, Ponds, Reservoirs, Bays or Coastal Waters: Heat dissipation areas will be developed on a case-by-case basis.	FW2-TM, FW2-NT, All SE, SC
			FW2-TM, FW2-NT, All SE, SC

[13.]**12.** (No change in text.)

[14.]**13.** Toxic Substances (ug/l):

NOTE: [Criteria followed by an (a) represent aquatic protection based criteria. Criteria followed by an (h) represent criteria based upon human health information.

Criteria followed by an (a*) or (h*) represent criteria developed after review of both human health information and aquatic protection data. The basis for the criterion adopted (human health or aquatic protection) is indicated by the letter preceding the (*).] **Except as noted, aquatic life criteria followed by an (a) represent acute aquatic life protection criteria as a one-hour average, aquatic life criteria followed by (c) represent chronic aquatic life protection criteria as a four-day average. No exceedance of aquatic life criteria shall be permitted at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)(2. Criteria followed by an (h) are noncarcinogenic effect-based human health criteria as a 30-day average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)2. Criteria followed by (hc) are carcinogenic effect-based human health criteria as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)2 and are based on a risk level of one-in-one-million. Criteria followed by an (hcc) are for toxic substances considered to be possible human carcinogens and are based on a risk level of one-in-one hundred thousand. These criteria, (hc) and (hcc), are carcinogenic effect-based human health criteria as a 70-year average with no frequency of exceedance at or above the design flows specified in section N.J.A.C. 7:9B-1.5(c)2. Criteria followed by an (OL) are organoleptic effect-based criteria and are maximum concentrations. "H" represents hardness, in mg/l as calcium carbonate, in water quality criteria formulas for metals.**

[i. Aldrin/Dieldrin	(1)	0.0019(a)	All Classifications
ii. Ammonia, un-ionized (24 hr. average)	(1)	20(a)	FW2-TP, FW2-TM
	(2)	50(a)	FW2-NT
	(3)	0.1 of acute definitive LC50 or EC50(c)	All SE, SC
iii. Arsenic, Total	(1)	50(h)	FW2
iv. Barium, Total	(1)	1000(h)	FW2
v. Benzidine	(1)	0.1(h*)	All Classifications
vi. Cadmium, Total	(1)	10(h)	FW2
vii. Chlordane	(1)	0.0043(a)	FW2
	(2)	0.0040(a)	All SE, SC
viii. Chlorine Produced Oxidants (CPO)	(1)	24 hour average less than 11.0. Less than 19 at any time. (a)	FW2
	(2)	24 hour average less than 7.5. Less than 13 at any time. (a)	All SE, SC
ix. Chromium, Total	(1)	50(h)	FW2
x. DDT and Metabolites	(1)	0.0010(a)	All Classifications
xi. Endosulfan	(1)	0.056(a)	FW2
	(2)	0.0087(a)	All SE, SC
xii. Endrin	(1)	0.0023(a)	All Classifications
xiii. Heptachlor	(1)	0.0038(a)	FW2
	(2)	0.0036(a)	All SE, SC
xiv. Lead, Total	(1)	50(h)	FW2
xv. Lindane	(1)	0.080(a)	FW2
	(2)	0.004(a)	All SE, SC
xvi. Mercury, Total	(1)	2(h)	FW2
xvii. Polychlorinated biphenyls (PCB's)	(1)	0.014(a)	FW2
	(2)	0.030(a)	All SE, SC
xviii. Selenium, Total	(1)	10(h)	FW2
xix. Silver, Total	(1)	50(h)	FW2
xx. Toxaphene	(1)	0.013(a)	FW2
	(2)	0.005(a)	All SE, SC]
i. Acenaphthylene	**(1)**	**0.0028(hc)**	**All FW2**
	(2)	**0.031(hc)**	**All SE, SC**
ii. Acrolein	**(1)**	**320(h)**	**All FW2**
	(2)	**780(h)**	**All SE, SC**
iii. Acrylonitrile	**(1)**	**0.0591(hc)**	**All FW2**
	(2)	**0.665(hc)**	**All SE, SC**
iv. Aldrin	**(1)**	**3.0(a); 0.000135(hc)**	**All FW2**
	(2)	**1.3(a); 0.000144(hc)**	**All SE, SC**
v. Aluminum (Total recoverable)	**(1)**	**750(a); 87(c)**	**All FW2**
vi. Ammonia, un-ionized (24-hour average)	**(1)**	**20(c)**	**FW2-TP, FW2-TM**
	(2)	**50(c)**	**FW2-NT**
	(3)	**0.1 of acute definitive LC50 or EC50(c)**	**All SE, SC**
vii. Anthracene	**(1)**	**9,570(h)**	**All FW2**
	(2)	**108,000(h)**	**All SE, SC**
viii. Antimony	**(1)**	**12.2(h)**	**All FW2**
	(2)	**4,300(h)**	**All SE, SC**
ix. Arsenic (Total recoverable)	**(1)**	**360(a); 190(c); 0.0170(hc)**	**All FW2**
	(2)	**69(a); 36(c); 0.136(hc)**	**All SE, SC**
x. Asbestos	**(1)**	**7 million fibers/L(h) (fibers longer than 10 micrometers)**	**All FW2**
xi. Barium	**(1)**	**2,000(h)**	**All FW2**
xii. Benz(a)anthracene	**(1)**	**0.0028(hc)**	**All FW2**
	(2)	**0.031(hc)**	**All SE, SC**
xiii. Benzene	**(1)**	**0.150(hc)**	**All FW2**
	(2)	**71(hc)**	**All SE, SC**
xiv. Benzidine	**(1)**	**0.000118(hc)**	**All FW2**
	(2)	**0.000535(hc)**	**All SE, SC**
xv. 3,4-Benzofluoranthene (Benzo(b)fluoranthene)	**(1)**	**0.0028(hc)**	**All FW2**
	(2)	**0.031(hc)**	**All SE, SC**
xvi. Benzo(a)pyrene (BaP)	**(1)**	**0.0028(hc)**	**All FW2**
	(2)	**0.031(hc)**	**All SE, SC**
xvii. Benzo(ghi)perylene	**(1)**	**0.0028(hc)**	**All FW2**
	(2)	**0.031(hc)**	**All SE, SC**
xviii. Benzo(k)fluoranthene	**(1)**	**0.0028(hc)**	**All FW2**
	(2)	**0.031(hc)**	**All SE, SC**
xix. Beryllium	**(1)**	**0.00767(hc)**	**All FW2**
	(2)	**0.132(hc)**	**All SE, SC**
xx. alpha-BHC (alpha-HCH)	**(1)**	**0.00391(hc)**	**All FW2**
	(2)	**0.0131(hc)**	**All SE, SC**
xxi. beta-BHC (beta-HCH)	**(1)**	**0.137(hcc)**	**All FW2**
	(2)	**0.460(hcc)**	**All SE, SC**
xxii. gamma-BHC (gamma-HCH/Lindane)	**(1)**	**2.0(a); 0.080(c); 0.0186(hc)**	**All FW2**
	(2)	**0.16(a); 0.0625(hc)**	**All SE, SC**
xxiii. Bis(2-chloroethyl) ether	**(1)**	**0.0311(hc)**	**All FW2**
	(2)	**1.4(hc)**	**All SE, SC**
xxiv. Bis(2-chloroisopropyl) ether	**(1)**	**1,250(h)**	**All FW2**
	(2)	**170,000(h)**	**All SE, SC**
xxv. Bis(2-ethylhexyl) phthalate	**(1)**	**1.76(hc)**	**All FW2**
	(2)	**5.92(hc)**	**All SE, SC**
xxvi. Bromodichloromethane (Dichlorobromomethane)	**(1)**	**0.266(hc)**	**All FW2**
	(2)	**22(hc)**	**All SE, SC**
xxvii. Bromoform	**(1)**	**4.38(hc)**	**All FW2**
	(2)	**360(hc)**	**All SE, SC**

xxviii. Butylbenzyl phthalate	(1)	239(h)	All FW2
	(2)	416(h)	All SE, SC
xxix. Cadmium (Total recoverable)	(1)	$e^{(1.128(\ln(H))-3.828)}$(a); $e^{(0.7852(\ln(H))-3.490)}$(c); 15.9(h)	All FW2
	(2)	43(a); 9.3(c); 169(h)	All SE, SC
xxx. Carbon tetrachloride	(1)	0.363(hc)	All FW2
	(2)	6.31(hc)	All SE, SC
xxxi. Chlordane	(1)	2.4(a); 0.0043(c); 0.000277(hc)	All FW2
	(2)	0.09(a); 0.0040(c); 0.000283(hc)	All SE, SC
xxxii. Chloride	(1)	250,000(ol); 860,000(a); 230,000(c)	All FW2
xxxiii. Chlorine Produced Oxidants (CPO)	(1)	19(a); 11(c)	All FW2
	(2)	13(a); 7.5(c)	All SE, SC
xxxiv. Chlorobenzene	(1)	22.0(h)	All FW2
	(2)	21,000(h)	All SE, SC
xxxv. Chloroform	(1)	5.67(hc)	All FW2
	(2)	470(hc)	All SE, SC
xxxvi. 2-Chlorophenol	(1)	122(h)	All FW2
	(2)	402(h)	All SE, SC
xxxvii. Chlorpyrifos	(1)	0.083(a); 0.041(c)	All FW2
	(2)	0.011(a); 0.0056(c)	All SE, SC
xxxviii. Chromium (Total recoverable)	(1)	16(a); 11(c); 160(h)	All FW2
	(2)	1,100(a); 50(c); 3,230(h)	All SE, SC
xxxix. Chrysene	(1)	0.0028(hc)	All FW2
	(2)	0.031(hc)	All SE, SC
xl. Copper (Total recoverable)	(1)	$e^{(0.9422(\ln(H))-1.464)}$(a); $e^{(0.8545(\ln(H))-1.465)}$(c)	All FW2
	(2)	2.9(a); 2.9(c)	All SE, SC
xli. Cyanide	(1)	22(a); 5.2(c); 768(h)	All FW2
	(2)	1.0(a); 1.0(c); 220,000(h)	All SE, SC
xlii. 4,4′-DDD (p,p′TDE)	(1)	0.000832(hc)	All FW2
	(2)	0.000837(hc)	All SE, SC
xliii. 4,4′-DDE	(1)	0.000588(hc)	All FW2
	(2)	0.000591(hc)	All SE, SC
xliv. 4,4′-DDT	(1)	1.1(a); 0.0010(c); 0.000588(hc)	All FW2
	(2)	0.13(a); 0.0010(c); 0.000591(hc)	All SE, SC
xlv. Demeton	(1)	0.1(c)	All FW2 SE, and SC
xlvi. Dibenz(a,h)anthracene anthracene	(1)	0.0028(hc)	All FW2
	(2)	0.031(hc)	All SE, SC
xlvii. Dibromochloromethane (Chlorodibromomethane)	(1)	72.6(h)	All FW2
	(2)	34(hc)	All SE, SC
xlviii. Di-n-butyl phthalate	(1)	3,530(h)	All FW2
	(2)	15,700(h)	All SE, SC
xlix. 1,2-Dichlorobenzene	(1)	2,520(h)	All FW2
	(2)	16,500(h)	All SE, SC
l. 1,3-Dichlorobenzene	(1)	2,620(h)	All FW2
	(2)	22,200(h)	All SE, SC
li. 1,4′-Dichlorobenzene	(1)	343(h)	All FW2
	(2)	3,159(h)	All SE, SC
lii. 3,3′-Dichlorobenzidine	(1)	0.0386(hc)	All FW2
	(2)	0.0767(hc)	All SE, SC
liii. 1,2-Dichloroethane	(1)	0.291(hc)	All FW2
	(2)	99(hc)	All SE, SC
liv. 1,1-Dichloroethylene	(1)	4.81(h)	All FW2
	(2)	3.2(hc)	All SE, SC
lv. trans-1,2-Dichloroethylene	(1)	592(h)	All FW2
lvi. 2,4-Dichlorophenol	(1)	92.7(h)	All FW2
	(2)	794(h)	All SE, SC
lvii. 1,3-Dichloropropene	(1)	0.193(hc)	All FW2
	(2)	1700(h)	All SE, SC
lviii. Dieldrin	(1)	2.5(a); 0.0019(c); 0.000135(hc)	All FW2
	(2)	0.71(a); 0.0019(c); 0.000144(hc)	All SE, SC
lix. Diethyl phthalate	(1)	21,200(h)	All FW2
	(2)	111,000(h)	All SE, SC
lx. Dimethyl phthalate	(1)	313,000(h)	All FW2
	(2)	2,900,000(h)	All SE, SC
lxi. 4,6-Dinitro-o-cresol	(1)	13.4(h)	All FW2
	(2)	765(h)	All SE, SC
lxii. 2,4-Dinitrophenol	(1)	69.7(h)	All FW2
	(2)	14,000(h)	All SE, SC
lxiii. 2,4-Dinitrotoluene	(1)	0.11(hc)	All FW2
	(2)	9.1(hc)	All SE, SC
lxiv. 1,2-Diphenylhydrazine	(1)	0.0405(hc)	All FW2
	(2)	0.541(hc)	All SE, SC
lxv. Endosulfans (alpha and beta)	(1)	0.22(a); 0.056(c); 0.932(h)	All FW2
	(2)	0.034(a); 0.0087(c); 1.99(h)	All SE, SC
lxvi. Endosulfan sulfate	(1)	0.93(h)	All FW2
	(2)	2.0(h)	All SE, SC
lxvii. Endrin	(1)	0.18(a); 0.0023(c); 0.629(h)	All FW2
	(2)	0.037(a); 0.0023(c); 0.678(h)	All SE, SC
lxviii. Endrin aldehyde	(1)	0.76(h)	All FW2
	(2)	0.81(h)	All SE, SC
lxix. Ethylbenzene	(1)	3,030(h)	All FW2
	(2)	27,900(h)	All SE, SC
lxx. Fluoranthene	(1)	310(h)	All FW2
	(2)	393(h)	All SE, SC
lxxi. Fluorene	(1)	1,340(h)	All FW2
	(2)	51,100(h)	All SE, SC
lxxii. Guthion	(1)	0.01(c)	All FW2, SE and SC
lxxiii. Heptachlor	(1)	0.52(a); 0.0038(c); 0.000208(hc)	All FW2
	(2)	0.053(a); 0.0036(c); 0.000214(hc)	All SE, SC
lxxiv. Heptachlor epoxide	(1)	0.52(a); 0.0038(c); 0.000103(hc)	All FW2
	(2)	0.053(a); 0.0036(c); 0.000106(hc)	All SE, SC
lxxv. Hexachlorobenzene	(1)	0.000748(hc)	All FW2
	(2)	0.000775(hc)	All SE, SC
lxxvi. Hexachlorobutadiene	(1)	6.94(h)	All FW2
	(2)	50(hc)	All SE, SC
lxxvii. Hexachlorocyclopentadiene	(1)	245(h)	All FW2
	(2)	17,000(h)	All SE, SC
lxxviii. Hexachloroethane	(1)	2.73(h)	All FW2
	(2)	12.4(h)	All SE, SC
lxxix. Indeno(1,2,3-cd) pyrene	(1)	0.0028(hc)	All FW2
	(2)	0.031(hc)	All SE, SC
lxxx. Iron	(1)	1,000(c)	All FW2
lxxxi. Isophorone	(1)	552(h)	All FW2
	(2)	600(hc)	All SE, SC
lxxxii. Lead (Total recoverable)	(1)	$e^{(1.273(\ln(H))-1.460)}$(a); $e^{(1.273(\ln(H))-4.705)}$(c); 5(h)	All FW2
	(2)	220(a); 8.5(c)	All SE, SC
lxxxiii. Malathion	(1)	0.1(c)	All FW2, SE and SC
lxxxiv. Manganese	(1)	100(h)	All SE, SC
lxxxv. Mercury (Total recoverable)	(1)	2.4(a); 0.012(c); 0.144(h)	All FW2
	(2)	2.1(a); 0.025(c); 0.146(h)	All SE, SC
lxxxvi. Methoxychlor	(1)	0.03(c); 40(h)	All FW2
	(2)	0.03(c)	All SE, SC
lxxxvii. Methyl bromide (Bromomethane)	(1)	48.4(h)	All FW2
	(2)	4,000(h)	All SE, SC
lxxxviii. Methylchloride (Chloromethane)	(1)	5.7(hc)	All FW2
	(2)	470(hc)	All SE, SC
lxxxix. Methylene chloride	(1)	2.49(hc)	All FW2
	(2)	1,600(hc)	All SE, SC
xc. Mirex	(1)	0.001(c)	All FW2, SE and SC
xci. Nickel (Total recoverable)	(1)	$e^{(0.8460(\ln(H))+3.3612)}$(a); $e^{(0.8460(\ln(H))+1.1645)}$(c); 516(h)	All FW2
	(2)	75(a); 8.3(c); 3,900(h)	All SE, SC
xcii. Nitrate (as N)	(1)	10,000(h)	All FW2
xciii. Nitrobenzene	(1)	16.0(h)	All FW2
	(2)	1,900(h)	All SE, SC
xciv. N-Nitrosodi-n-butylamine	(1)	0.00641(hc)	All FW2
xcv. N-Nitrosodiethylamine	(1)	0.000233(hc)	All FW2
xcvi. N-Nitrosodimethylamine	(1)	0.000686(hc)	All FW2
	(2)	8.1(hc)	All SE, SC
xcvii. N-Nitrosodiphenyl amine	(1)	4.95(hc)	All FW2
	(2)	16.2(hc)	All SE, SC
xcviii. N-Nitrosopyrrolidine	(1)	0.0167(hc)	All FW2
xcix. Parathion	(1)	0.065(a); 0.013(c)	All FW2
c. Pentachlorobenzene	(1)	3.67(h)	All FW2
	(2)	4.21(h)	All SE, SC

ci. Pentachlorophenol	(1)	$e^{(1.005(pH)-4.830)}$(a); $e^{(1.005(pH)-5.290)}$(c); 0.282(c)	All FW2
	(2)	13(a); 7.9(c); 8.2(hc)	All SE, SC
cii. Phenanthrene	(1)	0.0028(hc)	All FW2
	(2)	0.031(hc)	All SE, SC
ciii. Phenol	(1)	20,900(h)	All FW2
	(2)	4,600,000(h)	All SE, SC
civ. Phosphorous (yellow)	(1)	0.1(c)	All SE, SC
cv. Polychlorinated biphenyls (PCBs-1242, 1254, 1221, 1232, 1248, 1260, and 1016)	(1)	0.014(c); 0.000244(hc)	All FW2
	(2)	0.030(c); 0.000247(hc)	All SE, SC
cvi. Pyrene	(1)	797(h)	All FW2
	(2)	8,970(h)	All SE, SC
cvii. Selenium (Total recoverable)	(1)	20(a); 5.0(c); 179(h)	All FW2
	(2)	300(a); 71(c); 6,800(h)	All SE, SC
cviii. Silver (Total recoverable)	(1)	$e^{(1.72(ln(H))-6.52)}$(a); 164(h)	All FW2
	(2)	2.3(a); 65,000(h)	All SE, SC
cix. Sulfide-hydrogen sulfide (undissociated)	(1)	2(c)	All FW2, SE and SC
cx. 1,2,4,5-Tetrachlorobenzene	(1)	2.56(h)	All FW2
	(2)	3.25(h)	All SE, SC
cxi. 2,3,7,8-Tetrachlorodibenzo-p-dioxin) (TCDD)	(1)	0.000000013(hc)	All FW2
	(2)	0.000000014(hc)	All SE, SC
cxii. 1,1,2,2,-Tetrachloroethane	(1)	1.72(hcc)	All FW2
	(2)	11(hc)	All SE, SC
cxiii. Tetrachloroethylene	(1)	0.388(hc)	All FW2
	(2)	4.29(hc)	All SE, SC
cxiv. Thallium	(1)	1.70(h)	All FW2
	(2)	6.22(h)	All SE, SC
cxv. Toluene	(1)	7,440(h)	All FW2
	(2)	200,000(h)	All SE, SC
cxvi. Toxaphene	(1)	0.73(a); 0.0002(c); 0.000730(hc)	All FW2
	(2)	0.21(a); 0.0002(c); 0.000747(hc)	All SE, SC
cxvii. 1,2,4-Trichlorobenzene	(1)	30.6(h)	All FW2
	(2)	113(h)	All SE, SC
cxviii. 1,1,1,-Trichloroethane	(1)	127(h)	All FW2
cxix. 1,1,2-Trichloroethane	(1)	13.5(h)	All FW2
	(2)	42(hc)	All SE, SC
cxx. Trichloroethylene	(1)	1.09(hc)	All FW2
	(2)	81(hc)	All SE, SC
cxxi. 2,4,5-Trichlorophenol	(1)	2,580(h)	All FW2
	(2)	9,790(h)	All SE, SC
cxxii. 2,4,6-Trichlorophenol	(1)	2.14(hc)	All FW2
	(2)	6.53(hc)	All SE, SC
cxxiii. Vinyl chloride	(1)	0.0830(hc)	All FW2
	(2)	525(hc)	All SE, SC
cxxiv. Zinc (Total recoverable)	(1)	$e^{(0.8473(ln(H))+0.8604)}$(a); $e^{(0.8473(ln(H))+0.7614)}$(c);	All FW2
	(2)	95(a); 86(c)	All SE, SC

[15.]**14.** (No change in text.)

(d) Surface Water Quality Criteria for [the Mainstem Delaware River and Delaware Bay—Zones 1C Through 6] **waters under the jurisdiction of the DRBC**:

[Surface Water Quality Criteria for the Mainstem Delaware River and Delaware Bay—Zones 1C Through 6

Substance		Criteria	Zones
1. General Criteria	i.	The waters shall not contain substances attributable to municipal, industrial, or other discharges in concentrations or amounts sufficient to preclude the specified water uses to be protected. Within this requirement:	All Zones
		(1) The waters shall be substantially free from unsightly or malodorous nuisances due to floating solids, sludge deposits, debris, oil, scum; and substances in concentrations or combinations which are toxic or harmful to human, animal, plant, or aquatic life, or that produce color, taste, or odor in the water, or that taint fish or shellfish flesh.	
	ii.	In no case shall concentrations of substances exceed those values given for rejection of water supplies in the United States Public Health Service Drinking Water Standards.	All Zones
2. Alkalinity	i.	Not less than 20 mg/l.	1E
	ii.	Must be maintained between 20 and 100 mg/l.	2
	iii.	Must be maintained between 20 and 120 mg/l.	3, 4, 5, 6
3. Bacterial Quality	i.	Total coliforms: Most Probable Number not to exceed U.S. Public Health Service's shellfish standards in designated shellfish areas.	6
	ii.	Fecal Coliforms:	
		(1) Maximum geometric average not to exceed 200 per 100 ml. Samples shall be taken at such frequency and location as to permit valid data interpretation.	1C, 1D, 1E, 6
		(2) Maximum geometric average not to exceed 200 per 100 ml above R.M. 117.81, and 770 per 100 ml below R.M. 117.81. Samples shall be taken at such frequency and location as to permit valid data interpretation.	2
		(3) Maximum geometric average of 770 per 100 ml. Samples shall be taken at such frequency and location as to permit valid data interpretation.	3, 4
		(4) Maximum geometric average of 770 per 100 ml from R.M. 78.8 to 59.5, and of 200 per 100 ml from R.M. 59.5 to 48.2. Samples shall be taken at such frequency and location as to permit valid interpretation.	5
		(5) The criteria in (2) and above do not apply during the period October 1, 1987 to April 30, 1988, unless reinstated earlier by the Commissioner due to elevations in bacterial levels which may impair or interfere with existing water uses, or due to cancellation or postponement of the Delaware River Basin Commission's Seasonal Disinfection Study.	
4. Chlorides	i.	Maximum 15-day average of 50 mg/l.	2
	ii.	Maximum 30-day average concentration of 180 mg/l at R.M. 98.	3

5. Detergents, Synthetic (Methylene blue active substances (MBAS))	i.	Not to exceed 0.5 mg/l.	1C, 1D, 1E
	ii.	Maximum 30-day average of 0.5 mg/l.	2
	iii.	Maximum 30-day average of 1.0 mg/l.	3, 4, 5, 6
6. Dissolved Oxygen	i.	Not less than 4.0 mg/l at any time; minimum 24-hour average concentration of 5.0 mg/l.	1C, 1D, 1E
	ii.	Minimum 24 hour average concentration shall not be less than 5.0 mg/l. During periods from April 1 to June 15 and September 16 to December 31 the seasonal average shall not be less than 6.5 mg/l.	2
	iii.	Minimum 24 hour average concentration of 3.5 mg/l. During periods from April 1 to June 15 and September 16 to December 31, the seasonal average shall not be less than 6.5 mg/l.	3, 4
	iv.	Minimum 24 hour average concentration of 3.5 mg/l at R.M. 78.8, 4.5 mg/l at R.M. 70.0 and 6.0 mg/l at R.M. 59.5. During the periods from April 1 to June 15 and September 16 to December 31, the seasonal average shall not be less than 6.5 mg/l over the entire zone.	5
	v.	Minimum 24 hour average concentration of 6.0 mg/l, with a minimum concentration of 5.0 mg/l at any time, unless due to natural conditions.	6
7. Hardness	i.	Maximum 30-day average of 95 mg/l.	2
	ii.	Maximum 30-day average of 150 mg/l.	3
8. pH (standard units)	i.	Must be maintained between 6.0 and 8.5.	1C, 1D, 1E
	ii.	Must be maintained between 6.5 and 8.5.	2, 3, 4, 5, 6
9. Phenols	i.	Maximum of 0.005 mg/l, unless exceeded due to natural conditions.	1C, 1D, 1E, 2, 3
	ii.	Maximum of 0.02 mg/l, unless exceeded due to natural conditions.	4
	iii.	Maximum of 0.01 mg/l, unless exceeded due to natural conditions.	5, 6
10. Radioactivity	i.	Alpha emitters—maximum 3 pc/l (picocuries per liter).	All Zones
	ii.	Beta emitters—maximum 1,000 pc/l.	All Zones
11. Sodium	i.	Maximum 30-day average concentration of 100 mg/l at R.M. 98.	3
12. Solids, Total Dissolved (Filterable Residue)	i.	Not to exceed 133 percent of background or 500 mg/l, whichever is less. (Background is 90 mg/l for Zones 1C and 1D and 200 mg/l for Zones 1E and 2).	1C, 1D, 1E, 2, 3
	ii.	Not to exceed 133 percent of background.	4, 5, 6
13. Temperature and Heat Dissipation Areas	i.	Temperature, except in designated heat dissipation areas:	
		(1) Shall not be raised more than 5°F (2.8°C) above ambient temperature until stream temperatures reach 87°F (30.6°C); above 87°F (30.6°C) natural temperature will prevail.	1C, 1D, 1E
		(2) Shall not be raised more than5°F (2.8°C) above the average 24 hour temperature gradient displayed during the 1961-1966 period, or to a maximum of 86°F (30.0°C), whichever is lower.	2, 3, 4
		(3) Shall not be raised above ambient temperature by more than 4°F (2.2°C) during the period from September through May nor more than 1.5°F (0.8°C) during the period from June through August, nor shall maximum temperatures exceed 86°F (30.0°C) in Zone 5 or 85°F (29.4°C) in Zone 6.	5, 6
	ii.	Heat Dissipation Areas: Temperature limitations may be exceeded by special permission in heat dissipation areas designated on a case-by-case basis, subject to the following conditions:	
		(1) Maximum Length:	
		(i) 1000 feet or twenty times the average width of the stream, whichever is less, measured from the point where the waste discharge enters the stream.	1C
		(ii) 3500 feet or twenty times the average width of the stream, whichever is less, measured from the point where the waste discharge enters the stream.	1D, 1E
		(iii) 3500 feet measured from the point where the waste discharge enters the stream.	2, 3, 4, 5, 6
		(2) Maximum Width:	
		(i) One-half the surface width of the stream or the width encompassing one-half of the entire cross-sectional area of the stream, whichever is less. Within any one heat dissipation area only one shore shall be used in determining the limits of the area.	1C, 1D, 1E
		(ii) Two-thirds the surface width measured from shore to shore at any stage of tide. Within any one heat dissipation area only	2, 3, 4

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		one shore shall be used in determining the limits of the area.	
		(3) Maximum Cross-section: One quarter of the cross-sectional area of the stream.	2, 3, 4
14. Threshold Odor Number	i.	Not to exceed 24 at 60°C.	All Zones
15. Turbidity (Nephelometric Turbidity Unit-NTU)	i.	Maximum 30-day average of 20 NTU, and a maximum of 150 NTU at any time, unless exceeded due to natural conditions.	1C, 1D
	ii.	Maximum 30-day average of 30 NTU, and a maximum of 150 NTU at any time, unless exceeded due to natural conditions.	1E
	iii.	Maximum 30-day average of 40 NTU and a maximum of 150 NTU at any time, except in Zone 2 above R.M. 117.81 during the period from May 30 to September 15 when the turbidity shall not exceed 30 NTU, unless exceeded due to natural conditions.]	2, 3, 4, 5, 6

1. Mainstem Delaware River and Delaware Bay:

i. For parameters with criteria in "Delaware River Basin Commission, Administrative Manual—Part III, Water Quality Regulations," Article 3, dated May 22, 1991, including all amendments and future supplements thereto, the criteria contained therein are the applicable criteria.

ii. For parameters without criteria in "Delaware River Basin Commission, Administrative Manual—Part III, Water Quality Regulations," Article 3, dated May 22, 1991, including all amendments and future supplements thereto, the criteria at (c) above are the applicable criteria and shall be applied as follows:

(1) Criteria applicable to FW2-NT waters apply where salinities are less than or equal to 3.5 parts per thousand (ppt) at mean high tide;

(2) Criteria applicable to SE waters apply where salinities are greater than 3.5 ppt at mean high tide; and

(3) Where salinities vary from 3.5 ppt or less, to greater than 3.5 ppt, at mean high tide, the more stringent of the FW2-NT or SE criteria apply.

2. Tributaries to the mainstem Delaware River and Delaware Bay:

i. The applicable criteria are those contained in "Delaware River Basin Commission, Administrative Manual—Part III, Water Quality Regulations," Article 3, dated May 22, 1991 including all amendments and supplements thereto; or

ii. The criteria at (c) above, whichever are more stringent.

3. For all waters under the jurisdiction of the DRBC where criteria are not established in "Delaware River Basin Commission, Administrative Manual—Part III, Water Quality Regulations," Article 3, dated May 22, 1991, including all amendments and future supplements thereto, or at (c) above, the Department shall use criteria based upon the best available scientific information, in accordance with N.J.A.C. 7:9B-1.6(b)4iii and (d)1ii above, to establish water quality based effluent limitations.

[7:9B-4.15] **7:9B-1.15** Surface water classifications for the waters of the State of New Jersey

(a) This section contains the surface water classifications for the waters of the State of New Jersey. Surface water classifications are presented in tabular form. Subsections (c) through (g) contain surface water classifications by major drainage basin. Subsection (h) lists [FW1] **FW1** waters by tract within basins and subsection (i) identifies the outstanding national resource waters of the State.

(b) The following are instructions for the use of Tables 1 through 5 found in N.J.A.C. [7:9-4.15(c)] **7:9B-1.15(c)** through (g) respectively:

1.-4. (No change.)

5. To find unnamed waterways or waterbodies or named waterways or waterbodies which do not appear in the listing, use the following instructions:

i.-v. (No change.)

vi. If the waterway or waterbody of interest flows through or is entirely located within State parks, forests or fish and game lands, Federal wildlife refuges, other special holdings, or is a State shellfish water as defined in [N.J.A.C. 7:9-4] **this subchapter,** the Department's maps should be checked to determine if the waterbody of interest is mapped as a C1 water. If the waterway or waterbody does not appear on the United States Geological Survey quadrangle that the Department used as a base map in its designation of the C1 waters, the Department will determine on a case-by-case basis whether the waterway or waterbody should be designated as C1.

vii. (No change.)

6. The following 10 classifications are used for the sole purpose of identifying the water quality classification of the waters listed in the Tables in (c) through (h) below:

i.-v. (No change.)

vi. "SE1" means saline estuarine waters whose designated uses are listed in N.J.A.C. [7:9-4.12(d)] **7:9B-1.12(d).**

vii. "SE2" means saline estuarine waters whose designated uses are listed in N.J.A.C. [7:9-4.12(e)] **7:9B-1.12(e).**

viii. "SE3" means saline estuarine waters whose designated uses are listed in N.J.A.C. [7:9-4.12(f)] **7:9B-1.12(f).**

ix-x. (No change.)

7. (No change.)

(c) The surface water classifications in Table 1 are for waters of the Atlantic Coastal Basin:

TABLE 1

[Water Body] **Waterbody**	Classification
...	
ABSECON CREEK	
(Egg Harbor)—North and South Branches from their origins downstream to the boundary of the Pinelands Protection and Preservation Area	**PL**
(Absecon)—Entire length, **except portions described above**	FW2-NT/SE1
...	
BASS RIVER	
(Oswego Lake)—Source to Pineland Protection and Preservation Area boundary at the Garden State Parkway, except those branches described separately below	PL
(New Gretna)—Pineland Protection and Preservation Area boundary to the boundary of shellfish waters	FW2-NT/SE1
(New Gretna)—Boundary of shellfish waters to Mullica River	SE1 (C1)
(Bass River State Forest)—Tommy's Branch from its headwaters to the Bass River **State Forest** Recreation Area service road	FW1
(Bass River State Forest)—Falkenburg Branch of Lake Absegami from its headwaters to the Lake	FW1
BATSTO RIVER	
(Browns Mills)—Entire length, except waters described separately below	PL
(Wharton)—[Brooks and tributaries to the Batsto River between and immediately to the west of Tylertown and Crowleytown, from their headwaters to the head of tide at mean high water] **Skit Branch and tributaries from their headwaters to the confluence with Robert's Branch**	FW1
(Wharton)—The easterly branches of the Batsto River from Batsto Village upstream to the confluence with Skits Branch	FW1
...	

BRISBANE LAKE	
[(Allenwood)] (**Allaire State Park**)—The lake and its tributaries within the boundaries of Allaire State Park, except Mill Run, which is listed separately, and the tributary described separately below	FW2-NT (C1)
(Allaire State Park)—The easterly tributary to Mill Run upstream of Brisbane Lake, located entirely within the Allaire State Park boundaries	FW1
(Mill Run)—Mill Run from its source to Brisbane Lake	FW2-NT (C1)
(Mill Run)—Mill Run from the outlet of Brisbane Lake to the Manasquan River	FW2-NT (C1)
...	
CEDAR CREEK	
(Cedar Crest)—Source to the boundaries of the Pinelands Protection and Preservation Area at the Garden State Parkway, except branches described separately below	PL
(Berkeley)—Garden State Parkway to Barnegat Bay	FW2-NT/SE1
(Greenwood Forest)—Webbs Mill Branch and tributaries located entirely within the boundaries of Greenwood Forest [Tract] **Wildlife Management Area**	FW1
(Greenwood Forest)—[Chamberlain's Branch and five tributaries which originate in and are located entirely within the boundaries of the Greenwood Forest Tract upstream of the blueberry farm exception] **Chamberlain's Branch from its origins to a point 1000 feet west of Route 539**	FW1
(Greenwood Forest)—[Other tributaries to Chamberlain's Branch, located within the boundaries of the Greenwood Forest Tract] **Those portions of the tributaries to Chamberlain's Branch originating and wholly contained within the boundaries of the Greenwood Forest Wildlife Management Area**	FW1
...	
GREAT EGG HABOR RIVER	
(Berlin)—Source to confluence with Tinker Branch	FW2-NT
(Berlin)—Tinker Branch, the River from its confluence with Tinker Branch, and all tributaries within the Pinelands Protection and Preservation Area, downstream to the boundary at the Rt. 40 bridge in Mays Landing	PL
(Winslow)—All tributaries or segments of tributaries outside of the boundaries of the Pinelands Protection and Preservation Area, downstream to Rt. 40 at Mays Landing	FW2-NT
(Mays Landing)—Rt. 40 bridge to Great Egg Harbor, except those tributaries described separately below	FW2-NT/SE1
(Mays Landing)—All tributaries or segments of tributaries within the boundaries of the Pinelands Protection and Preservation areas	PL
(Egg Harbor)—Tributaries and all other waters within MacNamara Wildlife Management Area, except tributary described below	FW2-NT/SE1 (C1)
(Tuckahoe)—[Tributary] **Stream** adjacent to and north of Hawkins Creek [from its origin], **and its tributaries, from their origins** to the point where the influence of impoundment [occurs] **begins**	FW1
...	

HAWKINS CREEK	
(Tuckahoe)—Source to the point where [impoundment influences flow] **the influence of impoundment begins**	FW1
(Tuckahoe)—Downstream of the influence of impoundment	SE1 (C1)
...	
JIMMIES CREEK	
[(Stone Harbor)] (**Great Bay**)—Source to the boundary of Great Bay Wildlife Management Area	SE1 (C1)
[(Stone Harbor)] (**Parkers Landing**)—Segments of the Creek outside the boundaries of Great Bay Wildlife Management Area	SE1
...	
MILE THOROFARE (**Brigantine**)—Entire length	SE1 (C1)
...	
MULLICA RIVER	
(Berlin)—Source to Pinelands Protection and Preservation Area boundaries at the Garden State Parkway, except branches and tributaries described below	PL
[(Wharton)—Skit Branch and tributaries from their headwaters to the confluence with Robert's Branch]	[FW1]
(Wharton)—Stream in the southeasterly corner of the Wharton [Tract] **State Forest** located between Ridge Rd. and Seaf Weeks Rd., downstream to the boundaries of the Wharton [Tract] **State Forest**	FW1
(Wharton)—Gun Branch from its headwaters to US Rt. 206	FW1
(New Gretna)—River and tributaries from the Pinelands Protection and Preservation Area boundary to Great Bay	SE1 (C1)
(Wharton)—Brooks and tributaries between and immediately to the west of Tylertown and Crowleytown, from their headwaters to the head of tide at mean high water	**FW1**
...	
SEDGE CREEK (**MacNamara**)—Entire length	SE1 (C1)
...	
SKIT BRANCH—See [MULLICA] **BATSTO RIVER**	
...	
TAUGH CREEK	
(Whitesboro)—Entire length, except segment described below	SE1 (C1)
(Whitesboro)—Portions outside the boundaries of **Marmora Wildlife Management Area**	SE1
...	
TRIBUTARIES, TOMS RIVER	
(Holmeson)—Tributaries within the boundaries of the Pinelands Protection and Preservation Area	PL
(Van Hiseville)—All tributaries outside the boundaries of the Pinelands Protection and Preservation Area which enter the River between the Rt. 528 bridge, Cassville and the Rt. 547 bridge, Whitesville, except Dove's Mill Branch described separately below	FW2-TM
(Toms River)—All tributaries within the boundaries of the Pinelands Protection and Preservation Area	PL
(Archer's Corners)—All tributaries outside the boundaries of the Pinelands Protection Area and within the boundaries of Collier[']s Mills Wildlife Management Area	FW2-NT (C1)
...	

TULPEHOCKEN CREEK
(Wharton)—Creek and tributaries from their origin to the confluence with Featherbed [Brook] **Branch** FW1
(Wharton)—The westerly tributaries and those natural ponds within the lands bounded by Hawkins **(Bulltown-Hawkins)** Rd., Hampton Gate **(Tuckerton)** Rd., and Sandy Ridge Rd. FW1
TURTLE GROUND CREEK (Jeffers Landing)—Entire length SE1 (C1)
TURTLE GUT (Ventnor)—Entire length SE1 (C1)
WADING RIVER
(Chatsworth)—Entire length, except tributaries described separately below PL
(Greenwood Forest)—Westerly tributary to Howardsville Cranberry Bog Reservoir and other tributaries located entirely within the boundaries of the Greenwood Forest [Tract] **Wildlife Management Area** FW1
...

(d) The surface water classifications in Table 2 are for waters of the Delaware River Basin:

TABLE 2

[Water Body] **Waterbody**	Classification
...	
ASHROE LAKE (Stokes State Forest)	**FW2-NT (C1)**
ASHROE LAKE TRIBUTARIES	
(Stokes State Forest)—Tributary to the Lake from Deer Lake and portion of southernmost tributary to Ashroe Lake outside of the Stokes State Forest boundary)	**FW2-TP (C1)**
(Stokes State Forest)—Southernmost tributary to the Lake from its source to the Stokes State Forest boundary	**FW1 (tp)**
ASSUNPINK CREEK	
(Washington)—Source to boundary of Van Ness Park, except segments described separately below	FW2-NT
(Roosevelt)—Creek and those tributaries within the boundaries of the Assunpink Wildlife Management Area	FW2-NT (C1)
(Quaker Bridge)—[Boundary] **Eastern boundary** of Van Ness Park to Quaker Bridge Rd.	FW2-NT (C1)
(Quaker Bridge)—Quaker Bridge Rd. to **western** Park boundary	FW2-TM (C1)
(Lawrence)—**Western** Van Ness Park boundary to, but not including, Whitehead Mill Pond	FW2-TM
(Trenton)—Whitehead Mill Pond to Delaware River	FW2-NT
...	
BEAR CREEK (Johnsonburg)—[Entire length] **Mud Pond to the Erie-Lackawanna Railroad trestle north of Johnsonburg**	[FW2-TM]**FW1**
(Frelinghuysen)—Erie-Lackawanna Railroad trestle to confluence with Pequest River	**FW2-TM**
BEATTY'S BROOK (Penwell)—Entire length	FW2-TP (C1)
BEAVER BROOK (Hope)—Entire length	FW2-NT
BEAVERDAM BRANCH	
(Glassboro)—Source to boundary of the Glassboro Wildlife Management Area	FW2-NT
(Glassboro)—Within the boundaries of Glassboro Wildlife Management Area	FW2-NT (C1)
BEERSKILL [CREEK (Shaytown)—Entire length]	[FW2-TP (C1)]
(High Point State Park)—Source to boundary of High Point State Park at 41° 15'48" N, 74° 45'49" W	**FW1 (tp)**
(Shaytown)—Boundary of High Point State Park to confluence with Little Flat Brook	**FW2-TP (C1)**
BIG FLAT BROOK	
(Montague)—Sawmill [Lake] **Pond** to confluence with Parker Brook, except segments [described directly below and those] described under the listing for Flat Brook, below	FW2-NT (C1)
[(Stokes State Forest)—Two tributaries to Big Flat Brook which originate along Struble Road in Stokes State Forest to their confluences with Big Flat Brook on Fish and Game properties boundaries]	[FW1]
(Sandyston)—Confluence with Parker Brook, through the Blewitt Tract, to the confluence with [Little] Flat Brook, except tributaries described under the listing for Flat Brook, below	FW2-TP (C1)
(Tuttles Corner)—Outlet stream from Lake Ashroe to its confluence with Big Flat Brook	**FW2-TP(C1)**
...	
BUCKSHUTEM CREEK	
(Centre Grove)—Entire length, except segments described separately below	FW2-NT
([Millville] **Edward G. Bevan**)—Creek and tributaries within the boundaries of [Millville] **Edward G. Bevan** Wildlife Management Area, except those tributaries described separately below	FW2-NT (C1)
([Millville] **Edward G. Bevan**)—Joshua and Pine Branches to their confluence with Buckshutem Creek	FW1
CAT GUT (Mad Horse Creek)—Entire length	SE1 (C1)
CEDAR BRANCH (Manumuskin River)—Source to Manumuskin River	FW1
CEDAR BRANCH **(Edward G. Bevan)—Entire length**	**FW1**
[(Frames Corner)—Entire length, except segment described below]	[FW2-NT/SE1]
[(Bevans)—That portion of the Branch and all tributaries within the boundaries of Bevans Wildlife Management Area]	[FW2-NT/SE1 (C1)]
CEDAR BRANCH ([Millville] **Edward G. Bevan**)—See NANTUXENT CREEK	
CEDAR CREEK	
(Dividing Creek Station)—Entire length, except portions described separately below	FW2-NT
[(Millville)] **(Edward G. Bevan)**—Those tributaries to Cedar Creek that originate in and are located entirely within the boundaries of [Millville Fish and Game Tract] **Edward G. Bevan Wildlife Management Area**	FW1
CEDARVILLE POND (Cedarville)	FW2-NT (C1)
CHERRY TREE CREEK (Mad Horse Creek)—Entire length	SE1 (C1)
CLARKS POND (Bridgeton)	FW2-NT (C1)
CLEARVIEW CREEK (Hampton)—Source to Alms House Brook	FW2-NT
CLINT MILLPOND **(Beaver Swamp)**	FW2-NT (C1)
...	
CRISS BROOK (Stokes State Forest)—Entire length **within the boundaries of Stokes State Forest**	FW1 **(tp)**
CROSSWICKS CREEK (Bordentown)—Entire length	FW2-NT
CROW CREEK (S. Dennis)—Entire length	FW2-NT/SE1 (C1)
CULVER'S CREEK (Frankford)—Entire length	FW2-TM
CULVER'S LAKE (Frankford)	FW2-TM
DEER LAKE (Sandyston)	**FW2-NT (C1)**
...	

DIVIDING CREEK	
(Dividing Creek)—Entire length, except those segments described below	FW2-NT/SE1
[(Millville)] **(Edward G. Bevan)**—Those segments of tributaries that are located entirely within the boundaries of the [Millville Fish and Game Tract, north of Whitehead Station] **Edward G. Bevan Wildlife Management Area**	FW1
...	
DUNNFIELD CREEK	
(Del. Water Gap)—Source to Rt. I-80	FW1
(Del. Water Gap)—Rt. I-80 to Delaware River, except tributaries described below	FW2-TP (C1)
(Worthington)—[Sunfish Pond, its outlet stream to the Delaware River and all] All unnamed waters that are located entirely within the boundaries of the Worthington [Tract] **State Forest**	FW1
EAST CREEK	
([Lake Nummi) **Dennis**)—Source to boundaries of the Pinelands Protection and Preservation Area except those portions described separately below	PL
[(Belleplain)—All tributaries to Lake Nummi from their origins to the Lake]	[FW1]
(Belleplain)—A stream and tributary that originate just south of East Creek Mill Rd., 1.2+ miles north-northeast of Eldora and are located entirely within the boundaries of Belleplain State Forest	FW1
(Eldora)—Boundary of the Pinelands Protection and Preservation Area to Delaware Bay except segment described separately below	FW2-NT/SE1
(Dennis Creek)—Segment within the boundaries of the Dennis Creek Wildlife Management Area	FW2-NT/SE1 (C1)
...	
FLAT BROOK	
([Blewitt] **Flatbrook-Roy**)—Confluence of Big Flat Brook and Little Flat Brook to the boundary of [the Blewitt Tract] **Flatbrook-Roy Wildlife Management Area**, except segments described below	FW2-TP (C1)
(Flatbrookville)—[Blewitt Tract] **Flatbrook-Roy Wildlife Management Area** boundary to Delaware River, except segments described below	FW2-TM
(Walpack)—Segment of the Brook within Walpack Wildlife Management Area	FW2-TM (C1)
(Stokes State Forest)—Two tributaries to Flat Brook which originate along Struble Road in Stokes State Forest to their confluences with Flat Brook within the boundaries of Flatbrook-Roy Wildlife Management Area	**FW1 (tm)**
(High Point)—All surface waters of the Flat Brook drainage area within the boundaries of High Point State Park and Stokes State Forest, except the following waters:	[(]FW1[)]
1. Saw Mill Pond and Big Flat Brook downstream **to the confluence with Flat Brook**;	
2. Mashipacong Pond and its outlet stream (Parker Brook) to the confluence with Big Flat Brook;	
3. Lake Wapalanne and its outlet stream to the confluence with Big Flat Brook;	
4. Lake Ocquittunk and waters connecting it with Big Flat Brook;	
5. Stony Lake and its outlet stream (Stony Brook) to the confluence with Big Flat Brook;	
6. Kittatinny Lake, that portion of its inlet stream outside the Stokes State Forest boundaries, and its outlet stream, including the Shotwell Camping Area tributary, to the confluence with Big Flat Brook;	
7. Deer Lake and its outlet stream to Lake Ashroe;	
8. Lake Ashroe, portions of its tributaries outside the Stokes State Forest boundaries, and its outlet stream to the confluence with Big Flat Brook;	
9. Lake Shawanni and its outlet stream to its confluence with [Big] Flat Brook;	
10. Crigger Brook and tributary to its confluence with Big Flat Brook	
(Del. Water Gap)—All tributaries to Flat Brook that flow from the Kittatinny Ridge and are located entirely within the [proposed] boundaries of the Delaware Water Gap National Recreation Area	FW1
FORKED BROOK (Stokes State Forest)—Entire length	FW2-TP (C1)
FURNACE **(OXFORD)** BROOK	
(Oxford)—Source to railroad bridge at Oxford	FW2-TP (C1)
(Oxford)—Railroad bridge to Pequest River	FW2-NT
FURNACE LAKE (Oxford)	FW2-TM
GARDNERS LAKE (Andover)	FW2-TM
GOOSE POND (Mad Horse Creek)	SE1 (C1)
GOSHEN CREEK	
(Woodbine)—Entire length except segment described below	SE1
(Dennis Creek)—Segment and all tributaries within the Dennis Creek Wildlife Management Area	SE1 (C1)
GRAVELLY RUN [(Millville)] **(Edward G. Bevan)**—Downstream to the [Millville Fish and Game Tract] **Edward G. Bevan Wildlife Management Area** boundaries	FW1
...	
KITTATINNY LAKE TRIBUTARY	
[(Sandyston)—Entire length]	[FW2-TP (C1)]
(Stokes State Forest)—Source to boundary of Stokes State Forest	**FW1 (tp)**
(Sandyston)—State Forest boundary to Kittatinny Lake	**FW2-TP (C1)**
KYMER BROOK (Andover)—Entire length	FW2-NT
LAHAWAY CREEK	
(Prospertown)—Entire length, except tributaries described separately below	FW2-NT
(Colliers Mills)—All tributaries which originate in the Colliers Mills [Tract] **Wildlife Management Area** north-northeast of Archers Corners, from their sources to [Lahaway Creek] **the boundaries of the Colliers Mills Wildlife Management Area**	FW1
LAKE—See listing under Name	
LITTLE EASE RUN	
(Glassboro)—Entire length, except portion described separately below	FW2-NT
(Glassboro)—Run and tributaries within the Glassboro Wildlife Management Area, except tributary described separately below	FW2-NT (C1)
(Glassboro)—[That tributary to the Branch of Little Ease Run which joins the Branch just south of Stangor Ave.] **The portion of a branch of Little Ease Run situated immediately north of Stanger Avenue, and entirely within the Glassboro Wildlife Management Area**	FW1
(Glassboro)—The first and second easterly tributaries to Little Ease Run north of Academy [Ave.] **Road**	FW1

LITTLE FLAT BROOK	
(High Point State Park)—Source to boundary of High Point State Park	**FW1 (tm)**
(Layton)—[Source] **State park boundary** to, but not including, Hainesville Pond, except tributaries described below or under the listing for Flat Brook above	FW2-TM (C1)
[(Bevans)] **(Flatbrook-Roy)**—Tributary which originates north of Bevans-Layton Rd. downstream to the first pond adjacent to the Fish and Game headquarters building	FW1**(tm)**
(Hainesville)—Hainesville Pond to Rt. 206 bridge, except tributaries described under the listing for Flat Brook, above	FW2-NT (C1)
(Hainesville)—Rt. 206 bridge to confluence with Big Flat Brook, except tributaries described under listing for Flat Brook, above	FW2-TM (C1)
. . .	
[LONG] **LONE** TREE CREEK (Egg Island)—Entire length	SE1 (C1)
. . .	
MARCIA LAKE [(Montague)]	
(High Point State Park)—Entire Lake	FW2-TM (C1)
(High Point State Park)—Outlet stream from the Lake to the confluence with Clove (Mill) Brook	**FW2-TP (C1)**
MASHIPACONG POND (Montague)	**FW2-NT (C1)**
. . .	
MILE BRANCH—[See NANTUXENT CREEK]	
Entire length	**FW1**
. . .	
MOUNT MISERY BROOK	
(Woodmansie)—Entire length, except segments described below	PL
SOUTH BRANCH, MOUNT MISERY BROOK	
(Lebanon State Forest)—All tributaries to the South Branch that are located entirely within the boundaries of Lebanon State Forest	FW1
(Pasadena)—The two easterly branches of the Branch which are located entirely within the boundaries of the Pasadena [Fish and Game Tract] **Wildlife Management Area**	FW1
MOUNTAIN LAKE (Liberty)	FW2-TM
MOUNTAIN LAKE CREEK	
(Liberty)—Source to Mountain Lake	FW2-TM
(White)—Mountain Lake dam to Pequest River	FW2-NT
MUD POND (Johnsonburg)—Pond and its outlet stream, **Bear Creek,** to the Erie-Lackawanna Railroad trestle north of Johnsonburg	FW1
. . .	
MUSKEE CREEK	
(Port Elizabeth)—Source to boundary of Pinelands Protection and Preservation Area, except segments described separately below	PL
(Peaselee)—The Middle Branch from its origin to the boundaries of the Peaselee [Fish and Game Tract] **Wildlife Management Area**	FW1
(Peaselee)—Those portions of the tributaries to Slab Branch which are located entirely within the boundaries of the Peaselee [Fish and Game Tract] **Wildlife Management Area**	FW1
(Bricksboro)—Pinelands Protection and Preservation Area boundaries to Maurice River	FW2-NT
NANCY GUT	
([Newport] **Nantuxent**)—Source to the boundary of Nantuxent Creek Wildlife Management Area	SE1 (C1)
(Newport)—Stream and all tributaries outside of the boundaries of the Nantuxent Creek Wildlife Management Area	SE1
NANTUXENT CREEK	
(Newport Landing)—Entire length, except segment described below	FW2-NT/SE1
([Newport Landing] **Nantuxent**)—All waters within the boundaries of Nantuxent Creek Wildlife Management Area	FW2-NT/SE1 (C1)
[(Newport Landing)—Cedar and Mill Branches to Shaw's Mill Pond]	[FW1]
NEW WAWAYANDA LAKE (Andover)	FW2-TM
NISHISAKAWICK CREEK (Frenchtown)—Entire length	FW2-NT
OLDMANS CREEK	
(Lincoln)—Entire length, except portion described below	FW2-NT/SE1
(Harrisonville)—Portion within Harrisonville Lake Wildlife Management Area	FW2-NT (C1)
OCQUITTUNK LAKE	
(Stokes State Forest)—Entire lake	**FW2-NT (C1)**
(Stokes State Forest)—From the outlet of the Lake to the confluence with Big Flat Brook	**FW2-TP (C1)**
OCQUITTUNK LAKE TRIBUTARY (Stokes State Forest)—Source to Ocquittunk Lake	**FW1 (tp)**
. . .	
PEQUEST RIVER	
(Belvidere)—Source to Tranquility bridge except segments described below	FW2-TM
(Whittingham)—Northwesterly tributaries, [which are located within the boundaries of the Whittingham Tract from their origin] **including Big Spring, located within the boundaries of the Whittingham Wildlife Management Area, southwest of Springdale, from their origins** to their confluence with the Pequest River	FW1 (tm)
(Whittingham)—Stream and tributaries within the Whittingham [Tract] **Wildlife Management Area,** except those classified as FW1, above	FW2-TM (C1)
(Vienna)—Tranquility bridge to Townsbury bridge	FW2-NT
(Townsbury)—Townsbury bridge to Delaware River, except segment described below	FW2-TM
(Pequest)—Segment and tributaries within the boundaries of the Pequest Wildlife Management Area	FW2-NT (C1)
. . .	
RANCOCAS CREEK	
NORTH BRANCH	
(North Hanover)—Source to boundary of the Pinelands Protection and Preservation Area at Pemberton	PL
(Pemberton)—Boundary of the Pinelands Protection and Preservation Area to the Delaware River, except tributaries described below	FW2-NT
(Pemberton)—Tributaries within the boundaries of the Pinelands Protection and Preservation Areas	PL
SOUTH BRANCH RANCOCAS CREEK	
(Southhampton)—Source to Pinelands Protection and Preservation Area boundaries at Rt. 206 bridge south of Vincentown	PL
(Vincentown)—Vincentown to Delaware River, except tributaries described separately below	FW2-NT

(Vincentown)—All tributaries within the Pinelands Protection and Preservation Area	PL
COOPER BRANCH RANCOCAS CREEK	
(Woodmansie)—Entire length, except portions described separately, below	PL
(Lebanon State Forest)—Branch and tributaries downstream to Pakim Pond, and tributaries to Cooper Branch located entirely within the Lebanon State Forest boundaries	FW1
DEER PARK BRANCH RANCOCAS CREEK	
(Buckingham)—Stream and tributaries near Buckingham to confluence with Pole Bridge Branch	FW1
MACDONALDS BRANCH RANCOCAS CREEK	
(Woodmansie)—Entire length, except as described separately below	PL
(Lebanon State Forest)—Branch and tributaries located entirely within Lebanon State Forest	FW1
SHINNS BRANCH RANCOCAS CREEK	
(Lebanon State Forest)—Branch and tributaries located entirely within the boundaries of Lebanon State Forest, from their sources to the forest boundary	FW1
(Lebanon Lake Estates)—Forest boundary to lake	PL
ROARING DITCH	
(Heislerville)—Entire length, except segment described below	SE1
(Eldora)—Ditch and all tributaries within the Dennis Creek Wildlife Management Area boundaries	SE1 (C1)
ROWANDS POND (Clementon)—Pond, inlet stream and outlet stream within Rowands Pond Wildlife Management Area	FW2-NT (C1)
RUNDLE BROOK (Del. Water Gap)—Source to [Flatbrook Rd.] **Sussex County Route 615**	FW1
SALEM CREEK (RIVER) (Salem)—Entire length	FW2-NT/SE1
SAMBO ISLAND BROOK (Del. Water Gap)—Entire length	FW1
SAMBO ISLAND POND (Del. Water Gap)	FW1
SANDYSTON CREEK (Sandyston)—Entire length	FW2-TP (C1)
SAVAGES RUN (East Creek)	
(Lake Nummi)—Entire length, except portions described separately, below	PL
(Belleplain)—Those two tributaries and portions thereof downstream of Lake Nummi **and all tributaries to Lake Nummi** that are located entirely within the boundaries of Belleplain State Forest	FW1
SAWMILL POND (High Point)	FW2-NT (C1)
SCHOOLEYS MTN. BROOK (Schooley's Mtn.)—Entire length	FW2-TP (C1)
SHABACUNK (SHABBECONG) CREEK (Ewing)—Entire length	FW2-NT
SHAWANNI CREEK (Walpack)—Entire length	FW2-TP (C1)
SHAWANNI LAKE (Stokes State Forest)	FW2-NT (C1)
SHAWS MILL POND (Cedarville)	FW2-NT/SE1 (C1)
TRIBUTARIES	
(Edward G. Bevan)—Cedar and Mile Branches to Shaw's Mill Pond	**FW1**
...	
STEELE RUN	
(Washington Crossing State Park)—Source to [Rt. 29] **confluence with westerly tributary**	FW1
(Titusville)—[Rt. 29 to the Delaware River] **Confluence with westerly tributary to the Delaware River**	FW2-NT
STEENY KILL LAKE (High Point)	[FW2-NT (C1)] **FW1**
STEEP RUN (Mauricetown)—Entire length	FW2-NT (C1)
STEPHENSBURG BROOK (Stephensburg)—Entire length	FW2-TP (C1)
STONY BROOK (Knowlton)—Entire length	FW2-NT
STONY BROOK [(Stokes State Forest)]	[FW2-TP (C1)]
(Stokes State Forest)—Source and tributaries, wholly contained within Stokes State Forest, from their origins to, but not including, Stony Lake	**FW1 (tp)**
(Stokes State Forest)—Tributary originating approximately one mile west of the Branchville Reservoir to the confluence with Stony Brook	**FW1 (tp)**
(Stokes State Forest)—Outlet of Stony Lake to the confluence with Big Flat Brook	**FW2-TP (C1)**
STONY LAKE (Stokes State Forest)	FW2-TM (C1)
TRIBUTARIES—See STONY BROOK	
STOW CREEK	
(Stow Creek Landing)—Entire length, except tributaries described separately below	FW2-NT/SE1
(Mad Horse Creek)—Tributaries within the boundaries of the Mad Horse Creek Wildlife Management Area	FW2-NT/SE1 (C1)
STRAIGHT CREEK (Berrytown)—Entire length	SE1 (C1)
SUNFISH POND (Worthington)—The pond and its outlet stream to the Delaware River	**FW1**
...	
TILLMAN BROOK (Walpack)—Entire length	[FW2-TP (C1)] **FW1 (tp)**
...	

(e) The surface water classifications in Table 3 are for waters of the Passaic, Hackensack and New York Harbor Complex Basin:

TABLE 3

[Water Body] **Waterbody**	Classification
...	
BEAR SWAMP LAKE (Ringwood **State Park**)	FW2-NT (C1)
...	
BRUSHWOOD POND (Ringwood **State Park**)	FW2-TM (C1)
...	
CEDAR POND [(Clinton)] **(Postville)**—Pond and all tributaries	FW1
CHARLOTTEBURG RESERVOIR (Charlotteburg)	FW2-TM
CHERRY RIDGE BROOK	
(Vernon)—[Entire length, except segments described below] **Tributaries not contained within Wawayanda State Park and Newark Watershed lands**	FW2-NT
[(Canistear)] **(Wawayanda State Park)**—Brook and tributaries upstream of Canistear Reservoir located entirely within the boundaries of Wawayanda State Park and the Newark Watershed lands	FW1
CLINTON BROOK	
(Mossmans Brook) (W. Milford)—Source to, but not including, Clinton Reservoir	FW2-NT (C1)
(Newfoundland)—Clinton Reservoir dam to Pequannock River	FW2-TP (C1)
CLINTON RESERVOIR (W. Milford)	FW2-TM (C1)
CLOVE BROOK—See STAG BROOK	
COOLEY BROOK	
(W. Milford)—Entire length, except segments described below	FW2-TP (C1)
(Hewitt **State Forest**)—Segments of the brook and all tributaries **which originate and are** located entirely within Hewitt State Forest	FW1 (tp)
CORYS BROOK (Warren)—Entire length	FW2-NT
CRESSKILL BROOK	
(Alpine)—Source to Duck Pond Rd. bridge, Demarest	FW2-TP (C1)
(Demarest)—Duck Pond Rd. bridge to Tenakill Brook	FW2-NT

CUPSAW BROOK	
(Skylands)—Source to Wanaque Reservoir, except segment described below	FW2-NT
[(Skylands)] **(Ringwood State Park)**—That segment of Cupsaw Brook within the boundaries of Ringwood State Park	FW2-NT (C1)
...	
GRANNEY BROOK—See SPRING BROOK	
GRANNIS BROOK (Morris Plains)—Entire length	FW2-NT
GREAT BROOK	
(Chatham)—Entire length, except segment described below	FW2-NT
(Great Swamp)—Segment within the boundaries of the Great Swamp National Wildlife Refuge	FW2-NT (C1)
GREEN BROOK	
(W. Milford)—Entire length, except those segments described below	FW2-TP (C1)
(Hewitt **State Forest)**—These segments **and tributaries which originate and are** located entirely within the Hewitt State Forest boundaries	FW1 (tp)
...	
LAKE STOCKHOLM BROOK	
(Stockholm)—Entire length, except tributaries described separately below	FW2-TP (C1)
(Stockholm)—[Westerly] **Portion of westerly** tributary**, from its origins to about 1,000 feet south of the Route 23 bridge,** located entirely within the boundaries of the Newark watershed	FW1 (tp)
(Stockholm)—Brook between Hamburg Turnpike and [Williamsville-Stockholm] **Vernon-Stockholm** Rd. to its confluence with Lake Stockholm Brook, north of Rt. 23	FW1 (tp)
LITTLE POND BROOK (Oakland)—Entire length	FW2-TP (C1)
LOANTAKA BROOK	
(Green Village)—Entire length, except segment described below	FW2-NT
(Great Swamp)—Brook and all tributaries within the boundaries of Great Swamp National Wildlife Refuge	FW2-NT (C1)
LUD-DAY BROK—(Camp Garfield)—Source [to confluence with a tributary from Camp Garfield] **downstream to its confluence with the southwestern outlet stream from Clinton Reservoir just upstream of the confluence of the outlet stream and a tributary from Camp Garfield**	FW1
MORSES CREEK **(Linden)**—Entire length	FW2-NT/SE3
...	
PACACK BROOK	
(Stockholm)—[Source to Pequannock River, excluding Canistear Reservoir, except segments described separately below] **Outlet of Canistear Reservoir to Pequannock River**	FW2-NT
(Canistear)—Brook and tributaries upstream of Canistear Reservoir located entirely within the boundaries of the Newark Watershed	FW1
PASSAIC RIVER	
(Mendham)—Source to Rt. 202 bridge (Van Doren's Mill), except tributaries described separately below	FW2-TM
(Paterson)—Rt. 202 bridge to Dundee Lake dam	FW2-NT
(Little Falls)—Dundee Lake dam to confluence with Second River	FW2-NT/SE2
(Newark)—Confluence with Second River to mouth	SE3
TRIBUTARIES	
([Fairfield] **Great Piece Meadows State Park**)—Tributaries within Great Piece Meadows **State Park**	FW2-NT (C1)
PECKMAN RIVER (Verona)—Entire length	FW2-NT
PEQUANNOCK RIVER	
MAIN STEM	
(Vernon)—Source to confluence with Pacack Brook	FW1 (tp)
(Newfoundland)—Pacack Brook to Hamburg Turnpike, (Bench Mark 257) in Bloomingdale except tributaries described separately below	FW2-TM
(Riverdale)—Hamburg Turnpike bridge to Pompton River	FW2-NT
TRIBUTARIES	
(Copperas Mtn.)—Entire length	FW2-TP (C1)
(Smoke Rise)—Entire length	FW2-TP (C1)
(Green Pond Junction)—Tributary at Green Pond Junction **from its origin downstream to Route 23**	FW1 (tm)
(Jefferson)—Tributary joining the main stem about 3,500± feet southeast of the Sussex-Passaic County line, near Jefferson **from its origin to about 2,000 feet upstream of the pond**	FW1 (tm)
(Lake Kampfe)—Source to, but not including, Lake Kampfe	FW2-TM
(Lake Kampfe)—Lake Kampfe to Pequannock River, except tributary described separately below	FW2-NT
(Lake Kampfe)—Tributary within the boundaries of Norvin Green State Forest, originating west of Torne Mtn.	FW2-NT (C1)
PILES CREEK **(Grasselli)**—Entire length	SE3
...	
SMITH CREEK **(Woodbridge)**—Entire length	FW2-NT/SE[2]3
SPLIT ROCK RESERVOIR (Rockaway)	FW2-TM
SPLIT ROCK RESERVOIR TRIBUTARIES	
(Farny State Park)—Three tributaries within Farny State Park	FW2-NT (C1)
SPRING (GRANNEY) BROOK (Mine Hill)—Entire length	**FW2-TP (C1)**
SPRING GARDEN BROOK (Florham)—Entire length	FW2-NT
STAG (CLOVE) BROOK (Mahwah)—Entire length	FW2-TP (C1)
STEPHENS BROOK	
(Roxbury)—Entire length, except segment described separately, below	FW2-NT
(Berkshire Valley)—That segment north of the boundaries of the Berkshire Valley [Tract] **Wildlife Management Area**	FW1
...	
WHIPPANY RIVER	
(Brookside)—Source to Whitehead Rd. bridge	FW2-TP (C1)
(Morristown)—Whitehead Rd. bridge to [Passaic River] **Rockaway River**	FW2-NT
TRIBUTARIES	
(Brookside)—Entire length	FW2-TP (C1)
(E. of Brookside)—Entire length	FW2-TM
(E. of Washington Valley)—Entire length	FW2-TM
(Gillespie Hill)—Entire length	FW2-TP (C1)
(Shongum Mtn.)—Entire length	FW2-NT
WONDER LAKE (West Milford)	FW2-NT (C1)
WOODBRIDGE [RIVER] **CREEK (Woodbridge)**—Entire length	FW2-NT/SE3

(f) The surface water classifications in Table 4 are for waters of the Raritan River and Raritan Bay Basin:

TABLE 4

[Water Body] **Waterbody**	Classification
...	
BLACKBERRY CREEK	
(Oceanport)—Source to a line beginning on the easternmost extent of Gooseneck Point and bearing approximately 162 degrees True North to its terminus on the westernmost extent of an unnamed point of land in the vicinity of the western extent of Cayuga Ave. in Oceanport	SE1
(Oceanport)—Creek below the line described above	SE1 **(C1)**
...	
CAPOOLONG (**CAKEPOULIN**) CREEK	
(Sydney)—Entire length	FW2-TP (C1)
...	
PIGEON SWAMP [(S. Brunswick)] **(Pigeon Swamp State Park)**—All waters within the boundaries of Pigeon Swamp State Park	FW2-NT (C1)
...	
RARITAN RIVER	
NORTH BRANCH (Also see INDIA BROOK)	
(Pleasant Valley)—Source to, but not including, Ravine Lake	FW2-TP (C1)
(Far Hills)—Ravine Lake dam to Rt. 512 bridge	FW2-TM
(Bedminister)—Rt. 512 bridge to confluence with South Branch, Raritan River	FW2-NT
SOUTH BRANCH RARITAN RIVER	
(Mt. Olive)—Source to the dam that is 390 feet upstream of the Flanders-Drakestown Road bridge **and the two tributaries which originate north and east of the Budd Lake Airfield**	FW2-NT (C1)
(Mt. Olive)—Dam to confluence with Turkey Brook	FW2-TM (C1)
(Naughright)—Confluence with Turkey Brook to confluence with Electric Brook	FW2-TP (C1)
(Clinton)—Confluence with Electric Brook to downstream end of Packers Island, except segment described separately, below	FW2-TM
(Ken Lockwood Gorge)—River and tributaries within Ken Lockwood Gorge Wildlife Management Area	FW2-TM (C1)
(Neshanic Sta.)—Downstream end of Packers Island to confluence with North Branch, Raritan River	FW2-NT
MAIN STEM RARITAN RIVER	
(Bound Brook)—From confluence of North and South Branches to Landing Lane bridge in New Brunswick and all freshwater tributaries downstream of Landing Lane bridge	FW2-NT
(Sayreville)—Landing Lane bridge to Raritan Bay and all saline water tributaries	SE1
...	

(g) The surface water classifications in Table 5 are for waters of the Wallkill River Basin:

TABLE 5

[Water Body] **Waterbody**	Classification
BEARFORT WATERS (Wawayanda)	FW2-NT (C1)
BEAVER RUN (Wantage)—Entire length	FW2-NT
BLACK CREEK	
(McAfee)—Source to Rt. 94 bridge, except those tributaries described separately, below	FW2-TM
(Vernon)—Rt. 94 bridge to Pochuck Creek	FW2-NT
TRIBUTARIES	
(Hamburg)—Three tributaries to Black Creek which originate in the Hamburg Mtn. [Tract] **Wildlife Management Area** from their sources to the [Tract] **Management Area** boundaries	FW1 (tm)
(Rudeville)—Tributaries within the Hamburg Mtn. [Tract] **Wildlife Management Area** not classified as FW1, above	FW2-TM (C1)
(McAfee)—Entire length	FW2-TP (C1)
(Vernon Valley)—Entire length	FW2-NT
...	
FRANKLIN POND CREEK	
(Franklin)—Entire length, except those tributaries described separately, below	FW2-TM
(Hamburg Mtn.)—The first tributary, just south of Hamburg Mtn., flowing toward the Wallkill River and located entirely within the Hamburg Mtn. [Tract] **Wildlife Management Area**	FW1 (tm)
(Hamburg Mtn.)—Tributaries within the Hamburg Mtn. [Tract] **Wildlife Management Area** not classified as FW1 as described above	FW2-TM (C1)
GLENWOOD BROOK (Glenwood)—Outlet of Glenwood Lake to State line	FW2-TM
HAMBURG CREEK	
(Hamburg Mtn.)—Source to Rt. 517 bridge, Rudeville, except tributary described separately below	FW2-TM
(Hardistonville)—Rt. 517 bridge to Wallkill River	FW2-NT
(Hamburg Mtn.)—The third tributary just southwest of Hamburg Mtn. flowing toward the Wallkill River and located entirely within the Hamburg Mtn. [Tract] **Wildlife Management Area**	FW1
HANFORD BROOK (Hanford)—Entire length within New Jersey	FW2-NT
LAKE LOOKOUT (Wawayanda)	FW2-NT (C1)
LAKE LOOKOUT BROOK (Wawayanda)—Brook and tributaries from source in Newark City [Holdings] **holdings**, through the Wawayanda [Tract] **State Park**, to confluence with the outlet stream from Lake Wawayanda	FW1
LAKE RUTHERFORD (Wantage)—**The Lake and its tributaries**	FW1 (tm)
...	
MUD POND OUTLET STREAM (Hamburg)—Outlet stream from the Pond, located within Hamburg Mtn. [Tract] **Wildlife Management Area**	FW2-NT (C1)
...	
SAND HILLS BROOK	
(Hamburg Mtn.)—The upstream portion of Sand Hills Brook located entirely within the boundaries of the Hamburg Mtn. [Tract] **Wildlife Management Area**	FW1
(Hamburg)—Brook and tributaries beyond [Tract] **Management Area** boundaries	FW2-NT
...	

(h) FW1 waters are listed in Table 6 by tract within basins:

Table 6

ATLANTIC COASTAL PLAIN BASIN

...

WHARTON STATE FOREST	MULLICA RIVER WATERSHED
	Deep Run and tributaries from their headwaters downstream to Springer's Brook
	Skit Branch and tributaries from their headwaters downstream to the confluence with Robert's Branch

	Tulpehocken Creek and tributaries from their sources downstream to the confluence with Featherbed Branch
	The westerly tributaries to Tulpehocken Creek and those natural ponds within the lands bounded by Hawkins **(Bulltown-Hawkins)** Rd., Hampton Gate **(Tuckerton)** Rd., and Sandy Ridge Rd.
	Stream in the southeasterly corner of the Wharton State Forest, located between Ridge Rd. and Seaf Weeks Rd. downstream to the boundaries of Wharton State Forest
	Brooks and tributaries **to the Mullica River** between and immediately to the west of Tylertown and Crowleytown, from their headwaters downstream to the head of tide at mean high water
	The easterly branches of the Batsto River from Batsto Village **upstream** to the confluence with Skit[s] Branch
	Gun Branch from its headwaters downstream to U.S. Route 206
DELAWARE RIVER BASIN	
. . .	
BELLEPLAIN STATE FOREST	EAST CREEK WATERSHED
	All tributaries to Lake Nummi from their origins downstrem to the lake
	Those two tributaries to Savages Run and portions thereof downstream of Lake Nummi, which are located entirely within the Belleplain State Forest boundaries
	[The] A stream and its tributaries that originate just south of East Creek Mill Rd., 1.2± miles north-northeast of Eldora, and are located entirely within the boundaries of Belleplain State Forest
	WEST CREEK WATERSHED
	The portion of the tributary to West Creek that originates about 0.9 miles southeast of Hoffman's Mill and is located entirely within the boundaries of Belleplain State Forest
	Eastern branch of the easterly tributary to Pickle Factory Pond from its origin to its confluence with the western branch
	Those tributaries to the stream which enter West Creek approximately 0.5 miles upstream of Hoffman's Mill and which are located entirely within the boundaries of Belleplain State Forest
. . .	
FLATBROOK-ROY WILDLIFE MANAGEMENT AREA	FLAT BROOK WATERSHED
	The tributary to Little Flat Brook which originates north of the Bevans-Layton Rd., downstream to the first pond adjacent to the Fish and Game headquarters building
	Two tributaries to [Big] Flat Brook which originate along Struble Rd. in Stokes State Forest, downstream to the confluence with [Big] Flat Brook [on Fish and Game property] **within Flatbrook-Roy Wildlife Management Area boundaries**
GLASSBORO WILDLIFE MANAGEMENT AREA	MAURICE RIVER WATERSHED
	The portion of a branch of Little Ease Run situated immediately north of [Stangor] **Stanger** Avenue, and entirely within the Glassboro Wildlife Management Area
	First and second easterly tributaries to Little Ease Run north of Academy Road
HIGH POINT STATE PARK AND STOKES STATE FOREST	CLOVE BROOK WATERSHED
	The second and third northerly tributaries to Clove Brook, those tributaries to Steeny Kill Lake, **Steeny Kill Lake,** and those downstream of the Lake which originate in High Point State Park, downstream to the confluence with Clove Brook or to the boundaries of High Point State Park
	The northerly tributaries to Mill Brook due west of Steeny Kill Lake, within the High Point State Park
	FLAT BROOK WATERSHED
	All surface waters of the Flat Brook drainage within the boundaries of High Point State Park and Stoke State Forest except the following:
	(1) Saw Mill Pond and Big Flat Brook downstream **to the confluence with Big Flat Brook;**
	(2) Mashipacong Pond and its outlet stream (Parker Brook) to the confluence with Big Flat Brook;
	(3) Lake Wapalanne and its outlet stream to the confluence with Big Flat Brook;
	(4) Lake Ocquittunk and waters connecting it with Big Flat Brook;
	(5) Stony Lake and its outlet stream (Stony Brook) downstream to the confluence with the Big Flat Brook;
	(6) Kittatinny Lake, that portion of its inlet stream outside the Stokes State Forest boundaries, and its outlet stream, including the Shotwell Camping Area tributary, to the confluence with Big Flat Brook;
	(7) Deer Lake and its outlet stream to Lake Ashroe;
	(8) Lake Ashroe, the portions of its tributaries outside the Stokes State Forest boundaries, and its outlet stream to the confluence with Big Flat Brook;
	(9) Lake Shawanni and its outlet stream to the confluence with [Big] Flat Brook;
	(10) Crigger Brook and its tributary to the confluence with Big Flat Brook
	SHIMERS BROOK WATERSHED
	The portion of Shimers Brook and its tributaries that are located within the boundaries of High Point State Park

JOHNSONBURG NATURAL AREA	PEQUEST RIVER WATERSHED Mud Pond and its outlet stream, Bear Creek, to the Erie-Lackawanna Railroad trestle, north of Johnsonburg
LEBANON STATE FOREST	RANCOCAS CREEK WATERSHED Deer Park Branch and tributaries near Buckingham, downstream to the confluence with Pole Bridge Branch Tributaries to the South Branch of Mount Misery Brook located entirely within the boundaries of Lebanon State Forest Cooper Branch and tributaries downstream to Pakim Pond and those tributaries to Coopers Branch downstream of Pakim Pond that are located entirely within the boundaries of Lebanon State Forest Shinns Branch and tributaries located entirely within the boundaries of Lebanon State Forest, **from their sources to the forest boundary** Jade Run located entirely within the boundaries of Lebanon State Forest [MacDonald's] **MacDonalds** Branch and tributaries located entirely within the boundaries of Lebanon State Forest, **from their sources to the forest boundary**
. . .	
WASHINGTON CROSSING STATE PARK	STEELE RUN WATERSHED That portion of Steele Run, [which is] located within the boundaries of Washington Crossing State Park, [and is upstream of New Jersey Rt. 29] **to the confluence with the westerly tributary**
WHITTINGHAM WILDLIFE MANAGEMENT AREA	PEQUEST RIVER WATERSHED Northwesterly tributaries to the Pequest River, including Big Spring, located within the boundaries of the Whittingham Wildlife Management Area southwest of Springdale, from their origins to their confluence with the Pequest River
[WORTHINGTON STATE FOREST]	[DUNNFIELD CREEK WATERSHED Dunnfield Creek to I-80] **DELAWARE RIVER WATERSHED** Sunfish Pond[,] **and** its outlet stream to the Delaware River [and all] **All** unnamed waters located entirely within the boundaries of the Worthington State Forest **DUNNFIELD CREEK WATERSHED** **Dunnfield Creek to I-80**
PASSAIC RIVER, HACKENSACK RIVER, NY HARBOR COMPLEX BASIN	
A.S. HEWITT STATE FOREST	WANAQUE RIVER WATERSHED **Portions of** Cooley Brook and tributaries **which originate and are** located entirely within the boundaries of Hewitt State Forest Surprise Lake **Portions of** Green Brook and tributaries **which originate and are** located entirely within the boundaries of Hewitt State Forest West Pond
BERKSHIRE VALLEY WILDLIFE MANAGEMENT AREA	ROCKAWAY RIVER WATERSHED Stephens Brook north of the boundaries of the Berkshire Valley Wildlife Management Area
CITY OF NEWARK HOLDINGS AND WAWAYANDA STATE PARK	PEQUANNOCK RIVER WATERSHED [Northern tributary to Cedar Pond from its origin, downstream to about 1000 feet from the entrance into the pond] **Cedar Pond and all tributaries** Hanks Pond and all tributaries Tributary to Pequannock River at Green Pond Junction from its origin downstream to Route 23 Tributary joining the main stem of the Pequannock River 3,500± feet southeast of the Sussex-Passaic County line, near Jefferson from its origin to about 2,000 feet upstream of the pond Pacack Brook and its tributaries upstream of Canistear Reservoir, located entirely within the boundaries of the Newark watershed and Wawayanda State Park Cherry Ridge Brook and its tributaries north of Canistear Reservoir, located entirely within the boundaries of the Newark watershed lands and Wawayanda State Park The southern branch of the easterly tributary to Canistear Reservoir Pequannock River and tributaries upstream of the confluence with Pacack Brook The northwestern tributary to Oak Ridge Reservoir The portion of the westerly tributary to Lake Stockholm Brook, from its origins to about 1,000 feet south of the Route 23 Bridge, located entirely within the boundaries of the Newark watershed Lud-Day Brook downstream to its confluence with the southwestern outlet stream from Clinton Reservoir just upstream of the confluence of the outlet stream and a tributary from Camp Garfield Brook between Hamburg Turnpike and Vernon-Stockholm Road, downstream to its confluence with Lake Stockholm Brook, north of Rt. 23
RARITAN RIVER BASIN	NONE
WALLKILL RIVER BASIN	
CITY OF NEWARK HOLDINGS AND WAWAYANDA STATE PARK	LAKE LOOKOUT BROOK WATERSHED **Lake Lookout,** Lake Lookout Brook and tributaries from its headwaters in the Newark City holdings, downstream through the State-owned Wawayanda State Park to the confluence with the outlet stream from Lake Wawayanda
. . .	

(i) The following are the [outstanding national resource waters] **Outstanding National Resource Waters** of the State:
1. FW1 Waters; and
2. PL Waters.

7:9-6.3 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings unless the context clearly indicates otherwise[.]:

...

"Surface waters" means water at or above the land's surface which is neither ground water nor contained within the saturated zone, including, but not limited to, the ocean and its tributaries, all springs, streams, rivers, lakes, ponds, wetlands, and artificial waterbodies.

...

"Vadose waters" means water contained within the unsaturated zone (vadose zone).

...

7:14A-1.9 Definitions

As used in this chapter, the following words and terms shall have the following meanings[.]:

...

"Ground water" means [water below the land surface in a zone of saturation] **that portion of water beneath the land surface that is within the zone of saturation (below the water table) where pore spaces are filled with water.**

...

"Surface waters" means [any "waters of the State" which are not ground water"] **water at or above the land's surface which is neither groundwater nor contained within the unsaturated zone, including, but not limited to, the ocean and its tributaries, all springs, streams, rivers, lakes, ponds, wetlands, and artificial waterbodies.**

...

"Unsaturated zone" [or "zone of aeration"] means the [zone between the land surface and the water table] **subsurface volume between the land's surface and the top of the saturated zone (water table), where moisture does not fill all the pore spaces in the formation or soil.**

...

"Vadose waters" means water contained within the unsaturated zone (vadose zone).

...

"Wetlands" means those areas that are inundated or saturated by surface, [or] ground, **or vadose** water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions[. Wetlands generally include swamps, marshes, bogs, and similar areas.], **commonly known as hydrophytic vegetation. The Department shall evaluate the parameters of hydrology, soils, and vegetation to determine the presence and extent of wetlands.**

...

7:14A-3.14 Calculating NJPDES permit conditions

(a)-(b) (No change.)

(c) Metals: All permit effluent limitations, standards, or prohibitions for a metal shall be expressed in terms of [the total metal (that is, the sum of the dissolved and suspended fractions of the metal)] **"total recoverable metal" as defined in 40 CFR Part 136** unless:

1.-2. (No change.)

(d)-(l) (No change.)

(a)

ENVIRONMENTAL REGULATION

Notice of Opportunity for Interested Party Review

Surface Water Quality Standards

Practical Quantitation Levels

N.J.A.C. 7:9-4

Authorized By: Scott A. Weiner, Commissioner, Department of Environmental Protection and Energy.

Authority: N.J.S.A. 13:1D-1 et seq., 58:10A-1 et seq., and 58:11A-1 et seq.

Take notice that the New Jersey Department of Environmental Protection and Energy (Department) is contemplating a proposed amendment to N.J.A.C. 7:9-4 to delete N.J.A.C. 7:9-4.5(e)7 and to adopt Practical Quantitation Levels (PQLs) at N.J.A.C. 7:9-4.14(e). The Department has concluded that the implications of the Clean Water Enforcement Act are so significant that it is essential that violation levels established by the Department for regulated discharges to surface waters can be accurately measured and routinely quantified by the laboratory community. A PQL is the lowest level of a specified substance that can be reliably measured within the specified limits of precision and accuracy during routine laboratory operations. When regulatory limits are less than the levels that can be accurately measured and routinely quantified, the Department is contemplating the use of PQLs in determining compliance when regulating surface water discharges. PQLs would be revised periodically to incorporate advances in analytical methodologies. It is anticipated that the PQLs would become more sensitive over time and enable the Department to improve its regulatory efforts.

The Department is seeking public comment on drafts of the PQLs prior to formal proposal and adoption. A list of the PQLs and the basis and background document supporting them is available for public review and comment by writing to:

Steven P. Lubow
Department of Environmental Protection and Energy
Office of Regulatory Policy
CN 423
Trenton, New Jersey 08625

Interested parties may submit views, proposed regulatory language, or discussions relevant to this interested party review by writing, prior to the close of the public comment period on **December 18, 1992,** to:

Richard J. McManus, Director
Office of Legal Affairs
Department of Environmental Protection and Energy
CN 402
Trenton, New Jersey 08625

(b)

ENVIRONMENTAL REGULATION

Notice of Invitation for Informal Input

New Jersey Pollutant Discharge Elimination System

Effluent Limitations for Total Phosphorus

Surface Water Quality Standards

Surface Water Quality Criteria for Total Phosphorus

Take notice that the New Jersey Department of Environmental Protection and Energy (NJDEPE or Department) is soliciting informal input of its regulation of total phosphorus. The Department is soliciting input in response to concerns expressed by a substantial number of permittees about the attainability of water quality-based effluent limitations established using the existing ambient water quality criteria for total phosphorus at N.J.A.C. 7:9-4.14(c)6 (N.J.A.C. 7:9B-1.14(c)5 in the Surface Water Quality Standards (SWQS) proposal being published concurrently elsewhere in this issue of the New Jersey Register).

Total phosphorus is well recognized as frequently being the nutrient present in the lowest relative quantities and therefore limiting the growth of aquatic vegetation in freshwater systems. In New Jersey the Department's experience has been that total phosphorus is generally the limiting nutrient. Because of this, New Jersey's SWQS were amended in 1981 to incorporate the current numerical criteria for total phosphorus. In

1985 the SWQS were amended to include nutrient policies which allowed for the development of site specific (waterway) criteria for phosphorus which could supersede the adopted criteria. The 1989 revisions to the SWQS did not include any changes to either the nutrient policies or the total phosphorus criteria.

New Jersey Pollutant Discharge Elimination System (NJPDES) permits issued over the last few years have included water quality-based effluent limitations for total phosphorus. Permittees receiving these effluent limitations have indicated that the treatment necessary to achieve total phosphorus limitations more stringent than 1.0 mg/l are extremely expensive, and limitations more stringent than 0.5 mg/l are not achievable by existing treatment technologies. Because of the concerns raised by the permittees, the Department is seeking comments from interested parties on the regulation of total phosphorus in general and on the following topics in particular:

1. Is the site specific criteria development approach, as discussed at N.J.A.C. 7:9-4.5(g)3, realistic? What methods are appropriate for determining site specific criteria for nutrients?

2. Are the variance procedures found at N.J.A.C. 7:9-4.8 and 4.9 viable approaches for providing relief from excessive treatment costs and situations where existing treatment technology cannot achieve water quality based effluent limitations for total phosphorus?

3. Are there other approaches which could provide relief while meeting the requirements of State and Federal statutes and regulations? Please provide detailed descriptions of such approaches or copies of regulations incorporating alternate approaches.

4. One approach that has been considered is the issuance of a Statewide variance from the total phosphorus criteria, based upon a demonstration of widespread adverse social and economic impacts pursuant to N.J.A.C. 7:9-4.8 and 4.9, while requiring dischargers to comply with the effluent limitation for total phosphorus at N.J.A.C. 7:9-5.7(b). Is this an appropriate method of dealing with the regulation of total phosphorus? The Department is particularly interested in receiving social and economic impact data, as described in "Draft Economic Guidance for Water Quality Standards; Workbook" (Prepared for the Economic and Statistical Analysis Branch, Office of Water Regulations and Standards, USEPA, by Abt Associates Inc., August 3, 1990), from permittees which could be used for development of such a variance. The Department is also interested in information on the site-specific and statewide water quality and ecological effects of such a variance. Please provide studies, data, and other supporting materials.

5. Are current estimates for the cost of phosphorus removal via existing treatment technologies accurate? Are there alternative technologies, approaches, or policies capable of reducing phosphorus discharges at a lower cost that exist but have not been widely implemented? Please provide detailed information on such technologies, approaches, or policies.

6. Are there alternative approaches or policies by which the Department could achieve reductions in phosphorus loadings to a given system that involve measures related to other sources under the permittee's control besides the permitted discharge? For example, if a permittee showed that it would be prohibitively expensive to meet an effluent limitation for phosphorus, are there less expensive measures that the permittee could be required to undertake to reduce phosphorus loadings to the receiving waters (for example, reducing phosphorus loadings from runoff)? Please provide detailed information on such alternative measures and how such a requirement might be implemented.

7. How should the Department consider nonpoint sources in the regulation of total phosphorus for point sources? Is a nutrient budget, performed on a watershed basis, necessary to determine wasteload allocations? The Department is interested in suggestions of specific regulatory strategies that might be utilized for effective phosphorus control. Examples and documentation of approaches that have been effectively used may be submitted for consideration.

8. Are the existing numerical criteria for total phosphorus appropriate? If they are not appropriate, what would be appropriate numerical criteria? Copies of scientific studies, data, etc., should be provided in support of suggested numerical criteria. Would it be more appropriate to regulate certain forms of phosphorus (for example, phosphate)? If so, please provide supporting data or information.

9. Would narrative criteria be more appropriate than numerical criteria for regulating total phosphorus? What type of narrative criteria, if any, should the Department consider? Specific narrative language and supporting documentation should be submitted for consideration. Comments are also requested on whether narrative criteria (for example, Nutrient concentrations shall not result in algal blooms, accelerated eutrophication or other water quality related problems) would shift so much of the burden of proof to the Department that nutrients would only be regulated after a problem had developed.

The Department is seeking informal input and comment on the regulation of total phosphorus prior to proposing changes to either the NJPDES regulations or the SWQS.

In order to be considered, interested parties must submit all comments, suggested regulatory language and any other information in written or printed form, prior to the close of the public comment period on **December 18, 1992,** to:

Richard J. McManus, Director
Office of Legal Affairs
Department of Environmental Protection and Energy
CN 402
Trenton, New Jersey 08625

HEALTH

(a)

DRUG UTILIZATION REVIEW COUNCIL

List of Interchangeable Drug Products

Proposed Amendments: N.J.A.C. 8:71

Authorized By: Drug Utilization Review Council, Robert Kowalski, Chairman.
Authority: N.J.S.A. 24:6E-6(b).
Proposal Number: PRN 1992-484.

A **public hearing** concerning these proposed amendments will be held on Monday, November 23, 1992, at 2:00 P.M. at the following address:

Room 804, Eighth Floor
Department of Health
Health-Agriculture Bldg.
Trenton, New Jersey 08625-0360

Submit written comments by December 2, 1992 to:

Mark A. Strollo, R.Ph., M.S.
Drug Utilization Review Council
New Jersey Department of Health
Room 501, CN 360
Trenton, New Jersey 08625-0360
609-292-4029

The agency proposal follows:

Summary

The List of Interchangeable Drug Products is a generic formulary, or list of acceptable generic drugs which pharmacists must use in place of brand-name prescription medicines, passing on the resultant savings to consumers.

For example, the proposed bromocriptine mesylate 2.5 mg tablets could be used as a less expensive substitute for Parlodel, a branded prescription medicine. Similarly, the proposed levothyroxine sodium tablets could be substituted for the more costly branded product, Synthroid.

The Drug Utilization Review Council is mandated by law to ascertain whether these proposed medications can be expected to perform as well as the branded products for which they are to be substituted. Without such assurance of "therapeutic equivalency," any savings would accrue at a risk to the consumer's health. After receiving full information on these proposed generic products, including negative comments from the manufacturers of the branded products, the advice of the Council's own technical experts, and data from the generics' manufacturers, the Council will decide whether any of these proposed generics will work just as well as their branded counterparts.

Every proposed manufacturer must attest that they meet all Federal and State standards, as well as having been inspected and found to be in compliance with the U.S. Food and Drug Administration's regulations.

Social Impact

The social impact of the proposed amendments would primarily affect pharmacists, who would need to either place in stock, or be prepared to order, those products ultimately found acceptable.

Many of the proposed items are simply additional manufacturers for products already listed in the List of Interchangeable Drug Products. These proposed additions would expand the pharmacist's supply options.

Physicians and patients are not adversely affected by this proposal because the statute (N.J.S.A. 24:6E-6 et seq.) allows either the prescriber or the patient to disallow substitution, thus refusing the generic substitute and paying full price for the branded product.

Economic Impact

The proposed amendments will expand the opportunity for consumers to save money on prescriptions by accepting generic substitutes in place of branded prescriptions. The full extent of the savings to consumers cannot be estimated because pharmacies vary in their prices for both brands and generics.

Some of the economies occasioned by these amendments accrue to the State through the Medicaid, Pharmaceutical Assistance to the Aged and Disabled Program, and prescription plan for employees. A 1988 estimate of average savings per substituted Medicaid prescription was $7.31. However, the number of prescriptions that will be newly substituted due to these proposed amendments cannot be accurately assessed in order to arrive at a total savings.

Regulatory Flexibility Analysis

The proposed amendments impact many small businesses, as defined under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. specifically, over 1500 pharmacies and several small generic drug manufacturers which employ fewer than 100 employees.

However, there are no reporting or recordkeeping requirements for pharmacies, and small generic drug manufacturers have minimal initial reports, and no additional ongoing reporting or recordkeeping requirements. Further, these minimal requirements are offset by the increased economic benefits accruing to these same small generic businesses due to these proposed amendments.

Full text of the proposed amendments follows:

Amoxapine tablets 25mg, 50mg, 100mg, 150mg	Danbury
Atenolol tablets 25mg	Danbury
Benzonatate capsules 100mg	Pharmacaps
Bromocriptine mesylate tabs 2.5mg	Danbury
Carbidopa/levodopa tabs 10/100, 25/100, 25/250	Purepac
Clofibrate caps 500 mg	Novopharm
Clorazepate dipotassium tablets 15 mg	Danbury
Clorazepate dipotassium tablets 3.75mg	Danbury
Clorazepate dipotassium tablets 7.5mg	Danbury
Desipramine HCl tabs 10mg, 25mg, 50mg	Danbury
Desipramine HCl tabs 75mg, 100mg, 150mg	Danbury
Diflusinal tabs 250mg, 500mg	West Point
Doxycycline hyclate caps 100mg	W-C
Entex PSE tablets substitute	Trinity
Erythromycin delayed release capsule 250mg	Faulding
Fiorinal tablet substitute	Danbury
Fluphenazine HCl tabs 1mg, 2.5mg, 5mg, 10mg	Danbury
Gemfibrozil capsules 300mg	Danbury
Gemfibrozil tabs 600mg	W-C
Granulex spray substitute	PEL Associates
Guaifenesin LA tablets 600mg	Trinity
Ibuprofen tablets 300mg	Danbury
Iodinated glycerol tabs 30mg	Trinity
Isosorbide dinitrate tablets 20mg, 30mg, 40mg	Danbury
Leucovorin calcium tablets 5mg, 25mg	Danbury
Levothyroxine sodium tabs 125mcg, 150mcg	Mova
Levothyroxine sodium tabs 200mcg, 300mcg	Mova
Levothyroxine sodium tabs 25mcg, 50mcg	Mova
Levothyroxine sodium tabs 75mcg, 100mcg	Mova
Loperamide capsules 2mg	Danbury
Loxapine succinate caps 5mg, 10mg, 25mg, 50mg	Danbury
Metaproterenol sulfate syrup 10mg/5ml	Silarx
Methylprednisolone tablets 4mg, 16mg	Danbury
Metoclopramide HCl tabs 10mg	Mutual
Metoclopramide HCl tabs 5mg	Danbury
Metoprolol tabs 50mg, 100mg	Mutual
Minocycline HCl tablets 50mg, 100mg	Danbury
Nadolol tablets 40mg, 80mg, 120mg	Danbury
Nitrofurantoin capsules 25mg, 50mg, 100mg	Danbury
Phenazopyridine tabs 100mg, 200mg	Trinity
Pindolol tabs 5mg, 10mg	Lemmon
Pindolol tabs 5mg, 10mg	Mutual
Pindolol tabs 5mg, 10mg	Mylan
Piroxicam caps 10mg, 20mg	Novopharm
Potassium Cl oral sol. 10%	Forest
Potassium Cl powder 20mEq/packet	Forest
Propantheline Br tablets 15mg	Danbury
Propoxyphlene napsylate/APAP tablets 100/650	Danbury
Spironolactone tablets 25mg, 50mg, 100mg	Danbury
Spironolactone/HCTZ tablets 50/50	Danbury
Temazepam caps 15mg, 30mg	Danbury
Theophylline elixir 80mg/15ml	Forest
Theophylline with KI elix. 80mg with 130mg/15ml	Forest
Timolol maleate tabs 5mg, 10mg, 20mg	Novopharm
Tolmetin sodium capsules 400mg	Danbury
Tolmetin sodium tablets 200mg	Danbury
Trazodone HCl tablets 150mg	Danbury
Urised tablets substitute	Trinity

LAW AND PUBLIC SAFETY

(a)

BOARD OF EXAMINERS OF OPHTHALMIC DISPENSERS AND OPHTHALMIC TECHNICIANS

Lease Agreements

Proposed Amendment: N.J.A.C. 13:33-1.35
Proposed New Rule: N.J.A.C. 13:33-1.36

Authorized By: Board of Examiners of Ophthalmic Dispensers and Ophthalmic Technicians, Robert Troast, President.

Authority: N.J.S.A. 52:17B-41.13 and 41.17.

Proposal Number: PRN 1992-465.

Submit written comments by December 2, 1992 to:

H. Lee Gladstein, Executive Director
Board of Examiners of Ophthalmic Dispensers and Ophthalmic Technicians
P.O. Box 45011
Newark, New Jersey 07104

The agency proposal follows:

Summary

In order to address the increasing numbers of questions being submitted to the Board by licensees, attorneys and the public inquiring about permissible business arrangements between licensees and non-licensees, the Board of Examiners of Ophthalmic Dispensers and Ophthalmic Technicians is proposing to amend N.J.A.C. 13:33-1.35 and to adopt a new rule at N.J.A.C. 13:33-1.36. The amendment and new rule are intended to aid the public and Board licensees in recognizing ethical forms of professional practice and to promote quality assurance.

N.J.A.C. 13:33-1.35(e) prohibits kickbacks and rebates to any ophthalmologist, refractionist or optometrist. The proposed amendment makes clear that the prohibition applies with regard to any physician making a referral, whether or not that doctor is self-denominated as a specialist. The amendment also makes clear that the prohibition applies to any person, not just to a physician or optometrist.

Proposed new rule N.J.A.C. 13:33-1.36 addresses varieties of potential abuse relating to space rental agreements for other than fair market value. By limiting the rental cost to fair market value without consideration of number of referrals made or volume of income, the new rule is intended to eliminate an eyecare practitioner's incentive to steer a patient for inappropriate reasons.

Pursuant to subsection (b) of the proposed new rule, however, the Board will consider approval of certain standard commercial arrangements which are for other than fair market value. This exception to the general prohibition is proposed because the Board is aware that some licensees may be renting space in a solely commercial setting, such as large shopping malls, where a uniform type of lease demands other types of payments such as percentage-of-gross, but the likelihood of abusive charging or referring is remote. The exception will permit these licensees, with prior approval of the Board, to make their services widely available to the public in a variety of commercial settings without undue hindrance.

Social Impact

The proposed amendment to N.J.A.C. 13:33-1.35(e) prohibiting kickbacks and rebates clarifies the intent of N.J.S.A. 52:17B-41.17 and provides greater assurance to the public that referrals are made on the basis of the quality of the work performed by the ophthalmic dispenser and not by the inducement of a referral fee.

Proposed new rule N.J.A.C. 13:33-1.36, which prohibits space rental arrangements containing financial components unrelated to fair market value, will remove ethically questionable aspects of rental arrangements between Board licensees and lessors in a position to refer. The prohibition will also operate to strengthen competition among licensees to the benefit of consumers by removing a financial element which is unrelated to the quality of services or merchandise supplied by the licensee.

Economic Impact

The proposed amendment and new rule may have a favorable impact on consumer health care costs. By limiting extraneous motivations for referrals, the amendment and new rule may help avoid the probable increase in health care costs which results from the likely higher costs of doing business where factors other than quality of professional service are significantly involved.

Licensees presently engaged in a lease arrangement where rent is determined by the number of referrals made or by volume of sales or fees will incur the costs involved in entering into a new leasing arrangement on different terms and may experience a reduction in income. The Board believes, however, that the benefits to the public, as outlined above, more than outweigh any negative impact upon their licensees.

Regulatory Flexibility Analysis

The Board of Examiners of Ophthalmic Dispensers and Ophthalmic Technicians currently licenses approximately 1,500 individuals. Almost all of those licensees who operate optical establishments may be classified as "small businesses" as that term is defined in the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq.

The proposed amendment to N.J.A.C. 13:33-1.35(e) places no reporting, recordkeeping or other compliance requirements upon small businesses since it merely clarifies the prohibition against kickbacks and rebates.

Proposed new rule N.J.A.C. 13:33-1.36 defines impermissible space rental agreements and prohibits licensees from entering into a contract or renewal thereof, or any other arrangement which violates the provisions of the proposed new rule, after the effective date of the rule. To the extent that a licensee is presently engaged in an impermissible rental agreent as outlined herein, the licensee will incur costs in transferring to a permissible arrangement. The costs cannot be estimated with any certainty but may include some loss of income. The services of an attorney or real estate professional may be needed in order to comply.

Licensees engaged in or seeking to engage in agreements which may be deemed impermissible but where the likelihood of abusive charging or referring is remote (that is, shopping mall space rental agreements) will incur only the nominal costs involved in obtaining Board approval of the rental agreement.

Because the proposed new rule seeks to promote and protect the public welfare by insulating referrals from undesirable motives, it must be uniformly and consistently applied; no differential treatment can be accorded to small businesses.

Full text of the proposal follows (additions indicated in boldface **thus;** deletions indicated in brackets [thus]):

13:33-1.35 Advertising; **prohibition on** rebates and commissions for referring patients

(a)-(d) (No change.)

(e) It shall be unlawful for any ophthalmic dispenser or ophthalmic technician or employee or agent thereof or any other person on their behalf to offer to pay a rebate or commission in any from whatsoever to any [ophthalmologist, refractionist or] **physician,** optometrist, **or any other person** in return for referring patients to anyone licensed under [this Act] **N.J.S.A. 52:17B-41.1 et seq.**

13:33-1.36 [(Reserved)] Space rental agreements with other health care practitioners

(a) A Board licensee may rent space to or from a person authorized by law to prescribe corrective or therapeutic eyewear or from a separately held entity in which said person and/or his or her immediate family hold any financial interest, only where the total rent to be paid is set forth a written agreement and such rent is for a fixed dollar amount for a stated period of time determined by the fair market value for the rented space. The rent shall not be determined by the number of referrals made or by volume of sales or fees.

(b) Any monetary arrangement other than as set forth in (a) above shall require Board approval for good cause shown.

(c) The term "immediate family," for the purpose of this section, means the spouse and children, siblings and parents, spouse's siblings and parents, and the spouses of the children of the person authorized by law to prescribe corrective or therapeutic eyewear.

(d) A Board licensee shall not enter into a contract or renewal thereof or any other arrangement which violates the provisions of this section after the effective date hereof.

(a)

BOARD OF MEDICAL EXAMINERS

Fee Schedule

Bio-analytical Laboratory Directorship Licensure

Proposed Amendment: N.J.A.C. 13:35-6.13

Authorized By: State Board of Medical Examiners, Charles A. Janousek, Executive Director.

Authority: N.J.S.A. 45:9-2 and 45:1-3.2.

Proposal Number: PRN 1992-466.

Submit written comments by December 2, 1992 to:

Charles A. Janousek, Executive Director
Board of Medical Examiners
28 W. State Street
Trenton, New Jersey 08608

The agency proposal follows:

Summary

The proposed amendment to N.J.A.C. 13:35-6.13 increases the written examination, re-examination and exemption fees for bio-analytical laboratory directorship plenary and specialty licenses from $150.00 to $350.00. This amendment is necessary since the National Certification Agency for Medical Laboratory Personnel raised the cost per candidate for the administration of the examination for the bio-analytical laboratory directorship plenary license and bio-analytical laboratory directorship specialty license and re-examinations. The increase will allow the Board to recoup the costs incidental to the administration of the examination.

Social Impact

The proposed amendment will impact those applicants who, as a part of the licensure process, must sit for the written examination. This proposed amendment will raise an applicant's cost to take the examination. The licensing process itself enables only qualified individuals to service the public, thus protecting health and welfare. All licensees of the Board of Medical Examiners will be affected in that the proposed amendment adds sufficient funds to cover the cost of the examination plus the incidental costs of administering the examination so that applicants will bear the costs, not the pool of all individuals licensed by the Board.

Economic Impact

The Board of Medical Examiners has been advised of an increase in the written examination fee by the test administrators. The proposed amendment to the Board's fee schedule is necessary to prevent a fiscal loss to the Board, which is required pursuant to N.J.S.A. 45:1-3.2 to cover expenses. Individuals seeking licensure and all licensees of the Board of Medical Examiners will be affected by this proposed amendment in that only applicants will pay the cost of the exam and its administration as opposed to all licensees absorbing the cost.

Regulatory Flexibility Statement

The proposed amendment to the Board of Medical Examiners fee schedule will only affect individual applicants for Bio-analytical laboratory directorships, and not small businesses as defined under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. Therefore, no regulatory flexibility analysis is necessary.

Full text of the proposal follows (additions indicated in boldface **thus;** deletions indicated in brackets [thus]):

13:35-6.13 Fee schedule

(a) The following fees shall be charged by the Board of Medical Examiners:

1.-2. (No change.)

3. Bio-analytical laboratory directorship, plenary license

i. Examination (plenary license) [150.00] **350.00**

ii. Re-examination	[150.00]	**350.00**
iii. Exemption (plenary license)	[150.00]	**350.00**
4. Bio-analytical laboratory directorship, specialty license		
i. Examination (specialty license)	[150.00]	**350.00**
ii. Re-examination (specialty license)	[150.00]	**350.00**
iii. Exemption (specialty license)	[150.00]	**350.00**

iv. (No change.)
5.-10. (No change.)

(a)

STATE BOARD OF MEDICAL EXAMINERS

Prescribing, Dispensing or Administering Anabolic Steroids

Proposed New Rule: N.J.A.C. 13:35-6.18

Authorized By: State Board of Medical Examiners, Charles A. Janousek, Executive Director.
Authority: N.J.S.A. 45:9-2.
Proposal Number: PRN 1992-467.

Submit written comments by December 2, 1992 to:
Charles A. Janousek, Executive Director
State Board of Medical Examiners
28 West State Street
Trenton, New Jersey 08608

The agency proposal follows:

Summary

The State Board of Medical Examiners is proposing a new rule to establish standards for the prescribing or dispensing of anabolic steroids and human growth hormones in this State. Anabolic steroids are synthetic derivatives of the male hormone testosterone prescribed as replacement or adjuvant therapy for a variety of diseases and conditions including male hypogonadism, various gynecologic disorders and some anemias. Clinically these drugs are used mainly to promote growth and to repair body tissue in senility, debilitating illnesses and convalescence. Recognizing the potential for abuse of steroids approved for therapeutic use as well as black market and veterinary anabolic-androgenic steroids, the Legislature enacted P.L. 1989, c.335, effective January 12, 1990, making it a crime of the third degree "for any person other than a practitioner acting in the course of his professional practice to knowingly or purposely manufacture, distribute or dispense" an anabolic steroid. N.J.S.A. 2C:3-51. Effective July 30, 1992, the Legislature amended that statute making it a crime of the second degree when a person over the age of 18 distributes or dispenses the substance to a person 17 years of age or younger. P.L. 1992, c.71. Pursuant to the authority of N.J.S.A. 24:21-3, the Commissioner of Health listed anabolic steroids as a Schedule III, Controlled Dangerous Substance effective April 15, 1991 (see 23 N.J.R. 1943(b)).

The proposed rule defines anabolic steroid and provides specific substances including human growth hormone that fall within the definition. Licensees, defined to include physicians, registered residents or resident permit holders, podiatrists or certified nurse midwives, all of whom are subject to regulation by the Board of Medical Examiners, would be precluded from prescribing, ordering, dispensing, administering, selling or transferring anabolic steroids or human growth hormone to increase muscle mass, strength or weight without an accepted medical necessity. The rule would expressly state that use of anabolic steroids for body building or muscle enhancement by a person in good health is not a valid medical purpose. The rule would require maintenance of specific medical records relating to diagnosis and treatment when such drugs are prescribed. Violation of the rule will be sanctionable under N.J.S.A. 45:1-13 as improper distribution or dispensing of a controlled dangerous substance; under N.J.S.A. 45:1-21(c) as gross malpractice, gross neglect and gross incompetence; and under N.J.S.A. 45:1-21(e) for professional misconduct. Finally, the rule obligates a licensee to report a violation of the rule to the Board, pursuant to the colleague reporting mandate set forth at N.J.S.A. 45:9-19.5.

Social Impact

The pernicious effect of the illegal distribution and abuse of anabolic steroids on the health of the population cannot be understated. News articles recount stories of children as young as seven taking anabolic steroids. Studies suggest that as many as 10 to 12 percent of high school males are obtaining and abusing steroids approved only for therapeutic use, as well as veterinary anabolic steroids, in a misguided attempt to enhance athletic performance and/or build up muscle mass. Harmful physical side effects from use of steroids include deep scarring acne, early skin aging, enlargement of feet, hands and jaws, stunted bone development, hepatic abnormalities, risk of cancer, stroke, heart disease, and potential sterility. Psychologically, individuals experience severe mood fluctuations, increased aggression and a dependence on the substance.

The rule proposed here, coupled with the criminal penalties for possession and distribution, N.J.S.A. 2C:35-5.1 and 2C:35-10.1, is an attempt to limit the availability and to control the inappropriate application of anabolic steroids. The rule recognizes that a physician in the course of his or her professional practice may prescribe these drugs as an effective treatment for certain conditions. The rule acknowledges the risks associated with these drugs and prescribes parameters of professional practice, precluding the prescription of steroids to persons in good health for purposes of body building, muscle enhancement or increasing muscle bulk or strength. As physicians are an integral part of many school, amateur and professional sports programs, they are particularly able to educate and to prevent use and abuse of anabolic steroids. Such education, as well as the limitation on availability of anabolic steroids, can have only positive impact on the public health.

Economic Impact

While this rule may have a detrimental economic impact on those few physicians who routinely prescribe, dispense or administer anabolic steroids for purposes unrelated to medical necessity, the benefits to be derived by banning such prescribing far outweigh this impact. More importantly, by giving licensees clear guidance as to the prescribing motivations which will be deemed improper and enhancing the Board ability to detect abuses through a clear delineation of the colleague reporting obligation, the Board hopes to be joining other agencies in their efforts to reduce anabolic steroid abuse in this State. In so doing, societal savings can be great. As mentioned above, anabolic steroid use has been associated with a large number of symptoms which necessitate costly medical treatment.

Regulatory Flexibility Analysis

If, for the purposes of the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., licensees of the Board of Medical Examiners are deemed "small businesses" within the meaning of that statute, the following statement is applicable:

The proposed new rule, at subsection (b), limits the circumstances under which a licensee may prescribe, order, dispense, administer, sell or transfer any anabolic steroid or human growth hormone. The existing recordkeeping requirements of N.J.A.C. 13:35-6.5 pertaining to utilization of such drugs or substances are reiterated in subsection (c). Subsection (d) requires licensees to state on any prescription for anabolic steroids or human growth hormones the diagnosis for which they are prescribed as treatment. Noncompliance with any of these requirements may be considered as constituting one of several acts subject to penalty, under subsection (e). Licensees are required to report, under subsection (f), as unprofessional conduct of a colleague pursuant to N.J.S.A. 45:9-19.5, any information in their possession which reasonably indicates that another licensee has acted in violation of the limitations imposed under subsection (b).

As discussed in the Economic Impact above, the rule's limitations concerning anabolic steroids and human growth hormones may result in some loss of income to those few physicians who routinely prescribe, dispense or administer same for purpose prohibited under the rule. No increased recordkeeping costs should be incurred if a licensee has been operating in compliance with N.J.A.C. 13:35-6.5. No increased costs are anticipated from either the diagnosis-on-prescription or the unprofessional conduct reporting requirements. No professional services are required to comply with these requirements. The Board considers that, in order to promote the public health and maintain the integrity of the medical profession, no lesser requirements or exemptions can be provided.

Full text of the proposed new rule follows:

13:35-6.18 Prescribing, dispensing or administering anabolic steroids

(a) As used within this section, the following terms have the following meanings unless the content indicates otherwise:

1. "Anabolic steroid" means any drug or hormonal substance, chemically and pharmacologically related to testosterone (other than estrogen, progestin and corticodsteriods) that promotes muscle growth, including the substances listed below as well as any salt, ester, or isomer of such substance which act in a similar manner in the human body:

Bolenone
Chlorotestosterone (4-chlortestosterone)
Chorionic gonadotropin
Clostebol
Danazol
Dehydrochlormethyltestosterone
Dihydrotestosterone (4-dihydrotesterone)
Drostanolone
Ethylestrenol
Fluoxymesterone
Formebulone (formebolone)
Mesterolone
Methandienone
Methandranone
Methandriol
Methandrosterone
Methenolone
Methyltestosterone
Mibolerone
Nandrolone
Norethandrolone
Oxandrolone
Oxymesterone
Oxymetholone
Stanolone
Stanozolol
Testolactone
Testosterone
Trenbolone

2. "Human growth hormone" ("hGH") means any polypeptide hormone of recombinant DNA origin and includes the following substances:

Somatrem
Somatropin

3. "Licensee" means a physician, registered resident or resident permit holder, podiatrist or certified nurse midwife subject to regulation by the New Jersey Board of Medical Examiners.

(b) No licensee shall prescribe, order, dispense, administer, sell or transfer any anabolic steroid or human growth hormone, for the purpose of hormonal manipulation intended to increase muscle mass, strength, or weight without an accepted medical necessity to do so, or for the intended purpose of improving performance in any form of exercise, sport or game. Body building, muscle enhancement, or increasing muscle bulk or strength through the use of anabolic steroid or human growth hormone by a person in good health is not a valid medical purpose.

(c) Licensees shall complete and maintain patient medical records which accurately reflect the utilization of any substance or drug included in this rule, which records must indicate the diagnosis, any additional information upon which the diagnosis is based and the purpose for which the substance or drug is being used.

(d) Licensees shall state on any prescription for anabolic steroids or human growth hormones the diagnosis for which the medication is prescribed as treatment.

(e) Violation of any of the requirements of (b) through (d) above may be deemed to constitute one or more of the following:

1. Distribution or dispensing of a controlled dangerous substance in an indiscriminate manner, not in good faith, or without good cause, pursuant to N.J.S.A. 45:1-13;

2. Gross malpractice, gross neglect, or gross incompetence in the practice of the licensed profession pursuant to N.J.S.A. 45:1-21(c);

3. Professional misconduct in the practice of the licensed profession pursuant to N.J.S.A. 45:1-21(e);

4. A failure to comply with the provisions of an act or regulation administered by the Board, pursuant to N.J.S.A. 45:1-21(h); or

5. Unprofessional conduct which would present an imminent danger to an individual patient or to the public health, safety or welfare, within the meaning of N.J.S.A. 45:9-19.5.

(f) Licensees who are in possession of information which reasonably indicates that another licensee has prescribed, dispensed or administered an anabolic steroid for the purpose of hormonal manipulation that is apparently intended to increase muscle mass, strength or weight without a medical necessity to do so or for apparent purpose of improving performance in any form of exercise, sport or game shall be obligated to report such information to the Board pursuant to N.J.S.A. 45:9-19.5.

(a)

STATE BOARD OF MEDICAL EXAMINERS ACUPUNCTURE EXAMINING BOARD

Acupuncture

Proposed Amendment: N.J.A.C. 13:35-6.13
Proposed New Rules: N.J.A.C. 13:35-9

Authorized By: Acupuncture Examining Board, Robert F. Lenahan, C.A., Chairman; and State Board of Medical Examiners, Sanford Lewis, M.D., President.

Authority: N.J.S.A. 45:2C-3.

Proposal Number: PRN 1992-468.

Submit written comments by December 2, 1992 to:

Morris W. Eugene
Assistant Executive Director
State Board of Medical Examiners
28 West State Street
Trenton, New Jersey 08608

The agency proposal follows:

Summary

The Acupuncture Act, N.J.S.A. 45:2C-1 et seq., established the Acupuncture Examining Board under the Board of Medical Examiners in the Division of Consumer Affairs. Pursuant to N.J.S.A. 45:2C-3, the Board is required to promulgate, subject to the review and approval of the Board of Medical Examiners, such rules and regulations as it deems necessary to effectuate the purposes of the Act. N.J.S.A. 45:2C-1 states the purpose of the Act to be the establishment of the more effective provision of acupuncture services in this State in order to encourage the use thereof by the residents of the State who pursue this form of health care treatment and to protect the public health, safety and welfare. In order to effectuate these purposes, the Board is proposing a new subchapter entitled "Acupuncture" to be codified at N.J.A.C. 13:35-9. The Board is also proposing to delete N.J.A.C. 13:35-6.13(a)9, the fee schedule for certification as an acupuncturist, in order to place it, as revised, within the proposed new subchapter.

The purpose and scope of the proposed new rules is defined in N.J.A.C. 13:35-9.1, and essential terms are defined in N.J.A.C. 13:35-9.2.

N.J.A.C. 13:35-9.3 lists the credentials the applicant must provide when seeking certification through the methods acceptable to the Board: possession of a baccalaureate degree plus two or more years of acupuncture schooling; proof of sufficient experience or successful completion of a tutorial within New Jersey; or possession of a plenary license and registration to practice medicine in the State of New Jersey.

Examination requirements are set forth in N.J.A.C. 13:35-9.4. Applicants are required to successfully complete the comprehensive written examination developed by the National Commission for Certification of Acupuncturists (NCCA) as well as the Board-administered oral/practical examination.

N.J.A.C. 13:35-9.5, Prohibited acts, provides that uncertified persons shall not hold themselves out as practicing acupuncturists nor use descriptive titles denoting that they are certified to practice acupuncture.

N.J.A.C. 13:35-9.6 contains the fee schedule. As a result of increased examination and program costs, the fees set forth in this section represent an increase in the fees currently charged for certification as an acupuncturist. In addition, in order to reflect a determination of the Division of Consumer Affairs to accurately and specifically identify the actual elements for which a board incurs expenses and in order to create within the Division a uniform method of assessing and collecting fees

from the professional boards, certain new fees have been established, including an application fee, delinquency fees and a fee for preparation of certification papers for applicants to other states.

N.J.A.C. 13:35-9.7 describes the term of lawful practice and biennial registration requirements. Also included in this section is the procedure to be followed in the event the certificate to practice acupuncture in New Jersey lapses for a period of five years or more, which includes retaking the written examination or the oral/practical examination or both.

N.J.A.C. 13:35-9.8, Standards of practice, enumerates the only therapies a certified acupuncturist may perform and sets forth the statutory requirements that the licensee obtain from each patient before performing acupuncture a physician referral or diagnosis and written consent.

N.J.A.C. 13:35-9.9 lists accepted equipment and devices to effect the stimulation of acupuncture points and channels, and N.J.A.C. 13:35-9.10 contains precautionary and sterilization procedures.

Patient record requirements are set forth in N.J.A.C. 13:35-9.11.

N.J.A.C. 13:35-9.12 concerns guest acupuncturists who are the invited guests of a professional acupuncture association, a scientific acupuncture foundation or an approved acupuncture training program. Upon application to the Board, these individuals may be granted temporary permission to engage solely in professional education through lectures, clinics or demonstrations for a maximum of 60 days in a calendar year or longer upon special permission of the Board.

N.J.A.C. 13:35-9.13 sets forth tutorial application requirements and requirements for tutorial program design. Tutorial programs must consist of a minimum of 1,650 hours of clinical training and 600 hours in theoretical and didactic training, and this section lists the specific areas in which all such training is required. Written training plan agreements must be submitted to the Board for approval.

N.J.A.C. 13:35-9.14 sets forth the responsibilities of a supervising acupuncturist in an approved tutorial program, and N.J.A.C. 13:35-9.15 sets forth the responsibilities of the acupuncture trainee.

N.J.A.C. 13:35-9.16 describes the course of training which physicians and dentists must complete in order to practice acupuncture. The training course must be for a minimum of 300 hours and must include 150 hours of clinical training.

Finally, N.J.A.C. 13:35-9.17 sets forth continuing professional education requirements. Evidence of 20 documented hours of continuing education is required during each two-year period.

Social Impact

In proposing this new subchapter, the Acupuncture Examining Board is fulfilling its statutorily mandated duties to establish the more effective provision of and encourage the use of acupuncture services in this State and to protect the public health, safety and welfare. These new rules will have a beneficial impact on acupuncture patients, licensees and the Board's own regulatory process. The rules require individuals engaged in the practice of acupuncture to conform to high standards of professional practice for the protection of the public. Licensees will benefit in that they will have a clear and comprehensive set of regulations setting forth their responsibilities. Finally, the implementation of these clearly defined rules will enhance the Board's regulatory and enforcement functions.

Economic Impact Statement

Applicants for licensure will incur costs in obtaining and submitting to the Board the credentials required for licensure. These include affidavits of good moral character; certified birth records; and certified academic transcripts or letters from past or present employers. Applicants from foreign jurisdictions may incur additional fees to have their credentials evaluated, translated and/or authenticated. Physician applicants will incur costs to document current licensure and specific acupuncture training.

The increased licensing and examination fees will obviously have an economic impact upon licensees and, to the extent the proposed fee increases may be passed along to the patient as a cost of doing business, may have an indirect economic impact on consumers. The Board points out, however, that these increases are necessary to prevent a fiscal loss to the Board, which is required pursuant to N.J.S.A. 45:1-3.2 to cover its expenses. In accordance with the statute, the sums to be raised are estimated not to exceed the amount required.

The licensee's obligation to obtain the patient's informed written consent, to use specified equipment and devices and to comply with precautionary and sterilization procedures as outlined in the regulations reflect the licensee's existing obligations under the Acupuncture Act, the Comprehensive Regulated Medical Waste Management Act, and the United States Food and Drug Administration rules and regulations. Thus, the proposed rules will not impose compliance costs in addition to those already required by the cited statutes and regulations.

The proposed rules implementing statutory requirements for approved tutorials establish registration fees for both the supervisor ($125.00, to be renewed annually) and the trainee ($60.00). The supervisor will also incur the costs of preparing and submitting to the Board a written tutorial agreement and may incur costs in preparing written reports of any substantial modifications to the program.

The proposed rules also require licensees to prepare complete and accurate patient records and to maintain such records for seven years. Costs will vary depending upon the size of the practice; but since compliance with this requirement represents only a small part of the licensee's practice, compliance costs should be nominal.

Licensees will also be required to complete 20 hours of continuing education as a requirement of biennial license renewal. The Board does not anticipate that this will be an undue financial burden for licensees in that there will be a wide range of courses from various sources at differing costs. To the extent that continuing education costs may be passed on to the patient in the form of increased fees, patient fees may be minimally affected.

Regulatory Flexiblity Analysis

If, for the purposes of the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., acupuncturists are deemed "small businesses" within the meaning of the statute, the following analysis is applicable:

The Acupuncture Examining Board currently licenses approximately 40 individuals. The reporting, recordkeeping and other compliance requirements contained in the proposed new rules, which are set forth in detail below, do not differ materially from current standards of professional practice and are a reflection of the requirements of the Acupuncture Act, N.J.S.A. 45:2C-1 et seq.

Individuals must submit, upon application, the appropriate credentials, which are different for each of the Board-approved pathways to licensure. Applicants must successfully complete the National Commission for Certification of Acupuncturists (NCCA) written exam as well as the Board-administered oral/practical exam. Licensees must comply with requirements for biennial license renewal and, if appropriate, license reinstatement, and must post the license certificate in a conspicuous location in the licensee's office.

The rules permit a certified acupuncturist to perform or prescribe the use of the following four therapies only: acupuncture, acupressure, breathing techniques and exercise to promote health. The acupuncturist must obtain a physician referral or diagnosis and informed written consent from each patient before performing acupuncture. Licensees must also comply with rules regarding accepted equipment and devices as well as precautionary and sterilization procedures. Personnel responsible for performing sterilization must be adequately trained and supplied with a written outline of sterilization procedures, and copy of such outline must be maintained on the premises. Licensees must maintain, in English, complete and accurate patient and billing records for a period of seven years from the date of the patient's last treatment.

An organization sponsoring a guest acupuncturist must obtain written Board permission to do so at least 60 days prior to the guest acupuncturist's presentation in New Jersey; guest acupuncturists may perform acupuncture in conjunction with lectures or demonstrations for a maximum of 60 days in a calendar year.

Requirements with regard to acupuncture tutorials are as follows. Licensees, who may supervise up to two trainees, must enter into a written agreement with the trainee, and both the supervisor and the trainee must file applications for Board approval. Clinical training must consist of a minimum of 1,650 hours in specified areas and didactic training must consist of a minimum of 600 hours. The supervisor's responsibilities include notifying the Board in writing within 10 days of the termination of any training agreement for any reason and notifying the Board in the event of any modification in the training plan. Progress reports must be filed with the Board within 30 days of each trainee's completion of each year of a tutorial and must be accompanied by the supervisor's annual renewal fee. The trainee's responsibilities include compliance with standards of practice as set forth in this subchapter as well as all applicable statutory requirements. The trainee must identify himself or herself as a trainee when rendering services and must report to the Board any delay, interruption or termination of the tutorial not reported by the supervisor.

Compliance requirements for physicians or dentists who wish to practice acupuncture include completion of a course of training consisting of a minimum of 300 hours in specified areas.

Finally, during each two-year period prior to license renewal, licensees are required to participate in courses or activities of continuing education totaling 20 hours; evidence of 20 documented hours of continuing education must be submitted to the Board upon application for license renewal.

Other than the services of continuing education instructors, the proposed rules will not require licensees to employ professional services in order to comply. Foreign applicants for licensure may need to employ a credentials evaluating service and/or translation services.

While the cost of compliance with the proposed new rules cannot be accurately estimated, the rules are not expected to impact heavily on licensees inasmuch as most of the requirements are mandated by statute and therefore are already a part of the acupuncturist's regular practice. The proposed rules must apply to all Board licensees, without differentiation as to the size of the practice, since they concern duties mandated by statute and since they are intended to safeguard the public health, safety and welfare.

Full text of the proposal follows (additions indicated in boldface **thus;** deletions indicated in brackets [thus]):

13:35-6.13 Fee Schedule

(a) The following fees shall be charged by the Board of Medical Examiners:

1.-8. (No change.)

[9. Acupuncturist (registration)

i. Examination	$325.00
ii. Reexamination	325.00
iii. Endorsement	175.00
iv. Biennial registration	120.00
v. Reinstatement	25.00
vi. Non-refundable administrative processing fee	$25.00]

[10.]**9.** (No change in text.)

SUBCHAPTER 9. [(RESERVED) ACUPUNCTURE

13:35-9.1 Purpose and scope

(a) The rules of this subchapter are established pursuant to N.J.S.A. 45:2C-1 et seq. ("The Acupuncture Act") and set forth requirements for the practice of acupuncture in the State of New Jersey.

(b) These rules shall apply to all persons certified as acupuncturists by the State of New Jersey, applicants for such certification, and guest acupuncturists granted temporary permission by the Board to perform acupuncture pursuant to N.J.A.C. 13:35-9.12.

13:35-9.2 Definitions

For purposes of this subchapter, the following terms shall have the following meanings:

"Acupressure" means manual surface stimulation of a certain acupuncture point, combination of points, or meridians on the body.

"Acupuncture" means the stimulation of a certain point or points on or near the surface of the body by the insertion of special needles to prevent or modify the perception of pain or to normalize physiological functions including for the purpose of pain control and for the treatment of certain diseases or dysfunctions of the body. Acupuncture includes the techniques of acupressure, electroacupuncture, mechanical stimulation and moxibustion.

"Acupuncture tutorial" means an acupuncture tutorial program which has been approved by the Acupuncture Examining Board and which provides applicants who successfully complete the program with the requirements to sit for the examination for certification as an acupuncturist.

"Board" means the Acupuncture Examining Board, which is located at 28 West State Street, Trenton, New Jersey 08608.

"Certificate" (license) as used in N.J.S.A. 45:2C-6, 9 and 11 shall be deemed synonymous with the word "licensure" as used in the statutes of the Board of Medical Examiners. The words "certification" or "certified" in these sections of the Act shall mean that the licensee has been determined by the Acupuncture Examining Board to possess the qualifications required in New Jersey for the practice of acupuncture. Such certification does not expire and remains valid until suspended or revoked; for this reason, the document issued does not include an address or expiration date. However, this certification alone does not permit one to practice in New Jersey; the certified person must also hold a document denoting current practice registration, as set forth in N.J.A.C. 13:35-9.7.

"Certificate" as used in N.J.S.A. 45:2C-12 refers to a biennial registration. The right to practice commences and ends with the effective and expiration dates of this document and it is not valid for more than two years.

"Electroacupuncture" means the therapeutic use of weak electric currents at acupuncture loci.

"Experience" means proof to the satisfaction of the Board that the applicant has accrued full-time independent acupuncture practice experience consisting of at least 750 patient treatment sessions annually for three years prior to January 18, 1986.

"Guest acupuncturist" means an acupuncturist from another state or country who is not a certified acupuncturist in this State and is the invited guest of a professional acupuncture association, scientific acupuncture foundation, or an acupuncture training program approved by the Board.

"Mechanical stimulation" means stimulation of a certain acupuncture point or points on or near the surface of the body by means of apparatus or instrument.

"Moxibustion" means the therapeutic use of thermal stimulus at acupuncture loci by burning artemisia alone or artemisia formulations.

"Oriental massage" means a system of acupressure or massage movements following Oriental principles.

"Sterilization" means the use of a steam autoclave or equivalent dry heat or ethylene oxide gas in order to destroy all microbial life, including viruses, thereby creating sterility.

"Supervising acupuncturist" or "supervisor" means a certified acupuncturist who is approved by the Board to provide an acupuncture tutorial to a trainee.

"Surface stimulation" means the application of purposeful stimuli to the surface of the body.

"Trainee" means a person who is registered with the Board in order to participate in an acupuncture tutorial under a supervising acupuncturist.

"Training agreement" means the written tutorial agreement between the supervisor and the trainee.

"Training plan" means the written tutorial plan that is filed with and approved by the Board.

"Training program" means and encompasses the agreement and the plan.

13:35-9.3 Credentials required for certification

(a) At the time of application, an applicant shall provide the following credentials:

1. Proof of having attained the age of 21, in the form of a certified copy of birth record, required of all applicants;

2. Affidavits from two persons, unrelated to the applicant, attesting to the applicant's moral character, required of all applicants; the signatures on any affidavits emanating from foreign jurisdictions must be authenticated as required by (a)5i(2) below;

3. Proof of possession of a baccalaureate degree, unless the applicant is a New Jersey-plenary licensed physician or presents proof of sufficient experience or successful completion of a tutorial within New Jersey, so as to be exempted by the Board from the baccalaureate requirement;

i. If the candidate has been awarded a baccalaureate degree from a college or university within the United States, a certified transcript shall be forwarded directly to the Board from that institution, which shall have been accredited by a regional accreditation agency recognized by the Council on Post-Secondary Accreditation or the United States Department of Education;

ii. If the candidate has been awarded a baccalaureate degree from a school located outside the United States, the applicant shall submit to the board an original and one photocopy of the applicant's transcript showing that a degree was awarded, and an evaluation of credits earned as determined by a Board-approval credential

evaluation service. A list of such credential evaluation services shall be provided by the Board;

4. Applicants presenting a baccalaureate degree shall also provide evidence of graduation from a Board-approved two-year course of study or program at a Board-approved school of acupuncture. If the applicant was enrolled in a course of study of duration greater than two years, completion of only two years shall not satisfy this requirement. Evidence shall consist of a certified transcript from that school confirming that a diploma was awarded to the applicant. A list of approved acupuncture schools shall be provided by the Board. Candidacy status or accredited status with the National Accreditation Commission for Schools and Colleges of Acupuncture and Oriental Medicine is required in order for a school to be on the Board's approved list;

5. As an alternative to the primary pathway of a baccalaureate degree plus two or more years of acupuncutre schooling as set forth in (a)3 and 4 above, an applicant shall provide evidence of either successful completion of a Board-approved tutorial program in acupuncture in New Jersey as set forth in N.J.A.C. 13:35-9.13 or experience acceptable to the Board, which experience shall be no less than 750 patient treatment sessions as a full-time acupuncturist during a 12-month period for each of three years prior to January 18, 1986. Such experience shall consist of the general practice of acupuncture.

i. Acceptable proof of experience shall include letters from past or present employers written to the Board on professional letterhead, which must be sent directly to the Board from the employer or the appropriate official at that office or institution. Such letters must clearly establish that the business existed and was offering acupuncture service during the period of time in question.

(1) When a letter from an employer, office or institution does not clearly and credibly indicate the required experience, the Board may at its discretion require that the applicant submit patient records of 750 treatment sessions or such other proof as the Board deems necessary.

(2) The signature(s) on letters of documentation emanating from foreign jurisdictions must be properly notarized and authenticated by an appropriate governmental official.

ii. If the applicant was self-employed, original patient records which clearly indicate the required 750 patient treatment sessions shall be submitted to the Board; such records shall be legible and well-organized. The Board may require records to be translated into English at the expense of the applicant; and

6. If the applicant is a physician and surgeon, the applicant must submit the following documentation in addition to that required by (a)1 and 2 above:

i. Proof that the applicant holds a current plenary license and registration to practice medicine in the State of New Jersey; and

ii. Proof that the applicant has completed the required specific training in acupuncture, pursuant to N.J.A.C. 13:35-9.16.

(b) Documents, other than patient records, written in a language other than English must be accompanied by an English translation done by a Board-approved translation service; a list of such translation services shall be provided by the Board. Translations by any other services or persons will not be accepted. The Board may, at its discretion, send such documents received from a source other than the applicant back to the applicant to be translated by an acceptable translation service at the applicant's expense.

13:35-9.4 Examination requirements

(a) An applicant shall successfully complete the comprehensive written examination developed by the National Commission for Certification of Acupuncturists ("NCCA"), provided that the examination is administered in the English language under conditions and circumstances approved by the Board. The Board at its discretion may reject a particular sitting of the examination if it receives evidence that the integrity of the examination was compromised. For the purposes of this subsection, "successful completion" means achieving a passing grade as established by NCCA for that sitting of the examination; nevertheless, the Board at its discretion may establish its own passing grade, which may be higher or lower than that of NCCA, for future exams.

(b) An applicant shall successfully complete an oral/practical examination administered annually by the Board.

13:35-9.5 Prohibited acts

A person, including a physician and surgeon or a dentist, who is not certified under the Acupuncture Act shall not hold himself or herself out as a practicing acupuncturist nor use a descriptive title such as "Certified Acupuncturist," "Acupuncturist," "C.A.," or any other letters or words denoting that the person is certified to practice acupuncture in this State.

13:35-9.6 Fee schedule

(a) The fee schedule for certification as an acupuncturist is as follows:

1. Application Fee	$ 50.00
2. Examination, Oral/Practical	$225.00
3. Examination, Written	$350.00
4. Initial Registration Fee:	
i. During the first year of a biennial renewal period	$170.00
ii. During the second year of a biennial renewal period	$ 85.00
5. Biennial Registration	$170.00
6. Duplicate or replacement of biennial registration certificate	$ 25.00
7. Delinquency Fee (biennial registration) (up to 60 days)	$ 50.00
8. Delinquency Fee (61 days or more)	$150.00
9. Reinstatement Fee	$150.00
10. Tutorials:	
i. Supervisor:	
(1) Application Fee	$ 50.00
(2) Initial Registration	$125.00
(3) Renewal, Annually	$125.00
(4) Delinquency Fee	$ 50.00
ii. Trainee:	
(1) Application Fee	$ 25.00
(2) Initial Registration	$ 60.00
11. Preparation of certification papers for applicants to other states:	$ 25.00

(b) If a license lapses due to nonpayment of the biennial registration fee, it may be reinstated within five years, provided that the pertinent deliquency fee and all past due registration fees are submitted with the application.

(c) The examination fee will be refunded only if the application is rejected by the Board or withdrawn by the candidate within 14 days of receipt of the application by the Board.

(d) After the 14-day period in (c) above, an applicant who fails to sit for an examination for which payment has been submitted may, one time only, have the fee credited toward the next scheduled examination. The fee will be entirely forfeited if the applicant fails to sit for the succeeding examination.

(e) The application fee is non-refundable.

13:35-9.7 Term of lawful practice; biennial registration

(a) Licensure as an acupuncturist is not effective until, pursuant to N.J.S.A. 45:2C-12, the applicant receives a biennial registration from the Board denoting completion of all requirements. This certificate shall confer the right to practice in the State of New Jersey during the period of its validity; the right to practice in this State commences with the effective date of this certificate and ends on its expiration date. The expiration date shall be June 30 of the next year ending with an odd number (that is, 1993, 1995, 1997, etc.) after the date of issue. The certificate shall be valid for not more than two years.

(b) It shall be an unlawful practice to engage in the practice of acupuncture prior to receipt of the biennial registration, after it has expired, or after the license certificate has been suspended or revoked by order of the Board.

(c) Registration shall be renewed biennially by the licensee on official forms supplied by the Board. Registration will be renewed only upon receipt by the Board of a properly completed renewal application form and payment of the required fee. A renewal application form submitted within 60 days after the biennial registration

deadline must be accompanied by the late fee set forth in N.J.A.C. 13:35-9.6(a)8.

(d) The certificate shall be posted in a conspicuous location in the applicant's office. If an applicant has more than one office, he or she shall obtain from the Board a duplicate certificate for each location.

(e) If the certificate to practice acupuncture in New Jersey lapses for a period of five years or more, reinstatement may be requested by special application to the Board. Requirements for reinstatement are:

1. Submission of a statement giving the reasons for the lapse. The Board shall have the right to make further inquiry, as deemed necessary, into the applicant's activities during the pertinent period;

2. Submission of two new letters of good moral character as required by N.J.A.C. 13:35-9.3(a)2;

3. Payment of the initial registration fee;

4. Successful completion, within one year prior to the request for reinstatement, of the complete examination described in N.J.A.C. 13:35-9.4(a) and (b), unless the individual proves that he or she:

i. Has been engaged in full time continuing acupuncture practice in another jurisdiction throughout the period that the license was lapsed in New Jersey, and the license has been in good standing throughout that period; and

ii. Submits proof that he or she has attended continuing professional education courses in acupuncture and related topics (see N.J.A.C. 13:35-9.17(d)).

13:35-9.8 Standards of practice

(a) A certified acupuncturist may perform or prescribe the use of the following therapies only:

1. Acupuncture, as defined in N.J.A.C. 13:35-9.2;

2. Acupressure, as defined in N.J.A.C. 13:35-9.2;

3. Breathing techniques; and

4. Exercise to promote health.

(b) A certified acupuncturist may perform initial acupuncture treatment only on presentation by the patient of a referral by or diagnosis from a licensed physician.

(c) Following an explanation by the acupuncturist of the definition of acupuncture, procedures, potential risks and potential benefits, the acupuncturist shall obtain informed written consent from each patient before performing acupuncture. See Appendix A, incorporated herein by reference, for an example of an informed consent form.

13:35-9.9 Accepted equipment and devices; procedures

(a) Licensees may use any of the following to effect the stimulation of acupuncture points and channels: needles, moxa, cupping, thermal methods, herbal applications, magnetic stimulation, gwasha scraping techniques, acupatches, acuform, teishin (pressure needles), manual acutotement (defined as stimulation by an instrument that does not pierce the skin), acupressure, electroacupuncture (whether utilizing electrodes on the surface of the skin or current applied to inserted needles), laser bio-stimulation in accordance with relevant Federal law including United States Food and Drug Administration rules and regulations, and ultrasonic stimulation of acupuncture points and channels.

(b) The needles used in acupuncture shall include, but not be limited to: solid filiform needles, dermal needles, plum blossom needles, press needles, prismatic needles and disposable lancets.

(c) The use of staples or hypodermic needles in the practice of acupuncture is prohibited.

13:35-9.10 Precautionary and sterilization procedures

(a) All non-disposable needles and acupuncture equipment that comes into contact with the patient's blood or bodily fluids or penetrates the skin, and equipment used to handle or store needles or other acupuncture equipment that comes into contact with the patient's blood or bodily fluids or penetrates the skin, shall be sterilized prior to each use. Prior to sterilization, all equipment to be sterilized shall be thoroughly cleaned with a disinfectant or cleansing solution.

(b) Sterilization shall be accomplished before use by one of the following methods:

1. Steam autoclave at 250 degrees Fahrenheit (120 degrees Celsius) and 15 pounds per square inch of pressure for 30 minutes;

2. Equivalent dry heat; or

3. Ethylene oxide gas sterilization.

(c) Sterilization equipment shall be used and maintained strictly in accordance with the guidelines of the manufacturer of the instrument, and shall be monitored regularly in accordance with the manufacturer's guidelines to determine whether the equipment is functioning properly.

(d) The following methods of sterilization are unacceptable: boiling acupuncture equipment or soaking acupuncture equipment in alcohol or other antiseptic solution. A glass bead sterilizer may not be used as a primary method of sterilization. Using a glass bead sterilizer is permissible only as a supplemental procedure following the use of the methods in (b) above.

(e) The acupuncturist may delegate disposal of needles to an approved agent; a list of approved agents shall be supplied, upon request, by the Acupuncture Examining Board. The needles shall be placed in a rigid, puncture-proof, sealed container for disposal. Disposal containers shall be labelled as such, and shall carry the warning "CONTAMINATED CONTENTS—USE PRECAUTIONS." Disposal containers shall be wiped with a suitable disinfectant if blood or other bodily fluids are spilled on the outside. Disposal containers shall be discarded appropriately. The acupuncturist shall comply with all requirements of the State Department of Environmental Protection and Energy and the Department of Health implementing the Comprehensive Regulated Medical Waste Management Act, P.L. 1989, c.34 (N.J.S.A. 13:1E-48.1 et seq.).

(f) If in the course of treatment of a patient, a licensee learns that the patient has a blood-borne highly infectious disease, the licensee shall use only disposable needles in treating the patient.

(g) It shall be the responsibility of the certified acupuncturist to ensure that personnel responsible for performing sterilization procedures pursuant to this rule are adequately trained and supplied with a written outline of sterilization procedures. A copy of the outline shall be maintained on the premises.

13:35-9.11 Patient records

(a) An acupuncturist shall maintain complete and accurate records on each patient who has been given acupuncture treatment. The record shall include, but not necessarily be limited to, the following: source of referral and/or diagnosis from a licensed physician; subjective complaints presented by the patient; dates of initial consultation and all treatment sessions; treatments given; and periodic reevaluation and progress notes made in the course of treatment.

(b) Complete and accurate billing records shall be prepared and maintained.

(c) The information required by (a) and (b) above shall be maintained in English.

(d) Patient and billing records shall be kept for a period of seven years from the date of the patient's last treatment.

13:35-9.12 Guest acupuncturist

(a) An acupuncturist from another state or country, who is not a certified acupuncturist in this State and is the invited guest of a professional acupuncture association, scientific acupuncture foundation, or an acupuncture training program approved by the Board, may engage solely in professional education through lectures, clinics or demonstrations, provided such acupuncturist has been granted temporary permission by the Board. The guest acupuncturist may then perform acupuncture in conjunction with these lectures, clinics or demonstrations for a maximum of 60 days in a calendar year or longer upon special permission of the Board. The guest acupuncturist shall not open an office or appoint a place to meet patients or receive calls from patients or otherwise engage in the practice of acupuncture.

(b) The sponsoring organization shall request permission from the Board, in writing, for the guest acupuncturist no later than 60 days prior to the guest acupuncturist's initial presentation in New

Jersey. A resume or summary of the guest acupuncturist's credentials, written in English, shall accompany the request for approval.

13:35-9.13 Tutorial applications and design of tutorial program

(a) No person shall practice acupuncture in an approved tutorial program in acupuncture in this State without prior approval of the Board.

(b) Tutorial applications shall be filed with the Board as follows:

1. Application as an acupuncture trainee shall be filed on a form provided by the Board and accompanied by the tutorial trainee application fee. The information to be provided on the application form shall include personal biographical and educational information and current resident status.

2. Applications for approval to supervise an acupuncture trainee shall be filed on a form provided by the Board and accompanied by a copy of the written trainee agreement, the tutorial supervision application fee, and any other pertinent documents required by the Board. The information to be provided on the application shall include personal biographic, educational and experiential requirements.

(c) Evidence of prior training and experience shall be submitted to the Board for its review with the applications for registration of the supervising acupuncturist and trainee.

(d) The applicant shall document to the Board's satisfaction that any prior training and experience obtained by the trainee outside of the State of New Jersey was completed within a state or jurisdiction having conditions and requirements equivalent to or higher than those in effect pursuant to this subchapter and N.J.S.A. 45:2C-1 et seq.

(e) The trainee shall be at least 18 years of age and shall have a minimum of 60 credits at an institution of higher learning, which must be accredited by a regional accreditation agency recognized by the Council on Post-Secondary Accreditation or the United States Department of Education.

(f) Requirements for approval of an acupuncture tutorial are as follows:

1. An acupuncture tutorial shall be designed to be completed in no less than two nor more than four calendar years;

2. An acupuncture tutorial shall be designed to provide a trainee with a structured learning experience in all the basic skills and knowledge necessary for the independent practice of acupuncture, and shall prepare the trainee for the Board's examination for certification;

3. Acupuncture tutorials which are in the nature of internships may be full-time or part-time relationships; however, the training plan and proposed supervision shall be contained in a written agreement between the supervisor and trainee, pursuant to (i) below;

4. An acupuncture tutorial shall provide formal clinical training with supplemental theoretical and didactic instruction which may be obtained in a post-secondary educational institution which is either accredited by an accrediting body recognized by the Board or specifically approved by the Board;

5. The clinical training shall consist of a minimum of 1650 hours in the following areas:

i. Practice observation;

ii. Patient history and physical examination, including traditional Oriental medical diagnostic procedures;

iii. Therapeutic treatment planning;

iv. Preparation of the patient;

v. Sterilization, use and maintenance of equipment;

vi. Moxibustion;

viii. Electoracupuncture;

viii. Body and auricular acupuncture;

ix. Treatment of emergencies, including certification in cardiopulmonary resuscitation ("CPR");

x. Pre- and post-treatment and instructions to the patient;

xi. Contraindications and precautions; and

xii. Optional: Shiatsu, Acupressure, TaiChi-Chuan and Qi Gong; and

6. The theoretical and didactic training shall consist of a minimum of 600 hours in the following areas:

i. Traditional Oriental medicine;

ii. Acupuncture anatomy and physiology;

iii. Acupuncture techniques;

iv. Survey of clinical medicine;

v. History of Chinese medicine; and

vi. Study of general sciences in anatomy, physiology and pathology, which training may be obtained in a post secondary-educational setting approved by the Board, provided that each of the courses is for at least three academic credits.

(g) The acupuncture services assigned to the trainee shall be those which are unlikely to endanger the health and welfare of patients receiving such services.

(h) No trainee shall be authorized to render acupuncture services to any patient unless the patient has been informed that such services will be rendered by a trainee. The patient, on each occasion of treatment, shall be informed of the procedure to be performed by the trainee under the supervision of the supervising acupuncturist, and shall have consented in writing prior to the initial rendering of the acupuncture procedure by the trainee. The foregoing requirements do not apply to those instances wherein the trainee merely assists the supervisor in the rendering of acupuncture services.

(i) The acupuncture tutorial training program shall be set forth in a written agreement signed by the supervisor and the trainee which shall be submitted for approval to the Board, with the application. The agreement shall set forth, but is not limited to:

1. The training plan;

2. The length of training time;

3. The method of providing the theoretical and didactic training;

4. Guidelines for supervision of the acupuncture services rendered by the trainee; and

5. Tuition fees to be paid by the trainee for participation in the program.

(j) An acupuncture tutorial shall be made available regardless of the trainee's sex, race, religion, creed, or color and regardless of physical handicap which does not unduly interfere with the capacity of the trainee to safely master the program.

13:35-9.14 Responsibilities of supervising acupuncturist

(a) No acupuncturist shall supervise any person in an approved tutorial program in acupuncture in this State without prior approval of the Board.

(b) The supervising acupuncturist shall have the following duties and responsibilities:

1. The supervisor shall obtain permission from the Board to supervise up to two trainees in an approved tutorial program;

2. The supervisor shall at all times be responsible for and provide supervision of the work performed by the trainee as required in this subchapter;

3. The supervisor shall assign only those patient treatments which can be safely and effectively performed by the trainee and which are consistent with the level of training received by the trainee. The supervisor shall provide continuous direction and immediate supervision of the trainee when patient services are being provided. For purposes of this subsection, "continuous direction and immediate supervision" means that the supervisor shall be in the same facility as, and in proximity to, the location where the trainee is rendering services, and shall be readily available at all times to provide advice, instruction and assistance to the trainee and the patient;

4. The supervisor shall assure that prior to the procedure an oral explanation is given and the patient's written informed consent to any procedure and its performance by the trainee is obtained;

5. The supervisor shall assure that the objectives of the training plan submitted to the Board are provided and met by the trainee;

6. The supervisor shall notify the Board in writing within 10 days of the termination of any training agreement for any reason. At the time of such notification, the registration of the trainee shall be cancelled;

7. If, at any time, the trainee plan of the acupuncture tutorial is substantially modified, the supervisor shall file with the Board a report of such modifications. There shall be no charge for the filing of such a report;

8. The supervisor shall assure that the trainee complies with accepted standards of practice, this subchapter, and applicable statutory requirements;

9. The supervisor shall file a progress report with the Board within 30 days of completion by each trainee of each year of an approved acupuncture tutorial. Information in the progress report shall follow guidelines provided by the Board. The supervisor shall file a final report within 30 days of completion of the training; and

10. The supervisor shall assure that when rendering services or otherwise engaging in professional activity, the trainee shall always identify himself or herself as an acupuncture trainee.

13:35-9.15 Responsibilities of the acupuncture trainee

(a) The acupuncture trainee shall have the following duties and responsibilities:

1. The trainee shall not provide acupuncture services independently or without the required supervision, and shall not provide any services for which he or she is not trained or being trained to competently perform;

2. The trainee shall satisfactorily meet the objectives of the training plan submitted to the Board including the necessary theoretical training;

3. The trainee shall comply with the standards of practice in these rules as well as all applicable statutory requirements;

4. The trainee shall always identify himself or herself as an acupuncture trainee when rendering services or otherwise engaging in professional activity;

5. The trainee shall report to the Board any delay, interruption or termination of the acupuncture tutorial not reported by the supervisor; and

6. At the completion of the tutorial, the trainee may file an application for examination.

13:35-9.16 Training required of a physician or dentist

(a) No physician holding a plenary license from the New Jersey Board of Medical Examiners or dentist licensed by the New Jersey Board of Dentistry shall be prevented from practicing acupuncture provided his or her course of training has included:

1. Graduation from a school approved by the National Accreditation Commission of Schools and Colleges of Acupuncture and Oriental Medicine (NACSCAOM);

2. Acupuncture training in a United States or foreign medical school or a foreign acupuncture school; or

3. Courses of training acceptable to or approved by the Board.

(b) The course of training shall be for a minimum of 300 hours, which must include a clinical training program of at least 150 hours. Such United States or foreign training must include:

1. Traditional Oriental medicine (a survey of the theory and practice of traditional diagnostic and therapeutic procedures);

2. Acupuncture anatomy and physiology (fundamentals of acupuncture including point location, the meridian system, special and extra loci, and auriculotherapy); and

3. Acupuncture techniques (instruction in the use of needling techniques, moxibustion and electroacupuncture, including precautions such as sterilization of needles, contraindications and complications).

13:35-9.17 Continuing professional education requirements

(a) The provisions of this section shall apply to all applicants for biennial license renewal except those seeking renewal for the first time.

(b) Beginning with the biennial renewal period that starts on July 1, 1995, no license renewal shall be issued by the Board unless the applicant confirms on his or her renewal application that during the two calendar years preceding application for renewal the applicant participated in courses or activities of continuing education of the type and number of credits specified in this section. Evidence of 20 documented hours of continuing education is a mandatory requirement for license renewal, except for initial renewal.

1. "Documented" means that the applicant obtains:

i. A certificate of participation;

ii. A signed document by the instructor indicating attendance; or

iii. An official transcript from an accredited local, state or national organization or learning institution, as set forth in (d) below.

2. A licensee shall be solely responsible for obtaining and maintaining, for a period of three years, documentation on his or her completion of the required continuing education courses. Such documentation shall be submitted to the Board upon request, and will be surveyed from time to time.

(c) Credit for continuing professional education will be granted as follows for each two-year period:

1. Publication in a national professional journal of a copyrighted article on acupuncture: three hours per article to a maximum of six hours;

2. Attendance at seminars and conferences: one hour per contact hour; and

3. Successful completion of graduate course work taken beyond that required for professional license: one hour per credit hour.

(d) Acceptable continuing professional education courses or activities shall be in any subject area which will update and refresh the clinical skills or knowledge of an acupuncturist. However, courses must be accredited by NACSCAOM, the New Jersey Department of Higher Education, a regional accreditation agency recognized by the Council on Post-Secondary Accreditation, or the United States Department of Education. Seminars and conferences must be accredited or sponsored by a local, state, or national professional organization; a local, state or Federal education or health agency; or a local, state or national medical, psychological, dental or similar professional organization. Notwithstanding that the continuing education course or activity appears to meet these requirements, the Board at its discretion may at any time examine and review any course or activity claimed for credit. If such course or activity does not clearly meet the requirements of this section or is deemed by the Board to be not pertinent to the practice of acupuncture, the course or activity shall be disallowed for credit toward the required 20 continuing education credits.

(e) In the event that a candidate for license renewal shall complete in two years a number of hours in excess of the number required, the documented hours in excess of those required shall not be credited toward license renewal requirements for subsequent years.

(f) The Board may, at its discretion, waive any of the requirements of this section for good cause shown. An appearance before the Board may be required.

APPENDIX A

The following is an example of an informed consent form:

" 'Acupuncture' means the stimulation of a certain point or points on or near the surface of the body by the insertion of special needles to prevent or modify the perception of pain or to normalize physiological functions, including pain control, for the treatment of certain diseases or dysfunctions of the body, and includes the techniques of electroacupuncture, mechanical stimulation and moxibustion.

The potential risks are: slight pain or discomfort at the site of needle insertion, infection, bruises, weakness, fainting, nausea and even aggravation of systems existing prior to acupuncture treatment.

The potential benefits: acupuncture may allow for painless and drugless relief of one's symptoms and improved balance of bodily energies leading to prevention or elimination of the presenting problem.

With this knowledge I voluntarily consent to the above procedures." (Signature of patient/guardian).

(a)

STATE BOARD OF NURSING

Nurse Anesthetists

Proposed Amendments: N.J.A.C. 13:37-13.1 and 13.2

Authorized By: Board of Nursing, Sister Teresa Harris, Executive Director.

Authority: N.J.S.A. 45:11-24.

Proposal Number: PRN 1992-469.

Submit written comments by December 2, 1992 to:

Sister Teresa Harris, Executive Director
State Board of Nursing
Post Office Box 45010
Newark, New Jersey 07101

The agency proposal follows:

Summary

The Board of Nursing is proposing to amend N.J.A.C. 13:37-13.1 and 13.2 relating to nurse anesthetist practice. Significant additions have been made to the current rules in order to clarify and codify Board policy with regard to nurse anesthetist practice and to delineate accepted standards of practice.

The proposed amendments to N.J.A.C. 13:37-13.1(a), (a)2 and (a)3, concerning conditions to practice as a nurse anesthetist, are for clarification purposes. The amendments set forth, for the benefit of the nurse anesthetist, the names of the accrediting and certifying bodies currently approved by the Board to grant accreditation to nurse anesthesia programs and to administer the certifying examination.

Similarly, N.J.A.C. 13:37-13.1(a)4 has been amended to set forth the name of the accrediting body approved by the Board to grant recertification to nurse anesthetists. Paragraph (a)4 also clarifies the obligation of the nurse anesthetist to obtain such recertification on a biennial basis and to comply with all of the recertification requirements established by the accrediting body.

The Board is proposing a new requirement, set forth at N.J.A.C. 13:37-13.1(b), concerning compliance with written policies within the facility in which any anesthetic service is performed by a nurse. In order to practice as a nurse anesthetist in this State, the nurse anesthetist would be required to assure that written policies and procedures are in place at the facility where he or she works, which must include a policy for maintaining continuing education, and to assure that the policies and procedures are reviewed at least annually and revised as appropriate. The Board believes this requirement is a necessary consumer protection measure in that it will ensure accountability and high professional standards within institutions utilizing nurse anesthetists.

The Board is also proposing two new subsections, N.J.A.C. 13:37-13.1(c) and (d). Subsection (c) requires the nurse anesthetist to notify the Board, in writing, upon the occurrence of specifically enumerated events which the Board deems likely to have an impact upon the individual's ability to practice (that is, failure to renew or maintain full recertification; physical and/or mental illness; substance abuse/dependency). Subsection (d) states that a nurse anesthetist who violates any provision of subchapter 13 or any provision of the Nursing Practice Act shall be subject to disciplinary action. These two new subsections are intended to inform licensees of their responsibilities as well as to enhance the ability of the Board to enforce its rules. That compliance with subsections (b) and (c) is required is reiterated in N.J.A.C. 13:37-13.1(a)5.

Finally, the Board is proposing an amendment to N.J.A.C. 13:37-13.2 concerning practice pending the results of the nurse anesthetist examination. The proposed amendment requires a graduate nurse anesthetist to work under the direct supervision of a certified registered nurse anesthetist or a physician-anesthesiologist pending the results of the first certifying examination. This change will make the requirements for graduate nurse anesthetists consistent with the requirements for graduate nurses set forth in N.J.A.C. 13:37-2.3, as well as ensure that, for the protection of the patient, graduate nurse anesthetists work in a supervised setting where their level of competence can be monitored.

Social Impact

Licensees should benefit from the proposed amendments specifying the names of the accrediting and certifying bodies approved by the Board in that they will be provided with more specific knowledge of the Board's requirements with regard to qualifications to practice.

The public will benefit significantly from these proposed amendments, which are intended to foster greater accountability within facilities rendering anesthetic services by nurses. The requirement that a nurse anesthetist not practice at any location which has not established written policies and procedures to meet minimum accepted standards of nurse anesthesia practice and applicable Department of Health and Human Services standards, as well as the requirement that graduate nurse anesthetists work under the direct supervision of a certified registered nurse anesthetist, are intended to ensure that a consistent level and quality of care is given to the public. The requirement that a nurse anesthetist advise the Board of an occurrence which the Board deems likely to affect his or her ability to practice will also serve to protect the public and will enhance the Board's ability to enforce its rules.

Economic Impact

The economic impact of the proposed amendments upon the approximately 300 nurse anesthetists currently registered with the Board and upon the health care community is expected to be minimal. Although a nurse anesthetist may not practice at a location which does not have minimum practice standards in place, including continuing education requirements, the Board believes most hospitals and other health care facilities already maintain standards which are consistent with the requirements set forth in the amendments by virtue of Department of Health and Human Services requirements. In addition, the nurse anesthetist is already required to maintain continuing education credits as a condition for recertification.

Similarly, the requirement that a graduate nurse anesthetist practice only under direct supervision pending the results of the first scheduled examination is a standard practice of health care employers, and, therefore, the Board does not anticipate that either the nurse or the employer will incur additional costs in order to comply.

However, a health care facility which does not currently have written policies and procedures in place or sufficient supervisory staff would be required to devote administrative and professional staff time to develop policies and procedures, and provide supervision of graduate nurse anesthetists. Any additional economic burden upon the health care facility or the nurse is clearly outweighed by the public benefit to be derived; that is, greater accountability and a consistent level of the quality of care within facilities rendering anesthetic services by nurse anesthetists.

No adverse economic impact upon the public is expected as a result of these amendments.

Regulatory Flexibility Analysis

To the extent that nurses offering nurse anesthetist services are deemed to be small businesses under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the following analysis applies:

The proposed amendments to N.J.A.C. 13:37-13.1(a) are for clarification only and therefore impose no compliance requirements. The proposed amendments to N.J.A.C. 13:37-13.1(b), (c) and (d) and the amendment to N.J.A.C. 13:37-13.2 will impose reporting, recordkeeping and other compliance requirements upon nurse anesthetists and also upon health employers in which any anesthetic service is performed, some of which may be considered small businesses.

Compliance requirements include a prohibition against practice in a facility which has not established policies and procedures to meet minimum practice standards. To the extent that a health care facility does not have such policies and procedures in place, it would be required to do so if it desires to hire nurse anesthetists. The individual nurse anesthetist may be required to review and revise these policies and procedures annually. In addition, graduate nurse anesthetists who are practicing pending the results of the first scheduled certifying examination following completion of an approved program in nurse anesthesia must practice under direct supervision of a certified registered nurse anesthetist or a qualified physician-anesthesiologist. Compliance costs would be as stated in the Economic Impact above.

Reporting requirements include notifying the Board in writing upon the occurrence of specified events the Board considers likely to have an impact upon the nurse anesthetist's ability to practice. No professional services would be needed in order to comply.

Because these compliance requirements further the Board's objectives of protecting the public health in the provision of safe, competent nursing care, no differentiation in compliance based upon business size is warranted.

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

13:37-13.1 [Qualifications to practice as a nurse anesthetist] **Nurse anesthetist practice**

(a) The [qualifications to] **conditions for** practice as a nurse anesthetist in this State shall be as follows:

1. Current licensure as a registered professional nurse in the State of New Jersey;

2. Graduation from a program in nurse anesthesia accredited by the [nationally recognized accrediting body approved by the Board] **Council on Accreditation of Nurse Anesthesia Educational Programs of the American Association of Nurse Anesthetists or such other accrediting body as approved by the Board**;

3. Passing [of a] **the** certifying examination administered by the [nationally recognized accrediting body approved by the Board] **Council on Certification of Nurse Anesthetists of the American Association of Nurse Anesthetists or such other certifying body as approved by the Board**;

4. Maintenance of [the recertification requirements by the nationally recognized accrediting body approved by the Board.] **full recertification which shall be obtained on a biennial basis from the Council on Recertification of Nurse Anesthetists of the American Association of Nurse Anesthetists, and compliance with all of its current recertification requirements; and**

5. Compliance with (b) and (c) below.

(b) A nurse anesthetist shall only practice at a location which has established written policies and procedures which meet minimum accepted standards of nurse anesthesia practice and the applicable Department of Health and Human Services standards. A nurse anesthetist shall comply with said policies and procedures and shall ensure that they are reviewed annually, revised as necessary and that they address at least the following areas: verification of qualifications; continuing education; delineation of the responsibilities of all personnel; anesthetic agents which may be administered and under what conditions and/or supervision; pre-anesthesia evaluation; patient preparation; intra-operative monitoring; post-operative monitoring; peri-operative documentation (pre/intra/post-operative); administration and documentation of medications; responsibilities of all personnel for assuring that anesthesia supplies and equipment are available and in working order; and patient emergencies.

(c) Each nurse anesthetist shall immediately notify the Board, in writing, upon the nurse anesthetist's:

1. Failure to renew or to maintain, on a biennial basis, full recertification as a nurse anesthetist;

2. Chemical substance abuse/dependency;

3. Criminal indictment and/or conviction of a crime; or

4. Involvement in a civil, criminal or administrative investigation, complaint and/or judgment involving alleged malpractice, negligence or misconduct relating to his or her practice as a nurse or nurse anesthetist; or

5. Voluntary license surrender or any disciplinary action against the nurse anesthetist by any state or Federal board or agency, including any order of limitation or preclusion.

(d) A nurse anesthetist who violates any of the provisions of this subchapter or any provision of the Nurse Practice Act, N.J.S.A. 45:11-23 et seq., or N.J.S.A. 45:1-14 et seq. may be subject to disciplinary action by the Board, including a restriction on his or her practice as a nurse anesthetist.

13:37-13.2 Practice pending the results of the examination

(a) [A] **Pending the results of the first scheduled certifying examination following completion of an approved program in nurse anesthesia, a graduate** nurse anesthetist who meets the requirements of N.J.A.C. 13:37-13.1(a)1 and 2 may practice as a nurse anesthetist [pending the results of the first scheduled certifying examination following completion of an approved program in nurse anesthesia] **under the direct supervision of a certified registered nurse anesthetist or qualified physican-anesthesiologist. For the purpose of this subsection direct supervision shall mean the physical presence of said supervisor within the room in which anesthesia is being administered.**

(b) (No change.)

(a)

NEW JERSEY RACING COMMISSION

Thoroughbred Rules
License Fees

Proposed Amendments: N.J.A.C. 13:70-4.1, 4.2, 4.15, 9.41 and 22.5

Authorized By: New Jersey Racing Commission, Frank Zanzuccki, Executive Director.

Authority: N.J.S.A. 5:5-30.

Proposal Number: PRN 1992-478.

Submit written comments by December 2, 1992 to:

Mike Vukcevich, Deputy Director
New Jersey Racing Commission
CN 088
Trenton, New Jersey 08625

The agency proposal follows:

Summary

The primary objective of the proposed rule amendments is to increase New Jersey Racing Commission ("Racing Commission" or "Commission") licensure/registration fees in several categories, and to institute a fee for partnerships. The categories affected are: assistant starter, assistant trainer, authorized agent, clocker, certificate of identification, jockey, jockey agent, jockey apprentice, pari-mutuel employee, plater, starter, valet, vendor, off-track stabling facilities, and partnerships.

N.J.A.C. 13:70-4.1, Persons required to have licenses, in pertinent part, lists 17 classes of persons required to secure a license from the New Jersey Racing Commission, and sets forth the annual licensure fee each applicant is required to pay. The proposed amendment seeks to increase the annual fees in 13 of the 17 classes of licensure, as follows: assistant starter, $5.00 to $10.00; assistant trainer, $25.00 to $30.00; authorized agent, $25.00 to $50.00; clocker, $5.00 to $10.00; certificate of identification, $5.00 to $10.00; jockey, $25.00 to $50.00; jockey agent, $25.00 to $50.00; jockey apprentice, $25.00 to $30.00; pari-mutuel employee, $15.00 to $25.00; plater, $15.00 to $20.00; starter, $5.00 to $10.00; valet, $15.00 to $20.00; and vendor, $25.00 to $50.00. The current annual license fees for an owner ($50.00), stable employee ($5.00), trainer ($50.00), and veterinarian ($50.00) are not subject to an increase under the amendment.

N.J.A.C. 13:70-4.2, Items requiring registration, requires that certain entities be registered with the Racing Commission annually and sets forth an annual fee to be paid by each to the Racing Commission. A stable name, corporate stable name and multiple ownership are required to pay an annual $50.00 registration fee under the present rule. The proposed amendment would not increase these fees, but would subject partnerships to an annual registration fee of $25.00. Although partnerships are subject to the jurisdiction of the Racing Commission, they are neither currently referenced in N.J.A.C. 13:70-4.2 nor presently required to pay any annual fee to the Commission. The proposed amendment to N.J.A.C. 13:70-4.2, in addition to imposing such a fee with regard to partnerships, serves to clarify the rules to reflect the requirement of partnership registration.

N.J.A.C. 13:70-4.15, Requirements; farms or licensed tracks, in pertinent part, presently requires any farm or training center making application for licensure as an off-track stabling facility to make itself available for inspection by the Racing Commission and to provide the Commission with unrestricted access to all stabling facilities. Presently, although not particularly set forth in this regulation, off-track stabling facility licensees pay a $25.00 annual fee to the Racing Commission. The proposed amendment to N.J.A.C. 13:70-4.15 would by its terms require that each such facility pay a $50.00 annual license fee to the Racing Commission.

N.J.A.C. 13:70-9.41, Jockey agent license fee, presently requires that each jockey agent obtain a license from the Racing Commission, at a $10.00 annual fee. The proposed amendment to N.J.A.C. 13:70-9.41 would increase this annual fee to $50.00. This proposed amendment to N.J.A.C. 13:70-4.15 is consistent with the proposed amendment to N.J.A.C. 13:70-4.1, discussed *infra*.

N.J.A.C. 13:70-22.5, License fees, which requires licensure for each authorized agent of an owner, presently requires that each agent pay to the Commission a $25.00 annual license fee. However, if an agent represents more than one owner, a separate written instrument must be filed for each owner and the $25.00 fee must be paid in each case.

The proposed amendment would increase the annual license fee in each instance from $25.00 to $50.00. This amendment to N.J.A.C. 13:70-22.5 is consistent with the proposed amendment to N.J.A.C. 13:70-4.1, discussed *infra*.

As noted, with the exception of the proposed amendment to N.J.A.C. 13:70-4.2, the proposed amendments seek to achieve increases in license fees with regard to persons who are subject to the licensure/registration jurisdiction of the Racing Commission. N.J.A.C. 13:70-4.2 imposes an annual fee requirement of $25.00 on partnerships. The latter amendment additionally serves to clarify the rules by affirmatively reflecting that partnerships are required to submit to the Racing Commission licensure scheme. The imposition of a registration fee of $25.00 is considered appropriate as the Commission continues to process partnership applications, yet presently collects no fee to offset incurred costs.

Although there have been limited exceptions, the last major increase in license/registration fees collected by the Racing Commission occurred in 1984. Because of costs of administering its licensure program, coupled with continuing budgetary restrictions, the Racing Commission considers it necessary and appropriate to pass on some of these increased costs to persons subject to licensure under its existing regulations, rules and practice. This is not only necessary from a financial perspective, but also to insure that the Racing Commission's licensure process continues to function efficiently.

Social Impact

The proposed rule amendments should not adversely affect any social programs or policies. As noted above, they will result in an increase in licensure fees payable to the Racing Commission and impose a requirement on partnerships to pay an annual fee of $25.00.

Economic Impact

The proposed rule amendments will have a positive impact on the ability of the New Jersey Racing Commission to maintain its existing level of service to the industry relative to its licensing function. Fees, with limited exceptions, have not been increased since 1984 despite the increase in costs of administering the licensing fuunctions.

The net effect of the proposed amendments is to clarify aspects of the existing licensure process, to increase fees as to most classes of licenses issued by the Racing Commission, and to require that registered partnerships pay an annual fee to the Racing Commission. Limited negative economic impact might be realized by affected partnerships and those individuals and/or entities whose fee categories will increase. As noted, the proposed amendments do not extend the licensure jurisdiction of the Racing Commission to any class of individuals or entities who, pursuant to current Commission regulations, rules or existing practice, are not subject to the Commission's licensure scheme. The largest increase in fees that the proposed amendments impose is $25.00. In no instance will any annual license or registration fee collected by the Racing Commission exceed $50.00.

Regulatory Flexibility Analysis

Certain licensees and registrants affected by the proposed amendments, specifically authorized agents, jockey agents, vendors and partnerships, may be small businesses, as that term is defined under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. No reporting or recordkeeping requirements are imposed upon such licensees and registrants by the amendments. Compliance requirements are altered for authorized agents, jockey agents and vendors in that annual license fees are increased by $25.00. For partnerships, the amendments clarify the necessity for partnership registration with the Commission and impose an annual registration fee of $25.00. Because the fee increases and imposition are necessary to enable the Commission to maintain its licensing function, no exemptions or lesser fees are provided based upon the size of the licensee or registrant.

Full text of the proposal follows (additions indicated in boldface **thus;** deletions indicated in brackets [thus]):

13:70-4.1 Persons required to have licenses

(a) The following persons are required to take out a license from the Racing Commission and the annual fee will be as follows:

1. Assistant starter:	[$ 5.00] **$10.00**
2. Assistant trainer:	[$25.00] **$30.00**
3. Authorized agent:	[$25.00] **$50.00**
4. Clocker:	[$ 5.00] **$10.00**
5. Certificate of identification:	[$ 5.00] **$10.00**
6. Jockey:	[$25.00] **$50.00**
7. Jockey agent:	[$25.00] **$50.00**
8. Jockey apprentice:	[$25.00] **$30.00**
9. Owner:	$50.00
10. Pari-mutuel employee:	[$15.00] **$25.00**
11. Plater:	[$15.00] **$20.00**
12. Stable employee:	$5.00
13. Starter:	[$ 5.00] **$10.00**
14. Trainer:	$50.00
15. Valet:	[$15.00] **$20.00**
16. Vendor:	[$25.00] **$50.00**
17. Veterinarians:	$50.00

(b) (No change.)

13:70-4.2 Items requiring registration

(a) The following must be registered with the Racing Commission annually and the fee payable for such registration shall be as follows:

1. Stable name—$50.00;
2. Corporate stable name—$50.00;
3. Multiple ownership—$50.00[.];
4. **Partnerships—$25.00.**

13:70-4.15 Requirements; farms or licensed tracks

(a)-(b) (No change.)

(c) Any farm or training center making application for licensure as an off-track stabling facility shall **pay a $50.00 annual license fee and** be liable to inspection by the employees of the Commission, and shall be required to provide unrestricted access to all stabling facilities to the employees and agent of the Commission upon demand.

(d)-(f) (No change.)

13:70-9.41 Jockey agent license fee

Each jockey agent must obtain a license from the Racing Commission, and the fee therefor shall be [$10.00]**$50.00.**

13:70-22.5 License fees

The fee for each license shall be [$25.00] **$50.00 as set forth in N.J.A.C. 13:70-4.1.** If an agent represents more than one owner, a separate written instrument shall be filed for each owner and the fee paid in each case.

(a)

NEW JERSEY RACING COMMISSION

Thoroughbred Rules

Claimed Horse

Proposed Amendment: N.J.A.C. 13:70-12.4

Authorized By: New Jersey Racing Commission,
Frank Zanzuccki, Executive Director.
Authority: N.J.S.A. 5:5-30.
Proposal Number: PRN 1992-479.

Submit written comments by December 2, 1992 to:
Mike Vukcevich, Deputy Director
New Jersey Racing Commission
CN 088
Trenton, New Jersey 08625

The agency proposal follows:

Summary

The New Jersey Racing Commission ("Racing Commission" or "Commission") is proposing an amendment to N.J.A.C. 13:70-12.4, Claimed horse.

A claiming race, simply put, is a race where horses are entered with the stipulation that an authorized person may purchase the entered horse at the stated (claiming) price shown in the day's race program. Any horse entered in such a race whose true value exceeds the claiming price is nonetheless subject to purchase at the claiming price. The claiming race thus has among its objectives to insure that the entered horses are of comparable competitive worth and, consequently, to prevent an accomplished horse from participating in races for purse money against horses of significantly lesser stature.

The rule subject of the instant proposal, N.J.A.C. 13:70-12.4, prohibits a claimed thoroughbred horse from starting, for 30 days after the date upon which it was claimed, in any race wherein the determining eligibility price is not less than 25 percent more than the price for which it was claimed. For example, a horse claimed on January 1, 1993 for $10,000 presently could not, until January 31, 1993 (30 days after the date upon which it was claimed), participate in a race where the determining eligibility price is $12,499.99 or less (that is, an amount less than 25 percent more than the price for which it was claimed). The proposed amendment to N.J.A.C. 13:70-12.4 would reduce this restriction from 30 days to 15 days. Assuming adoption of the amendment, the horse in the above example would thus be free of the regulatory restriction on January 16, 1993, or 15 days after the January 1, 1993 claiming date.

The Commission is of the view that the adoption of the proposed amendment will likely benefit the race industry. The reduction of the eligibility restriction imposed by N.J.A.C. 13:70-12.4, from 30 to 15 days, will cause more horses to be available for competition. This is a desirable result as there exists a need to increase the number of available horses to insure that races are conducted with the maximum possible number of entrants. A greater supply of horses, which translates to more available horses to compete, is consistent with advancing the public's interest in and perception of the sport. Moreover, such a result will likely increase the amount of wagers placed on horse races impacted by the rule, which funds ultimately result in increased income to the horsemen and inure to the benefit of all aspects of the racing industry.

The adoption of the amendment will further benefit the racing industry as it will likely stimulate new investment. The claiming process serves as a major vehicle for the introduction of first time owners to horse racing. A net effect of reducing the eligibility restriction from 30 to 15 days is to provide a potential purchaser of a horse participating in a claiming race with a factor to evaluate in the purchase decision making process. If a potential owner is subject to a lesser eligibility restriction, the purchase may be viewed as more feasible as the horse will be eligible to compete in a greater array of races at an earlier time. Of course, a prospective owner's decision to purchase must encompass other factors as the true value of the horse vis-a-vis the claiming price, the horse's potential for development, etc. Similarly, all of these factors must be recognized by existing owners in their decision to enter a horse in a race where that horse would be subject to a stated claiming price.

The Racing Commission has received comments to the instant proposal from various segments of the racing industry. These preliminary comments are mixed in terms of opinion expressed. Some oppose the amendment, contending that a reduction of the eligibility restriction from 30 to 15 days will benefit the more prosperous horsemen, giving he or she an added incentive to claim a horse from one who may be of a lesser financial stature. Some take an opposing view, indicating that adoption of the amendment would also benefit the latter class of horsemen because the field of races available to compete in for purse money would be expanded. Additional comments received by the Racing Commission express the opinion that the adoption of the amendment will foster competition and encourage new owners to enter the race industry. Still other received preliminary comments reflect the viewpoint that adoption of the amendment would not have any impact at all. One comment notes that the Commission's standardbred regulation contains no comparable eligibility restrictions and asserts that no consequent problems exist in that aspect of the race industry.

Social Impact

The proposed rule amendment should not adversely affect any social programs or policies. As noted, the amendment would likely benefit the race industry by causing more horses to be available for competition, by advancing the public perception and interest in the sport, and by fostering investment.

Economic Impact

The proposed rule amendment will have a positive economic impact to the extent that it will generate additional wagering funds and foster new investment in the industry. For the reasons reflected in the commentary above, any ultimate economic effect on those horsemen directly impacted by the amendment is difficult to measure and appears to a large degree dependent on individual circumstances. It can be said, however, that adoption of the amendment would likely be one of several factors for an owner to consider in determining which claiming races to enter his or her horse(s) in. Similarly, a reduction in the eligibility restriction would be one of several factors for a potential purchaser to consider in the evaluation of whether the horse's acquisition at a particular claiming price would be viable.

Regulatory Flexibility Statement

A regulatory flexibility analysis is not required because the proposed amendment does not impose reporting, recordkeeping or other compliance requirements on small businesses, as defined under the Regulatory Flexibility Act, N.J.A.C. 52:14B-16 et seq. The proposed amendment reduces the time period for the claimed horse racing limitation in N.J.A.C. 13:70-12.4(a) from 30 to 15 days.

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

13:70-12.4 Claimed horse

(a) A claimed horse shall not start for [30] **15** days after the date upon which it was claimed in any race wherein the determining eligibility price is not less than 25 percent more than the price for which it was claimed.

(b) This provision shall not apply to starter handicaps.

(a)

NEW JERSEY RACING COMMISSION

Harness Rules

License Fees; Partnership Registration

Proposed Amendments: N.J.A.C. 13:71-7.1, 7.5, 7.26, 7.35 and 24.5

Authorized By: New Jersey Racing Commission, Frank Zanzuccki, Executive Director.

Authority: N.J.S.A. 5:5-30.

Proposal Number: PRN 1992-480.

Submit written comments by December 2, 1992 to:

Mike Vukcevich, Deputy Director
New Jersey Racing Commission
CN 088
Trenton, New Jersey 08625

The agency proposal follows:

Summary

The primary objective of the proposed rule amendments is to increase New Jersey Racing Commission ("Racing Commission" or "Commission") licensure/registration fees in several categories, and to institute a fee for partnerships. The categories affected are: authorized agent, timer, certificate of identification, pari-mutuel employee, plater, starter, vendor, off-track stabling facilities, and partnerships.

N.J.A.C. 13:71-7.1, Persons required to have licenses; fingerprints and photographs, in pertinent part, lists 12 classes of persons required to secure a license from the New Jersey Racing Commission, and sets forth the annual licensure fee each applicant is required to pay. The proposed amendment seeks to increase the annual fees in seven of the 12 classes of licensure, as follows: authorized agent, $25.00 to $50.00; timer, $5.00 to $10.00; certificate of identification, $5.00 to $10.00; pari-mutuel employee, $15.00 to $25.00; plater, $15.00 to $20.00; starter, $5.00 to $10.00; and vendor, $25.00 to $50.00. The current annual license fees for an owner ($50.00), stable employee ($5.00), driver/trainer ($50.00), stable name ($50.00) and veterinarian ($50.00) are not subject to an increase under the proposed amendment.

N.J.A.C. 13:71-7.5, Items requiring registration, requires that certain entities be registered with the Racing Commission annually and sets forth an annual fee to be paid by each to the Racing Commission. A stable name, corporate stable name and multiple ownership are required to pay an annual $50.00 registration fee under the present rule. The proposed amendment would not increase these fees, but would subject partnerships to an annual registration fee of $25.00. Although partnerships are subject to the jurisdiction of the Racing Commission, they are neither currently referenced in N.J.A.C. 13:71-7.5 nor presently required to pay any annual fee to the Commission. The proposed amendment to N.J.A.C. 13:71-7.5, in addition to imposing such a fee with regard to partnerships, serves to clarify the rules to reflect the requirement of partnership registration.

N.J.A.C. 13:71-7.26, Requirements; farms or licensed tracks, in pertinent part, presently requires any farm or training center making appli-

cation for licensure as an off-track stabling facility to make itself available for inspection by the Racing Commission and to provide the Commission with unrestricted access to all stabling facilities. Presently, although not particularly set forth in this rule, off-track stabling facility licensees pay a $25.00 annual fee to the Racing Commission. The proposed amendment to N.J.A.C. 13:71-7.26 would by its terms require that each such facility pay a $50.00 annual license fee to the Racing Commission.

N.J.A.C. 13:71-7.35, Badges, among other things, requires that all persons working in or about the licensed premises of the stable area of any track under the Racing Commission's jurisdiction be licensed. The proposed amendment to this rule removes, in paragraph (a)1, the reference to the year 1977 as the time when which all persons working in or about the licensed premises are to be so licensed. The proposed amendment to paragraph (a)1 further deletes the provision indicating that the licensee fee is $5.00, and amends the language of the rule to indicate that the license fee is that applicable to a person's particular class of licensure.

N.J.A.C. 13:71-24.5, License fees, which requires licensure for each authorized agent of an owner, presently requires that each agent pay to the Commission a $25.00 annual license fee. However, if an agent represents more than one owner, a separate written instrument must be filed for each owner and the $25.00 fee must be paid in each case. The proposed amendment would increase the annual license fee in each instance from $25.00 to $50.00. This amendment to N.J.A.C. 13:71-24.5 is consistent with the proposed amendment to N.J.A.C. 13:71-7.1, discussed *infra.*

As noted, with the exception of the proposed amendment to N.J.A.C. 13:71-7.5, the proposed amendments seek to achieve increases in license fees with regard to persons who are subject to the licensure/registration jurisdiction of the Racing Commission. N.J.A.C. 13:71-7.5 imposes an annual fee requirement of $25.00 on partnerships. The latter proposed amendment additionally serves to clarify the rules by affirmatively reflecting that partnerships are required to submit to the Racing Commission licensure scheme. The imposition of a registration fee of $25.00 is considered appropriate as the Commission continues to process partnership applications, yet presently collects no fee to offset incurred costs.

Although there have been limited exceptions, the last major increase in license/registration fees collected by the Racing Commission occurred in 1984. Because of costs of administering its licensure program, coupled with continuing budgetary restrictions, the Racing Commission considers it necessary and appropriate to pass on some of these increased costs to persons subject to licensure under its existing regulations, rules and practice. This is not only necessary from a financial perspective, but also to insure that the Racing Commission's licensure process continues to function efficiently.

Social Impact

The proposed rule amendments should not adversely affect any social programs or policies. As noted above, they will result in an increase in licensure fees payable to the Racing Commission and impose a requirement on partnerships to pay an annual fee of $25.00.

Economic Impact

The proposed rule amendments will have a positive impact on the ability of the New Jersey Racing Commission to maintain its existing level of service to the industry relative to its licensing function. Fees, with limited exceptions, have not been increased since 1984 despite the increase in costs of administering the licensing functions.

The net effect of the proposed amendments is to clarify aspects of the existing licensure process, to increase fees as to most classes of licenses issued by the Racing Commission, and to require that registered partnerships pay an annual fee to the Racing Commission. Limited negative economic impact might be realized by affected partnerships and those individuals and/or entities whose fee categories will increase. As noted, the proposed amendments do not extend the licensure jurisdiction of the Racing Commission to any class of individuals or entities who, pursuant to current Commission regulations, rules or existing practice, are not subject to the Commission's licensure scheme. The largest increase in fees that the proposed amendments impose is $25.00. In no instance will any annual license or registration fee collected by the Racing Commission exceed $50.00.

Regulatory Flexibility Analysis

Certain licensees and registrants affected by the proposed amendments, specifically vendors, authorized agents, stables, off-track stabling facilities, and partnerships, may be small businesses, as that term is defined under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. No reporting or recordkeeping requirements are imposed upon such licensees and registrants by the amendments. Compliance requirements are altered for vendors, authorized agents, and off-track stabling facilities in that annual license fees are increased by $25.00. For stables, the annual fee for registration of the stable name is increased by $25.00. For partnerships, the amendments clarify the necessity for partnership registration with the Commission and impose an annual registration fee of $25.00. Because the fee increases and imposition are necessary to enable the Commission to maintain its licensing function, no exemptions or lesser fees are provided based upon the size of the licensee or registrant.

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

13:71-7.1 Persons required to have licenses; fingerprints and photographs

(a) The following persons shall be required to take out a license from the New Jersey Racing Commission and the annual fee therefor shall be as follows:

1. Driver/Trainer: $50.00
2. Owner: $50.00
3. Pari-Mutuel Employee: [$15.00] **$25.00**
4. Stable Employee: $ 5.00
5. Stable Name: $50.00
6. Starter: [$ 5.00] **$10.00**
7. Plater: [$15.00] **$20.00**
8. Timer: [$ 5.00] **$10.00**
9. Vendor: [$25.00] **$50.00**
10. Identification License: [$ 5.00] **$10.00**
11. Authorized Agent: [$25.00] **$50.00**
12. Veterinarians: $50.00

(b) (No change.)

13:71-7.5 Items requiring registration

(a) The following must be registered with the Racing Commission **annually** and the fee payable for such registration shall be as follows:

1. Each stable name must be duly registered with the Racing Commission. The fee shall be [$25.00] **$50.00**.

2.-3. (No change.)

4. Partnerships (two individuals or any combination of entities and/or individuals) shall be registered with the Commission. The fee shall be $25.00 annually.

13:71-7.26 Requirements; farms or licensed tracks

(a)-(b) (No change.)

(c) Any farm or training center making application for licensure as an off-track stabling facility shall **pay a $50.00 annual license fee and** be liable to inspection by the employees of the Commission and shall be required to provide unrestricted access to all stabling facilities to the employees and agent of the Commission upon demand.

(d)-(f) (No change.)

13:71-7.35 Badges

(a) All licensed personnel who enter the stable area of any track under the jurisdiction of the New Jersey Racing Commission in any capacity whatsoever shall wear upon their outside apparel in a prominent position the authorized badges containing picture identification supplied by the Commission. This rule shall also apply to State, track, veterinarian personnel, as well as the vendors and suppliers authorized in the stable area, and the badges shall be readily available and produced by such personnel upon request of track security, county and city police, State police, Commission inspectors and stewards at said request. Failure to comply with this rule will result in a $5.00 fine for the first offense; $10.00 fine for the second; $25.00 for the third; and ejection from the grounds upon the fourth offense.

1. [Commencing in 1977, all] **All** persons working in or about the licensed premises shall be required to be licensed **in their appropriate category** by the New Jersey Racing Commission [at a fee of $5.00].

(b) (No change.)

13:71-24.5 License fees

The fee for each license shall be [$25.00] **$50.00 as set forth in N.J.A.C. 13:71-7.1.** If an agent represents more than one owner, a separate written instrument shall be filed for each owner and the fee paid in each case.

TRANSPORTATION

(a)

DIVISION OF TRANSPORTATION ASSISTANCE OFFICE OF AVIATION

Notice of Additional Extension of Comment Period Licensing of Aeronautical and Aerospace Facilities Proposed Repeal and New Rule: N.J.A.C. 16:54

Take notice that the New Jersey Department of Transportation in its rule proposal of July 20, 1992, established a comment date of August 19, 1992, as the final date of receipt of comments concerning the proposal repeal and new rules at N.J.A.C. 16:54, Licensing of Aeronautical and Aerospace Facilities (see 24 N.J.R. 2542(a)). The Department extended the comment period to September 18, 1992 (see 24 N.J.R. 3026(a)).

In view of the numerous additional requests for extensions received from the municipalities and the general public to afford time for preparation of comments, the Department of Transportation is further extending the comment period to January 15, 1993.

Submit comments, in writing by January 15, 1993 to:

Charles L. Meyers
Administrative Practice Officer
Department of Transportation
1035 Parkway Avenue
CN 600
Trenton, NJ 08625

TREASURY-GENERAL

(b)

DIVISION OF PENSIONS AND BENEFITS

State Health Benefits Commission Annual Enrollment Periods Proposed Amendment: N.J.A.C. 17:9-2.3

Authorized By: State Health Benefits Commission, Patricia A. Chiacchio, Acting Secretary.
Authority: N.J.S.A. 52:14-17.27.
Proposal Number: PRN 1992-476.

Submit comments by December 2, 1992 to:

Peter J. Gorman, Esq.
Executive Assistant
Division of Pensions and Benefits
CN 295
Trenton, New Jersey 08625

The agency proposal follows:

Summary

The proposed amendments change the time frames of the open enrollment periods during which public employees of State or local government may enroll or change their enrollment in health benefits plans. These changes are being made to conform to the State's fiscal periods.

Social Impact

The proposed amendments will affect those public employees who choose to change their current coverage or to enroll in the various health benefits plans available to them, in that the open enrollment period will not be the month of February, for State employees, or the month of January, for local employees, but will be April and March, respectively. All employees will be notified in advance. No social impact is expected.

Economic Impact

The proposed amendments will affect those public employees who choose to change their current coverage or to enroll in the various health benefits plans available to them, in that the open enrollment period will not be the month of February, for State employees, or the month of January, for local employees, but will be April and March, respectively. This postponement of the open enrollment period in 1993 may have a negative economic effect on some of the individuals who may have benefitted from an earlier enrollment, in that someone who wishes to change to a less expensive plan will be prevented from doing so until April or March. After 1993, there will be no impact. In that the new enrollment periods will be coordinated with the State fiscal year, any effect on the State is expected to be positive. There is no anticipated effect on the Division.

Regulatory Flexibility Statement

A Regulatory Flexibility Analysis is not required because the proposed amendments affect only individual members of the State and local health benefits system and the members of government who are responsible for its implementation, and not any small businesses, as the term is defined in the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq.

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

17:9-2.3 Annual enrollment period

(a) Any employee who shall elect not to enroll for coverage for himself or herself or for his or her dependent at the time such employee or dependent first becomes eligible for coverage shall subsequently be permitted to enroll himself or herself and his or her dependents only during the annual enrollment period, which is the month of [February] **April** of each year with coverage effective for the first coverage period in [May] **July** in the case of State coverage and the month of [January] **March** with coverage effective [May] **July** 1 in the case of local coverage.

(b)-(c) (No change.)

(c)

DIVISION OF PENSIONS AND BENEFITS

State Health Benefits Commission Coverage Changes; Exemptions Proposed Amendment: N.J.A.C. 17:9-2.4

Authorized By: State Health Benefits Commission, Patricia A. Chiacchio, Acting Secretary.
Authority: N.J.S.A. 52:14-17.27.
Proposal Number: PRN 1992-475.

Submit comments by December 2, 1992 to:

Peter J. Gorman, Esq.
Executive Assistant
Division of Pensions and Benefits
CN 295
Trenton, New Jersey 08625

The agency proposal follows:

Summary

The proposed amendment will permit employees in the retiree or COBRA group to select, within 60 days of the qualifying event, a less expensive health benefit plan, as compared to the medical plan that they had while an active employee, when they retire or are terminated from their employment and are eligible for continued COBRA coverage.

Social Impact

This proposed amendment will affect those persons who are retiring or being terminated from their employment and are eligible for COBRA continuation of a health benefits plan other than the one that they had while actively employed. Such persons will be able to select a less expensive plan, which will have a positive economic impact. However, there is no anticipated social impact.

Economic Impact

It is hoped that this amendment will be economically beneficial to the persons affected by the amendment. Under this amendment, certain

retirees and/or persons terminated, for example, laid off, can obtain the same type of health coverage that they had while actively employed but through another plan, if necessary, if that plan offers such coverage at a lower cost.

Regulatory Flexibility Statement

A regulatory flexibility analysis is not required because this proposed amendment does not impose reporting, recordkeeping or other compliance requirements on small businesses as defined under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. The proposed amendment allows an individual to select a different health coverage within 60 days of retirement or COBRA enrollment. There is no effect on small businesses.

Full text of the proposal follows (additions indicated in boldface **thus**):

17:9-2.4 Coverage changes; exceptions

(a) An employee may change his or her enrollment and the enrollment of his or her dependents to any type of coverage at any time if such changes result from a change in family, dependency or employment status of the employee or his or her dependents. Such changes will be permitted under the following conditions:

1.-7. (No change.)

8. Retirement or COBRA enrollment: When an employee enrolls in the retiree or COBRA group, he or she may, within 60 days of the qualifying event, select a plan other than the plan which covered the employee as an active employee.

(b)-(c) (No change.)

OTHER AGENCIES

(a)

CASINO CONTROL COMMISSION

Accounting and Internal Controls
Removal of Slot Drop Buckets and Slot Cash Storage Boxes; Meter Readings
Proposed Amendment: N.J.A.C. 19:45-1.42

Authorized By: Casino Control Commission, Joseph A. Papp, Executive Secretary.

Authority: N.J.S.A. 5:12-63, 69 and 70(l).

Proposal Number: PRN 1992-477.

Submit comments by December 2, 1992 to:

Barbara A. Mattie
Chief Analyst—Operations
Casino Control Commission
Arcade Building
Tennessee Avenue and the Boardwalk
Atlantic City, NJ 08401

The agency proposal follows:

Summary

The proposed amendment would change the requirements for reading and recording the bill meters associated with a slot machine's bill changer. Under the proposed amendment, the casino licensee's accounting department would read and record the bill meters in accordance with a schedule submitted to and approved by the Commission. The amendment would also require casino licensees to read and record the bill meters whenever a variance between the bill changer's change meter and the cash removed from the bill changer's cash box is $25.00 or more. The casino licensee would also be required to file an incident report with the Casino Controller, the Commission and the Division explaining the variance.

Social Impact

The proposed amendment is not anticipated to have any significant social impact. The proposed amendment may give casino licensees the ability to more economically and efficiently utilize their workforce.

Economic Impact

Since the current process of reading the bill meters on a weekly basis is very labor intensive, it is anticipated that the proposed amendment will have a positive economic impact on casino licensees by reducing labor costs. The requirement that casino licensees prepare an incident report for variances of $25.00 or more will have an economic impact on casino licensees; however, the cost of preparing the report should be more than offset by the cost savings realized from the reduced labor costs.

Regulatory Flexibility Statement

A regulatory flexibility statement is not required since the proposed amendment will affect only the operation of New Jersey casino licensees, none of which qualifies as a small business under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq.

Full text of the proposal follows (additions indicated in boldface **thus;** deletions indicated in brackets [thus]):

19:45-1.42 Removal of slot drop bucket and slot cash storage boxes; meter readings

(a)-(d) (No change.)

(e) Accounting department employees with no incompatible functions shall, at least once a week, read and record on a Slot Meter Sheet the numbers on the in-meter, drop meter, jackpot meter, manual jackpot meter[,] **and** change meter [and bill meters]. **Accounting department employees shall read and record on a Slot Meter Sheet the numbers on the bill meters in accordance with a schedule submitted to and approved by the Commission.** These procedures shall be performed in conjunction with the removal and replacement of the slot drop buckets or slot cash storage boxes prior to opening the slot machines for patron play.

(f) (No change.)

(g) Whenever there is a variance of $25.00 or more between the meter reading taken from the change meter and recorded on the Slot Meter Sheet pursuant to (f) above, and the total amount of cash removed from the bill changer's slot cash storage box, the casino licensee's accounting department shall, as expeditiously as possible, read and record the bill changer's bill meters. The meter readings from the bill meters shall be compared to the total amount of cash removed from the slot cash storage box to verify the variance. The casino licensee shall be required to file an incident report with the casino controller, Commission and Division whenever a variance between the meter readings from the change meter and the cash removed from the slot cash storage box is $25.00 or more. The incident report shall include, at a minimum, the following:

1. The date of the meter reading;
2. The date the report was filed;
3. The amount of the variance, by denomination;
4. The asset number of the bill changer involved;
5. An indication as to the cause of the variance, if available;
6. An indication as to whether the bill meters confirmed the variance; and
7. The signature and license number of the preparer.

(b)

DELAWARE RIVER BASIN COMMISSION

Notice of Proposed Amendments to Administrative Manual Rules of Practice and Procedure

SUMMARY: Notice is hereby given that the Delaware River Basin Commission will hold a **public hearing** to receive comments on proposed amendments to its Rules of Practice and Procedure in relation to Commission review of electric generation or cogeneration projects. The hearing will be part of the Commission's regular business meeting which is open to the public.

The Commission's Rules of Practice and Procedure presently require Commission review and approval of all projects involving a withdrawal of surface or ground water whenever the daily average withdrawal during any month exceeds 100,000 gallons per day (gpd). Similarly, review and approval by the Commission of all discharges of wastewater to surface or ground waters having a design capacity of 50,000 gpd or more is also required. One or both of these requirements generally trigger Com-

mission review of major electric generating projects. However, the Rules of Practice and Procedure do not specifically address similar electric generation or cogeneration projects if they elect to use an existing source of water supply and the Commission has been made aware of the fact that several such projects are under consideration. The depletive water use from these projects could have a substantial impact on the water resources of the Basin. Since the Commission as a matter of policy has imposed special requirements on new electric generating facilities regarding the replacement of depeletive water use during critical hydrologic periods, the Commission is now proposing to amend its Rules of Practice and Procedure by the addition of a new category of projects for review under Section 3.8 of the Compact: electric generating or cogenerating facilities designed to consumptively use in excess of 100,000 gpd of water during any 30-day period.

The Commission recognizes the need to consider all large consumptive water uses and has asked staff to survey large water purveyors to obtain information on major depletive water users. Based on the results of that survey, the Commission may consider extending review authority to other large consumptive water users.

HEARING DATE: The **public hearing** will be part of the Commission's regular business meeting which is scheduled for Wednesday, December 9, 1992 beginning at 1 P.M.

HEARING ADDRESS: The hearing will be held at the Harbour League Club, 800 Hudson Square, Camden, New Jersey.

WRITTEN COMMENTS should be submitted to Susan M. Weisman, Delaware River Basin Commission, P.O. Box 7360, West Trenton, New Jersey 08628.

FOR FURTHER INFORMATION CONTACT: Susan M. Weisman, Commission Secretary, Delaware River Basin Commission: Telephone (609) 883-9500 X203. Persons wishing to testify are requested to notify the Secretary in advance.

The **subject of the hearing** will be as follows:

Amendments to the Administrative Manual—Rules of Practice and Procedure

It is proposed to amend the Administrative Manual—Rules of Practice and Procedure as follows:

1. New Section 2-3.5(b)(17) is added to read as follows:

(17) Electric generating or cogenerating facilities designed to consumptively use in excess of 100,000 gallons per day of water during any 30-day period.

RULE ADOPTIONS

ADMINISTRATIVE LAW

(a)

OFFICE OF ADMINISTRATIVE LAW

Conduct of Administrative Law Judges

Adopted New Rules: N.J.A.C. 1:1-1.5 and 1.1 Appendix A

Adopted Amendment: N.J.A.C. 1:31-3.1

Proposed: August 17, 1992 at 24 N.J.R. 2755(a).
Adopted: September 30, 1992 by Jaynee LaVecchia, Director, Office of Administrative Law.
Filed: October 1, 1992 as R.1992 d.430, **without change.**
Authority: N.J.S.A. 52:14F-5(e), (f) and (g).
Effective Date: November 2, 1992.
Expiration Date: April 21, 1997, N.J.A.C. 1:1 and 1:31.

Summary of Public Comments and Agency Responses:
No comments received.

Full text of the adoption follows.

1:1-1.5 Conduct of Administrative Law Judges

The Code of Judicial Conduct for Administrative Law Judges, as incorporated herein by reference as Appendix A, shall govern the conduct of administrative law judges.

APPENDIX A
CODE OF JUDICIAL CONDUCT
FOR ADMINISTRATIVE LAW JUDGES

PREAMBLE

The Code of Judicial Conduct for Administrative Law Judges is intended to establish basic ethical conduct standards for administrative law judges. The Code is intended to govern the conduct of these administrative law judges and to provide guidance to assist judges in establishing and maintaining high standards of judicial and personal conduct. This Code is based upon the Model Code of Judicial Conduct as adopted by the ABA on August 7, 1990 and the New Jersey Code of Judicial Conduct.

The text of the Canons is authoritative. The Commentary, by explanation and example, provides guidance with respect to the purpose and meaning of the Canons. The Commentary is not intended as a statement of additional rules. When the text uses "shall" or "shall not," it is intended to impose binding obligations the violation of which can result in disciplinary action. When "should" or "should not" is used, the text is a statement of what is or is not appropriate conduct, but not as a binding rule under which a judge may be disciplined. When "may" is used, it denotes permissible discretion or, depending on the context, it refers to action that is not covered by specific proscriptions.

The Canons are rules of reason. They should be applied consistent with constitutional requirements, statutes, administrative rules, and decisional law and in the context of all relevant circumstances. The Code is to be construed so as not to impinge on the essential independence of judges in making judicial decisions. The Code is designed to provide guidance to administrative law judges and to provide a structure for regulating conduct.

CANON 1

AN ADMINISTRATIVE LAW JUDGE SHALL UPHOLD THE INTEGRITY AND INDEPENDENCE OF THE ADMINISTRATIVE JUDICIARY

An independent and honorable administrative judiciary is indispensable to justice in our society. An administrative law judge should participate in establishing, maintaining, and enforcing, high standards of conduct, and shall personally observe those standards so that the integrity and independence of the administrative judiciary will be preserved. The provisions of this Code are to be construed and applied to further that objective.

Commentary: Deference to the judgments and rulings of administrative proceedings depends upon public confidence in the integrity and independence of administrative law judges. The integrity and independence of administrative law judges depends in turn upon their acting without fear or favor. Although judges should be independent, they must comply with the law, including the provisions of this Code. Public confidence in the impartiality of the administrative judiciary is maintained by the adherence of each administrative law judge to this responsibility. Conversely, violation of this Code diminishes public confidence in the administrative judiciary and thereby does injury to the system of government under law.

CANON 2

AN ADMINISTRATIVE LAW JUDGE SHALL AVOID IMPROPRIETY AND THE APPEARANCE OF IMPROPRIETY IN ALL ACTIVITIES

A. An administrative law judge shall respect and comply with the law and at all times shall act in a manner that promotes public confidence in the integrity and impartiality of the administrative judiciary.

Commentary: Public confidence in the administrative judiciary is eroded by irresponsible or improper conduct by judges. An administrative law judge must avoid all impropriety and appearance of impropriety. An administrative law judge must expect to be the subject of constant public scrutiny. An administrative law judge must therefore expect, and accept restrictions on the administrative law judge's conduct that might be viewed as burdensome by the ordinary citizen, and should do so freely and willingly.

The prohibition against behaving with impropriety or the appearance of impropriety applies to both the professional and personal conduct of a judge. Because it is not practicable to list all prohibited acts, the proscription is necessarily cast in general terms that extend to conduct by administrative law judges that is harmful although not specifically mentioned in the Code. Actual improprieties under this standard include violations of law, court rules, or other specific provisions of this Code. The test for appearance of impropriety is whether the conduct would create in reasonable minds a perception that the administrative law judge's ability to carry out judicial responsibilities with integrity, impartiality, and competence is impaired.

See also Commentary under Canon 2C.

B. An administrative law judge shall not allow family, social, political, or other relationships to influence the judge's judicial conduct or judgment. An administrative law judge shall not lend the prestige of the office to advance the private interests of the administrative law judge or others; nor shall an administrative law judge convey or permit others to convey the impression that they are in a special position to influence the judge. An administrative law judge shall not testify voluntarily as a character witness.

Commentary: Maintaining the prestige of the administrative judiciary is essential to a system of government in which the administrative judiciary must to the maximum extent possible, function independently of the executive and legislative branches. Respect for the office facilitates the orderly conduct of legitimate administrative judicial functions. Administrative law judges should distinguish between proper and improper use of the prestige of office in all of their activities. For example, it would be improper for an administrative law judge to allude to his or her judgeship to gain a personal advantage such as deferential treatment when stopped by a police officer for a traffic offense. Similarly, official letterhead must not be used for conducting an administrative law judge's personal business.

An administrative law judge must avoid lending the prestige of the office for the advancement of the private interests of others. For example, a judge must not use the judge's judicial position to gain advantage in a civil suit involving a member of the judge's family.

Although an administrative law judge should be sensitive to possible abuse of the prestige of the office, an administrative law judge may, based on the judge's personal knowledge, serve as a reference or provide a letter of recommendation.

An administrative law judge must not testify voluntarily as a character witness because to do so may lend the prestige of the office in support of the party for whom the administrative law judge testifies. Moreover, when an administrative law judge testifies as a witness, a lawyer who regularly appears before the judge may be placed in the awkward position of cross-examining the judge. An administrative law judge may, however, testify when properly summoned. Except in unusual circumstances where the demands of justice require, an administrative law judge should discourage a party from requiring the judge to testify as a character witness.

C. An administrative law judge shall not hold membership in any organization that practices invidious discrimination as defined by Federal law and the New Jersey Law Against Discrimination.

Commentary: It is inappropriate for a judge to hold membership in any organization that practices invidious discrimination. Membership of an administrative law judge in an organization that practices invidious discrimination may give rise to perceptions that the judge's impartiality is impaired. Canon 2C refers to the current practices of the organization. Whether an organization practices invidious discrimination is often a complex question to which judges should be sensitive. The answer cannot be determined from a mere examination of an organization's current membership rolls, but rather depends on how the organization selects members and other relevant factors, such as, that the organization is dedicated to the preservation of religious, ethnic, or cultural values of legitimate common interest to its members, or that it is in fact and effect an intimate, purely private organization whose membership limitations could not be constitutionally prohibited. Absent such factors, an organization is generally said to discriminate invidiously if it arbitrarily excludes from membership on the basis of categories prohibited by Federal law or the New Jersey Law Against Discrimination persons who would otherwise be admitted to membership. See New York State Club Ass'n Inc. v. City of New York, 487 U.S. 1, 108 S.Ct. 2225, 101 L.Ed. 2d 1 (1988); Board of Directors of Rotary International v. Rotary Club of Duarte, 481 U.S. 537, 107 S.Ct. 1940, 95 L.Ed. 2d 474 (1987); Roberts v. United States Jaycees, 468 U.S. 609, 104 S.Ct. 3244, 82 L.Ed. 2d 462 (1984).

Although Canon 2C relates only to membership in organizations that invidiously discriminate, in addition, it would be a violation of Canon 2 and Canon 2A for an administrative law judge to arrange a meeting at a club that the judge knows practices invidious discrimination, or for the judge to regularly use such a club. Moreover, public manifestation by an administrative law judge of the judge's knowing approval of invidious discrimination on any basis gives the appearance of impropriety under Canon 2 and diminishes public confidence in the integrity and impartiality of the administrative judiciary, in violation of Canon 2A.

When a person who is an administrative law judge at the time this Code becomes effective learns that an organization to which the judge belongs engages in invidious discrimination that would preclude membership under Canon 2C or under Canon 2 and Canon 2A, the administrative law judge is permitted, in lieu of resigning, to make immediate efforts to have the organization discontinue its invidiously discriminatory practices, but the judge is required to suspend participation in any activities of the organization. If the organization fails to discontinue its invidiously discriminatory practices as promptly as possible, the administrative law judge is required to resign immediately from the organization.

CANON 3

AN ADMINISTRATIVE LAW JUDGE SHALL PERFORM THE DUTIES OF THE OFFICE IMPARTIALLY AND DILIGENTLY

The judicial duties of an administrative law judge take precedence over all other activities. Judicial duties include all the duties of the office prescribed by law. In the performance of these duties, the following standards apply.

A. Adjudicative responsibilities:

(1) An administrative law judge shall hear and decide matters assigned to the judge except those in which disqualification is required.

(2) An administrative law judge shall be faithful to the law and maintain professional competence in it. A judge shall be unswayed by partisan interests, public clamor, or fear of criticism.

(3) An administrative law judge shall maintain order and decorum in proceedings before the judge.

(4) An administrative law judge shall be patient, dignified, and courteous to litigants, witnesses, attorneys, representatives, and others with whom the judge deals in an official capacity, and shall require similar conduct of attorneys, representatives, staff members, and others subject to the judge's direction and control.

Commentary: The duty to hear all proceedings fairly and with patience is not inconsistent with the duty to dispose promptly of the business of the judge. Judges can be efficient and businesslike while being patient and deliberate.

(5) An administrative law judge shall perform judicial duties without bias or prejudice. A judge shall not, in the performance of judicial duties, by words or conduct manifest bias or prejudice, including but not limited to bias or prejudice based upon race, sex, religion, national origin, disability, age, sexual orientation, or socioeconomic status, and shall not permit staff and others subject to the judge's direction and control to do so.

Commentary: A judge must refrain from speech, gestures, or other conduct that could reasonably be perceived as sexual harassment and must require the same standard of conduct of others subject to the judge's direction and control. Facial expression and body language, in addition to oral communication, can give to parties or lawyers in the proceeding, the media, and others an appearance of bias. A judge must be alert to avoid behavior that may be perceived as prejudice.

(6) An administrative law judge shall accord to all persons who are legally interested in a proceeding, or their representative, full right to be heard according to law, and except as authorized by law, neither initiate nor consider *ex parte* or other communications as to substantive matters concerning a pending or impending proceeding. On notice, a judge may obtain the advice of a disinterested expert on the law applicable to a proceeding before the judge, by *amicus curiae* or as otherwise authorized by law, if the judge affords the parties reasonable opportunity to respond. A judge may with the consent of the parties, confer separately with the parties and their lawyers in an effort to mediate or settle matters pending before the judge. A judge may initiate or consider any *ex parte* communications when expressly authorized by law to do so.

Commentary: The proscription against communications concerning a proceeding includes communications from lawyers, law teachers, and other persons who are not participants in the proceeding except as authorized by law, but does not preclude a judge from consulting with other judges or subordinate personnel whose function is to aid the judges in carrying out adjudicative responsibilities. To the extent reasonably possible, all parties or their lawyers shall be included in communications with a judge.

(7) An administrative law judge shall dispose of all judicial matters promptly, efficiently, and fairly.

Commentary: In disposing of matters promptly, efficiently, and fairly, a judge must demonstrate due regard for the rights of the parties to be heard and to have issues resolved without unnecessary cost or delay. Prompt disposition of the judge's business requires a judge to devote adequate time to his or her duties, to be punctual in attending hearings and expeditious in determining matters under submission, and to insist that other subordinate officials, litigants, and their representatives cooperate with the judge to that end.

(8) An administrative law judge shall abstain from public comment about a pending or impending proceeding in any court or tribunal and shall require similar abstention on the part of personnel subject to the judge's direction and control. This subsection does not prohibit judges from making public statements in the course of their official duties or from explaining for public information the hearing procedures of agencies.

Commentary: "Agency personnel" does not include the lawyers in a proceeding before a judge. The conduct of lawyers is governed by rules of professional conduct. This subsection is not intended to preclude participation in an association of judges merely because such association makes public comments about a pending or impending proceeding in the administrative process. The subsection is directed primarily at public comments by a judge concerning a proceeding before another judge.

(9) An administrative law judge shall not disclose or use, for any purpose unrelated to judicial duties, nonpublic information acquired in a judicial capacity.

B. Administrative responsibilities:

(1) An administrative law judge shall diligently discharge assigned administrative responsibilities, maintain professional competence in judicial administration, and facilitate the performance of the administrative responsibilities of other administrative law judges.

(2) An administrative law judge shall require staff and other persons subject to the judge's direction and control to observe the standards of fidelity and diligence that apply to the judge.

(3) An administrative law judge shall initiate appropriate disciplinary measures against a judge or a lawyer for unprofessional conduct of which the judge may become aware.

Commentary: Disciplinary measures may include reporting a lawyer's misconduct to an appropriate disciplinary body. Internal agency procedure which routes the complaint should be utilized; however, the judge remains responsible for initiation of the action.

C. Disqualification.

(1) An administrative law judge shall disqualify himself or herself in any proceeding in which the judge's impartiality might reasonably be questioned, including but not limited to instances where:

Commentary: By decisional law, the rule of necessity may supersede the rule of disqualification. For example, a judge might be the only judge available in a matter requiring immediate judicial action. The judge must disclose on the record the basis for possible disqualification and use reasonable efforts to transfer the matter to another judge as soon as practicable.

(a) the judge has a personal bias or prejudice concerning a party, or personal knowlege of disputed evidentiary facts concerning the proceeding;

(b) in private practice the judge served as a lawyer in the matter in controversy, or a lawyer with whom the judge previously practiced law served during such association as a lawyer concerning the matter, or the judge or such lawyer has been a witness concerning it;

Commentary: A lawyer in a governmental agency does not necessarily have an association with other lawyers employed by that agency within the meaning of this subsection; a judge formerly employed by a governmental agency, however, should disqualify himself or herself in a proceeding if the judge's impartiality might reasonably be questioned because of such association.

(c) the judge has served in governmental employment and in such capacity participated as counsel, advisor, or material witness concerning the proceeding or expressed an opinion concerning the merits of the particular case in controversy;

(d) the judge knows that he or she, individually or as a fiduciary, or his or her spouse or child residing in the judge's household, or any other member of the judge's family or a person treated by the judge as a member of the judge's family residing in the judge's household, has a more than *de minimis* financial interest in the subject matter in controversy or in a party to the proceeding, or any other more than *de minimis* interest that could be substantially affected by the outcome of the proceeding; generally, receiving service from a particular public utility is a *de minimis* interest;

(e) the judge or the judge's spouse, or a person within the third degree of relationship to either of them, or the spouse of such a person:

(i) is a party to the proceeding, or an officer, director, or trustee of a party;

(ii) is acting as, or is in the employ of or associated in the practice of law with, a lawyer or other representative in the proceeding;

Commentary: The fact that a lawyer in a proceeding is affiliated with a law firm with which a lawyer-relative of the judge is affiliated of itself disqualifies the judge.

(iii) is known by the judge to have a more than *de minimis* interest that could be affected by the outcome of the proceeding;

(iv) is to the judge's knowledge likely to be a witness in the proceeding.

(2) A judge shall inform himself or herself about the judge's personal and fiduciary financial interests, and make a reasonable effort to inform himself or herself about the personal financial interests of his or her spouse and minor children residing in the judge's household.

(3) For the purposes of this Code the following words or phrases shall have the meaning indicated:

(a) The degree of relationship is calculated according to the common law;

Commentary: According to the common law, the third degree of relationship test would, for example, disqualify the judge if the judge's or his or her spouse's parent, grandparent, uncle or aunt, brother or sister, cousin, niece or her husband, or nephew or his wife were a party or lawyer in the proceeding.

(b) "fiduciary" includes such relationships as executor, administrator, trustee, and guardian;

(c) "financial interest" means ownership of a more than *de minimis* legal or equitable interest, or a relationship as director, advisor, or other active participant in the affairs of a party, except that:

(i) ownership in a mutual or common investment fund that holds securities is not a "financial interest" in such securities unless the judge participates in the management of the fund;

(ii) an office in an educational, religious, charitable, fraternal, or civic organization is not a "financial interest" in securities held by the organization;

(iii) the proprietary interest of a policy holder in a mutual insurance company, or a depositor in a mutual savings association, or a similar proprietary interest, is a "financial interest" in the organization only if the outcome of the proceeding could substantially affect the value of the interest;

(iv) ownership of government securities is a "financial interest" in the issuer only if the outcome of the proceeding could substantially affect the value of the securities;

(v) ownership of one share of stock is more than a *de minimis* interest.

(d) "proceeding" includes prehearing or other stages of litigation.

CANON 4

AN ADMINISTRATIVE LAW JUDGE SHALL REGULATE EXTRA-JUDICIAL ACTIVITIES TO MINIMIZE THE RISK OF CONFLICT WITH JUDICIAL DUTIES

A. Extra-judicial activities in general:

An administrative law judge shall conduct all of the judge's extra-judicial activities so that they do not:

(1) cast reasonable doubt on the judge's capacity to act impartially as a judge;

(2) demean the judicial office; or

(3) interfere with the proper performance of judicial duties.

Commentary: Complete separation of a judge from extra-judicial activities is neither possible nor wise; a judge should not become isolated from the community in which the judge lives.

Expressions of bias or prejudice by a judge, even outside the judge's judicial activities, cast reasonable doubt on the judge's capacity to act impartially as a judge. Expressions which may do so include jokes or other remarks demeaning individuals on the basis of their race, sex, religion, national origin, disability, age, sexual orientation, or socioeconomic status.

B. Avocational activities:

An administrative law judge may speak, write, lecture, teach, and participate in other extra-judicial activities concerning the law, the legal system, the administration of justice, and non-legal subjects, subject to the requirements of this Code.

Commentary: As a judicial officer and person specially learned in the law, a judge is in a unique position to contribute to the improvement of the law, the legal system, and the administration of justice, including the revision of substantive and procedural law. To the extent that time permits, a judge is encouraged to do so, either independently or through a bar association, judicial conference, or other organization dedicated to the improvement of the law.

C. Governmental, civic, and charitable activities:

(1) An administrative law judge shall not appear at a public hearing before, or otherwise consult with, an executive or legislative body or official except on matters concerning the law, the legal system, or the administration of justice or except when acting *pro se* in a matter involving the judge or the judge's interest.

Commentary: The judge has a professional obligation to avoid improper influence.

(2) An administrative law judge shall not accept appointment to a governmental committee or commission or other governmental position that is concerned with issues of fact or policy on matters other than the improvement of the law, the legal system, or the administration of justice. A judge may, however, represent a country, state, or locality on ceremonial occasions or in connection with historical, educational, or cultural activities.

Commentary: Canon 4C(2) prohibits a judge from accepting any governmental position except one relating to the law, legal system, or administration of justice. The appropriateness of accepting extra-judicial assignments must be assessed in light of the demands on judicial resources created by crowded dockets and the need to protect the judge from involvement in extra-judicial matters that may prove to be controversial. Judges should not accept governmental appointments that are likely to interfere with the effectiveness and independence of the administrative judiciary.

(3) An administrative law judge may participate in civic and charitable activities that do not reflect adversely upon impartiality or interfere with the performance of judicial duties. A judge may serve as an officer, director, trustee, or non-legal advisor of an educational, religious, charitable, fraternal, or civic organization not conducted for the economic or political advantage of its members, subject to the following limitations:

(a) A judge shall not serve as an officer, director, trustee, or non-legal advisor if it is likely that the organization will be engaged in proceedings that would ordinarily come before the judge or will be regularly engaged in adversary proceedings in any court or tribunal.

Commentary: The changing nature of some organizations and of their relationship to the law makes it necessary for a judge to reexamine regularly the activities of each organization with which he or she is affiliated to

determine if it is proper to continue his or her relationship with that organization.

(b) An administrative law judge as an officer, director, trustee or non-legal advisor, or as a member, or otherwise:

(i) may assist such an organization in planning fund-raising, but shall not personally participate in the solicitation of funds or other fund-raising activities; however, this shall not prohibit *de minimis* fundraising activities within the confines of the OAL and its employees for non-profit charitable organizations with which judges or their immediate families are associated;

(ii) may make recommendations to public and private fund-granting organizations on projects and programs concerning the law, the legal system, or the administration of justice;

(iii) shall not personally participate in membership solicitation if the solicitation might reasonably be perceived as coercive or, except as permitted in Canon 4C(3)(b)(i), if the membership solicitation is essentially a fund-raising mechanism;

(iv) shall not use or permit the use of the prestige of judicial office for fund-raising or membership solicitation.

Commentary: An administrative law judge may solicit membership or endorse or encourage membership efforts for an organization devoted to the improvement of the law, the legal system, or the administration of justice or a nonprofit educational, religious, charitable, fraternal, or civic organization as long as the solicitation cannot reasonably be perceived as coercive and is not essentially a fund-raising mechanism. Solitication of funds for an organization and solicitation of memberships similarly involve the danger that the person solicited will feel obligated to respond favorably to the solicitor if the solicitor is in a position of influence or control. A judge must not engage in direct, individual solicitation of funds or memberships in person, in writing, or by telephone except in the following cases: (1) a judge may conduct de minimis *fund-raising activities within the confines of the OAL and its employees for non-profit charitable organizations with which judges or their immediate families are associated, (2) a judge may solicit other judges for membership in the organizations described above and other persons if neither those persons nor persons with whom they are affiliated are likely ever to appear before the Office of Administrative Law, and (3) a judge who is an officer of such an organization may send a general membership solicitation mailing over the judge's signature.*

Use of an organization letterhead for membership solicitation does not violate Canon 4C(3)(b) provided the letterhead lists only the judge's name and office or other position in the organization, and if comparable designations are listed for other persons, the judge's judicial designation. In addition, a judge must also make reasonable efforts to ensure that the judge's staff, and others subject to the judge's direction and control do not solicit funds on the judge's behalf for any purpose, charitable or otherwise.

D. Financial activities:

(1) An administrative law judge shall not engage in financial and business dealings that:

(a) may reasonably be perceived to exploit the judge's judicial position, or

(b) involve the judge in transactions or continuing business relationships with lawyers or other persons likely to come before the Office of Administrative Law.

Commentary: A judge may avoid financial and business dealings that involve the judge in frequent transactions or continuing business relationships with persons likely to come either before the judge personally or before other judges in the Office of Administrative Law. In addition, a judge should discourage members of the judge's family from engaging in dealings that would reasonably appear to exploit the judge's judicial position or involve those family members in frequent transactions or continuing business relationships with persons likely to come before the judge. This rule is necessary to avoid creating an appearance of exploitation of office or favoritism and to minimize the potential for disqualification.

(2) An administrative law judge may, subject to the requirements of this Code, hold and manage investments of the judge and members of the judge's family, including real estate.

(3) An administrative law judge shall not serve as an officer, director, manager, advisor, or employee of any business entity.

(4) An administrative law judge shall manage the judge's investments and other financial interests to minimize the number of cases in which the judge is disqualified. As soon as the judge can do so without serious financial detriment, the judge should divest himself or herself of investments and other financial interests that might require frequent disqualification.

(5) Neither an administrative law judge, nor a member of the judge's family or a person treated by the judge as a member of the judge's family residing in the judge's household shall accept a gift, bequest, favor, or loan from anyone except for:

Commentary: Because a gift, bequest, favor, or loan to a member of the judge's family residing in the judge's household might be viewed as intended to influence the judge, a judge must inform those family members of the relevant ethical constraints upon the judge in this regard and discourage those family members from violating them. A judge cannot, however, reasonably be expected to know or control all of the financial or business activities of all family members residing in the judge's household.

(a) a gift incident to a public testimonial, books, tapes, and other resource materials supplied by publishers on a complimentary basis for official use, or an invitation to the judge and the judge's spouse or guest to attend a bar-related function or an activity devoted to the improvement of the law, the legal system, or the administration of justice;

(b) a gift, award, or benefit incident to the business, profession, or other separate activity of a spouse or other family member of a judge residing in the judge's household, including gifts, awards, and benefits for the use of both the spouse or other family member and the judge (as spouse or family member), provided the gift, award, or benefit could not reasonably be perceived as intended to influence the judge in the performance of judicial duties;

(c) ordinary social hospitality;

(d) a gift from a relative or friend, for a special occasion, such as a wedding, anniversary, or birthday, if the gift is fairly commensurate with the occasion and the relationship;

Commentary: A gift to a judge, or to a member of the judge's family living in the judge's household, that is excessive in value raises questions about the judge's impartiality and the integrity of the judicial office and might require disqualification of the judge where disqualification would not otherwise be required.

(e) a gift, bequest, favor, or loan from a relative or close personal friend whose appearance or interest in a case would in any event require disqualification;

(f) a loan from a lending institution in its regular course of business on the same terms generally available to persons who are not administrative law judges;

(g) A scholarship or fellowship awarded on the same terms and based on the same criteria to other applicants; or

(h) any other gift, bequest, favor, or loan only if: the donor is not a party or other person who has come or is likely to come or whose interests have come or are likely to come before the judge.

Commentary: Canon 4D(5)(h) prohibits judges from accepting gifts, favors, bequests, or loans from lawyers or their firms if they have come or are likely to come before the judge; it also prohibits gifts, favors, bequests, or loans from clients of lawyers or their firms when the clients' interests have come or are likely to come before the judge.

(6) An administrative law judge is not required by this Code to disclose income, debts, or investments, except as provided in this Canon and Canon 3. The Director of the Office of Administrative Law is required to disclose such information pursuant to the New Jersey Conflicts of Interest Law, *N.J.S.A.* 52:13D-12.

E. Fiduciary activities:

(1) An administrative law judge shall not serve as executor, administrator, or other personal representative, trustee, guardian, attorney in fact, or other fiduciary, except for the estate, trust, or person of a member of the judge's family, and then only if such service will not interfere with the proper performance of judicial duties.

(2) An administrative law judge shall not serve as a fiduciary if it is likely that the judge as a fiduciary will be engaged in proceedings that would ordinarily come before the judge, or if the estate, trust, or ward becomes involved in adversary proceedings in the Office of Administrative Law.

(3) The same restrictions on financial activities that apply to a judge personally also apply to the judge while acting in a fiduciary capacity.

Commentary: The restrictions imposed by this Canon may conflict with the judge's obligation as a fiduciary. For example, a judge should resign as trustee if detriment to the trust would result from divestiture of holdings the retention of which would place the judge in violation of Canon 4D(4).

F. Practice of Law.

A full-time administrative law judge shall not practice law, with or without compensation.

Commentary: This prohibition refers to the practice of law in a representative capacity and not in a pro se *capacity. A judge may act for himself*

or herself in all legal matters, including matters involving litigation and matters involving appearances before or other dealings with legislative and other governmental bodies. However, in so doing, a judge must not abuse the prestige of office to advance the interests of the judge or the judge's family.

This provision will not be interpreted to prohibit a judge from giving legal advice to and assisting in the drafting or reviewing of documents for a member of the judge's family, so long as the judge receives no compensation. A member of the judge's family denotes a spouse, child, grandchild, parent, grandparent, or other relative or person with whom the judge maintains a close familial relationship. A judge must not, however, act as an advocate or negotiator for a member of the judge's family in a legal matter.

G. Compensation and reimbursement.

An administrative law judge may receive compensation and reimbursement of expenses for the extra-judicial activities permitted by this Code to the extent permitted by law.

CANON 5

AN ADMINISTRATIVE LAW JUDGE SHALL REFRAIN FROM POLITICAL ACTIVITY

A. An administrative law judge shall not:

(1) act as a leader or hold an office in a political organization;

(2) publicly endorse or publicly oppose any candidate for public office;

(3) make speeches on behalf of a political organization;

(4) attend political functions or functions that are likely to be considered as being political in nature;

(5) solicit funds for, pay an assessment to, or make a contribution to a political organization or candidate, or purchase tickets for political party dinners or other functions; or

(6) otherwise engage in any political activity except as authorized under this Code.

Commentary: An administrative law judge retains the right to participate in the political process as a voter. Canon 5A(2) does not prohibit an administrative law judge from privately expressing his or her views on candidates for public office.

B. A candidate for reappointment to an administrative law judge position or an administrative law judge seeking another governmental office shall not engage in any political activity to secure the appointment except that such persons may:

(1) communicate with the appointing authority, including any selection or nominating commission or other agency designated to screen candidates;

(2) seek support or endorsement for the appointment from organizations that regularly make recommendations for reappointment or appointment to the office, and from individuals to the extent requested or required by those specified in Canon 5B(1); and

(3) provide to those specified in this Canon information as to his or her qualifications for the office.

C. An administrative law judge shall resign from office when the judge becomes a candidate either in a party primary or in a general election for an elective public office.

1:31-3.1 General causes for discipline

(a) The Director of the Office of Administrative Law may discipline an administrative law judge for:

1.-3. (No change.)

4. Any conduct which constitutes a violation of the OAL Office Policies for Administrative Law Judges or the Code of Judicial Conduct for Administrative Law Judges; or

5. (No change.)

BANKING

(a)

DIVISION OF REGULATORY AFFAIRS

Mortgage Bankers and Brokers
Branch Offices; Licensing Exemptions
Adopted Amendments: N.J.A.C. 3:38-1.9, 5.2 and 5.3

Proposed: June 1, 1992 at 24 N.J.R. 1937(a).

Adopted: September 30, 1992 by Jeff Connor, Commissioner, Department of Banking.

Filed: October 1, 1992 as R.1992 d.431, **with substantive and technical changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 17:1-8; 17:11B-13, *Mortgage Bankers Ass'n of New Jersey v. New Jersey Real Estate Comm'n, et al.*, 102 *N.J.* 176 (1986) (on remand—OAL Docket No. BRE-228-87).

Effective Date: November 2, 1992.

Operative Date: January 1, 1993.

Expiration Date: September 8, 1997.

Summary of Public Comments and Agency Responses:

The Department received comments from the following persons:

1. Micki Greco Shillito, Executive Director, New Jersey Real Estate Commission.

2. James R. Silkensen, Executive Vice President, New Jersey Savings League.

3. Samuel J. Damiano, President, New Jersey Council of Savings Institutions.

4. Thomas N. Lyons, Esq., Crummy, Del Deo, Dolan, Griffinger & Vecchione.

5. Barry S. Goodman, Esq., Greenbaum, Rowe, Smith, Ravin & Davis, on behalf of the New Jersey Association of Realtors.

6. Edward R. McGlynn, Esq., Robinson, St. John & Wayne, on behalf of Mortgage Access Corporation.

7. Marguerite M. Schaffer, Esq., Shain, Schaffer & Rafanello, on behalf of Coldwell Banker, Schlott and Sears Mortgage Corporation.

8. E. Robert Levy, Esq., Levy, Lybeck & Bertele, on behalf of the Mortgage Bankers Association of New Jersey.

9. John F. Kuntz, Executive Vice President and General Counsel, The Howard Savings Bank.

A **Summary** of the comments received and responses of the Department follows:

COMMENT: We support the restrictions that have been proposed in the regulation. However, we are concerned that the Department of Banking and Real Estate Commission proposals and adoptions do not go nearly far enough to prevent abuse. Accordingly, we urge these agencies to monitor implementation of the regulations, especially where a real estate office has its own mortgage banking subsidiary.

RESPONSE: The Department shares these concerns, and has attempted to fashion safeguards through these rules. Of course, the issue of whether a real estate licensee may also act as a mortgage banker in the same transaction remains the subject of litigation.

COMMENT: We disagree with the proposal which allows real estate licensees to accept up to $250.00 for reimbursement of expenses without being licensed under the Act. If it is permitted, the $250.00 will become a routine assessment.

RESPONSE: The Department, along with the Real Estate Commission, intends to monitor the industry to ensure that the charges imposed by a real estate licensee are for reimbursement of expenses incurred in providing mortgage related services. Real estate licensees not complying with this requirement will need to obtain a mortgage brokering license from the Department.

COMMENT: We oppose the concept of charging for use of computer linked mortgage loan information systems. Many printed publications available to New Jersey consumers provide this information at no additional cost.

RESPONSE: Because of the large diversity of mortgage products available and the frequent changes in rates and terms, the Department views computer linked systems as a potentially helpful way to provide timely information to consumers. The Department recognizes that there

are costs associated with such systems. The proposed amendments allow a real estate licensee to pass on these costs, so that consumers desiring to pay for this service will have the opportunity to do so.

COMMENT: The $250.00 limit on expenses which a real estate licensee may recover for mortgage related services without being licensed under the Act should be increased to $375.00 to allow smaller real estate brokers to participate. Since the smaller broker has fewer transactions, its cost per transaction is higher.

RESPONSE: The Department views $250.00 as a sufficient charge to reimburse a real estate licensee for the costs of its mortgage related services. If a real estate licensee desires to charge more than $250.00, it may obtain a mortgage broker license from the Department.

COMMENT: The Department has no statutory authority to regulate fees charged by real estate brokers in the performance of services.

RESPONSE: It should first be noted that Administrative Law Judge Arnold Samuels at page 104 of the Initial Decision recommended that "[t]he fee to be paid to a real estate broker or salesperson who engages in mortgage origination services, if charged to the buyer, should be regulated and limited to specific dollar amounts by the Department of Banking." However, the Department in this proposal has not set the maximum fee which a real estate licensee may charge. Rather, it has used the $250.00 threshold to help define the limits of a real estate licensee "engaged in the business of a mortgage banker or broker," as set forth in N.J.S.A. 17:11B-2(d). Pursuant to the proposed amendments, a real estate licensee is not prevented from charging a borrower more than $250.00 provided that it obtains a license from the Department before doing so. As the Department is not regulating the fees real state licensees may charge, whether it possesses statutory authority to do so is irrelevant.

COMMENT: A real estate licensee should not need to maintain books and records to justify charging $250.00. Maintaining these books will be unduly burdensome, since records will need to be continually updated to determine the per transaction expense for mortgage related services. A real estate licensee should be able to charge the maximum amount permitted, without relation to the cost of services, with the free market setting the appropriate amount.

RESPONSE: The Act only exempts from licensure real estate licensees "not engaged in the business of a mortgage banker or broker." It would be contrary to this legislative directive to allow real estate brokers not licensed under the Act to charge unlimited fees for mortgage related services. Accordingly, it is necessary for a real estate broker charging for mortgage related services to prove through its records that it is not engaged in the business of a mortgage banker or broker for profit. Otherwise, it must obtain a license.

COMMENT: A real estate licensee should be able to charge for reimbursement of expenses regardless of whether the loan is closed.

RESPONSE: Allowing real estate licensees to charge fees up front would create too great a possibility for abuse. Further, charging such fees would appear to be in violation of P.L.1992, c.66, §2, which prohibits loan brokers from collecting an advance fee from a borrower.

COMMENT: The provision which allows real estate licensees to "escape" licensure by charging only for expenses and not more than $250.00 will destroy the regulatory equality needed between licensed mortgage brokers and realty agents who are performing the same services. Since Department of Banking licensees must comply with regulatory standards, and real estate licensees do not, the performance of the same brokerage activities by Department of Banking licensees might be substantially more costly for them than realty agents. Further, real estate licensees will have the ability to perform these services without delay.

RESPONSE: A mortage banker or broker may take an application and begin processing a loan without making the disclosures required by the mortgage processing regulations, N.J.A.C. 3:1-16.1. However, such a licensee must provide the disclosures before taking a fee. N.J.A.C. 3:1-16.3(a). Pursuant to the rules as adopted, a real estate licensee may only obtain reimbursement for expenses at closing. To this extent, the real estate licensee not also licensed as a mortgage banker or broker is at a disadvantage. Further, once a real estate licensee refers the borrower to a lender, that lender will need to make the disclosures required by N.J.A.C. 3:1-16.3 before taking an application fee.

COMMENT: A real estate licensee should not be permitted to become licensed as a mortgage banker and broker and accept fees in excess of $250.00. The real estate licensee who receives a sales commission has a conflict of interest which should prohibit the licensee from also receiving this additional compensation for its mortgage banking or brokering.

RESPONSE: The Department leaves to the Court the issue of whether it constitutes an impermissible conflict for a real estate licensee to receive a sales commission and also receive a fee for its mortgage banking or brokering activities.

COMMENT: The rules of the Real Estate Commission permit a real estate licensee to be employed by a licensed mortgage banker and receive compensation from that banker. After implementation of this rule, every one of the licensees of the Real Estate Commission will now likely become solicitors with a licensed mortgage banker or broker and receive compensation for taking applications for the licensee. Real estate licensees will hire themselves to the lender paying the highest compensation. This will increase the lender's costs, thereby necessitating higher interest rates and loan fees to consumers.

RESPONSE: A real estate licensee also conducting mortgage banking will have the incentive of obtaining the best mortgage loan for the consumer, since this will facilitate the sale of the home. Further, competition will not allow a licensee to offer artificially high interest rates or costs. The Department notes in this regard that the Real Estate Commission has promulgated rules which require real estate licensees to provide disclosures to borrowers, which prohibit incentives to salespersons for referring clients to a particular lender and which provide solicitors with reasonable access to real estate offices.

COMMENT: The Department's rules as proposed allow for a bank to market its mortgage banking products at its bank branch offices without those offices also constituting branches of the licensees. Our institution is considering marketing the products of our mortgage banking subsidiary at our bank branches.

RESPONSE: The Department adopts this rule to facilitate such activities, and is of the view that bank branches are already sufficiently supervised.

COMMENT: Proposed N.J.A.C. 3:38-5.9(i) provides that a real estate office does not constitute a branch of an unaffiliated licensee merely because the real estate broker or salesman distributes or receives an application of the licensee at that office. This creates an "arbitrary distinction" between a real estate office operated by a real estate licensee affiliated with a mortgage banking licensee, and a real estate office which is not affiliated with a mortgage banking licensee. All real estate offices should be excluded from the branch office requirements, regardless of whether they are affiliated with a mortgage banking licensee.

RESPONSE: There is a substantial difference between an office of a real estate licensee affiliated with a mortgage banker and an office of a real estate licensee who is not affiliated with a mortgage banker. A real estate licensee affiliated with a mortgage banker which takes and receives mortgage banking applications will have incentives to refer clients principally to its affiliated company. The Department is of the view that such activity should take place under its supervision and under the control of an individual licensed under the Act. Requiring a branch office license for such locations allows for this necessary supervision.

An office of a real estate licensee which does not distribute applications of an affiliated lender does not have the same incentives. Accordingly, the Department does not deem it necessary for an unaffiliated lender to obtain a branch office license for a real estate office where its applications are distributed or received.

COMMENT: Proposed N.J.A.C. 3:38-1.9(i) allows a solicitor to take applications and fees at a real estate office without that office being considered a branch of the mortgage banker. However, this exemption contains a proviso which requires that the licensee not hold himself out to the public as performing mortgage banking or brokering at the real estate office, and not maintain an office or desk there. Since the rule already limits the type of activity which a solicitor may conduct at the real estate office, this additional proviso is unnecessary, inconsistent and counterproductive.

RESPONSE: The Department proposed this exception based on its understanding that real estate offices are locations where mortgage banking licensees and solicitors occasionally meet with consumers. However, the Department never intended to allow a licensee to have an employee permanently located at a real estate office distributing and receiving applications without that location first obtaining a branch office license. By requiring that branch offices be licensed and under the supervision of a licensee, N.J.S.A. 17:11B-7, the legislature has determined that such locations where mortgage banking is regularly conducted should be regulated.

A solicitor of a licensee when permanently located at a real estate office represents in substance a satellite office of that licensee. This does not represent the incidental activity which the Legislature envisioned

when it partially exempted real estate licensees from licensure under the Act.

COMMENT: Under the rules as proposed, consumers' ability to utilize state-of-the-art technology to gain the widest selection of available mortgage loan products will be greatly restricted. Under a computerized loan origination system, a field service representative ("FSR") registered with the Department as a solicitor, governed by specified policies and procedures, operates a computer terminal loaded with information, controlled by a licensed lender and available for the consumer's review at all times. If the proposal is adopted in its current foam, consumers' ability to utilize this state-of-the-art technology to gain the widest selection of available mortgage loan products will be greatly restricted.

RESPONSE: The rules as proposed permit a real estate licensee to access such a computer for the benefit of a consumer without obtaining a branch office license. However, once a solicitor so acts on behalf of a licensee on a regular basis at a particular location and distributes applications there, the location must be licensed. This is true regardless of whether the location is a licensed real estate office or any other location.

The Department recognizes that current industry practices do not allow for the licensing of all locations where activities such as distributing applications occasionally take place. Accordingly, the home and place of business of a consumer are exempted from the branch office requirements. However, these are locations where the activities surrounding only individual loans take place. Where a licensee takes applications on a regular basis at a particular location, it must be licensed.

The Department notes that, with technological change, it may be appropriate to distinguish the branch office license required for a computer terminal from the one necessary for a traditional branch. With depositories for example, the Legislature has created a separate branching requirement for automated teller machines (ATMs). See for example N.J.S.A. 17:9A-20C which permits banks to establish communication terminal branch offices. However, the Department sees no such distinction in the Act regarding mortgage banking offices.

COMMENT: Proposed N.J.A.C. 3:38-1.9(i) exempts licensed real estate offices where a mortgage banking licensee who does not hold himself out to the public as performing mortgage banking or brokering there and does not maintain an office or desk there occasionally meets with consumers and distributes or receives applications or fees there. There is no rational basis for the Department to permit solicitors of unaffiliated mortgage banking licensees to visit real estate offices as a convenience for borrowers without that office constituting a branch of the mortgage banker, while not extending the exemption to offices of real estate licensees which are in fact affiliated to the mortgage banking licensee employing the solicitor. Further, this section should be amended to add a reference to solicitors and delete the word "occasionally."

RESPONSE: The Department agrees that this exemption should apply equally to licensees and solicitors, and has made this technical change upon adoption. In addition, the term "occasionally" is deleted, since the proposed rule already excludes from the exemption licensees who hold themselves out to the public as performing mortgage banking or brokering there or maintain an office or desk there.

However, the Department when it proposed this rule was of the view that solicitors should not be permitted to visit affiliated real estate offices for the purpose of distributing applications and receiving fees, without that location being licensed. As noted by the Real Estate Commission in the summary to its proposal, the financial affiliation between a financial institution and a real estate licensee "may color the real estate licensee's judgment." 23 N.J.R. 3425 (November 18, 1991). Administrative Law Judge Arnold Samuels stated in his decision (at page 90) that the evidence "clearly indicated a practice on the part of some real estate brokers, particularly those with mortgage banking or mortgage brokerage affiliates, to exclude outside loan solicitors in favor of their own in-house sources." Given this relationship, the Department deems it necessary to require licensure of those real estate offices where solicitors of affiliated licensees distribute applications.

The comment from Micki Greco Shillito, Executive Director of the Real Estate Commission, noted that the Commission understood the Banking Department's concern that its mortgage licensees not be permitted to circumvent the branch office license requirements by establishing unlicensed mortgage offices in affiliated real estate offices. However, the Executive Director suggested that this concern was addressed through the licensing requirement for all offices which are held out to the public as being locations where mortgage banking or brokering take place. Further, the Executive Director noted that the Real Estate Commission's recently adopted rules addressed some of these concerns by requiring disclosure of affiliation, by prohibiting payments to salespersons for steering loan business, and by requiring access to real estate offices for non-affiliated lenders.

The Department of Banking supports these regulatory initiatives by the Real Estate Commission, and is of the view that they are positive steps in lessening the problems inherent in having affiliated licensees lending money to a client of the real estate licensee. Further, the Department welcomes the challenge of working together with the Real Estate Commission to better regulate this complex industry for the greater protection of New Jersey's citizens and businesses.

The Department's rules as adopted permit a solicitor of an affiliated licensee to visit the affiliated real estate office without that office being licensed so long as no applications are distributed or received there and no fees are taken in the office. It is anticipated that affiliated companies will be able to structure their businesses to accommodate these requirements. Of course, with experience in this rapidly changing field, the Department and the Real Estate Commission may consider further changes in these licensing rules.

The Department makes the decision not to further amend these rules for the reasons stated above. In addition, the Department notes that further amendments at this time might require an additional stay in the proceedings before the court. In an area of licensing which has been undecided for most of the past decade, the Department views it as important to obtain a final decision from the courts without further delay.

To allow institutions to comply with these rules, the Department has postponed the operative date until January 1, 1993.

Full text of the adopted amendments follows: (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *[thus]*).

3:38-1.9 Office requirements

(a)-(f) (No change.)

*[(g)]***(k)* A branch office of a licensee under the Act does not also constitute a branch office of another licensee merely because the first licensee distributes or receives applications of that other licensee at the branch office.

*[(h)]***(l)* A principal or branch office of a bank, savings bank, savings and loan association or credit union shall not also constitute a branch office of a licensee merely because the bank, savings bank, savings and loan association or credit union distributes or receives applications of the licensee at the principal or branch office.

*[(i)]***(m)* A licensed real estate office of a person licensed as a real estate broker or salesman pursuant to Chapter 15 of Title 45 of the Revised Statutes does not constitute a branch of an unaffiliated licensee under the Act merely because the real estate broker or salesman distributes or receives an application of the licensee at that office, or because an unaffiliated licensee under the Act ***or a solicitor of that licensee*** who does not hold himself out to the public as performing mortgage banking or brokering there and does not maintain an office or desk there *[occasionally]* meets at the office of the real estate broker as a convenience to the borrower and distributes or receives applications or fees there. For purposes of this section, the term "unaffiliated" shall mean a licensee under the Act not affiliated with a real estate licensee, as defined in N.J.A.C. 11:5-1.41.

3:38-5.2 Exemptions

(a) The following persons are exempt from the licensing requirements of this Act.

1.-3. (No change.)

4. A person licensed as a real estate broker or salesman pursuant to Chapter 15 of Title 45 of the Revised Statutes, and not engaged in the business of a mortgage banker or broker. A real estate broker or salesman receiving separate or additional compensation in any amount for originating or brokering a mortgage loan, in addition to the real estate sales commission, shall be deemed to be engaged in the business of a mortgage banker or broker and must be licensed or employed and registered as a solicitor for a licensed mortgage banker or broker; except that a person licensed as a real estate broker or salesman who, in addition to the real estate commission, only receives up to $250.00 at the closing of the mortgage loan for reimbursement of expenses incurred in providing mortgage related services in conjunction with a particular real estate sales or real

estate brokerage service shall not be deemed to be engaged in the business of a mortgage broker. Expenses are deemed to be incurred in providing mortgage related services only if the expenses are specifically allocated to those services and are not a percentage of the general overhead or costs of the real estate office.

5.-6. (No change.)

3:38-5.3 Registration of solicitors

(a) (No change.)

(b) To register a solicitor, the prospective employing licensee shall send the following to the Department of Banking:

1. (No change.)

2. A $25.00 registration fee which is payable every two years upon renewal.

(c) The Department shall provide all licensees with a solicitor registration certificate which shall be renewable every two years. The registration shall run from January 1, 1993 to December 31, 1994, and for two-year intervals thereafter.

(d)-(f) (No change.)

COMMUNITY AFFAIRS

(a)

DIVISION OF HOUSING AND DEVELOPMENT

Homelessness Prevention Program Eligibility

Adopted Amendment: N.J.A.C. 5:12-2.1

Proposed: November 18, 1991 at 23 N.J.R. 3439(a).
Adopted: September 30, 1992 by Stephanie R. Bush, Commissioner, Department of Community Affairs.
Filed: October 2, 1992 as R.1992, d.433, **with substantive changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 52:27C-24 and 52:27D-280.

Effective Date: November 2, 1992.
Expiration Date: December 27, 1994.

Summary of Public Comment and Agency Response:

A letter of comment was received from Connie M. Pascale, Esq., Senior Attorney of Legal Services of New Jersey.

COMMENT: The presumption that a person or household not having shelter costs in excess of the greater of 60 percent of gross income or 100 percent of net income will be able to pay shelter costs after the expiration of the period of assistance should not be deleted. It provides guidance to field staff and assures uniformity of application. Its removal will result in arbitrary decision-making.

RESPONSE: As was stated in the Summary statement of the proposal, this provision has been found to be unworkable and useless as a source of any guidance. However, in order to provide a reasonable objective basis for any determination, Bureau staff will work with each applicant to prepare a budget that will be of use in determining probable ability to pay shelter costs.

COMMENT: Eligibility should be determined solely on the basis of need and causation, without regard to any subjective assessment of ability to pay shelter costs after the expiration of the period of assistance.

RESPONSE: The Homelessness Prevention Program is not an entitlement program. Its funding is limited and it is intended to help, and can only help, those who, with short-term assistance, will be able to remain in their homes once the assistance is ended. Therefore, it is necessary for the Bureau to assess the probability of each applicant's being able to retain the housing without assistance after the Program's assistance ends.

COMMENT: The proposed amendatory language requiring that the cause of the incipient or actual homelessness be coincidental in time with the inability to pay housing costs is not supported by the statute. There will inevitably be some time lag between cause and effect (as when a person loses his or her job and only later is unable to afford housing because he has exhausted his savings), leading to subjective and arbitrary determinations of ineligibility.

RESPONSE: The Department agrees with the merit of the commenter's argument and, therefore, this requirement has been deleted.

COMMENT: The requirement that a person own a unit for three years in order to be eligible for mortgage assistance is not justified by any provision of the statute. There is no good reason to deny assistance just because a person has not owned a house for three years at the time that employment is lost.

RESPONSE: The Department agrees with the commenter, and has determined that the financial concerns expressed in the proposal can also be addressed by evaluation of the specific circumstances of each applicant. The proposed change has been deleted and the existing one-year requirement has been reinstated.

Summary of Agency-Initiated Change:

The Department has determined that the requirement that the home of a loan applicant be a single-family dwelling is not appropriate, since there may be instances where, for example, an owner may occupy one unit of a two-family dwelling and rent the other, and that owner may otherwise be eligible. The Department believes that an evaluation of the specific circumstances of each applicant would be more appropriate.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from the proposal indicated in brackets with asterisks *[thus]*).

5:12-2.1 Eligibility

(a)-(f) (No change.)

(g) No person or household determined by the Bureau of Housing Services to be unlikely to pay shelter costs after the period of assistance has ended shall be eligible for assistance. ***Program staff will work with each applicant in the preparation of a budget that will be of use in determining the applicant's ability to carry shelter costs.***

(h) To be eligible for assistance, a person or household must have experienced an uncompensated loss of income or increase in expenses***,*** for a limited period of time***,*** that are necessarily incurred for the preservation of human life. Applicants must submit documentation verifying that one or more of the following caused*[, and is coincidental in time with,]* the inability to pay housing costs:

1.-6. (No change.)

(i) Assistance to any person or household facing foreclosure as a result of mortgage or property tax arrearages shall be in the form of a loan which shall be secured by a recorded mortgage.

1. No person or household shall be eligible for a mortgage loan unless the home is an owner-occupied *[single family]* dwelling (which may be an attached or detached house or a condominium unit) that was owned and occupied by the applicant for at least *[three years]* ***one year*** prior to falling into arrears on the mortgage loan or property taxes.

2.-3. (No change.)

HIGHER EDUCATION

(b)

NEW JERSEY HIGHER EDUCATION ASSISTANCE AUTHORITY (NJHEAA)

Policy Governing New Jersey College Loans to Assist State Students (NJCLASS) Program

Adopted Amendment: N.J.A.C. 9:9-7.6

Proposed: August 3, 1992 at 24 N.J.R. 2687(b).
Adopted: September 22, 1992, by the New Jersey Higher Education Assistance Authority, Philip W. Koebig, Chairman.
Filed: October 5, 1992 as R.1992 d.436, **without change.**

Authority: N.J.S.A. 18A:72-10.

Effective Date: November 2, 1992.
Expiration Date: October 3, 1993.

Summary of Public Comments and Agency Responses:
No comments received.

Full text of the adoption follows.

9:9-7.6 Interest

(a) The NJCLASS loan shall have a daily fixed simple annual interest rate. The NJCLASS interest rate will be a pass through rate of the bond interest rate, associated costs of sale, and such other costs or reserves which may be required, determined as the bonds are issued. The interest rate will be published in the New Jersey Register after each bond issue.

(b)-(c) (No change.)

HUMAN SERVICES

(a)

DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

Hospice Services Manual
General Provisions, Provider and Recipient Requirements, Basis of Payment
Appendices
Medicaid Only Manual
Eligibility Standards
Adopted New Rules: N.J.A.C. 10:53A
Adopted Amendment: N.J.A.C. 10:71-5.6

Proposed: August 17, 1992 at 24 N.J.R. 2778(a).

Adopted: October 9, 1992 by Alan J. Gibbs, Commissioner, Department of Human Services.

Filed: October 9, 1992 as R.1992 d.442, **with substantive and technical changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 30:4D-3i(1) through (7); N.J.S.A. 30:4D-6(b)(20); N.J.S.A. 30:4D-7, 7a, b and c; 1814(i) of the Social Security Act, 42 U.S.C. 1395f(i); 1905(o) of the Social Security Act, 42 U.S.C. 1396d.

Effective Date: November 2, 1992.

Expiration Date: November 2, 1997, N.J.A.C. 10:53A.
December 24, 1995, N.J.A.C. 10:71.

Summary of Public Comments and Agency Responses:

The Division of Medical Assistance and Health Services received three comments on the proposal. The summary of comments, and agency response, appear below. Since the commenters expressed the same concern, the agency will make one response to the three commenters.

The term Medicare refers to Title XVIII of the Social Security Act. The term Medicaid refers to Title XIX of the Social Security Act. The acronym "NF" refers to a nursing facility. The acronym "MDO" refers to a Medicaid District Office.

COMMENT: Maureen A. Eng, R.N., President, New Jersey Hospice organization, requested that nutritional supplements be removed as a covered service so that Medicaid and Medicare clients will be treated consistently (see proposed N.J.A.C. 10:53A-3.4(d)7, 24 N.J.R. 2778(a), 2786).

COMMENT: Yvonne Crouch, Executive Director, Cumberland County Hospice, expressed the same concern.

COMMENT: Margaret J. Coloney, R.N., President, The Center for Hope Hospice, also had the same comment.

RESPONSE: The agency's response is to delete the reference to nutritional supplements as a covered service as requested by the commenters. This deletion will make Medicaid similar to Medicare with respect to the policy governing nutritional supplements.

The New Jersey Medicaid Hospice program has been formulated parallel to the Federal Medicare Hospice program.

However, deletion of nutritional supplements as a per diem covered service does not mean Medicaid recipients will be denied this item if it is medically necessary. The Medicaid recipient will be able to obtain nutritional supplement(s) properly prescribed from a pharmacy or medical supplier, who is required to contact the MDO for prior authorization. The pharmacy or medical supplier who issues the nutritional supplement will then submit a claim to the New Jersey Medicaid program.

This change does not place an additional burden on either the recipient or the providers (hospice, pharmacy, or medical supplier). The policy is already in effect for Medicaid recipients residing in the community. There are existing regulations in the Pharmacy Manual at N.J.A.C. 10:51-1.2(b)1 and 10:51-1.13(a)3 allowing for coverage of protein replacement produces. The policy is being continued in the proposed updated Pharmacy Manual and recodified as N.J.A.C. 10:51-1.2(d) and N.J.A.C. 10:51-1.12(a)9 respectively (see 24 N.J.R. 3053(a), 3056, 3059).

In essence, recipients enrolled in the hospice program will be able to obtain nutritional supplements when duly prescribed regardless of their place of residence.

Summary of Changes Between Proposal and Adoption:

The reference to nutritional supplements is being deleted from N.J.A.C. 10:53A-3.4(d)7 in response to the public comments and for the reasons indicated in the summary of public comments indicated above.

Language has been added to N.J.A.C. 10:53-4.1(d) and (d)1 to explain when a qualified applicant's income may be applied towards the cost of their care. As was indicated in the economic impact statement accompanying the proposal, "qualified applicants in nursing facilities (NFs) may be required to contribute towards the cost of their care". (Reference is made to 24 N.J.R. 2778(a), 2779). In addition, the text of the proposal indicates that a recipient who is residing in a NF and receiving hospice under Medicaid is required to pay towards the NF room and board services from their available income (N.J.S.A. 10:53A-4.1(b)). Therefore, the additional language being added upon adoption to N.J.A.C. 10:53A-4.1(d) provides clarification on when to apply the available income.

The Division wants to be absolutely clear that there are two sets of procedures. One procedure applies to recipients applying for hospice while residing in a NF (N.J.A.C. 10:53A-4.1(d)1); the other procedure relates to recipients applying for hospice from the community (N.J.A.C. 10:53A-4.1(d)2). The procedures which appeared in the text of the proposal remain the same. Therefore, there is no increased burden on either the recipient or the hospice provider. Both recipients and providers should be aware that the County Welfare Agency's determination of available income is contingent upon the recipient's living arrangement at the time of application. For example, a recipient residing in a NF may have already contributed their available income towards the cost of NF care. Therefore, this income, which has already been utilized, will not be applied to hospice care for the first calendar month.

There is a clarification in language in N.J.A.C. 10:53A-4.2(c) concerning retroactive rate adjustments and retroactive add-ons. The text of the proposal indicated that the room and board rate is calculated at 95 percent of the highest approved Medicaid NF per diem rate (institutionally specific) effective at the time services are provided, excluding add-ons and special program rates. The amended language upon adoption indicates that "retroactive rate adjustments and retroactive add-ons" are excluded from the 95 percent calculation.

This subsection of the rule (N.J.A.C. 10:53A-4.2(c)1i) impacts on both hospice and NF providers. Both the proposed and adopted text contain the same basic regulatory requirement that the 95 percent per diem rate (for hospice room and board) is the rate that is effective at the time services are provided. This is the Division's basic policy which is not being changed upon adoption and is applicable to the same provider groups—NFs and hospices. The Division believes it is necessary to add the clarifying language upon adoption to clearly indicate that the 95 percent rate will not be subject to retroactive rate adjustments or add-ons. The adopted text does not place any additional burdens on either NFs or hospices because the 95 percent rate was never subject to "retroactivity".

This subsection of the rule would not impact on Medicaid recipients who elect hospice benefits and reside in a NF because recipients are not responsible for determining per diem rates.

The narrative for procedure code Z2015, room and board rate, contains the same language revision (see N.J.A.C. 10:53A-5.2, HCPCS codes for Hospice Services).

The agency is also making technical changes upon adoption as follows.

The definition of the "Election of Hospice Benefit Statement" is being amended upon adoption to indicate that "benefits" is plural rather than singular. This change is made in N.J.A.C. 10:53A-1.2, Definitions, and continues throughout the text.

In addition, the references to Appendices I through X have been deleted and replaced with references to Forms 1 through 10 to be consistent with the codification in the Administration Manual, N.J.A.C. 10:49. There will be one Appendix with the forms listed in numerical

sequence. The change commences in N.J.A.C. 10:53A-1.2, Definitions, and continues throughout the text.

The term "Fiscal Agent" is being lower-cased commencing with N.J.A.C. 10:53-2.1(f) and continues throughout the text. The term "Long Term Care Services Billing System" is being replaced with the term "Long Term Care Facility Billing System" to maintain consistency with the Long Term Care Services Manual. The change first appears at N.J.A.C. 10:53-2.5(b) and continues throughout the text.

The spelling of "hospice" is being corrected at N.J.A.C. 10:53-3.3(e).

One sentence is being deleted from N.J.A.C. 10:53A-4.2(c)1ii(2) because it is redundant. The proposed text inadvertently had two statements about the limitation on bed hold days not to exceed 10 consecutive days; the adoption will have only one clause describing this existing limitation.

There is also a technical change to the Medicaid Only Manual, N.J.A.C. 10:71-5.6(d). The acronym "ICF/MR" is being added after the reference to intermediate care facilities for the mentally retarded.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *[thus]*).

CHAPTER 53A
HOSPICE SERVICES MANUAL

SUBCHAPTER 1. GENERAL PROVISIONS

10:53A-1.1 Introduction

Reimbursement for hospice services provided by Medicaid was authorized pursuant to 1905(o) of the Social Security Act, codified as 42 U.S.C. 1396(d). N.J.S.A. 30:4D-6b(20) authorizes that the New Jersey Division of Medical Assistance and Health Services develop a program of hospice services. The Hospice Services Manual (N.J.A.C. 10:53A) sets forth the rules for the provision of hospice services to the terminally ill who are eligible for Medicaid. Room and board services are also available for those Medicaid recipients residing in a nursing facility that are eligible for hospice services. The Home Care Services Manual, N.J.A.C. 10:60, is applicable to hospice care as a waiver service provided under the AIDS Community Care Alternatives Program (ACCAP).

10:53A-1.2 Definitions

The following words and terms, as used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Benefit period" means a period of time when an individual is eligible to receive hospice services. Hospice benefit periods are for the following periods of time: 90 days; 90 days; 30 days; and an unlimited fourth period.

"CAP" means a limitation on the payment amount or aggregate days of inpatient care as imposed by Medicaid on the hospice provider. The "CAP" year begins on November 1st of one year and ends on October 31st of the next year.

"Comprehensive hospice *[benefit" means]* ***benefits" mean*** the covered services provided by hospices and physicians for hospice care, room and board services provided to Medicare/Medicaid recipients residing in a nursing facility, and services unrelated to the terminal illness that may be provided by Medicaid as part of the hospice plan of care. The comprehensive hospice benefit does not include hospice services under ACCAP or any other waiver program.

"Dietician" or "dietary consultant" means a person who:

1. Is registered or eligible for registration by the Commission on Dietetic Registration of the American Dietetic Association; or

2. Has a bachelor's degree from a college or university with a major in foods, nutrition, food service or institution management, or the equivalent course work for a major in the subject area; and has completed a dietetic internship accredited by the American Dietetic Association or a dietetic traineeship approved by the American Dietetic Association or has one year of full-time, or full-time equivalent, experience in nutrition and/or food service management in a health care setting; or

3. Has a master's degree plus six months of full-time, or full-time equivalent, experience in nutrition and/or food service management in a health care setting.

"Division" means the Division of Medical Assistance and Health Services within the New Jersey Department of Human Services.

"Election of Hospice *[Benefit]* ***Benefits*** Statement" means a written document signed by a Medicaid eligible individual for hospice services, indicating the following: the identification of the particular hospice that will provide care to the individual; the scope of services and conditions under which hospice services are provided; which other Medicaid services are forfeited when choosing hospice services; the individual or his or her representative's acknowledgement that he or she has been given a full understanding of hospice care; and the effective date of the signing of the Election of Hospice Benefits Statement (FD-378) (incorporated herein by reference as ***Form #1 in the*** Appendix *[I]*).

"Hospice," for the purposes of the New Jersey Medicaid program (hereafter referred to as the Program), means a public agency or private organization (or subdivision of such organization) that is Medicare certified for hospice care and has a valid provider agreement with the Division to provide hospice services. A hospice is primarily engaged in providing supportive or palliative care and services, rather than curative care, to the terminally ill and/or bereaved. Hospice providers in New Jersey are hospital-based or free-standing home health agencies, or free-standing hospice agencies.

"Hospice indicator" means a unique date specific identifier in the Medicaid eligibility record which is used in the processing of hospice claims for eligible recipients.

"Hospice services," for the purposes of the Program, means services which support a philosophy and method for caring for the terminally ill emphasizing supportive and palliative rather than curative care, and includes services, such as home care, bereavement counseling, and pain control.

"Interdisciplinary group" means a group of professionals who are employees of the hospice, that provide and/or supervise hospice services. The interdisciplinary group, at a minimum, must be composed of a physician, a registered professional nurse, a medical social worker and a pastoral or other counselor.

"Medical Director" means a physician (M.D. or D.O.) who assumes overall responsibility for the medical component of the hospice services as an employee of the hospice.

"Room and board services," as referred to in this chapter, means the performance of personal care services, assistance in activities of daily living, provision of patient social activities, the administration of medications, the maintenance of the cleanliness of a resident's room, and supervision and assistance in the use of durable equipment and prescribed therapies provided to hospice recipients in a nursing facility (identical to those provided to non-hospice recipients in a nursing facility).

"Terminal illness," as referred to in this chapter, means having a medical prognosis of a life expectancy of six months or less as certified or recertified, in writing, by a licensed physician (M.D. or D.O.).

"Unrelated services" means services provided that are necessary for the diagnosis and treatment of diseases or illnesses that are not in and of themselves related to or are not caused primarily by the terminal condition for which hospice services are provided.

SUBCHAPTER 2. PROVIDER REQUIREMENTS

10:53A-2.1 Hospice enrollment requirements

(a) To be approved by the Division as a hospice provider, a hospice must:

1. Be approved for Medicare (Title XVIII) participation by the federal Health Care Financing Administration (HCFA) as a hospice provider. A copy of the Medicare certification must be submitted to the Division of Medical Assistance and Health Services; and

2. Complete and submit the Medicaid "Provider Application" (FD-20); "Ownership and Controlling Interest Statement" (HCFA-1513); and the "Medicaid Provider Agreement" (FD-62).

i. The documents, referenced in (a)2 above, are located as Forms 8, 9, and 10 in the Appendix of the Administration Chapter,

(N.J.A.C. 10:49-Appendix) at the end of the chapter, and may be obtained from and submitted to:

Paramax/Unisys Corporation
Provider Enrollment
CN 4804
Trenton, New Jersey 08650-4804

ii. Hospice provider agreements are approved by the:

Chief, Provider Enrollment Unit
Division of Medical Assistance and Health Services
CN-712
Trenton, New Jersey 08625-0712

iii. A change in the ownership of a hospice is not considered a change in the individual's designation of a hospice and requires no action on the Medicaid hospice recipient's part. The hospice shall notify the Division in writing of a change in ownership and shall submit a new application package.

(b) If the hospice is providing hospice services to a Medicaid recipient residing in a nursing facility (NF), the nursing facility must be a Medicaid-approved nursing facility. The hospice must also have a written contract with the nursing facility under which the hospice takes full responsibility for the professional management of the individual's hospice services and the nursing facility agrees to provide room and board services to the individual.

1. Room and board services include the performance of personal care services, assistance in activities of daily living, provision of patient social activities, the administration of medications, the maintenance of the cleanliness of a resident's room, and supervision and assistance in the use of durable equipment and prescribed therapies provided to hospice recipients in an NF (identical to those provided to non-hospice recipients in an NF).

(c) If the hospice is already a Medicaid ACCAP hospice provider, in lieu of the process listed in (a) above, the hospice shall send a letter citing its ACCAP provider status to the Provider Enrollment Unit of the Division whose address is listed in (a)2ii above, requesting approval as a hospice provider of room and board services and/or as a provider of the comprehensive hospice benefit.

(d) Upon approval as a hospice provider, the hospice shall be assigned a Medicaid provider number. In the event the hospice provider is also an ACCAP hospice provider, the hospice provider number will be the same *[under]* ***for*** both programs.

(e) For the purposes of reimbursement, if a physician provides direct patient care services to a hospice recipient, he or she must be an approved Medicaid physician provider (see Physician Services Manual, N.J.A.C. 10:54).

(f) The *[Fiscal Agent]* ***fiscal agent*** shall furnish a provider manual and an initial supply of pre-printed claim forms.

10:53A-2.2 Changing from one hospice to another

(a) In order for a hospice recipient to change hospices, the hospice policies and procedures listed below shall be followed:

1. An individual may change hospices once in each benefit period. The change of the hospice is not considered a revocation of the election of hospice services.

2. In order to change the designation of the hospice, an individual shall file a signed statement, the Change of Hospice, FD-384 (6/92) form incorporated herein by reference as ***Form #7 in the*** Appendix *[VII]*, with the hospice where the individual was initially enrolled and also with the newly designated hospice. The statement shall include the following information:

i. The name of the hospice from which the individual received hospice services; and

ii. The name of the hospice from which the individual will receive hospice services and the date the change is effective.

3. The original hospice of enrollment and the new hospice must send the Hospice Eligibility Form, FD-383 (6/92) to the MDO, CWA or DYFS, as applicable, in order to change providers. (See ***Form #6 in the*** Appendix *[VI]* in this manual incorporated herein by reference for the Hospice Eligibility Form, FD-383 (6/92) and N.J.A.C. 10:53A-3.2 for the application policy for medical and financial eligibility.)

10:53A-2.3 Physician certification and recertification

(a) The hospice shall follow these policies and procedures to obtain physician certification of the applicant's terminal illness and to certify that hospice services are reasonable and necessary for the palliation and management of the terminal illness or related conditions.

1. The attending physician, who must be a doctor of medicine (M.D.) or osteopathy (D.O.), is the one identified by the Medicaid applicant at the time the applicant elects to receive hospice services as the primary physician in the determination and the delivery of the applicant's medical care.

2. The written Physician Certification/Recertification for Hospice Benefits Form, FD-385 (6/92) (***Form #8 in the*** Appendix *[VIII]* incorporated herein by reference) shall be obtained within two calendar days after hospice care is initiated for the first period of hospice coverage.

i. If the hospice does not obtain written certification within two days after the initiation of hospice care, a verbal certification may be obtained within these two days and a written certification no later than eight calendar days after care is initiated. If these requirements are not met, no payment can be made for any days prior to the certification.

ii. The signing of the written form shall be done by the hospice Medical Director, or physician of the interdisciplinary team and the attending physician (if the applicant has an attending physician), and shall include the statement that the applicant's medical prognosis is such that the life expectancy is six months or less.

3. If the hospice recipient revokes hospice benefit package and then reenters the hospice in any subsequent period, the hospice shall obtain, no later than seven calendar days after the beginning of that period, a written Physician Certification/Recertification for Hospice *[Benefit]* ***Benefits*** Form, FD-385 (6/92) prepared by the Medical Director of the hospice or the physician member of the hospice's interdisciplinary group.

4. For subsequent recertifications, a written recertification must be obtained no later than two business days after the period begins (after the first 90-day benefit period, after the next 90-day benefit period, and after the third 30-day period). The Medical Director of the hospice or physician member of the interdisciplinary team shall recertify that the individual is terminally ill and that hospice services are reasonable and necessary for the palliation and management of the terminal illness or related condition, and, in addition, recertify the necessity of the continuing need for hospice services.

5. In addition, the individual's attending physician is required to recertify the terminal illness for the fourth unlimited benefit period, as described below:

i. An additional Physician Certification/Recertification for Hospice *[Benefit]* ***Benefits*** Form, FD-385 (6/92) must be obtained prior to the fourth unlimited period but no later than two days after the period begins.

6. The hospice must retain the Physician Certification/Recertification for Hospice Benefits Form(s), FD-385 (6/92) on file for review by the Division in the recipient's medical record.

10:53A-2.4 Standards for staffing

(a) The Medical Director of the hospice shall assume overall responsibility for the medical component of the hospice services.

(b) The hospice shall designate an interdisciplinary group or groups composed of, at a minimum, the following individuals who are employees of the hospice and who provide and/or supervise the services offered by the hospice:

1. A physician (doctor of medicine or osteopathy);

2. A registered professional nurse;

3. A medical social worker (see N.J.A.C. 10:53A-3.4 for qualifications); and

4. A pastoral or other counselor.

(c) The interdisciplinary group shall be responsible for the following:

1. Participation in the establishment of the plan of care;

2. Provision or supervision of hospice services in coordination with the recipient's attending physician;

3. Periodic review and updating of the plan of care for each recipient receiving hospice services with the attending physician;
4. Establishment of policies governing the day-to-day provision of hospice services; and
5. In-service education for volunteer staff before he or she begins providing care for a hospice recipient.

(d) A hospice recipient, family members, and/or significant others shall participate in the formulation of the final plan of care.

(e) If the hospice has more than one interdisciplinary group, it shall designate, in advance, the group it chooses to execute the functions described above.

(f) The Medical Director or Director of Nursing of the hospice shall designate a registered professional nurse to coordinate the implementation of the plan of care for each recipient.

(g) Volunteer assistance is an integral part of hospice services. The hospice shall document and maintain a volunteer staff sufficient to provide administrative and patient care in an amount that, at a minimum, equals five percent of the total compensated patient care hours provided by all paid hospice employees and contracted staff regardless of the payment source.

10:53A-2.5 Administrative policy for admission and discharge from room and board services in a nursing facility

(a) If a recipient of hospice services is admitted to a nursing facility (NF) from any location, or is changed from nursing facility status to hospice status (while residing in a nursing facility), or is discharged from the hospice or dies, the NF shall submit to the CWA and the MDO, a completed Notification from Long-Term Care Facility of Admission or Termination of a Medicaid Patient (MCNH-33) (***Form #9 in the*** Appendix *[IX]*, incorporated herein by reference) to prompt a change in the recipient's status.

(b) If the recipient residing in an NF chooses hospice benefits, the NF shall submit to the *[Fiscal Agent]* ***fiscal agent***, a completed Long Term Care Turnaround Document (TAD)(MCNH-117) (***Form #11 in the*** Appendix *[XI]* herein incorporated by reference) *[form]* to remove the patient from the Long Term Care *[Services Billing System]* ***Facility billing system***. The following information shall be placed on the MCNH-117 in the REMARKS column (Field #38 on the bottom):

"DISCHARGED FROM NURSING FACILITY TO HOSPICE"

1. The hospice recipient is removed from the Long Term Care *[Billing System]* ***Facility billing system*** effective on the date the Election of Hospice *[Benefit]* ***Benefits*** Statement, FD-378 (6/92) ***(Appendix Form #1)*** is signed. On that date and thereafter, the Medicaid *[Fiscal Agent]* ***fiscal agent*** will directly reimburse the hospice for services rendered to the hospice recipient and the NF will no longer be reimbursed for care beginning this date. The hospice shall be responsible for reimbursing the NF for room and board services provided under contract with the hospice.

2. If the recipient revokes hospice and returns to NF care, the NF shall complete and submit the Long Term Care Turnaround Document (TAD)(MCNH-117) form to the *[Fiscal Agent]* ***fiscal agent***. The following information shall be placed on the MCNH-117 in the REMARKS column (Field #38 on the bottom):

"ADMITTED TO NURSING FACILITY AND DISCHARGED FROM HOSPICE"

3. The effective date of the change from hospice care to NF care is the date the Revocation of Hospice Benefits, FD-381 (6/92) (***Form #4 in the*** Appendix *[IV]* incorporated herein by reference) is signed. The NF will be reimbursed for care provided on this date and thereafter, and the hospice will no longer be reimbursed for care beginning on this date.

10:53A-2.6 Recordkeeping

(a) The medical record of the hospice recipient maintained by the hospice shall be complete and accurate and reflect the services provided. The medical record shall include, at a minimum, the following information:
1. Identification information;
2. Certification/recertification documents;
3. Informed consent documents;
4. Election forms;
5. Hospice eligibility forms;
6. Pertinent medical history and physical examination data;
7. Test results;
8. Initial and subsequent assessments;
9. Plan of care and updates; and
10. Complete documentation of all services and events (including evaluations, treatments, progress notes, etc.).

(b) All medical records shall be signed and dated by the professional staff person providing the service.

(c) The medical record shall be maintained and made available, as necessary, to the Division of Medical Assistance and Health Services or its agent for audit and review purposes in accordance with State law (see N.J.S.A. 30:4D-12 and (N.J.A.C. 10:49-13.1).

10:53A-2.7 Monitoring

(a) On a random selection basis, the Division shall conduct post-payment quality assurance reviews based on Surveillance and Utilization Review System (SURS) reports and other sources to assure compliance with program, personnel, recordkeeping and service delivery requirements. Provisions shall be made to recover funds, when reviews by the Division reveal that overpayments to the hospice have been made. At the specific request of the Division, the hospice shall submit a plan of care and other documentation for those Medicaid recipients selected for a quality assurance review.

1. The review shall involve contact with the hospice and the recipient and will focus on the following areas:
i. Number of recipients;
ii. Cost per recipient including the "cap" requirements;
iii. Number of days of service per recipient and the quality of services;
iv. Comparative analysis between claim payments and the plan of care; and
v. Completion of forms necessary for eligibility for hospice services.

(b) On-site monitoring visits shall be made by the Division staff for the purpose of determining compliance with the provisions of the Medicaid hospice rules and for quality assurance purposes. The results of the on-site monitoring shall be reported to the hospice with a copy for the Division. When indicated, a plan of correction will be required. Continued non-compliance with requirements may result in such sanctions as: the curtailment of accepting new recipients for services; termination of the hospice's provider contract; and/or the suspension, debarment or disqualification of the hospice or hospice-related parties from participation in the Medicaid program.

10:53A-2.8 Provision for provider fair hearings

Pursuant to the N.J.A.C. 10:49-10, Notices, Appeals and Fair Hearings, providers with the New Jersey Medicaid program have the right to file for fair hearings.

10:53A-2.9 Advance directives

(a) All hospices participating in the New Jersey Medicaid program are required to comply with the provisions of the Federal Patient Self Determination Act (P.L. 101-108) and must notify Medicaid hospice recipients about their rights under State law to make decisions concerning their medical care and their right to formulate an advance directive.

1. All hospice providers are required by Federal law to:
i. Maintain written policies and procedures with respect to all adult individuals receiving medical care by or through the hospice agency about their rights under State law to make decisions concerning their medical care and the right to formulate an advance directive;
ii. Provide the New Jersey State Department of Health statement of New Jersey law (Your Right to Make Health Care Decisions in New Jersey) to recipients upon initial receipt of hospice care, regarding their rights to make decisions concerning their medical care. This includes the right to accept or refuse medical or surgical treatment and the right to formulate an advance directive for their health care;
iii. Provide written information to recipients, upon initial receipt of hospice care, concerning the hospice agency's written policies on the implementation of such rights;

iv. Document in the recipient's medical record whether or not the recipient has executed an advance directive;

v. Not condition the provision of care or otherwise discriminate against a recipient based on whether or not the recipient has executed an advance directive;

vi. Ensure compliance with requirements of State law respecting advance directives; and

vii. Provide education for staff and the community on issues concerning advance directives.

2. The provisions in (b)1 above do not prohibit the application of a State law which allows a hospice to refuse to implement an advance directive based on conscientious objection. The New Jersey Advance Directives for Health Care Act, P.L. 1991, c.201, does allow private religious affiliated health care institutions to develop institutional policies and practices defining circumstances in which they will decline to participate in the withholding or withdrawing of specific measures to sustain life. Such policies and practices are to be included in the hospice's written policies.

SUBCHAPTER 3. RECIPIENT REQUIREMENTS

10:53A-3.1 Eligibility for covered hospice services

(a) For the purposes of this subchapter only, the term "applicant" refers to an individual applying for hospice eligibility who may or may not be Medicaid eligible at the time of application.

(b) In order to receive hospice services, an individual must be eligible for Medicaid either in the community or in an institution. Additionally, an individual is eligible for hospice services in the community if he or she would be eligible for Medicaid if he or she were institutionalized. Eligibility rules are found at N.J.A.C. 10:71. Parental and spousal deeming of income do not apply. Persons eligible only for the Medically Needy component of the New Jersey Medicaid program are not eligible for hospice services.

1. The transfer of resource provisions of N.J.A.C. 10:71-4.7 apply to persons seeking hospice services while residing in a nursing facility as well as to persons seeking eligibility for hospice services in the community but whose income disqualifies them from New Jersey Care ... Special Medicaid Programs.

2. Persons not already eligible for Medicaid but who express interest in hospice services should be referred to the county welfare agency for a determination of eligibility. Persons already residing in a nursing facility should be referred to a county welfare agency of the county in which the facility is located. Persons in the community or waiting for placement in a nursing home should be referred to the county welfare agency in their county of residence.

3. When providing services to members of the Garden State Health Plan (GSHP), an authorization number shall be obtained from the applicant's GSHP physician case manager prior to providing hospice services. Hospice agencies shall use this authorization number when billing for services provided to a GSHP member.

(c) In addition to financial eligibility, the individual applying for Medicaid hospice eligibility shall meet the following conditions:

1. He or she shall voluntarily elect the hospice services (see N.J.A.C. 10:53A-3.2);

2. If eligible for Medicare, he or she shall assign his or her Medicare Part A benefits for hospice care. For dually eligible Medicare and Medicaid hospice recipients, the hospice benefits election applies simultaneously under both the Medicare and Medicaid programs;

3. He or she shall be certified or recertified as terminally ill by the attending physician (see N.J.A.C. 10:53A-2.3) and be certified by the attending physician that hospice services are reasonable and necessary for the palliation or management of the terminal illness or related conditions by the completion of the Physician Certification/Recertification for Hospice *[Benefit]* ***Benefits*** Form FD-385 (6/92). A copy of this form shall be part of the medical record at the hospice agency;

4. He or she shall have a plan of care for hospice services established prior to and consistent with the provision of hospice services. (For information on the plan of care, see N.J.A.C. 10:53A-3.6); and

5. He or she shall waive all rights to the following:

i. Those hospice services provided by a hospice other than the one designated by the recipient (unless provided under written arrangements made by the designated hospice); and

ii. Any Medicaid services that are related to the treatment of the terminal condition for which hospice services were elected, or for a related condition, or for services equivalent to hospice care, except for the following services:

(1) Those provided (either directly or under arrangement) by the designated hospice; and

(2) Those provided by the recipient's physician or consulting physician in treatment of the terminal condition, if that physician is not an employee of the designated hospice receiving compensation from the hospice for those services.

(d) Applicants in the following categories may be eligible for hospice if the applicant meets the criteria listed in (b) and (c) above.

1. The aged;

2. The blind;

3. The disabled;

4. Children under 21 years of age including those under the supervision of the Division of Youth and Family Services (DYFS);

5. Caretaker relatives who have dependent children in their care; or

6. Pregnant women (up to 60 days postpartum).

10:53A-3.2 Application policy for medical and financial eligibility for hospice services

(a) The application policy for medical eligibility for hospice services is as follows:

1. Individuals requesting or initiating hospice eligibility should be referred to a Medicaid approved hospice to complete the hospice medical eligibility requirements for hospice services through the completion of the Physician Certification/Recertification for Hospice *[Benefit]* ***Benefits*** Form, FD-385 (6/92) and the Election of Hospice Benefits Statement, FD-378 (6/92).

2. The hospice shall notify the agency (that is, the county welfare agency (CWA), the Division of Youth and Family Services (DYFS), or the Medicaid District Office (MDO) (for SSI recipients), as applicable), responsible for maintaining the hospice "indicator" (Special Program Number 15) of the completion of the medical eligibility requirements in (a)1 above. The notification must be done through the use of the Hospice Eligibility Form, FD-383 (6/92). The form shall also be sent to the address listed below to indicate to the Division of the completion and/or change in the medical eligibility:

Hospice Program
Division of Medical Assistance and Health Services
CN-712
Trenton, New Jersey 08625-0712

i. The date of the signing of the Election of Hospice Benefits Statement, FD-378 (6/92) determines the date of eligibility for hospice services if the applicant is eligible for Medicaid.

(b) The application policy for financial eligibility is as follows:

1. After medical eligibility has been determined, all applicants (whether previously eligible for Medicaid or not) should be referred to the CWA, DYFS or the MDO, as applicable, for hospice financial eligibility processing. If the applicant's Medicaid eligibility status has not been established, is not known, or is uncertain, the hospice agency shall contact the MDO to determine where to refer the potential applicant.

2. For the recipient who had been eligible for regular Medicaid benefits (such as through AFDC, Medicaid Only or New Jersey Care ... Special Medicaid Programs), the CWA is responsible for assigning the hospice "indicator" and to notify the hospice, in writing, of the date of Medicaid eligibility for hospice by returning the Hospice Eligibility Form (FD-383) (6/92).

3. Exceptions: The instructions in (b)1 and 2 above do not apply if the applicant is eligible through DYFS or SSI. For instructions for those eligible through DYFS or SSI, see (b)4 or 5 below, respectively.

4. If the applicant for hospice services is under the supervision of DYFS, DYFS shall be responsible for assigning the hospice

"indicator" and to notify the hospice, in writing, of the date of the Medicaid eligibility for hospice by returning the Hospice Eligibility Form (FD-383) (6/92).

5. If the applicant for Medicaid hospice services is SSI eligible, the MDO is responsible for assigning the hospice "indicator" and to notify the hospice, in writing, of the date of the Medicaid eligibility for hospice by returning the Hospice Eligibility Form (FD-383) (6/92). (See N.J.A.C. 10:49, Administration, (Appendix ***Form #17***), for the list of Medicaid District Offices.)

6. The medical eligibility materials (copies of the Physician Certification/Recertification for Hospice Benefits, FD-385 (6/92) form and the Election of Hospice Benefits Statement, FD-378, (6/92)) shall be forwarded by the hospice to the MDO, CWA or DYFS, as applicable.

7. All other applicants for room and board services, including those who would lose SSI because of monthly income shall be referred to the CWA. For individuals determined eligible, see (b)2 above for processing responsibilities.

(c) Rules for retroactive Medicaid eligibility in N.J.A.C. 10:49 ***, Administration,*** apply to those recipients eligible for Medicaid, prior to their Medicaid application for hospice. In addition, the following retroactive eligibility rule applies:

1. No retroactive eligibility payment will be authorized for hospice services prior to the date the Election of Hospice Benefits Statement, FD-378 (6/92) is signed. Retroactive eligibility for hospice services may be established for up to three months prior to Medicaid eligibility provided the Election of Hospice Benefits Statement, FD-378 (6/92) had been signed. Such cases must be referred to the following address for determination of retroactive eligibility:

Retroactive Eligibility Unit
Division of Medical Assistance and Health Services
CN-712
Trenton, New Jersey 08625-0712

2. For an applicant who becomes initially eligible for Medicaid, solely because of his or her hospice status, Medicaid eligibility begins with the date the Election of Hospice Benefits Statement, FD-378 (6/92) was signed by the applicant, or his or her representative. In these cases, retroactive eligibility is not available prior to the date on the Election of Hospice Benefits Statement, FD-378 (6/92).

(d) The hospice shall notify the agency determinining eligibility (MDO, CWA or DYFS) through a copy of the Hospice Eligibility Form, FD-383 (6/92) of a change in the recipient's status which could affect the eligibility for Medicaid and/or for hospice services, a change in the hospice provider status, or a change in a recipient's address.

(e) A limited access Medicaid Eligibility Identification Card (MEI) with the statement "Except for hospice and physician services, CHECK WITH HOSPICE PROVIDER for other services" shall be issued to a Medicaid recipient who is eligible for hospice services. The hospice shall provide the name and telephone number of the contact person within the hospice so that other providers may obtain approval from the hospice for other than hospice and physician services.

1. When the hospice applicant is also a Garden State Health Plan member, the following process shall be followed by the hospice:

i. A member of the Garden State Health Plan has a message on his or her Medicaid Eligibility Identification Card (MEI) which states, "HMO-Check GSHP ID Card". Each member of the GSHP will also have a gold-colored GSHP-ID card which lists the name and telephone number of the member's physician case manager. The hospice provider shall obtain from the member of the Garden State Health Plan who requests hospice services, a Garden State Health Plan Authorization Form (GSHP-7) (9/91) which is completed by the member's physician case manager and specifically authorizes hospice services.

ii. The hospice provider shall use the authorization number which is imprinted on the top right hand corner of the GSHP-7 form when billing for services provided to a member of the GSHP.

10:53A-3.3 Benefit periods

(a) There are two 90-day benefit periods, one 30-day period, and a fourth unlimited period. The two 90-day periods must be used before the 30-day period and all three periods must be used before the fourth unlimited benefit period. The benefit periods shall be recorded on a Hospice Benefits Statement, FD-379 (6/92) ***Form #2 in the*** (Appendix *[II]*, incorporated herein by reference) and filed in the recipient's medical record.

(b) Contents of the Election of Hospice Benefits Statement, FD-378 (6/92) ***(Appendix Form #1)*** shall include the following:

1. The identification of the particular hospice that will provide the care to the applicant;

2. The applicant's or his or her representative's acknowledgment, that he or she has been given a full understanding of hospice services;

3. The applicant's or his or her representative's acknowledgment that he or she understands that the regular Medicaid services other than hospice services are waived by the signing of the Election of Hospice Benefits Statement, FD-378 (6/92) and/or the Representative Statement for the Election of Hospice Benefits, FD-380 (***Form #3 in the*** Appendix *[III]*, incorporated herein by reference), unless the services are prior authorized;

4. The effective date of the election statement; and

5. The signature of the applicant or the applicant's representative.

(c) The hospice applicant is eligible for three benefit periods of hospice services (90 days, 90 days, and 30 days, totaling 210 days) and a fourth unlimited benefit period with the approval of the hospice provider, if the applicant or his or her representative files an Election of Hospice Benefits Statement, FD-378 (6/92) with a particular hospice.

1. A hospice recipient shall designate an effective date for the beginning of hospice services which shall not be earlier than the date the election is made.

(d) Revocation of election of hospice services shall be as follows:

1. The recipient may choose at any time to institute a "break" (a time period when care other than hospice care is given) between benefit periods or by a revocation of hospice services.

2. The Election of Hospice Benefits Statement, FD-378 (6/92) shall be considered to be valid through subsequent benefit periods if there is no "break" in care.

3. A new Election of Hospice Benefits Statement, FD-378 (6/92) is required to be filed following a break or revocation of hospice service.

i. The recipient or his or her representative shall file a signed statement with the hospice provider that indicates the recipient revokes the election for Medicaid coverage of hospice services for the remainder of the election period with the date that the revocation is to be effective.

ii. When revoked, the recipient forfeits hospice services for any remaining days in the benefit period. A recipient may not receive hospice services later than the effective date that the revocation is signed.

iii. The hospice shall immediately notify the agency that determined hospice eligibility (either CWA, DYFS or the MDO) of the revocation of hospice, verbally if possible, and also by filling out and submitting the Hospice Eligibility Form, FD-383 (6/92) to the eligibility source (CWA, MDO or DYFS, as applicable) so that the recipient's hospice eligibility may be terminated. The hospice shall also fill out the Termination of Hospice Benefits, FD-382 (6/92) (***Form #5 in the*** Appendix *[V]*, incorporated herein by reference) and retain this form in the recipient's medical record.

(e) Entitlement to all other Medicaid services may be restored if the recipient continues to be Medicaid eligible, under the following circumstances:

1. When the 210 days of *[hsopice]* ***hospice*** entitlement has expired, and the recipient does not choose the fourth unlimited benefit period; or

2. When the recipient revokes hospice services.

(f) When a hospice recipient residing in a nursing facility revokes the hospice *[benefit]* ***benefits*** and returns to the status of a patient of the NF, the hospice shall proceed as follows:

1. The Hospice Eligibility Form, FD-383 (6/92) shall be completed and submitted to the MDO after the recipient has signed the Revocation of Hospice Benefits, FD-381 (6/92) form indicating he or she has revoked the Medicaid hospice benefit.

2. The nursing facility shall conform to the nursing facility rules in the Long Term Care Facilities Services Manual, N.J.A.C. 10:63 for admission and placement for this recipient similar to any admission to the NF.

i. Upon discharge from the hospice, the recipient, upon admission or readmission to the NF, is counted in the "occupancy rate" by the NF. The recipient is not counted as part of the NF census or "occupancy rate" if he or she is a hospice patient residing in the NF.

10:53A-3.4 Covered hospice services

(a) The amount, character, and scope of New Jersey Medicaid hospice services shall be the same for all hospice recipients and shall not be less than the hospice services provided under Medicare (Title XVIII) (Section 1861 (dd) et seq. of the Social Security Act, codified as 42 U.S.C. Section 1395x(dd)1).

(b) The Division reimburses for covered hospice services that are reasonable and necessary for the palliation and management of the terminal illness, and which are provided to a hospice recipient consistent with the recipient's individualized plan of care.

1. Required hospice services which shall be available to the hospice recipient include nursing care, medical social services, supervisory physician services, counseling services, durable medical equipment and supplies including drugs and biologicals, homemaker/home health aide services, physical therapy, occupational therapy and speech-language pathology services.

i. The following services are considered "core" hospice services: nursing care, medical social services, physician services and counseling services.

(1) A hospice provider shall ensure that substantially all core services are routinely provided directly by hospice employees.

(2) A hospice may use contracted staff, if necessary, to supplement hospice employees in order to meet the needs of hospice recipients during periods of peak patient loads or under extraordinary circumstances or to obtain physician specialty services.

(3) If contracted staff is used, the hospice shall maintain professional, financial and administrative responsibility for the services and shall assure the qualifications of the staff and that services meet all requirements under each level of care.

(c) Covered hospice services are reimbursed at predetermined, prospective, inclusive rates corresponding to one of four levels of care. Two of the levels of care are reimbursed for services provided in the home: Routine Home Care and Continuous Home Care; and two levels of care are reimbursed for services provided on an inpatient basis: Inpatient Respite Care and General Inpatient Care in either a hospital or nursing facility (see also, N.J.A.C. 10:53A-4.1). The provisions at (c)1 through 4 below apply to the levels of care provided by the hospice.

1. The routine home care rate is reimbursed if less skill than professional registered nursing, or licensed practical nursing, or less intensity than continuous home care is needed to enable the person to remain at home.

i. The routine home care rate includes the following services: routine nursing services, social work, counseling services, durable medical equipment, supplies, drugs, home health aide/homemakers, physical therapy, occupational therapy, and speech-language pathology services. The routine home care rate includes respite care delivered in the home that is not predominately nursing care.

ii. The routine home care rate is reimbursed when the recipient is not receiving continuous home care, regardless of the volume and intensity of routine home care services.

2. The continuous home care rate is reimbursed only during a period of medical crisis to maintain the recipient at home where most of care is skilled nursing care on a continuous basis to achieve palliation or management of the recipient's acute medical symptoms and only as necessary to maintain the recipient at home.

i. A minimum of eight hours of nursing care must be provided during a 24-hour day which begins and ends at midnight before the Continuous Home Care rate can be paid. The nursing care need not be sequential, that is, four hours may be provided in the morning and four hours in the evening of the same day.

ii. The nursing care must be provided either by a registered professional nurse, or a licensed practical nurse under the supervision of a registered professional nurse. More than half (four hours or more) of the period of care must be nursing care provided by licensed nurses.

iii. The Continuous Home Care rate includes homemaker/home health aide services which may be provided to supplement the nursing care, but not to substitute for the minimal amount of nursing care provided by the licensed nurses.

3. Inpatient respite care is short-term, occasional, inpatient care provided to the recipient in a hospital or nursing facility only when necessary to relieve the family members or other persons caring for the recipient at home.

i. The inpatient respite care rate is not reimbursed for more than five consecutive days.

ii. Inpatient respite care is provided by a hospice to a Medicaid hospice recipient in either a hospital or a nursing facility. The inpatient respite care rate or the payment of room and board services under hospice is not provided when a recipient is considered a nursing facility patient and not a hospice patient.

4. The general inpatient care rate is reimbursed when provided in a hospital or nursing facility during periods of acute medical crisis, for palliative care, for pain control, or management of acute and severe clinical problems which cannot be managed in another setting.

5. Concerning the limitation on the aggregate payments to hospice providers for inpatient respite care and general inpatient care, see N.J.A.C. 10:53A-4.3.

(d) Specific services provided by a hospice within each level of care related to the terminal illness and paid under the per diem rate schedule, are listed as follows:

1. Nursing care provided by or under the supervision of a registered professional nurse;

2. Physical therapy, occupational therapy, and speech-language pathology provided by a qualified therapist for the purpose of symptom control or to enable the recipient to maintain activities of daily living and basic functional skills;

3. Medical social services provided by a social worker who has at least a bachelor's degree in social work from a school accredited or approved by the Council of Social Work Education, and who is working under the direction of a physician and with the interdisciplinary team;

4. Homemaker/Home Health aide services shall be provided by a homemaker/home health aide who has been certified as having successfully completed a training program approved by the New Jersey State Board of Nursing, Department of Law and Safety. Home health aides shall provide those personal care services as described in the Home Care Services Manual, (N.J.A.C. 10:60), N.J.A.C. 10:60-2.2(c) under the supervision of a registered professional nurse;

i. Homemaker/Home Health aide services may be provided on a 24-hour, continuous basis but only during periods of a recipient's crisis, not a family crisis, and only as necessary to maintain the terminally ill recipient at home;

ii. A registered professional nurse shall visit the home of the hospice recipient at least every two weeks when homemaker/home health aide services are provided for the purpose of assessing the homemaker/home health aide services and provide education and supervision to the aide, as needed;

5. Durable medical equipment and supplies included in the plan of care, as well as self-help and personal comfort items which are reasonable and necessary for palliation and management of the recipient's terminal illness;

6. Drugs and biologicals included in the plan of care primarily for the relief of pain and symptom control for a recipient's terminal illness; ***and***

[7. Nutritional supplements that are part of the palliation and routine care of the hospice recipient; and]

*[8.]***7.*** Counseling, provided with respect to care of the terminally ill recipient, for family members or other persons caring for the recipient at home and provided by members of the interdisciplinary group, as well as by other qualified professionals as determined by the hospice provider.

i. Counseling, including dietary counseling, shall be provided both for the purpose of training the recipient's family or other caregiver to provide care, and for the purpose of helping the recipient and those caring for him or her to adjust to the nature of the recipient's illness.

ii. Bereavement counseling consists of counseling services provided to the recipient's family after the recipient's death under the supervision of a qualified professional. Bereavement counseling is a required inclusive component of hospice service and is not separately reimbursed by Medicaid.

(1) The plan of care shall clearly delineate the type of counseling services to be provided and the frequency of the delivery of the service which shall be offered up to one year following the death of the recipient.

iii. Dietary counseling, when necessary, provided by a qualified professional dietician or dietary consultant.

iv. Spiritual counseling including notice to the recipient as to the availability of appropriate clergy.

(e) Room and board services identical to those provided to non-hospice Medicaid recipients shall be provided for hospice recipients residing in a nursing facility. The recipient eligible for hospice services who is residing in a Medicaid approved nursing facility is considered a hospice recipient, not a patient of a nursing facility.

1. Room and board services include the performance of personal care services, assistance in activities of daily living, provision of patient social activities, the administration of medications, the maintenance of the cleanliness of a resident's room, and supervision and assistance in the use of durable equipment and prescribed therapies.

2. The Pre-admission Screening (PAS) rules do not apply to a hospice patient admitted directly to a nursing facility or changed from nursing facility care to hospice care. This individual would be considered a hospice patient, not an NF patient. If the hospice patient revokes the hospice benefit and returns to that NF's care or the care of another NF, the PAS rules apply which are in the Long Term Care Services Manual, N.J.A.C. 10:63 (see N.J.S.A. 30:4D-17.10).

(f) Physician services for administration, interdisciplinary group activities, and general supervisory activities of the medical director, his or her designated representative, or other physician employees of the hospice provider, or those working under arrangements with the hospice, are considered "core services" and are included in the hospice per diem rate. These services shall not be billed separately to the *[Fiscal Agent]* **fiscal agent***.

1. The cost of physician services for direct personal care shall be covered as a separate service only for physician employees of the hospice who do not volunteer for these services. In such instances, the physician may receive separate reimbursement above the hospice per diem rate when physician services are billed by this employee. The hospice shall not bill on behalf of the physician for these direct personal care services. For the procedures for the reimbursement of these services, see N.J.A.C. 10:53A-4.2.

(g) Regarding other covered services, some Medicaid services which are not duplicative of hospice services may be covered by Medicaid for the hospice recipient. These services include optometric and optical services, prosthetic and orthotic services, medical day care services, and personal care services. These services must be approved by the interdisciplinary team, be consistent with the plan of care and be determined to be medically necessary.

10:53A-3.5 Services unrelated to the terminal illness

(a) The hospice recipient, by signing the Election of Hospice Benefits Statement, FD-378 (6/92) agrees to waive most regular Medicaid services. However, Medicaid covered services unrelated to the terminal illness, included in the plan of care, may be provided by approved Medicaid providers upon approval of the interdisciplinary team of the hospice.

1. The reasons for providing unrelated services and the verification that the unrelated services are not, in any way, related to the terminal illness shall be documented in the plan of care by a member of the interdisciplinary team.

i. Documentation shall clearly specify those services that are related to and those services that are unrelated to the terminal illness.

ii. Services unrelated to the terminal illness are subject to the same coverage provisions, limitations, prior authorization requirements, and conditions applied to services available to other general non-hospice Medicaid recipients.

iii. All payments for services (except for physician's services) that are unrelated to the terminal illness may be denied if not approved by the interdisciplinary team, documented in the plan of care and on file in the patient's medical record.

(b) The fourth unlimited benefit period beyond 210 days of hospice care must also be approved by the interdisciplinary team of the hospice as an integral part of the plan of care.

1. If a fourth unlimited period of hospice services is anticipated, the hospice shall document in the recipient's medical record, the approval of this period by the interdisciplinary team at the beginning of the third benefit period. Approval by the interdisciplinary team prior to the delivery of hospice services is required for payment for services.

2. A new Physician Certification/Recertification for Hospice Benefits Form, FD-385 (6/92) is required for the approval by the interdisciplinary team for the fourth unlimited benefit period.

(c) The documentation of the approval of unrelated services and the fourth benefit period shall be filed in the recipient's medical record with the copy of the claim form and be made available upon request for post-payment review purposes.

10:53A-3.6 Plan of care

(a) Requirements for the initial plan of care for recipients of hospice services are listed below:

1. At least one of the persons involved in developing the initial plan of care shall be a registered professional nurse or physician.

2. In establishing the initial plan of care, the member of the basic interdisciplinary group (a physician, a registered professional nurse, a medical social worker, or a counselor) who assesses the recipient's needs shall contact at least one other group member before writing the initial plan of care.

3. The initial plan of care shall be established on the same day as the assessment if the day of assessment is to be considered a covered day for hospice services.

4. At a minimum, the other two members of the basic interdisciplinary group shall review the initial plan of care and provide their input to the plan of care within two calendar days of the day of assessment.

5. The initial plan of care shall be approved by the Medical Director of the hospice by his or her signature on the plan of care in the medical record, thereby assuming professional medical responsibility for the hospice care.

(b) Requirements for the continuing plan of care for recipients of hospice services are listed below:

1. All services provided to each hospice recipient must be approved by the interdisciplinary team of the hospice as an integral part of the plan of care. The medical necessity for emergent/urgent services shall be justified by the attending physician and documented in the plan of care in the medical record.

2. The plan of care shall be signed by the attending physician, the Medical Director or his or her physician designee and the interdisciplinary group prior to the complete implementation of the plan of care, thereby assuming the professional medical responsibility for the hospice care.

3. The plan of care shall be reviewed and updated in a timely manner as specified by the plan of care, but at least once a month, by the attending physician, the Medical Director or physician designee, and the interdisciplinary team. These reviews shall be documented in the hospice recipient's medical record.

4. The plan shall include the assessment of the recipient's needs and identification of the services, including the management of discomfort and symptom relief. The scope and frequency of hospice services and other services needed to meet the needs of the hospice recipient and the family shall be stated in detail in the plan of care and appropriately documented in the medical record.

10:53A-3.7 Provision for recipient fair hearings

Pursuant to N.J.A.C. 10:49-10 (Notices, Appeals and Fair Hearings), Medicaid recipients have the right to file for fair hearings.

SUBCHAPTER 4. BASIS OF PAYMENT

10:53A-4.1 Post-eligibility treatment of income

(a) For a hospice recipient residing at home, who is eligible only for hospice services, the policy for handling the post-eligibility treatment of income is the same as that of the Division's home and community-based waivers, for example, CCPED. For these recipients, there is no available income to be applied to the cost of care because the maintenance standard in the home and community-based waiver programs has been determined to be equal to the income eligibility standard for Title XIX approved facilities (see N.J.A.C. 10:71-5).

(b) For a recipient who is residing in a nursing facility and receiving hospice under Medicaid, payment to the hospice for room and board services shall be reduced by the recipient's available income. Available income is that amount which remains after deducting certain amounts from the recipient's gross income, as determined in accordance with the N.J.A.C. 10:71.

1. Instructions for the use of the "Statement of Available Income for Medicaid Payment (PA-3L)" form, incorporated herein by reference as ***Form #10 in the*** Appendix *[X]*, are as follows:

i. The hospice is responsible for ensuring that the amount of the recipient's available income is reported and that the amount corresponds to that attributed to the recipient's account on the Statement of Available Income for Medicaid Payment (PA-3L). The available income must be deducted by the hospice from the amount billed the *[Fiscal Agent]* ***fiscal agent***. The hospice shall be liable to the Division for any available income not reported to the *[Fiscal Agent]* ***fiscal agent*** by the hospice.

ii. The Statement of Available Income for Medicaid Payment (PA-3L) is completed by the CWA on each non-SSI Medicaid recipient that receives hospice services in the community, the NF or the hospital.

(1) The PA-3L form reflects the recipient's available income that remains after deducting certain amounts for the maintenance of a community spouse, the maintenance of other dependent relatives, health insurance premiums, and the personal needs allowance (PNA). A PA-3L form must be attached to a copy of the 1500 N.J., Health Insurance Claim Form and be kept in the recipient's billing record when requesting payment from Medicaid for the cost of hospice care, as specified in (b)1ii(2) through (5) below.

(2) The hospice is responsible for maintaining a personal needs allowance (PNA) account and making these monies available for use by the recipient.

(3) It is the responsibility of the hospice to deduct the applicable amount of the available income (which corresponds to that attributed to the recipient on the PA-3L form) from the total per diem charges for the payment of room and board services on the 1500 N.J. claim form.

(4) The PA-3L form shall be obtained by the hospice from the NF for each recipient of hospice services who has been on the Long Term Care *[Billing System]* ***Facility billing system***. The hospice shall negotiate the change in the collection of this income with the nursing facility, if applicable, or collect it from the recipient and/or family.

(5) For the hospice applicant who has not previously been on the Long Term Care *[Billing System]* ***Facility billing system*** as an NF patient, the CWA shall generate the PA-3L form for the use of the hospice.

(6) For individuals with no income, or income below $60.00 per month, who continue to qualify for Supplemental Security Income (SSI) payments and Medicaid, no PA-3L form is required upon admission to hospice care status.

(A) For these hospice recipients, confirmation of the SSI status should be obtained from the MDO and documented in the hospice billing record.

(B) When submitting the 1500 N.J. claim form, the hospice shall note in the recipient's billing record and state in the "REMARKS" area of the claim form, the wording "SSI Eligible*[."]*".*

(c) Regarding adjustments to the PA-3L, the CWA is required to report all changes of income on an amended PA-3L form to the hospice.

1. When special exceptions apply (for example, in the month of admission, for verified living expenses, and for the first two months of Medicare premium deductions), the PA-3L form will reflect those changes for the applicable month(s).

2. The recipient and/or the family are required to report all changes of available income to the CWA. Additionally, the hospice should report any changes in financial circumstances to the CWA. For those changes which impact on available income, a new PA-3L form must be generated by the CWA, indicating the month for which the change is effective.

3. When an amended PA-3L form affects the periods of service that have already been billed by the hospice, a "RETROACTIVE ADJUSTMENT" shall be submitted to the *[Fiscal Agent]* ***fiscal agent***. The reason for the adjustment shall be recorded in the "REMARKS" area of the 1500 N.J. claim form and also in the recipient's billing record at the hospice.

4. On post-payment quality assurance review, the hospice is liable to the Division for any of the recipient's available income not deducted appropriately from the claim forms.

(d) ***The instructions for when to apply the available income are as follows:*** For any full or part of a calendar month in hospice care status, all available income shown on the PA-3L form shall be applied to the cost of the care and subtracted from the per diem charge on the 1500 N.J. claim form, except as indicated in (d)1 through 4 below.

1. ***The instructions in this paragraph apply on admission from a nursing facility.*** For the recipient who is admitted to hospice care status from an NF during a given calendar month, the available income may have already been utilized by the NF to offset the cost of care in the same month of admission to hospice care status. Thus, no income is applicable to the hospice for the first calendar month. This applies only if it is a partial calendar month of hospice room and board services. No new PA-3L form is generated by the CWA but a copy of the PA-3L form must be obtained from the NF and kept in the patient's record. The hospice must certify to this fact in the recipient's billing record and in the "REMARKS" area of the claim form with the following statement:

"INCOME APPLIED TO THE NF COST OF CARE FOR (ADD THE MONTH AND YEAR TO WHICH THE COST IS APPLIED)"

2. ***The instructions in this paragraph apply on admission from the community.*** For a hospice recipient admitted from the community, an exemption for verified living expenses is permitted in computing available income. An amended PA-3L form shall be generated from the CWA indicating the adjusted amount to be deducted from the hospice per diem charge for that month. Under no circumstances must the requested exemption exceed the verified living expenses. (This deduction is not applicable for hospice recipients who are returning to hospice care from the hospital.)

3. In reviewing the PA-3L form to determine what income should be applied to a billing month, the effective date in each of the numbered columns (PA-3L #1, #2, and #3) shall be carefully checked. This is particularly significant for hospice recipients admitted from the community or the hospital, as income may change within the first three months due to changes in income deductions, specifically Medicare premium payments.

4. The instructions for completing the PA-3L form when the recipient has been discharged or has died, are as follows:

i. For the discharge month or that partial part of the month in the hospice care, the available income amount shown on the PA-3L form shall be applied to the cost of care. If the income exceeds the charge for that month, the balance of income not applied to the cost of care shall be returned to the recipient. Exceptions to this general policy are indicated in (d)4ii through v below.

ii. For the hospice recipient who is discharged to the community, the amount of available income may be reduced by an amount to cover anticipated living expenses. However, this must be reflected on the PA-3L form by the CWA. When the PA-3L form does not reflect the reduction, contact the CWA to effect the change.

iii. For the hospice recipient who dies on the first, second, or third day of the month, and income is not available because the check could not be endorsed and was returned, the 1500 N.J. claim form must be so annotated in the "REMARKS" area stating "Recipient expired on (date)—income not available for use." No further documentation is required.

iv. For the hospice recipient who dies after the third day of the month and the income is not available because the check was returned, the 1500 N.J. claim form should be so annotated and documentation (that is, SSA transmittal receipt) retained in the hospice billing files. The 1500 N.J. claim form must be annotated in the "REMARKS" area—"Check returned—SSA transmittal receipt available—income not available for use."

v. For the hospice recipient who is admitted to nursing facility care (in the same or in a different NF) after being discharged from the hospice, the hospice shall provide information to the NF concerning the amount of available income which was applied to the bill in the discharge month so that the NF may accurately reflect the balance amount for the NF admission month billing. The nursing facility must also complete an MCNH-33 form to notify the CWA and MDO of the discharge of the hospice patient from hospice care and the income applied to the hospice service, so that a new PA-3L form can be issued for the month of admission to the NF.

10:53A-4.2 Basis of payment—hospice providers

(a) The Division reimburses an approved hospice provider for those hospice services related to the terminal illness and included in the recipient's plan of care according to the methodology and indices in section 1814(i)(1)(C) (ii) and 1814(i)(2)(B) of the Social Security Act.

1. One of four predetermined, cost-related prospective payment rates subject to the "cap" amounts (see N.J.A.C. 10:53A-1.1 for definition of "cap") is reimbursed for each day the recipient is receiving hospice services (see N.J.A.C. 10:53A-4.3 for calculations). The rates vary depending on the level of care which is based on the type and intensity of services furnished on that day and are consistent with the plan of care. The levels of care are, as follows:

i. Routine home care;

ii. Continuous home care;

iii. Inpatient respite care; and

iv. General inpatient care.

(b) The rules regarding the reimbursement for each level of care which relate to the per diem rate are described below:

1. The hospice is reimbursed at the routine home care rate for routine nursing services, social work, counseling services, durable medical equipment, medical supplies and equipment, drugs, biologicals, home health aide/homemakers, physical therapy, occupational therapy, and speech-language pathology services. Routine home care is also reimbursed for home care provided continuously that is not predominately nursing care and includes respite care delivered in the home.

i. The routine home care rate is reimbursed when the recipient is not receiving continuous home care, regardless of the volume and intensity of routine home care services.

2. The hospice is reimbursed at the continuous home care rate for services provided in periods of acute medical crisis, where the predominance of care is skilled nursing care on a continuous basis, to achieve palliation or management of the recipient's acute medical symptoms and only as necessary to maintain the recipient at home.

i. At least eight hours of nursing care in a 24-hour period has to be provided before the continuous home care rate may be paid. Continuous home care is reimbursed at the continuous home care daily rate divided by 24 to determine the hourly rate. For every hour of continuous care furnished, the hourly rate is reimbursed up to 24 hours furnished in a day, as applicable.

ii. Up to 24 hours of nursing care in a 24-hour period in the home may be provided primarily by the registered professional nurse, or a licensed practical nurse together with and under the supervision of a registered professional nurse, with the support of the homemaker/home health aide staff.

3. The hospice is reimbursed at the inpatient respite care rate for care provided on an intermittent, non-routine, and/or occasional need basis for each day a hospice eligible recipient is in an approved inpatient facility (nursing facility or general hospital) receiving respite care. The recipient is not in need of general inpatient care.

i. Payment for Inpatient Respite Care is made for a maximum of five consecutive days at a time, including the date of admission but not counting the date of discharge. Payment of the sixth day and any subsequent day is reimbursed at the Routine Home Care rate.

(1) The hospice may be paid the appropriate home care rate (either the routine or continuous home care rate) for the discharge day unless the recipient dies as an inpatient. When the recipient dies as an inpatient, the Inpatient Respite Rate is reimbursed for the day of death.

ii. Payments to a hospice for inpatient respite care are also limited according to the aggregate number of days of inpatient respite care furnished to Medicaid patients per year for that particular hospice. (See N.J.A.C. 10:53A-4.4 for further description relating to the calculation of this limitation.)

iii. The inpatient respite care rate is not reimbursed to the nursing facility for care provided to nursing facility patients that are not Medicaid hospice patients of a Medicaid approved hospice.

4. The general inpatient care rate is reimbursed for services provided in a hospital or nursing facility in periods of acute medical crisis, for hospitalized recipients for palliative care for pain control or management of acute and severe clinical problems which cannot be managed in other settings. For example, reimbursement at the general inpatient care rate is made during situations when the recipient's condition is such that it is no longer possible to maintain the recipient at home, as determined and specified in the plan of care.

i. None of the other fixed payment rates, such as routine home care, are applicable for the day on which the patient receives hospice general inpatient care, except as stated below for the day of discharge.

(1) For the day of discharge from an inpatient unit, the appropriate home care rate (either the routine or continuous home care rate) is reimbursed unless the recipient dies as an inpatient. In this situation, when the recipient dies, the general inpatient care rate is reimbursed for the day of death.

ii. Payments to a hospice for general inpatient care are limited according to the aggregate number of days of inpatient care furnished to Medicaid patients per year for that particular hospice. (See N.J.A.C. 10:53A-4.4 for information on calculating this limitation.)

(c) In addition to the per diem rates listed in (a) above, the following rates may be reimbursed according to the special circumstances listed below:

1. The room and board rate is reimbursed on a per diem basis for hospice services provided to Medicaid hospice recipients at the specific Medicaid approved NF where the hospice recipient is residing. This rate may be reimbursed to the hospice in addition to the rate for routine home care or continuous home care. (Note: The hospice patient residing in a NF is not a Medicaid recipient of nursing facility care but a hospice recipient.)

i. The room and board rate is calculated at 95 percent of the highest approved Medicaid NF per diem rate (institutionally specific) effective at the time services are provided, and excluding ***retroactive rate adjustments, retroactive*** add-ons and special program rates. The rate is adjusted every six months to reflect changes in the nursing facility's case mix. The NF contracts with the hospice to accept the recipient based on actual room and board components provided to the recipient by the NF. The provider number and name of the nursing facility where the recipient resides and with whom the hospice contracts must be placed in the "REMARKS" area of the 1500 N.J. claim form.

(1) The calculated rate used by the hospice as the per diem room and board rate may be obtained from:

Bureau of Institutional and Provider Reimbursement
Division of Medical Assistance and Health Services
CN-712
Trenton, New Jersey 08625-0712

ii. The Division shall continue to pay the hospice the room and board rate for the purpose of retaining the bed for therapeutic leave or during a period of hospitalization, if indicated. The hospice is responsible through its contract with the NF to reimburse the NF to retain the bed.

(1) Nursing facility bed reservation days rate (for therapeutic leave from the NF to home): The hospice is reimbursed the room and board rate for reserving an NF bed for hospice recipients residing in an NF who return to a home setting temporarily for therapeutic leave. The bed reservation days rate (not to exceed 24 days per calendar year) is paid to the hospice provider in addition to the rate of routine home care or continuous home care.

(2) Nursing facility bed reservation days ***rate is reimbursed*** during a period of hospitalization (commonly known as "bed hold days") *[not to exceed 10 consecutive days per period of hospitalization]*: The hospice is reimbursed the room and board rate for reserving a nursing facility bed for hospice recipients residing in a nursing facility who require inpatient hospitalization. Bed reservation days (not to exceed 10 consecutive days per period of hospitalization) are paid to the hospice in addition to the rate for general inpatient care.

(3) The responsibility for the bed reservation policy, listed in (c)1ii(1) and (2) above, and the submission of claims for these days rests with the hospice.

(d) Payment of the four "level of care" rates will be made to hospice providers at the predetermined minimum prospective Medicaid payment rates revised annually by the Federal Health Care Financing Administration (HCFA) (see N.J.A.C. 10:53A-5 for the references for the methodology). The payment rates will be adjusted by the Division for regional differences in wages, using indices and methodology determined by HCFA.

1. The regional designation of a provider for wage adjustment purposes will be determined by the location of the main business office of the hospice provider.

2. Since the four level of care rates are prospective rates, there shall be no retroactive adjustments other than the application of the "cap" on overall payments and the limitation on payments for inpatient care, if applicable. The rate paid for any particular day may vary depending on the level of care furnished to the recipient. The cap and limitation on payment for inpatient care are described in N.J.A.C. 10:53A-4.4.

(e) No deductible shall be imposed for services furnished by hospices to Medicaid recipients during the period of election, regardless of the setting in which the services are provided.

1. Hospices shall not charge Medicaid recipients directly for Medicare coinsurance amounts.

(f) For recipients at home who are dually eligible for both Medicare and Medicaid, and who are receiving Medicare hospice benefits, the hospice may bill Medicaid Fiscal Agent for the five percent co-payment for outpatient drugs and biologicals on the 1500 N.J. claim form.

1. The co-payment reimbursement shall be a maximum of five percent per prescription cost of each outpatient drug and/or biologicals but shall not exceed $5.00 for each prescription.

2. Copies of the Explanation of Medicare Benefits (EOMB), or other health, or insurance carriers' denial, or Explanation of Benefits (EOB) statements, or other third party liability statements, shall be attached to the copy of the 1500 N.J. claim form filed in the recipient's billing record, as well as an invoice for the outpatient drugs and/or biologicals to which the five percent co-payment is applied for post payment review. The pharmacy attachment or EOMB (EOB, etc.) shall not be attached to the 1500 N.J. claim form submitted to the Fiscal Agent.

(g) For recipients who are dually eligible for Medicare and Medicaid and who are receiving Medicare hospice benefits, the hospice may bill the Medicaid Fiscal Agent for the co-payment for each Inpatient Respite Care day equal to five percent of the payment made for each respite care day by Medicare.

1. Copies of the EOMB, or other health or life insurance carriers' denial, or EOB statements, or other third party liability statements shall be attached to a copy of the 1500 N.J. claim form filed in the recipient's medical record, as well as an invoice for Inpatient Respite care to which the five percent co-payment is applied. The invoice for Inpatient Respite Care or the EOMB (EOB, etc.) shall not be attached when submitting the 1500 N.J. claim form to the Fiscal Agent.

(h) In addition, for dually eligible Medicare and Medicaid hospice recipients, the hospice shall submit claims first to Medicare. Payment by Medicaid for unrelated services or for coinsurance requires an EOMB or EOB to be attached to the claim submitted to the Medicaid Fiscal Agent.

(i) The hospice shall not overlap from one calendar month to another in the billing process or bill for more than one month's comprehensive hospice benefit and/or room and board charges on each claim form.

(j) The amount of the Medicare co-insurance payment to be reimbursed to the hospice by Medicaid shall be submitted on a separate 1500 N.J. claim form from the other per diem charges.

10:53A-4.3 Basis of payment—physician services

(a) The method of calculation of the basic per diem rates for hospice services listed in N.J.A.C. 10:53A-4.1 includes the costs of the administrative and general supervisory activities performed by physicians who are employees of the hospice provider or those working under financial arrangements with the hospice provider.

1. The administrative and supervisory activities are generally performed by the physician serving as the Medical Director and/or the physician member of the hospice interdisciplinary group.

i. Interdisciplinary group activities include participation in the establishment of plans of care, supervision of care and services, periodic review and updating of plans of care, and the establishment of governing policies.

(b) The Division shall pay the physician for only direct patient care services furnished to Medicaid hospice recipients by hospice physician employees, and for physician services furnished under arrangements made by the hospice, unless the services were provided on a volunteer basis. The cost of the direct patient care services of the physician who is an employee of the hospice agency shall be submitted on the 1500 N.J. by the physician to the Medicaid fiscal agent.

1. Physician services furnished on a volunteer basis are excluded from Medicaid reimbursement.

2. The physician may bill for services which are not provided on a volunteer basis. However, the physician shall treat Medicaid recipients on the same basis as other recipients in the hospice. For instance, a physician may not designate all physician services rendered to non-Medicaid patients as volunteered and at the same time seek payment from the hospice for all physician services rendered to Medicaid recipients.

(c) The attending physician shall bill only for direct personal care services and not for other costs such as laboratory or X-rays, which are to be included in the hospice per diem rate.

1. The costs of attending physician's direct personal care services shall not be included in the hospice cap determinations.

(d) Attending physician services and other specialty physician services, including consultation services provided by physicians who are not employees of the hospice are reimbursed as covered services on a fee-for-service basis under the Physician Services Manual (N.J.A.C. 10:54) separate from the method of calculation of the hospice per diem rates listed in N.J.A.C. 10:53A-4.1.

1. The hospice shall state the name of the physician who has been designated the attending physician (whenever the attending physician is not a hospice employee) in the plan of care and on the Election of Hospice Benefits Statement, FD-378 (6/92); and specify whether the attending physician services are either related or unrelated to the recipient's terminal illness.

10:53A-4.4 Limitations on reimbursement for hospice services

(a) The Division limits aggregate payments to a hospice during a hospice "cap" period to the same degree, amount, and methodology as Medicare except the room and board per diem amounts reimbursed to hospice providers for services provided in a nursing facility are not subject to the "cap limitations" on the overall reimbursement to hospice providers.

1. Any payments in excess of the "cap" must be refunded by the hospice to the Division.

(b) The Division also limits payment for inpatient care according to the number of days of inpatient care furnished to hospice recipients in the aggregate for that provider. The computation of the limitation is as follows:

1. During the 12-month period beginning November 1 of each year and ending October 31 of the following year, the aggregate number of inpatient days (both for general inpatient care and inpatient respite care) shall not exceed 20 percent of the aggregate total number of days of hospice care provided to all Medicaid recipients during that same period.

i. The maximum allowable number of inpatient days shall be calculated by multiplying the total number of days of Medicaid hospice care by 20 percent.

ii. If the total number of days of inpatient care furnished to Medicaid hospice recipients is less than or equal to the maximum, no adjustment shall be made.

iii. If the total number of days of inpatient care exceeds the maximum allowable number, the amount of the limitation will be determined by: calculating a ratio of the maximum allowable days to the number of actual days of inpatient care, and multiplying this ratio by the total reimbursed for inpatient care (general and respite reimbursement); multiplying the excess inpatient care days by the routine home care rate; adding the amounts determined in the calculations of (b)1iii(1) and (2) above; and comparing the amount in (b)1iii(3) above with interim payments made to the hospice for inpatient care during the "cap period."

(1) The aggregate number of inpatient days (both for inpatient general and inpatient respite care) shall not exceed 20 percent of the aggregate total number of days of hospice care provided to all Medicaid recipients during that same period.

(2) Any payments in excess of the "cap" must be refunded by the hospice to the Division.

(c) The hospice shall report to the Medicaid Hospice Program, the aggregate number of inpatient days (both for inpatient general and inpatient respite care) and the aggregate total number of days of hospice care provided to all Medicaid recipients during the "cap" period. For a hospice enrolling as an approved Medicaid hospice provider during a time other than the first day of the "cap year" for the first time, the "cap" will be applicable for a period of more than 12 months and not more than 23 months.

1. The report shall be sent and received no later than the January 1 following the end of the "cap" period (October 31 of the previous year) to the following address:

Division of Medical Assistance and Health Services
Hospice Program
CN-712
Trenton, New Jersey 08625-0712

SUBCHAPTER 5. HEALTH CARE FINANCING ADMINISTRATION (HCFA) COMMON PROCEDURE CODING SYSTEM (HCPCS)

10:53A-5.1 Introduction

(a) The New Jersey Medicaid program adopted the Health Care Financing Administration's (HCFA) Common Procedure Coding System (HCPCS). The HCPCS procedure codes as listed in this subchapter are relevant to certain Medicaid hospice services.

(b) For a complete description of the basis of payment for the HCPCS codes listed below, refer to N.J.A.C. 10:53A-4.2, Basis of payment—hospice providers in the Hospice Services Manual. Section 1814 (i)(1)(C)(ii) of the Social Security Act authorizes the rates and provides for annual increases in payment rates for hospice services. The Federally predetermined prospective annual rates are calculated based on the annual hospice rates established by Medicare. In addition, section 1814(i)(2)(B) of the Act provides for an annual increase in the hospice cap amounts. Hospice payment rates for care and services are in effect from October 1 of one year to September 30 of the following year. For the "cap" amounts, the fiscal year ends on October 31 of the calendar year.

(c) States have the flexibility to establish hospice rates at amounts no lower than Medicare hospice rates based on the same methodology used in setting Medicare rates, and adjusted to disregard offsets attributable to Medicare coinsurance amounts. The New Jersey Medicaid program is setting hospice rates for the four "levels of care" at the prospective predetermined levels which are determined by HCFA.

(d) The rates marked with an asterisk are adjusted for regional differences in wages, using indices based on regions listed in Addendums A and B in the State Medicaid Manual, Transmittal No. 27 (April 1987) (section 4305-4309), in the State Medicaid Manual, Transmittal No. 50 (October 1990) and in Federal statute as referenced in (b) above. These State Medicaid Manuals give specific directions for calculating individual hospice agency rates for the four levels of hospice care (routine, continuous, inpatient respite and general inpatient care) and for the co-payment for inpatient respite care. State Medicaid Manuals may be obtained through the United States Department of Health and Human Services, Health Care Financing Administration.

10:53A-5.2 HCPCS procedure codes for hospice services

Note: The rates of the procedure codes marked with an asterisk (*) are subject to an adjustment based on regional differences in wages as set by Federal statute as referenced in N.J.A.C. 10:53A-5.1(b)

*Y6333 ROUTINE HOME CARE RATE

Per diem rate, calculated as referenced in N.J.A.C. 10:53A-5.1(d)

*Y6334 CONTINUOUS HOME CARE RATE

The continuous home care rate is reimbursed at an hourly rate for at least eight hours of nursing care in a 24 hour period calculated as referenced in N.J.A.C. 10:53A-5.1(d).

*Y6335 INPATIENT RESPITE CARE RATE

Inpatient respite care is reimbursed on a per diem basis for not more than five consecutive days (including the day of admission and not the day of discharge) for short-term, occasional inpatient care subject to the limitation of the "cap" according to Federal statute as referenced in N.J.A.C. 10:53A-5.1(b), adjusted annually as specified in Sections 4306.3 of the State Medicaid Manual and described in N.J.A.C. 10:53A-4.4.

*Y6336 GENERAL INPATIENT CARE RATE

Payments are limited according to the aggregate inpatient days furnished to all recipients subject to the limitation of the "cap" according to Federal statute as referenced in N.J.A.C. 10:53A-5.1(b), adjusted annually as specified in Sections 4306.3 of the State Medicaid Manual and described in N.J.A.C. 10:53A-4.4.

Z2015 ROOM AND BOARD RATE

Room and board rate is reimbursed on a per diem basis for hospice services provided to a Medicaid recipient at the specific Medicaid approved NF rate (see NF rate setting methodology in Long Term Care Services Manual (N.J.A.C. 10:63)) where the recipient is residing. The rate is calculated at 95 percent of the highest approved per diem rate (institutionally specific) effective at the time services are provided and excluding ***retroactive rate adjustments, retroactive*** add-ons and special program rates adjusted every six months.

Y6337 THERAPEUTIC LEAVE DAYS RATE

Reimbursed at the same rate as the room and board rate in Z2015 for reserving an NF bed for a recipient who returns home, not to exceed 24 days per calendar year, in addition to the routine home care or continuous home care rate, as applicable.

Y6338 BED HOLD DAYS RATE

Reimbursed at the same rate as the room and board rate in Z2015 for reserving an NF bed for a recipient who requires inpatient hospitalization, not to exceed 10 consecutive days per period of hospitalization, in addition to the general inpatient care rate.

*Y6339 HOSPICE RESPITE CO-PAYMENT

Reimbursed on a per diem basis for dually Medicare/Medicaid recipients at five percent of the hospice Medicare inpatient respite care rate.

Y6343 DRUG AND BIOLOGICALS CO-PAYMENT

Reimbursed at a maximum of five percent per prescription cost for each outpatient drug or biological not to exceed $5.00 for each prescription for those recipients residing in an NF who are dually eligible Medicare/Medicaid recipients.

[APPENDICES] ***APPENDIX***

[APPENDIX I] ***FORM #1***—ELECTION OF HOSPICE BENEFITS STATEMENT (FD-378)
[APPENDIX II] ***FORM #2***—HOSPICE BENEFITS STATEMENT (FD-379)
[APPENDIX III] ***FORM #3***—REPRESENTATIVE STATEMENT FOR THE ELECTION OF HOSPICE BENEFITS (FD-380)
[APPENDIX IV] ***FORM #4***—REVOCATION OF HOSPICE BENEFITS (FD-381)
[APPENDIX V] ***FORM #5***—TERMINATION OF HOSPICE BENEFITS (FD-382)
[APPENDIX VI] ***FORM #6***—HOSPICE ELIGIBILITY FORM (FD-383)
[APPENDIX VII] ***FORM #7***—CHANGE OF HOSPICE (FD-384)
[APPENDIX VIII] ***FORM #8***—PHYSICIAN CERTIFICATION/ RECERTIFICATION FOR HOSPICE BENEFIT FORM (FD-385)
[APPENDIX IX] ***FORM #9***—NOTIFICATION FROM LONG TERM CARE FACILITY OF ADMISSION OR TERMINATION OF A MEDICAID PATIENT (MCNH-33)
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[APPENDIX XI] ***FORM #11***—LONG TERM CARE TURNAROUND DOCUMENT (MCNH-117)
APPENDIX *[XII]* ***II***—FISCAL AGENT BILLING SUPPLEMENT

[APPENDIX I] ***FORM #1***
STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

ELECTION OF HOSPICE BENEFITS STATEMENT

I, _____ ,
(Applicant's Name and HSP (Medicaid) Case Number)
elect to receive the Medicaid hospice benefits from

_____
(Hospice Agency and Medicaid Provider Billing Number)
this day of _____ 19 ___. I am aware that I have a life threatening illness. I consent to the management of the symptoms of my disease by the above hospice agency. My family and I will help to develop a plan of care based on our needs. My care will be supervised by my attending physician, _____ , and the Hospice Medical Director in conjunction with the hospice interdisciplinary group.

I may receive benefits which include home nursing visits, counseling, medical social work services, medical supplies and equipment. If needed, I may also receive home health aide/homemaker services, physical therapy, occupational therapy, speech-language pathology services, inpatient care for acute symptoms and procedures ordered by my physician and hospice, and continuous nursing care in the home in medical crisis.

I may request volunteer services from the hospice.

I realize that my family and I have the opportunity for limited respite or relief care in an inpatient nursing facility or hospital.

In accepting these services, I relinquish my rights to regular Medicaid benefits, except for services of my attending physician, and for treatment for medical care unrelated to my terminal illness, except when the unrelated services are approved by the hospice interdisciplinary group, or provided in the case of accidental injury, or sudden or serious illness requiring treatment on an emergency basis.

I understand that I can revoke and terminate my hospice benefits at any time and resume regular Medicaid benefits if I am still eligible for Medicaid.

I understand that the hospice benefits consists of four benefit periods—two 90-day periods, one 30-day period, and a fourth unlimited period. I may be responsible for hospice charges if I become ineligible for Medicaid.

I am aware that if I choose to revoke hospice benefits during a benefit period, I am not entitled to coverage for hospice services for the remaining days of that benefit period. I understand that should I choose to do so, I am still eligible to receive the remaining benefit period(s).

I understand, that should I choose to do so, I may change the designation of the particular hospice once during the election period by filing a statement with the particular hospice from which care has been received and with the newly designated hospice. I understand that changing hospice providers is not a revocation of the remainder of that election period.

I understand that, unless I revoke the hospice benefits, hospice coverage will continue for 210 consecutive days. After the 210 days of hospice benefits, my benefits will automatically expire unless I choose to request to enter the fourth unlimited benefit period upon physician recertification of my continued need for hospice services related to my terminal illness.

I understand that if I am a dually eligible Medicare and Medicaid recipient, I must elect to use the Medicare and Medicaid hospice benefits simultaneously.

Check one:

☐ I am a Medicare recipient and have elected to use the Medicare hospice benefits. My Medicare eligibility for hospice benefits begins _____ .
(Date)

☐ My Medicare hospice benefits have been exhausted as of _____ .
(Date)

☐ I am not a Medicare recipient.

☐ I am currently a nursing facility resident, residing at:

_____
Facility Name/Address

_____

_____
Signature of the Applicant

FD-378 (6/92)

[APPENDIX II] ***FORM #2***
STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

HOSPICE BENEFITS STATEMENT

Recipient's Signature or Mark	Recipient's Name (Print or Type)
HSP (Medicaid) Case Number	
Witness' Signature	Relationship to Hospice Recipient
Date Signed	Effective Date of Election

SECOND CERTIFICATION PERIOD
(To be signed only if benefits previously revoked or temporarily terminated)

Recipient's Signature or Mark	Recipient's Name (Print or Type)
Witness' Signature	Relationship to Hospice Recipient
Date Signed	Effective Date of Second Period

THIRD CERTIFICATION PERIOD
(To be signed only if benefits are previously revoked or temporary terminated)

Recipient's Signature or Mark	Recipient's Name (Print or Type)
Witness' Signature	Relationship to Hospice Recipient
Date Signed	Effective Date of Third Period

FOURTH CERTIFICATION PERIOD (To be signed if hospice benefits are to continue)

Recipient's Signature or Mark	Recipient's Name (Print or Type)
Witness' Signature	Relationship to Hospice Recipient
Date Signed	Effective Date of Fourth Period

FD-379 (6/92)

[APPENDIX III] ***FORM #3***
STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

REPRESENTATIVE STATEMENT FOR THE ELECTION OF HOSPICE BENEFITS

I,_____, due to the physical/mental
(Legal Representative)
incapacity of _____, am authorized
(Applicant's Name and HSP (Medicaid) Case Number)
in accordance with State laws to execute, change or revoke the election of Medicaid hospice benefits on behalf of _____, who has been certified as terminally ill. As the representative for _____, I will sign all necessary forms required for the administration of hospice benefits.

_____
Signature of the Legal Representative

_____
Date

_____
Witness

_____
Date

FD-380 (6/92)

[APPENDIX IV] ***FORM #4***
STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

REVOCATION OF HOSPICE BENEFITS

I,_____ revoke the hospice benefits allowed
(Recipient's Name and HSP (Medicaid) Case Number)
to me by Medicaid and rendered by_____,
Hospice Agency and Medicaid Provider Billing Number
effective this _____ day of _____, 19____.

I understand that any remaining days of this election period will not be available to me.

I understand that I may elect hospice services at a later time if this revocation has occurred during either of the two initial 90-day benefit periods.

I understand that as of the date of this revocation, if I am still eligible, my regular Medicaid benefits will be restored.

_____ *_____*
Hospice Recipient's Signature or Mark ***Date***

FD-381 (6/92)

[APPENDIX V] ***FORM #5***
STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

TERMINATION OF HOSPICE BENEFITS

Hospice benefits for_____ are hereby
(Recipient's Name and HSP (Medicaid) Case Number)
terminated effective _____, 19____, for the following reason.

- ☐ Patient is deceased. Date of death is _____, 19____.
- ☐ Patient has not requested extension of Medicaid hospice benefits.
- ☐ Patient has become financially ineligible for Medicaid.
- ☐ Patient has become medically ineligible for hospice benefits as there is no physician certification or recertification of the terminal illness or need for hospice services.
- ☐ OTHER: (Please explain.)_____

_____

_____

_____

- ☐ Condition improved. Inactive status.

_____
(Hospice Agency and Medicaid Provider Billing Number)

will continue to follow patient but active hospice benefits are temporarily discontinued. Patient may return to active status any time change in condition necessitates.

_____ _____
Hospice Medical Director *[Date]* ***Date***

FD-382 (6/92)

[APPENDIX VI] ***FORM #6***
STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

HOSPICE ELIGIBILITY FORM

THIS SECTION TO BE COMPLETED BY THE HOSPICE AGENCY
☐ Initial application ☐ Change in status
☐ Change of address

1. Recipient's Name _____
2. HSP (Medicaid) Case # _____
3. Recipient's Address _____
4. Birthdate:
Sex: Male ☐ Female ☐
SSN: _____
Race: _____
5. Is the recipient currently receiving Room and Board Service in a nursing facility:
Yes ☐ No ☐ If yes, give name and address of facility:
6. Medicare entitlement: ***PART A*** Yes ☐ No ☐
PART B Yes ☐ No ☐*
HIC # _____
7. Medicaid eligibility: Yes ☐ No ☐ Unknown ☐
If no, give the name of the person, the relationship to recipient, and the telephone number of the person who will initiate the Medicaid application.
8. Other insurance (Include company name, policy number, and policy holder):
9. ☐ Election of hospice benefit on _____
Physician Certification on _____
10. ☐ Termination of benefit on _____
Reason: Death ☐ Revocation ☐ Other (Explain)_____
11. ☐ Change of hospice provider on _____
From: _____, Medicaid Provider Billing No.____
To: _____, Medicaid Provider Billing No.____

Name, Address and Medicaid Provider Billing Number of provider submitting form:

Contact person and telephone number:_____ Date: _____

THIS SECTION TO BE COMPLETED BY THE MDO, CWA, OR DYFS DISTRICT OFFICE AS CONFIRMATION OF ELIGIBILITY
12. Medicaid eligibility effective date:_____ termination date: _____
13. HSP (Medicaid) Case # (if not entered above): _____
14. Attach copy of computer screen showing effective date and termination date of "Special Program Code 15".

Note: Hospice eligibility dates correspond to election or revocation dates.

Contact person and telephone number:_____ Date_____

Agency_____

FD-383 (6/92)

INSTRUCTIONS FOR SUBMITTING THE HOSPICE ELIGIBILITY FORM (FD-383 (6/92))

The Hospice Eligibility Form (FD-383 (6/92)) is to be initiated by the hospice provider. The purpose of this form is to ensure that the recipient is medically and financially eligible for Medicaid hospice services and is identified in the eligibility system at the CWA, MDO, or DYFS District Offices as a hospice recipient (Special Program Segment 15). Accurate completion of this form will ensure payment to the hospice provider for services provided to Medicaid hospice recipients.

Form FD-383 should also be completed by the hospice provider when the person elects or revokes the hospice benefit, the Medicaid recipient dies, if there is a change of hospice providers, or a change in Medicaid recipient's address.

The first section of form FD-383 must be completed by the hospice provider and sent to the agencies as follows:

- To the Medicaid District Office (MDO) for SSI eligibles.
- To the County Welfare Agency (CWA) of the person's residence for Medicaid Only and New Jersey Care ... Special Medicaid Programs applicants.
- To the Division of Youth and Family Services (DYFS) District Office for children in DYFS foster care.

The hospice provider must send the original copy of form FD-383 to one of the above agencies with a copy to:

Division of Medical Assistance and Health Services
Hospice Program CN-712
Trenton, New Jersey 08625-0712

The MDO, CWA, or DYFS District Office will process the data and return a copy of form FD-383 to the hospice provider with a copy of the computer screen showing the effective date and termination date of "Special Program Code 15". Please refer to the Hospice Services Manual instructions for more detail on the eligibility process.

[APPENDIX VII] ***FORM #7***
STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

CHANGE OF HOSPICE

I,_____ ,
(Recipient's Name and HSP (Medicaid) Case Number)
wish to change the designation of the particular hospice from which I receive hospice care. I no longer with to receive hospice service from _____, but instead wish to receive hospice services
(Hospice Agency and Medicaid Provider Billing Number)
from _____ effective this _____ day of
(Hospice Agency and Medicaid Provider Billing Number)
_____, 19____.

I understand that this change of hospice providers is not a revocation of the remainder of this election period.

_____ _____
Recipient's Signature or Mark Witness Signature

_____ _____
Date Date

FD-384 (6/92)

[APPENDIX VIII] ***FORM #8***
STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

PHYSICIAN'S CERTIFICATION/RECERTIFICATION FOR HOSPICE BENEFITS FORM

I,_____ , as the attending physician of _____, who is under my care at this time, hereby
(Recipient's name and HSP (Medicaid) Case Number)
certify (or recertify) that this patient is terminally ill, this his/her life expectancy is six months or less provided the illness follows its usual course, and that hospice services are reasonable and necessary for the treatment of this terminal illness or related condition.

_____
Signature of the Attending Physician

_____
Print the Attending Physician's Name

_____
Date

FD-385 (6/92)

[APPENDIX IX] *FORM #9*

NOTIFICATION FROM LONG TERM CARE FACILITY OF ADMISSION OR TERMINATION OF A MEDICAID PATIENT (MCNH-33)

SAMPLE

STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

NOTIFICATION FROM LONG-TERM CARE FACILITY OF ADMISSION OR TERMINATION OF A MEDICAID PATIENT

I. PATIENT INFORMATION:

1. Name: _____ (LAST) _____ (FIRST) 2. Social Security Account No.: _ _ _ - _ _ - _ _ _ _
3. HSP(Medicaid) Case No.: _ _ _ _ _ _ _ _ _ _ _ _ _ Confirmed By: _____ (CWA) ☐ Medicaid Only ☐ SSI
4. Authorized by: _____ Medicaid District Office

II. PROVIDER INFORMATION:

1. Provider Number: _ _ _ _
2. LTCF Name: _____ 5. MEDICAID DISTRICT OFFICE
3. Address: _____ MDO Street Address: _____
4. City, State, Zip: _____ City, State, Zip: _____

III. ADMISSION INFORMATION:

1. Admission Date: ___ / ___ / ___ 2. Is this a new admission? ___Yes ___ No (If yes, send copy of MCNH-33 to CWA.)
3. Admitted to room number: _____ Bed number: _____
4. Admitted from: ___ Community Boarding Home ___ Medicare to Medicaid ___ Psychiatric Hospital
   ___ Private to Medicaid (anticipated Medicaid effective date: ___ / ___ / ___ (Attach PA-4 to MDO copy)
   ___ Hospital ___ Other LTCF ___ Other (identify) _____
5. Name and Address of hospital/LTCF: _____ Admission Date: ___ / ___ / ___
   _____
6. If admitted from hospital/LTCF give the name/address of previous residence:
   _____
   (Hospital Name and Address or Home Address)

IV. TERMINATION INFORMATION:

1. Discharge Date: ___ / ___ / ___ 2. Has discharge been ordered by physician? ___Yes ___ No
3. Bed will be reserved in room number: _____ Bed number: _____
4. Discharged to hospital _____ (do not send MCNH-33 to CWA)
   NAME OF HOSPITAL
5. Discharged to: ___ Community (from LTCF/Hospital) ___ Other LTCF ___ Other (identify)
6. Death: ___ in LTCF ___ in hospital

V. CERTIFICATION:

The facility certifies that the patient will reside only in those areas of the facility which are certified for participation in the New Jersey Medicaid Program at the level of care authorized for this patient by the New Jersey Medicaid Program. The facility also certifies that upon discharge to a hospital, the patient's room/bed will be reserved for the full period of time covered by the New Jersey Medicaid Bed Reserve policy.

This form completed by: _____ (Name) _____ (Title) _____ (Date) _____ (Signature)

VI. CWA USE ONLY:

Medicaid Effective Date: ___ / ___ / ___
_ Medicaid Only - PA-3L attached
_ SSI only - no PA-3L required
_ Not eligible
_ Transcript requested - Date: ___ / ___ / ___
Remarks:

COUNTY WELFARE OFFICE

Street Address: _____

City and Zip: _____

Signature of Case Worker: _____ Date: _____

[APPENDIX X] ***FORM #10***
STATE OF AVAILABLE INCOME FOR MEDICAID PAYMENT (PA-3L)

SAMPLE

STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

STATEMENT OF AVAILABLE INCOME FOR MEDICAID PAYMENT

Redetermination Date: _____ (MM/YY) SSA No.: _____ _____ (ELIG. EFF. DATE) _____ (PRINT DATE)

_____ (HSP (Medicaid) CASE NUMBER) _____ (LAST) _____ (FIRST) _____ (COUNTY)

Long-Term Care Facility: _____

Address: _____

SSI STATUS _ _ _ _ (LAC/PS) LTCF Provider No._____ Previous Provider No.: _____

	LTCF Information	PA3L #1 Information	PA3L #2 Information	PA3L #3 Information	Remarks
Effective Date					Admit, Change, Redetermination
Social Security Income					Claim #
Buy-In Amount					HIC #
Gross Social Sec. Benefit					
Railroad/Veteran					Claim #
Pension/Other Benefit					Specify
Other Income					Specify
Total Other Income	$				Spouse's S.S.A. #
Total Gross Income		$	$	$	M=Married Couple same LTCF G=Foreign Pension/VA A & A C=Combined Situation
Workshop/Other					
Maint./Home					Specify
Maint./Spouse Dependent					Specify
Health Premium	$				Policy #
[illegible] Exempt		$	$	$	
[illegible]	$				
Available Income		$	$	$	R=Representative Payee
Month of Adm./ Disch. Exempt					Specify
Resources	SPECIFY (i.e., address)				Circle One Yes No

Name and Address of Representative Payee

Signature: IM Worker: _____ Date: _____

Supervisor: _____ Date: _____

PA-3L (rev. 6/88)

BUREAU OF CLAIMS & ACCOUNT

[APPENDIX XI] *FORM #11*
LONG TERM CARE TURNAROUND DOCUMENT (TAD)

SAMPLE

RETURN TO UNISYS, CN 4805, TRENTON, NJ 08650

PROVIDER NO. PER DIEM

LONG TERM CARE TURNAROUND DOCUMENT (TAD)

State of New Jersey
Department of Human Services
Division of Medical Assistance and Health Services

BILLING MONTH/YEAR _____

PAGE _____ OF _____

1 REF	2 ACT	3 PATIENT LAST NAME	4 INIT	5 MEDICAID HSP#	6 PAT. ACCT. NO.	7 ATTEND PHYS	8 ADMIT DT	9 ADM CODE	10 FROM DOS	11 TO DOS	12 DS CD	13 LOC

LINE	14 DX 1	15 DX 2	16 DX 3	17 ADDITIONAL NURSING SERVICES	18 THERAPIES	19 FUTURE USE	20 COTTAGE #	21 CO CD	22 LV USE
1				TRA RES IVT HTR OXY NGT WOU	PHY SPE OCC	FUT1 FUT2 FUT3			

23 CD	24 FR	1ST LOA TO	25 CD	26 FR	2ND LOA TO	27 CD	28 FR	3RD LOA TO	29 CD	30 FR	4TH LOA TO	31 CD	32 FR	5TH LOA TO	33 TPL 1	34 TPL 2	35 PAT. PYMT.	36 INS. PYMT.	37 OTH. PYMT.

1 REF	2 ACT	3 PATIENT LAST NAME	4 INIT	5 MEDICAID HSP#	6 PAT. ACCT. NO.	7 ATTEND PHYS	8 ADMIT DT	9 ADM CODE	10 FROM DOS	11 TO DOS	12 DS CD	13 LOC

LINE	14 DX 1	15 DX 2	16 DX 3	17 ADDITIONAL NURSING SERVICES	18 THERAPIES	19 FUTURE USE	20 COTTAGE #	21 CO CD	22 LV USE
2				TRA RES IVT HTR OXY NGT WOU	PHY SPE OCC	FUT1 FUT2 FUT3			

23 CD	24 FR	1ST LOA TO	25 CD	26 FR	2ND LOA TO	27 CD	28 FR	3RD LOA TO	29 CD	30 FR	4TH LOA TO	31 CD	32 FR	5TH LOA TO	33 TPL 1	34 TPL 2	35 PAT. PYMT.	36 INS. PYMT.	37 OTH. PYMT.

1 REF	2 ACT	3 PATIENT LAST NAME	4 INIT	5 MEDICAID HSP#	6 PAT. ACCT. NO.	7 ATTEND PHYS	8 ADMIT DT	9 ADM CODE	10 FROM DOS	11 TO DOS	12 DS CD	13 LOC

LINE	14 DX 1	15 DX 2	16 DX 3	17 ADDITIONAL NURSING SERVICES	18 THERAPIES	19 FUTURE USE	20 COTTAGE #	21 CO CD	22 LV USE
3				TRA RES IVT HTR OXY NGT WOU	PHY SPE OCC	FUT1 FUT2 FUT3			

23 CD	24 FR	1ST LOA TO	25 CD	26 FR	2ND LOA TO	27 CD	28 FR	3RD LOA TO	29 CD	30 FR	4TH LOA TO	31 CD	32 FR	5TH LOA TO	33 TPL 1	34 TPL 2	35 PAT. PYMT.	36 INS. PYMT.	37 OTH. PYMT.

1 REF	2 ACT	3 PATIENT LAST NAME	4 INIT	5 MEDICAID HSP#	6 PAT. ACCT. NO.	7 ATTEND PHYS	8 ADMIT DT	9 ADM CODE	10 FROM DOS	11 TO DOS	12 DS CD	13 LOC

LINE	14 DX 1	15 DX 2	16 DX 3	17 ADDITIONAL NURSING SERVICES	18 THERAPIES	19 FUTURE USE	20 COTTAGE #	21 CO CD	22 LV USE
4				TRA RES IVT HTR OXY NGT WOU	PHY SPE OCC	FUT1 FUT2 FUT3			

23 CD	24 FR	1ST LOA TO	25 CD	26 FR	2ND LOA TO	27 CD	28 FR	3RD LOA TO	29 CD	30 FR	4TH LOA TO	31 CD	32 FR	5TH LOA TO	33 TPL 1	34 TPL 2	35 PAT. PYMT.	36 INS. PYMT.	37 OTH. PYMT.

REMARKS 38

MCNH-117 (9/91)

APPENDIX *[XII]* *II*
FISCAL AGENT BILLING SUPPLEMENT

AGENCY NOTE: The Fiscal Agent Billing Supplement is appended as a part of this chapter but is not reproduced in the New Jersey Administrative Code. When revisions are made to the Fiscal Agent Billing Supplement, replacement pages will be distributed to providers and copies will be filed with the Office of Administrative Law. For a copy of the Fiscal Agent Billing Supplement, write to:

Paramax/Unisys Corporation
CN-4801
Trenton, New Jersey 08650-4801

or contact:

Office of Administrative Law
Quakerbridge Plaza, Building 9
CN-049
Trenton, New Jersey 08625-0049

10:71-5.6 Income eligibility standards

(a)-(c) (No change.)

(d) Institutional eligibility: For the purpose of the Medicaid program, Title XIX approved facilities shall include acute care general hospitals, nursing facilities, intermediate care facilities for the mentally retarded *(*ICF/MR*)*, and licensed special hospitals (Class A, B, C) and Title XIX psychiatric hospitals (for persons under age 21 and age 65 and over).

1. Persons are considered institutionalized if they enter a Title XIX approved facility and a physician has certified that the duration of stay in the Title XIX facility (or a combination of such facilities) is expected to be 30 consecutive days or more. Income eligiblity shall be determined in accordance with the variations contained in N.J.A.C. 10:71-5.4(b). However, the income of the institutionalized individual shall not be reduced by any of the income exclusions found in N.J.A.C. 10:71-5.3.

2. Institutionalized individuals, identified in (d)1 above, who are found Program eligible will receive benefits as of the date of admission.

3. Persons in a facility which is not Title XIX approved or whose stay is expected to be a period of less than 30 consecutive days will have eligibility determined in accordance with the community living arrangement which existed prior to entering the facility.

4. (No change.)

5. Persons living in the community who do not otherwise qualify for Medicaid benefits and who elect to participate in the hospice program, or who are assigned a slot in the CCPED or other waiver programs, will have financial eligibility determined in the same manner as those who reside in an institution.

i. Such individuals who are found eligible will receive benefits on the date of the election of hospice benefits, or the date of assignment to a waiver slot, whichever is applicable.

(a)

DIVISION OF MEDICAL ASSISTANCE AND HEALTH SERVICES

Home Care Services Manual

Personal Care Assistant Services; Eligibility for HCEP

Adopted Amendments: N.J.A.C. 10:60-2.3, 3.15 and 4.2

Proposed: August 3, 1992 at 24 N.J.R. 2687(c).
Adopted: October 7, 1992 by Alan J. Gibbs, Commissioner, Department of Human Services.
Filed: October 7, 1992 as R.1992 d.438, **without change.**

Authority: N.J.S.A. 30:4D-6b(2)(12)(17); N.J.S.A. 30:4E-8, 10; 42 CFR 440.170(f).

Effective Date: November 2, 1992.
Expiration Date: February 19, 1996.

Summary of Public Comments and Agency Response:

COMMENT: Andrew D. Hendry, Assistant Director, Legislative and Advocacy Services, Association for Retarded Citizens of New Jersey, supported the increase in the maximum personal care assistant hours (PCA) from 25 to 40 hours per week. The commenter stated that family caregivers of persons with developmental disabilities are an increasingly aging population who are under great strain. The additional hours will ease the family's burden and possibly avoid the "far more expensive option of institutionalization." The commenter had one fear in that the requirement for medical need contained in the rule might be interpreted too literally. The commenter wanted the concept of "medical need" to include both a "direct medical need," that is, providing insulin to a diabetic, and an "indirect medical need, that is, bathing an incapacitated person so that sickness can be prevented.

RESPONSE: The Department's response is that it appreciates the support for the increased hours. The Department also hopes that the increased PCA hours will obviate the need for institutional placement.

The Department must maintain the standard of medical necessity in order to comply with Federal regulations (42 CFR 440.170(f)). However, medical need is currently interpreted as in need of health related tasks, including activities of daily living, that are essential to the recipient's health and well-being.

COMMENT: Ken Dolan, Executive Director, Home Care Council of New Jersey, supported the increase in the maximum number of PCA hours to 40. The commenter stated that several member agencies have reported that an additional 10 to 15 hours per week of PCA services would have enabled patients to remain in their own homes.

The commenter requested tight controls over expanded hours "because the drive to maximize profits will encourage some home care providers to abuse the system." The commenter offered two suggestions:

1. Providers should be required to submit written notification to the MDO and the Division's Central Office within 24 hours after the initiation of expanded hours.

2. The Division's Office of Home Care Programs should continuously track and periodically analyze expanded hour notifications. The analysis should provide data on the providers, geographic location, and reasons for expanded hours.

The commenter also requested that "reimbursement for expanded hours be based on the hourly rate and not a special block rate as is the case with 12 or 24 hour cases."

RESPONSE: The Department's response is that it again appreciates the support for the additional PCA hours. With respect to the controls, the rules already require the provider to notify the MDO, albeit the notification can be in writing or by telephone. The agency will take administrative measures to monitor the expanded hours, including receiving and reviewing reports from the Office of Program Integrity Administration and including these cases in the MDO's Post Payment Home Care Quality Assurance program.

With respect to the reimbursement for expanded hours, the agency intends to continue the current practice of using the hourly rate which is what the commenter advocated.

COMMENT: A Medicaid recipient wrote in support of the increase in the maximum number of hours. The recipient's identity is confidential pursuant to N.J.A.C. 10:49-9.4.

RESPONSE: The agency appreciates the support for the increased hours.

Full text of the adoption follows.

10:60-2.3 Additional requirements for provision of covered services
(a)-(d) (No change.)
(e) Service limitations are as follows:
1. (No change.)
2. Personal care assistant services are limited to a maximum of 25 hours per week. However, if there is a medical need for additional hours of service, this limit may be exceeded by the provider up to an additional 15 hours per week, under certain criteria as follows:
i. If the caregiver is employed, ill, frail, or temporarily absent from the home for sickness or family emergency and therefore unable to participate adequately in providing medically necessary care to ensure the safety and well-being of the recipient;
ii. If the recipient lives alone or has no caregiver, and is in need of medically necessary care to ensure his or her safety and well-being;
iii. If the recipient is severely functionally limited and requires care to meet activities in daily living (ADL) needs, both in the morning and afternoon/evening; or
iv. If the recipient's physical status/medical condition suddenly deteriorates, resulting in an increased need for personal care on a short-term basis until the stabilization of the health status.
3. Additional hours must be medically indicated as specified in N.J.A.C. 10:60-2.2 and must not be a companion service.
4. The agency providing these increased services must notify the Medicaid District Office (MDO) either in writing or by telephone, about the recipients receiving more than 25 hours of PCA services. Failure to notify the MDO may result in non-payment of the hours in excess of the 25 hours. Services provided to these recipients will be included by the MDO in the post-payment quality assurance reviews.

10:60-3.15 ACCAP services
(a) All Medicaid services, except for nursery facility services, are available under ACCAP in accord with an individualized plan of care. Additionally, the following services are available to the eligible recipient:
1.-3. (No change.)
4. Personal care assistant service: These are health-related tasks performed in the recipient's home by a certified individual who is under supervision of a registered professional nurse. These services shall be prescribed by a physician and shall be provided in accord with a written plan of care. Personal care assistant service under ACCAP may exceed the regular program limitation. Only Medicaid-approved personal care assistant providers shall provide personal care assistant service under ACCAP.
(5)-(6) (No change.)

10:60-4.2 Eligibility requirements for HCEP
(a) Financial eligibility shall be determined by the Division's Bureau of Pharmaceutical Assistance to the Aged and Disabled (PAAD) initially and on an annual basis using existing PAAD processes and policies where applicable.
(b) To qualify for services, an applicant shall meet the following criteria:
1. Be a resident of New Jersey for at least 30 days;
2. Have a gross annual income of less than $18,000 if single, or if married, less than $21,000 in combination with that of a spouse.
3.-6. (No change.)
(c)-(g) (No change.)

(a)

DIVISION OF YOUTH AND FAMILY SERVICES

Adoption Assistance and Child Welfare Act of 1980 Requirements

Readoption with Amendment: N.J.A.C. 10:131

Proposed: July 20, 1992 at 24 N.J.R. 2522(a).
Adopted: October 2, 1992 by Alan J. Gibbs, Commissioner, Department of Human Services.
Filed: October 7, 1992 as R.1992 d.437, **without change.**

Authority: N.J.S.A. 30:4C-4 and 30:1-12.

Effective Date: October 7, 1992, Readoption;
November 2, 1992, Amendment.
Expiration Date: October 7, 1997.

Summary of Public Comments and Agency Responses:
No comments received.

Full text of the readoption can be found in the New Jersey Administrative Code at N.J.A.C. 10:131.

Full text of the adopted amendment follows.

10:131-1.1 State Child Welfare Services Plan
New Jersey develops an annual State Child Welfare Services Plan. Copies of the State Child Welfare Services Plan may be obtained from:

Division of Youth and Family Services
Office of Policy, Planning and Support
50 East State Street
CN 717
Trenton, New Jersey 08625-0717

LAW AND PUBLIC SAFETY

(b)

DIVISION OF ALCOHOLIC BEVERAGE CONTROL

Licensee Training and Certification

Adopted New Rules: N.J.A.C. 13:2-22

Proposed: June 1, 1992 at 24 N.J.R. 1958(b).
Adopted: October 7, 1992 by Catherine A. Costa, Director, Division of Alcoholic Beverage Control.
Filed: October 9, 1992 as R.1992 d.445, **with substantive changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 33:1-3, 12, 12.40 through 12.48, 23, 25, 26, 27, 31, 39 and 93.

Effective Date: November 2, 1992.
Operative Date: At such time as the Director contracts with a nonprofit educational organization pursuant to N.J.A.C. 13:2-22.5 (see N.J.A.C. 13:2-22.10).
Expiration Date: July 24, 1995.

Summary of Public Comments and Agency Responses:
Pursuant to the Notice of Proposal, the Director of the Division of Alcoholic Beverage Control solicited public comments with regards to the proposed training rules. The Division received one written comment from Mr. Perry Collier, President of Collier's Liquor Store, who indicated that a more efficient way to conduct the training would be by using correspondence courses which could be updated annually rather than require attendance at an actual training class. The Director in response indicated that the intent and purpose of the training is to insure that the actual owners and key employees are familiar with the rules regarding the sale of alcoholic beverages. The Director stated the only way to insure that the intent and purpose of the rules are met is to require actual attendance at a training seminar.

Summary of Agency-Initiated Changes:

Upon review of the new rules, the Director has determined that the nine month completion period for the initial training by all plenary and limited retail distribution licensees from the adoption date of the rules is impractical. No seminars will be held while the Director is in the process of contracting with a nonprofit educational organization to administer and conduct all or part of the educational training program. Therefore, in essence, the first seminar will be held less than a full nine months after the effective date, making it impractical to offer sufficient training sites and sessions to service the entire universe of affected licensees. Therefore, the Director has determined that the operative date with relationship to the nine month period requiring all licensees to complete the initial training program shall begin at the time the Director contracts with the nonprofit educational organization pursuant to N.J.A.C. 13:2-22.5. Therefore, there shall be an amendment to N.J.A.C. 13:2-22.2(a) indicating a change in the operative date and a new section, N.J.A.C. 13:2-22.10, establishing the operative date.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *[thus]*):

SUBCHAPTER 22. LICENSEE TRAINING AND CERTIFICATION

13:2-22.1 Licensee training program established

All holders of a plenary or limited retail distribution license issued under the provisions of N.J.S.A. 33:1-12 shall successfully complete educational training courses at such times, under such conditions, and with identified consequences for noncompliance, as are hereinafter set forth in this subchapter.

13:2-22.2 Requirements for successful completion; time for completion

(a) All holders of a plenary or limited retail distribution license at the time this subchapter *[is adopted]* ***becomes operative*** shall successfully complete an initial educational training program within nine months of the *[effective date of this subchapter]* ***operative date of this subchapter***. Successful completion shall entail attendance during the entire training program and satisfactory participation in the program's group exercise and questioning activities.

(b) Any person or entity that thereafter acquires a plenary or limited retail distribution license as a newly issued license, or by an approved person-to-person transfer of license, or any currently existing plenary or limited retail distribution license held by a corporation which is subject to a change of 33⅓ percent or more of its corporate stockholders, shall be required to attend and successfully complete an initial educational training program within nine months of the new license issuance, the approval of a person-to-person license transfer application or the change of 33⅓ percent or more of the stockholdings in a corporate license.

(c) All holders of plenary or limited retail distribution licenses that have successfully completed an initial educational training program shall be required to attend and successfully complete supplemental continuing educational training programs determined necessary by the Director based upon modifications and changes in the law, regulations, policy or societal conditions. The schedule for supplemental training shall be set forth in the Alcoholic Beverage Control Bulletin and further communicated to all affected licensees.

13:2-22.3 Individuals required to attend

(a) One or more of the following individuals shall be required to attend the educational training programs on behalf of the plenary or limited retail distribution licensee:

1. For licenses held in the name of an individual as a sole proprietorship, or for licenses held in the name of a partnership, the required attendee shall be the individual owner of the license, or at least one of the partners actively engaged in the operation or control of the business, respectively.

2. For licenses held by a corporation, the required attendee shall be at least one of the corporate officers or a stockholder owning at least 25 percent of the corporate stock, who shall be actively engaged in the operation or control of the business.

3. Where any licensee designates a manager on its license application, the required attendee shall also include that individual, in addition to the persons identified in (a)1 or (a)2 above.

4. In addition to the above, any licensee may register as an attendee, on a space available basis, any other officer, stockholder, clerk or other employee actively engaged in the operation or control of the licensed business.

13:2-22.4 Dates and location of training

The educational training programs required under this subchapter shall be available and reasonably accessible to all plenary and limited retail distribution licensees in the State. The training programs shall be offered at least once every three months, subject to need, in the geographical area covered by each of the current three telephone area codes in New Jersey; as well as at least once annually on a Statewide basis.

13:2-22.5 Designation of entity to conduct the training programs

In order to satisfy the training requirements on the most cost efficient basis, and in furtherance of the authority set forth in N.J.S.A. 33:1-12.45, the Director, Division of Alcoholic Beverage Control may contract with a non-profit educational organization in this State to administer and conduct all or part of the educational training programs required by this subchapter.

13:2-22.6 Training program curriculum

(a) The Director, Division of Alcoholic Beverage Control, shall establish and revise annually the course content and shall approve the individual instructors or lecturers who will conduct the training programs, in consultation with any non-profit educational organization he or she may have contracted with in accordance with N.J.A.C. 13:2-22.5.

(b) The curriculum for the initial training programs shall include, but is not limited to, an explanation and development of the following:

1. The provisions of the New Jersey Alcoholic Beverage Control Act, N.J.S.A. 33:1-1 et seq., as it relates to the distribution, transportation, sale, and marketing of alcoholic beverages by retail distribution licensees; with detailed emphasis placed on the provisions of law governing the sale and delivery of alcoholic beverages to persons under the legal age;

2. The rules and regulations promulgated by the Director, Division of Alcoholic Beverage Control, N.J.A.C. 13:2, governing the sale, advertising, transportation, required records, promotion and marketing of alcoholic beverages, the disciplinary and adjudicatory procedures and consequences attendant to violative activity, and the permitted and prohibited conduct and use of the license and the licensed premises;

3. The application of municipal ordinances and regulations concerning the licensure, hours of sale, location, restrictions and permitted use of retail licenses and licensed premises established by municipal governing bodies or municipal boards of alcoholic beverage control;

4. Relevant administrative policies and determinations of the Director, Division of Alcoholic Beverage Control, the requirements and procedures for the collection and remittance of New Jersey taxes, and other State and Federal laws and regulations that impact upon the retail alcoholic beverage industry of the State of New Jersey; and

5. The relationship and application of the 10 point legislative declaration of policy and purpose set forth in N.J.S.A. 33:1-3 to the conduct and use of retail liquor licenses.

(c) The curriculum for the supplemental training program shall include, but is not limited to, any changes in the Alcoholic Beverage Control Act or other related laws affecting retail licensed businesses, new or amended regulations of the Division of Alcoholic Beverage Control, administrative and judicial policy changes, prevailing market or societal conditions and reinforcement or further expansion of matters addressed in the initial training program or revisions thereto.

13:2-22.7 Registration fees

(a) Each attendee shall be required to pay a registration fee in an amount to be established by the Director, Division of Alcoholic

Beverage Control, giving due consideration to the actual expenses required to properly operate and maintain the educational training programs. The cost of registration shall be reviewed annually by the Director against the actual operational expenses and adjusted accordingly. In no event shall be registration fee for each attendee be less than $50.00 nor more than $150.00.

(b) A schedule of registration fees and any subsequent amendments thereto shall be set forth and published in the Alcoholic Beverage Control Bulletin, and otherwise disseminated to all affected licensees.

(c) For purposes of administration, if the Director contracts with a non-profit educational organization pursuant to N.J.A.C. 13:2-22.5, the full registration fee shall be remitted to the contracting educational organization. That organization shall forward 20 percent of the fee to the Director, within seven business days after receipt for deposit in the State Treasury. The balance of the fee shall be retained by the educational organization to reimburse it for the costs associated with the conduct and maintenance of the educational training programs, including the scheduling, notice and promotional expenses, site expenses, instructional expenses (other than personnel of the Division of Alcoholic Beverage Control or other State employees), course materials, and other related expenses.

(d) The non-profit educational organization shall maintain true and accurate books of account concerning all aspects of the operation and maintenance of the educational training program, which records shall be made available for inspection by the Director upon demand. The organization shall provide the Director with a full and complete fiscal and operational report detailing the program's activities on an annual basis; and it shall post an adequate performance bond if required by the Director.

13:2-22.8 Certification of educational training or order of deferment

(a) Upon the satisfactory completion of an initial or supplemental educational training program required under this subchapter, the holder of a plenary or limited retail distribution license shall receive from the Director, Division of Alcoholic Beverage Control, a Certificate of Educational Training. The certificate shall include the date and location of the completed training program, the name of the attendee or attendees on behalf of the licensee, and the licensee's name, address and license number. The Certificate of Educational Training may be displayed on the licensed premises and must be made available to the licensing issuing authority at the time of any application for renewal of the license.

(b) Any holder of a plenary or limited retail distribution licenses who submits that it will be unable to attend an initial or supplemental training program within the required time period, may apply to the Director, no later than 30 days before the expiration of the requisite training time period, for a deferment of the requirement for attendance in the educational program. The request for deferment shall be made to the Director on a form to be promulgated by the Director and accompanied by a non-refundable processing fee of $25.00. If the Director is satisfied that there is good cause for the deferment, the Director shall issue an Order of Deferment of the training requirement, subject to conditions thereon as may be appropriate. Any Order of Deferment shall not exceed six months.

13:2-22.9 Sanctions for noncompliance

(a) Any holder of a plenary or limited retail distribution license who fails to attend and successfully complete the required initial or supplemental educational training program within the time period set forth in this subchapter, and who has not received a currently valid Order of Deferment, shall be subject to the following administrative sanctions to be imposed by the Director, Division of Alcoholic Beverage Control.

1. The first failure to attend or successfully complete the training program within the time periods set forth in this subchapter shall constitute a first offense and shall subject the licensee to a monetary penalty of $250.00 in lieu of institution of formal disciplinary proceedings, with a requirement that the training be completed within the following three months.

2. Failure to attend or successfully complete the training program within the three month extension after a first offense shall constitute a second offense and subject the licensee to a monetary penalty of $500.00 in lieu of institution of formal disciplinary proceedings, with a requirement that the training be completed within the following three months.

3. Failure to attend or successfully complete the training program within the additional three month extension granted a second offender shall constitute a third offense and subject the licensee to a monetary penalty of $1,000 in lieu of institution of formal disciplinary proceedings, with a requirement that the training be completed within the following three months.

4. Any failure to comply with the final three months extension afforded a third offender shall subject the licensee to formal administrative charges that can lead to an indefinite suspension of license, with leave granted to lift the suspension upon payment of a monetary penalty of $2,000 and proof of satisfactory completion of the educational training program.

***13:2-22.10 Subchapter operative date**

This subchapter shall be operative on the date of the Director's contracting with a nonprofit educational organization pursuant to N.J.A.C. 13:2-22.5. Notice of such operative date shall be published in the New Jersey Register and added to this subchapter where necessary through a Notice of Administrative Change.*

(a)

DIVISION OF CONSUMER AFFAIRS
STATE BOARD OF COSMETOLOGY AND HAIRSTYLING

Annex Classrooms; Fees
Adopted New Rule: N.J.A.C. 13:28-6.35
Adopted Amendment: N.J.A.C. 13:28-5.1

Proposed: July 6, 1992 at 24 N.J.R. 2333(a).
Adopted: September 30, 1992 by the Board of Cosmetology and Hairstyling, Bridget Damiano, Chairperson.
Filed: October 9, 1992 as R.1992 d.444, **without change.**

Authority: N.J.S.A. 45:5B-6.

Effective Date: November 2, 1992.
Expiration Date: May 16, 1993.

Summary of Public Comments and Agency Responses:

One comment in support of the proposal was received from Carmen G. Triggiano, Legislative Chairman and Trustee, Hair International of N.J.

Full text of the adoption follows.

13:28-5.1 Fee schedule

(a) The following fees will be charged by the Board:

1.-16. (No change.)

17. Annex classroom (initial):	$150.00
18. Biennial school license with annex classroom—renewal:	$200.00

13:28-6.35 Annex classrooms

(a) An application for approval of a school of cosmetology and hairstyling to conduct an annex classroom separate and apart from the licensed main facility for specific training activities shall be submitted on an application form prescribed and provided by the Board.

1. A licensed school may not have more than one annex classroom. It may be used only by the school under which it is licensed.

2. An inspection of the annex classroom shall be made by an inspector after the minimum equipment has been installed therein, and a report of such inspection shall be made to the Board before a school may be authorized to operate.

3. Schools making application to include an annex classroom in their initial school license application will not be charged a separate application fee. Schools making application for an annex classroom after their initial license is issued shall be required to pay a separate application fee.

(b) Requirements for an annex classroom are as follows:

1. The minimum floor space in any annex classroom shall be at least 500 square feet, excluding offices, reception, locker and lavatory space, for the first 25 students and an additional 20 square feet for each student over 25. The space provided for any annex classroom shall not be considered part of the minimum space required for a school license and shall not exceed 30 percent of the square footage of its main school.

2. Minimum equipment shall include: work stations for at least 25 students or for the actual number of students in attendance, whichever is greater; a shampoo bowl and chair; a dryer; a styling chair; a manicure station; a chalk board; one locker per student; and separate lavatory facilities for men and women with toilets and sinks having hot and cold running water.

3. The maximum distance permitted between the annex classroom and the main facility shall be one mile; and students must be informed prior to enrollment that a portion of their training may be given at the annex facility.

4. Specific training activities permitted at the annex classroom facilities shall be limited to lectures, demonstrations, examinations, work on mannequins, and use of films, tapes, records and written materials. No clinical work on patrons or models (except for lecture/demonstration purposes with proper equipment) shall be permitted, except that instructors or lecturers are permitted to work on models and students may perform work on other students.

5. Students may complete no more than the first 50 percent of the total number of clock hours required for their course of study at the annex classroom. Clock hours completed at the annex classroom shall be recorded on sign-in sheets which must be kept separate and distinct from the sign-in sheets for clock hours completed at the main facility.

6. The ratio of licensed teachers present and on the premises to students in attendance at an annex classroom shall be at least one licensed teacher for every 25 students or less, and one additional licensed teacher for every additional 25 students or less after the first 25.

7. All health, safety, sanitary and operating regulations applicable to licensed schools of cosmetology and hairstyling are applicable to annex classrooms unless otherwise specified.

(c) Upon receipt of an application for approval of a school of cosmetology and hairstyling to operate an annex classroom, the Board shall inform the applicant in writing that the application is either complete and accepted for filing or deficient with an explanation of the specific information or documentation required to complete the application. A complete application is one in which a completed application form, including all required information and documentation, has been filed by the applicant. Required information and documentation is as follows:

1. A floor plan;
2. A copy of the lease;
3. A listing of equipment;
4. Name(s) and license number(s) of the teacher(s) employed to teach at the annex;
5. Copies of the fire and building inspection reports; and
6. Proof of liability and bond coverage for the annex location and the students attending classes there.

(d) After reviewing a completed application and the report of inspection, the Board shall inform the applicant in writing of its decision regarding approval of an annex classroom.

(a)

DIVISION OF CONSUMER AFFAIRS STATE BOARD OF OPTOMETRISTS

Requirements for Issuing Prescriptions and Dispensing of Medications; Certification by Examination; Fees

Adopted New Rules: N.J.A.C. 13:38-2.4 and 4
Adopted Amendment: N.J.A.C. 13:38-5.1

Proposed: August 17, 1992 at 24 N.J.R. 2802(a).
Adopted: September 23, 1992 by the Board of Optometrists, Vincent Martucci, President.
Filed: October 9, 1992 as R.1992 d.443, **without change.**

Authority: P.L. 1991, c.385.

Effective Date: November 2, 1992.
Expiration Date: August 27, 1995.

The Board of Optometrists afforded all interested parties an opportunity to comment on the proposed new rules, N.J.A.C. 13:38-2.4 and 4, and the proposed amendment, N.J.A.C. 13:38-5.1, relating to certification of licensed optometrists to prescribe medications for treatment purposes. The official comment period ended on September 16, 1992. Announcement of the opportunity to respond to the Board appeared in the New Jersey Register on August 17, 1992, at 24 N.J.R. 2802(a). Announcements were also forwarded to the Star Ledger, the Trenton Times, the New Jersey Optometric Association, the Society of Dispensing Opticians, the Consumers League of New Jersey, the New Jersey Department of Health, the State Board of Medical Examiners, the State Board of Pharmacy, the State Board of Nursing, and various professional groups, practitioners and other interested parties.

A full record of this opportunity to be heard can be inspected by contacting the Board of Optometrists, Post Office Box 45012, Newark, New Jersey 07101.

Summary of Public Comments and Agency Responses:

Four letters were received during the 30-day comment period. Three commenters expressed support for the proposed regulations and one commenter objected to portions of the proposal. A summary of the comments received and the Board's responses follows:

COMMENT: The New Jersey Optometric Association, on behalf of New Jersey's approximately 1,000 actively practicing optometrists, stated that it found the proposed regulations to be wholly consistent with the enabling legislation and it applauded the Board for moving expeditiously to develop regulations to implement the law.

The New Jersey State Chamber of Commerce stated that the dispensing of topical eye medications by licensed doctors of optometry will hasten the treatment of patients and avoid more serious eye problems for many of them.

Scott Rufolo, O.D., stated that the fee schedule is reasonable and that he was relieved to see that the Board has approved the TMOD examination for certification.

RESPONSE: The Board acknowledges and appreciates the commenters' support for the proposed regulations.

COMMENT: Scott Rufolo, O.D. and Larry Fuerman, O.D. stated that the 20-hour continuing education requirement for certification renewal is reasonable. However, both commenters suggested that all 20 hours, rather than 10 hours, should count toward the 50 continuing education credits required for licensure. Dr. Rufolo added that he felt 10 hours in addition to the 50 was fair, while Dr. Fuerman stated that 60 hours of continuing education is excessive.

RESPONSE: Permitting all 20 hours in ocular pathology and pharmacology to be included within the 50-hour continuing education requirement for biennial license renewal would, in effect, decrease the amount of hours spent on maintaining general optometric practice knowledge and skills. Since the prescriptive power authorized by the Consumer Access to Eye Care Act is an expansion of the optometrist's professional practice, the Board believes an expansion of the currently required 50 credit hours of continuing education is both appropriate and necessary for the protection of the public health and welfare.

COMMENT: Dr. Fuerman stated that the $125.00 application fee is appropriate but stated his objection to the $210.00 biennial renewal fee. This commenter asked for the justification for a continuing fee, stating

that the licensing fee is, in his opinion, already very high due to demographics.

RESPONSE: Pursuant to N.J.S.A. 45:1-3.2, all professional occupational and licensing boards must be self-funding; that is, all boards must meet their operating costs through licensing and other fees. The certification process places additional administrative burdens on the Board, the expenses of which cannot and should not be met solely by licensing fees. The $125.00 fee is a one-time charge for opening the applicant's file and processing the initial application for certification. At the time of biennial certification renewal, the applicant pays only the $210.00 renewal fee, which covers administrative costs in connection with certification, such as processing the renewal application and verifying the 20-hour continuing education requirement. The renewal fee also covers investigation and enforcement costs for the biennial period related specifically to certified optometrists. In summary, while the Board recognizes the additional economic burden upon applicants for certification, it is required by statute to assess a certification renewal fee in order to cover Board operating expenses related to the certification process.

Full text of the adoption follows.

13:38-2.4 Requirements for issuing prescriptions and dispensing of medications

(a) Every optometrist shall provide the following on all prescriptions:

1. The prescriber's full name, address, telephone number, license number and academic degree or identification of professional practice. This information shall be preprinted on all prescriptions;
2. The full name, age and address of the patient;
3. The date of issuance of prescription; and
4. The signature of the prescriber, hand-written.

(b) Every optometrist certified to prescribe pharmaceutical agents pursuant to the provisions of N.J.A.C. 13:38-4 and P.L. 1991, c.385, shall, in addition to the information set forth in (a) above, provide the following on all prescriptions for pharmaceutical agents:

1. The optometrist's certification number;
2. The name, strength and quantity of drug or drugs to be dispensed;
3. Adequate instruction for the patient. A direction of "p.r.n." or "as directed" alone shall be deemed an insufficient direction;
4. The number of refills permitted or time limit for refills, or both; and
5. Every prescription blank shall be imprinted with the words "substitution permissible" and "do not substitute" and shall contain space for the optometrist's initials next to the chosen option, in addition to the space required for the signature in (a)4 above.

(c) In addition to the provisions of (a) and (b) above, optometrists certified to prescribe pharmaceutical agents pursuant to the provisions of N.J.A.C. 13:38-4 and P.L. 1991, c.385, shall comply with the following:

1. The optometrist shall advise all patients by adequate notice, such as, but not limited to, a sign or pamphlet in the waiting room of the optometrist's office, that the patient may request the optometrist to substitute a generic drug for any prescribed medication.
2. The optometrist shall not dispense a prescription as provided for in N.J.S.A. 45:12-1 in an amount exceeding a 72-hour supply unless the prescription is dispensed at no charge to the patient.
3. The optometrist shall ensure that each container of medication dispensed directly to a patient is labeled in a legible manner with at least the following information:
   i. The optometrist's full name;
   ii. The full name of the patient;
   iii. The date the medication is dispensed;
   iv. The expiration date of medication;
   v. The name, strength and quantity of medication dispensed;
   vi. Adequate instructions for the patient regarding the frequency of administration of the medication;
   vii. When an optometrist dispenses a pharmaceutical sample which has been packaged and labeled by the manufacturer and such sample package contains the information required by (c)3v and vi above, the information listed in (c)3i through ii, inclusive, above need not be added; and
   viii. When an optometrist dispenses a medication, other than a sample exempted pursuant to (c)3vii above, in a container without sufficient space for the information required by this paragraph, the container shall be placed in a larger container or envelope, and the larger container or envelope shall be labeled as indicated in this paragraph and shall contain only one type of medication.

(d) In no instance shall an optometrist sign a blank prescription form or dispense drugs without complying with the above standards.

Recodify existing N.J.A.C. 13:38-2.4 through 2.11 as 2.5 through 2.12. (No change in text.)

SUBCHAPTER 4. CERTIFICATION BY EXAMINATION

13:38-4.1 Purpose and scope

(a) The rules of this subchapter implement the provisions of the Consumer Access to Eye Care Act of 1991, P.L. 1991, c.385.

(b) This subchapter shall apply to a licensed optometrist utilizing pharmaceutical agents, as defined and limited in P.L. 1991, c.385, for the purposes of treating deficiencies, deformities, diseases or anomalies of the human eye, including the removal of superficial foreign bodies from the eye and adnexae.

13:38-4.2 Application for certification; general requirements

(a) An optometrist licensed in this State who wishes to use pharmaceutical agents for treatment purposes as permitted by P.L. 1991, c.385, must be certified by the Board prior to prescribing or dispensing such agents.

(b) Each applicant for certification shall submit the following to the Board:

1. A completed application form;
2. The application fee set forth in N.J.A.C. 13:38-5.1;
3. Verification that the applicant has successfully completed the educational requirements set forth in N.J.A.C. 13:38-4.3. The applicant shall obtain the required verification from the school where the applicant completed the educational requirements; and
4. Proof that the applicant has successfully completed the examination requirements set forth in N.J.A.C. 13:38-4.4.

(c) An applicant who satisfies all of the requirements set forth in (b) above shall, upon payment of the initial certification fee set forth in N.J.A.C. 13:38-5.1, be certified by the Board to use pharmaceutical agents as defined and limited in P.L. 1991, c.385.

13:38-4.3 Educational requirements for certification

Each applicant for certification shall be required to successfully complete all educational requirements in ocular pharmacology at a school duly accredited by the United States Department of Education and the Council on Postsecondary Accreditation. The education shall be no less than that required of currently enrolled students as part of their requirements for graduation from that school.

13:38-4.4 Examination requirements for certification

Each applicant for certification shall be required to successfully complete the Treatment and Management of Ocular Disease Examination administered by the National Board of Examiners in Optometry.

13:38-4.5 Biennial certification renewal

(a) An application for certification renewal shall be issued by the Board upon the applicant's submission of proof that during the two calendar years immediately preceding application for renewal the applicant successfully completed 20 continuing professional education credits in Board-approved courses devoted to both ocular pathology and ocular pharmacology. Each credit shall represent or be equivalent to one hour of actual course attendance.

(b) Ten credits of the 20-credit continuing education requirement set forth in (a) above shall be in addition to the 50-credit continuing education requirement for license renewal. Credit for a continuing education course which is approved as fulfilling either the certification or the license renewal requirements shall be applied only once, either to the certification or to the license renewal requirement.

SUBCHAPTER 5. FEE SCHEDULE

13:38-5.1 Fee schedule

(a) The following fees shall be charged by the Board:

1.-6. (No change.)

7. Initial certification fee:

i. If paid during the first year of a biennial renewal period: $210.00

ii. If paid during the second year of a biennial renewal period: $105.00

8. Biennial renewal fee—certification to prescribe: $210.00

9. Each additional certificate—certification to prescribe (for second and third branch locations) 25.00

Recodify existing 7.-14. as 10.-17. (No change in text.)

(a)

DIVISION OF CONSUMER AFFAIRS BUREAU OF SECURITIES

Bureau of Securities Rules

Readoption with Amendments: N.J.A.C. 13:47A-1 through 11

Adopted Repeal: N.J.A.C. 13:47A-4.3

Proposed: July 20, 1992 at 24 N.J.R. 2524(a).

Adopted: September 4, 1992 by A. Jared Silverman, Chief, Bureau of Securities.

Filed: October 2, 1992 as R.1992 d.435, **with substantive and technical changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 49:3-67(a).

Effective Date: October 2, 1992, Readoption; November 2, 1992, Amendments.

Expiration Date: October 2, 1997.

The Bureau of Securities ("Bureau") afforded all interested parties an opportunity to comment on the proposed readoption with amendments, N.J.A.C. 13:47A. The official comment period ended August 19, 1992 and no additional comments were received through September 3, 1992. Announcement of the opportunity to respond to the Bureau appeared in the New Jersey Register on July 20, 1992 at 24 N.J.R. 2524(a). Announcements were also sent to the New Jersey Law Journal, New Jersey State Bar Association, New York Stock Exchange, Securities Industry Association, International Association for Financial Planning, U.S. Securities & Exchange Commission, Commodity Futures Trading Commission, New York Law Journal, Commerce Clearing House, Inc., American Stock Exchange, National Association of Securities Dealers, Inc., Investment Company Institute, North American Securities Administrators Association, Wall Street Journal, Bureau of National Affairs, the Star-Ledger, Philadelphia Inquirer, National Association of Investors Corp., National Association of Personal Financial Advisors, Institute of Certified Financial Planners, National Society of Compliance Professionals, New Jersey Society of Certified Public Accountants, American Bar Association—Section of Business Law, National Law Journal, Philadelphia Stock Exchange, Pacific Stock Exchange, Barron's, New York Times, Midwest Stock Exchange, Securities Week, Wall Street Letter, Trenton Times, Asbury Park Press, Bergen Record and other interested parties.

A full record of this opportunity to be heard can be inspected by contacting the Bureau of Securities, P.O. Box 47029, Newark, New Jersey 07101.

Summary of Public Comments and Agency Responses:

The Bureau received four comment letters. One of the letters was a request for a copy of the proposal from the Investment Management Consultants Association ("IMCA"). A copy of the proposal was sent to IMCA by facsimile on the same day the request was received. No further comments were received from IMCA. A letter from the Securities Industry Association ("SIA") stated that it supports the implementation of the Central Registration Depository ("CRD") and recommends New Jersey's full participation in the system, as proposed in the amended rules of the Bureau of Securities. The letter noted that the SIA represents over 600 securities firms headquartered in the United States and Canada and those firms account for some 90 percent of the securities business being done in North America. The SIA letter did not comment on the specifics of the proposed readoption. Two letters provided comments and suggested changes to the proposal. The letters were from Alan M. Parness, Esquire, of the law firm of Cadwalader, Wickersham & Taft and from the National Association of Securities Dealers, Inc. ("NASD"), respectively. The first two comments below are from the NASD, the balance are from Mr. Parness.

COMMENT: The letter from the NASD commented on proposed N.J.A.C. 13:47A-1.1(b). The letter noted that photographs were no longer required for agents pursuant to the Uniform Application for Agent Registration (Form U-4).

RESPONSE: The proposal amended this rule so that NASD members would no longer have to file photographs for each of their partners, officers and directors with the Bureau of Securities, if the photographs had been filed with the NASD, since the broker-dealer applications would be filed with the CRD once the proposal is adopted. Since the NASD deleted the photograph requirement in 1985, the Bureau has elected to delete the requirement for NASD members. The proposed regulation has been amended accordingly. Non-NASD members will still be required to file photographs with the Bureau of Securities pursuant to N.J.A.C. 13:47A-1.2. Pursuant to N.J.A.C. 13:47A-1.2, a non-NASD member broker-dealer filing directly with the Bureau must file all of the information required by N.J.A.C. 13:47A-1.1, including photographs of its partners, officers and directors.

COMMENT: The NASD letter noted that proposed N.J.A.C. 13:47A-1.8 allows a broker-dealer applicant to deposit cash or securities with the Bureau Chief in lieu of surety bonds required by N.J.A.C. 13:47A-1.7. However, the current rule says that "[N]o securities other than those listed on the New York Stock Exchange or the American Stock Exchange will be accepted . . ." The NASD asked that the Bureau amend N.J.A.C. 13:47A-1.8 to allow NASDAQ/NMS securities to be deposited with the Bureau in lieu of a surety bond. The NASD stated that the NASDAQ/NMS is the second largest market in the United States and that this market has achieved blue sky parity with the New York and American Stock Exchanges.

RESPONSE: NASDAQ/NMS securities have been exempt from registration in New Jersey since N.J.S.A. 49:3-50(a)(8) was amended, effective April 9, 1986. The NASD is correct that securities quoted on NASDAQ/NMS have achieved regulatory parity under New Jersey law with those securities listed on the New York and American Stock Exchanges. Accordingly, the Bureau will amend proposed rule N.J.A.C. 13:47A-1.8 as suggested by the NASD. The surety bond rule for investment advisors, N.J.A.C. 13:47A-2.4(b), has been similarly amended.

COMMENT: The letter from Mr. Parness stated that since proposed N.J.A.C. 13:47A-7.1(b) provides that the consent on page 1 of the Form BD will be accepted as the consent to service of process form under N.J.S.A. 49:3-57(a) and 49:3-73(a), then proposed N.J.A.C. 13:47A-1.1 is unnecessary.

RESPONSE: Proposed N.J.A.C. 13:47A-1.1 sets forth the list of registration requirements for a broker-dealer in New Jersey. One of the requirements is a consent to service of process. N.J.A.C. 13:47A-7.1 specifies what documentation meets the consent requirement in N.J.A.C. 13:47A-1.1(a)1.

COMMENT: Paragraph 6 on page 4 of the Form U-4 filed by each agent registering through the CRD in accordance with proposed N.J.A.C. 13:47A-3.1(b) includes a consent to service of process and therefore proposed N.J.A.C. 13:47A-1.1(a)2 is redundant.

RESPONSE: Proposed N.J.A.C. 13:47A-1.1(a)2 applies to officers, directors, limited partners and general partners of a broker-dealer registrant. Inasmuch as they can comply with the consent to service of process requirement by filing a U-4 with the CRD, that will be acceptable to the Bureau. Inasmuch as they cannot use the Form U-4 to comply with the requirement, they need to file a consent to service of process either with the CRD or the Bureau. Therefore, N.J.A.C. 13:47A-1.1(a)2 is not redundant.

COMMENT: Since proposed N.J.A.C. 13:47A-1.4 applies only to annual financial statements filed by registered broker-dealers, it would appear that reference to that rule in N.J.A.C. 13:47A-1.1(a)3 is inappropriate.

RESPONSE: The filing of annual financial statements will continue to be a requirement for registered broker-dealers in New Jersey. These financial statements will be filed directly with the Bureau of Securities. The comment is correct in that this is not a requirement of initial registration and should not be referred to as such in the regulations.

This is an ongoing requirement. Accordingly, the proposal has been amended.

COMMENT: Since the statement concerning the nature and location of each business in which the applicant has engaged during the preceding five years referenced in N.J.A.C. 13:47A-1.1(a)5 is not required by N.J.S.A. 49:3-57(a), why is it necessary for a broker-dealer applicant which is a corporation or partnership? As regards individuals, such information is readily obtainable from item 19 on page 2 of Form U-4, which must be filed by all agents, as well as officers, directors and partners who are not registering as agents.

RESPONSE: Proposed N.J.A.C. 13:47A-1.1(a)5 would require a broker-dealer applicant to disclose the nature and location of each business in which the applicant has engaged during the preceding five years. This information is currently required by the New Jersey broker-dealer application SB-1. The statutory basis for requiring this information is N.J.S.A. 49:3-57(a)(3). If the applicant can supply this information via the Form BD or Form U-4, the Bureau does not require a separate filing of this information. However, the broker-dealer is on notice that this information is required to be provided to the Bureau as part of a registration application. If the forms are not adequate to provide the Bureau with the required information, applicants should take steps to be sure the required information is properly provided to the Bureau as part of the application.

COMMENT: Noting that photographs are no longer required by Form U-4 and are not mandated by N.J.S.A. 49:3-57(a), why should applicants provide them to the Bureau, since fingerprint cards must be filed for all relevant personnel in accordance with SEC Rule 17f-2.

RESPONSE: As noted above in response to the comment by the NASD, the photograph requirement has been deleted with respect to NASD members by proposed rule N.J.A.C. 13:47A-1.1(b). The photograph requirement can be justified in terms of identification of the applicant for the purposes of assessing their qualifications under N.J.S.A. 49:3-57(a)(3). Without being able to identify someone, it is impossible to determine whether they are qualified to be registered. However, in the interest of uniformity, the Bureau has elected to delete the photograph requirement as to broker-dealers and their partners, officers and directors, if the broker-dealer will be registering in New Jersey via the CRD. For those few broker-dealers who will be registering in New Jersey directly, and who are not NASD members, the Bureau wishes to retain the photograph requirement, since no other regulatory agency will be registering the broker-dealer.

COMMENT: Since N.J.A.C. 13:47A-1.1(c) and (d) are inapplicable to NASD members in accordance with subsection (e), it would appear that all these subsections are unnecessary. If subsections (c), (d) and (e) are deleted from N.J.A.C. 13:47A-1.1, they should be added to N.J.A.C. 13:47A-1.2, without reference to the NASD in (e).

RESPONSE: The items in proposed N.J.A.C. 13:47A-1.1 are all of those items required to register as a broker-dealer in New Jersey. The purpose of N.J.A.C. 13:47A-1.1 is to provide a checklist for a broker-dealer application. Subsections (c), (d) and (e) were originally part of N.J.A.C. 13:47A-1.1. As proposed for readoption, the provisions of these subsections apply to broker-dealers registering under section N.J.A.C. 13:47A-1.2, but not NASD members. However, N.J.A.C. 13:47A-1.2 is drafted to incorporate all of the requirements of N.J.A.C. 13:47A-1.1. Rather than list some requirements in N.J.A.C. 13:47A-1.1 and some in N.J.A.C. 13:47A-1.2, all of the requirements are listed in N.J.A.C. 13:47A-1.1. An applicant can ignore those requirements listed in N.J.A.C. 13:47A-1.1 which do not apply.

COMMENT: Neither N.J.S.A. 49:3-57 nor SEC Rule 15b1-2 mandate the filing of a *certified* balance sheet by a new applicant, as contrasted with one affirmed in accordance with SEC Rule 15b1-2(d). This requirement results in unnecessary expense. Accordingly, certified balance sheets should be only provided by applicants engaged in business for one year or more preceding the date of the application; all other applicants should be required only to file unaudited balance sheets with an officer's notarized affirmation.

RESPONSE: A certified balance sheet can be required under N.J.S.A. 49:3-57(a)(5), which provides: "The application shall contain whatever information the bureau chief by rule requires concerning such matters as . . .(5) the applicant's financial condition." Certification is part of the currently promulgated rules. N.J.A.C. 13:47A-1.2.

COMMENT: The supplemental information regarding new officers, directors and partners required by proposed N.J.A.C. 13:47A-1.9(a)4 is readily obtainable from page 2 of the Form U-4 filed by each such person with the CRD. Accordingly, it need not be separately filed with the Bureau.

RESPONSE: The filing of supplemental information through the Form U-4 on the CRD is acceptable to the Bureau. If a new officer, director or partner can comply with this requirement by use of the Form U-4 CRD filing, no supplemental direct filing with the Bureau is required. If the officer, partner or director cannot file this information by use of a Form U-4, a supplemental filing is required. The proposed regulation has been amended accordingly.

COMMENT: It would appear that the filing of U-4 and U-5 forms with the CRD should suffice for purposes of N.J.A.C. 13:47A-1.9(a)5 and 7; Form BD does not require reporting of new or terminated agents (other than those reported on Schedule A, B or C because they are also officers, directors, partners or sole proprietors of the firm).

RESPONSE: The requirement of N.J.A.C. 13:47A-1.9(a)5 is not new. N.J.A.C. 13:47A-1.9 has been reorganized in the proposal. Current N.J.A.C. 13:47A-1.9(e) has been moved to paragraph (a)5 for ease of reference. Likewise, subsection (f) is now paragraph (a)7. The specific method of compliance is not changed by this proposal. If an applicant has been able to comply with these requirements by filing a U-4 or U-5 in the past, then it will be able to comply with these requirements in the future.

COMMENT: Since broker-dealers registering under N.J.A.C. 13:47A-1.2 effect all filings on Form BD, it would appear that Form SB-4 is no longer necessary. It is therefore suggested that reference to such form be deleted from these subsections, and that Form BD should be the exclusive form employed for reporting all amendments.

RESPONSE: Until all New Jersey registered broker-dealers are registered via the CRD, the Bureau is allowing those broker-dealers who have filed SB-1 applications to update them via the SB-4 until the end of the current registration period. This does not preclude use of the Form BD to update an application. Under the proposed transition rules N.J.A.C. 13:47A-7.7(a) and (b), an applicant may file a Form BD with the CRD prior to the expiration of the current license term. The Form BD would then be updated via amendments to the Form BD. Amendments via the SB-4 would not be acceptable for updating a CRD-filed application, because the NASD cannot process an SB-4. Non-NASD members will have to file both initial applications and amendments directly with the Bureau. Non-members are encouraged to file the applications and amend them by use of the Form BD. However, non-NASD members currently registered via Form SB-1 have the option to file amendments by use of the SB-4 (see proposed N.J.A.C. 13:47A-1.9(b)).

COMMENT: Since proposed N.J.A.C. 13:47A-1.2 requires the filing of Form BD, it is recommended that subsection (d) be deleted, because it is redundant of subsection (e). Additionally subsection (e) should be incorporated directly into paragraph (a)8 for ease of reference.

RESPONSE: Proposed N.J.A.C. 13:47A-1.2 deals with an *initial* application. A mechanism is necessary to allow non-NASD members who will have an SB-1 on file with the Bureau and NASD members until the expiration of their current license term, to update their application forms. Under the proposed rules, broker-dealers have the option to switch over to a Form BD based application (filed with the CRD for NASD members or filed directly with the Bureau for non-NASD members) under N.J.A.C. 13:47A-7.7; or they may update the SB-1 application currently on file with the Bureau via the SB-4. At the beginning of the next license term, NASD member broker-dealers should all be registered via the CRD either by renewing their CRD application and amending it to include New Jersey or by filing an initial Form BD with the CRD and including New Jersey. Only non-NASD members currently registered in New Jersey via Form SB-1 will be eligible to amend their applications via the SB-4. Any future *initial* broker-dealer applications for registration in New Jersey by non-NASD members will be made via a Form BD filed directly with the Bureau. This procedure is designed to provide a smooth transition from the SB-1 and SB-4 to the Form BD.

COMMENT: The fingerprint requirement in N.J.A.C. 13:47A-1.9(f) potentially applies to persons exempt from filing under SEC Rule 17f-2(a). Since fingerprints are not mandated under N.J.S.A. 49:3-57, why is it necessary for all officers, directors, controlling persons and partners to file them?

RESPONSE: This rule is a current requirement. The only change in the proposal is that the requirement may be satisfied by filing fingerprints with the CRD. Previously, the rule would have required a separate set to be sent directly to the Bureau. As noted previously with respect to photographs, fingerprint cards help *identify* an applicant, which goes to qualifications under N.J.S.A. 49:3-57(a)(3). The proposal has been amended to conform to SEC Rule 17f-2.

COMMENT: The use of Form SB-4 to register agents appears to conflict with proposed N.J.A.C. 13:47A-3.1, which requires the filing of either Form SB-3 on a direct filing, or Form U-4 when filing through the CRD.

RESPONSE: The agents of a broker-dealer registered via the CRD shall file for registration of the agents pursuant to N.J.A.C. 13:47A-3.1(b). The agents of a non-NASD member broker-dealer not registered via the CRD shall be registered pursuant to N.J.A.C. 13:47A-3.1(c). Only agents of a qualified issuer may register directly with the Bureau by filing a Form SB-3 pursuant to N.J.A.C. 13:47A-3.1(a). Proposed N.J.A.C. 13:47A-1.9(g) has been deleted and part of it has been moved to N.J.A.C. 13:47A-3.1(c). Proposed N.J.A.C. 13:47A-3.1(a) has been changed.

COMMENT: Since broker-dealers making direct filings under N.J.A.C. 13:47A-1.2 will use Form BD, it would appear that Form BDW, and not Form SB-10, should be the appropriate form withdrawal filings.

RESPONSE: The use of Form SB-10 needs to be retained for non-NASD member broker-dealers who registered via the SB-1 and for registered NASD member broker-dealers who withdraw prior to conversion to the CRD (that is, the end of their current license term). However, for future non-NASD applicants who file a Form BD directly with the Bureau, the Form BDW would be the appropriate form to use for withdrawal. N.J.A.C. 13:47A-1.11(b) has been amended accordingly.

COMMENT: Item 5 on page 2 of Form BD requires disclosure of information regarding a successor filing, and page 1 of Form BD includes a consent to service of process (as recognized by N.J.A.C. 13:47A-7.1(b)). Accordingly, there seems to be no reason for the special filing requirements in N.J.A.C. 13:47A-1.13(b).

RESPONSE: These are not special filing requirements. These are filing requirements for non-NASD member broker-dealers who are not eligible for filing via the CRD. A fully executed Form BD filed directly with the Bureau, as supplemented by N.J.A.C. 13:47A-1.2, will suffice to meet these requirements.

COMMENT: There appears to be no justification for the Bureau to refuse to accept uniform Form ADV for investment advisor filings. It would appear that all information required by N.J.S.A. 49:3-57 (and Form SB-2) can be readily found in Form ADV, and it is unreasonable to require applicants to prepare a special duplicative form solely for New Jersey. Accordingly, while Form ADV should ideally be adopted as the exclusive form in lieu of Form SB-2, at the least Form ADV should be adopted as an optional application form for investment advisers registered with the SEC (and for amendments filed under N.J.A.C. 13:47A-2.5). Likewise, Form ADV-W should be adopted as either the exclusive or at least an optional form for withdrawals under N.J.A.C. 13:47A-2.7, and the successor information in item 9 on page 2 of Form ADV, Part I should suffice for purposes of successor filings under N.J.A.C. 13:47A-2.8.

RESPONSE: The current rules sunset on October 5, 1992. The limited purpose of this proposal was to prevent the rules from lapsing, while amending the regulations to allow New Jersey to participate in the CRD Phase II. The rules concerning investment advisors were not substantively changed in the proposal. However, the Bureau agrees that Form ADV should be adopted in New Jersey. For the time being, the Bureau is proposing adoption of the Form ADV as an option to the Form SB-2, and Form ADV-W as an option to Form SB-10, rather than as replacements. Replacements would require transition rules and other changes not reasonably possible given the short time frame before October 5, 1992. However, N.J.A.C. 13:47A-2.1, 2.5, 2.7 and 2.8 have been amended to allow Form ADV and Form ADV-W as options.

COMMENT: If Form U-4 is accepted for agents filing through the CRD, there appears to be little reason not to accept this uniform form for agents of non-NASD broker-dealers and issuers under N.J.A.C. 13:47A-3.1. In the case of agents filing a Form U-4, a separate consent is unnecessary by reason of paragraph 6 on page 4 of that form.

RESPONSE: A non-NASD broker-dealer need only file a Consent to Jurisdiction directly with the Bureau to register an agent.

COMMENT: N.J.A.C. 13:47A-3.2(b) does not take into account Form U-5 termination filings through the CRD (which filings are the responsibility of the agent's employer, not the agent).

RESPONSE: The proposed rule has been amended to allow the Form U-5 to be used to terminate an agent registered via the CRD.

COMMENT: It would be preferable if these rules spelled out the requisite examinations, or at least simply stated that persons who have passed the requisite NASD exams for their particular positions satisfy your requirements.

RESPONSE: The Bureau intends to review the situation concerning examinations in the near future.

COMMENT: N.J.S.A. 49:3-49(c)(2) specifically excludes "issuers" from the definition of the term "broker-dealer," and nowhere in N.J.S.A. 49:3-56 is there a requirement that an issuer selling its securities through one or more registered agents effect a separate "qualification" filing. If your legislature intended to require what is in effect an "issuer-dealer" registration, then the New Jersey Uniform Securities Law should have mandated such a filing. In the absence of any statutory authority, it is submitted that rules N.J.A.C. 13:47A-6.1 through 6.5 have no basis in law and must be repealed.

RESPONSE: The statute provides for a fee for an issuer application in N.J.S.A. 49:3-57(b). Under N.J.S.A. 49:3-56(b), an agent must be registered and to be registered must be associated with a particular broker-dealer registered under the act or a particular issuer. If an agent is terminated with a broker-dealer or issuer, the broker-dealer and issuer are required to notify the Bureau. If the Bureau is to keep track of agents, it has to keep track of their principals, in this case, issuers.

COMMENT: In the interest of uniformity, it is strongly recommended that Form U-2 be recognized as either the exclusive form of consent, or at least an alternative to your forms, which are antiquated and cumbersome to complete. As previously mentioned, paragraph 6 on page 4 of Form U-4 and, if adopted, the consent on page 1 of Form ADV, should be recognized as alternatives to the separate consent filing.

RESPONSE: The proposal has been amended so that Form U-2 will be recognized as an option that can be used to comply with the requirements of N.J.A.C. 13:47A-7.1.

COMMENT: With regard to the securities registration rules promulgated in 1990 (N.J.A.C. 13:47A-10.1 through 10.4), the New Jersey Addendum inappropriately requires issuers to make statements regarding the broker-dealer, filing a consent to service of process under N.J.S.A. 49:3-73 is not required by an issuer and is unnecessary and duplicative where the registration application was filed by the broker-dealer in a firm commitment underwriting, additional filings and fees are inappropriate in shelf registrations, and payment of a $1,000 filing fee for each security in a registration statement is inappropriate when the statute requires a $1,000 filing fee for each registration statement under N.J.S.A. 49:3-62(b).

RESPONSE: The Bureau intends to reexamine the securities registration regulations as part of its overall review of the rules. In light of the limited purpose of the current proposal, the Bureau chooses to defer any changes to the securities registration regulations to a later date.

The Bureau believes that the proposed rules in their current form as published on July 20, 1992 at 24 N.J.R. 2524(a) adequately address the concerns of the Bureau and the public with the following proposed changes:

Summary of Changes upon Adoption

1. Proposed N.J.A.C. 13:47A-1.1(a)3 has been amended to delete reference to N.J.A.C. 13:47A-1.4 since the annual financial report is an ongoing requirement, not an initial registration requirement, except as set forth in N.J.A.C. 13:47A-1.3.

2. Proposed N.J.A.C. 13:47A-1.1(b) has been amended to delete the photograph requirement for partners, officers and directors of NASD member broker-dealers.

3. Proposed N.J.A.C. 13:47A-1.8 has been amended to allow a broker-dealer to deposit NASDAQ/NMS securities with the Bureau in lieu of surety bonds.

4. Proposed N.J.A.C. 13:47A-1.9(a)4 has been amended to allow the home address and ten year business history of a new officer, director or partner of a NASD member broker-dealer to be filed as part of the U-4 filing with the CRD, instead of by separate direct filing with the Bureau. The Form U-4 requests that information.

5. Proposed N.J.A.C. 13:47A-1.9(g) has been deleted. The part of it concerning registration of agents of non-NASD member broker-dealer has been retained as proposed N.J.A.C. 13:47A-3.1(c).

6. Proposed N.J.A.C. 13:47A-1.11(b) has been amended to allow a non-NASD member broker-dealer that has filed its application directly with the Bureau via Form BD to use Form BDW to withdraw that application.

7. Proposed N.J.A.C. 13:47A-2.1 has been amended to allow an investment advisor to file its application with the Bureau on Form ADV.

8. Proposed N.J.A.C. 13:47A-2.4 has been amended to allow an investment advisor to deposit NASDAQ/NMS securities with the Bureau in lieu of surety bonds. See N.J.A.C. 13:47A-1.8 above.

9. Proposed N.J.A.C. 13:47A-2.5 has been amended to allow an investment advisor to file amendments to its application by either updating an existing Form ADV already on file with the Bureau or by filing a complete new Form ADV if the registrant only has a Form SB-2 on file with the Bureau.

10. Proposed N.J.A.C. 13:47A-2.7 has been amended to allow an investment advisor that has previously filed its application with the Bureau on Form ADV to use form ADV-W to withdraw that application.

11. Proposed N.J.A.C. 13:47A-2.8 has been amended to allow an investment advisor to file a successor application on Form ADV.

12. Proposed N.J.A.C. 13:47A-3.1(a) has been amended to correct it. Only agents of qualified issuers use Form SB-3 to file an application with the Bureau. Reference to broker-dealers in this subsection has been deleted.

13. Proposed N.J.A.C. 13:47A-3.1(c) replaces part of proposed N.J.A.C. 13:47A-1.9(g), which has been deleted. Proposed N.J.A.C. 13:47A-3.1(c) provides that agents of non-NASD member broker-dealers register with the Bureau by filing the Consent to Jurisdiction.

14. Proposed N.J.A.C. 13:47A-3.2(b) has been amended to recognize Form U-5 termination filings via the CRD.

15. Proposed N.J.A.C. 13:47A-7.1 has been amended to allow the Form U-2 Uniform Consent to Service of Process to be used to satisfy the Consent to Service of Process requirements.

16. Proposed N.J.A.C. 13:47A-7.7(a) through (f) have been amended to insert the effective date of the rule.

Full text of the readoption can be found in the New Jersey Administrative Code at N.J.A.C. 13:47A.

Full text of the adopted amendments follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal shown in brackets with asterisks *[thus]*).

13:47A-1.1 Application for registration for NASD members

(a) Any person who is a member of the National Association of Securities Dealers, Incorporated (NASD), desiring to transact business in the State of New Jersey as a broker-dealer shall file an application with the Bureau of Securities by filing the application with the NASAA/NASD Central Registration Depository (CRD) on the form designated as Form BD, Uniform Application for Broker-Dealer Registration, or any successor form to the Form BD prescribed by the CRD for filing a broker-dealer application. The requisite registration fee shall be submitted with the application filed with the CRD in the amount of $250.00 for each year of the two year registration term for the broker-dealer (for a total of $500.00), plus $10.00 for each officer, director or partner doing business in the State of New Jersey. Failure to pay the entire $500.00 fee plus additional required fees, as above, within the billing time limits established by the Bureau or by the CRD, shall be a ground for immediate revocation of the registration. The application filed with the CRD shall be supplemented by direct filing with the Bureau of Securities of any additional information required by the Bureau Chief. The 30 day time period for review of an application will not commence until the applicant files all documents or material facts specified and required. The following additional information shall be required to be filed with the Bureau of Securities for all broker-dealer applications and no application shall be deemed complete until all of the following are properly submitted, unless the requirements are waived by the Bureau Chief:

1. A consent to service of process executed by the applicant as set forth in N.J.A.C. 13:47A-7.1;

2. A consent to service of process executed by each officer, director, general partner or limited partner of the applicant who is to act as an agent in the State of New Jersey, as set forth in N.J.A.C. 13:47A-7.1;

3. Certified financial statements as set forth in N.J.A.C. 13:47A-1.3 *[,1.4]* and 1.5;

4. A statement of minimum net capital as set forth in N.J.A.C. 13:47A-1.6;

5. A statement of the nature and location of each business in which the applicant has engaged during the preceding five years; and

6. Any additional information requested by the Bureau Chief.

(b) The applicant shall submit to the Bureau of Securities as part of the application an identification photograph of each partner, officer or director, unless the applicant is a member of ***the NASD or is a member of*** and has current photographs on file with the New York Stock Exchange, American Stock Exchange, ***or*** another major stock exchange, *[or the NASD]*; and has granted written permission to the Bureau Chief, or his or her duly designated representative, to examine without notice any filings made by the applicant with such exchange or association.

(c) The applicant, if a natural person, shall submit to the Bureau of Securities as part of the application, two (non-criminal) fingerprint cards (one State Police card and one Federal Bureau of Investigation card) with impressions taken by a recognized law enforcement agency.

(d) The applicant, if a corporation or partnership, shall submit to the Bureau of Securities as part of the application, two applicant (non-criminal) fingerprint cards (one State Police card and one Federal Bureau of Investigation card) for each officer, director, controlling person or partner with all of the impressions taken by a recognized law enforcement agency.

(e) Subsections (c) and (d) above shall not apply to an applicant who is a member of the New York Stock Exchange, the American Stock Exchange or the NASD.

(f) If, during the pendency of the application, it appears to the Bureau Chief that the application may contain a misrepresentation, may omit a document or material fact, or contains any statement which may be, at the time and in the light of the circumstances under which it is made, false or misleading in any material respect, the Bureau Chief, in his or her discretion, may notify the applicant of the deficiency by letter. A deficiency letter shall require the applicant to perfect the application by amending or supplementing the information previously submitted within 21 days after the issuance of the deficiency letter; withdraw the application; or subject itself to further action of the Bureau Chief by Order or otherwise. If the applicant elects to perfect the application within 21 days, the amendment or supplement by the applicant shall postpone the effectiveness of the application for 30 days after the applicant perfects the application. The Bureau Chief may elect, in his or her discretion, to act without issuing a deficiency letter.

13:47A-1.2 Application for registration for persons not eligible for registration via CRD

Any person desiring to transact business in the State of New Jersey who is not a member of the NASD or who is not otherwise eligible to register via the CRD pursuant to N.J.A.C. 13:47A-1.1, shall file all of the information required by N.J.A.C. 13:47A-1.1 and in the same form required by that section directly with the Bureau of Securities at its current office address. The application shall be accompanied by a check or money order payable to the State of New Jersey, Bureau of Securities, in the amount of $500.00, plus $10.00 for each officer, director or partner doing business in the State of New Jersey.

13:47A-1.3 Financial reports to supplement application

(a) An application for registration as a broker-dealer must be supplemented by a concurrent filing directly with the Bureau of Securities of a certified statement of the applicant's financial condition as of a date within 60 days of the application; provided, however, if the applicant has been engaged in business for one year or more preceding the date of the application, a certified financial statement as of the end of its last fiscal period, along with an unaudited balance sheet as of a date within 60 days of the application may be submitted directly to the Bureau concurrently with the filing of the application for registration. The concurrent filing will be considered to be a necessary part of the registration application, whether the application is filed via the CRD for NASD members, or directly with the Bureau for non-NASD members.

(b) The balance sheet must be signed by a principal or officer of the applicant and must be notarized.

13:47A-1.4 Annual financial report

Every registered broker-dealer must file with the Bureau Chief an annual certified report of financial condition during each calendar year. Said report will be due not later than 60 days after the termination date of each report; provided that reports for any two consecutive years shall not be as of termination dates within four months of each other. Requests for extensions of time for the filing of the report must be made in writing to the Bureau Chief in advance of the due date.

13:47A-1.5 Preparation and contents of financial statements

(a) Financial statements and reports required of registered broker-dealers under N.J.S.A. 49:3-47 et seq., including the financial statement filed with the application for initial registration, shall consist of a balance sheet supported by an analysis of the trading and investment inventories and shall be prepared by a certified public accountant or a public accountant who shall be in fact independent.

(b) Complete copies of Form X-17A-5, as filed with the Securities and Exchange Commission, or copies of the New York Stock Exchange Financial Questionnaire may be filed to comply with the requirements of this section.

(c) The analysis of the trading and investment inventories required by (a) above shall have attached thereto, and made a part thereof, a statement under oath by the broker-dealer which shall set forth those securities within said trading and investment inventories which have not been registered under the Securities Act of 1933 (1933 Act), or which are not subject to, or are exempted from the registration requirements of the 1933 Act and the rules and regulations promulgated thereunder other than by reason of section 3(a) of the 1933 Act and the rules and regulations promulgated under section 3(a) of the 1933 Act.

13:47A-1.6 Minimum net capital

(a) No registration as a broker-dealer shall be issued unless the applicant therefor has a minimum net capital of $10,000 or has posted with the Bureau of Securities a surety bond in the amount of $10,000, except as set forth in (b) and (c) below. Under all subsections of this section, if the applicant has been in business for less than one year, the statement of minimum net capital submitted as part of the broker-dealer application must include a written statement of the applicant's source of capital.

(b) No registration as a broker-dealer shall be issued to an applicant engaged exclusively in the sale of investment company shares unless the applicant therefor has a minimum net capital of $5,000, or has posted with the Bureau of Securities a surety bond in the amount of $5,000. The statement of minimum net capital submitted as part of the broker-dealer application must include a written statement that the applicant purchases or sells solely investment company shares in order to qualify under this subsection.

(c) No registration as a broker-dealer shall be issued to an applicant having custody of clients' funds or securities unless such applicant has a minimum net capital of $25,000 or has posted with the Bureau of Securities a surety bond in the amount of $25,000. The statement of minimum net capital submitted as part of the broker-dealer application must include a written statement that the applicant has custody of clients' funds or securities, if such is the case.

(d) Computation of net capital shall be in accordance with rules promulgated by the Securities and Exchange Commission, unless the Bureau Chief prescribes otherwise by rule or order.

(e) Reporting of net capital by a broker-dealer shall be made as part of the application for registration with the CRD in the case of broker-dealers eligible for such registration. If the CRD registration form does not provide for reporting of net capital as set forth in this section, or if the registration is filed directly with the Bureau of Securities because CRD registration is not available to the applicant, then the reporting of net capital shall be made by a supplemental filing made directly to the Bureau of Securities concurrently with the broker-dealer application.

13:47A-1.7 Bonds

(a) The bonds required to be filed under N.J.A.C. 13:47A-1.6 (Minimum net capital) shall provide for suit thereon by third parties for any cause of action under N.J.S.A. 49:3-71, for loss and damages, and shall be in the form designated N.J. SB-7 as set forth in N.J.A.C. 13:47A-11.10. The bond shall be for a term of two years, but the right to bring an action under the bond for losses sustained while it was in force shall continue for two years from the date of the sale upon which the action is based.

(b) The bond may provide for termination provided, however, that 90 days' notice thereof is served in writing upon the Bureau Chief; and provided further, that the right to bring an action for losses sustained while it was in force shall continue for two years from the date of the sale upon which the action is based.

13:47A-1.8 Cash or securities in lieu of bond

In lieu of the bonds required by N.J.A.C. 13:47A-1.6 (Minimum net capital), the applicant may deposit cash or securities with the Bureau Chief, and the amount thereof shall be determined by the Bureau Chief having due regard for the amount of the bond required and the nature of the securities furnished. No securities other than those listed on the New York Stock Exchange or the American Stock Exchange ***or designated or approved for designation upon notice of issuance as a National Market System security on the National Association of Securities Dealers' Automated Quotation System*** will be accepted, except that mutual funds may be accepted in certain cases, in the discretion of the Bureau Chief.

13:47A-1.9 Change of status; submission of form

(a) A registered broker-dealer who is registered with New Jersey via the NASAA/NASD CRD shall file an amendment with the CRD on the amendment form prescribed by the NASAA/NASD CRD whenever any of the following events occur:

1. Its firm name is changed;
2. Its principal office address is changed;
3. The address of a branch office within the State of New Jersey is changed;
4. A new officer, director or partner is elected or admitted to the firm. *[This]* ***The amendment filing*** shall ***include*** *[be supplemented by a direct filing with the Bureau of a document setting forth]* the home address and 10 year business history of the officer, director or partner *[and a check or money order in the amount of $5.00 for each individual listed]*;
5. It commences the employment of an agent currently effectively registered in the State of New Jersey. This amendment shall be filed no later than five days after the commencement of such employment;
6. A partner, officer or director of the registered broker-dealer resigns, retires or otherwise terminates his or her affiliation with the broker-dealer. No filing fee is required for this type of amendment, unless the NASAA/NASD CRD prescribes otherwise;
7. The registered broker-dealer terminates the employment of an agent. This amendment shall be filed within five days of the termination. No filing fee is required for this type of amendment, unless the NASAA/NASD CRD prescribes otherwise;
8. Subsections (d), (e), and (f) below require an amendment to be filed; or
9. Any other event has occurred that would require an amendment to the Form BD Uniform Application for Broker-Dealer Registration.

(b) A registered broker-dealer that is registered pursuant to N.J.A.C. 13:47A-1.2 (registrants not eligible for registration via the CRD and therefore registered directly with the Bureau of Securities) shall file directly with the Bureau at its current office address, a form designated N.J. Form SB-4, as set forth in N.J.A.C. 13:47A-11.4, whenever it changes any of the information set forth in (a) above. Alternatively, the broker-dealer may use the same form required by the CRD to file an amendment directly with the Bureau in lieu of filing the Form SB-4, whenever it changes any of the information set forth in (a) above.

(c) Such amendment to the CRD or N.J. SB-4 form, as applicable, shall be filed no later than 20 days after the occurrence named therein, unless otherwise specified in (a) above. The amendment filed with the CRD shall be accompanied by the fee, if any, prescribed by the NASAA/NASD CRD for amendments. Filing of a N.J. SB-4 form as required by (b) above shall be accompanied

by a check or money order in the amount of $5.00 for each change listed, unless otherwise specified in (a) above.

(d) A registered broker-dealer shall file with the Bureau of Securities a N.J. Form SB-4 form, as set forth in N.J.A.C. 13:47A-11.4 or file with the CRD the equivalent CRD amendment form and fee as prescribed by the NASAA/NASD CRD, whenever any changes occur regarding the original answers to question 5 on its original N.J. SB-1 broker-dealer application as to arrests, conviction of any crime, disciplinary actions by any administrative body, restraints, injunctions, suspensions, revocations, denials, judgments based on fraud, as to the registrant or any partner, officer or director, within 20 days of the occurrence named in the form. Such N.J. Form SB-4 shall be accompanied by a check or money order in the amount of $5.00.

(e) For a registered broker-dealer that has filed its broker-dealer application with the CRD on Form BD that has had any changes occur regarding the answers in its original Form BD application as to arrests, conviction of any crime, disciplinary actions by any administrative body, restraints, injunctions, suspensions, revocations, denials, judgments based on fraud, as to the registrant or any partner, officer or director shall file an amendment with the CRD fully disclosing the details of the changes within 20 days of the occurrence named in the amendment. Such amendment shall be accompanied by the fee, if any, prescribed by the NASAA/NASD CRD for amendments. In the event that the CRD amendment form does not allow for full detailed disclosure of the details of the changes, as required by the Uniform Securities Law (1967), N.J.S.A. 49:3-47 et seq. and these rules, the registrant shall make full detailed disclosure of the changes by a supplemental filing directly to the Bureau of Securities at its current office address.

(f) A registered broker-dealer, if a corporation or partnership, shall file with the Bureau of Securities or the CRD, whichever is applicable, two applicant (non-criminal) fingerprint cards (one State Police card and one Federal Bureau of Investigation card) with all of the impressions taken by a recognized law enforcement agency, for each officer, director, controlling person or partner who commences any employment or affiliation with said registered broker-dealer no later than five days after the commencement of such employment or affiliation. ***Those persons exempt from filing fingerprint cards with the Securities and Exchange Commission pursuant to Rule 17f-2 promulgated under the Securities Exchange Act of 1934 or its successor rule shall be exempt from filing fingerprint cards with the Bureau pursuant to this subsection.***

[(g) A registered broker-dealer that filed its broker-dealer application directly with the Bureau of Securities shall not file the N.J. Form SB-4 when it is submitting the application for the initial registration for an agent commencing with the registrant, but shall register that agent by submitting a Consent to Jurisdiction form directly to the Bureau of Securities no later than five days after the commencement of such employment or affiliation. An officer, director, controlling person or partner of the registered broker-dealer may submit their initial agent application by use of the N.J. Form SB-4, if that person has filed an applicant fingerprint card with the Bureau of Securities or with the CRD. All other registered broker-dealers must submit their initial agent applications via the CRD in accordance with the requirements of the CRD.]

13:47A-1.10 Maintenance of books and records

All broker-dealers shall keep at their principal place of business, open to inspection of the Bureau of Securities of the State of New Jersey, all books and records required to be kept by the Securities and Exchange Commission or by the Bureau of Securities.

13:47A-1.11 Withdrawal of broker-dealer registration

(a) A broker-dealer registered in New Jersey via the CRD shall file a Form BDW or any successor form to the Form BDW prescribed by the CRD when it desires to withdraw its registration as a broker-dealer in the State of New Jersey. Such request for withdrawal will become effective 30 days after filing with the CRD.

(b) A broker-dealer registered in New Jersey by direct filing with the Bureau of Securities because it is not eligible for registration via the CRD shall file directly with the Bureau a form designated N.J. Form SB-10, as set forth in N.J.A.C. 13:47A-11.13, ***if its initial application was filed on a Form SB-1, or by filing directly with the Bureau a Form BDW, if its initial application was filed on a Form BD,*** when it desires to withdraw its registration as a broker-dealer in the State of New Jersey. Such request will become effective 30 days after filing with the Bureau.

13:47A-1.12 Display of name

The name of the registered broker-dealer shall appear on the door or window of any branch or sales office operated within the State of New Jersey.

13:47A-1.13 Application for successor

(a) A broker-dealer registered in New Jersey via the CRD shall file the forms or amendments as required by the CRD to effectuate registration in New Jersey of a successor to the registered broker-dealer. The filing shall be accompanied by the fee, if any, prescribed by the CRD for such filings.

(b) A broker-dealer registered in New Jersey by direct filing with the Bureau of Securities because it is not eligible for registration via the CRD may file directly with the Bureau an application on a Form BD, Uniform Application for Broker-Dealer Registration, accompanied by all of the information required by N.J.A.C. 13:47A-1.1 and in the same form as required by that section to effectuate the registration of a successor. Such application shall be marked "SUCCESSOR APPLICATION" in the upper right-hand corner by the registrant, and shall be accompanied by a consent to service of process executed by the applicant. There shall be no filing fee for the successor application.

13:47A-2.1 Application for registration

(a) Any person desiring to act as an investment advisor within or from the State of New Jersey shall file an application with the Bureau of Securities on a form designated N.J. Form SB-2 as set forth in N.J.A.C. 13:47A-11.2. ***Alternatively, the application may be filed on the Form ADV Uniform Application for Investment Adviser Registration.***

(b)-(c) (No change.)

13:47A-2.4 Cash or securities in lieu of bond

(a) In lieu of the bond required by *[Section 2]* ***N.J.A.C. 13:47A-2.2*** (Capital requirements) *[of this Subchapter]*, the applicant may deposit cash or securities with the Chief of the Bureau of Securities, and the amount thereof shall be determined by the Bureau Chief having due regard for the amount of the bond required and the nature of the securities furnished.

(b) No securities other than those listed on the New York Stock Exchange or the American Stock Exchange ***or designated or approved for designation upon notice of issuance as a National Market System security on the National Association of Securities Dealers' Automated Quotation System*** will be accepted, except that mutual funds may be accepted in certain cases, in the discretion of the Bureau Chief.

13:47A-2.5 Change of status; submission of form

(a)-(e) (No change.)

(f) Alternatively, changes reportable under this section may be filed with the Bureau of Securities by filing a complete initial Form ADV Uniform Application for Investment Adviser Registration, or if a Form ADV is already on file with the Bureau, by filing an update to the Form ADV.

13:47A-2.7 Withdrawal of investment advisor registration

A registered investment advisor shall file with the Bureau of Securities a form designated N.J. Form SB-10, as set forth in N.J.A.C. 13:47A-11.13, when it desires to withdraw its registration as an investment advisor in the State of New Jersey. Such request for withdrawal will become effective 30 days after filing with the Bureau of Securities. ***Alternatively, if the application on file with the Bureau of Securities was submitted on Form ADV, the Form ADV-W may be filed to effectuate withdrawal of the investment advisor registration.***

13:47A-2.8 Application for successor

A registered investment advisor may file an application with the Bureau of Securities on a form designated N.J. Form SB-2, as set forth in N.J.A.C. 13:47A-11.2, for the registration of a successor. Such application shall be marked "SUCCESSOR APPLICATION" in the upper right-hand corner by the registrant, and shall be accompanied by a consent to service of process executed by the applicant. There is no filing fee for the successor application. ***Alternatively, an application may be filed on behalf of a successor by filing with the Bureau of Securities a complete and updated Form ADV Uniform Application for Investment Adviser Registration.***

13:47A-3.1 Agents of Broker-Dealers and Qualified Issuers

(a) Any person desiring to act in the State of New Jersey as an agent of a *[registered broker-dealer registered directly with the Bureau of Securities or as an agent of a]* qualified issuer shall file an application with the Bureau of Securities on a form designated N.J. Form SB-3, as set forth in N.J.A.C. 13:47A-11.3. Such application shall be accompanied by:

1. A consent to service of process executed by the applicant;
2. Two applicant non-criminal fingerprint cards (one State Police card and one FBI card) with impressions taken by a recognized law enforcement agency; and
3. A check or money order made payable to the State of New Jersey, Bureau of Securities, in the amount of $60.00.

(b) Any person desiring to act in the State of New Jersey as an agent of a broker-dealer registered in New Jersey via the NASAA/NASD CRD shall file an application for registration as an agent with the CRD on the agent application form prescribed by the NASAA/NASD CRD. The agent application shall be accompanied by a consent to service of process executed by the applicant; fingerprint cards as required by the NASAA/NASD CRD; and payment in the form prescribed by the CRD of $30.00 for each year of the two year registration period (for a total of $60.00).

(c) Any person desiring to act in the State of New Jersey as an agent of a non-NASD member broker-dealer registered in New Jersey directly with the Bureau of Securities shall file a Consent to Jurisdiction form directly with the Bureau of Securities no later than five days after the commencement of such employment or affiliation along with the requisite fee to register as an agent. An officer, director, controlling person or partner of the registered broker-dealer may also submit a Consent to Jurisdiction Form.

13:47A-3.2 Change of status; agents; submission of form.

(a) A registered agent who previously filed their application for registration directly with the Bureau of Securities shall file, directly with the Bureau of Securities, a form designated N.J. Form SB-5, as set forth in N.J.A.C. 13:47A-11.5, whenever the agent changes their name or home address, and whenever a change in the answers to question 13 on his original application for registration occurs, as to arrests, convictions of any crime, disciplinary actions by any administrative body, restraints, injunctions, suspensions, revocations, denials, or judgments based on fraud. The N.J. Form SB-5 must be filed within 20 days of the occurrence named therein and be accompanied by a check or money order in the amount of $5.00 for each change listed under this subsection. Whenever an agent terminates or commences employment with a broker-dealer or issuer, the agent must file the N.J. Form SB-5 within five days of the termination or commencement. If more than 30 days elapses between the date of termination and the commencement with the new broker-dealer or issuer, the form must be accompanied by a check or money order in the amount of $5.00.

(b) A registered agent who previously filed for registration in New Jersey by filing an application with the NASAA/NASD CRD shall file an amendment with the CRD on the amendment form prescribed by the NASAA/NASD CRD whenever any of the events occur that are set forth in *[above]* (a) ***above***. The amendment shall be filed in accordance with the time limits set forth in (a) above and shall be accompanied by the fee prescribed by the CRD for such amendments. ***Whenever an agent terminates employment with a broker-dealer registered in New Jersey via the CRD, the broker-dealer must file the Form U-5 Uniform Termination Notice for Securities Industry Registration within five days of the termination.***

13:47A-4.1 Examinations for broker-dealers and investment advisors

No officer, director, partner or individual affiliated with a broker-dealer or investment advisor applying for registration in this State who will participate in management either as an investment advisor or in the offering or selling of securities either within or from this State, shall be so registered unless they have taken and successfully passed a securities examination approved by the Chief of the Bureau of Securities and offered by an independent self-regulatory group of the securities industry registered with the Securities and Exchange Commission, or taken and successfully passed a securities examination given by a state whose examination is recognized by the Bureau of Securities of the State of New Jersey.

13:47A-4.2 Examinations for agents

No person may apply for registration as an agent in the offering or selling of securities, either within or from this State, unless he shall have taken and successfully passed a securities examination approved by the Chief of the Bureau of Securities and offered by an independent self-regulatory group of the securities industry registered with the Securities and Exchange Commission, or taken and successfully passed a securities examination given by a state whose examination is recognized by the Bureau of Securities of the State of New Jersey.

13:47A-4.3 Requests for waiver

(a) Requests for waiver of examination requirements will be considered only on the basis of knowledge, training and experience in the securities field. Any person requesting waiver must have been continuously active in the securities field for a period of at least two full years prior to the filing of the application.

(b) Requests for waiver must be submitted in writing directly to the Bureau Chief and requested simultaneously with the application for registration filed with the CRD or the Bureau, as appropriate.

13:47A-5.1 Expiration date

Registration of a broker-dealer, investment advisor or agent shall expire on December 31 of the calendar year following the year in which the registration became effective, unless revoked.

13:47A-5.2 Application for renewal

(a) A broker-dealer registered in New Jersey via the CRD that desires to apply for the renewal of its registration shall file the forms prescribed by the CRD to effectuate a renewal. Such application shall be accompanied by payment in the form prescribed by the CRD of $250.00 for each year of the two year renewal term (for a total of $500.00) plus $10.00 for each partner, officer or director of the applicant doing business in New Jersey. Failure to pay the entire $500.00 fee plus additional required fees, as above, within the billing time limits established by the Bureau or by the CRD, shall be a ground for immediate revocation of the registration.

(b) A broker-dealer registered in New Jersey via direct registration with the Bureau of Securities that desires to apply for the renewal of its registration shall file on the form designated N.J. Form R-1, as set forth in N.J.A.C. 13:47A-11.14, issued to the registrant by the Bureau of Securities. Such application shall be accompanied by a check or money order made payable to the State of New Jersey, Bureau of Securities, in the amount of $500.00 plus $10.00 for each partner, officer or director of the applicant doing business in New Jersey.

(c) A registered investment advisor desiring to apply for the renewal of its registration shall file on the form designated N.J. Form R-1A, as set forth in N.J.A.C. 13:47A-11.15, issued to the registrant by the Bureau of Securities. Such application shall be accompanied by a check or money order made payable to the State of New Jersey, Bureau of Securities, in the amount of $100.00.

(d) An agent registered in New Jersey via the CRD that desires to apply for the renewal of his registration shall file the forms prescribed by the CRD to effectuate a renewal. Such application shall be accompanied by payment in the amount of $60.00 in the form prescribed by the CRD.

(e) An agent registered in New Jersey via direct registration with the Bureau of Securities that desires to apply for the renewal of his registration shall file on the form designated N.J. Form R-2, as set forth in N.J.A.C. 13:47A-11.16, issued by the Bureau of Securities in the name and registration number of the agent. Such application shall be accompanied by a check or money order made payable to the State of New Jersey, Bureau of Securities in the amount of $60.00.

13:47A-5.3 Filing for renewal

(a) Applications for renewal will be issued by the Bureau of Securities during the month of October for investment advisors, qualified issuers, and for non-NASD member broker-dealers and their agents registered directly with the Bureau of Securities and must be filed by the registrant directly with the Bureau of Securities, not less than 30, nor more than 90, days before the December 31 expiration date of current registration, except as provided by the transition rule in N.J.A.C. 13:47A-7.7(e) for applicants that wish to renew their New Jersey registration via the CRD.

(b) Broker-dealers and agents currently registered in New Jersey via the CRD shall renew their applications in accordance with the requirements prescribed by the CRD and shall accompany the application with the fee prescribed by these regulations in the form prescribed by the CRD.

(c) Any person who fails to apply for the renewal of its registration during the period specified in (a) above or by the CRD in connection with renewal under (b) above must make a new application for registration as set forth in these rules and may not submit the renewal application forms issued by the Bureau of Securities.

13:47A-7.1 Consent to service of process

(a) The irrevocable consent appointing the Bureau Chief or his or her successor in office as attorney to receive service of any lawful process in any noncriminal suit, action or proceeding against him ***or her*** shall be filed directly with the Bureau Chief, for registrants whose application is or was filed directly with the Bureau of Securities, by filing concurrently with the application the Form SB-6I for ***individuals,*** Form SB-6C for corporations***,*** or SB-6P for, partnerships***,*** as the case may be, as set forth in N.J.A.C. 13:47A-11.6, 7 and 8. ***Alternatively, the requirements of this section may be satisfied by filing with the Bureau of Securities a fully executed Form U-2 Uniform Consent to Service of Process.***

(b) For broker-dealer applications for registration in New Jersey filed via the CRD a fully executed page 1 (Execution Page) of the Form BD Uniform Application for Broker-Dealer Applications or a successor form as prescribed by the CRD may be filed with the CRD to fulfill the requirement of (a) above for the broker-dealer.

(c) All nonbroker-dealer registrants and those broker-dealers not registered with New Jersey via the CRD must continue to file the Consent to Service of Process directly with the Bureau of Securities, as set forth in (a) above.

13:47A-7.5 Expediting applications

Pursuant to Section 49:3-57(a) of the Uniform Securities Law (1967), applications become effective on noon on the 30th day after filing with the Bureau of Securities. Applications filed with the CRD to effectuate registration in New Jersey will become effective on noon on the 30th day after notice to the Bureau of Securities by the CRD that the application has been filed with the CRD. Any applicant desiring an earlier effective date must submit a written request to expedite to the Bureau Chief, such request to be made a part of the application and the applicant's permanent file. Acceleration is not automatic, and in no case shall an application become effective in less than five full business days after having been filed with the Bureau of Securities.

13:47A-7.6 Effectiveness of registrations filed with the CRD

Filing an application for registration with the CRD does not in any way impair the authority of the Bureau of Securities to require that additional information be filed with the Bureau or the CRD, nor does it in any way impair the Bureau's authority to deny, suspend, postpone or revoke any registration in accordance with the provisions of the Uniform Securities Law (1967) and the regulations promulgated under that Law. Allowing registrants to file their applications with the CRD, if they are eligible to do so, is for the convenience of the registrant and the Bureau, but is not intended to impair or substitute any other person's discretion or decision making authority for that of the Bureau of Securities in reviewing and acting upon applications.

13:47A-7.7 Transition rule for registrants currently registered with the Bureau of Securities and new registrants

(a) Registrants registered with the CRD in other states *[(at the time these amended rules take effect)]* ***on November 2, 1992*** who wish to include a registration in New Jersey may do so by filing an amendment with the CRD to the Form BD Uniform Application for Broker-Dealer Registration to include New Jersey as one of the states it is registered. These registrants must also include in the amendment filing any other information required by N.J.A.C. 13:47A-1.1 or 1.9. The information required by N.J.A.C. 13:47A-1.1 and 1.9 may be filed as a supplement to the amendment filed with the CRD or by a separate supplemental filing made directly to the Bureau of Securities at the same time the amendment is filed with the CRD.

(b) Registrants not registered with the CRD in other states *[(at the time these amended rules take effect)]* ***on November 2, 1992***, but who are registered in New Jersey via Form SB-1 who wish to extend their registration to other states, while retaining registration in New Jersey, may file an initial Form BD Uniform Application for Broker-Dealer Registration with the CRD to register in New Jersey and those other states in which it is eligible. These registrants must also supplement their Form BD registration with the information required by N.J.A.C. 13:47A-1.1 and 1.9. The information required by N.J.A.C. 13:47A-1.1 and 1.9 may be filed as a supplement to the initial registration filed with the CRD or by a separate supplemental filing made directly to the Bureau of Securities at the same time the initial application is filed with the CRD.

(c) Registrants not registered with the CRD in other states *[(at the time these amended rules take effect)]* ***on November 2, 1992***, who are registered in New Jersey via Form SB-1 and who are not eligible for registration via the CRD, but wish to retain registration in New Jersey, may renew their application for registration upon expiration directly with the Bureau of Securities in accordance with N.J.A.C. 13:47A-5.2(b).

(d) New applicants who are not registered either directly with the Bureau of Securities or via the CRD *[(at the time these amended rules take effect)]* ***on November 2, 1992***, must file their application for registration with the CRD in accordance with N.J.A.C. 13:47A-1.1, if they are eligible to do so. Only those new applicants who are not eligible for filing with the CRD may file their applications directly with the Bureau of Securities in accordance with N.J.A.C. 13:47A-1.2.

(e) Registrants registered with the CRD in other states *[(at the time these amended rules take effect)]* ***on November 2, 1992***, and who are registered in New Jersey via Form SB-1 shall file a Form BD, Uniform Application for Broker-Dealer Registration, or any successor form to the Form BD prescribed by the CRD for filing a broker-dealer application no later than 30 days prior to the expiration of its current registration as set forth in N.J.A.C. 13:47A-5.1. The registrant shall henceforth file all amendments required by N.J.A.C. 13:47A-1.9 directly with the CRD, as prescribed by the CRD. The amendment filed with the CRD shall be accompanied by the fee, if any, prescribed by the CRD for amendments. Notwithstanding the 90 day provision of N.J.A.C. 13:47A-5.3, a broker-dealer may file its Form BD application with the CRD prior to 90 days before expiration of its registration. However, the fee will not be waived. The new registration will run from the date the Form BD application, as supplemented by information filed directly with the Bureau is approved by the Bureau, until it expires on December 31 of the year next ensuing the year in which the registration became effective in accordance with N.J.A.C. 13:47A-5.1.

(f) Registrants who wish to withdraw their registration in New Jersey ***on November 2, 1992***, *[(at the time these amended rules

take effect those applicants)]* shall apply for withdrawal in accordance with N.J.A.C. 13:47A-1.11(a) or (b), as appropriate.

13:47A-7.8 Filing of information with the CRD

Any information filed by an applicant as part of a registration application that is filed with the NASAA/NASD CRD shall be considered to have been filed with the BUREAU of Securities in accordance with N.J.A.C. 13:47-7.5, unless the information is required by these rules to be filed directly with the Bureau of Securities at its current office address. If the information is required to be filed directly with the Bureau of Securities, then filing the information with the CRD will have no effect and the information will be considered as "not filed."

13:47A-8.1 Assessment

A registrant who fails to file with the Bureau of Securities or the CRD (as limited by N.J.A.C. 13:47A-7.8) any information required by N.J.A.C. 13:47A-1.9 (change of status), or any fee, annual report, financial report or statement as required by the Uniform Securities Law (1967) or the rules promulgated thereunder, within the time prescribed by the Law and the rules, shall be assessed a penalty of $10.00 for each late filing.

(a)

DIVISION OF STATE POLICE

Licensing and Registration of Dealers and Manufacturers; Sale, Purchase, Acquisition and Transfer of Firearms by Dealers to Eligible Persons; Investigation of Applications and Qualifications for Permits to Carry Handguns; Security Systems

Adopted Amendment: N.J.A.C. 13:54-1.15

Proposed: September 8, 1992 at 24 N.J.R. 3022(a).
Adopted: October 9, 1992 by Colonel Justin J. Dintino, Superintendent, Division of State Police.
Filed: October 9, 1992 as R.1992 d.446, **without change.**

Authority: N.J.S.A. 2C:58-1 et seq. and 2C:39-1 et seq.

Effective Date: November 2, 1992.
Expiration Date: November 18, 1996.

The Division of State Police afforded all interested persons with an opportunity to comment on the adoption of proposed amendments to N.J.A.C. 13:54-1.15. These amendments make clear that applications for licenses, permits, firearms purchase identification cards or registrations in the possession of the Division of State Police and municipal police departments are not public records. The section is also amended to make clear that originals or copies of licenses, registrations, permits and firearms identification cards in the possession of the New Jersey State Police or municipal police departments are not public records. Such records may not be disclosed to any person not authorized by law or this chapter to have access to them. Announcement of the opportunity to comment on the proposed amendment appeared in the New Jersey Register on September 8, 1992 at 24 N.J.R. 3022(a). Secondary publication of the proposed amendment, and a 30-day opportunity to comment thereon, appeared in the Newark Star Ledger, the Trenton Times, the Asbury Park Press and the Camden Courier Post, all newspapers of general circulation.

Summary of Public Comment and Agency Response:

No comments were received by the Division as a result of the public notice of the proposed rule amendment.

Full text of the adoption follows.

13:54-1.15 Confidentiality of background investigations, permits, licenses, firearms identification cards, registrations and applications

Any background investigation conducted by the chief of police, the Superintendent or county prosecutor of any applicant for a license, permit, firearms identification card or registration in accordance with the requirements of this chapter, are not public records and shall not be disclosed to any person, not authorized by law or this chapter to have access to such investigations, including the applicant, except upon order of a court of competent jurisdiction. Any applications for licenses, permits, firearms identification cards or registrations and any permits, licenses, registrations and firearms identification cards or any records reflecting the issuance or denial of such permits, licenses, firearms identification cards or registrations, maintained by any State or municipal governmental agency, are not public records and shall not be disclosed to any person not authorized by law or this chapter to have access to such documentation, except upon the request of persons acting in their governmental capacities for purposes of the administration of justice or upon order of a court of competent jurisdiction.

TREASURY-GENERAL

(b)

DIVISION OF PENSIONS

Notice of Administrative Correction

State Health Benefits Program
Health Maintenance Organization Charges
N.J.A.C. 17:9-5.6

Take Notice that the Division of Pensions has discovered an error in the current text of N.J.A.C. 17:9-5.6. As amended effective August 19, 1974 (see 6 N.J.R. 156(a) and 360(c)), the first sentence of the rule began, "For purposes of State and local coverage, the employer who pays ..." However, in the subsequent publication of proposed and adopted amendments to the rule (see 14 N.J.R. 1293(b) and 15 N.J.R. 343(b)), the word "employer" was erroneously reproduced as "employee," and so incorporated into the Code in its March, 1983 update. Through this notice of administrative correction, published pursuant to N.J.A.C. 1:30-2.7, this error is corrected.

Full text of the corrected rule follows (addition indicated in boldface **thus**; deletion indicated in brackets [thus]):

17:9-5.6 Health maintenance organization charges

For purposes of State and local coverage, the *[employee]* ***employer*** who pays any portion of the cost for the employee and for dependent coverage cannot pay any more for the same type of coverage if the employee enrolls himself or herself and his or her dependents in a health maintenance organization as an alternative program. If the cost of the coverage in the alternative plan exceeds the cost of the State program, the additional charge would be collected by payroll deductions from the employee.

OTHER AGENCIES

(c)

CASINO CONTROL COMMISSION

Accounting and Internal Controls
Removal of Slot Drop Buckets and Slot Cash Storage Boxes; Meter Readings

Adopted Amendment: N.J.A.C. 19:45-1.42

Proposed: August 3, 1992 at 24 N.J.R. 2695(a).
Adopted: September 30, 1992 by the Casino Control Commission, Steven P. Perskie, Chairman.
Filed: October 2, 1992 as R.1992 d.432, **without change.**

Authority: N.J.S.A. 5:12-63, 69, 70(l), 99(a)10 and 11.

Effective Date: November 2, 1992.
Expiration Date: March 24, 1993.

Summary of Public Comments and Agency Responses:

Comments were received from the Division of Gaming Enforcement (Division) and Greate Bay Hotel and Casino (the "Sands").

COMMENT: The Division reviewed the proposal and it does not object to the adoption of the proposed amendment as published.

RESPONSE: Accepted.

COMMENT: The Sands supports the proposed amendment as it pertains to N.J.A.C. 19:45-1.42(b)1. However, it commented that because of the similarity between certain types of specific slot drop buckets and slot cash storage boxes, the slot drop buckets which conform to the requirements of N.J.A.C. 19:45-1.36(h) should allow for reduced staffing as well. Thus, it suggests an amendment to N.J.A.C. 19:45-1.42(b)2.

RESPONSE: Rejected. Although the Sands' comment may be valid, it is beyond the scope of the proposal published by the Commission.

Full text of the adoption follows.

19:45-1.42 Removal of slot drop buckets and slot cash storage boxes; meter readings

(a) (No change.)

(b) Procedures and requirements for removing a slot drop bucket or slot cash storage box from its compartment shall be the following:

1. If the slot drop bucket or slot cash storage box meets the requirements of N.J.A.C. 19:45-1.36(b), (c), (d) and (e):

i. When the casino is not open to the public, the removal of a slot drop bucket or slot cash storage box shall be performed by at least two employees, one of whom shall be a casino security department member and one of whom shall be an accounting department member. Such removal shall be in the presence of a Commission inspector.

ii. When the casino is open to the public, the removal of a slot drop bucket or slot cash storage box shall be performed by at least three employees, two of whom shall be casino security department members and one of whom shall be an accounting department member. Such removal shall be in the presence of a Commission inspector.

2. (No change.)

(c)-(f) (No change.)

EDUCATION

(a)

STATE BOARD OF EDUCATION

Pupil Transportation

Adopted New Rules: N.J.A.C. 6:21-6, 6A, 6B and 6C; 9.2 and 9.13

Adopted Amendments: N.J.A.C. 6:21-5, 8 and 9

Proposed: June 15, 1992 at 24 N.J.R. 2109(a) (see also 24 N.J.R. 2325(a)).

Adopted: September 9, 1992 by State Board of Eduation, John Ellis, Secretary, State Board of Education and Commissioner, Department of Education.

Filed: September 14, 1992 as R.1992, d.397, **with substantive and technical changes** not requiring further public notice or comment (see N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 18A:1-1, 4-15, 39-21, 7D-18 and 39:3B-5.

Effective Date: November 2, 1992.

Operative Date: May 21, 1993, unless otherwise noted in the rules.

Expiration Date: November 22, 1994.

Summary of Public Comments and Agency Responses:

Three individuals spoke at the March 18, 1992 public testimony session provided by the State Board of Education and three individuals spoke at the June 17, 1992 public testimony session. The speakers included Phyllis Scheps, New Jersey State PTA; Rene Rovatar, New Jersey Association of School Business Officials; Arthur L. Yeager, D.D.S.; Brenda Considine, Association of Retarded Citizens; Denise Walker, New Jersey Day Training Coalition and Winifred Kraft, Ortho Safe Systems. Written comments were received from Nicholas Scalera, Division of Youth and Family Services; Earl Mattison, New Jersey School Bus Owners Association; Andrew Rolfe, Arcola Bus Sales; Christine M. Johnson, Assistant Commissioner, Policy and Planning, Department of Transportation; Robert Dumond, Blue Bird Body Company; James Shoop, Assistant Business Administrator, Passaic Board of Education and Arthur L. Yeager, D.D.S.

COMMENT: Two commenters expressed support for the mandates for a belt cutter and an electronic voice communication system on vehicles. They also suggested that language be added which requires that a fire blanket be carried in all vehicles used to transport special education students.

RESPONSE: A belt cutter and an electronic voice communication system are required. However, the Department did not recommend carrying fire blankets since they are not a requirement of the 1990 National Minimum Standards for School Buses.

COMMENT: A commenter suggested the following revisions:

- Removing the upper leg compressive force test requirement.
- Increasing the static force that each mobile seating device belt assembly and anchorables can withstand from 2,500 pounds to 6,000 pounds.
- The floor track wheel level chair anchorage systems should always be recessed. The option for the surface mounted anchorage type should be eliminated.
- All connecting hardware should be a positive locking system with a quick release.

RESPONSE: The Department disagrees. The amendments to this rule were established based upon the National Minimum Standards for School Buses which were developed by a committee representing state transportation directors, school bus manufacturers, the National School Transportation Association, the National Safety Council, the Transportation Research Center, and experts in the field of transportation of the handicapped. Therefore, the Department feels confident that the standards established by this committee are appropriate standards.

COMMENT: One commenter supported legislation that requires seat belts for children who ride in Type I school buses.

RESPONSE: Amendatory language was added at adoption level based upon the enactment of legislation on September 8, 1992. The amended language requires school buses to be equipped in accordance with P.L. 1992, c.92 and requires that the seat back height shall be a minimum of 28 inches or a minimum of 24 inches above the seating reference point.

These requirements apply only to school business and equipment for which a bid is submitted or an order for purchase placed on or after September 8, 1992.

COMMENT: The same commenter suggested increasing the minimum interior temperature of Type 1 buses from 40°F to 50°F.

RESPONSE: The Department disagrees. The minimum temperature of 40°F is a National Minimum Standard and the Department feels the standard is sufficient to maintain health and comfort.

COMMENT: Two commenters suggested that two roof safety hatches be required.

RESPONSE: Amendatory language was added at adoption level based upon the enactment of legislation on September 8, 1992. The amended language requires buses to be equipped with emergency exits in accordance with P.L. 1992, c.93. This will apply to buses manufactured on or after July 1, 1993.

COMMENT: Two commenters suggested mandating a side emergency door. One of these commenters suggested substituting a side emergency door for two push-out windows.

RESPONSE: The Department disagrees. The side emergency door is located on the driver side of the bus which is continuously exposed to traffic. A side emergency door is not required by the 1990 National Minimum Standards and there is sufficient evidence to mandate its use. A side emergency door should remain a local option.

COMMENT: One commenter expressed appreciation for the cooperation she has received from the Bureau of Pupil Transportation in the area of bus safety and suggests the following two revisions:

1. That chartered buses be required to display a school bus sign under this section; and

2. That Federal Motor Vehicle Safety Standard 217 for emergency push out windows be incorporated in this rule.

RESPONSE: The Department disagrees. District boards of education use chartered vehicles for extra-curricular activities, not to and from school. Therefore, the identification requirements of this section should not apply. The Federal Safety Standard 217 excludes school buses from the push-out window requirement. The Department feels that the

number and type of emergency exits established by N.J.A.C. 6:21-6B.11 are sufficient for student safety.

COMMENT: One commenter suggested requiring all buses to be equipped with a back-up alarm.

RESPONSE: The language on the original proposal that permits the optional use of a back-up alarm has been revised in the reproposal to mandate their use.

COMMENT: Four commenters suggested that there is no basis for limiting the capacity of Type A or B vehicles. Several commenters felt no limit was necessary and one commenter suggested raising the Type A capacity limit to 20. One commenter also felt there should be no capacity limits on Types C and D buses.

RESPONSE: The Department disagrees. The Department's concern is that without limiting the capacity on vehicles, the actual loaded weight of the vehicle may exceed the Gross Vehicle Weight Rating established by the chassis manufacturer. Limiting the capacity is a safeguard against a potential overload hazard. Since a Type A school bus has a gross vehicle weight rating of 10,000 lbs. or less, the Department feels that a 16 person capacity limit is necessary to protect against likely overload. For this reason, the Department maintains this standard. However, the manufacturing design of new equipment is constantly changing. Therefore, the Department will continue to study the new equipment design and make a recommendation for an amendment if appropriate. Capacity limits are necessary to assure student safety.

COMMENT: The same four commenters suggested changing the requirement for a two bulb clearance marker to one bulb of four candlepower. One bulb will provide better illumination and visibility. A dual system would require both bulbs to be operational during Division of Motor Vehicle Inspection. One commenter felt that a two bulb system would stress the electrical system and an illuminated "School Bus" sign would serve the purpose of identifying the vehicle better. One commenter recommended that either a one bulb or two bulb design be permitted.

RESPONSE: The Department disagrees. Dual bulbs will provide adequate illumination and visibility. The Department has been assured by a manufacturing engineer that the two bulb design will not negatively affect the electrical system. If one bulb burns out, the second is a back-up. As with all other equipment, both bulbs must be operational at the time of inspection. The purpose of the clearance marker lights is to indicate the width and height of the vehicle to the driver and motorists, not to identify the vehicle as a school bus.

COMMENT: Three commenters suggested eliminating the requirement that the emergency door arrow and exterior mirror assembly and support brackets be black. One commenter suggests permitting the exterior mirror assembly and bracket be stainless steel.

RESPONSE: The Department disagrees. The function of the arrow is to provide direction on how to open the emergency door. The proposed specification requires an exterior mirror assembly and support brackets to be black to eliminate glare which can obstruct the driver's view.

COMMENT: Two commenters suggested eliminating the requirement for a pry bar to be mounted in the bus because it may be improperly used by students.

RESPONSE: The Department disagrees. The pry bar is to be securely mounted in the location readily accessible to the driver and is beneficial in the event of an accident.

COMMENT: The same two commenters suggested removing "completely horizontal" regarding the owner identification on the sides of the bus. This could result in the unnecessary cost of repainting vehicles.

RESPONSE: The Department disagrees. The regulation only applies to vehicles manufactured 200 days after the adoption of this proposal. Therefore, repainting is not an issue.

COMMENT: The same two commenters suggested eliminating the phrase "on the front and the rear of the bus" from the identification letters or numbers requirement. This identification should be permitted anywhere on the bus to help students identify their bus.

RESPONSE: The Department disagrees. The identification numbers on the bus only identify the vehicle to the owner. Students identify their vehicle by the route number which is placed in the front side window of the bus. Placing additional numbers or letters on the sides of the bus may be confusing to small children.

COMMENT: The same two commenters suggested adding a requirement for tinted glass.

RESPONSE: The Department disagrees. This proposal allows tinted glass in vehicles which transport special education students. Tinted glass is unnecessary in vehicles which transport regular students and is costly to the board of education. Tinted windows darken the inside of the bus and may make visibility difficult.

COMMENT: The same two commenters on the original proposal suggested changing the requirement for two extra fuses to one. A single fuse should address most emergency situations. The proposed language would require maintenance of a large number of spare fuses on the bus.

RESPONSE: The Department agrees that one fuse is sufficient, as reflected in the reproposal.

COMMENT: The same two commenters suggested that a Citizen Band Radio is not an appropriate communication device for school buses. Federal Communications Commission (FCC) regulations prohibit the commercial use of Citizen Band radios.

RESPONSE: The Department disagrees. The use of citizen band radios for pupil transportation safety is not prohibited by FCC regulations. Several boards of education currently use citizen band radios successfully.

COMMENT: The same two commenters suggested changing the requirements for the size of the lettering on signs located on vehicles under the jurisdiction of the Department of Transportation used as school buses, from "six" to "eight inches high." Six inches high does not conform to N.J.A.C. 6:21-6B.17(b).

RESPONSE: The requirement in N.J.A.C. 6:21-8.2(e)1 establishes an exemption for buses under the jurisdiction of the Department of Transportation. These vehicles may not have an area to accommodate eight inch letters. Since they are dual purpose vehicles used for other than student transportation, a change in this rule is unnecessary.

COMMENT: The same two commenters suggested that the phrase "trunk compartment mounted spare tire" required by N.J.A.C. 6:21-9.9 in the original proposal be removed. This language does not adequately address station wagons, suburbans or minivans.

RESPONSE: For clarity, the Department agreed and the language was reworded to "a securely mounted spare tire" in the reproposal.

COMMENT: The same two commenters suggested amending the color requirement for the wheels and rims to include "white."

RESPONSE: The color "white" was included in the reproposal.

COMMENT: Another commenter suggested that the requirements of Subchapter 6 should not be limited to vehicles which transport public school students and nonpublic school students when services are provided by a local board of education. The requirements should apply to all school buses.

RESPONSE: Division of Motor Vehicles law, N.J.S.A. 39:1-1, requires that all school buses meet the requirements of the Department of Education or the Department of Human Services whichever is the appropriate agency. N.J.A.C. 6:21 can only apply to vehicles under the Department's jurisdiction.

COMMENT: The same commenter did not approve of the body and chassis requirements specifically listed at N.J.A.C. 6:21-6A.3(e); 6A.4(a), (b) and (e); 6A.13(a); 6A.17(a)2; 6A.26(h); 6B.4(b)1; 6B.7; 6B.14; 6B.15(d); 6B.28(b); 6B.31(b); 6B.34(c); 6B.35; 6B.38(a)1; 6B.42(b); 6B.48(b)7; and 6C.4(a)8.

RESPONSE: The Department supports these requirements which are based on the 1990 National Minimum Standards for School Buses. The standards were established by a committee representing state transportation directors, school bus manufacturers, the National School Transportation Association, the National Safety Council, and the Transportation Research Center. The Department is confident that these requirements are adequate to maintain student transportation safety.

COMMENT: The same commenter asked the question, why is the application of regulations pertaining to aisles limited to buses under the jurisdiction of the Department of Transportation?

RESPONSE: The aisle requirements in this proposal are not limited to buses regulated by the Department of Transportation. This requirement applies to both Department of Education and Department of Transportation buses used for pupil transportation.

COMMENT: The same commenter states that he understands the regulation in N.J.A.C. 6:21-6B.3(b) having to do with battery mounting but suggested it be reworded for clarity.

RESPONSE: The Department disagrees. The rule is clear as it is written.

COMMENT: The same commenter disagrees with the vertical hinge requirement for emergency push-out windows.

RESPONSE: The Department supports vertically hinged push-out windows. In the event of an emergency, exiting through a vertically hinged window is easier and safer for students.

COMMENT: The same commenter stated that regulations established by the Division of Motor Vehicles prohibits the use of manual switches.

RESPONSE: The rule at N.J.A.C. 13:20-11.10 to which the commenter refers is outdated. Manual switches are currently accepted by the Division of Motor Vehicles.

COMMENT: The same commenter suggested that grille colors "gray" and "silver" also be permitted.

RESPONSE: The Department agrees and the colors "gray" and "silver" were added to the list of accepted grille colors in the reproposal.

COMMENT: The same commenter asked how the tailpipe can terminate to the rear of all doors yet not under an emergency exit on a Type A bus?

RESPONSE: This rule prohibits the exhaust system tailpipe from terminating under doors and windows designed to open for ventilation. This rule protects students from hazardous exhaust fumes which may enter the vehicle.

COMMENT: The same commenter suggested that clarification is needed because wheelchairs which extend into the aisle should not be considered an obstruction.

RESPONSE: The Department disagrees. Wheelchairs should not obstruct the aisle.

COMMENT: The same commenter expressed concern that these rules do not apply to less than 10 passenger vehicles which transport handicapped students.

RESPONSE: Subchapter 9, which regulates less than 10 passenger vehicles, will sunset in 1994. The Department recognizes this concern and is in the process of researching specialized equipment which will be added to Subchapter 9, Small Vehicles Standards, at a later date.

COMMENT: The same commenter suggested that to satisfy the interlock requirement, either the parking brake be engaged or the vehicle be in the park position in order for the lift to operate.

RESPONSE: This standard permits any type interlock or design which prevents the operation of the vehicle when the lift is not in a fully stored position. This is essential for the safety of handicapped students.

COMMENT: Another commenter questioned whether the rules should address parents who transport their own children under contract with a board of education especially relating to requiring car seats.

RESPONSE: Parents who transport their own children under contract with a district board of education must comply with N.J.A.C. 6:21-9.11(e) which requires that seat belts be provided. Car seat requirements fall under the jurisdiction of the New Jersey Division of Motor Vehicles, N.J.S.A. 39:3-76.2a.

COMMENT: Another commenter asked whether the effective date of these rules is based on the date a vehicle is manufactured or the date a vehicle enters the state.

RESPONSE: N.J.A.C. 6:21-6.1(d) states that the rules established in N.J.A.C. 6:21-6, 6A, 6B and 6C shall apply to buses "manufactured" after May 21, 1993 unless otherwise noted.

COMMENT: The same commenter requested that the requirement which prohibits the exhaust from exiting under an operating window be deleted.

RESPONSE: The Department disagrees. This is not a new standard. This requirement is based upon the 1990 National Minimum Standards for School Buses and the U.S. Department of Transportation Regulations. The Department is confident that the requirement is adequate to maintain student transportation safety.

COMMENT: The same commenter recommends that the requirement for a separate blower motor for the defroster be deleted and recommends changing the criteria for measuring the visibility provided by the rear vision mirror system.

RESPONSE: These requirements are based upon the 1990 National Minimum Standards for School Buses. The Department is confident that these requirements are adequate and necessary to maintain student transportation safety.

Summary of Agency-Initiated changes upon adoption:

Several typographical errors were identified throughout the text and are being corrected upon adoption. The substantive changes at N.J.A.C. 6:21-6B.11, having to do with safety hatches, reflect the language of the recently enacted statute, P.L. 1992, c.93. Likewise, the substantive changes at N.J.A.C. 6:21-6B.30 regarding seat belts and N.J.A.C. 6:21-6B.31 regarding seat back heights are a direct reflection off the newly enacted P.L. 1992 c.92.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *[thus]*):

SUBCHAPTER 5. STANDARDS FOR SCHOOL BUSES *[MANUFACTURED BETWEEN (Upon adoption, dates will be inserted.)]*

6:21-5.1-5.24 (No change.)

SUBCHAPTER 6. STANDARDS FOR BUSES USED FOR PUPIL TRANSPORTATION

6:21-6.1 Scope and purpose

(a) To ensure the safety of students, buses originally designed to carry 10 or more passengers used in the transportation of public school students to and from school and school related activities shall comply with the rules established in N.J.A.C. 6:21-6, 6A, 6B, 6C and all applicable Federal Motor Vehicle Safety Standards.

(b) The rules established in N.J.A.C. 6:21-6, 6A, 6B and 6C also apply to buses used for the transportation of nonpublic school students when services are provided by a district board of education.

(c) The rules established in N.J.A.C. 6:21-6, 6A, 6B and 6C do not apply to buses approved for school use under the jurisdiction of the Department of Transportation unless otherwise noted.

(d) The rules established in N.J.A.C. 6:21-6, 6A, 6B and 6C shall apply to buses manufactured after *[(200 days from the adoption of this rule)]* ***May 21, 1993 unless otherwise noted***. Buses manufactured prior to this date shall comply with the rules in effect when the bus was manufactured or converted.

6:21-6.2 Words and phrases defined

The following words and phrases, when used in N.J.A.C. 6:21-6 through 6C*,* shall have the following meanings unless the context clearly indicates otherwise. Any reference to direction is relative to the driver in a seated position.

"Completed vehicle" means a vehicle that requires no further manufacturing operation to perform its intended function.

"Curb weight" means the weight of a school bus or vehicle including a maximum capacity of all fluids.

"Driver" means the authorized licensed operator of the vehicle.

"Emergency brake" means the mechanism designed to stop a school bus or vehicle in case of service brake failure.

"FMVSS" means Federal Motor Vehicle Safety Standards.

"FMCSR" means Federal Motor Carrier Safety Regulations.

"GVW" means Gross Vehicle Weight. GVW is the total weight of a single vehicle plus its load.

"GVWR" means Gross Vehicle Weight Rating. GVWR is the value specified by the manufacturer as the maximum loaded weight of a single vehicle.

"Kph" mean kilometers per hour.

"Mph" means miles per hour.

"NSFSB" means National Standards for School Buses.

"Parking brake" means a mechanism designed to prevent the movement of a stationary vehicle.

"Passenger" means any person riding in a school bus or vehicle other than the driver.

"Passenger seat" means a seat other than the driver's seat.

"SAE" means Society of Automotive Engineers, Inc.

"SBMI" means School Bus Manufacturers Institute.

"School bus" or "bus" when used in this subchapter shall refer to Types A, B, C and D buses and shall be classified in the following manner:

1. A Type "A" school bus is a conversion or body constructed upon a van-type compact truck or a front-section vehicle, with a GVWR of 10,000 pounds or less, designed for carrying 10 to 16 passengers;

2. A Type "B" school bus is a conversion or body constructed and installed upon a van or front-section vehicle chassis, or stripped chassis, with a GVWR of more than 10,000 pounds, designed for carrying 10 to 25 passengers. Part of the engine is beneath and/or behind the windshield and beside the driver's seat. The entrance door is behind the front wheels;

3. A Type "C" school bus is a body installed upon a flat back cowl chassis with a GVWR of more than 10,000 pounds, designed for carrying 10 to 54 passengers. The engine is in front of the windshield, or part of the engine is beneath and/or behind the windshield and beside the driver's seat. The entrance door is behind the front wheels;

4. A Type "D" school bus is a body installed upon a chassis, with the engine mounted in the front, midship, or rear, with a GVWR of more than 10,000 pounds, designed for carrying 10 to 54 passengers. The engine may be behind the windshield and beside the driver's seat; it may be at the rear of the bus, behind the rear wheels, or midship between the front and rear axles. The entrance door is ahead of the front wheels;

5. A Type "I" school bus is any vehicle with a seating capacity of 17 or more passengers used for the transportation of students to and from school or school related activities. This identification regulates the type of vehicle registration required by the New Jersey Division of Motor Vehicles; and

6. A Type "II" school bus is any vehicle with a seating capacity of 16 passengers or less used for the transportation of students to and from school or school related activities. This identification regulates the type of vehicle registration required by the New Jersey Division of Motor Vehicles.

"School bus warning lamps" are eight alternately flashing red or amber lamps mounted horizontally both front and rear, intended to identify a vehicle as a school bus and to inform other users of the highway that the vehicle is stopped or about to stop.

"Service brake" means the primary mechanism designed to stop a motor vehicle.

"Strobe school bus warning lamps" means a school bus warning lamp system utilizing eight electronic sealed beam flash tubes.

"Webbed belt" means a narrow fabric belt woven with continuous filling yarns and finished *[salvages]* ***selvages***.

6:21-6.3 Certification

(a) The chassis and/or body manufacturer and any manufacturer of school bus equipment required by this subchapter shall, upon request, provide evidence and/or certify to the Department of Education, Bureau of Pupil Transportation and the user that their product meets the minimum standards of this subchapter and all applicable FMVSS.

(b) Any person who alters, converts, or modifies a certified "completed vehicle" used to transport students shall certify to the New Jersey Department of Education, Bureau of Pupil Transportation and the user that all modifications conform to applicable design, construction, testing, and performance standards contained in this chapter.

(c) School bus vendors who sell or lease buses for student transportation shall issue a "Vendor Certification Statement", to the buyer or leasee, signed by an authorized agent or officer of the company certifying that the bus meets all State and Federal requirements.

SUBCHAPTER 6A. CHASSIS STANDARDS

6:21-6A.1 Air cleaner

(a) The engine intake air cleaner system shall be furnished and properly installed by the chassis manufacturer to meet engine manufacturer's specifications.

(b) The intake air system for diesel engines may have an air cleaner restriction indicator properly installed by the chassis manufacturer to meet engine specifications.

6:21-6A.2 Axles

The front axle and rear differential, including suspension assemblies, shall have a gross axle weight rating at ground at least equal to that portion of the load as would be imposed by the chassis manufacturer's maximum gross vehicle weight rating.

6:21-6A.3 Brakes

(a) A braking system, including service brake and parking brake, shall be provided.

(b) Buses using air or vacuum in the operation of the brake system shall be equipped with warning signals, readily audible and visible to the driver, that will give a continuous warning when the air pressure available in the system for braking is 60 pounds per square inch or less or the vacuum in the system available for braking is eight inches of mercury or less. The audible warning signal shall be capable of alerting the driver while the bus is being operated in traffic. An illuminated gauge shall be provided that will indicate to the driver the air pressure in pounds per square inch or the inches of mercury vacuum available.

1. Vacuum-assist brake systems shall have a reservoir used exclusively for brakes that shall be adequate to ensure loss in vacuum at full stroke application of not more than 30 percent when the engine is not running. The brake system on gas-powered engines shall include suitable and convenient connections for the installation of a separate vacuum reservoir.

2. The brake system dry reservoir shall be safeguarded by a check valve or equivalent device, that in the event of failure or leakage in its connection to the source of compressed air or vacuum, the stored dry air or vacuum shall not be depleted by the leakage or failure.

(c) Buses using a hydraulic assist-brake system shall be equipped with warning signals, readily audible and visible to the driver, that will provide continuous warning in the event of a loss of fluid flow from the primary source or loss of the electric source powering the backup system.

(d) The brake lines and booster assist lines shall be protected from excessive heat and vibration and shall be installed to prevent chafing.

(e) The brake system shall be designed to permit visual inspection of brake lining wear without removal of any chassis components.

(f) The parking brake shall hold the vehicle stationary, or to a limit of traction of the braked wheels, on a 20 percent grade under any condition of legal loading and on a surface free from snow, ice and loose material.

(g) When applied, the parking brake shall remain in an applied position with the capacity set forth in (f) above despite exhaustion of the source of energy used for the application or leakage of any kind.

(h) A parking brake lever shall be mounted to the right of the driver in a position that is easily accessible.

1. On Types A and B buses, the parking brake lever may be mounted in accordance with the chassis manufacturer's standards.

(i) The parking brake shall be equipped with a warning device visible to the driver which will indicate that the parking brake is on.

6:21-6A.4 Bumper, front

(a) The front bumper shall be furnished by the chassis manufacturer as part of the chassis.

1. The Type D bus front bumper may be furnished by the body or chassis manufacturer.

(b) The front bumper shall be of pressed steel channel or equivalent material at least 3/16 inch thick and not less than eight inches high and shall extend beyond the forward-most part of the body, grille, hood, and fenders and shall extend to outer edges of the fenders at the bumper top line.

(c) The front bumper, except breakaway bumper ends, shall be of sufficient strength to permit pushing a vehicle of equal gross vehicle weight without permanent distortion to bumper, chassis, or body.

(d) An energy absorbing front bumper, which conforms to current FMVSS test requirements, may be used. Its design shall incorporate a self-restoring energy absorbing system of sufficient strength to:

1. Push another vehicle of similar GVW without permanent distortion to the bumper, chassis, or body; and

2. Withstand repeated impacts without damage to the bumper, chassis or body according to current NSFSB.

(e) Tow eyes or hooks shall be furnished and attached so as not to project beyond the front bumper. Tow eyes or hooks attached to the chassis frame, shall be furnished by the chassis manufacturer. This installation shall be in accordance with the chassis manufacturer's standards.

6:21-6A.5 Clutch

The clutch torque capacity shall be equal to or greater than the engine torque output.

6:21-6A.6 Color

The chassis, including front bumper, shall be black. The cowl, fenders and hood shall be National School Bus Yellow. The hood may be painted non-reflective National School Bus Yellow. Wheels and rims shall be black, gray, white, or silver. The grille shall be chrome *, **silver, gray,*** or National School Bus Yellow.

6:21-6A.7 Drive shaft

Each segment of the drive shaft shall be equipped with a metal guard or guards around its circumference to prevent the drive shaft from whipping through the floor or dropping to the ground if broken.

6:21-6A.8 Electrical system

(a) Buses shall be equipped with a battery or batteries as specified by the manufacturer.

1. The storage battery shall have a minimum cold cranking capacity rating equal to the cranking current required for 30 seconds at 0 degrees Fahrenheit (-17.8°c) and a minimum reserve capacity rating of 120 minutes at 25 amps. Higher capacities may be required depending upon optional equipment and local environmental conditions.

2. When a battery or batteries are to be mounted by the body manufacturer on a sliding tray rather than the standard installation provided by the chassis manufacturer, the battery(s) shall be temporarily mounted on the chassis frame by the chassis manufacturer. In this case, the final location of the battery(s) and the appropriate cable lengths shall be according to current SBMI design objectives.

(b) Buses shall be equipped with an alternator.

1. A Type A bus shall have a minimum 60 ampere per hour alternator.

2. A Type B bus shall have a minimum 80 ampere per hour alternator.

3. Types C and D buses shall have an alternator with a minimum output rating of at least 100 amperes capable of producing a minimum of 50 percent of its maximum rated output at manufacturer's recommended engine idle speed.

4. Buses equipped with an electrical power lift, shall have a minimum 100 amps per hour alternator.

5. A direct-drive alternator is permissible in lieu of belt drive. Belt drive shall be capable of handling the rated capacity of the alternator with no detrimental effect on the other driven components.

6. Estimating the required alternator capacity shall be according to current SBMI design objectives.

(c) Wiring shall use a standard color and number coding and conform to current SAE standards.

1. The chassis shall be delivered to the user with a wiring diagram that coincides with the wiring of the chassis.

2. The chassis manufacturer shall install a readily accessible terminal strip or plug on the body side of the cowl, or at an accessible location in the engine compartment of buses designed without a cowl, that shall contain the following terminals for the body connections:

i. Main 100 amps. body circuit;
ii. Tail lamps;
iii. Right turn signal;
iv. Left turn signal;
v. Stop lamps;
vi. Back up lamps; and
vii. Instrument panel lights which are rheostat controlled by the headlamp switch.

6:21-6A.9 Engine fire extinguishers

Gasoline powered buses may be equipped with a fire extinguisher system for the engine compartment.

6:21-6A.10 Exhaust system

(a) The exhaust pipe, muffler, and tailpipe shall be outside the bus body compartment and attached to the chassis.

(b) The exhaust system components shall not be located where their location would likely result in burning, charring, or damaging the electrical wiring, the fuel supply, or any combustible part of the bus.

1. The exhaust system on a gas-powered chassis shall be properly insulated from fuel tank connections by a securely attached metal shield at any point where it is 12 inches or less from fuel tank or tank connections.

i. When a metal shield is required, the metal shield shall provide a minimum of two inches clearance between the exhaust system components, the fuel system, and/or combustible components.

(c) The tailpipe diameter from muffler to the end shall comply with the chassis manufacturer's standard and shall be constructed of a corrosion resistant tubing material at least equal in strength and durability to 16-gauge steel tubing.

1. The exhaust system tailpipe shall terminate to the rear of all doors and windows designed to be opened for ventilation.

2. The exhaust sysem shall not discharge to the atmosphere immediately below an emergency exit, fuel tank or fuel tank fill pipe.

3. The exhaust system tailpipe of a bus powered by a gasoline engine shall extend to the rear bumper or to the left or right perimeter sides of the bus body and discharge to the atmosphere either:

i. At or within six inches forward of the rearmost part of the bus on either side; or

ii. Beyond the rear bus bumper up to a maximum of two inches.

4. The exhaust system tailpipe of a bus using fuel other than gasoline shall extend to the rear bumper or to the perimeter of the sides of the bus body and discharge to the atmosphere either:

i. At or within 15 inches forward of the rearmost part of the bus on the sides; or

ii. Beyond the rear bus bumper up to a maximum of two inches.

(d) The muffler shall be constructed of corrosion-resistant material.

6:21-6A.11 Fenders, front, Type C buses

(a) The total spread of the outer edges of the front fenders, measured at the fender line, shall exceed the total spread of front tires when front wheels are in straight-ahead position.

(b) Front fenders shall be properly braced and free from any body attachments.

6:21-6A.12 Frame

(a) The frame or its equivalent shall be of such design and strength characteristics to correspond with the standard practice for trucks of the same general load characteristics.

(b) Any frame modification shall not be for the purpose of extending the wheelbase.

(c) Holes in the top or bottom flanges, or side units of the frame, shall not be permitted except as provided in the original chassis frame. Welding to the frame shall be by the chassis manufacturer or as approved by the chassis manufacturer.

(d) Frame lengths shall be provided in accordance with current SBMI design objectives.

6:21-6A.13 Fuel tank

(a) The fuel tank or tanks of minimum 30 gallon capacity shall have a 25 gallon actual draw. If a fuel tank size, larger than 30 gallons is supplied, the actual draw shall be 83 percent of the tank capacity. The fuel tank(s) shall be filled and vented to the outside of the body, the location of which shall ensure that accidental fuel spillage will not drip or drain on any part of the exhaust system.

(b) No portion of the fuel system which is located to the rear of the engine compartment, except the filler tube, shall extend above the top of the chassis frame rail. Fuel lines shall be mounted to obtain maximum possible protection from the chassis frame.

(c) A fuel filter with replaceable element shall be installed between the fuel tank and the engine.

(d) The fuel tank installation shall be in accordance with current SBMI design objectives.

(e) An auxiliary tank may be added in accordance with current SBMI design objectives.

(f) A bus constructed with a power lift unit may have the fuel tank mounted on the left chassis frame rail or behind the rear wheels.

6:21-6A.14 Governor

(a) An engine governor may be installed.

(b) When an engine is mounted in the midship or rear of a bus, a governor shall be installed to limit engine speed to the maximum revolutions per minute recommended by the engine manufacturer, or a tachometer shall be installed so the engine speed may be known to the driver.

(c) A road-speed governor may be installed to limit road speed.

6:21-6A.15 Heating system

The chassis engine shall have plugged openings for the purpose of supplying hot water for the bus heating system. The opening shall be suitable for attaching a ¾ inch pipe thread/hose connector. The engine shall be capable of supplying water having a temperature of at least 170 degrees Fahrenheit at a flow rate of 50 pounds per minute at the return end of 30 feet of one inch inside diameter automotive hot water heater hose.

6:21-6A.16 Horn

Buses shall be equipped with dual horns of a standard make. Each horn shall be capable of producing a complex sound in a band of audio frequencies between 250 and 2,000 cycles per second.

6:21-6A.17 Instruments and instrument panel

(a) The chassis shall be equipped with the following instruments and gauges. Lights in lieu of gauges are not acceptable except as noted:

1. Speedometer;

2. Odometer which will give accrued mileage to seven digits including tenths of miles;

3. Voltmeter;

i. An ammeter with graduated charge and discharge with ammeter and its wiring compatible with generating capacities is permitted in lieu of a voltmeter;

4. Oil-pressure gauge;

5. Water temperature gauge;

6. Fuel gauge;

7. Upper beam headlight indicator;

8. Vacuum or air brake indicator gauge;

i. A light indicator in lieu of a gauge is permitted on buses equipped with a hydraulic-over-hydraulic brake system;

9. Turn signal indicator; and

10. Glow-plug indicator light, where appropriate.

(b) All instruments shall be easily accessible for maintenance and repair.

(c) Above instruments and gauges shall be mounted on an instrument panel in such a manner that each is clearly visible to the driver while in normal seated-belted position in accordance with current SBMI design objectives.

(d) The instrument panel shall have lamps of sufficient candlepower to illuminate all instruments, gauges and the shift selector indicator for an automatic transmission.

(e) All gauges and instruments must be appropriately identified.

6:21-6A.18 Oil filter

An oil filter with replaceable element shall be provided and shall be connected by flexible oil lines if it is not of built-in or engine mounted design. The oil filter shall have a minimum capacity of one quart.

6:21-6A.19 Openings

All openings in the floorboard or firewall between chassis and passenger compartment, such as for gearshift selector/lever and parking brake lever, shall be sealed.

6:21-6A.20 Passenger load

(a) The gross vehicle weight (GVW) is the sum of the chassis weight, plus the body weight, plus the driver's weight, plus total seated pupil weight.

1. For purposes of calculation:

i. The driver's weight is 150 pounds; and

ii. The pupil weight is 120 pounds per pupil.

(b) The GVW shall not exceed the chassis manufacturer's GVWR for the chassis.

(c) Buses with a GVWR in excess of 26,001 pounds shall display the GVWR on the sides of the bus as required by the Division of Motor Vehicles.

6:21-6A.21 Power and gradeability

The GVW shall not exceed 185 pounds per published net horsepower of the engine at the manufacturer's recommended maximum number of revolutions per minute.

6:21-6A.22 Retarder system

A retarder system may be used which shall maintain the speed of the fully loaded school bus at 19.0 mph or 30 kph on a seven percent grade for 3.6 miles or six km.

6:21-6A.23 Shock absorbers

Buses shall be equipped with front and rear double-action shock absorbers compatible with manufacturer's rated axle capacity at each wheel location.

6:21-6A.24 Springs

(a) The capacity of the springs or suspension assemblies shall be commensurate with the chassis manufacturer's GVWR.

(b) If leaf type rear springs are used, they shall be of a progressive type.

6:21-6A.25 Steering gear

(a) The steering gear shall be approved by the chassis manufacturer and designed to assure safe and accurate performance when a vehicle is operated with maximum load and at maximum speed.

(b) The steering mechanism shall be accessible for external adjustment.

(c) No changes shall be made in the steering apparatus which are not approved by the chassis manufacturer.

(d) There shall be a clearance of at least two inches between the steering wheel and the cowl, instrument panel, windshield, or any other surface.

(e) Power steering is required and shall be of the integral type with integral valves.

(f) The steering system shall be designed to provide a means of lubrication for all wear points, if wear points are not permanently lubricated.

6:21-6A.26 Tires and rims

(a) Tires and rims of proper size and tires with load rating commensurate with chassis manufacturer's GVWR shall be provided.

(b) Tubeless tires mounted on one-piece drop center rims may be used.

(c) All tires shall be of the same size, construction and load rating. The load rating shall meet or exceed the GAWR in accordance with current applicable FMVSS.

1. Tires on Types C and D buses may be of more than one type construction provided all tires on the same axle are the same type of construction.

(d) If a bus is equipped with a spare tire and rim assembly, it shall be of the same size as those mounted on the bus.

(e) If a bus is equipped with a tire carrier, it shall be suitably mounted in an accessible location outside ***the*** passenger compartment.

(f) The tire tread depth shall at no time be less than 4/32 of an inch on the front tires and 2/32 of an inch on the rear tires as measured on two adjacent treads by a Dill gauge or its equivalent.

(g) Regrooved or recapped tires shall not be used on the front wheels of a bus.

(h) Dual rear tires shall be provided on Types B, C, and D buses.

(i) Tire chains, snow tires or all weather tires shall be used for the drive wheels to enhance the safe operation of the bus in areas of snow and ice.

6:21-6A.27 Transmission

(a) When an automatic transmission is used, it shall provide for not less than three forward speeds and one reverse speed.

(b) When a manual transmission is used, second gear and higher shall be synchronized except when incompatible with engine power.

A minimum of three forward speeds and one reverse speed shall be provided.

(c) A diagram of the shifting control pattern shall be located in a position easily visible to the driver.

(d) There shall be a detent on the automatic transmission shift lever to insure that the transmission cannot accidentally move from neutral to a drive gear without driver effort.

(e) Buses which are not equipped with a park position on the shift control selector for automatic transmissions shall be equipped with a heavy duty parking brake.

(f) The transmission shift control lever/mechanism shall be mounted to the right of the steering column.

6:21-6A.28 Turning radius

(a) A chassis with a wheel base of 264 inches or less shall have a right and left turning radius of not more than 42½ feet, curb to curb measurement.

(b) A chassis with a wheelbase of 265 inches or more shall have a right and left turning radius of not more than 44½ feet, curb to curb measurement.

6:21-6A.29 Undercoating

The undersides of steel or metallic-constructed front fenders shall be coated with rust-proofing compound.

6:21-6A.30 Weight distribution

The weight distribution of a fully loaded bus on a level surface shall not exceed the manufacturer's front and rear GAWR.

SUBCHAPTER 6B. BODY STANDARDS

6:21-6B.1 Aisle

(a) The minimum clearance of all aisles shall be 12 inches.

1. The aisle leading to an exit door or a rear emergency exit shall be a minimum width of 12 inches.

2. The aisle leading from the center aisle to a side emergency door shall be a minimum width of 24 inches.

3. The aisle leading to an emergency or lift door from a wheelchair position shall be a minimum width of 30 inches.

(b) Aisles shall be unobstructed at all times by any type barrier, seat, or other object.

(c) The seat backs shall be slanted sufficiently to give aisle clerance of 15 inches at the tops of seat backs.

(d) This rule also applies to buses under the jurisdiction of the Department of Transportation, approved for school use, contracted by a local board of education for transportation to and from school.

6:21-6B.2 Back up warning alarm

An automatic audible alarm shall be installed behind the rear axle of the bus and shall comply with current applicable SAE standards for rubber tired vehicles.

6:21-6B.3 Battery

(a) A battery is to be furnished by the chassis manufacturer.

(b) When the battery is mounted as described in the chassis standards of N.J.A.C. 6:21-6A.8(a), the body manufacturer shall securely attach battery on a slide-out or swing-out tray in a closed, vented compartment in the body skirt, so that the battery may be exposed to the outside for convenient servicing. The battery compartment door or cover shall be hinged at the front or top and secured by an adequate and conveniently operated fastening device.

6:21-6B.4 Bumpers

(a) The front bumper shall be provided by the chassis manufacturer.

1. The bumper on a Type D bus may be furnished by the body or chassis manufacturer.

2. A front safety shield attached directly under the bus front bumper may be used. It shall be constructed of rigid plastic, fiberglass, steel or equivalent material designed to withstand abnormal vibration, severe atmosphere conditions and removable to permit towing. The shield's overall width shall not exceed maximum front tire width, when bus wheels are in a straight ahead position and shall terminate 12 to 14 inches above the road surface. Front surface may be either solid, perforated or louvered and shall be black.

(b) A rear bumper shall be provided which is constructed of pressed steel channel or equivalent material at least 3/16 inch thick.

1. The bumper on a Type A bus shall be a minimum of eight inches high.

2. The bumper on Types B, C, and D buses shall be a minimum of 9½ inches high.

(c) The bumpers shall be of sufficient strength to permit pushing by another vehicle without permanent distortion.

(d) The rear bumper shall be wrapped around the back corners of the bus. It shall extend forward at least 12 inches, measured from the rear-most point of the body at the floor line.

(e) The rear bumper shall be attached to the chassis frame in such a manner that it may be easily removed. It shall be braced to withstand rear or side impact, and shall be attached to discourage hitching of rides.

(f) The rear bumper shall extend at least one inch beyond the rear-most part of the body surface measured at the floor line.

1. A Type A bus may conform to chassis manufacturer's specifications.

(g) Energy-absorbing bumpers which conform to current applicable FMVSS test requirements may be used. Its design shall incorporate a self-restoring energy absorbing bumper system so attached to discourage the hitching of rides and of sufficient strength to:

1. Permit pushing by another vehicle without permanent distortion to the bumper, chassis, or body; and

2. Withstand repeated impacts without damage to the bumper, chassis, or body according to current NSFSB.

6:21-6B.5 Color

(a) The school bus body shall be painted National School Bus Yellow.

(b) The body exterior paint trim, bumper, lamp hoods, emergency door arrow, exterior mirror assembly and support brackets shall be black.

1. The words "EMERGENCY DOOR" shall be applied both inside and outside the door in red lettering at least two inches high and at least 3/16 inch wide.

(c) Reflective material may be applied to the bus. The material used shall be automotive engineering grade or better, meeting initial reflectance values as specified by NSFSB and retaining at least 50 percent of those values for a minimum of six years. Reflective materials and markings, if used, may include any or all of the following:

1. The bumpers may be marked diagonally 45 degrees down to the centerline of the pavement with stripes evenly spaced of National School Bus Yellow or non-contrasting reflective material two inches wide.

2. The rear of bus body may be marked with a strip of reflective National School Bus Yellow material no greater than two inches in width to be applied to the back of the bus, extending from the left lower corner of the "SCHOOL BUS" lettering, across to left side of the bus, then vertically down to the top of the bumper, across the bus on a line immediately above the bumper to the right side, then vertically up to a point even with the strip placement on the left side, and concluding with a horizontal strip terminating at the right lower corner of the "SCHOOL BUS" lettering.

3. The sides of the bus body may be marked with reflective National School Bus Yellow material at least six inches but not more than 12 inches in width, extending the length of the bus body and located (vertically) as close as practicable to the beltline.

4. The "SCHOOL BUS" signs may be marked with reflective National School Bus Yellow material comprising background for lettering of the front and/or rear "SCHOOL BUS" signs.

6:21-6B.6 Communications

(a) School buses may be equipped with an electronic voice communication system, preferably not citizen band equipment.

(b) A public address sound system with interior speakers and exterior horn may be installed.

6:21-6B-7 Construction

(a) The bus construction shall be of prime commercial quality steel or other metal or material with strength at least equivalent to all-steel as certified by the body manufacturer.

(b) The construction shall provide a reasonably dustproof and water-tight unit and the exterior shall be designed to discourage the hitching of rides.

(c) The bus body joints shall conform to current applicable FMVSS. This does not include the body joints created when body components are attached to components furnished by the chassis manufacturer.

(d) Restraining barriers shall conform to current applicable FMVSS requirements for buses with a GVWR of more than 10,000 pounds.

(e) Buses may be equipped with steel side panel skirts between the front and rear axles of the bus and shall extend to the bottom-most evaluation of any chassis component located within the center section of a wheel base measurement apportioned into three equal sections. The side panel skirt shall terminate no less than twelve inches above a level road surface. Beyond the rear axle, the bottom of the side panel skirts shall taper upward to the bottom-most part of the rear bumper.

(f) Buses shall not be equipped with stanchions, an interior luggage rack, a roof luggage rack, or luggage access ladder.

1. This rule also applies to buses under the jurisdiction of the Department of Transportation, approved for school use, contracted by a local board of education for transportation to and from school.

6:21-6B.8 Defrosters

(a) Defrosting and *[degfogging]* ***defogging*** equipment shall direct a sufficient flow of heated air onto the windshield, the window to the left of the driver and the glass in the viewing area directly to the right of the driver to eliminate frost, fog and snow. The defroster unit shall have a separate blower motor in addition to the heater motors.

1. A Type A bus shall be equipped with defogging and defrosting equipment which will direct a sufficient flow of heated air onto the windshield to eliminate frost, fog, and snow.

(b) The defrosting system shall conform to SAE standards.

(c) The defroster and defogging system shall be capable of furnishing heated outside ambient air except that part of the system furnishing additional air to the windshield, entrance door, and step-well which may be of the recirculating air type.

(d) Auxiliary fans are not to be considered as a defrosting and defogging system.

(e) Portable heaters shall not be used.

6:21-6B.9 Doors, entrance

(a) The entrance door shall be under control of driver, and designed to afford easy release and prevent accidental opening. When a hand lever is used, no part shall come together so as to shear or crush fingers.

(b) The entrance door shall be located on the right side of the bus opposite the driver and within direct view of the driver.

(c) The entrance door on Types B, C, and D buses shall have a minimum horizontal opening of 24 inches and a minimum vertical opening of 68 inches. The entrance door on a Type A bus shall have a minimum opening of 1,200 square inches.

(d) The entrance door shall be of split-type, sedan-type, or jack-knife type. A split-type door includes any sectioned door which divides and opens inward or outward. If one section of split-type door opens inward and the other opens outward, the front section shall open outward.

(e) Door panels shall be of approved safety glass. The bottom of each lower glass panel shall not be more than 10 inches from the top surface of the bottom step. The top of the upper glass panel shall not be more than six inches from top of door.

1. A Type A bus which is not equipped with a split-type door shall have an upper panel window of safety glass with an area of at least 350 square inches.

(f) The vertical closing edges on a split-type door shall be equipped with a flexible material to protect children's fingers.

1. A Type A bus which is not equipped with a split-type door may conform to the chassis manufacturer's specifications.

(g) There shall be no entrance door to the left of the driver on Types C and D buses. Type A and B buses may conform to chassis manufacturer's specifications.

(h) All doors shall be equipped with a padding at the top edge of each door opening. Pad shall be at least three inches wide and one inch thick and extend the full width of the door opening.

(i) When a bus is equipped with air doors or other air operated assemblies, excluding windshield wipers, an additional air tank is needed for the operation of those assemblies.

6:21-6B.10 Doors, emergency

(a) The emergency door shall be hinged on the right side if in rear end of the bus and on the front side if on either side of the bus. All emergency doors shall open outward and be equipped with a device to hold the door open during emergencies and school bus evacuation drills.

1. A Type A bus equipped with double emergency doors shall be hinged on the outside edge and have a three point fastening device.

(b) The emergency door shall be labeled inside and outside to indicate how it is to be opened.

(c) The upper portion of emergency door shall be equipped with approved safety glazing, exposed area of which shall be not less than 400 square inches.

1. A rear view wide angle lens may be attached to one rear bus window. The lens shall not cover more than one third of the glass area.

(d) The lower portion of the rear emergency door on Types B, C, and D buses shall be equipped with a minimum of 350 square inches of approved safety glazing.

(e) There shall be no steps leading to emergency door.

(f) The words "EMERGENCY DOOR" shall be applied to the emergency door both inside and outside in red letters at least two inches high and 3/16 inch wide, shall be placed at top of or directly above the emergency door or on the door in the metal panel above the top glass.

(g) The emergency door shall be designed to be opened from the inside and outside of the bus and shall be equipped with a quick release fastening device designed to prevent accidental release. Control of the fastening device from the driver's seat shall not be permitted.

(h) The emergency door and the rear emergency window fastening device shall be equipped with a buzzer located in the driver's compartment which will indicate to the driver that the slide bar has moved and the emergency door is about to open. The switch which operates the buzzer shall be enclosed in a metal case and the wires leading from the switch shall be concealed in the bus body.

(i) The emergency door may be equipped with a locking system which incorporates an interlocking electrical circuit that will prevent the bus from being started while the emergency door is locked.

(j) The emergency door windows shall not be covered by any metal bars or screening.

(k) The emergency door shall be equipped with padding at least three inches wide and one inch thick, at top edge of each door opening, which shall extend the full width of the door opening.

(l) There shall be no obstruction higher than ¼ inch high across the bottom of any emergency door opening.

6:21-6B.11 Emergency exits

(a) Buses shall be equipped with emergency push-out split sash side windows which are vertically hinged on the forward side of the bus and roof safety hatches as follows:

1. One emergency push-out exit window per side.

i. Push-out windows shall not be placed directly opposite each other.

ii. Each emergency push-out side exit window shall be equipped with a warning buzzer, located in the driver's compartment to alert the driver when the latch for the emergency push-out window is released.

2. A roof safety hatch shall be installed in the forward half of the bus roof.

i. The roof safety hatch shall be constructed of metal, fiberglass or equivalent and equipped with an interior and exterior latch release. Each roof safety hatch shall provide a minimum opening of 20 inches by 20 inches.

ii. Each roof safety hatch shall be equipped with a warning buzzer, located in the driver's compartment to alert the driver when the latch for the roof safety hatch is released.

(b) Additional push-out windows *[and roof safety hatches]* may be used.

(c) *[An additional roof safety hatch may be installed in the rear half of the bus roof on Types C and D buses.]* ***Buses shall be equipped with emergency exits in accordance with P.L. 1992, c.93.***

6:21-6B.12 Emergency equipment

(a) A pry bar at least 24 inches in length shall be securely mounted in the bus in a location readily accessible to the driver.

(b) Each school bus shall contain at least three reflectorized triangle road warning devices in compliance with FMVSS and be mounted in an accessible place in the driver's compartment.

1. The mounting location in a Type A bus is optional.

(c) Buses may be equipped with an identified body fluid clean-up kit that is removable, moisture proof and mounted in an accessible place in driver's compartment.

6:21-6B.13 Fire extinguishers

(a) The bus shall be equipped with at least one pressurized, dry chemical type fire extinguisher, complete with hose, mounted in a bracket located in the driver's compartment and readily accessible to the driver and passengers. A pressure gauge shall be mounted on the extinguisher which can be easily read without removing the extinguisher from its mounted position.

(b) The fire extinguisher shall be approved by the Underwriters Laboratories, Inc. with a total rating of 2 A-10 BC or greater. The operating mechanism shall be sealed with a type of seal which will not interfere with the use of the fire extinguisher.

6:21-6B.14 First aid kit

(a) A removable first aid kit shall be provided. It should be moisture and dust proof and be mounted in an accessible place within the driver's compartment. When the first aid kit is stored in a storage compartment, the location of the kit shall be identified by the words "First Aid" in red letters two inches high and 3/16 inch wide.

(b) The kit shall contain, but is not limited to, the following items:

1. Two, one inch × 2½ yards adhesive tape rolls;
2. Twenty-four sterile gauze pads three inches × three inches;
3. One hundred ¾ inch × three inches adhesive bandages;
4. Eight, two inch bandage compresses;
5. Ten, three inch bandage compresses;
6. Two, two inch × six yards sterile gauze roller bandages;
7. Two nonsterile triangular bandages approximately 40 inches × 54 inches with two safety pins;
8. Three sterile gauze pads 36 inches × 36 inches;
9. Three sterile eye pads;
10. One pair latex gloves;
11. One pair rounded end scissors;
12. One mouth-to-mouth airway;
13. One sharpened pencil; and
14. One small writing pad.

6:21-6B.15 Floor

(a) The floor in the underseat area, including tops of the wheelhousing, drivers compartment, and the toe board, shall be covered with rubber floor covering or equivalent having minimum overall thickness of .125 inch.

1. The toe board floor covering on Types A and B buses may be the chassis manufacturer's standard.

(b) The floor covering in the aisle shall be rubber or equivalent, wear-resistant, and ribbed. Minimum overall thickness shall be .187 inch measured from the tops of the ribs.

(c) The floor covering must be permanently bonded to the floor and shall not crack when subjected to sudden changes in temperature. The bonding or adhesive material shall be waterproof and shall be the type recommended by the manufacturer of floor covering material. All seams must be sealed with waterproof sealer.

(d) A secured insulated screw-down plate to access the fuel tank sending unit shall be provided.

6:21-6B.16 Heaters

(a) Heaters shall be of hot water type and/or combustion type.

(b) If only one heater is used, it shall be of fresh air or combination fresh air and recirculating type.

(c) If more than one heater is used, additional heaters may be of the recirculating air type.

(d) The heating system shall be capable of maintaining a temperature of not less than 40 degrees Fahrenheit throughout the bus at average minimum January temperature as established by the U.S. Department of Commerce, Weather Bureau, for the area in which the bus is to be operated.

(e) All heaters installed by the body manufacturers shall bear a name plate that indicates the heater rating is in accordance with SBMI standards. The plate shall be affixed by the heater manufacturer which will constitute certification that the heater performance is as shown on the plate.

(f) Heater hoses shall be adequately supported to guard against excessive wear due to vibration. The hoses shall not dangle or rub against the chassis or sharp edges and shall not interfere with or restrict the operation of any engine function. Heater hose shall conform to SAE standards. Heater lines on the interior of the bus shall be shielded to prevent scalding of the driver or passengers.

(g) Each hot water heater system installed by the body manufacturer shall include one shut-off valve in the pressure line and one shut-off valve in the return line with both valves at or near the engine in an accessible location. There shall also be a water flow regulating valve installed in the pressure line for convenient operation by the driver while seated.

1. The hot water heater system in a Type A bus may conform to the chassis manufacturer's standard.

(h) Combustion type heaters shall comply with current applicable FMCSR.

(i) Accessible bleeder valves shall be installed in an appropriate place in the return lines of body company-installed heaters to remove air from the heater lines.

(j) Access panels shall be provided to make heater motors, cores, and fans readily accessible for service. Outside access panel may be provided for the driver's heater.

(k) A rear engine bus shall be equipped with a hot water heater booster pump.

6:21-6B.17 Identification

(a) The words "SCHOOL BUS" shall be applied to the bus body in black letters at least eight inches high on both the front and rear of the bus between the warning lamp signals or on signs attached thereto. Lettering shall be placed as high as possible without impairment of its visibility. Lettering shall conform to Series "B" of standard alphabets for highway signs.

1. An illuminated front and rear destination sign with "SCHOOL BUS" in eight inch black letters on background of National School Bus Yellow may be used.

(b) When attached signs are used, they shall comply with the following:

1. The sign on the front of the bus shall have the words "SCHOOL BUS" printed in black letters not less than eight inches on a background of National School Bus Yellow;

2. The sign on the rear of the bus shall be at least 10 square feet in size and shall be painted National School Bus Yellow and have the words "SCHOOL BUS" printed in black letters not less than eight inches high; and

3. Attached signs shall be removed or covered whenever the bus is not being used for to and from school transportation.

(c) The standards in (a) and (b) above also apply to buses under the jurisdiction of the Department of Transportation, approved for school use, contracted by a local board of education for transportation to and from school.

(d) There shall be no lettering on the front or rear of the bus unless specified in this subchapter.

(e) Only signs and lettering limited to the name of owner or operator and any marking necessary for identification shall appear on the sides of the bus.

1. The owning or operating organization shall be conspicuously identified in letters at least three inches high, located on each longitudinal side of the exterior of the bus. The identification shall be below the window line, completely horizontal and shall be black or National School Bus Yellow.

2. Identification letters or numbers, up to a maximum height of six inches, shall be in prominent locations on the front and rear of the bus below the window line. The color of the letters or numbers shall be either white, black or National School Bus Yellow.

(f) No advertisement of any kind shall be exhibited either on the interior or exterior of the bus, except for the manufacturer's and vendor's trade names which may be exhibited on the bus.

6:21-6B.18 Inside height

(a) The inside body height shall be 72 inches or more, measured from the ceiling to the floor metal, at any point on longitudinal center line from front vertical bow to rear vertical bow.

1. A Type A bus shall have a minimum of 62 inches inside body height.

6:21-6B.19 Insulation

(a) The ceiling and walls shall be insulated with adequate material to deaden sound and to reduce vibration to a minimum. If thermal insulation is specified, it shall be of fire-resistant material approved by the Underwriters Laboratories, Inc.

(b) Floor insulation may be used and shall be either five ply $^{19}/_{32}$ inch thick plywood, or a material of equal or greater strength with an insulation R value and shall be equal or exceed properties of exterior-type softwood plywood, C-D Grade as specified in standards issued by U.S. Department of Commerce. When plywood is used, all exposed edges shall be sealed.

1. Type A bus shall be insulated with a minimum of one-half inch exterior grade plywood securely fastened to the steel floor of the bus in the passenger compartment.

6:21-6B.20 Interior

(a) The interior of the bus shall be free of all unnecessary projections, such as luggage racks, which may cause injury. This standard requires inner lining on ceilings and walls. If ceiling is constructed with lapped joints, the forward panel shall be lapped by the rear panel and the exposed edges shall be beaded, hemmed, flanged, or otherwise treated to minimize sharp edges.

(b) The driver's area forward of the foremost padded barriers shall permit the mounting of required safety equipment and vehicle operation equipment.

(c) Every school bus shall be constructed so that the noise level taken at the ear of the occupant nearest to the primary vehicle noise source shall not exceed 85 dBA when tested according to NSFSB.

6:21-6B.21 Lamps and signals

(a) The lamps on the exterior of the bus shall conform to current applicable FMVSS.

1. Each clearance, marker, or identification lamp shall be of the two bulb design and shall automatically be activated, whenever the headlights or parking lamps are activated, in a steady burning state.

2. Two parking lamps shall designate the front of the bus.

3. Two backup lamps shall be installed on the rear of Types B, C, and D buses. These lamps shall be illuminated when either the shift control lever for the transmission is placed into reverse gear or the rear emergency door is unlatched.

4. An armored marker-type amber lamp connected to the turn signals shall be installed on each side of the bus body immediately behind the entrance door on the right and symmetrically opposite on the left side of all Type C and D buses.

(b) Interior lamps shall be provided which adequately illuminate aisle and stepwell. Stepwell light shall be illuminated by the service door operated switch, which will illuminate only when headlights and clearance lights are on and the service door is open.

(c) Body instrument panel lights shall be controlled by an independent rheostat switch.

(d) A telltale light, plainly visible to the driver, shall be installed to give a positive indication of the operation of the stop lights.

(e) Alternately flashing signal lamps shall be provided as follows:

1. Red signal lamps are alternately flashing lamps mounted horizontally both front and rear, intended to identify a vehicle as a school bus and to inform other users of the highway that the bus is stopped to take on or discharge school children.

i. Buses shall be equipped with two front and two rear red lamps located approximately six inches below the top of the bus, as near the sides as is possible, and equidistant from the center.

2. Amber signal lamps are alternately flashing lamps mounted horizontally both front and rear, intended to identify a vehicle as a school bus and to inform other users of the highway that the bus is about to stop on the highway to take on or discharge school children.

i. In addition to the four red lamps described in (e)1 above, four amber lamps shall be installed with one amber lamp located near each red signal lamp, at same level, but closer to vertical centerline of bus.

ii. The amber lamps shall be activated, approximately 300 feet prior to each school bus stop, either by a hand button that is identified and easily accessible to the belted bus driver or by a foot switch located on the floor board directly in front of where a clutch pedal normally would be located.

3. The system of red and amber signal lamps shall be wired so that amber lamps are energized manually, and red lamps are automatically energized (with amber lamps being automatically deenergized) when stop signal arm is extended or when bus service door is opened.

4. All flashers for alternately flashing red and amber signal lamps shall be enclosed in the body in a readily accessible location.

5. Each school bus shall be equipped with a system which monitors the front and rear alternately flashing signal lamps and the monitor shall be mounted in full view of the driver. If the full circuit current passes through the monitor, each circuit shall be protected by a fuse or circuit breaker.

6. The area around the lens and extending outward approximately three inches from each alternately flashing signal lamp shall be black in color. In those installations where there is no flat vertical portion of the body immediately surrounding the entire lens of lamp, a circular or square band approximately three inches wide, immediately below and to both sides of the lens, shall be black in color on the body or roof area against which the signal lamp is seen from a distance of 500 feet along axis of vehicle.

7. Visors or hoods, black in color, with a minimum depth of four inches shall be provided.

8. If strobe alternately flashing signal lamps are utilized, the front and rear signal lamps shall be equipped with eight seven inch sealed beam electronic strobe lamps, four red and four amber, working in an automatic integrated system. The exterior surface of lens shall be smooth and meet SAE color requirements. Strobe alternately flashing signal lamps are only permitted on Type C and D buses.

i. The solid-state strobe power supply shall provide the electrical power to energize the sealed beam flash tubes. The power supply shall energize the lamps at a combined alternating flash rate of 120-128 flashes per minute. The power supply shall be fully enclosed in a metal container, with a minimum metal wall thickness of .060 inches, and mounted within the front or rear bulkheads.

(f) The requirements in (e) above also apply to buses under the jurisdiction of the Department of Transportation, approved for school use, contracted by a local board of education for transportation to and from school.

(g) The bus body shall be equipped with rear turn signal lamps that are at least seven inches in diameter or if a shape other than round, a minimum 38 square inches of illuminated area and meet SAE standards. These signals must be connected to the chassis hazard wiring switch to cause simultaneous flashing of turn signal lamps when needed as vehicular traffic hazard warning. Turn signal

lamps are to be placed as wide apart as practical and their centerline shall be approximately eight inches below the rear window.

1. On Type A buses, the lamps must be at least 21 square inches in lens area.

(h) Buses shall be equipped with four combination red stop/tail lamps as follows:

1. Two combination lamps with a minimum diameter of seven inches, or if a shape other than round, a minimum 38 square inches of illuminated area shall be mounted on the rear of the bus just inside the turn signals.

2. Two combination lamps with a minimum diameter of four inches, or if a shape other than round, a minimum 12 square inches of illuminated area shall be placed on the rear of the body between the beltline and the floor line. Rear license plate lamp may be combined with one lower tail lamp. Stop lamps shall be activated by the service brakes and shall emit a steady light when illuminated.

3. Type A buses may conform to the chassis manufacturer's standard.

6:21-6B.22 Metal treatment

(a) All metal used in construction of bus body shall be zinc coated or aluminum coated or treated by equivalent process before bus is constructed. Included are such items as structural members, inside and outside panels, door panels, and floor sills; excluded are such items as door handles, grab handles, interior decorative parts, and other interior plated parts.

(b) All metal parts that will be painted shall be chemically cleaned, etched, zinc-phosphate coated, and zinc-chromate or epoxy primed or conditioned by equivalent process.

(c) In providing for these requirements, particular attention shall be given lapped surfaces, welded connections of structural members, cut edges, punched or drilled hole areas in sheet metal, closed or box sections, unvented or undrained areas, and surfaces subjected to abrasion during vehicle operation.

(d) As evidence*[d]* that the above requirements have been met, samples of materials and sections used in the construction of the bus body shall not lose more than 10 percent of material by weight when subjected to 1,000 hour salt spray test as provided for in the NSFSB.

6:21-6B.23 Mirrors

(a) An interior mirror shall be provided which is either clear view laminated glass or clear view glass bonded to a backing which retains the glass in the event of breakage. Mirror shall be a minimum of six inches by 30 inches. The mirror shall have rounded corners and protected edges.

1. On a Type A bus, the mirror shall be a minimum of six inches by 16 inches.

(b) Buses shall be equipped with a system of exterior mirrors which conform to current applicable FMVSS as follows:

1. A rear vision mirror system which shall be capable of providing a view along the left and right sides of the vehicle which will provide the driver with a view of the rear tires at ground level, a minimum distance of 200 feet to the rear of the bus and at least 12 feet perpendicular to the side of the bus at the rear axle line; and

2. A crossview mirror system which shall provide the driver with indirect vision of an area at ground level from the front bumper forward and the entire width of the bus to a point where the driver can see by direct vision. The crossview system shall also provide the driver with indirect vision of the area at ground level around the left and right front corners of the bus to include the tires and entrance door on all types of buses to a point where it overlaps with the rear vision mirror system.

i. No portion of the crossview mirror assembly shall project more than six inches forward or laterally from the outer-most limits of the vehicle at point of installation.

ii. No portion of the crossview mirror assembly shall unduly obstruct the light emitted from any required lamp or the driver's view of vehicular traffic.

3. Stick-on convex mirrors shall not be attached to any mirror surface.

6:21-6B.24 Mounting

(a) The chassis frame shall support the rear body cross member. The bus body shall be attached to the chassis frame at each main floor sill, except where chassis components interfere, in such manner as to prevent shifting or separation of body from chassis under severe operation conditions.

1. The distance between the fasteners which secure the body to the chassis shall not exceed 42 inches.

2. The fasteners shall be located directly opposite each other along the longitudinal length of the chassis frame.

(b) Insulation material shall be placed at all contact points between the body and the chassis frame on body on chassis type buses, and shall be attached to the chassis frame or body so that it will not move under severe operating conditions.

6:21-6B.25 Overall length

Overall length of bus shall not exceed 40 feet.

6:21-6B.26 Overall width

Overall width of bus shall not exceed 96 inches excluding accessories.

6:21-6B.27 Reflectors

(a) Reflectors are required on buses which comply with current applicable FMVSS as follows:

1. On the rear: Two red reflectors, equally spaced as far from the center as practical and at the same height.

2. On each side: Two reflectors on each side, one amber, at or near the front and one red at or near the rear.

3. One amber reflector on each side of the bus body as near the center as practical shall be provided on buses 30 feet or more in length.

6:21-6B.28 Rub rails

(a) There shall be one rub rail located on each side of bus approximately at seat level which shall extend from rear side of entrance door completely around bus body (except emergency door) to point of curvature near outside cowl on left side.

(b) There shall be one rub rail located approximately at floor line which shall cover same longitudinal area as upper rub rail, except at wheelhousing, and shall extend only to radii of right and left rear corners.

(c) Each rub rail shall be attached at each body post, and all other upright structural members.

(d) Each rub rail, in their finished form, shall be four inches or more in width. They shall be of 16 gauge steel or suitable material of equivalent strength, and shall be constructed in corrugated or ribbed fashion.

(e) Both rub rails shall be applied outside body or outside body posts. Pressed-in or snap-on rub rails do not satisfy this requirement.

(f) On Type A and B buses with a chassis manufacturer's body, or Type C and D buses with a rear luggage or a rear engine compartment, rub rails are not required to extend around rear corners.

6:21-6B.29 Sanders and traction device

(a) When used, sanders shall:

1. Be *[a]* ***of*** hopper cartridge-valve type;

2. Have a metal hopper with all interior surfaces treated to prevent condensation of moisture;

3. Be of at least 100 pound (grit) capacity;

4. Have a cover on the filler opening of the hopper, which screws into place, sealing unit airtight;

5. Have discharge tubes extending to front of each rear wheel under fender;

6. Have no-clogging discharge tubes with slush-proof, non-freezing rubber nozzles;

7. Be operated by an electric switch with a telltale pilot light mounted on the instrument panel;

8. Be exclusively driver-controlled; and

9. Have a gauge to indicate that hoppers need refilling when they are down to one-quarter full.

(b) Automatic traction chains may be used.

6:21-6B.30 Seat belt for driver

(a) A type 2 lap belt/shoulder seat belt shall be provided for the driver. The assembly shall be equipped with an emergency locking retractor for the continuous belt system. The lap portion of the belt shall be guided or anchored where practical to prevent the driver from sliding sideways under it.

(b) The seat belt shall have a button type latch and the floor anchored belt section shall be booted to keep the buckle within driver's reach.

(c) Buses shall be equipped in accordance with P.L. 1992, c.92.

6:21-6B.31 Seats and crash barriers

(a) All seats shall have minimum depth of 15 inches.

(b) Seat backs shall be a minimum of *[24]* ***28*** inches high and a minimum *[20]* ***24*** inches above the seating reference point.

1. This requirement shall apply only to school buses and equipment for which a bid is submitted or an order for purchase placed on or after September 8, 1992.

(c) Seat, seat back cushion and crash barrier shall be covered with a material having 42-ounce finished weight, 54 inches width, and finished vinyl coating of 1.06 broken twill, or other material with equal tensile strength, tear strength, seam strength, adhesion strength, resistance to abrasion, resistance to cold, and flex separation, and meets the criteria contained in the NSFSB Fire Block Test for school bus seat upholstery.

1. Damaged or vandalized covers of seat cushions, seat backs, and crash barriers equipped with flame-retardant materials shall be repaired in a manner to maintain the original flame-retardant protection.

(d) All seats shall be forward facing.

(e) Each seat leg shall be secured to the floor by a minimum of two bolts, washers, and nuts.

(f) All seat frames attached to the seat rail shall be fastened with two bolts, washers and nuts or flange-headed nuts.

(g) The driver's seat shall be of the highback type with a minimum seat back adjustment of 15 degrees and with a head restraint to accommodate a 95 percentile adult male. The driver's seat shall be secured with nuts, bolts, and washers or flange-headed nuts.

1. The space between the back of the driver's seat, in the rearmost position, and the front surface of the restraining barrier located directly behind the driver shall comply with FMVSS for barrier deflection.

6:21-6B.32 Spray suppressant and mud flaps

Spray suppressants or mud flaps are required when an angle found by a level road surface and a line projected from the point of contact of the rearmost tire with the ground and the bottom edge of the rear bumper exceeds an angle of 22½ degrees.

6:21-6B.33 Steps

(a) First step at the entrance door shall not be less than 10 inches and not more than 14 inches from the ground, based on standard chassis specifications.

1. Type D buses shall have the first step at the entrance door 12 to 16 inches from the ground.

(b) Step risers shall not exceed a height of 10 inches. When plywood is used on the steel floor or step, the riser height may be increased by thickness of the plywood used.

(c) Steps shall be enclosed to prevent accumulation of ice and snow.

(d) Steps shall not protrude beyond side body line.

(e) A grab handle not less than 20 inches in length shall be provided in unobstructed location inside the doorway.

6:21-6B.34 Step treads

(a) All steps, including floor line platform area, shall be covered with 3/16 inch rubber floor covering or other materials equal in wear resistance and abrasion resistance to top grade rubber.

(b) The rubber step treads shall be permanently bonded to the step well metal, minimum 24 gauge cold roll steel, and the ribbed rubber grooved design shall run at 90-degree angles to long dimension of the step tread.

(c) Three-sixteenth inch ribbed step tread shall have a 1½ inch white nosing integral piece without any joint.

(d) The rubber portion of step treads shall have the following characteristics:

1. Special compounding for good abrasion resistance and high coefficient of friction;

2. Flexibility so that it can be bent around a one-half inch mandrel both at 130 degrees Fahrenheit and 20 degrees Fahrenheit without breaking, cracking, or crazing; and

3. Show a durometer hardness of 85 to 95.

6:21-6B.35 Stirrup steps

There shall be at least one folding stirrup step or recessed foothold and suitably located handles on each side of the front of the bus body for easy accessibility for cleaning the windshield and lamps except when windshield and lamps are easily accessible from the ground. A step, in lieu of the stirrup steps, is permitted in or on the front bumper.

6:21-6B.36 Stop signal arm

A stop signal arm shall be provided on the left side of the body which meets the applicable requirements of FMVSS. The stop arm shall be an octagonal shape with white letters and border on a red background. The flashing lamps in stop arm shall be connected to the alternately red flashing signal lamp circuits. Vacuum, electric or air operation of the stop signal arm is optional.

6:21-6B.37 Storage compartment

If tools, tire chains and/or tow chains are carried on the bus, a container of adequate strength and capacity may be provided. Such storage container may be located either inside or outside the passenger compartment but, if inside, it shall have a cover (seat cushion may not serve as this purpose) capable of being securely latched and be fastened to the floor convenient to either the entrance or emergency door.

6:21-6B.38 Sun shield

(a) Interior adjustable transparent sun shield not less than six inches by 30 inches with a finished edge shall be installed in a position convenient for use by driver.

1. A Type A bus may be equipped with a sun shield not less than six inches by 16 inches.

6:21-6B.39 Tailpipe

(a) The tailpipe diameter from muffler to the end shall comply with the chassis manufacturer's standard and shall be constructed of a corrosion resistant tubing material at least equal in strength and durability to 16-gauge steel tubing.

(b) The tailpipe shall terminate to the rear of all doors and windows designed to be opened for ventilation.

(c) The tailpipe shall not terminate immediately below an emergency exit, fuel tank, or fuel tank fill pipe.

(d) The tailpipe of a bus powered by a gasoline engine shall extend to the rear bumper or to the left or right perimeter sides of the bus body and discharge to the atmosphere either:

1. At or within six inches forward of the rearmost part of the bus on the left or right side; or

2. Beyond the rear bus bumper up to a maximum of two inches.

(e) The tailpipe of a bus using fuel other than gasoline shall extend to the rear bumper or to the left or right perimeter sides of the bus body and discharge to the atmosphere either:

1. At or within 15 inches forward of the rearmost part of the bus on the left or right side; or

2. At or beyond rear bus bumper up to a maximum of two inches.

(f) Tailpipe(s) which terminate at either the left or right side of the bus shall extend to but not beyond the perimeter of the bus body side.

6:21-6B.40 Tow eyes or hooks

Tow eyes or hooks may be furnished on the rear and attached so they do not project beyond the rear bumper. Tow eyes or hooks attached to the chassis frame shall be furnished by either the chassis or body manufacturer. The installation shall be in accordance with the chassis manufacturer's specifications.

6:21-6B.41 Undercoating

(a) The entire underside of the bus body, including floor sections, cross member, and below floor line side panels, shall be coated with rust-proofing compound for which the compound manufacturer has issued a notarized certification of compliance to the bus body builder that the compound meets or exceeds all performance and qualitative requirements of applicable Federal specifications.

(b) Undercoating compound shall be applied with suitable airless or conventional spray equipment to recommended film thickness and shall show no evidence of voids in cured film.

6:21-6B.42 Ventilation

(a) The body shall be equipped with a suitable, controlled ventilating system of sufficient capacity to maintain proper quantity of air under operating conditions without opening of windows except in extremely warm weather.

(b) A static-type nonclosable exhaust vent shall be installed in the low-pressure area of roof.

(c) One six inch diameter, two speed auxiliary fan with protective cage shall be installed on each side of the driver position on Types C and D school buses. Each fan shall be controlled by a separate switch.

1. If an auxiliary fan is used on Types A and B buses, it shall be a nominal six inch diameter fan with the blades covered with a protective cage. Each fan shall be controlled by a separate switch.

6:21-6B.43 Walking control arm

(a) A walking control arm may be installed on buses. The construction and design of this equipment shall offer a safe and trouble free operation. The control unit shall be installed on the right side of the front bumper. Equipment shall not obstruct the view of any sign or license plate on the bus. The open crossing gate shall extend forward on the front bumper at least 60 inches up to a maximum of 96 inches.

1. The walking control arm shall be powered by either vacuum, air pressure, or electric. No manual operation of the arm is permitted.

2. The walking control arm shall be activated automatically to the fully extended position when the red school bus warning lights are in operation. It shall be maintained in operating condition at all times or removed.

6:21-6B.44 Wheelhousing

(a) The wheelhousing opening shall allow for easy tire removal and service.

(b) Wheelhousing shall be attached to floor sheets in such a manner to prevent any dust, water, or fumes from entering the body. Wheelhousing shall be constructed of at least 16 gauge steel, or other material of equal strength.

(c) The inside height of the wheelhousing above the floor line shall not exceed 12 inches.

(d) If tire chains are used, the wheelhousing shall provide clearance for installation and use of tire chains on single and dual power driving wheels.

(e) No part of a raised wheelhousing shall extend into the emergency door opening.

6:21-6B.45 Windows and windshield

(a) Each full side window shall provide an unobstructed emergency opening at least nine inches high and 22 inches wide, obtained by lowering window.

1. Push-out type, split-sash windows may be used.

(b) Push out windows shall be provided in accordance with the emergency exit requirements of this subchapter.

(c) Glass in all side and rear windows shall be of AS-2 or better grade. Equivalent plastic AS-4 or better shall only be used in side windows of the bus behind the driver.

(d) The windshield shall have a horizontal gradient tinted band starting slightly above the line of a driver's vision and gradually decreasing in light transmission to 20 percent or less at the top of the windshield. Glass in the windshield shall be of AS-1 grade.

1. Glass in the windshield shall be heat-absorbent, laminated plate. The windshield shall be large enough to permit the driver to see the roadway clearly, shall be slanted to reduce glare, and shall be installed between the front corner posts that are so designed and placed as to afford minimum obstruction to the driver's view of the roadway.

(e) All glass in the windshield, windows and doors shall be approved safety glass, so mounted that a permanent mark is visible, and of sufficient quality to prevent distortion of the view in any direction.

(f) All exposed edges of glass shall be banded.

(g) The windows in the rear of the bus shall be stationary.

(h) Windows shall be free of window guards or bars both inside and outside.

6:21-6B.46 Windshield washers

A windshield washer system shall be provided.

6:21-6B.47 Windshield wipers

(a) A windshield wiping system, two-speed or more, shall be provided.

(b) The wipers shall be operated by one or more air or electric motors of sufficient power to operate wipers. If one motor is used, the wipers shall work in tandem to give full sweep of windshield.

6:21-6B.48 Wiring

(a) All wiring shall conform to current applicable SAE standards.

(b) Wiring shall be arranged in circuits as required with each circuit protected by a fuse or circuit breaker. One extra fuse for each size fuse which is used on the bus shall be conveniently located in the fuse area unless the bus is equipped with circuit breakers. A system of color and number coding shall be used.

1. The following body interconnecting circuits shall be color coded as follows:

FUNCTION	COLOR
Left Rear Directional Light	Yellow
Right Rear Directional Light	Dark Green
Stoplights	Red
Back-Up Lights	Blue
Taillights	Brown
Ground	White
Ignition Feed, Primary Feed	Black

2. The color of the cables shall correspond to current applicable SAE standards.

3. Wiring shall be arranged in at least six regular circuits, as follows:

i. Head, tail, stop (brake), and instrument panel lamps;

ii. Clearance and step-well lamps (step-well lamp shall be actuated when entrance door is opened);

iii. Dome lamp;

iv. Ignition and emergency door signal;

v. Turn signal lamps; and

vi. Alternately flashing signal lamps.

4. Any of above combination circuits may be subdivided into additional independent circuits;

5. Whenever heaters and defrosters are used, at least one additional circuit shall be installed;

6. Whenever possible, all other electrical functions (such as sanders and electric-type windshield wipers) shall be provided with independent and properly protected circuits.

7. Each body circuit shall be coded by number or letter on a diagram of circuits and shall be attached to the body in readily accessible location.

(c) The entire electrical system of the body shall be designed for the same voltage as the chassis on which the body is mounted.

(d) All wiring shall have an amperage capacity equal to or exceeding the designed load. All wiring splices shall be in an accessible location and noted as splices on the wiring diagram.

(e) An easily readable body wiring diagram shall be furnished with each bus body or affixed in an area convenient to the electrical accessory control panel.

(f) The main power supply to the body shall be attached to a terminal on the chassis.

(g) Wires passing through metal openings shall be protected by a grommet.

(h) Wires not enclosed within the body shall be fastened securely at intervals of not more than 18 inches. All joints shall be soldered or joined by equally effective connectors.

(i) A heavy duty solenoid switch shall be installed in main electric power supply line to body circuits on Types B, C and D buses. The solenoid switch shall be energized by the bus ignition switch. Hazard and directional signal lamp circuits shall operate independently of the ignition switch.

SUBCHAPTER 6C. SPECIALLY EQUIPPED SCHOOL BUS STANDARDS

6:21-6C.1 Scope

(a) The following standards address modifications to buses designed for transporting students with special transportation needs. These standards are supplementary to the chassis and body standards established in N.J.A.C. 6:21-6A and 6B.

(b) Specially equipped buses shall meet the body and chassis standards of N.J.A.C. 6:21-6A and 6B prior to any modifications made for mobile seating device positions or special equipment such as a power lift.

(c) A bus used for the transportation of children confined to a wheelchair or other mobile positioning device, or who require life support equipment which prohibits the use of the entrance door, shall be equipped with a power lift.

6:21-6C.2 Aisle

The aisle leading to an emergency or power lift door from a wheelchair position shall be a minimum width of 30 inches.

6:21-6C.3 Communications

Buses shall be equipped with an electronic voice communication system, preferably not citizen band equipment.

6:21-6C.4 Doors

(a) Buses with a power lift shall be equipped with a special entrance door to accommodate the power lift.

1. The door shall be located on the right side of the bus and designed so as not to obstruct the regular entrance door.

2. The opening may extend below the floor through the bottom of the body skirt. If such an opening is used, reinforcements shall be installed at the front and rear of the floor opening to support the floor. This opening shall be the same strength as other floor openings.

3. A drip molding shall be installed above the door opening to divert water from the entrance.

4. The door posts and headers shall be reinforced to provide support and strength equivalent to the sides of the bus.

5. A single door or double doors may be used.

6. The doors shall have fastening devices to hold the doors open.

7. The doors shall be weather sealed.

8. When manually operated dual doors are provided, the rear door shall have at least a one point fastening device to the header. The forward mounted door shall have at least three point fastening devices; one to the header, one to the floor line of the body, and one into the rear door.

i. The door and hinge mechanism strength shall be equivalent or greater than the strength of the emergency exit door.

9. The door material, panels and structural strength shall be equivalent to the entrance and emergency doors. The rub rail extensions, lettering and other exterior features shall match adjacent sections of the body.

10. The door shall have windows set in rubber compatible within one inch of the lower line of the adjacent sash.

11. Doors shall be equipped with a device that will actuate an audible or flashing visible signal, located in the driver's compartment, when the doors are not securely closed and the ignition is in the "on" position.

12. A switch shall be installed so that the lifting mechanism will not operate when the lift platform door is closed.

13. Doors shall be equipped with padding at the top edge of the door opening. The padding shall be at least three inches wide and one inch thick. It shall extend the full width of the door opening.

6:21-6C.5 Glass

(a) Tinted safety glass or tinted plastic may be installed in side windows of the bus to the rear of the driver which complies with applicable Division of Motor Vehicle requirements.

(b) Tinted safety glass shall be AS-3 or better grade.

6:21-6C.6 Identification

(a) A bus equipped with a power lift shall display at least one universal handicapped symbol on the back of the bus and below the windowline.

1. The symbol shall not exceed 12 inches in size, be white on a blue background, and be of a high intensity reflectorized material as specified in NSFSB.

6:21-6C.7 Lights

Lights shall be placed inside the bus to sufficiently illuminate the lift door area.

6:21-6C.8 Power Lift

(a) The power lift with a skid resistant platform shall be located on the right side of the bus body and confined within the bus body when not extended.

(b) The lifting mechanism and platform shall be capable of lifting a minimum weight of 800 pounds. The lift platform shall have a minimum of 30 inches clear width unobstructed by the required handrail. The minimum clear length of the platform between the outer edge barrier and inner edge shall be 40 inches.

(c) When the platform is stored, it shall be securely fastened.

(d) Controls shall be provided that enable the operator to activate the lift mechanism from either inside or outside of the bus.

(e) The lift platform shall be designed to prevent the platform from falling while in operation due to a power failure or a single component mechanical failure.

(f) The power lift shall be equipped with a manual back-up system for use in the event of a power failure.

(g) The lift shall be designed to allow the lift platform to rest securely on the ground.

(h) The outboard platform edge and sides shall be designed to restrain a wheelchair or other mobile seating device from slipping or rolling off the platform. The platform outer edge barrier shall be designed to be automatically or manually lowered when the platform is at ground level, but shall not be equipped with any type of latch which could result in a lowered barrier when the platform is above ground level.

(i) The platform shall be equipped with at least one handrail. The handrail shall be approximately 25 to 34 inches in height and a minimum of 18 inches in length and designed to fold when it is in a stored position.

(j) A self-adjusting, skid resistant plate shall be installed on the outer edge of the platform to minimize the incline from the lift platform to the ground level. This plate, if so designed, may also serve as the restraining device described in (h) above.

(k) A circuit breaker shall be installed between the power source and lift motor if electrical power is used.

(l) The lift design shall prevent excessive pressure that could damage the lift system when the platform is fully lowered or raised.

(m) The lift mechanism shall be designed to prevent the lift platform from being folded or stored when occupied.

(n) An interlock shall be provided to prevent the operation of the bus while the lift or ramp is not in its fully stored and locked position.

6:21-6C.9 Ramp

(a) When a power lift system is not adequate to load and unload students with *[a]* special needs, a ramp device may be used.

1. When a ramp is used, it shall be of sufficient strength and rigidity to support the mobile device, occupant, and attendant(s). It shall be equipped with a protective flange on each longitudinal side to keep the mobile device on the ramp.

2. The ramp floor shall be of non-skid construction.

3. The ramp shall be equipped with handles and of a weight and design that enables one person to lift or move the ramp.

4. The ramp shall have at least three feet of length for each foot of incline.

6:21-6C.10 Restraining devices

Seat frames may be equipped with attachments or devices to which belts, restraining harnesses or other devices may be attached. Attachment framework or anchorage devices, if installed, shall conform with FMVSS.

6:21-6C.11 Seating arrangements

Flexibility in seat spacing to accommodate special devices shall be permitted to meet passenger requirements. All seating shall be forward facing.

6:21-6C.12 Securement system for mobile seating device and occupant

(a) The body shall be designed for positioning and securement of mobile seating devices and occupants in a forward facing position. Securement system hardware and attachment points for the forward facing system shall be provided.

(b) The mobile seating device securement system shall utilize four-point tie downs, with a minimum of two body floor attachment points located at the rear and a minimum of two body floor attachment points at the front of the space designated for the mobile seating device.

(c) A type 2 occupant securement system shall be provided for securement of the occupant's pelvic lap area and upper torso area.

(d) The mobile seating device and occupant securement system shall be designed to withstand a sled-test at a minimum impact speed/force of 30 mph/20 G's. The dynamic test shall be performed using system components and hardware (including attachment hardware) which are identical to the final installation in type, configuration, and positioning. The body structure at the attachment points may be simulated for the purpose of the sled test, but the simulated structure used to pass the sled test may not exceed the strength of the attachment structure to be used in the final body installation. The mobile seating device used for test purposes shall be a 150 pound powered wheelchair and the occupant shall be a 50th percentile male test dummy as specified in FMVSS. Measurements shall be made on the test dummy during the test for head acceleration, upper thorax acceleration, and upper leg compressive force. These measurements shall not exceed the upper limits established in applicable FMVSS. The test dummy shall be retained within the securement system throughout the test and forward excursion shall be such that no portion of the test dummy's head or knee pivot points passes through a vertical transverse plane intersecting the forward-most point of the floor space designed for the mobile seating device. All hardware shall remain positively attached throughout the test and there shall be no failure of any component. Each mobile seating device belt assembly including attachments, hardware and anchorages shall be capable of withstanding a force of not less than 2,500 pounds. This will provide equal mobile seating device securement when subjected to forces generated by forward, rear or side impact.

(e) The belt material at each space designated for the mobile seating device and the occupant restraint system shall be similar in size and fabric.

(f) The floor track or anchorage system shall be recessed into the floor with the top of the track or anchorage level with the floor surface or be surface mounted. If surface mounted, the maximum track or anchorage height above the floor surface shall not exceed 3/4 inch and be ramped on all sides with a ramp run/rise ratio not less than three to one.

(g) The occupant securement belt assemblies and anchorages shall meet the requirements of applicable FMVSS.

(h) The occupant securement system shall be designed to be attached to the bus body either directly or in combination with the mobile seating device securement system, by a method which prohibits the transfer of weight or force from the mobile seating device to the occupant in the event of an impact.

(i) Securement system attachments or coupling hardware not permanently attached shall be designed to prohibit it from being accidentally disconnected.

1. The following fasteners shall not be used for any occupant restraint or equipment securement:

i. T-bar or T-hook fasteners; or

ii. Touch fasteners, vinyl lap and shoulder belts.

(h) All attachment or coupling systems shall be accessible and operable without the use of tools or other mechanical assistance.

(i) All securement system hardware and components shall be free of sharp or jagged areas and shall be of a non-corrosive material or treated to resist corrosion.

(j) The occupant securement system shall be made of materials which do not stain, soil, or damage an occupant's clothing.

(k) The mobile seating device or securement system hardware shall not block the access to the lift door.

(l) The following information shall be provided with each bus equipped with a securement system:

1. Detailed instuctions regarding installation and use of the system, including a parts list; and

2. Detailed instructions, including a diagram, regarding the proper placement and positioning of the system, including correct belt angles.

6:21-6C.13 Steps

(a) The first step at the entrance door shall be not less than 10 inches and not more than 14 inches from the ground, based on standard chassis specifications.

1. The first step on a Type D bus at the entrance door shall be 12 to 16 inches from the ground.

(b) Step risers shall not exceed a height of 10 inches. When plywood is used on a steel floor or step, the riser height may be increased by the thickness of the plywood.

(c) On buses equipped with a power lift, the steps shall be the full width of the stepwell, excluding the thickness of the doors in an open position.

(d) The steps shall be enclosed to prevent the accumulation of ice and snow.

(e) The steps shall not protrude beyond the sides of the body line.

(f) Grab handles, not less than 20 inches in length, shall be provided inside the doorway on both sides in unobstructed locations.

6:21-6C.14 Support equipment and accessories

(a) Portable student support equipment or special accessory items (crutches, walkers, oxygen bottles, ventilators) shall be securely fastened at a mounting location able to withstand a pulling force of five times the weight of the item, or shall be retained in an enclosed, latched compartment.

1. The bus shall contain a belt cutter for use in emergencies, including evacuations. The belt cutter shall be designed to prevent injuries during use and secured in a safe location.

6:21-6C.15 Wheelchair and other mobile seating device requirements

(a) A wheelchair or other mobile seating device shall be equipped with an occupant restraint belt and hand brake which is furnished and maintained by the owner.

(b) An electric powered wheelchair shall be equipped with gel-cel (non-liquid electrolyte) battery. Batteries with liquid electrolyte are not permitted in the passenger compartment of the bus.

SUBCHAPTER 8. USE OF VEHICLES AS SCHOOL BUSES UNDER THE JURISDICTION OF THE DEPARTMENT OF TRANSPORTATION

6:21-8.1 Scope of exceptions and exemptions

The exceptions and exemptions hereinafter provided in this subchapter shall apply only to buses approved for school use by the Department of Transportation prior to *[(insert date of adoption of these amendments)]* ***May 21, 1993***.

6:21-8.2 Exceptions and exemptions

(a) (No change.)

(b) The seat requirements pursuant to N.J.A.C. 6:21-5.1 and 5.23 shall not apply to longitudinal seats seating not more than four pupils.

(c) The entrance door and the emergency door with aisles leading to each shall be accepted as meeting the requirement for doors pursuant to N.J.A.C. 6:21-5.1 and 5.6.

(d) The requirement pursuant to N.J.A.C. 6:21-5.1 and 5.6 to have the words "Emergency Door" printed on the outside of the emergency door shall not apply.

(e) In lieu of the lettering, Type I school vehicles that are operated by a privately or publicly owned local transit system and used for regular common carrier transit route service as well as special school route service, shall meet all the requirements of N.J.A.C. 6:21-5.1 and 5.7, except as follows:

1. (No change.)

(f) The requirements for the main aisles and the aisle to the emergency door, pursuant to N.J.A.C. 6:21-5.1 and 5.12 shall not apply.

(g) The requirement pursuant to N.J.A.C. 6:21-5.1 for bumpers shall not apply.

(h) Window requirements pursuant to N.J.A.C. 6:21-5.1 and 5.11 shall not apply.

(i) The color requirements pursuant to N.J.A.C. 6:21-5.1, 5.14 and 5.15 shall not apply.

6:21-8.3 Certificate of inspection

(a) No autobus under jurisdiction of the Department of Transportation shall be used for school pupil transportation services, as defined in N.J.S.A. 18A:39-1 and under contract with a local board of education for transportation to and from school, unless such autobus is authorized on the certificate of inspection issued by the Department of Transportation.

(b) Owners or operators of buses approved by the Department of Transportation shall submit evidence of such approval to the county superintendent at such times as may be deemed necessary.

6:21-8.4 Inspection by county superintendent

(a) The county superintendent may inspect any bus approved by the Department of Transportation for any item not covered by the approval of that department and from which they are not specifically exempted by these rules.

(b) (No change.)

SUBCHAPTER 9. SMALL VEHICLE STANDARDS

6:21-9.1 Definition

A small vehicle is defined as any vehicle with a capacity of less than 10 passengers.

6:21-9.2 Scope

(a) These standards apply to a small vehicle used for the transportation of public school pupils to and from school and school related activities.

(b) These standards also apply to small vehicles used to transport nonpublic school pupils to and from school when services are provided by a district board of education.

(c) Small vehicles which have a gross vehicle weight rating (GVWR) of less than 3,000 pounds shall not be used after *[(date to be inserted of 60 days after date of publication of adoption)]* ***January 2, 1993***. The GVWR is the value specified by the manufacturer as the maximum loaded weight of the vehicle.

6:21-9.3 Capacity

(a) The maximum number of pupils allowed who may be transported in each vehicle shall be determined by the seat measurement. Fifteen inches of seat length shall be provided for each pupil.

(b) (No change.)

6:21-9.4 Chains or snow tires

The drive wheels of the vehicle shall be equipped with tire chains, all weather tires, or snow tires and used for safe operation in areas of snow and/or ice.

6:21-9.5 Fire extinguisher

A fully charged dry chemical fire extinguisher with a pressure guage approved by the Underwriters Laboratories, Inc. with the minimum Underwriters rating of 10 B.C. shall be provided. The extinguisher shall be mounted in a bracket in a convenient location.

6:21-9.6 First aid kit

(a) A removable first aid kit shall be provided. It should be a moisture and dust proof container without a lock, with the words FIRST AID printed on the cover. The contents shall be maintained as follows:

1. Six single unit sterile gauze pads, three inches × three inches;
2. Two one-inch × 10 yards gauze bandages;
3. One one-inch × 2½ yards adhesive tape rolls;
4. 12 bandaid plastic strips;
5. One triangular bandage approximately 40 inches by 54 inches with a safety pin; and
6. One pair rounded end scissors.

6:21-9.7 Floor covering

A securely attached nonskid material floor covering shall be provided.

6:21-9.8 Heater capacity

The heater shall be capable of bringing the interior temperature of the vehicle up to and maintain a minimum of 50 degrees Fahrenheit.

6:21-9.9 Minimum emergency equipment

Minimum emergency equipment consisting of a securely mounted spare tire, jack, and three red reflectorized triangle warning devices shall be provided.

6:21-9.10 Rear-view mirrors

Approved rear-view mirrors shall be provided inside and outside the vehicle. Outside mirrors shall be mounted on both sides of the vehicle.

6:21-9.11 Seats and back rests

(a) Securely fastened seats and back rests shall be provided which are forward facing and spring or foam rubber upholstered.

(b) A "jump type" or folding seat is not permitted.

(c) The exit from any seat in the vehicle shall be clear of all obstructions.

(d) A vehicle shall not be used where the exit requires the folding of any seat ahead.

(e) A seat belt shall be provided for the driver and all passengers. Belts shall be properly maintained.

6:21-9.12 Sun visor

An adjustable sun visor shall be provided.

6:21-9.13 Rear window

The rear window shall be nonventilating.

6:21-9.14 Windshield wipers

Dual windshield wipers shall be provided.

ENVIRONMENTAL PROTECTION AND ENERGY

(a)

OFFICE OF THE COMMISSIONER

Organization of the Department of Environmental Protection and Energy

Adopted Repeal and New Rule: 7:1-1.1

Adopted: October 8, 1992 by Scott A. Weiner, Commissioner, Department of Environmental Protection and Energy.
Filed: October 9, 1992, as R.1992 d.441.
Authority: N.J.S.A. 13:1B-3(d), 13:1B-3(e), 13:1B-5(a), 52:14B-4(b).
Effective Date: October 9, 1992.
Expiration Date: August 15, 1995.

This repeal and new rule are organizational in nature and, as such, in accordance with N.J.S.A. 52:14B-4(b), may be adopted without prior notice or hearing and are effective upon filing with the Office of Administrative Law.

Full text of the adopted new rule follows.

SUBCHAPTER 1. GENERAL PROVISIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

7:1-1.1 Organization of the Department of Environmental Protection and Energy

(a) The Commissioner is the administrator and head of the Department of Environmental Protection and Energy (Department), and has the duties listed in N.J.S.A. 13:1B-3.

(b) The Deputy Commissioner is second in command to the Commissioner, coordinates staff functions in the Commissioner's office, is responsible for the day-to-day administration of Department activities, and oversees the following organizational units:

1. The Office of Legal Affairs, which, pursuant to Executive Order No. 6(1990), is the legal liaison with the Division of Law in the Department of Law and Public Safety, and with the Office of Administrative Law. In that capacity, the office manages the preparation of the Department's regulations for proposal and adoption, the Commissioner's final decisions adopting, modifying or rejecting initial decisions rendered by Administrative Law Judges in administrative appeals, and requests for legal advice from the Division of Law. The office also manages the response to requests for adjudicatory hearings in contested cases, manages requests for copies of public records, and receives all subpoenas of Department employees and records. In addition, the office organizes the agenda for the Commissioner's weekly legal affairs meetings. The office includes the Department's Ethics Liaison Officer and Administrative Practice Officer;

2. The Office of Audit, which provides the Department with external audits of grants, contracts, and leases, and internal financial and operational audits of its programs;

3. The Office of Employee Relations and Equal Opportunity, which implements a comprehensive labor-management relations policy in the Department, administers all collective bargaining agreements covering unionized Department employees, and provides Department management with advice concerning the interpretation and application of labor contracts and of State and Federal statutes governing public employment. The office also represents Department management in employee grievance and arbitration proceedings, and administers the Department disciplinary program, Employee Advisory Services referrals and conflict resolution in employee-related matters. The office is also responsible for the development and implementation of the Department's affirmative action program. The office monitors all personnel practices to ensure compliance with equal employment opportunity and affirmative action policies, investigates all complaints of alleged discrimination, and, in the Department's contracting processes, enforces compliance with Federal and State statutes concerning micro, urban, small, and socially and economically disadvantaged businesses;

4. The Municipal Wastewater Assistance Element, which assists municipalities with planning, design, construction, management and administration of municipal wastewater treatment and conveyance of facilities, and with combined sewer corrective actions. The element also administers the New Jersey Wastewater Treatment Financing Program, a State revolving loan fund; and

5. The Water Supply Element, which is responsible for programs that assure adequate and safe supplies of drinking water.

(c) The Department has six Assistant Commissioners, as follows:

1. Enforcement;
2. Environmental Regulation;
3. Management and Budget;
4. Natural and Historic Resources;
5. Policy and Planning; and
6. Site Remediation.

(d) The Assistant Commissioner for Enforcement oversees overall Department enforcement policies and generally supervises the Department's enforcement programs associated with the following: water; coastal resources; hazardous waste generation, transportation, treatment, storage and disposal; and air pollution. The Assistant Commissioner for Enforcement also manages the issuance and settlement of enforcement documents for radiation; pesticides; noise; land use; toxic release; discharge prevention; laboratory certification; and Right-to-Know. The Assistant Commissioner for Enforcement provides general enforcement policy direction and guidance to the Department's programs for solid waste, contaminated site remediation, and fish, game and wildlife. The Assistant Commissioner for Enforcement implements and generally supervises Operation Clean Shores, the Cooperative Coastal Monitoring Program, the County Environmental Health Act, and all Statewide water monitoring programs. The Assistant Commissioner for Enforcement also oversees the following organizational units:

1. The Division of Facility-Wide Enforcement, which is responsible for developing a team approach to multi-media enforcement of regulated facilities. This Division is directly responsible for enforcement associated with hazardous waste management, air pollution control, water pollution control, and safe drinking water. The Division also oversees enforcement policy and issues and settles enforcement documents for the pesticide, radiation, noise, toxic release, discharge prevention, Right-to-Know and laboratory certification programs;

2. The Coastal and Land Use Enforcement Management Unit, which is responsible for enforcement matters involving freshwater and coastal wetlands, coastal area facility review, waterfront development, stream encroachment and dam safety. This unit also provides general oversight of the enforcement policies of the fish, game and wildlife rules, and provides coordination with the State Police, Marine Bureau;

3. The Water Monitoring Management Unit, which is responsible for conducting ambient surface and groundwater monitoring, including biological and toxics monitoring and analysis, industrial pretreatment compliance monitoring, intensive water quality surveys, lake classification management, and associated data management. This unit is also responsible for co-authoring a field procedures manual for water data management and water investigations. This unit also includes the Marine Water Classification and Analysis program, which is responsible for the classification of shellfish growing areas, operation of the Southern Regional Laboratory to support the classification program and laboratory support for Department water monitoring programs and other agencies (EPA, Delaware River Basin Commission, Food and Drug Administration) and administering a shellfish resource recovery program. The laboratory has specialized capability in nutrient analysis of marine waters and studies involving microbial indicators; and

4. The Office of Enforcement Coordination, which serves as the liaison with all enforcement programs throughout the Department, and is responsible for assuring that a uniform enforcement policy is implemented throughout the Department. The office is also responsible for developing enforcement regulations, and handling

economic issues related to enforcement cases for all programs listed above as well as the Department's Solid Waste and Site Remediation programs. The office also supervises the Department's County Environmental Health Act program, Operation Clean Shores, and the Cooperative Coastal Monitoring program.

(e) The Assistant Commissioner for Environmental Regulation oversees the Department's permit programs. Environmental Regulation is responsible for making permit decisions that carry out the purposes and requirements of the enabling legislation and regulations; conducting reviews of permit applications in a manner which promotes meaningful public input; developing procedural and regulatory changes, as well as non-regulatory studies and outreach efforts, to consider in the Department's permit decision-making pollution prevention, protection of critical watersheds, and the Interim State Plan; helping permit applicants to comply with applicable requirements and promptly informing applicants when their applications are incomplete or when compliance does not appear to be possible; and finding opportunities to improve efficiency of permit reviews while maintaining or improving environmental protection, eliminating procedures and requirements which do not lead to greater environmental protection, and consolidating the reviews of multiple permits for individual facilities or projects. The Assistant Commissioner for Environmental Regulation also oversees the following organizational units:

1. The Office of Permit Information and Assistance, which provides general information about the State's environmental regulations, including information about what kinds of permits are needed for various projects, and information which permits applicants can use to ensure that their applications are administratively complete. The office also works to promote a coordinated permit review process; prevent duplication of efforts; enhance communication between Department staff, applicants and the public; and provide guidance on permit requirements, issues, and likely time frames for decision-making;

2. The Air Quality Regulation Program, which includes bureaus which: evaluate proposed new major stationary sources of air pollution; review air quality modeling and risk assessments which predict ground level air contaminant concentrations and their health effects; evaluate applications for new or modified equipment which emit air contaminants; and oversee the measurement of contaminant emissions from stationary sources;

3. The Hazardous Waste Regulation Program, which includes bureaus responsible for: tracking and reporting requirements for hazardous waste; developing regulations necessary to implement the program; developing legislation, regulations, rules, policies and procedures to enable New Jersey to maintain Federal authorization to implement the Federal Resource Conservation and Recovery Act hazardous waste management program for New Jersey; and performing a technical review of applications and issuing permits to regulate the treatment, storage and disposal of hazardous waste;

4. The Land Use Regulation Program, which administers the programs associated with the Waterfront Development Act, the Wetlands Act of 1970, the Coastal Area Facility Review Act, the Flood Hazard Area Control Act (stream encroachment), the Freshwater Wetlands Protection Act, and the Riparian Lands (Tidelands) Management Program;

5. The Office of Pollution Prevention, which is responsible for implementing the Pollution Prevention Act, and for developing the following: a pilot program to design single facility-wide permits for a set of facilities; a framework for industry to report reductions in the use and generation of hazardous substances; a systematic approach to integrate multimedia pollution prevention into existing media-specific permit programs; and policy initiatives to coordinate media-specific permit programs while emphasizing multimedia source reduction;

6. The Office of Regulatory Policy, which oversees regulations and plans upon which regulatory decisions are based, with an emphasis upon comprehensive watershed management issues. Regulatory Policy is also responsible for water quality management plans, the Coastal Zone Management Program, the Coastal Nonpoint Pollution Control Program, and stormwater management planning; and

7. The Wastewater Facilities Regulation Program, which includes bureaus responsible for: implementing the sewer connection ban program and reviewing permit applications for construction and operation of wastewater treatment facilities, sanitary sewers and alternate design septic systems; issuing New Jersey Pollutant Discharge Elimination (NJPDES) permits for discharges from industrial wastewater treatment facilities to surface waters, from industrial dischargers to municipal facilities, from municipal wastewater treatment facilities to surface waters, and from municipal and industrial treatment systems for process wastewater to groundwater; and regulating the discharge of contaminants and toxics into wastewater treatment facilities and regulating the management of residuals such as sludge, grit and screenings.

(f) The Assistant Commissioner for Management and Budget oversees the Department's administrative, financial, contracting, personnel and central services activities. The Assistant Commissioner also oversees the following organizational units:

1. The Division of Financial Management and General Services, which plans, budgets and manages the Department's finances; manages purchasing and contract administration; coordinates information systems and office automation; and provides printing, telecommunications, mailing and general services to the Department; and

2. The Division of Personnel, which provides recruitment, placement, job classification, payroll processing, compensation administration, job specification development, counseling, and employee and health benefits services.

(g) The Assistant Commissioner for Natural and Historic Resources directly supervises the following organizational units:

1. The Division of Fish, Game and Wildlife, which is responsible for management of marine fisheries, freshwater fisheries, wildlife management, and endangered and threatened nongame species. The Division also is responsible for enforcing statutes and regulations concerning wildlife resources and their habitats; education; providing wildlife information; performing laboratory services which monitor wildlife diseases; and reviewing the impacts of various types of development on wildlife;

2. The Division of Parks and Forestry, which is responsible for natural lands management, historic preservation, management of the forest environment, and management of state parks;

3. The Green Acres Program, which provides planning assistance and low-interest loans and grants to municipalities and counties for open space acquisition and recreational development projects, and provides matching grants to nonprofit organizations for open space acquisition projects. The program also serves as the Department's land acquisition agent in purchasing land for state parks, forests and wildlife management areas. The program also prepares and updates the Statewide Comprehensive Outdoor Recreation Plan, and manages all Federal funds granted to New Jersey for open space preservation and recreational development; and

4. The Engineering and Construction Program, which includes offices responsible for the following: planning and designing shore protection projects, conducting waterway maintenance, and overseeing the development of the State's Shore Protection Plan; regulating the construction and maintenance of dams to ensure their safety; removing derelict barges and scows and debris along the Hudson River and the Newark Bay area; and flood plain management.

(h) The Assistant Commissioner for Policy and Planning is principally responsible for: working in concert with the Department's programs to formulate and implement policy and management initiatives for the Department as a whole; providing a forum for the free exchange of information and ideas in developing a cohesive foundation for environmental policy; coordinating with the various programs of the Department to identify priorities and apply resources so as to achieve policy and management goals as efficiently and effectively as possible; providing science and technical information to the Department; coordinating efforts on the setting of standards and complex contamination issues that cross environmental media lines; and acting as the Department's research and development branch. The Assistant Commissioner for Policy and Planning directly supervises the following organizational units:

1. The Office of Energy, which includes Energy Planning and Conservation, and Air Quality Management. Energy Planning and Conservation is responsible for energy planning and policy functions, including the development and implementation of the State Energy Master Plan. Energy Planning and Conservation is also responsible for awarding and overseeing of grants for energy conservation projects. Air Quality Management is responsible for monitoring of the State's air quality, evaluation of stationary, mobile and natural source emissions, control of air pollution from mobile sources, development of air quality regulations, and coordination and implementation of the State's responsibilities under the Federal Clean Air Act;

2. Environmental Programs Development, which initiates outreach projects such as urban park beautification and environmental education, seeks funding for such projects, identifies potential outside funding sources, assists in the development of project ideas, and prepares funding applications;

3. Program Coordination, which coordinates the Department's review and issuance of comments on all environmental impact statements for major projects required by the National Environmental Policy Act and the Governor's Executive Order on environmental assessment;

4. The Policy Team, which develops long-term Department-wide policy and planning strategies in coordination with other areas of the Department, interested outside organizations and the regulated community;

5. The Division of Science and Research, which provides scientific and technical information to the Department, coordinates efforts on the setting of standards and complex contamination issues that cross environmental media lines, coordinates the Department's Geographic Information System, and acts as the Department's research and development branch, providing a scientific basis for the Department's regulatory, enforcement and legislative actions. The Division also includes the New Jersey Geological Survey, which is responsible for characterizing ground water resources; mapping and evaluating aquifers; providing technical assistance in geophysics including delineation of ground water contamination; maintaining a satellite Geographic Information System office and hydrogeologic database; constructing geologic maps; and locating and evaluating mineral resources and naturally occurring hazards;

6. The Division of Solid Waste Management, which contains the following subunits:

i. Engineering, which reviews permit applications for energy recovery facilities, large-scale municipal solid waste compost projects, new and expanded landfills, landfill disruptions, transfer stations, small-scale incinerators, materials recovery facilities, vegetative compost facilities, and recycling centers; reviews and approves closure plans for landfills; and approves the use of funds from the Sanitary Landfill Facility Contingency Fund (except for the payment of claims against the Fund, which is handled by the Environmental Claims Administration under the Assistant Commissioner for Site Remediation);

ii. Recycling and Planning, which administers statewide solid waste planning programs, and coordinates the county solid waste planning process; plans source reduction, recycling and market development activities; plans for special waste materials such as medical waste, contaminated soils, and asbestos; and administers statewide sludge management planning and policy development;

iii. Investigation and Enforcement, which administers a screening program to prevent persons with known criminal records, habits or associations from obtaining a permit to collect, transport, treat, store or dispose of solid waste; inspects permitted solid waste facilities, investigates unpermitted activities, and otherwise enforces solid waste statutes and regulations;

iv. Economic Regulation, which oversees the tariffs and rates charged in New Jersey for solid waste collection and disposal; performs staff analysis for Departmental approval for mergers and acquisitions, bulk sales, and certain debt transactions in the solid waste industry; issues registrations to solid waste haulers, haulage vehicles and facilities, as well as licenses to solid waste utilities; and coordinates the billing, collecting and reporting for the division's fee programs;

v. Finance and Management, which administers the Department's solid waste financial assistance programs, and the Division's research contracts personnel, budget, case management, management informstion systems, and physical plant; and

vi. Communication Coordination, which coordinates the division's research programs, regulation development, legislative review and communications; and

7. The Division of Environmental Safety, Health and Analytical Programs, which contains the following subunits:

i. Laboratories and Quality Assurance, which develops and administers the Department's quality assurance policies and procedures; administers the laboratory certification program; administers the Department's analytical services agreements; inspects laboratories; and assists the Department's laboratories in environmental, chemical and analytical research;

ii. Pesticide Control, which enforces laws and regulations regarding pesticides; investigates and conducts inspections to ensure that pesticides are used safely and properly; administers certification examinations; registers pesticide applicators, dealers, businesses and products; performs technical evaluations and environmental monitoring; and maintains and supports data management needs;

iii. Radiation Protection, which licenses users of radioactive materials; addresses radioactively contaminated sites; assesses exposure to non-ionizing radiation; administers the radon program and certifies radon testing and mitigation firms; maintains the environmental surveillance for nuclear power plants and serves as the lead State agency for emergencies at nuclear facilities; and registers x-ray producing machines and licenses radiological technologists; and

iv. Release Prevention, which gathers information on the use, storage and release of toxic chemicals to the environment; identifies companies which handle extraordinarily hazardous substances and works to ensure that procedures are in place to prevent the occurrence of devastating accidental chemical releases; and works to reduce the possibility of spills of hazardous substances, and to mitigate the consequences of spills which do occur.

(i) The Assistant Commissioner for Site Remediation directly supervises the following organizational units:

1. The Division of Publicly Funded Site Remediation, which includes units responsible for implementing and monitoring cleanup plans at sites being remediated with public funds; conducting remedial activities for contaminated sites where public funds are being expended; overseeing the remediation of sites that require ground water discharges by private parties; and providing contracting, program development, geologic, technical and scientific support to the Department's site remediation programs;

2. The Division of Responsible Party Site Remediation, which includes units responsible for evaluating sites to determine the existence of contamination; overseeing the cleanup of major contaminated waste sites as conducted by responsible parties; implementing the Environmental Cleanup Responsibility Act and the Underground Storage of Hazardous Substances Act; undertaking emergency activities related to discharges of hazardous substances and wastes; and developing and maintaining a master list of contaminated waste sites in the State; and

3. Environmental Claims Administration, which administers the New Jersey Spill Compensation Fund to provide compensation to individuals and businesses which have suffered damages from the discharge of petroleum products or other hazardous substances, and processes claims against the Sanitary Landfill Facility Contingency fund for damages resulting from the operation or closure of a sanitary landfill.

(j) The Department also includes the following organizational units:

1. Communications, which includes the Department's Public Information Office; monitors and supports public participation activities throughout the Department; provides editorial and design guidance to the Department in producing publications; provides centralized communications support within the Department and to other State, local, county and regional agencies; and provides writing and graphic arts services for the Department; and

2. Legislative and Intergovernmental Affairs, which tracks State and Federal legislation and coordinates development of the Department's positions and testimony on legislation; serves as a liaison with local governments; and coordinates State and local environmental protection activities through technical and financial assistance to municipal environmental commissions.

(k) Persons seeking information from the Department may contact the appropriate program listed above. In addition, the following sources of information are available:

1. To inspect, copy or obtain a copy of any public record required to be made available under N.J.S.A. 47:1A-1, Examination and Copies of Public Records, please contact:

Department of Environmental Protection and Energy
Office of Legal Affairs
Attention: Public Records Requests
401 East State Street
CN 402
Trenton, New Jersey 08625-0402

2. Publications, press releases, notices of public hearings and other forums, proposed and adopted rules and regulations, scientific studies, and a variety of other information is available at the DEPE Public Access Center, 401 East State Street, 1st Floor, Trenton, New Jersey. In addition to visiting the Public Access Center in person weekdays from 9:00 A.M. to 5:00 P.M., the public may make inquiries by calling (609) 777-DEPE, or by writing the center at:

Public Access Center
Department of Environmental Protection and Energy
401 East State Street
CN 402
Trenton, New Jersey 08625-0402

3. To obtain information concerning the types of permits required for a project, timing of permit reviews, and instructions for completing permit applications, please contact:

Office of Permit Information and Assistance
Department of Environmental Protection and Energy
401 East State Street
CN 401
Trenton, New Jersey 08625-0401

4. The DEPE Bulletin is an information service provided by the Department. In compliance with the Rules and Regulations Governing 90-Day Construction Permits (N.J.A.C. 7:1C), this semi-monthly publication contains a list of construction permit applications recently filed or acted upon by the Department. Using the DEPE Bulletin, interested persons can determine the status of Coastal Area Facility Review Act (CAFRA) permits, Federal Consistency Activity permits, Freshwater Wetlands Individual and Statewide General permits, Open Water Fill permits, Stream Encroachment permits, Tidal Wetlands permits, Waterfront Development permits, and Treatment Works Approvals. The DEPE Bulletin also includes a calendar of events of interest, a schedule of public hearings (which, however, does not constitute an official notice of a hearing), and a list of Environmental Impact Statements acted upon. Persons desiring to be included on the mailing list for the DEPE Bulletin should contact:

Department of Environmental Protection and Energy
Documents Distribution Center
CN 402
Trenton, New Jersey 08625-0402
(609) 292-1553

(a)

ENVIRONMENTAL REGULATION

New Jersey Pollutant Discharge Elimination System Statewide Stormwater Permitting Program

Adopted Amendments: N.J.A.C. 7:14A-1.2, 1.7, 1.8, 1.9, 2.1, 2.4, 2.5, 2.12, 2.13, 3.9, 3.11, 3.12, 3.13, 3.17, 7.8, 9.1, 10.3, 14.8, and Appendix H

Adopted New Rules: N.J.A.C. 7:14A-1.10 and 7:14A-3 Appendix A and Appendix B

Adopted Repeal and New Rule: N.J.A.C. 7:14A-3.8

Proposed: July 6, 1992 at 24 N.J.R. 2352(a).
Adopted: October 1, 1992 by Scott A. Weiner, Commissioner, Department of Environmental Protection and Energy.
Filed: October 2, 1992 as R.1992 d.434, **with substantive and technical changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 58:10A-1 et seq., 58:11A-1 et seq., 58:11-49 et seq., 58:10-23.11 et seq., 58:11-64 et seq., 13:1D-1 et seq., 13:1E-1 et seq., 58:4A-5, 58:4A-4.1 et seq., 58:12A-1 et seq., 4:24-39 et seq.

DEPE Docket Number: 27-92-06.
Effective Date: November 2, 1992.
Expiration Date: June 2, 1994.

Summary of Public Comments and Agency Responses:

The Department proposed the new rules, amendments, and repeal on July 6, 1992. On June 4, 1992, the day before the proposal was authorized by the Department, the United States Court of Appeals for the Ninth Circuit issued its opinion in *Natural Resources Defense Council v. United States Environmental Protection Agency,* 966 *F.2d* 1292 (9 Cir. 1992). In that opinion, the court declared unlawful certain portions of the United States Environmental Protection Agency's ("EPA's") stormwater rules, 40 C.F.R. 122.26. Certain portions of the Department's proposal, which include portions adopted by the present document, incorporate by reference portions of the affected EPA rules.

The Department recognizes that until EPA amends its rules or takes other final action in response to the court's opinion, there might be some ambiguity as to the requirements imposed by those of the Department's rules that incorporate the affected EPA rules. In order to avoid that ambiguity, the Department has set forth below its interpretation of the effect of the court's opinion on its rules, pending further EPA or judicial action.

The Ninth Circuit first declared unlawful EPA's definition of "storm water associated with industrial activity" to the extent that it excluded from that definition certain light industries where the stormwater was not exposed to certain work areas or types of materials. 966 *F.2d* at 1304-1305. See 40 C.F.R. 122.26(b)(14) and (b)(14)(xi). The court also declared unlawful EPA's definition of "storm water associated with industrial activity" to the extent that it excepted construction activities of less than five acres. 966 *F.2d* at 1305-1306. See 40 C.F.R. 122.26(b)(14)(x). It "remanded" both aspects of the EPA definition for "further proceedings." 966 *F.2d* at 1305, 1306. The Department's rules adopt the foregoing EPA definition in all its aspects, including any "amendments or supplements" thereto. N.J.A.C. 7:14A-1.9 and 14A-1.10.

Because the court remanded the affected portions of the EPA rules to EPA for further proceedings, the Department considers it appropriate to pay special deference to EPA's interpretation of that opinion. Regarding that opinion, EPA has stated its intention to conduct "further rulemaking proceedings" on the affected portions of its regulatory definition, and it has stated that it "will not require permit applications for construction sites disturbing less than five acres of land and category xi facilities without exposure until this further rulemaking is completed." "Message for the Storm Water Hotline," August 31, 1992. Out of deference to EPA, and in order to avoid the potential for confusion and unfairness that would be created if the Department were to adopt a different interpretation of the court's opinion, the Department has determined to adopt EPA's interpretation of that opinion pending further rulemaking or judicial action.

In sum, pending further EPA amendment of 40 C.F.R. 122.26, or further judicial review of the court's opinion, the Department will in-

terpret its and EPA's definition of "stormwater associated with industrial activity" to continue 1) to exempt the "light" industries listed in 40 C.F.R. 122.26(b)(14)(xi) from the requirement to obtain coverage under a stormwater permit, provided that their stormwater is not exposed to the specified work areas or materials, and 2) to include only that construction activity resulting in the disturbance of five or more acres of total land area.

Public hearings regarding the entirety of the Department's proposal were held on:

Tuesday, July 28, 1992
New Jersey Department of Environmental Protection and Energy
401 East State Street
Public Hearing Room, First Floor
Trenton, New Jersey

Thursday, July 30, 1992
Woodbridge Main Library
George Frederick Plaza
Route 35 North
Woodbridge, New Jersey

The comment period ended on August 6, 1992. The Department received comments from the following persons:

Richard J. Adelsohn, P.E. (RJA)
Jim Barton, Hewlett-Packard Company (HPC)
Thomas Battista, Pauls Trucking (PT)
Manuel C. Bernardo, Noville Essential Oil Company, Inc. (NEO)
Paul Becker, Great Swamp Watershed Association (GSWA)
Robert A. Briant, Jr., Utility and Transportation Contractors Association of New Jersey (UTCA)
Mr. Christiansen (MC)
Lynn A. Clark, P.E., Leaseway Transportation (LT)
Jay A. Davidson, Marine Trades Assoc. of NJ (MTA/NJ)
Wayne DeFeo, Browning-Ferris Industries (BFI)
Thomas J. Detweiler, Chemical Industry Council of New Jersey (CIC)
Abigail Fair, Association of New Jersey Environmental Commissions (ANJEC)
Marwan N. Frank, Safety-Kleen Corp. (SK)
George M. Gill, United New Jersey Auto Salvage Association (UNJASA)
Ellen Gulbinsky and Christy Ketteil, Association of Environmental Authorities (AEA)
Harold T. Hall, Jr., H.T. Hall, Inc. (HTH)
William F. Harrison, The Pinelands Commission (PC)
Richard N. Hartman, Thomas J. Sharp & Associates, Inc. (TSA)
David Hergert, Mays Landing Sand and Gravel Co., Inc. (MLSG)
John Jablonski (JJ)
Ms. Jacobi (MJ)
John V. Kelly, Assemblyman 36th District (JVK)
Anne L. Kruger, Ph.D. (ALK)
Stephen A. Micciche, (UNJASA)
Megan A. Milford, Waste Management of North America, Inc. (WMNA)
Eileen J. Moyer, Reckitt & Coleman Inc. (R&C)
Russell E. Nerlick, P.E., Western Monmouth Utilities Authority (WMUA)
Glen Petrauski, Raritan Township Municipal Utilities Authority (RTMUA)
Ernest Ramirez, Ramirez Associates (RA)
Peter Reinhart, New Jersey Builders Association (NJBA)
Bruce E. Schundler, The Schundler Company (SC)
James A. Shissias, Public Service Electric and Gas (PSE&G)
Joseph A. Simonetta, New Jersey Society of Professional Engineers (NJSPE)
Peter R. Spinney, New Jersey Chapter of the Institute of Hazardous Materials Management (IHMM/NJ)
Alan R. Veverka, P.E., D.W. Smith Associates, P.A. (DWSA)
Andrew L. Wade, Wade Salvage Inc. (WSI)
Edward Ward, Homasote Company (HC)
Gary Wiesner, Automotive Dismantlers Recycling Association and United New Jersey Auto Salvage Association (ADRA and UNJASA)
Samuel Wolfe, Institute of Hazardous Material Management—New Jersey (IHMM-NJ)
Eugene G. Wood, BASF Corporation (BASF)
John Yavorsky, Ph.D., P.E., Ambient Engineering Inc. (AEI)
Cindy Zipf and Susan Kennedy, Clean Ocean Action (COA)
Anonymous

General Comments

1. The following organizations and persons expressed support for the proposed Stormwater Permitting Program:

James A. Shissias, New Jersey State Chamber of Commerce
Cindy Zipf and Susan Kennedy, Clean Ocean Action
Thomas J. Detweiler, Chemical Industry Council of New Jersey
Joseph A. Simonetta, New Jersey Society of Professional Engineers
Ellen Gulbinsky and Christy Ketteil, Association of Environmental Authorities
Peter Reinhart, New Jersey Builders Association
Jay A. Davidson, Marine Trades Association of New Jersey
Abigail Fair, Association of New Jersey Environmental Commissions
Paul Becker, Great Swamp Watershed Association
Jim Barton, Hewlett Packard
Eugene G. Wood, BASF Corporation
Wayne DeFeo, Browning-Ferris Industries
Manuel C. Bernardo, Noville Essential Oil Company, Inc.
Richard J. Adelsohn, P.E.
David Hergert, Mays Landing Sand and Gravel Co., Inc.

RESPONSE: The Department appreciates the commenters' support.

2. COMMENT: An anonymous individual commented in broad terms on the business community's right to better communications and notification about the proposal.

RESPONSE: The Department has made significant efforts to publicize this proposal including presentations at 27 public seminars and conferences, a mailing to over 19,000 individuals and groups, and a roundtable discussion with key business leaders, notice in the New Jersey Register and in four newspapers Statewide, and two formal public hearings. In addition, the Department established an advisory group with representatives of the regulated community, municipal officials and environmental groups, which meets monthly to discuss the program. The Department also held a series of seminars in September, and plans on holding additional presentations throughout the year.

3. COMMENT: UNJASA commented that while they appreciate the need to protect the environment, since salvage yards provide a necessary outlet for recycling, the State should accept the financial burden in order for the salvage yards to meet the permitting requirements.

RESPONSE: The Department agrees that salvage yards provide a valuable service for solving a solid waste problem. Nevertheless like many other industries that provide valuable services, their activities must be conducted in accordance with State and Federal law. Currently the only way to pay the costs is to assess the regulated public. For the State to assume the financial burden for certain facilities would mean that this burden would be shifted to other applicants and/or the taxpayers. The Department does note, however, that salvage yards engaged in recycling should give consideration to applying for the low interest loans made available as part of the Clean Communities and Recycling Act, N.J.S.A. 13:1E-9(b)(2).

4. COMMENT: AEI commented that the proposal should have been separate from the NJPDES rules in a specific document and that there is a need for a concise, explanatory summary of the stormwater general permits that excludes extraneous material applicable to other NJPDES permits, but that clearly explains what discharges of stormwater require NJPDES permits and which can use the general permit approach.

RESPONSE: The rule proposal is part of the NJPDES rules because the program has been developed in accordance with the Federal NPDES program under the federal Clean Water Act Amendments of 1987. The State must follow the national program with regard to the overall regulatory umbrella of NJPDES, the state delegated NPDES program.

The Department agrees with the comment on providing understandable materials and has attempted to write the general permits in understandable terms. However, legal documents such as permits and rules usually need to include a good deal of complex and technical language. In order to provide a "layman's" explanation, the Department has prepared fact sheets and other handouts which describe the program in easy to understand language. These materials will be sent to the commenter and can be obtained by calling 609-633-7026, or by writing to the Office of Regulatory Policy, Department of Environmental Protection and Energy, CN 423, Trenton, N.J. 08625.

5. COMMENT: AEI commented that given the confusion over the definition of what a point source is and also given the professed intent of the NJDEPES program to regulate nonpoint sources in the future,

it might seem prudent for a facility that has only nonpoint source discharges of stormwater to submit a RFA.

RESPONSE: The stormwater permit requirement is limited to point sources of pollution by the definitions in the APA regulations. While there is clearly some overlap between nonpoint source pollution and point source pollution, particularly with regard to stormwater, this program is not intended to require permits for nonpoint source pollution. The Department is developing other programs to address nonpoint sources of pollution. If a facility is not certain whether its discharges constitute point source discharges, the Department agrees that it might be prudent for the facility to submit an RFA or to otherwise seek the Department's determination as to whether the facility has a point source that must be permitted.

6. COMMENT: AEI commented that "random" or "target area sampling" may not be random and that sampling may be targeted at a specific facility in a punitive way as a result of other unrelated issues and that such targeted sampling could result in a specific facility being required to apply for more expensive individual NJPDES permits. The DEPE should assure that any such sampling program would not be so abused.

RESPONSE: While the principal sampling effort associated with this program will most likely be random, there will also be some targeted sampling. This sampling is likely to be based on two factors: reported violations and watersheds targeted for study due to high levels of pollutants or as part of a watershed priority program. In no event would the Department conduct sampling as a means to punish a facility over other unrelated issues. Instead, sampling would be one part of an investigation that might ultimately justify a decision to require a discharger to seek coverage or authorization under another permit or a decision to conduct inspections of specific facilities. Sampling alone will not be the basis for an action to enforce the general permits.

7. COMMENT: PSE&G commented that it is their understanding that a point source discharge of storm water that subsequently turns into sheet flow runoff before entering waters of the United States (for example, a roof drain that empties onto a paved parking lot that drains by sheet flow into an adjacent wetlands) is not subject to the stormwater permitting requirements of the EPA or the NJDEPE. JJ had a similar question. Does the Department concur with this position? In addition, WSI questions if this regulation would apply if stormwater percolates naturally into the soil.

RESPONSE: The Department agrees that a roof drain that empties onto a paved parking lot that drains by sheet flow onto an adjacent wetlands generally will not constitute a point source discharge requiring a permit under these rules. It also agrees that there is no point source discharge requiring a permit under these rules where rain falls directly onto a surface and then percolates naturally through the soil and into groundwater. However, it cannot concur with the blanket statement that there is never a point source discharge requiring a permit in situations where the discharge leaves its discrete conveyance and is dispersed before entering the water of the State. For example, if a storm sewer emptied onto a parking lot that was graded to drain into an adjacent lake, the Department would consider that discharge to be a point source discharge because the discharge to the lake would be so directly linked to the storm sewer. The foregoing analyses are based upon the Federal definitions of "point source" and "discharge" (40 C.F.R. 122.2) cases interpreting those definitions, and EPA guidance, including its discussion of this issue at 55 F.R. 47990, 47995-47997 (November 16, 1990). The Department will continue to rely on these and similar authorities in determining whether a specific discharge constitutes a point source discharge requiring a permit.

8. COMMENT: NJBA commented that they look forward to the Department's development and distribution of a guidance manual to better explain the requirements of the general permits.

RESPONSE: In addition to the guidance documents already identified in response number (4), the Department intends to develop further guidance documents within the next six months.

9. COMMENT: HTH questions that since they store all products undercover and garage all trucks when they are on the premises, do they fall under the permit program?

RESPONSE: As long as the facility meets the EPA definition and has a discharge of stormwater to surface waters through a point source, the facility must obtain a permit. However, if the facility has met the objective of the general permit in that it has covered or removed material handling, storage, or processing from contact with stormwater, it will be able to prepare an SPPP and to comply with it quickly, easily, and at a minimal cost.

10. COMMENT: COA and MJ recommend that the Department expand the program to include other priority facilities, specifically gas stations, auto servicing centers, and restaurants.

RESPONSE: The Department agrees that certain commercial facilities that do not fit the EPA definition of "industrial activity" represent a potentially significant source of stormwater pollution. However, since this first phase of the Department's evolving stormwater program is designed essentially to comply with the present EPA requirements from which these facilities are exempt, the present rules do not regulate these facilities. Nevertheless, the Department is considering proposing rules extending this program in the future to cover other types of activities or facilities, including commercial facilities such as those described in the comment.

11. COMMENT: COA recommends that the Department expand the opportunity for future modification of the program through the use of future rule changes.

RESPONSE: The Department agrees with the comment and is anticipating further rule revisions and the development of additional general permits during the next two yers.

12. COMMENT: COA requests that the Industrial Stormwater Permitting Advisory Group (ISPAG) continue to meet to track the program's progress and discuss the need for changes, and that the public should be encouraged to attend ISPAG meetings.

RESPONSE: The Department agrees with the comment regarding the continuation of the ISPAG, and will be seeking additional groups such as Clean Ocean Action for inclusion into the ISPAG. As to the opportunity for the involvement of the general public, the ISPAG is designed to be a small working group with representatives from all the affected communities. The Department believes that this process is more conducive to developing a productive working relationship than the use of large open forums. The Department also believes that the broad spectrum of interests represented by the ISPAG's members effectively include most segments of the interested general public in the ISPAG process. In addition, the general public also has the right to directly participate in rule development through the informal and formal public process established for all rule proposals.

13. COMMENT: BFI strongly supports the Department's view that reporting and permittee site inspections "provide a more efficient and cost-effective approach than compliance sampling for ensuring the implementation of pollution prevention plans" and urges the Department to permit site inspections in a manner consistent with the EPA's April 2, 1992 rule.

RESPONSE: The Department's use of annual inspections for the industrial general permit is consistent with the EPA approach. The Department appreciates the commenter's support.

14. COMMENT: RJA supports the elimination of the formal testing and sampling requirements of the general permits, but believes that sampling requirements in the Individual Permit should be revised to reflect the intermittent and nonpoint source nature of stormwater.

RESPONSE: The Department appreciates the commenter's support on the industrial general permit. With regard to the individual permit, the Department is developing additional general permits for many of those facilities that presently would require individual permits. It is anticipated that sampling requirements for those facilities would be much less stringent than presently required for the individual permit. However, for those facilities remaining in the individual permit process, the Department agrees with EPA's approach that sampling is necessary in order to characterize the potential contaminants in order to develop appropriate effluent limitations. The Department agrees that sampling for stormwater is more difficult than sampling for other discharges and will consider revising the procedures in the development of additional general permits.

15. COMMENT: CIC and WMUA request clarification of the regulation with regard to non compliance. It is not clear what the penalties would be and how they would relate to the penalties found within the Clean Water Act, and how non compliance would be determined from the annual inspections and the SPPP.

RESPONSE: These regulations and permits will be enforced like any other regulations or permits issued pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq. That is, enforcement action (including penalty assessments) will be taken in accordance with that Act and its implementing regulations, N.J.A.C. 7:14-8.

As to annual inspections, the permits require permittees to identify, remediate, and prevent the recurrence of any events of non-compliance discovered thereby. Accordingly, a permittee would be subject to an enforcement action for any non-compliance identified in its inspection report. It would also be subject to enforcement action if it failed to implement the remedial steps set forth in its report. The foregoing are just examples of the type of activities that could subject a permittee to an enforcement action. The Department will exercise its reasonable discretion in determining what type of enforcement action should be taken in response to a specific violation.

16. COMMENT: ANJEC and GSWA commented that stormwater permitting should be related to Water Quality Management Plans and to secondary and cumulative impacts of expanding point sources of pollution. Comprehensive watershed wide planning should include anticipation of stormwater runoff and should address stormwater needs.

RESPONSE: The Department is presently developing a strategy to revise the scope and direction of the Water Quality Management Plans. This strategy will examine a number of issues including stormwater, secondary and cumulative impacts, and watershed management. It is anticipated that a draft of this strategy will be presented to the public for comments in the spring of 1993. The stormwater permitting program will be coordinated with this effort.

17. COMMENT: WMUA commented that POTW's should have the general permit requirements incorporated into their existing individual NJPDES permit.

RESPONSE: The Department will incorporate the general permit requirements into existing individual NJPDES permits where appropriate.

N.J.A.C. 7:14A-1.9 Definitions

18. COMMENT: RTMUA commented that it agrees with the proposed definition of "combined sewer system" if that definition recodifies the definition in N.J.A.C. 7:22A-1.4. However, the Summary accompanying the proposed rules indicates that to be considered a "combined sewer system," a sewer system must be designed to carry both sanitary sewage and stormwater from streets. Accordingly, RTMUA disagrees with the proposal if its purpose is to limit the definition of "combined sewer system." The Department needs to clarify the meaning when the proposed definition and Summary are read together with existing Federal and State rules.

The proposed definition defines "combined sewer system" to mean "a sewer system that is designed to carry sanitary sewage at all times and that also is designed to collect and transport stormwater from streets and other sources, thus serving a combined purpose." The proposed definition would therefore include stormwater from catch basins, gutters and other drains. This is in accordance with Federal law and existing State rules. However, the Summary sets forth a more limited definition. The RTMUA is therefore confirming in this comment that the proposed definition is not meant to be limited beyond its plain words to only stormwater collected from streets.

Currently, "combined sewer systems" are defined at N.J.A.C. 7:22A-1.4 to mean sewer systems which carry wastewater at all times and will also serve to collect and transport stormwater. The proposed definition does not reference the existing regulatory definition, although both definitions seem to encompass the same concepts. The proposed definition merely includes more specific examples of potential sources of stormwater. If this is incorrect, the RTMUA requests that clarification be provided.

EPA has defined a combined sewer as one which is designed as a sanitary sewer and a storm sewer. The plain words of the proposed definition adopt the Federal regulation. Many public and private bodies are involved in the Federal and State grant process. Therefore, continued consistency between Federal and State regulatory definitions and implementation of stormwater management programs is critical.

RESPONSE: The differences in wording between the definition of "combined sewer system" in N.J.A.C. 7:14A-1.9 and the definition of that term in N.J.A.C. 7:22A-1.4 were intentional, and the Department expects to propose corresponding amendments to the definition of "combined sewer system" in N.J.A.C. 7:22A-1.4. Like the EPA definition of "combined sewer" at 40 CFR 35.2005(b)(11), the definition of "combined sewer system" in N.J.A.C. 7:14A-1.9 expressly provides that in order to be considered a "combined sewer system," a sewer system must be "designed" to carry both sanitary sewage and stormwater. That is, stormwater conveyance (along with conveyance of sanitary sewage) must have been a primary purpose for which the sewer system was built, not the result of connections of storm drains that were not envisioned when the system was designed, or of infiltration from such sources as leaky pipes and manholes.

In addition, the definition of "combined sewer system" in N.J.A.C. 7:14A-1.9 uses the phrase "streets and other sources" instead of "streets or other sources" (the phrase used in the definition of "combined sewer system" in N.J.A.C. 7:22A-1.4). The Department deliberately used the word "and" rather than "or" so that, as stated in the Summary, a sewer system must be designed to carry stormwater from streets in order to be considered a "combined sewer system." Thus, there is no conflict between the "plain words" of the definition and the Summary. The Department believes that the term "combined sewer system" should be limited to sewer systems that were designed to provide sanitary sewer service as well as to be the principal means of stormwater conveyance in their service areas, as evidenced by conveyance of stormwater from streets. These are the sewer systems that are generally most subject to the problems typically associated with combined sewer systems. Sewer systems that receive stormwater not from streets, but rather from such sources as roof leaders and cellar drains are viewed by the Department not as "combined sewer systems," but as sanitary sewer systems with stormwater inflow problems. The foregoing creates no inconsistency between the State and the Federal programs. Instead, the adopted definition simply clarifies the federal definition.

N.J.A.C. 7:14A-3.9(b), Administration of General Permits

19. COMMENT: CIC commented that in N.J.A.C. 7:14A-3.9(b)4 and (b)6, the Department is essentially stating that an applicant has no right to appeal a Department decision with regard to General Permit Determinations since an adverse determination is not "final Agency action." CIC believes that this constitutes a direct violation of the Administrative Procedure Act ("APA") and that the Department does not have the authority to refuse or deny the rights of an applicant to appeal a final determination. It recommends that the Department either delete or modify the language found within these sections to protect the rights of the individual applicant and to comply fully with the APA.

RESPONSE: In these provisions the Department has attempted to strike an appropriate balance between the rights of an individual applicant to a hearing and the Department's need for flexibility in determining what type of a permit an applicant should be issued. These provisions do not deny an applicant the right to appeal determinations regarding general permits. They instead only set the time at which an applicant can appeal those determinations to the Appellate Division of the Superior Court. In other words, an applicant can still appeal the determination that it seek an individual permit rather than authorization under a general premit; the applicant need only wait to take an appeal to the Appellate Division until it has completed the individual permit process. (Part of that individual permit process consists of an adjudicatory hearing, during which the permittee would be able to raise the issue of whether it was properly required to seek coverage under a different type of permit than that under which it was originally covered.) In the interim, the applicant also has the right to appeal that determination to the Commissioner. This is similar to the court's general rule against the taking of interlocutory appeals.

These provisions are fully consistent with the APA, which New Jersey courts have consistently recognized does not create any rights to a hearing or appeal. They are also fully consistent with the courts' interpretation of the requirements of due process to the effect that a person applying for a permit has no protectable property interest in the permit for which it has applied and to the effect that, even if there is such an interest, that interest needs to be balanced against the interest of the state in order to determine the level of process that is due.

The foregoing applies with equal weight to those portions of N.J.A.C. 7:14A-3.9(b)(4) that set forth the procedures to be followed when the Department directs a permittee authorized by a general permit to apply for an individual permit or to seek coverage under a different general permit. The only difference is that one already covered by a permit may be due some process in connection with a determination that it seek another type of coverage or authorization. The Department believes that the process provided by its rules is more than constitutionally due. It also notes that it has provided more procedural protections related to its general permit determinations than has EPA.

Industrial General Permit

20. COMMENT: In general, ANJEC, GSWA and TC support the Department's proposal to control stormwater pollution from industrial sites under the industrial general permit (NJ0088315). Trying to prevent pollution at its potential source has a great deal of merit. SC also

commends the Department for trying to develop more creative ways of dealing with facilities that discharge pollutants through their stormwater discharges.

RESPONSE: The Department appreciates these supportive comments.

21. COMMENT: ANJEC and GSWA recommend that the Department conduct frequent, unannounced spot checks to insure that effective stormwater pollution control is accomplished through this general permit.

RESPONSE: The Department's Enforcement personnel will conduct regular, random inspections of facilities discharging under the industrial general permit.

22. COMMENT: While recognizing its obligation to meet Federal mandates, SC thinks the Department has not done enough to minimize the economic hardship of companies that do not discharge stormwater containing pollutants. The Department should request that EPA amend its rules to rectify this inequity in defining "stormwater discharge associated with industrial activity." TSC also recommends that the Department develop a database to distinguish between those stormwater discharges that cause pollution problems and those that do not (similar to the Underground Storage Tank (UST) Program); and create economic incentives, regulations and penalty schedules that focus on reducing pollution problems that already exist.

RESPONSE: By March 1993, the Department intends to evaluate the feasibility of establishing a Statewide Stormwater Monitoring Program that will allow the Department to evaluate the impact of the stormwater general permits in reducing pollutant loadings from stormwater discharges associated with industrial activity, and to identify areas and industries where stormwater discharges continue to cause water pollution problems. However, the federal regulations do not allow the Department to exempt any stormwater discharges associated with industrial activity, as defined at 40 CFR 122.26(b)14, from permitting requirements even if it can be documented that they are not discharging pollutants into waters of the State. For that reason, the Department has proposed a general permit containing the minimum requirements to meet the intent of the federal regulations, and still protect the environment. For facilities that can prevent (or have eliminated) contact between stormwater and source materials on their site, the only requirement is that they provide documentation of this in a stormwater pollution prevention plan that is kept on-site, and in an annual certification that is sent to the Department; and that they inspect the site every year to ensure that those conditions continue to be met.

The Department does intend to use the information gathered through its monitoring program and the stormwater permitting process to identify persistent stormwater pollution problems and to develop additional measures to rectify these problems, including additional permits or permit requirements, and/or education programs and alternative pollution control strategies. Those facilities that continue to discharge contaminated stormwater will have their general permit revoked and will be required to obtain an individual permit.

As to SC's more specific comments, the Department will forward its comments regarding the EPA definition of stormwater discharge associated with industrial activity to EPA for consideration as a possible amendment to 40 CFR 122.26.

23. COMMENT: SC recommends that the rules be revised to include only the minimal requirements necessary to meet the EPA mandate, and not include a $500.00 annual renewal fee or engineer certifications.

RESPONSE: As stated in the previous response to SC, the Department believes that the rules, as proposed, are necessary to meet both State and Federal minimum requirements for permitting stormwater discharge associated with industrial activity. The $500.00 fee is the current minimum fee for NJPDES Discharge to Surface Water (DSW) permits and is also the minimum amount that the Department can charge and still cover the costs of administering this program. The Department, in response to comments concerning the requirement for a P.E. certification, has revised that portion of the permit requirement to allow the owner or operator to certify the plans. For a more detailed response, please refer to the specific response concerning the P.E. certification, response number 51.

24. COMMENT: PSE&G and HPC request clarification of whether all stormwater discharges from a facility area ineligible for the industrial general permit if any of the facility's stormwater discharges are authorized under a NJPDES DSW permit. HPC further requests that the rules be clarified to allow stormwater discharges that are permitted under existing individual permits be re-permitted under the new industrial general permit, if they can meet the general permit conditions.

BASF and HPC request the same for stormwater discharges from facilities with expired NJPDES DSW permits. PSE&G, CIC and HC believe that unpermitted stormwater discharges from facilities with existing, expired or draft NJPDES permits should be eligible for authorization under the industrial general permit, provided that the other eligibility requirements are met.

RESPONSE: In response to the requests for clarification, the presently proposed general permit excludes all stormwater discharges from a facility at which any stormwater discharge is covered by an individual permit. However, the Department sees considerable merit in the comments to the effect that this exclusion should be rescinded, thereby making discharges eligible for the general permit without regard to whether or not they are currently covered by an individual permit. The major concern with the existing exclusion is that it treats two similarly situated facilities differently, without a clear environmental benefit justifying the differential treatment. The Department would like to move to eliminate this inequity by rescinding the exclusion, but it is legally constrained by doing so in this adoption document. Specifically, in consultation with the Department of Law and Public Safety (DLPS), the Department has determined that the rescission of the exclusion would constitute a change so substantial that it cannot be made except in the context of a new rule proposal.

The Department and the DLPS are also concerned that revising the permit to allow every discharge covered by an individual permit with numerical limits to instead be covered by the best management practices contained in the general permit might constitute backsliding in violation of the federal Clean Water Act. Accordingly, the Department will be developing a preproposal, to be available by November 1992, that would seek public comment on the appropriateness of rescinding the subject exclusion.

Pending that action, the Department notes that individual permittees who feel that they can demonstrate that it would not constitute backsliding to replace their individual permit limits with the limits in the general permit (and who can make several other demonstrations) can apply to the Department for such a replacement pursuant to N.J.A.C. 7:14A-3.9(b)3v.

25. COMMENT: CIC believes that the existing individual permit requirements do not take into account characteristics of storm events and force permittees to spend unreasonable resources on sampling and analysis which would be better spent building facilities and procedures to prevent stormwater contamination.

RESPONSE: The Department agrees that in general it is better to spend more on pollution prevention than on sampling. Indeed, the industrial general permit is designed to accomplish just that: to have the permittee invest in preventing pollution rather than sampling and analyzing discharges. Unfortunately, not every facility will be able to eliminate all contact with source materials and therefore not every facility will be eligible for the general permit. Facilities with individual permits are required to sample their stormwater discharges to verify that they are not discharging amounts of pollutants greater than that allowed under their individual permit. While the sampling requirements for individual permits are established under Federal regulations, the Department shares the concerns of the commenter and will continue to explore the possibility of modifying these requirements within the constraints of the Federal regulations.

26. COMMENT: PSE&G requests clarification of whether the existence of effluent guideline limitations for steam electric, coal pile runoff (40 CFR 423) excludes stormwater discharges from a generating station site that are not the result of the operation of the generating unit (for example, roof drainage from a warehouse) from eligibility under the industrial general permit.

RESPONSE: If the facility in question has any stormwater discharge that is subject to EPA effluent guideline limitations as defined by 40 CFR 423, then all of the stormwater discharges from that facility are excluded from eligibility under the industrial general permit. EPA effluent guideline limitations are Federally established numerical effluent limitations that cannot be administered under the industrial general permit, as proposed, since the general permit does not contain the sampling requirements necessary to verify compliance with numerical effluent limitations. Such sampling requirements would be included in an individual NJPDES DSW permit, which is what such facilities must apply for under these rules and the Federal rules.

27. COMMENT: PSE&G requests clarification that the proposed rules, and the Federal stormwater permit application requirements, only apply to point source discharges to surface waters. They question if a

point source discharge that turns into sheet flow prior to discharge to surface waters requires a permit.

RESPONSE: As set forth in the response to comment number 7, the stormwater permit application requirements apply only to stormwater discharge. Because some discharges that originate in discrete conveyances but are allowed to become sheet flow remain "point source discharges" under Federal law, the Department cannot concur with PSE&G's blanket statement on that issue.

28. COMMENT: WMNA commented that eligibility under the industrial general permit should include stormwater discharges from sanitary landfills that have been closed prior to the effective date of N.J.A.C. 7:26-2A.9, provided that the landfills are not disrupted, meet all engineering requirements, and have submitted the appropriate certifications for closure to the Department.

RESPONSE: The Department agrees with UMNA. Such facilities would be eligible to apply for a general permit so long as they can establish that they satisfy all the substantive requirements of N.J.A.C. 7:26 regarding closure.

29. COMMENT: SK recommends that eligibility under the industrial general permit be revised to only exclude stormwater that has deliberately, rather than accidentally, come into contact with source materials.

RESPONSE: Facilities authorized under the industrial general permit must devise methods to prevent all contact with source materials, deliberate as well as accidental. The environment is harmed equally by both types of contact. Further, proof of deliberate contact would render enforcement unduly difficult.

30. COMMENT: SK recommends that the phrase "come into contact with" in Appendix A (the industrial general permit), Part I, Section B be defined to make it clear that stormwater that remains outside of a secondary containment system provided around materials and machinery is not considered to "come into contact with" such material and machinery. The stormwater collected in a containment system is examined prior to discharge to ensure that it does not come into contact with materials or machinery.

SK also commented that materials or machinery which are provided with secondary containment pursuant to RCRA or the Spill Compensation and Control Act, are not "source materials." This exclusion must be added to Appendix B (now Attachment B), Section A. Secondary containment provides the means to collect leaks or spills from storage or treatment units, and machinery. Material collected in a secondary containment system is examined prior to discharge.

RESPONSE: Containment systems are not "source materials." Therefore, stormwater that comes into contact only with a containment system may be eligible for authorization under the general permit provided that the diverted stormwater does not otherwise come in contact with any source materials; and provided it meets all the other requirements and conditions of the general permit. The Department believes that this result follows clearly enough from the present condition of its industrial general permit that no further definitions are necessary.

31. COMMENT: CIC and LT support the Department's proposal to control stormwater pollution from industrial sites under the industrial general permit.

RESPONSE: The DEPE appreciates the commenters' support.

32. COMMENT: CIC commented that the extended State deadline for dischargers may leave industry open to potential legal action from nuisance citizen and public interest research group law suits. In addition, if an applicant files an RFA at the end of the 180 day period and is rejected by the Department, they would be too late for the April 1, 1993 individual permit deadline.

RESPONSE: The Department has done everything within its powers to set reasonable deadlines for facilities to come into compliance with its industrial stormwater program and to give those facilities a substantial degree of assurance that compliance with those deadlines will protect the facilities from challenge. While the Department lacks the legal authority to change the Federal deadlines, the Department has stated that in New Jersey it would not enforce the October 1, 1992 deadline, and it has provided an extension of 180 days for submission of an RFA. Further, the Department is prepared to accept RFA's beginning October 1, 1992 for facilities that either wish to comply with the EPA deadline or who wish to apply earlier than 180 days. If an applicant is uncertain whether it can qualify for the general permit it should either apply earlier or seek coverage under an individual permit. However, the Department lacks the legal authority to immunize industry from third party law suits.

33. COMMENT: LT commented that the requirement that the Request for Authorization (RFA) be submitted jointly by the owner and operator will complicate and possibly delay an entity's permitting process. LT recommends that the RFA be requested solely by the operators because they have primary control over the operation.

RESPONSE: The requirement for joint submission is consistent with the NJPDES rule at N.J.A.C. 7:14A-2.1(b) which presently requires submissions from the owner and operator. The NJPDES rule further stipulates at N.J.A.C. 7:14A-2.1(c) that when "more than one person is required to obtain a NJPDES permit for one or more activities at a specific site, the Department shall issue a single permit which lists all of these persons as permittees."

Deleting the owner submission could present problems from an enforcement perspective as operators may not be as reliable a party with respect to long term responsibility. In addition, the Department believes that this approach is consistent with standard landlord-tenant arrangements and is especially consistent for stormwater where the water can pick up contaminants as it runs across the land.

34. COMMENT: ALK questions "If a person owns land and buildings which are leased to one or more businesses with an applicable SIC code, must that person submit a separate RFA jointly with each tenant with an applicable SIC code?"

RESPONSE: Yes. The Department requires separate RFA's for each facility. If an "omnibus RFA" were to be submitted, it would create a situation where all operators could be considered to be co-permittees, which could greatly complicate the issue of potential liability. In addition, as tenants change, there would have to be constant modification of the authorization, which would inadvertently affect the other facilities. In short, the requirement for an individual RFA is necessary to an efficient program.

35. COMMENT: MC asked whether he, as a landlord of a property with a chemical complex on it, is responsible for any required permits. He also asked whether there are two fees, one for the owner and the other for the operator?

RESPONSE: Both he, as the owner, and the operators of his various tenant facilities are jointly responsible for the permit. However, there is only one fee.

36. COMMENT: PC commented that within the Pinelands Area, new stormwater discharges associated with industrial activity are likely to constitute development and require the completion of an application with the Pinelands Commission. In order for the general industrial stormwater permit to be consistent with the requirements of the Pinelands Protection Act and the Pinelands Comprehensive Management Plan (CMP), it will be necessary to indicate that for new stormwater discharges in the Pinelands Area, the RFA Requirements in Part II(C) will include "documentation that any industrial activity and stormwater requiring application to the Pinelands Commission has been approved by pursuant to the requirements of the Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-1.1 et seq.)." PC also suggested that similar changes be made to Parts II (B)(1) and Part (I)(4) of Appendix B to the industrial general permit for similar reasons.

RESPONSE: Although the Department fully agrees that it should not and may not issue any permits for development unless that development is consistent with the CMP, it disagrees that its industrial general permit constitutes a permit for development. While the construction general permit is clearly a development-related permit, activities covered by the industrial general permit only apply to activities either on existing sites, or to activities for new sites after construction has ended. The nature of the best management practices anticipated should involve little or no construction. In the infrequent case where the best management practices selected to comply with the permit would require a Pinelands Commission or State permit for development, the issue of whether such development would be consistent with the CMP will be made in the context of that approval process.

The Department also feels that requiring PC approval prior to issuance may create significant confusion and frustration among applicants since PC approval would probably not be needed in most cases, yet the permittee would have to confirm this with the PC prior to permit authorization. The Department believes that the existing PC procedures are adequate to insure compliance with the Pinelands Plan and therefore, it is unnecessary to include the suggested language in the industrial general permit.

37. COMMENT: ANJEC and GSWA recommended that the Content Requirement of the RFA be amended under Part II to add as part of 5, identification of the watershed the project is located in.

RESPONSE: The Department believes that the requirement for a U.S. Geological Survey quadrangle location map will provide enough informa-

tion to determine watersheds. Since the boundaries of a watershed may vary according to the purpose for which the identification is sought, location on a map will provide greater flexibility in determining watersheds.

38. COMMENT: CIC and R&C commented that facilities whose principal economic activity is something other than manufacturing should not be subject to the full scope of the general permit requirements simply because the business of the corporation with which they are associated is in the manufacturing category. CIC recommends that a provision be established within the proposed regulations for an abbreviated RFA along with a general exemption. This would allow applicants to document the absence of opportunity for stormwater contamination on their property and therefore qualify for an exemption from these regulations.

RESPONSE: The Department agrees that a facility should not be subject to the permitting requirement simply because it happens to be associated with a facility that is subject to the requirement. However, the definition of industrial activity, and the use of SIC codes, was determined by the EPA. Agreement states, like New Jersey, must be at least as stringent as EPA. The presently proposed rules incorporate the EPA definition by reference. According to the EPA definition, office buildings and accompanying parking lots, if their drainage is not mixed with stormwater runoff directly related to manufacturing, processing or raw materials storage areas at an industrial plant, are not subject to this permit (40 C.F.R. 122.26(b)(14). Research facilities, however, are considered to be industrial plants subject to this permit. Thus, most office buildings will not be in the program and will not need an abbreviated RFA. However, research facilities are in the program and need to comply with all of its requirements. The Department notes that a recent judicial opinion *(NRDC v. USEPA)* reaffirmed the proposition that an administrative agency may not fulfill a mandate that it issue permits for certain types of activities or facilities by exempting those activities or facilities from the permitting requirement.

39. COMMENT: Five commenters (MTA, ALK, SK, SC, COA) expressed concern that the $500.00 permit fee was unnecessary and too expensive. They suggested the possibility of deleting the requirement that the fee be paid every year.

RESPONSE: The Department shares the commenters' concerns that the permit fees be kept as low as possible. Accordingly, and as set forth in more detail in the Summary of the rule proposal, it has made every effort to keep the costs of running its industrial stormwater general permitting program to a bare minimum, which bare minimum is estimated to be between $1,600,000 and $2,000,000 for the first year of the general permit program. Based on the number of authorizations that the Department expects to issue during that first year (between 3,200 and 4,000), the $500.00 fee is both necessary and appropriate.

With regard to the need for an annual fee, it is important to note that while initial program costs do account for start-up costs and initial RFA processing, subsequent years will require processing of SPPP certifications and annual inspections, as well as the development of alternative general permits. In addition, program costs in subsequent years must also include enforcement and Statewide monitoring efforts. Nevertheless, as stated above, since it is difficult to accurately project annual fees at this time, the Department will carefully monitor the costs and revise the fees accordingly.

The Department admits that it is very difficult to project some of the costs for this program because much of the program is different in nature than existing traditional permit programs. The Department has never based a permit program on the use of general permits to this extent before. Therefore it is not certain as to the exact costs for this process. Accordingly, the Department has proposed the minimum fees that it estimated to be necessary, with the proviso that it will carefully monitor the fees and will lower or raise them as appropriate, if they are not consistent with the program costs.

The Department notes that it has convened a task force consisting of representatives from all parties interested in NJPDES fees to conduct a comprehensive review of those fees. The recommendations of that task force may have an effect on the fees set forth in these rules.

40. COMMENT: Four commenters (MTA, NEO, SC, COA) expressed concern that the fees were especially onerous on small businesses and that the fees should be linked to some measure such as facility size, compliance effort or degree of pollution risk.

RESPONSE: The Department has carefully considered both a lower small business fee, and an incentive fee for compliance efforts. With regard to the small business fee, the definition of small businesses in the N.J.S.A. 52:14B-18 is "any business which is resident in this State, independently owned and operated and not dominant in its field, and which employs fewer than 100 full-time people." After comparing this definition to the list of facilities presently identified as being potentially eligible for the general permit, the Department determined that most of the eligible facilities could potentially be classified as small businesses. Accordingly, if the fees were to be lowered for small businesses, an exorbitant fee would have to be imposed upon the handfull of eligible facilities that do not qualify as small businesses. The Department determined that it was more equitable to instead require all businesses, regardless of size, to pay the comparatively low $500.00 fee.

With regard to basing fees on some varying measure, the Department examined a number of possibilities including basing fees on facility size (acreage and employees), flow volume, incentives, and the completion of certain steps in the permitting process (completion of SPPP, and certification of compliance). However, it determined that such possibilities would either be too cumbersome to regulate efficiently or too arbitrary. The Department nonetheless is trying to develop a type of incentive system by developing other general permits, with increasingly more stringent requirements and costs, as an alternative to individual permits. It is the Department's intention to provide the industrial general permit as a basic general permit, with alternative general permits and individual permits, all at progressively higher fees, as part of a comprehensive regulatory system.

41. COMMENT: CIC commented that Part III.A does not authorize any discharge of a hazardous substance as defined in N.J.A.C. 7:1E-1.6. The definition found within this section is so broad and encompassing that the general permit would effectively become a zero discharge permit, which is not the stated intent of this rule. To make the permit realistic and effective, the Department should develop a specific definition of "discharge" as applied within this rule. Compliance with N.J.A.C. 7:1E should be addressed separately by applicable facilities.

RESPONSE: The Department agrees that its industrial general permit does not authorize any discharge of a hazardous substance as defined in N.J.A.C. 7:1E-1.6. However, it disagrees that this renders its permit a "zero discharge" permit. The Department expects that when most facilities have implemented an appropriate stormwater pollution prevention plan (SPPP), they will not cause any violation of N.J.A.C. 7:1E, especially given the Department's commitment to use a common sense approach to enforce those regulations. (See N.J.R. 2656(a), 2706-2707 (September 3, 1991) (responses to comments regarding proposed N.J.A.C. 7:1E).) If a facility is concerned that it cannot reduce its stormwater discharge of hazardous substances to the level required by N.J.A.C. 7:1E with a SPPP, it should consider seeking coverage or authorization under another permit.

42. COMMENT: TC commented that the requirement, in Part III.B.1.b, to eliminate any exposure of equipment to stormwater during storm events is totally impractical for a transportation company. It is not economically practical to have several thousand pieces of equipment (machinery) under roofs during storms. The language should be amended to provide latitude for the professional preparing the SPPP to determine what is necessary and appropriate to minimize the discharge of contaminants from operation facilities.

RESPONSE: The industrial stormwater general permit is intended to prevent, not minimize, pollution being discharged via stormwater. Therefore, this general permit requires that contact between industrial machinery and stormwater discharges associated with industrial activity be eliminated. If elimination of contact is not feasible for a particular facility (within the time period allotted for implementation of an SPPP), then the facility may not be appropriate to be covered by the general permit and should instead apply for an individual NJPDES DSW permit for the facility's stormwater discharges associated with industrial activity. The Department notes, however, that the "equipment (machine)" referred to by TC may in this case consist of nothing more than empty trucks. Because, as explained in the following response, trucks usually will not constitute "source materials," this requirement should not impose a significant burden on TC.

43. COMMENT: RJA commented that what is meant in Appendix B by "industrial machinery" should be clarified. Does this include equipment used in over the road transportation (tractor trailer trucks)?

RESPONSE: The Department does not consider most tractor trailer trucks to be "source materials" or "industrial machinery." Neither are any motor vehicles considered to "source materials" provided that the engines are covered and no source material are exposed on the engine compartment or on the trailer bed. However, where motor vehicles transport source materials (including industrial machinery, raw materials,

etc.) onto a facility, the facility's SPPP must address such source materials and ensure that contact is eliminated between the source materials (even though they are transported by motor vehicles) and stormwater discharges associated with industrial activity. Other than as set forth above and to indicate that "industrial machinery" should be interpreted in light of the more general term, "source materials," the Department finds it difficult at present to provide further clarification of the term "industrial machinery."

44. COMMENT: LT commented that although most of Appendix B (now Attachment B) is appropriate, sufficient latitude should be provided to ensure that more effort is placed on reduction of the source versus preparation of the SPPP. Because it will be expensive for a small facility, where minimal activities occur, to prepare a SPPP fully responsive to all of the issues in Appendix B, the likely result is that the entity will not be able to afford appropriate preparation, thus negating the SPPP's prime benefit. Therefore, the "shall"s used in Appendix B should be changed to "should"s.

RESPONSE: A facility will not be able to devote more resources to actually achieving "no contact" between source materials and stormwater by devoting less resources to developing its SPPP. Instead, every dollar spent on developing an SPPP, including an inventory and mapping elements of that plan, will likely save the facility many dollars in implementation and potential costly remediation work in the future. In other words, a certain amount of effort is required to first inventory and map stormwater discharges and source material locations, and to evaluate the existing site conditions, before appropriate measures to comply with the permit conditions can be implemented. The Department is convinced that "no contact" can be achieved only through adequate planning. Accordingly, the "shalls" in Appendix B have been retained.

45. COMMENT: ANJEC and GSWA commented that a note identifying the watershed the facility is located in should be included as part of the mapping documentation in Appendix B, Section B.

RESPONSE: The Department disagrees with this comment. The term watershed is a broadly defined term meaning the entire area that drains into a particular waterbody. Therefore, the Department would first have to define what size area and waterbody a watershed should be depicted for, in order to include this requirement. In addition, information necessary to define watersheds and determine watershed impacts is more readily available to the Department, at this time, than to individual applicants. The Department may reconsider including this requirement in industrial general permit in the future, once the Department has developed policies and programs related to watershed management and planning, monitoring, and permitting. The requirement of the USGS quadrangle map location will allow the Department to identify the appropriate watershed.

46. COMMENT: MTA/NJ commented that since the goal of the program is to prevent contact between pollutants and stormwater, what does the direction of stormwater flow or the location of swales and ditches matter?

RESPONSE: The path of stormwater, once it falls on the site surface, is not always readily apparent. In order to adequately plan for its control, you must know where stormwater flows in order to identify whether it may come into contact with source materials or whether or not there is a stormwater discharge to surface or ground water.

47. COMMENT: COA commented that with respect to source materials, the Stormwater Permitting Program should require the use of fine grated screens to reduce floatables and sediment at the point of discharge with minimum maintenance and expense.

RESPONSE: The Industrial General Permit does not establish specific requirements for stormwater management, such as installation of grated screens, but rather allows each individual facility to develop a stormwater pollution prevention plan that specifies appropriate best management practices to be implemented at the site, so long as such practices will ensure that there is no discharge of stormwater through separate storm sewer systems to surface waters, that has come in contact with source materials at the facility. In order to comply with the terms of the general permit the industrial facility will have to either remove or cover materials, and maintain good housekeeping practices (for example, employee education). These practices should eliminate much of the floatables and should reduce sediment loads. To impose a rigid requirement regarding screens would be contrary to the philosophy of flexibility upon which this permit is based.

48. COMMENT: CIC commented, with regard to the Implementation Schedule in Appendix B, Section E, that the industrial general permit requires a Stormwater Pollution Prevention Plan (SPPP) to be prepared within six months after the effective date of authorization, and to be implemented within 18 months after that date. Many corporations plan capital budget six months prior to the next operating year, making it impossible to appropriate monies for projects to be completed within one year after they have been identified. Implementation of best management practices can have a major effect on operation scheduling and customer demands (for example, modifying or moving a complete process). These projects could take longer than one year to obtain appropriate State and local permits, to engineer, and to complete. The Department should reconsider the permit deadlines and factor into them these additional considerations.

RESPONSE: The Department recognizes that, in some cases, the need to acquire permits may delay the implementation of an SPPP. Accordingly, Part III.B.2(a)iii of the industrial general permit establishes a process whereby a permittee may request, and the Department may grant, a six-month extension to the 18th month SPPP implementation deadline in order to obtain Federal, State or local permits or approvals necessary for the construction identified in the SPPP. The Department otherwise believes that the 180 days provided to submit the request for authorization, combined with another 180 days to prepare the SPPP and 18 months to implement the SPPP, provides permittees with ample time to comply with the permit conditions. To the degree this requires any deviation from corporate plans it is justified by the benefit to the environment.

49. COMMENT: SK commented that the 30 day limitation in Part III.B.3.a.ii for the permittee to amend the SPPP and the written certification is very short. The regulated community has internal expenditure authorization protocols which must be followed. In some cases, it takes about 30 days to allocate the money to spend on a project. It is more practical to require the SPPP amendment and certification within 90 days, allowing for time extensions as necessary.

RESPONSE: The 30-day limitation referred to by the commenter applies only to SPPP deficiencies that the Department discovers. The Department considers this 30-day limitation to be a reasonable and appropriate amount of time to correct most deficiencies, especially since the Department can and will extend that limitation in appropriate circumstances. To the degree that this may require some corporations to deviate from their spending protocols, it is justified by the benefit to the environment.

50. COMMENT: LT commented that they supported the concept in Parts III.C and III.D of performing annual inspections and certifications by a professional engineer in lieu of continued stormwater monitoring.

RESPONSE: The Department appreciates the support of LTC. However, as the next comment discusses, the Department is removing the requirement for a PE certification.

51. COMMENT: There were a significant number of comments regarding the requirement for a Professional Engineer. The Department has summarized these comments together and provided one comprehensive response below. MTA/NJ commented that the requirements in the permit for use of a Professional Engineer should be eliminated. The cost of employing a Professional Engineer to prepare documents and to certify, sign, and seal a SPPP has been roughly but conservatively estimated as $5,000 to $7,000—most probably, more. In addition, the permit requires a Professional Engineer to conduct an annual inspection and prepare and certify the inspection report—another costly undertaking. Many small businesses will be unable to cope with these excessive costs, and should instead spend their limited funds implementing best management practices to contain or eliminate sources of pollution. By creating a captive market for the services of Professional Engineers, the requirement for such services would also be subject to abuses.

Statements such as "The SPPP shall be prepared and implemented in accordance with good engineering practices ..." preclude a layman from preparing documents which the Professional Engineer must certify. They preclude using previously prepared, though still current or easily correctable, plot plans, site plans, or surveyor's sketches to fulfill some of the requirements. Any reputable Professional Engineer will be meticulously demanding before signing any document, especially when it implies express warranty. MTA/NJ expects that Professional Engineers will prepare their own maps and will hesitate to rely on the work of strangers. Also, existing plot plans will generally not satisfy some SPPP mapping requirements, such as mapping swales and ditches to show the flow of water. Since the goal of the program is to prevent contact between pollutants and stormwater, what does the direction of stormwater flow or the location of swales and ditches matter?

Moreover, a Professional Engineer's certification means little once the Engineer leaves the site, and can be manipulated by cleaning the site just before the Engineer's inspection. The Professional Engineer cannot certify ongoing compliance, which is the real objective. Further, a substantial amount of data required by the Professional Engineer must be supplied by the property owner and/or operator. In addition, ultimate responsibility for permit violations remains with the property owner and cannot be shifted to the Professional Engineer. Program goals will be properly served by allowing the property owner and/or operator to prepare the necessary documents and, under penalty of fine or imprisonment for false data or representations, sign the certifications. SPPP mapping requirements can be satisfied by a surveyor's plot plan or a layman's hand-drawn diagram.

COA commented that the requirement for SPPP certification by a licensed Professional Engineer will place a disproportionate and excessive burden on small facilities. Many large facilities have in-house engineers and will incur no added expenses to certify their plans. However, the added expense of Professional Engineer certification combined with the minimum permit fees may discourage small facilities from giving their full cooperation. This will be detrimental to the receiving waters. As an alternative to the initial Professional Engineer certifications and/or the annual recertification, COA suggests that photographic or video documentation with date verification be permitted. This will reduce the cost to smaller businesses as well as reduce the need for Department site visits.

SC commented that the requirement for certifications from a licensed Professional Engineer should be eliminated for companies such as SC where there are no unusual sources of pollution and where basic products and materials never come into contact with stormwater. The EPA is not mandating this requirement, which will create unnecessary work and economic hardship for many companies (especially small businesses) and encourage them to consider leaving New Jersey. Why is New Jersey taking this approach, which is the toughest and most expensive of any in the nation for companies such as SC? Other States do not have this requirement. The cost of this requirement includes the fee charged by the Professional Engineer (who will probably want to do some occasional or spot testing), and also the management time it takes for a small company to contact the engineer and make sure the engineer has the right papers.

SC suggests some more reasonable system similar to what the underground storage tank (UST) regulators did. With nominal economic hardship, they identified those USTs that were old, in need of repair, or which contained very hazardous materials. Those USTs are being repaired and replaced quickly, and brought up to current standards. The other "safe" USTs are being tracked and a data base developed. The Federal rules were fulfilled, and businesses with "safe" USTs did not suffer, even though they are still being regulated, require permits, and are required to submit nominal annual reports stating that nothing has changed (under penalty of imprisonment for false statements). The industrial stormwater permitting program could likewise require a nominal annual report stating that nothing has changed and that no materials of real concern are in contact with stormwater.

NEO commented that certification by the owner/operator should be sufficient. Operations managers are more knowledgeable than a Professional Engineer about the operations and pollution prevention needs of their facilities. Why is a double certification needed?

ALK commented on the requirements in Parts III.B.1.a and III.D.1 that a New Jersey Licensed Professional Engineer sign and seal the SPPP and prepare the annual inspection report. Any responsible person, including the required Signatories as defined in Part IV.J, should be capable of understanding the rules, and Signatories would be liable for false statements in any case. Why is it not sufficient for only the Signatories to sign the required documents?

MLSG commented that the "Engineer's Certification" in Appendix C prevents companies from using the professionals most qualified to prepare SPPPs, and should be expanded to allow the SPPP preparation certification to be done also by geologists, hydrogeologists, and certified environmental consultants. This change would also reduce the cost of preparing the SPPP. The Department's Bureau of Underground Storage Tanks has a certification program to qualify ground water consultants, which appears to be the kind of program that the stormwater permitting program should consider.

RA commented that the requirement in the permit for a New Jersey Licensed Professional Engineer should be eliminated. Company personnel who supervise a process know much more than a Professional Engineer does about the particular operation. If done properly, evaluation by a Professional Engineer is not inexpensive, and can sometimes be very expensive. Why does the Department put more faith in a Professional Engineer than in an industrial manager who operates the facility and has engineering talent at that facility? Most engineers are not Professional Engineers. It's primarily the consulting firms that have Professional Engineers. Industries generally have persons who have Ph.D. or Master of Science degrees, but who are not Professional Engineers. It is unjust that these persons cannot sign or certify documents concerning their company's engineering problems. If these persons have the qualifications, why must the company pay extra money for a Professional Engineer?

LT commented that the requirement in Part III.B.1.a to have a New Jersey Licensed Professional Engineer certify the SPPP is inappropriate. There is nothing so unique to stormwater management in New Jersey that would require a Professional Engineer who specializes in that State to certify the SPPP. In fact, it would be advantageous to use a Professional Engineer who has experience in other states in which stormwater management is more advanced (such as California, which requires the SPPP to be prepared and implemented by October 1, 1992). The Department should allow Professional Engineers registered in any state to prepare and certify the SPPP.

IHMM/NJ, commented that Part III.B.1.a, the SPPP Preparation Certification in Appendix C, and the SPPP Implementation and Inspection Certifications in Appendix D should be modified. The "Contents of the Stormwater Pollution Prevention Plan" (Appendix B) do not inherently include design activities, and the SPPP itself is a planning document, not a design document. Therefore, unless the SPPP requires engineering calculations, designs, or specifications, an otherwise qualified environmental management professional should be capable of attesting to the adequacy of the SPPP. Even if there are engineering elements in the SPPP, a licensed Professional Engineer should only be mandated for those components that lead to design-construct, and only then if the construction elements are directly related to the conveyance or treatment of stormwater. There are many facility engineers who are not Professional Engineers who can and do design facility or process modifications to eliminate contaminated runoff, and those modifications normally would not require a Professional Engineer.

Any person judged qualified to sign an SPPP should also be authorized to certify the SPPP, its implementation, and the inspection. Persons who are Certified as Hazardous Material Managers (CHMM) by the Institute of Hazardous Materials Management should be included in the definition of who is qualified to sign an SPPP. There are many facility environmental managers and experienced consultants who are CHMMs and who are primarily responsible for environmental planning and compliance of their facilities. These persons are usually the persons who know most about the sources of and the methods needed to eliminate contaminated runoff, and who will be preparing the SPPPs. If the Department needs some assurance as to the professional capabilities of the environmental manager to make these judgments, the CHMM certification offers such assurance.

The CHMM certification has been awarded to qualified environmental management professionals from many technical backgrounds: engineers, biologists, chemists, hydrogeologists, and environmental scientists. No one technical discipline has a monopoly on knowledge and experience required to implement the stormwater permitting program, but the CHMM Master certification meets or exceeds the implied requirements of an environmental professional capable of certifying an SPPP. The basic requirements for CHMM Master certification include a baccalaureate degree, seven years of experience in hazardous materials management-engineering-hydrology, two qualified professional references, passing a national exam, adherence to a professional code of ethics, and a certification maintenance program.

BFI commented that it disagrees with the requirement that New Jersey Licensed Professional Engineers sign and seal the SPPP and prepare reports. In the preamble to the EPA's April 2, 1992 final rule, EPA concluded that Professional Engineer certifications should normally not be required by authorized states (see 57 FR 11404). BFI agrees with the EPA position (and the view of commenters to the EPA proposal) that flexibility is an integral part of a workable stormwater management program. Other states, such as Indiana, have recognized this by requiring that plans be certified by "a qualified professional" rather than by a Professional Engineer (see 15 Ind. Reg. 1237, 1253; April 1, 1992). BFI urges the Department to take a similar approach, by deleting the Professional Engineer certification/reporting requirements. The permittee should be responsible for certifying the plan and submitting any necessary reports.

NJSPE commented that it has major concerns about the "Engineer's Certification" in Appendices C and D. Under the proposed provisions, Professional Engineers may face significant civil and criminal penalties which are not covered under any professional liability insurance policy. NJSPE is concerned with the possibility of placing a Professional Engineer in a position of potential criminal charges when that engineer is serving in the best interest to protect the public health, safety and welfare. Also, the Engineer's Certification constitutes a warranty or guarantee of the engineer's service. This would exclude the engineer from coverage under the engineer's professional liability insurance policy. These Certifications impose responsibilities upon the Professional Engineers for factors well beyond their control, and should be revised so that Professional Engineers will not have problems becoming insured if they undertake projects under these rules.

TSA commented that it has serious concerns about the "Engineer's Certifications" in Appendices C and D. TSA are specialists in the field of professional liability insurance for professional engineers, and are providing comments at the request of the New Jersey Society of Professional Engineers.

First, Professional Engineers may be subject to civil and criminal penalties which are not covered under any professional liability policy. Second, the Engineer's Certification (especially in Appendix C) constitutes an express warranty and/or guarantee of the engineer's service. Coverage would thus not be afforded under Professional Liability Policies, all of which exclude coverage for express warranties and guarantees. Third, these Certifications impose responsibilities and liabilities upon the Professional Engineers for factors beyond their control, such as actual implementation of the SPPP, and beyond what Professional Engineers traditionally assume when they render professional services. These Certifications will increase the risks to Professional Engineers, and thus increase the fees charged to their clients. Some Professional Engineers who are well educated on professional liability exposure and risk management will not provide these Certifications.

Eliminating these Certifications, or revising their language to lessen the burden on Professional Engineers, would provide professional liability protection and some comfort to the Professional Engineer, and reduce the costs to the facility. Although no coverage can be afforded under the Professional Liability Policy for civil and criminal penalties, TSA suggested language that would resolve the other two concerns.

It is highly probable that if revised as suggested, these Certifications would be considered a professional opinion rather than a warranty/guarantee. Professional Engineers are not opposed to assuming responsibility for their work and do not seek zero risk. They are responsible for their professional actions, and that is what their Professional Liability Policy covers. Professional Engineers play a vital role in this program and should not be removed from this program. However, the risks and liabilities they assume should be consistent with the liabilities they traditionally assume when providing professional service.

UNJASA commented that liability is definitely being assumed because the permit requires annual certification that the facility is in compliance with its SPPP. UNJASA also commented that its member's insurance rates would probably increase because of their hiring of engineers as additional persons involved with their property who could be sued, and who may or may not have liability and responsibility. Further, because stormwater represents an act of God, UNJASA members may not have any insurance coverage for stormwater. Increased pollution control costs encourage businesses to leave the country.

RJA commented that the "Engineer's Certifications" in Appendices C and D are significantly improved over the preliminary draft versions; however, Professional Engineers "Errors and Omissions Insurance" excludes "guarantees & certification." Use of the word "certify" negates our insurance coverage. The Department should eliminate the "certification" language or include a definition of certification similar to that being considered by the State Board of Professional Engineers and Land Surveyors where certification is defined as an opinion.

DWSA commented that the "Engineer's Certifications" in Appendices C and D satisfy the concerns previously expressed by DWSA to the Department, except for two minor word changes. Specifically, in the third sentence of the Engineer's Certification in Appendix C, the phrase "will be no exposure" should be changed to "should be no exposure." Likewise, in the third paragraph of the Engineer's Certification in Appendix D, the phrase "will be no discharge" should be changed to "should be no discharge." The attorney for DSWA's professional liability insurance carrier feels that by incorporating these two minor changes these Certifications will be acceptable.

WMNA commented that the Department should provide that the New Jersey Licensed Professional Engineer required by the permit may be employed by or part of a company that is owned by or associated in some way with the permit holder.

RESPONSE: The Department has heard many comments in recent years that it should rely upon a PE seal for determining compliance with various regulatory laws. The comments summarized above came, therefore, as a surprise. However, the Department recognizes that there are significant concerns expressed in these comments, specifically the concerns regarding professional qualifications, financial burdens, and liability and has reconsidered the requirements in the general permit for a New Jersey Licensed Professional Engineer. Therefore, the Department has changed Parts III.B.1.a, III.C., and III.D., as well as all references within N.J.A.C. 7:14A, to eliminate the requirements for a New Jersey Licensed Professional Engineer. It has also deleted the "Engineer's Certification" and all other references to engineers in Appendices C and D. However, some of the language that was contained in, or associated with, those Engineer's Certifications has been retained in Appendices C and D as part of the certifications that must be made by the facility owners and operators. This change is consistent with the comments suggesting that it was more appropriate for such certifications to be signed by the owner/operator than by a Professional Engineer.

Also, the Department agrees with some of the commenters that other qualified professionals have the knowledge and expertise to provide the kind of assurances the Department seeks regarding permit compliance, and the Department believes that it would be desirable in the future to modify the permit to establish a requirement that SPPPs be reviewed and inspected by persons meeting certain minimum technical qualifications. Therefore, the Department has added a "Reopener Clause for Stormwater Pollution Prevention Plan Certification" as Part V.Z. of the permit. This reopener clause announces the Department's intention to promulgate amendments to these rules in the near future to establish a certification program to identify those individuals the Department considers to be qualified to prepare SPPPs in accordance with the general permit requirements. The rule amendments will also include a requirement that once this program is established, SPPPs will be required to be prepared under the guidance of such qualified individuals and such individuals will be required to certify that the SPPPs meet all of the SPPP requirements set forth in the general permit. However, until this program to identify and train qualified individuals to certified SPPPs is in place, the Department will be relying on the owners and operators of industrial facilities to complete the SPPP certifications as amended in this final rule.

The Department intends to develop the criteria for determining who is considered to be a qualified individual under this program. The Department will also provide a training program and certification that persons who successfully complete the program are qualified to certify SPPPs in accordance with these rules. The Department intends to develop this program in order to satisfy the concerns of the Department, the regulated community, and environmental groups regarding the certification requirements in the general permit. This program should alleviate concerns related to exclusive reliance on New Jersey Licensed Professional Engineers, excessive financial costs, and liability concerns, while also providing, in the near future, an effective system of assurances that individuals specifically qualified to assess stormwater discharges and appropriate best management practices for them will be involved in the SPPP process.

Construction General Permit

52. COMMENT: NJBA requests clarification that single family homes are exempt from the construction general permit rules.

RESPONSE: Insofar as individually owned single family homes are exempt from the requirements of Chapter 251, they are also exempt from the requirements of this permit. However, if the construction of a single family home disturbs five acres or more, the owner is required to apply for authorization under the construction general permit or an individual permit.

53. COMMENT: NJBA requests clarification that once construction and land disturbance at construction sites is stabilized, no further general permits or authorization, annual reports or inspections are required.

RESPONSE: The construction general permit is required until all construction has been completed. Unless the activity is defined as an industrial activity covered by the industrial general permit, no further permits are necessary once construction is completed. If the use of the

site after construction is defined as an industrial activity, then the facility must apply for the appropriate stormwater industrial general or individual permit.

54. COMMENT: NJBA commented that the meaning of the term "co-permittee" in Appendix B should be clarified. It feels this would avoid any confusion with the recently invalidated Department "co-permittee" requirement.

RESPONSE: The Department recognizes the possibility of confusion, but has kept the term since it is specifically used in the USEPA stormwater permitting rules. It is also still used for NJPDES discharge to surface water permits where two persons share responsibility for a permit. An example of this might be a sewage treatment facility that uses a land application site to dispose of sludge. In this example, the landowner of the sludge disposal site would be a co-permittee with the owner of the sewage treatment plant. The court invalidated only the rule that required private dischargers to have a governmental co-permittee; it did not invalidate the entire co-permittee concept.

55. COMMENT: NJBA commented that it looks forward to the Department's development and distribution of a guidance manual to better explain the requirements of these general permits. They commended the Department for its efforts to simplify the new rules.

RESPONSE: In addition to the fact sheets and other handouts discussed in comment 4, the Department will be preparing further guidance documents and appreciates the NJBA's support.

56. COMMENT: UTCA commented they are pleased the Department has proposed to establish the permit system through the Soil Conservation District's process and are pleased that reasonable fees to implement the program have been proposed.

RESPONSE: The Department appreciates the support of the UCTA.

57. COMMENT: ANJEC and GSWA commented they do not support the proposed general permit for construction activities. Using Soil Erosion Sediment Control permit as the general stormwater management permit will jeopardize water quality. Requirements for soil erosion and sediment control are not designed to protect water quality and are only about 70 percent effective in keeping soil on site. Additionally, only the five and the 10-year storm are targeted for control under the soil erosion and sediment control regulations.

RESPONSE: The Department believes that the Chapter 251 soil erosion and sediment control program is effective in protecting water quality. The combination of the stormwater permitting program and the soil erosion and sediment control program is consistent with efforts encouraged by the USEPA throughout the country. In fact, New Jersey is ahead of many other states in the country who do not have regulatory control over soil erosion and sediment control. The merger of these two programs will not only enhance water quality protection, but also reduce bureaucracy. In addition, the Department will be working with the Department of Agriculture and the SCD's to eventually expand stormwater management to cover post-construction activities.

The assumptions that are made with respect to the 70 percent removal rate of sediments are not correct. While the sediment basins are required to remove that percentage of sediment, there are other measures required to further reduce the release of pollutants. These measures include requirements for ground cover and filter structures. The requirement to design for five or 10 year storm events represent most of the storms which need to be controlled. The systems are designed for 25 (discharge outlet) and 100 year (basins).

58. COMMENT: ANJEC and GSWA commented regarding their concern about interagency coordination and adequate staffing for permit administration. They suggest the Department retain authority over administering authorizations under the construction general permit to ensure provisions for protecting water quality are included.

RESPONSE: The Department agrees that it should retain authority over the administration of the construction general permit, and it has done so in a variety of ways, including the drafting of the permit and the execution of a Memorandum of Agreement. However, the Department feels that using the Soil Conservation District (SCD) and the Department of Agriculture (DOA) is the most efficient use of available resources to fulfill the mandates of this program. This coordinated program would provide a "one stop" administrative process which will allow the Department to concentrate on programmatic issues as opposed to administrative requirements. The local SCDs currently have the most expertise to run a program for construction activities. The Department, the DOA, and the SCDs have a commitment to provide the necessary resources to insure that the program's responsibilities are met. There should be adequate funding available and the Department and the DOA have a Memorandum of Agreement which will be updated as needed to improve coordination. The Department still retains authority over the permit, with the SCDs as the implementing agent. The Department will monitor this aspect of the program along with the others and will propose changes if it is less successful than anticipated.

59. COMMENT: ANJEC and GSWA commented that water quality protection provisions should include minimizing volume increases and nonstructural and structural BMPs.

RESPONSE: The Department is working to that goal with its overall Stormwater Management Program. The Department is promoting a model stormwater ordinance and will have a Best Management Practices manual available in the late Fall of this year. These programs will be able to address these concerns in a more comprehensive manner.

60. COMMENT: ANJEC and GSWA commented they feel formal interagency agreement with the Soil Conservation Districts regarding monitoring and enforcing the authorizations would be a more effective interagency activity.

RESPONSE: The Department agrees with ANJEC and BSWA and has entered into a formal Memorandum of Agreement with the Department of Agriculture and the State Soil Conservation Committee, which entities have statutory control over individual districts. A copy of this agreement was provided to the commenters.

61. COMMENT: COA commented regarding its concern with placing responsibility for oversight and monitoring with the Soil Conservation Districts (SCD) which have already fallen prey to significant budget cuts and pending legislation to allow for municipal implementation of many SCD responsibilities. Placing more responsibility with SCDs could adversely affect the timely processing of RFA for general construction permits and compromise the program.

RESPONSE: The fee associated with the permit should provide the necessary resources to allow the Districts to implement the program in a satisfactory manner. If not, the Department will take whatever steps would be necessary or appropriate to ensure that the program would not be compromised.

62. COMMENT: PSE&G commented that due to the *NRDC v. USEPA* court decision, the threshold of eligibility for a general permit for construction activity should be reduced to one acre or less. Otherwise, persons undertaking construction activities involving one to five acres would have no alternative than to apply for an individual NJPDES DSW permit to comply with the Federal rules.

RESPONSE: The Department shares the concern of the commenter and is proceeding as set forth at the beginning of this Summary. That is, until further judicial action or EPA rule-making, it will not require those construction projects of under five acres to seek a permit. If and when EPA promulgates a new rule, the Department will change its permit eligibility to conform to the change. It appears that other states are proceeding in the same manner as the Department and EPA.

63. COMMENT: NJBA and BFI commented that the five-acre threshold is a reasonable cut-off.

RESPONSE: The Department appreciates NJBA's and BFI's support.

64. COMMENT: ANJEC commented that the definition of construction activities under Part I.B. "Eligibility" should be clarified to read as follows: "Construction activities including clearing, grading, and excavation activities that would disturb 5 or more acres of land area and which are part of a larger common plan of development or sale."

RESPONSE: The Department believes the current wording of the permit is preferable to the commenter's suggestion as it is based on the USEPA definition. This will enable builders and other applicants who participate in projects in other states to have a predictable definition from state to state. The commenter's suggestion implies that a project must not only be five acres or more, but also must be part of a larger development. This would eliminate projects that meet the numerical threshold, but are not part of a larger development, which would be inconsistent with the intent of the federal definition.

65. COMMENT: With regard to section I.B—Eligibility (1), the NJBA requested clarification regarding how the Department plans to apply the general permit/request for authorization requirement retroactively. Specifically, how does this requirement apply in cases where neither the soil conservation districts nor builders are actively involved in the review or construction of a residential development, even though a storm water discharge may still be occurring?

RESPONSE: The commenter appears to be referring to a completed construction project. As currently required, only those activities for which construction is pending, active, or awaiting completion need to seek coverage under the construction general permit. Projects which are

completed by October 1, 1992 are not required to be covered by a permit. Where construction has not been completed after October 1, 1992, the applicant will have to seek authorization with a stormwater permit, but the applicant will have 180 days from the effective date of this permit (until about May 1993) to file its Request for Authorization. (This applies even if the construction is completed during the 180 days.) A detention basin is considered part of the overall project. Construction is completed when all components and phases of the project are finished. If, however, the activity located on the completed construction site is an activity that requires an industrial NJPDES permit, then that facility must seek authorization or apply for the appropriate permit.

66. COMMENT: With regard to section I.D—Authorization 4(b), the NJBA commented that this section should be modified to state that such authorizations do not expire in those cases where the certification or municipal approval is renewed or extended. Applicants should be spared the need to reapply and submit an additional $200.00 application fee in these cases.

RESPONSE: The Department agrees with the commenter has amended Appendix B, Part I.D.4.b to clarify this point.

67. COMMENT: The NJBA supports Section 3 that imposes time limits on the soil conservation districts for certifying the RFA's.

RESPONSE: The Department appreciates the NJBA's support.

68. COMMENT: The NJBA commented on the added paperwork that is required (for example, RFA's, annual reports, etc.) that must be completed and submitted to the soil conservation districts. The NJBA requested that the contents of the RFA form be made available for comments.

RESPONSE: The Department's RFA form requires the minimum information necessary to comply with the Federal rules. This process will not require the applicant to provide anything more than the most basic information. The draft RFA has been shared with the attendees of the three Stormwater Permit Seminars in September. Comments from the attendees were incorporated in the final form.

69. COMMENT: ANJEC and GSWA commented that the Content Requirement of the Request for Authorization be amended under Part II, C. on Page 1 of 3 to add as part of 4, identification of the watershed the project is located in.

RESPONSE: The Department disagrees with this comment. The term watershed is a broadly defined term meaning the entire area that drains into a particular waterbody. Therefore, the Department would first have to define what size area and waterbody a watershed should be depicted for, in order to include this requirement. In addition, information necessary to define watersheds and determine watershed impacts is more readily available to the Department, at this time, than to individual applicants. The Department may reconsider including this requirement in this general permit in the future, once the Department has developed policies and programs related to watershed management and planning, monitoring, and permitting. The requirement of the USGS quadrangle map location will allow the Department to identify the appropriate watershed.

70. COMMENT: The NJBA commented that the Department should develop a mechanism whereby the land owners (or their representatives) would be given an opportunity to be present during site inspections. Additionally, during these site inspections, the land owners should be held free from any personal liability or property damage incurred by the Department and its representatives.

RESPONSE: It is the standard procedure for the Department to make site inspections unannounced. This provides the inspector with the realtime daily conditions at that site. To make arrangements with the owner ahead of time would negate the purpose of the inspection. Nonetheless, the Department allows, and even encourages, the owner or its representatives to accompany the inspectors on their inspection. With respect to the liability issue, the Department sees no reason why its inspectors should be the only person to whom the landowner should owe no duty of care. Instead, any liability for personal injury or property damage should be allocated in accordance with general tort principles.

71. COMMENT: The NJBA questions what happens when a builder/developer sells a project or portions of a subdivision to other builders for the purpose of completing the construction of homes. Will these subsequent builders be required to receive separate authorizations to discharge stormwater? The NJBA believes that these situations should not trigger any permit requirement.

RESPONSE: The procedure for when a parcel is subdivided or if there is a change in ownership is addressed in Part V.T. A permit modification is required for a new owner or a change in the project's scope. A new permit and fee would be necessary for the new owner of a subdivided property when a new soil erosion sediment control plan is required. A simple change in ownership for the entire parcel will not require any additional fee, but the permit name must be modified by notifying the District issuing the permit.

72. COMMENT: UCTA commented that the use of the soil conservation districts to implement the construction general permit is the most practical method.

RESPONSE: The Department appreciates the UCTA's support.

73. COMMENT: UCTA commented that it was pleased that the fees for the construction general permit are reasonable.

RESPONSE: The Department appreciates the UCTA's support.

74. COMMENT: NJBA commented that the fee of $200.00 for the construction general permit and the increased paperwork is duplicative and unnecessary in light of the fact that the soil conservation districts already charge a substantial fee to review the soil erosion and sediment control plans. It suggested that the $200.00 fee be eliminated.

RESPONSE: The issuance of an authorization under the construction general permit, while predicated on the certification of the soil erosion and sediment control plan, still requires the processing of an RFA through the NJDOA to the Department, which is ultimately responsible for the permit. The Department attempted to provide a reasonable, efficient, and inexpensive mechanism for those engaged in construction to receive both certifications (the soil erosion and sediment control plan and the construction general permit) through a coordinated "one-stop" method. Although this kept the costs of administering the program to a minimum, the soil conservation districts will still incur some costs allocable to their handling of the general permit.

In addition, the NJDOA and the Department will also incur costs related to supervision, coordination, and further development of the permit program. These costs have been estimated at one staff-year at NJDOA and 3.5 collective staff-years at the districts throughout the State for a total cost of $200,000. Based on an estimate of 1,000 authorizations within the first year of the program, the $200.00 fee is the minimum necessary to cover these anticipated costs. The fee presently charged for the soil erosion and sediment control plan certification cannot be used to fund the activities associated with the construction general permit. Therefore, the Department established a minimal one-time fee to fund that work effort. This fee is low in comparison to other fees charged for similar activities related to construction at the local level.

75. COMMENT: RJA commented that the $200.00 fee for the construction general permit should be proportional to the size of the development.

RESPONSE: The Department, DOA, and the districts carefully considered developing a graduated fee. The conclusion was that as the permit is presently structured, the amount of resources allocated to a five-acre project would be essentially the same as that allocated for a 100-acre project. Further, because the fee is so low, the benefits of graduating seemed relatively slight. Therefore, the Department determined to use a simple, flat fee. However, if construction general permit is modified in the future, as contemplated by the rule proposal, the suggested approach might become more appropriate.

76. COMMENT: WMUA sought clarification as to whether a person authorized under the construction general permit who failed to maintain appropriate sedimentation or erosion control facilities would be penalized for every day that it failed to do so or would instead be penalized only for every day that it failed to do so and it rained.

RESPONSE: The answer to this would depend upon the terms and conditions of the approved soil erosion and sediment control plan, because that is the document specifying the controls to be maintained, presumably including when those controls are to be maintained. However, because most controls are required to be maintained regardless of whether or not it rains, permittees could be penalized for every day that they fail to maintain controls identified in their approved soil erosion and sediment control plans.

Permit Application Deadlines and Group Applications

77. COMMENT: BFI commented that it endorses the Department's proposal to extend the deadline for the submission of individual permit applications to April 1, 1993. BFI agrees that "EPA's October 1, 1992 deadline [does not] allow sufficient time for both the regulated community and the Department to make prudent decisions regarding stormwater permitting." 24 N.J.R. at 2353. Without an extension, permit applicants may, through no fault of their own, be unable to collect data required in the time frames set forth by the EPA. A determination by the Department that it will not "take enforcement action (for failure to

comply with 40 CFR 122.26(c)) against those who submit their individual applications by April 1, 1993," 24 N.J.R. at 2359, would be of tremendous assistance to applicants which must, in a short time frame, evaluate various permitting options and comply with applicable sampling and information requirements.

RESPONSE: The Department appreciates the support of BFI.

78. COMMENT: CIC commented that a Federally mandated deadline of October 1, 1992 has been imposed on all discharges of stormwater associated with industrial activity. The proposed rule extends this deadline to April 1, 1993. While CIC commends the Department for providing this protection, it is only a "half-measure." This action may protect dischargers from enforcement by the agency but it is not clear if it affords industry any protection against citizen lawsuits. If the Department rejects the RFA for the industrial general permit, the industry would have to apply for an individual permit by the Department deadline of April 1, 1993. Assuming that the amendment is effective September 1, 1992, then the RFA is due March 1, 1993. With the Department's 90 day review period (assume June 1, 1993), industry would miss the April 1, 1993 deadline for applying for the individual permit.

RESPONSE: The Department appreciates the CIC qualified support of the April 1, 1993 deadline in N.J.A.C. 7:14A-10.3(a)22. CIC's comment regarding third party lawsuits has been addressed in detail at comment number 32; the Department cannot immunize industry from such lawsuits. In regard to the relationship between the April 1, 1993 deadline and the schedules in Parts II.A.1 and I.D.2 of the industrial general permit for submission and Department review of the RFA, industries that seek to ensure that they comply with the April 1, 1993 deadline should either submit their RFAs toward the beginning rather than the end of the 180 day period allowed for such submissions in Part II.A.1, or submit individual applications as well as RFAs (with the understanding that if the Department issues authorization under the general permit before issuing an individual permit, the individual application will be considered to have been withdrawn).

79. COMMENT: The Department received a number of comments regarding the USEPA's group application process. These comments are discussed below and the Department has provided a single response following. JVK commented that the Department's decision not to honor group stormwater permit applications is a reversal in Department policy and inconsistent with Federal rules. The New Jersey Concrete and Aggregate Association was informed that the Department would not honor its group permit application and would require individual applications.

AEA commented that it is concerned that the Department is not going to honor the AEA's EPA group stormwater permit application, which AEA prepared on behalf of 59 AEA members after continued reassurance from the Department that the program would remain at the Federal level because the Department was too busy to take on additional permitting, and did not have the time or money to implement the program properly. The AEA also realized the need to meet application deadlines. The Summary of N.J.A.C. 7:14A-1.10 states (24 N.J.R. 2352(a), 2359): "However, since submitting a group application to EPA does not result in the issuance of an effective NJPDES permit, facilities included in a group application still need to obtain a NJPDES DSW permit from the Department for their stormwater discharges." Similarly, N.J.A.C. 7:14A-10.3(a)23 requires that a facility approved by EPA as a group member or a facility which has not been approved or rejected by EPA by April 1, 1993 must either apply for an individual DSW permit or request authorization under an applicable general DSW permit.

AEA requests that when reviewing N.J.A.C. 7:14A-1.10 for adoption, the Department should honor the group applications that have already been approved by EPA and consider creating exemptions for EPA approved group permits. The AEA would not have applied for an EPA stormwater group permit had it known that the Department was planning to take primacy in this area. If these rules are adopted as proposed, the AEA and numerous other organizations with group permit applications pending at EPA will have wasted much time, energy, and money without any improvement in environmental quality.

SK commented that the proposed rule calls for re-submittal of a stormwater RFA or individual permit by facilities which already submitted a stormwater permit application of one form or another to EPA. This requirement would incur an unnecessary financial burden on facilities which already submitted a permit application to EPA and responded to EPA's requests for additional information. Some of the facilities conducted expensive sampling and analysis programs. The State should accept the Federal NPDES permit if one is issued until it expires. For permit applications currently processed by EPA, the State should accept them as satisfying the Department's initial submittal requirements taking into consideration any related stormwater permit related work requested or determined acceptable by EPA. The State should not require the regulated community to repeat effort already made in response to EPA requests or which satisfies EPA's requirements.

RESPONSE: The provision that is the subject of these comments is N.J.A.C. 7:14A-10.3(a)23. (The AEA comment also mentions N.J.A.C. 7:14A-1.10. However, N.J.A.C. 7:14A-1.10 merely incorporates various requirements of the Federal Act, the State Act, and Federal rules into the NJPDES rules, and establishes no policies concerning group applications beyond those stated in 40 CFR 122.26.)

The Department recognizes that there is significant concern and confusion regarding the group application process. The Department intends to work with the ISPAG over the next six months on developing requirements that would ease some of the work and confusion over this process and will propose revisions by the spring of 1993 if warranted. If the commenters or other members of the regulated community have suggestions other than exemption, please submit them to the Office of Regulatory Policy at the address in comment 4.

The Department does not agree that N.J.A.C. 7:14A-10.3(a)23 is a reversal in Department policy, or that the Department had provided assurances that "the program would remain at the Federal level," or that a New Jersey facility that is part of a group application to EPA may receive a "group permit" or any kind of "Federal NPDES permit" from the EPA. The Department did encourage industries to participate in group applications. In this regard, the Department sent two letters in 1991 to trade associations and professional groups (the first signed by Mr. Leroy T. Cattaneo, then Deputy Director of the Department's former Division of Water Resources, the second signed by Mr. Barry Chalofsky of the Department's former Bureau of Water Quality Planning). The "Information Sheet" (dated 5/91) attached to the second of these letters included language which clarified the letters: [emphasis added]:

"In addition to reducing the number of applications that need to be processed, it is EPA's intention that once a group application is accepted it will be used to provide information for developing model general or individual permits that are industry-specific. **EPA does not have the authority to issue general or individual permits in New Jersey, which is a NPDES delegated state. Wherever feasible, the Department intends to make use of EPA's group application procedure and will issue general permits that are based on EPA models. EPA model general permits may have to be modified, if necessary, to meet New Jersey's specific environmental and legal needs; or, in special cases, the Department may determine that an individual permit is appropriate.**

"Another advantage of the group application procedure is that any facility that EPA accepts as a group from their Part 1 application **may** not be required to apply for an individual permit for their stormwater discharge. Any facility that EPA accepts as a group from its Part 1 application is not required to be covered under a promulgated stormwater general permit or to apply for an individual permit by the November 18, 1991 deadline established under federal regulations, **but may be required to apply to the Department for a general or individual permit at a later date.** Under proposed EPA rules, facilities approved by EPA under a group application will have to apply for authorization under a State general permit within 180 days of State general permit issuance. Facilities that are rejected as members of a group by EPA have twelve months to file a permit application with the Department."

As the first of the above two paragraphs stated, EPA does not have the authority to issue general or individual permits in New Jersey, which is a "NPDES delegated state," that is, a state that issues its own National Pollutant Discharge Elimination System (NPDES) permits under Section 402 of the Federal Clean Water Act. In its discussion of group applications in the November 16, 1990 Federal Register (55 FR 48028), EPA stated that "EPA does not have authority to issue general or individual permits to facilities in NPDES approved States."

In the second paragraph quoted above, moreover, the Department expressly stated its position. N.J.A.C. 7:14A-10.3(a)23 is fully consistent with this statement. EPA extended its deadline from November 18, 1991 to October 1, 1992 (see 40 CFR 122.26(e)(1)(i)), and N.J.A.C. 7:14A-10.3(a)23 establishes a still "later date" of October 1, 1993 for facilities approved by EPA as members of group applications.

Thus, the comments that facilities that submitted group applications to EPA may receive a "group permit" or "Federal NPDES permit" from

the EPA, and that they therefore should not have to obtain a NJPDES permit from the Department, are erroneous, as are the comments about the assurances provided by the Department in this regard and above a reversal in Department policy.

The Department also stated in the first paragraph quoted above that "wherever feasible, the Department intends to make use of EPA's group application procedure and will issue general permits that are based on EPA models" (with modifications if necessary to meet New Jersey's needs). This is still the Department's intent. However, the EPA has not yet provided any "model," industry-specific general permits. For those facilities that have been approved by EPA as members of group applications, the Department should not postpone the NJPDES permitting process indefinitely while waiting for the EPA to provide such "model" permits. By itself, the submission of a group application provides no water quality protection.

Nor is N.J.A.C. 7:14A-10.3(a)23 inconsistent with EPA regulations regarding group applications. Under 40 CFR 122.26(e)(1)(i), a facility that is part of a group application is exempt from the requirement to submit an individual application by October 1, 1992. Similarly, under N.J.A.C. 7:14A-10.3(a)21 and (a)22, such a facility would be exempt from the requirement to submit an individual permit application by April 1, 1993. (Because the Department does not believe that EPA's October 1, 1992 deadline allows sufficient time for both the regulated community and the Department to make prudent decisions regarding stormwater permitting, the Department proposed and adopted a later deadline of April 1, 1993.)

The USEPA has left it up to each NPDES approved state to establish its own policies concerning facilities approved as members of group applications. This is evident from the section entitled "Group Application: Applicability in NPDES States" of the preamble to EPA's November 16, 1990 rulemaking (55 FR 48027-48028). Excerpts from this section follow:

"... In any event, NPDES approved States are not bound by the determinations of EPA as to the appropriateness of groups or the issuance of permits based on model permits or individual permits..."

"One commenter advised that the rules should state that a NPDES approved State may accept a group application or require additional information. EPA has decided not to explicitly state this in the rule. However, this comment does raise some points that need to be addressed. Because the group application option is a modification of existing NPDES permit application requirements, the State is free to adopt this option, but is not required to ... If an approved NPDES State chooses to not issue permits based on the group application, facilities that discharge storm water associated with industrial activity that are located in that State must submit individual applications to the State permitting authority. Before submitting a group application, facilities should ascertain from the State permitting authority whether that State intends to issue permits based upon a group application approved by EPA for the purpose of developing general permits. For facilities that discharge storm water associated with industrial activity which are named in a group application, the Director may require an individual facility to submit an individual application where he or she determines that general permit coverage would be inappropriate for the particular facility."

Under N.J.A.C. 7:14A-10.3(a)23, submission of an individual application is not the only option available to a facility that is approved by the EPA as a member of a group application. The facility could also submit a "request for authorization" under an applicable general permit. (Often, much less information is required in such a "request for authorization" than in an individual application.) For some facilities, this general permit could be the industrial general permit or the construction general permit that are now part of the NJPDES rules. The financial burden of submitting a request for authorization under either of those general permits is minimal, and no sampling data is required. Moreover, the Department expects to issue additional general permits before the October 1, 1993 submission date specified in N.J.A.C. 7:14A-10.3(a)23.

Also, as stated in the last sentence in N.J.A.C. 7:14A-10.3(a)23, the requirements in N.J.A.C. 7:14A-10.3(a)23 do not apply to a facility that is owned or operated by a "municipality" (as defined in N.J.A.C. 7:14A-1.9) with a population of less than 100,000 other than an airport, powerplant, or uncontrolled sanitary landfill. Many of the 59 members of the AEA group application may therefore be exempt from these requirements.

80. COMMENT: The Department received some comments regarding the use of group application generated data. These comments are discussed below and the Department has provided a single response. UNJASA and ADRA commented that they have been approved by EPA as members "of the federal group stormwater permit," and asked if the State will recognize and grant the state permit using the data previously submitted to EPA. UNJASA and ADRA also asked if the State will "grant a group general permit, exempting a single engineer or engineering firm representing our industry statewide and allowing us the ability to monitor and police our operations along with the federal regulations."

PT commented that motor carriers are in the first phase of the EPA group application process, and asked how the Department intends to integrate and coordinate the Department program with this Federal program.

HTH commented that it manufactures concrete burial vaults and has filed with its national manufacturing group to comply with the Federal requirement. Since HTH has filed with the Federal program, does it still fall under the State program?

RESPONSE: As explained in the Department's response to the previous comment, facilities which participated in group applications to EPA will not obtain a permit from EPA, and must obtain a permit from the Department. In this regard, N.J.A.C. 7:14A-10.3(a)23 provides that if a facility is approved by the EPA as a member of a group application (or if a facility which is a participant of a group application has not been approved or rejected by the EPA by April 1, 1993), the owner and operator shall, by October 1, 1993, either apply for an individual DSW permit, or submit a written request for authorization under an applicable general DSW permit. (This requirement shall not apply to a facility that is owned or operated by a municipality with a population of less than 100,000 other than an airport, powerplant, or uncontrolled sanitary landfill.)

For some facilities, this general permit could be the industrial general permit or the construction general permit that are now part of the NJPDES rules. The financial burden of submitting a request for authorization under either of those general permits is minimal, and no sampling data is required. Moreover, the Department expects to issue additional general permits before the October 1, 1993 submission date specified in N.J.A.C. 7:14A-10.3(a)23. Although it is possible that the Department will issue additional general permits that are limited to specific industrial categories such as the salvage industry (the Department would refer to such permits as "industry-specific general permits" rather than "group general permits"), it is more likely that a broad range of industrial facilities will be eligible for these permits. The Department does intend to issue (with modifications if necessary to meet New Jersey's needs) general permits based on "model" general permits that EPA will develop using information contained in group applications. However, the EPA has not yet provided such "model" general permits for the salvage industry or other industries.

If a facility does decide to submit an individual application, and if sampling data for that particular facility (as distinguished from other facilities in the group) was submitted to EPA as part of a group application, the Department will consider the adequacy of that data before deciding whether to require that facility to submit any additional sampling data as part of the individual application. Further, the Department is considering further changes to sampling requirements for group applicants, and it expects to complete those deliberations within the next six months.

Summary of Hearing Officer Recommendations and Agency Responses:

Martin A. Bierbaum, Administrator of the Office of Regulatory Policy, served as the hearing officer at both public hearings. After reviewing the testimony given at the hearing and the public comments submitted directly to the Department, Administrator Bierbaum determined that the responses to the comments and the agency changes made to the regulations should be accepted as set forth in the Summary of Public Comments and Agency Responses and the Summary of Changes on Adoption.

A copy of the record of the public hearing is available upon payment of the Department's normal charges for copying. Persons requesting copies should contact:

Department of Environmental Protection and Energy
Office of Legal Affairs
401 East State St.
CN402
Trenton, N.J. 08625

Summary of Changes on Adoption:

The Department has determined to adopt the proposed amendments, new rules, and repeal, with the following changes:

1. The Department made a number of minor grammatical and technical changes to either correct printing errors or to clarify minor technical points.

2. In N.J.A.C. 7:14-1.8(j), the word "committee" was changed to "district" since the soil conservation districts are the appropriate entities to certify soil erosion and sediment control plans, not the soil conservation committee.

3. In N.J.A.C. 7:14A-2.1(a), Appendix A, Part IV(H)(1) (all references to Appendix A or B are to the Appendices to N.J.A.C. 7:14A-3), and in Appendix B, Part V(H)(1) the Department replaced "Wastewater Facilities Regulation Program Administrator, NJ DEPE (hereinafter referred to as the Administrator)" and other references to specific Departmental titles and addresses, with "the Department" to more accurately reflect recent Department reorganizations. Appropriate addresses are provided on either Department application forms or other instructions.

4. In N.J.A.C. 7:14A-3.9(b)(2)(ii) and (iii), and Appendix A, the Department deleted the requirement to identify the receiving surface water(s) in the RFA since this information may be difficult for applicants to obtain, particularly in urban areas. The Department is confident that the information will be obtainable from the USGS quadrangle map required to be submitted.

5. In N.J.A.C. 7:14A-3.9(b)2ii and 10.3(a), the Department added language clarifying that unless a general permit specifies otherwise, an RFA must include all of the information required in an individual application.

6. In N.J.A.C. 7:14A-3.9(b)2v, the Department added reference to "other similar DEPE publication" since the Department is presently considering developing alternative publications other than, but similar to, the DEPE Bulletin.

7. In N.J.A.C. 7:14A-3.13(a)9iii, the Department added language to clarify that a permit needs to include requirements for annual inspection reports only where the permit does not include traditional sampling and reporting requirements.

8. In Appendix A, Part I.B.1.a and Appendix B, Part I.B.2.a, the Department changed "paving and roofing materials" to "asphalt emulsion" and added a reference to "Subpart A" of 40 CFR 443 to reflect a recent clarification made by the U.S. Environmental Protection Agency.

9. In Appendix A, Part I.B.1.a, the Department added the words "any stormwater" to clarify that the effluent limitations were limited to those associated with stormwater discharges and not other kinds of discharges.

10. In Appendix A, Part I.B.1.b, the Department added the word "any" to clarify that facilities with any stormwater discharges presently covered by NJPDES permit are ineligible for the general permit.

11. In Appendix A, Part I.B.1.c, the Department replaced the word "covered" with the word "authorized" to be consistent with the terminology used throughout the general permits.

12. In Appendix A, Part I.C.2.b and Appendix B, Part I.C.2.b, the Department substituted "that date" to clarify that the appropriate date for the permit authorization to remain in effect would be the date specified by the Department.

13. In a number of places in the rules and the Appendices the Department deleted references to the requirement for a Professional Engineer. The most significant changes are in the certifications set forth at Attachments C and D to Appendix A. This is explained in the agency response to comment 51. The Department has moved some of the responsibilities to the permittee and has added a reopener clause at Appendices A and B, Part 5.Z, which will allow the Department to repropose a certification program to replace the Professional Engineer inspection and certification requirements.

14. In Appendix A, Part IV.A.2, the Department added language that was inadvertently deleted from the published version.

15. In Appendix A, Attachment A, Section C.4, the Department added the phrase "or combined" in recognition of the fact that some permittees may divert some of their stormwater to combined sewers.

16. In Appendix A, Attachment A, Section C.6, the Department added the phrase "or permit" to make this provision consistent with the certification contained at Appendix A, Attachment D.

17. In Appendix B, Part I.D.3.a and b, the Department added language to clarify the Pinelands Commission's review procedure.

18. In Appendix B, Part I.D.4.b, the Department added language in response to a comment, to clarify that if a certification of a soil erosion and sediment control plan is renewed or extended it will not be deemed to have expired.

19. In Appendix B, the Department deleted the requirement for the name of the receiving water since this information is available from the application for the soil erosion and sediment control plan.

20. In Appendix B, Part III.D.1, the Department added language requiring permittees to retain the Stormwater Pollution Prevention Plan for at least five years to be consistent with State and Federal recordkeeping requirements.

21. In N.J.A.C. 7:14A-10.3(a)17, the Department added language to this section to clarify that although the applicant is exempted from a variety of specific application requirements, it must still comply with the requirements of 40 CFR 122.26(c)(1)(i).

22. In Appendix H, the Department has added language to clarify that even though Appendix H does not require that the proscribed monitoring schedule be included in stormwater permits, Appendix H may nonetheless be used as a guide in establishing monitoring schedules for individual DSW permits for stormwater discharges to separate storm sewers.

23. In Appendices A and B, the Department changed the names of Appendices A through D to "Attachments" A through D in order to avoid confusion.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *[thus]*).

7:14A-1.2 Scope

(a)-(c) (No change.)

(d) It is the intent of the Department to regulate, at a minimum, the following by means of the New Jersey Pollutant Discharge Elimination System (NJPDES) permit program.

1.-12. (No change.)

13. Discharges of stormwater to surface waters, including discharges through storm sewers, as set forth in N.J.A.C. 7:14A-3.8.

14. (No change.)

(e) (No change.)

7:14A-1.7 Application

(a)-(c) (No change.)

(d) The issuance and compliance of all DSW, UIC, IWMF permits shall, at a minimum, satisfy the requirements of 40 CFR Parts 122, 123 and 124, the Federal Act, and the State Act, notwithstanding (c) above.

7:14A-1.8 Fee schedule for NJPDES permittees and applicants

(a) Except as provided in (i) and (j) below, the general conditions and applicability of the fee schedule for NJPDES permittees and applicants are as follows:

1. The Department shall collect an annual fee for the billing year July 1 to June 30 from all persons that are issued a NJPDES permit or authorization to discharge under a NJPDES general permit, or submit a NJPDES permit application or request for authorization.

2. The Department shall not assess any fee to public schools or religious or charitable institutions.

3. All NJPDES permittees/applicants that are issued a draft or final NJPDES permit, or that are issued an authorization to discharge under a final NJPDES general permit, shall submit payment within 30 days of assessment of the fee by the Department.

i. Upon receipt of a completed application or request for authorization, the Department shall assess the minimum fee as set forth in (h) below.

ii. Upon issuance of the final permit or of an authorization to discharge under a final NJPDES general permit, the annual fee shall be calculated and pro-rated for the period of the fee year remaining. The minimum fee already paid shall then be subtracted from the pro-rated assessment. In no case, however, will such payment of a pro-rated fee result in a fee that is less than the minimum fee for the category of discharge. The permittee may request a fee recalculation as provided at (a)6 below, once the first required monitoring report has been completed.

4. (No change.)

5. If the permittee/applicant fails to submit payment to the Department within 30 days of assessment of the fee, the Department may, in its discretion, take one or more of the following actions:

i. Return the NJPDES permit application or request for authorization to the applicant;

ii. Deny issuance of a final permit or authorization under a final general permit;

iii. Terminate a final permit (including termination of a permittee's authorization to discharge under a general permit); and/or

iv. (No change.)

6.-10. (No change.)

(b) (No change.)

(c) Except as provided in (i) and (j) below, the annual fee for discharges to surface water is calculated by using the following Environmental Impact in the annual fee formula:

1.-2. (No change.)

(d)-(g) (No change.)

(h) Minimum fees are as follows:

1. The minimum fee for Discharge to Surface Water permits shall be $500.00, except that:

i. The minimum fee for hazardous waste facilities regulated by N.J.A.C. 7:26 and for the Industrial Waste Management Facilities regulated by N.J.A.C. 7:14A-4 shall be $10,000.

ii. The fee for NJPDES Permit No. NJ0088323 (N.J.A.C. 7:14A-3, Appendix B) is specified in (j) below.

2.-8. (No change.)

(i) For NJPDES Permit No. NJ0088315 (N.J.A.C. 7:14A-3, Appendix A, incorporated herein by reference), the annual fee collected under (a) above should be the minimum fee of $500.00 set forth in (h)1 above. A request for authorization under that permit shall not be complete unless this fee is included in that request, or unless this permit has been reissued and this fee has already been paid for the billing year in which the RFA is submitted.

(j) For NJPDES Permit No. NJ 0088323 (N.J.A.C. 7:14A-3, Appendix B, incorporated herein by reference), there is no annual or minimum fee. Instead, a fee of $200.00 shall be paid by check or money order, payable to "Treasurer, State of New Jersey," and submitted to the soil conservation district along with each request for authorization submitted under that permit. The soil conservation district shall forward all such checks and money orders to the State Soil Conservation Committee in the Department of Agriculture, which shall cause such checks and money orders to be deposited to the credit of the State. The soil conservation *[committee]* ***district*** shall not certify any request for authorization that is not accompanied by this fee.

TABLE I (No change.)

TABLE II (No change.)

7:14A-1.9 Definitions

As used in this chapter, the following words and terms shall have the following meanings.

...

"Combined sewer system" means a sewer system that is designed to carry sanitary sewage at all times and that also is designed to collect and transport stormwater from streets and other sources, thus serving a combined purpose.

...

"Large municipal separate storm sewer system" means a "large municipal separate storm sewer system" as defined at 40 CFR 122.26(b)(4).

...

"Medium municipal separate storm sewer system" means a "medium municipal separate storm sewer system" as defined at 40 CFR 122.26(b)(7).

...

Municipal separate storm sewer" means a "municipal separate storm sewer" as defined at 40 CFR 122.26(b)(8).

...

"Process waste water" means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Process waste water includes, but is not limited to, "leachate" and cooling water other than "non contact cooling water."

...

"Request for authorization" is the document submitted under N.J.A.C. 7:14A-3.9 to obtain authorization to discharge under a general permit.

...

"Run-off" means, for purposes of N.J.A.C. 7:14A-4.7 only, any stormwater, leachate, or other liquid that drains overland from any part of a facility.

"Run-on" means, for purposes of N.J.A.C. 7:14A-4.7 only, any stormwater, leachate, or other liquid that drains overland onto any part of a facility.

...

"Separate storm sewer" means a conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, gutters, ditches, man-made channels, or storm drains):

1. Designed or used for collecting or conveying storm water;

2. Which is not part of a "combined sewer system"; and

3. Which is not part of a "Publicly Owned Treatment Works" ("POTW").

...

"Stormwater" means stormwater runoff, snow melt runoff, and surface runoff and drainage.

"Stormwater discharge associated with industrial activity" means a "storm water discharge associated with industrial activity" as defined at 40 CFR 122.26(b)(14).

...

"Uncontrolled sanitary landfill" means an "uncontrolled sanitary landfill" as defined at 40 CFR 122.26(b)(15).

...

7:14A-1.10 Incorporation by reference

The requirements applicable to the NJPDES program of the Federal Act, the State Act, and all Federal regulations cited in this chapter, including, but not limited to, 40 CFR Parts 122, 123, and 124, and including all future amendments and supplements, are incorporated into this chapter by reference unless the context clearly indicates otherwise. A copy of the Federal Act, the State Act, or any Federal regulation cited in this chapter may be obtained at the State Library. Wherever the requirements of this chapter are more stringent than the requirements of the Federal Act or a federal regulation, the requirements of this chapter shall apply.

7:14A-2.1 Application for NJPDES permit

*[(a) All applications for a NJPDES permit shall be submitted to:

Assistant Director
Wastewater Facilities Management Element
Division of Water Resources
CN-029
Trenton, New Jersey 08625]*

(a) All applications for a NJPDES permit shall be submitted to the appropriate Department office as identified on either the application form or other appropriate Department instructions.

(b)-(c) (No change.)

(d) The Department shall not issue a permit before receiving a complete application, with the exception of an emergency permit issued pursuant to N.J.A.C. 7:14A-2.2 or a general permit issued pursuant to N.J.A.C. 7:14A-3.9, or when the Department issues an interim NJPDES permit based on information the Department possesses, which may include applications previously filed with State, Federal or local agencies. An application for a permit is complete when the Department receives all of the information required on the application form and any information substantially related to the permit and determines the application has been satisfactorily completed. The completeness of each application for any type of discharge permit shall be judged independently of the status of any other permit application or permit for the same facility or activity. An applicant is required to submit the applicable information in N.J.A.C. 7:14A-1.7(b), 2.1, 3.2, 4.4, 5.8, and subchapters 6 and 10. The Department shall not make a final determination on any appli-

cation until such time as the applicant has supplied any missing information and corrected any deficiencies.

(e)-(f) (No change.)

(g) The schedule for submission of applications is as follows:

1. Any person planning to undertake any activity which shall result in a discharge to surface water (DSW) shall apply for a discharge allocation certificate (DAC) in accordance with N.J.A.C. 7:14A-3.3 unless the discharge is listed in (g)1i, ii, or iii below. This provision does not exempt any person from obtaining a NJPDES permit in accordance with this chapter.

i. Discharges authorized by a general permit;

ii. Discharges from separate storm sewers; however, a DAC is required for discharges into storm sewers of domestic wastewater, non contact cooling water, or process waste water other than stormwater;

iii. Discharges included in facilities plans approved prior to March 6, 1981 pursuant to Section 201 of the Federal Act.

2. (No change.)

3. Any person planning to undertake any activity which shall result in a discharge covered by this chapter (except for a discharge to surface water (DSW)) which does not require a facility for the collection or treatment of waste (such as land application of sludge) shall apply for a NJPDES permit at least 180 days prior to planned discharge.

4.-6. (No change.)

(h)-(j) (No change.)

(k) Applicants for NJPDES permits shall provide endorsements and comments as follows:

1. Prior to the submission of an application for a permit to discharge to surface or groundwater, DAC, or to gain approval for a treatment works or sewer connection, the applicant shall submit (return receipt requested) a copy of the application and the applicable information required pursuant to this chapter to the affected sewage authority(ies) and to the municipality in which the discharge(s) will be located, with a request that they endorse the application.

i.-ii. (No change.)

iii. This subsection does not apply to NJPDES permits that are solely for discharges from separate storm sewers; however, this subsection does apply to NJPDES permits for discharges into storm sewers of domestic wastewater, non contact cooling water, or process waste water other than stormwater.

2.-5. (No change.)

(l)-(o) (No change.)

7:14A-2.4 Signatories

(a) All permit applicants shall submit to the Department the following two-part certification:

1. (No change.)

2. "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that this application and all attached documents were prepared by personnel under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including the possibility of fine and/or imprisonment."

i. (No change.)

(b) Except as provided in N.J.A.C. 7:14A-3.13(a)9iii(3) or in a general DSW permit, all reports required by permits, other information requested by the Department and all permit applications submitted for Class II wells under N.J.A.C. 7:14A-5.8 shall be signed by a person described in (a)2i above, who shall make the certifications set forth in (a)2 above, or by a duly associated representative of that person. A general DSW permit shall not specify signature requirements less stringent than those applicable under 40 CFR 122.22(b). A person is a duly authorized representative only if:

1.-5. (No change.)

(c) (No change.)

7:14A-2.5 Conditions applicable to all permits

(a) Permittees shall comply with the following:

1. The permittee shall comply with all the conditions of its permit. No pollutant shall be discharged more frequently than authorized or at a level in excess of that which is authorized by the permit. The discharge of any pollutant not specifically regulated in the NJPDES permit or listed and quantified in the NJPDES application shall constitute a violation of the permit, unless the permittee can prove by clear and convincing evidence that the discharge of the unauthorized pollutant did not result from any of the permittee's industrial activities which contribute to the generation of its wastewaters, or unless the NJPDES permit is a general NJPDES permit for stormwater point sources or separate storm sewers that expressly exempts permittees from this provision, in which case the exemption shall apply only to the discharge authorized by the permit. Any permit noncompliance constitutes a violation of the State Act or other authority of this chapter and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. The Department shall not issue a NJPDES permit when the conditions of the permit do not provide for compliance with the applicable requirements of the state and Federal Acts or regulations.

2.-15. (No change.)

7:14A-2.12 Modification, suspension or revocation of permits

(a)-(b) (No change.)

(c) The Department may only modify, suspend or revoke a permit for discharges to surface water (DSW):

1.-8. (No change.)

9. When the permittee begins or expects to begin to use or manufacture as an intermediate or final product or by-product any toxic pollutant which was not reported in the permit application under N.J.A.C. 7:14A-10.3(a)11 or in the request for authorization under N.J.A.C. 7:14A-3.9(b)2 (unless the general permit expressly refers to a "request for authorization" and does not require the request for authorization to include a listing of toxic pollutants);

10.-13. (No change.)

(d) (No change.)

7:14A-2.13 Termination of permits

(a)-(b) (No change.)

(c) The Department may terminate a permittee's authorization to discharge under a general permit for causes specified in (a) above. Such termination of authorization is a type of permit termination under this section. With the consent of the permittee, however, the Department may terminate authorization under a general permit without following the procedures set forth in N.J.A.C. 7:14A-7 and 8, if the authorized discharge has been eliminated. A requirement that a permittee apply for an individual permit or seek authorization under another general permit in accordance with N.J.A.C. 7:14A-3.9 is not a termination within the meaning of this section N.J.A.C. 7:14A-2.13, even if the permittee's authorization is eventually terminated in favor of an individual permit or another general permit, or is automatically terminated as a result of the permittee's failure to submit in a timely manner an application *[from]* ***form*** or request for authorization form.

7:14A-3.8 Stormwater discharges

Except as provided in N.J.A.C. 7:14A-10.3(a)20 and (a)22, 40 CFR 122.26, entitled "Storm water discharges," is incorporated into this chapter by reference as part of the DSW permit program (see N.J.A.C. 7:14A-1.10). Persons who discharge or propose to discharge stormwater shall comply with applicable requirements of this chapter, and shall comply with applicable provisions of 40 CFR 122.26 except as provided in N.J.A.C. 7:14A-10.3(a)20 and (a)22.

7:14A-3.9 General permits

(a) Coverage: The Department may issue a general permit in accordance with the following:

1. Area: The general permit shall be written to authorize a category of discharges described in the permit under (a)2 below, except

those otherwise eligible for authorization under the permit but authorized by individual permits or other general permits, within a geographic area. The area shall correspond to existing geographic or political boundaries, such as:

i.-vii. (No change.)

2. Sources: The general permit shall be written to regulate, within the area described in (a)1 above, either:

i. Stormwater point sources; or

ii. A category of point sources other than stormwater point sources if the sources all:

(1)-(5) (No change.)

(b) Administration:

1. In general: General permits may be issued, modified, revoked and reissued, or terminated in accordance with applicable requirements of subchapters 2, 7 and 8 of this chapter. Special procedures for issuance are found at 40 CFR Section 123.44.

2. Authorization to discharge:

i. Except as provided in (b)2vi and 2vii below, persons seeking authorization under a general permit shall submit to the Department a written request for authorization. A person who fails to submit a request for authorization in accordance with the terms of the permit is not authorized to discharge under the terms of the general permit unless the general permit, in accordance with (b)2v below, contains a provision that a request for authorization is not required, or the Department notifies a person that it is authorized by a general permit in accordance with (b)2vii below.

ii. The contents of the request for authorization shall be specified in the general permit and shall require the submission of information necessary for adequate program implementation, including, at a minimum, the legal name and address of the owner and operator, the facility name and address, type of facility or discharges, *[the receiving surface water(s),]* and the certification required under (b)2iii below. Unless the general permit specifies otherwise, the request for authorization shall include all of the forms, information, signatures, and certification*[s]* that this chapter ***(including, but not limited to, N.J.A.C. 7:14A-2.1 and 10.3)*** requires to be included in an application for a DSW permit. The request for authorization shall also include any other certification specified in the general permit. The general permit shall not specify signature requirements less stringent than those applicable to permit applications under 40 CFR 122.22(a).

iii. In addition to other information required under (b)2ii above, the request for authorization shall include a certification that arrangements have been made for publication, in a daily or weekly newspaper within the area affected by the facility, of a notice which states that a request for authorization under a general permit to discharge pollutants to surface water has been submitted pursuant to N.J.A.C. 7:14A-3.9(b)2. This notice shall also identify the general permit under which authorization is sought, the legal name and address of the owner and operator, the facility name and address, ***and*** type of facility or discharges*[, and the receiving surface water(s)]*. Each general permit shall set forth the form of notice appropriate to that general permit.

iv. General permits shall specify the deadlines for submitting requests for authorization and the date(s) when a person is authorized to discharge under the permit.

v. General permits shall specify whether a person that has submitted a complete and timely request for authorization in accordance with the general permit, and that is eligible for authorization under the permit, is authorized to discharge in accordance with the permit either upon receipt of the request for authorization by the Department, after a waiting period specified in the general permit, on a date specified in the general permit, or upon the person's receipt of notification of authorization by the Department. Authorization may be terminated, revoked, or denied in accordance with (b)4 through (b)6 below. The Department shall publish in the DEPE Bulletin ***or other similar DEPE publication*** a quarterly report of each authorization issued under a general permit.

vi. Discharges other than discharges from publicly owned treatment works, combined sewer overflows, primary industrial facilities, and stormwater discharges associated with industrial activity, may, at the discretion of the Department, be authorized under a general permit without submission of a request for authorization where the Department finds that a request for authorization requirement would be inappropriate. In making such a finding, the Department shall consider: the type of discharge; the expected nature of the discharge; the potential for toxic and conventional pollutants in the discharges; the expected volume of the discharges; other means of identifying discharges authorized by the permit; and the estimated number of discharges to be authorized by the permit. The Department shall provide in the public notice of the general permit the reasons for not requiring a request for authorization.

vii. The Department may notify a person that it is authorized by a general permit, even if the person has not submitted a request for authorization. A person so notified may nonetheless request an individual permit under (b)3iii below.

3. Requiring an individual permit or another general permit:

i. The Department may require any permittee authorized by a general permit to apply for and obtain an individual DSW permit or seek and obtain authorization under another general permit. Any interested person may, in accordance with the procedures set forth at (b)5 below, petition the Department to take action under this subparagraph. Cases where an individual DSW permit or another general permit may be required include the following:

(1) There is evidence that the discharge(s) may be a significant contributor of pollutants. In making this determination, the Department may consider the location of the discharge with respect to the waters of the State, the size of the discharge, the quantity and nature of pollutants reaching the waters of the State, the quality of the receiving waters, and other relevant factors;

(2) The permittee is not in compliance with the conditions of the general DSW permit;

(3) (No change.)

(4) Effluent limitation guidelines are promulgated for point source authorized by the general DSW permit;

(5) A Water Quality Management Plan containing requirements applicable to such point sources is approved;

(6) Circumstances have changed since the time of authorization or the request to be authorized so that the permittee is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary; or

(7) The Department acquires new information indicating that the person otherwise is not eligible for the general permit according to its own terms.

ii. The Department may require any permittee authorized by a general permit to apply for an individual DSW permit or seek authorization under another general permit as provided in (b)3i above, only if that permittee has been notified of this requirement in writing.

(1) This notice shall include a brief statement of the reasons for this decision, an application form or, if applicable, a request for authorization form, a statement setting a time for the permittee to file the application or, if applicable, the request for authorization, and a statement that on the effective date of the individual DSW permit or on the date of the permittee's authorization under another general permit, the individual permittee's authorization under the general permit shall automatically terminate. The Department may grant additional time upon request of the permittee. If a permittee fails to submit in a timely manner an application form or request for authorization form required by the Department under this subparagraph, then that permittee's authorization under the general permit is automatically terminated at the end of the day specified for submitting the application form or request for authorization form.

iii. Any permittee authorized by a general permit may request to be excluded from authorization under the general permit by applying for an individual DSW permit. The permittee shall submit an application under N.J.A.C. 7:14A-3.2, with reasons supporting the request, to the Department no later than 90 days after the publication by the Department of the general permit in the DEPE Bulletin. The request shall be processed under subchapters 2, 7 and 8 of this

chapter. The request shall be granted by the issuing of any individual permit if the reasons cited by the permittee are adequate to support the request.

iv. When a permittee authorized by a general DSW permit is issued an individual DSW permit for the authorized discharge, or obtains authorization for that discharge under another general permit, the permittee's authorization under the general permit is automatically terminated on the effective date of the individual permit or on the date of the permittee's authorization under another general permit, whichever the case may be. When an individual DSW permit is denied to a permittee authorized by a general permit, or the permittee is denied authorization under another general permit, the permittee's authorization under the general permit is automatically terminated on the date of such denial, unless otherwise specified by the Department.

v. If a permittee's discharge is excluded from a general permit solely because that discharge already is authorized by an individual permit or authorization under another general permit, the permittee may request that the individual permit or authorization be revoked or modified, as appropriate, and that the discharge be authorized by a general permit. The permittee shall submit a request for revocation or modification under N.J.A.C. 7:14A-7.5 and any request for authorization required under N.J.A.C. 7:14A-3.9, with reasons supporting the request, to the Department. In reviewing such requests, the Department may consider the location of the discharge with respect to the waters of the State; the size of the discharge; the quantity and nature of pollutants reaching the waters of the State; the quality of the receiving waters; antibacksliding requirements in N.J.A.C. 7:14A-3.13(a)12, 40 CFR 122.44(l), and section 402(o) of the Federal Act (33 U.S.C. §1342(o)); and any other factors the Department considers relevant to determining whether the discharge is best regulated under one permit or the other. If the Department revokes or modifies the individual permit or authorization, and if authorization under a general permit is issued, the permittee shall be authorized under the general permit.

4. The Department may terminate a permittee's authorization under a general permit for causes specified in N.J.A.C. 7:14A-2.13(a). Such termination of authorization is a type of permit termination under N.J.A.C. 7:14A-2.13. A requirement pursuant to (b)3 above that a permittee apply for an individual permit or seek authorization under another general permit is not a termination within the meaning of N.J.A.C. 7:14A-2.13, even if the permittee's authorization is eventually terminated in favor of an individual permit or another general permit, or is automatically terminated under (b)3ii(1) above as a result of the permittee's failure to submit in a timely manner an application *[from]* ***form*** or request for authorization form. If the Department directs the permittee to apply for an individual permit or seek authorization under another general permit, the only procedure available to the permittee is to ask the Department to reconsider its decision by sending a letter to the Commissioner within 30 days of the issuance of the initial decision. The letter shall be sent to the Department's Office of Legal Affairs, and both the envelope and the letter shall clearly indicate that it is a "REQUEST FOR RECONSIDERATION OF GENERAL PERMIT DETERMINATION." The Commissioner may act on the request within 60 days; if the Commissioner fails to take any action the request shall be deemed denied. In no event shall an order from the Department directing a permittee to apply for an individual permit or seek authorization under another general permit (or a denial of a request to reconsider that order) be deemed final agency action.

5. Procedures regarding petitions brought under (b)3i above:

i. The petition shall state clearly and concisely:

(1) The name, address, and telephone number of the petitioner;

(2) The petitioner's interest in the petition (including any organizational affiliations and any economic interest);

(3) The name and address of the permittee whose authorization could be affected by the petition;

(4) The number of the permit under which that permittee is authorized; and

(5) The reasons why the petition should be granted (including any citations to any relevant legal authority).

ii. The petitioner shall serve the petition on both the Department and the permittees whose authorization could be affected by the petition.

iii. The permittees whose authorization could be affected shall have 30 days from the date the petition was served to respond to the petition. Any response shall be served on both the Department and the petitioner. The Department thereafter may in its discretion seek further information relevant to the petition.

iv. The Department shall determine whether to grant the petition based upon materials submitted in accordance with this paragraph and based upon the criteria set forth in (b)3i above. The Department shall notify both the petitioner and the permittees whose authorization is affected by the petition of the Department's determination.

v. Either party may ask the Department to reconsider its decision regarding a petition by sending a letter to the Commissioner within 30 days of the issuance of the initial decision. The letter shall be sent to the Department's Office of Legal Affairs, and both the envelope and the letter shall clearly indicate that it is a "REQUEST FOR RECONSIDERATION OF PETITION DETERMINATION." The Commissioner may act on the request within 60 days; if the Commissioner fails to take any action the request shall be deemed denied. Only if the ultimate outcome of the agency proceedings is that the petition is denied by the Commissioner shall there be final agency action.

6. The Department shall deny a request for authorization if it determines that the subject discharge is not eligible for the general permit for which the person has requested authorization, and the Department may deny a request for authorization if it determines that the discharge is not appropriately regulated under the relevant general permit because of its location with respect to the waters of the State, the size of the discharge, the quantity and nature of pollutants reaching the waters of the State, the quality of the receiving waters, or other relevant factors. If the Department denies a request for authorization, it shall notify the person of that denial in writing. The only procedure for challenging the denial that is available to a person whose request for authorization has been denied is to ask the Department to reconsider its decision by sending a letter to the Commissioner within 30 days of the issuance of the initial denial. The letter shall be sent to the Department's Office of Legal Affairs, and both the envelope and the letter shall clearly indicate that it is a "REQUEST FOR RECONSIDERATION OF GENERAL PERMIT DETERMINATION." The Commisioner may act on the request within 60 days; if the Commissioner fails to take any action, the request shall be deemed denied. In no event shall a denial of a request for authorization, or a request to reconsider that denial, be deemed final agency action.

(c) Appendix A to this subchapter and Appendix B to this subchapter contain two final general permits that the Department has issued for stormwater discharges associated with industrial activity. The inclusion of these two general permits within this subchapter does not affect the status or requirements of other general permits that the Department issued prior to the effective date of this subsection.

7:14A-3.11 Additional conditions applicable to specified categories of DSW permits

(a) The following conditions, in addition to those set forth in N.J.A.C. 7:14A-2.5, 3.10 and 3.12, apply to all DSW permits within the categories specified below:

1. Existing manufacturing, commercial, mining, and silvicultural dischargers and research facilities: In addition to the reporting requirements under N.J.A.C. 7:14A-2.5(a)12 and N.J.A.C. 7:14A-3.10, all existing manufacturing, commercial, mining, and silvicultural dischargers and research facilities must notify the Department as soon as they know or have reason to believe:

i. (No change.)

ii. That they (except for research facilities) have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application under N.J.A.C. 7:14A-3.2 and 10.3(a)11 or in the request for authorization under N.J.A.C. 7:14A-3.9(b)2 (unless the general

permit expressly refers to a "request for authorization" and does not require the request for authorization to include a listing of toxic pollutants).

2.-3. (No change.)

4. Municipal separate storm sewer systems: The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Department or the Regional Administrator under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include the information required under 40 CFR 122.42(c).

7:14A-3.12 Emergency plans

(a) Except as provided in (i) below, all applicants and holders of a DSW permit shall submit an emergency plan report prepared pursuant to (b) below or file for an exemption as provided in (e) below.

(b)-(h) (No change.)

(i) Persons who request or obtain authorization under a general DSW permit for stormwater point sources or separate storm sewers are exempt from developing an emergency plan under this section, unless such persons are applicants for or holders of another DSW permit for which an emergency plan is required under this section. However, a general DSW permit may stipulate its own requirements for development of emergency plans.

7:14A-3.13 Establishing DSW permit conditions

(a) In addition to the conditions established under N.J.A.C. 7:14A-2.6(a), each DSW permit shall include conditions meeting the following requirements when applicable.

1.-8. (No change.)

9. Monitoring requirements: In addition to N.J.A.C. 7:14A-2.9 the following monitoring requirements:

i.-ii. (No change.)

iii. Requirements to report monitoring results for stormwater discharges associated with industrial activity that are not subject to an effluent limitation guideline shall be established on a case-by-case basis depending upon the nature and effect of the discharge. *[At a minimum, a]* ***A*** permit for such a discharge must require ***either sampling in accordance with (a)9i and ii above, or****:

(1) The permittee to conduct an annual inspection of the facility to identify areas contributing to a stormwater discharge associated with industrial activity and evaluate whether measures to reduce pollutant loadings identified in a stormwater pollution prevention plan are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed;

(2) The permittee to prepare a report summarizing the result of the inspection. This report shall be accompanied by an annual certification that the facility is in compliance with its stormwater pollution prevention plan and the permit, except that if there are any incidents of non-compliance, those incidents shall be identified in the certification. If there are incidents of non-compliance, the report shall identify the steps being taken to remedy the non-compliance and to prevent such incidents from recurring. The permittee shall maintain this report and certification for a period of at least five years from the date of the report. This period may be extended by written request from the Department at any time;

(3) Such report and certification to be signed by a person described in N.J.A.C. 7:14A-2.4(a)2i, and, if the permit so requires, by a New Jersey Licensed Professional Engineer; and

(4) Monthly submission of discharge monitoring reports to the Department, if required under N.J.A.C. 7:14A-2.5(a)12.

iv. Permits that, pursuant to (a)9iii above, do not require the submittal of monitoring reports at least annually shall require that the permittee report to the Department all instances of non-compliance not reported under N.J.A.C. 7:14A-2.5(a)12 and (a)14 and N.J.A.C. 7:14A-3.10 at least annually.

10.-17. (No change.)

7:14A-3.17 Criteria and standards for the New Jersey Pollutant Discharge Elimination System

(a)-(i) (No change.)

(j) Wherever the provisions of other sections of N.J.A.C. 7:14A are more stringent than the criteria and standards in this section, the more stringent provisions of those other sections of N.J.A.C. 7:14A shall apply.

APPENDIX A

PERMIT NUMBER NJ0088315

NJPDES/DSW GENERAL INDUSTRIAL STORMWATER PERMIT (ROUND 2)

PERMIT NUMBER NJ0088315
NJPDES/DSW GENERAL INDUSTRIAL STORMWATER PERMIT (ROUND 2)

Permittee	Co-Permittee
GENERAL PERMIT—CATEGORY 5G2 PER INDIVIDUAL NOTICE OF AUTHORIZATION	
Property Owner	**Location of Activity**
GENERAL PERMIT—CATEGORY 5G2 PER INDIVIDUAL NOTICE OF AUTHORIZATION	GENERAL PERMIT—CATEGORY 5G2 PER INDIVIDUAL NOTICE OF AUTHORIZATION

Current Authorization Covered By This Approval And Previous Authorization	Issuance Date	Effective Date	Expiration Date
5G2: GEN INDUST STRMWTR ROUND 2	*[00/00/0000]* ***10/1/1992***	*[00/00/0000]* ***11/02/92***	*[00/00/0000]* ***11/01/97***

By Authority of: ***SCOTT A. WEINER, COMMISSIONER***

[DEPE AUTHORIZATION]

PART I. *AUTHORIZATION UNDER THIS PERMIT*

A. *Permit Area*

This permit applies to all areas of the State of New Jersey.

B. *Eligibility*

1. This permit may authorize all new and existing stormwater discharges associated with industrial activity that are subject to the Federal stormwater permitting requirements at 40 CFR 122.26, except for the following:

a. Stormwater discharges from facilities with ***any stormwater*** discharges subject to any of the following effluent guideline limitations for stormwater: cement manufacturing, materials storage piles (40 CFR 411, Subpart C); feedlots (40 CFR 412); fertilizer manufacturing (40 CFR 418); petroleum refining (40 CFR 419); phosphate manufacturing (40 CFR 422); steam electric, coal pile runoff (40 CFR 423); mineral mining and processing (40 CFR 436); ore mining and dressing (40 CFR 440); and *[paving and roofing materials]* ***asphalt emulsion*** (40 CFR 443 ***Subpart A***).

b. Stormwater discharges from facilities with ***any*** stormwater discharges authorized under another NJPDES Discharge to Surface Water (DSW) permit (including an expired permit).

c. Stormwater discharges that may be fully *[covered]* ***authorized*** under NJPDES Permit No. NJ0088323 (a separate general permit for stormwater discharges from certain construction and mining activities).

d. Stormwater discharges from facilities with "sanitary landfills" or "hazardous waste landfills", as defined in N.J.A.C. 7:26-1.4, unless those landfills have been closed in compliance with N.J.A.C. 7:26-2A.9 or 7:26-9.8 (the Solid Waste rules), the appropriate certifications have been submitted in accordance with N.J.A.C. 7:26, and the landfills are not disrupted. Such closed landfills are eligible for authorization under this permit.

e. Stormwater discharges from the following facilities where the stormwater has come into contact with petroleum-based oil and grease in raw materials, intermediate products, finished products, byproducts, or waste products located on the facility site:

i. Facilities classified as Standard Industrial Classification (SIC) Code 29 (Petroleum Refining and Related Industries); and

ii. Facilities that are defined as "major facilities", at N.J.S.A. 58:10-23.11b.1 and N.J.A.C. 7:1E-1.6 and that also have a total combined storage capacity of 200,000 gallons or more for petroleum or petroleum products.

2. Other discharges are not authorized by this permit, even if such discharges are combined with stormwater discharges that are authorized by this permit.

C. *Requiring an Individual Permit or Another General Permit;*

1. The Department may require any permittee authorized under this permit to apply for and obtain an individual DSW permit, or seek and obtain authorization under another general permit. Conversely, any permittee authorized under this permit may request to be excluded from authorization under this permit by applying for an individual DSW permit. Termination of existing permits under such circumstances is governed by N.J.A.C. 7:14A-3.9.

2. If, after receiving authorization under this permit, a facility is required by the Department to obtain another NJPDES DSW permit that would also cover the authorized stormwater discharge, then authorization under this permit shall remain in effect only until either:

a. The date such other permit becomes effective; or

b. The date the application for such other permit (or request for authorization under another general permit) is denied.

If such a facility fails to submit an application or request for authorization by the date specified by the Department, then the general permit authorization remains in effect only until *[the application deadline specified by the Department]* ***that date***.

D. *Authorization*

1. In order to obtain authorization under this permit, a complete Request for Authorization (RFA) and the $500.00 fee required under N.J.A.C. 7:14A-1.8(i) shall be submitted in accordance with the requirements of part II of this permit. Upon review of the RFA, the Department may, in accordance with N.J.A.C. 7:14A-3.9, either:

a. Issue notification of authorization under this permit, in which case, authorization is deemed effective as of the date the complete RFA is received by the Department;

b. Deny authorization under this permit and require submittal of an application for an individual DSW permit; or

c. Deny authorization under this permit and require submittal of an RFA for another general permit.

2. The Department shall issue or deny authorization within a period of 90 days after submission of a complete RFA. In the event that the Department fails to issue or deny authorization within such period, the authorization shall be deemed to have been issued.

3. For a stormwater discharge authorized by this permit, the permittee is exempt from the provision in N.J.A.C. 7:14A-2.5(a)1 which declares that the discharge of any pollutant not specifically regulated in the NJPDES permit or listed in the NJPDES application shall constitute a violation of the permit.

PART II. *REQUEST FOR AUTHORIZATION REQUIREMENTS*

A. *Deadlines for Requesting Authorization*

1. A Request for Authorization (RFA) for an existing stormwater discharge associated with industrial activity must be submitted within 180 days after the effective date of this permit.

2. An RFA for a new stormwater discharge associated with industrial activity must be submitted at least 30 days prior to the date upon which there may be such a discharge.

3. The Department may, in its discretion, accept an RFA submitted after the foregoing deadlines; however, the discharger may still be held liable for any violations that occurred prior to the submission of the RFA.

B. *Persons Requesting Authorization*

The RFA must be jointly submitted by all persons who currently own or operate any part of the facility requiring a NJPDES permit for the stormwater discharge associated with industrial activity at that facility. For example, if the facility is owned by one person but operated by another, both the owner and the operator must jointly submit a single RFA for the facility.

C. *Contents of the Request for Authorization*

A completed RFA shall include all of the following information regarding the regulated facility, using the Department's RFA form:

1. The name, mailing address, location, and EPA identification number (if assigned) of the facility.

2. The 4-digit Standard Industrial Classification (SIC) code and corresponding short title assigned to the facility by the New Jersey Department of Labor. If the facility is exempt from Department of Labor SIC code assignment procedures, the RFA shall provide the 4-digit SIC code and short title*[s]* that best represents the principal products or activities provided by the facility.

3. The legal name, address, and business telephone number of all current owners and operators, and, if applicable, their agents and engineers. The RFA shall also identify whether each person named is an owner or operator, and whether the owner is a Federal, State, or other public agency, or is a private entity.

4. The Federal tax identification number of the owner.

[5. The name of the receiving surface water(s). If the discharge is through a separate storm sewer operated by a public agency, the RFA shall also provide the name of that public agency.]

*[6.]***5.*** An 8.5" × 11" copy of a portion of the U.S. Geological Survey Topographic Map, 7.5 minute quadrangle series, showing the boundaries of the facility and the name of the quadrangle(s).

*[7.]***6.*** A brief description of the facility and its current and proposed uses.

*[8.]***7.*** Proposed date upon which there may be a new stormwater discharge associated with industrial activity, where applicable.

*[9.]***8.*** A list of any individual NJPDES permits for discharges to surface water issued for the facility.

*[10.]***9.*** The RFA certification contained in *[Appendix]* ***Attachment*** A.

*[11.]***10.*** Other certifications submitted in accordance with Part III.B.2 and the following:

a. For existing stormwater discharges, the certifications contained in *[Appendices]* ***Attachments*** C and D *may* also be submitted concurrently with the RFA, where appropriate.

b. For new stormwater discharges, the RFA must also include the certifications contained in *[Appendices]* ***Attachments*** C and D, if the RFA is submitted more than 24 months after the effective date of this permit. (If the RFA is submitted within 24 months after this permit's effective date, these certifications *may* be included in the RFA).

*[12.]***11.*** Additional information may be required by the Department to be included as part of the RFA if the Department determines that such additional information (including other data, reports, specifications, plans, permits, or other information) is reasonably necessary to determine whether to authorize the discharge under this permit.

The RFA shall be submitted along with payment of $500.00, in accordance with N.J.A.C. 7:14A-1.8(i), unless this amount has already been submitted within the same billing year for an annual recertification under part III.D.

D. *Where to Submit*

A completed and signed RFA shall be submitted to the Department at the address specified on the Department's RFA form.

E. *Additional Notification*

1. Facilities that discharge stormwater associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) must also submit a copy of the RFA to the owner and operator of that system.

2. The permittee is responsible for publishing a notice in a daily or weekly newspaper within the area affected by the permitted facility stating that a request for authorization under general permit no. NJ0088315 to discharge stormwater to surface water has been submitted in accordance with N.J.A.C. 7:14A-3.9(b)2. This notice shall also identify the legal name and address of the owner and operator, the facility name and address, ***and*** type of facility and discharges*[, and the receiving surface water(s)]*. A certification stating that arrangements for such notification have been made is contained in *[Appendix]* ***Attachment*** A and shall be signed and submitted as part of the RFA.

F. *Reauthorization*

As stated on the cover page, this permit expires in five years. If the Department reissues this permit, and if a stormwater discharge authorized by this permit will continue after the expiration of this permit, the permittee is required to submit an RFA within 180 days after the effective date of the reissued permit in order to be reauthorized.

PART III. *EFFLUENT LIMITATIONS*

A. *Hazardous Substances*

The permittee shall comply with the applicable provisions of N.J.A.C. 7:1E (Department rules entitled "Discharges of Petroleum and other Hazardous Substances") relevant to the stormwater discharges authorized by this permit. No discharge of hazardous substances (as defined in N.J.A.C. 7:1E-1.6) shall be deemed to be "pursuant to and in compliance with permit" within the meaning of the Spill Compensation and Control Act at N.J.S.A. 58:10-23.11c.

B. *Preparation and Implementation of the Stormwater Pollution Prevention Plan*

1. General Requirements

a. A stormwater pollution prevention plan (SPPP) shall be prepared and implemented, in accordance with the deadlines specified in 2. below, for each of the permittee's facilities that generates stormwater discharges authorized by this permit. The SPPP shall be prepared and implemented in accordance with good engineering practices and shall include, at a minimum, all of the information and items identified in *[Appendix]* ***Attachment*** B. The SPPP shall be *[signed and sealed (embossed) by a New Jersey Licensed Professional Engineer, and shall be]* signed by the permittee and retained at the facility.

b. The SPPP shall demonstrate that once it has been implemented, there will be no exposure, during and after storm events, of industrial materials, machinery, waste products or other source materials located at the facility, to stormwater that is discharged through separate storm sewers to surface waters. (The term "source materials" is defined in *[Appendix]* ***Attachment*** B.)

2. Deadlines and Certifications

a. Existing discharges:

i. Within six months after the effective date of the general permit authorization, the permittee shall prepare an SPPP for the authorized facility; and shall submit to the Department the "Stormwater Pollution Prevention Plan Preparation Certification*[s]*" contained in *[Appendix]* ***Attachment*** C (except if this certification was already included in the RFA submitted to the Department under Part II).

ii. Except as provided in iii. below, within 18 months after the effective date of the general permit authorization, the permittee shall implement the SPPP prepared for the facility; and shall submit to the Department the "Stormwater Pollution Prevention Implementation and Inspection Certification" contained in *[Appendix]* ***Attachment*** D (except if this certification was already included in the RFA submitted to the Department under Part II).

iii. The Department may grant a six-month extension to the deadline in ii. above, if the permittee submits a written request for such extension, at least 30 days prior to the deadline, establishing to the Department's satisfaction that the Federal, State and local permits and approvals necessary for the construction of best management practices identified in the SPPP could not with due diligence be obtained within the time period set forth in ii. above.

b. New discharges for which RFA's are submitted within 24 months of the effective date of this permit:

i. Within six months after the effective date of the general permit authorization for the new discharge, but no later than 24 months after the effective date of this permit, the permittee shall prepare an SPPP for the authorized facility; and shall submit to the Department the "Stormwater Pollution Prevention Plan Preparation Certification*[s]*" contained in *[Appendix]* ***Attachment*** C (except if this certification was already included in the RFA submitted to the Department under Part II).

ii. Within *24 months after the effective date of this permit,* the permittee shall implement the SPPP prepared for the facility; and shall submit to the Department the "Stormwater Pollution Prevention Implementation and Inspection Certification" contained in *[Appendix]* ***Attachment*** D (except if this certification was included in the RFA submitted to*[f]* the Department under Part II).

c. New discharges for which RFAs are submitted after 24 months from the effective date of this permit:

The SPPP shall be prepared and implemented prior to submission of the RFA under Part II; and the RFA shall contain the "Stormwater Pollution Prevention Plan Preparation Certifications" contained in *[Appendix]* ***Attachment*** C, and the "Stormwater Pollution Prevention Implementation and Inspection Certification" contained in *[Appendix]* ***Attachment*** D.

3. Additional Requirements

a. Agency Review

i. The permittee shall make the SPPP available upon request to an authorized representative of the Department and to the owner and operator of any municipal separate storm sewer system through which the stormwater discharge associated with industrial activity is discharged.

ii. Upon review by an authorized representative, the Department may notify the permittee at any time that the SPPP does not meet one or more of the minimum requirements of this part. Within 30 days after receiving such notification (unless otherwise specified by the Department), the SPPP shall be amended to adequately address all deficiencies and written certification of such amendments shall be submitted to the Department.

b. Public Review

All SPPPs prepared under this permit are considered reports that shall be available to the public for inspection and duplication under N.J.S.A. 58:10A-9.c. The permittee shall make SPPPs available to members of the public upon request. However, the permittee may claim any portion of a SPPP as confidential in accordance with N.J.A.C. 7:14A-11. The Department's decision on such claims shall be made in accordance with N.J.A.C. 7:14A-11.

c. Amendments to the Stormwater Pollution Prevention Plan

SPPPs may be amended so long as they continue to meet the requirements of part III.B of this permit. Any amended SPPPs shall be signed, certified, implemented, retained, and otherwise treated in the same manner as the original SPPP.

C. *Annual Inspections*

Once the SPPP has been implemented in accordance with III.B.1 and 2 above, the permittee *[and a licensed professional engineer]* shall conduct an annual inspection of the facility to identify areas contributing to the stormwater discharge authorized by this permit and to evaluate whether the SPPP complies with part III.B. and is being properly implemented, or whether additional measures are needed to meet the conditions of this permit. A report summarizing each inspection shall be included in the SPPP as required under *[Appendix]* ***Attachment*** B, Part H.

D. *Annual Reports and Recertification*

1. *[A licensed professional engineer]* ***The permittee*** shall prepare an annual report summarizing each inspection performed under III.C.

above. This report shall be accompanied by ***an*** annual certification*[s]* that the facility is in compliance with its SPPP and this permit, except that if there are any incidents of noncompliance, those incidents shall be identified in the certification (see *[Appendix]* ***Attachment*** D to this permit for the form of these certifications). If there are incidents of noncompliance, the report shall identify the steps being taken to remedy the noncompliance and to prevent such incidents from recurring. The report and certification shall be signed by the permittee *[and the engineer]* in accordance with *[Appendix]* ***Attachment*** D to this permit, and shall be maintained for a period of five years. This period may be extended by written request from the Department at any time. The certification should be submitted concurrently with the annual recertifications required under D.2. below.

2. After the certification*[s]* contained in *[Appendix]* ***Attachment*** D *[have]* ***has*** been received by the Department, the permittee must annually resubmit *[these]* ***this*** certification*[s]* (with new signatures each year). These annual recertifications shall be submitted in the same calendar month as the initial submission of these certifications. These recertifications shall be submitted to the Department at the address specified on the certification form provided by the Department, and shall be submitted with the $500.00 fee required under N.J.A.C. 7:14A-1.8(i).

E. All instances of noncompliance not reported under N.J.A.C. 7:14A-2.5(a)12 and (a)14 and N.J.A.C. 7:14A-3.10 shall be reported to the Department annually.

F. *Other *[Conditions]* *Discharges**

If, during or after the preparation of the SPPP, it is discovered that the facility generates and discharges, through storm sewers to surface waters, any unpermitted domestic wastewater, non-contact cooling water, or process waste water (including leachate and cooling water) other than stormwater, the permittee shall discontinue such discharges or apply for the appropriate NJPDES DSW permit in accordance with the NJPDES rules at N.J.A.C. 7:14A.

G. *Other Permits or Regulatory Requirements*

Compliance with the conditions of this permit does not exempt the permittee from any other applicable permit or other regulatory requirements including, but not limited to, all other Department rules and the Pineland rules (N.J.A.C. 7:50).

PART IV. *CONDITIONS APPLICABLE TO GENERAL PERMITS AUTHORIZING STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY*

A. *Duty to Comply*

1. The permittee shall comply with all conditions of this New Jersey Pollutant Discharge Elimination System (NJPDES) permit. Any permit noncompliance constitutes a violation of the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq., hereinafter referred to as the State Act) or other authority of the NJPDES regulations (N.J.A.C. 7:14A) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application (N.J.A.C. 7:14A-2.5(a)1).

2. The permittee shall comply with applicable effluent standards or prohibitions established under section 307(a) of the "Federal Water Pollution Control Act" (33 U.S.C. §1251 et seq.)*[;]* ***(hereinafter referred to as the Federal Act) and Section 4 of the**** State Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement (N.J.A.C. 7:14A-2.5(a)3).

3. The permittee is required to comply with all other applicable Federal, State, and local laws, rules, regulations, or ordinances. The issuance of this permit shall not be considered a waiver of any requirements other than the requirement that any discharge of stormwater associated with industrial activity be authorized by a permit.

B. *Permit Expiration*

1. This permit and the authorization to discharge shall expire at 11:59 P.M. on the expiration date of the permit. The permittee may discharge after the above date of expiration of the permit only in conformance with N.J.A.C. 7:14A-2.1 ("Application for a NJPDES Permit") and 2.3 ("Continuation of Expired Permits").

2. The conditions of an expired permit are continued in force pursuant to N.J.A.C. 7:14A-2.3, and remain fully effective and enforceable.

3. When the permittee is not in compliance with the conditions of the expiring or expired permit, the Department may, in accordance with N.J.A.C. 7:14A: 1) initiate enforcement action based upon the permit which has been continued, 2) issue a notice of intent to deny the new permit, 3) issue a new permit, or 4) take other actions authorized by the NJPDES regulations or the State Act.

C. *Duty to Halt or Reduce Activity*

It shall not be a defense in an enforcement action to assert that the only possible alternative to maintain compliance with the conditions of this permit would have been to cease or reduce the permitted discharge activity (see N.J.A.C. 7:14A-2.5(a)5i).

D. *Duty to Mitigate*

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit, including, but not limited to, halting or reducing the permitted activity and temporary repairs (N.J.A.C. 7:14A-2.5(a)6).

E. *Proper Operation and Maintenance*

The permittee referenced herein shall be responsible for supervising and managing the operation and maintenance of any facilities or systems which are isntalled or used by the permittee to achieve compliance with the conditions of this permit and with the requirements identified in the stormwater ollution prevention plan. Proper operation and maintenance also requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit.

F. *Permit Actions*

This permit may be modified, suspended, revoked and reissued, or terminated in accordance with the provisions set forth in N.J.A.C. 7:14A-2.

G. *Property Rights, Liability, and Other Laws*

1. This permit does not convey any property rights of any sort or any exclusive privileges (N.J.A.C. 7:14A-2.5(a)9).

2. Nothing in this permit shall be construed to exempt the permittee from complying with the rules, regulations, policies, and/or laws lodged in any agency or subdivision in this State having legal jurisdiction.

H. *Duty to Provide Information*

1. The permittee shall furnish to the *[Wastewater Facilities Regulation Program Administrator, NJDEPE (hereinafter referred to as the Administrator)]* ***Department***, within a reasonable time, any information which the *[Administrator]* ***Department*** may request to determine whether cause exists for modifying, suspending, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the *[Administrator]* ***Department***, upon request, copies of records required to be kept by this permit (N.J.A.C. 7:14A-2.5(a)10).

2. When the permittee becomes aware that he has failed to submit any relevant facts in a request for authorization, or has submitted incorrect information in a request for authorization or in any report to the *[Administrator]* ***Department***, the permittee shall promptly submit such facts or the correct information.

I. *Inspection and Entry*

1. The permittee shall allow the Regional Administrator of the United States Environmental Protection Agency (USEPA), the Department, or any authorized representative(s), upon the presentation of credentials and other documents as may be required by law, to inspect the permittee's premises in accordance with N.J.A.C. 7:14A-2.5(a)11 et seq.

2. Any refusal by the permittee, facility land owner(s), facility lessee(s), their agents, or any other person(s) with legal authority, to allow entry to the authorized representatives of the NJDEPE and/or USEPA shall constitute grounds for suspension, revocation and/or termination of this permit, or other permit or enforcement action.

3. By acceptance of this permit, the permittee consents to any inspections by authorized representatives of the NJDEPE and/or USEPA to determine the extent of compliance with any and all conditions of this permit and agrees not to, in any manner, seek to charge said representatives with a civil or criminal act of trespass when they enter the premises occupied by the permittee for said inspection purposes.

J. *Signatory Requirements*

1. All permit applications, reports, certifications, or other information required by the Department, shall be signed in accordance with the requirements set forth at N.J.A.C. 7:14A-2.4 ("Signatories") and N.J.A.C. 7:14A-3.9 ("General Permits").

2. False Statements. Any person who purposely, knowingly, recklessly, or negligently makes a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under the State Act shall upon conviction, be subject to a civil penalty, or by imprisonment, or by both (N.J.S.A. 58:10A-1 et seq. and N.J.A.C. 7:14-8 et seq.*)*

K. *Reporting Changes and Violations*

1. Planned Changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could change the nature or increase the quantity of the pollutants discharged (N.J.A.C. 7:14A-2.5(a)14i).

2. Anticipated Noncompliance. The permittee shall give reasonable advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with the permit requirements (N.J.A.C. 7:14A-2.5(a)14ii).

L. *Reporting Noncompliance*

The permittee shall report to the Department any noncompliance including, but not limited to, violations of effluent limitations that cause, or have the potential to cause, injury to persons or to the environment or poses a threat to human health or the environment. Reporting shall be as stipulated in N.J.A.C. 7:14A-2.5(a)14vi and N.J.A.C. 7:14A-3.10(a).

M. *Bypass*

1. A bypass is the anticipated or unanticipated intentional diversion of waste streams from any portion of a treatment works.

2. Bypasses shall be subject to the requirements and conditions set forth in N.J.A.C. 7:14A-3.10(e), (f), and (g).

N. *Upset*

1. An upset is an exceptional incident in which there is unintentional and temporary noncompliance with an effluent limitation because of an event beyond the reasonable control of the permittee, including fire, riot, sabotage, or flood, storm event, natural cause, or other act of God, or other similar circumstance, which is the cause of the violation. Upset also means noncompliance consequent to the performance of maintenance operations for which a prior exception has been granted by the Department or a delegated local agency.

2. An upset does not include noncompliance to the extent caused by operational error, improperly designed facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

3. Upsets shall be subject to the requirements and conditions set forth in N.J.A.C. 7:14A-3.10(h).

O. *Emergency Plan*

Liability. The submission of an emergency plan or an exemption from the development of an emergency plan does not exempt the permittee from liability for violations arising from an emergency situation as per N.J.A.C. 7:14A-3.12(g) and (h).

P. *Discharge Permitted*

The permittee shall discharge to surface waters of the State only as authorized herein and consistent with the terms and conditions of this permit.

Q. *Reopener Clause for Toxic Effluent Limitations*

Notwithstanding any other condition of this permit, if any applicable toxic effluent standard, limitation, or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Sections 301(b)(2) (C) and (D), 304(b)(2), and 307(a)(2) of the Federal Clean Water Act or Sections 4 or 6 of the State Act for a toxic pollutant and that effluent standard, limitation, or prohibition is more stringent than any limitation on the pollutant in the permit (or controls a pollutant not limited in the permit), this permit shall be promptly modified or revoked and reissued to conform to that effluent standard, limitation, or prohibition (N.J.A.C. 7:14A-3.13 et seq.).

R. *Availability of Information*

Public access and confidentiality requirements regarding NJPDES permits, effluent data, and information required by NJPDES application forms shall be as set forth in N.J.A.C. 7:14A-11 et seq.

S. *Effective Date of Permit*

1. This permit shall become effective in its entirety on the date indicated (Effective Date) on the first page of this permit unless a request for an adjudicatory hearing is granted and a stay is granted pursuant to the provisions of N.J.A.C. 7:14A-8 et seq. ("Public Comment and Notice Procedures").

2. For purposes of judicial review, final agency action on a permit does not occur unless and until a party has exhausted its administrative remedies under N.J.A.C. 7:14A-3 and 7:14A-8. Any party which neglects or fails to seek such review thereby waives its opportunity to exhaust available agency remedies.

T. *Transfer of Permit Authorizations*

1. An authorization issued pursuant to this permit may not be transferred to any person except in compliance with 2 and 3 below and after notice to the Department. The Department may require modification, or revocation and reissuance of the authorization to change the name of the entity authorized and incorporate such other requirements as may be necessary under the Act.

2. Transfer by Modification. Except as provided in paragraph (3) of this section, an authorization issued under this permit may be transferred by the entity authorized to a new owner or operator only if the authorization has been modified or revoked and reissued (N.J.A.C. 7:14A-2.12) or a minor modification is made (pursuant to N.J.A.C. 7:14A-2.14(a)4) to identify the new entity authorized and incorporate such other requirements as may be necessary under the State and Federal Acts.

3. Automatic Transfers. As an alternative to the authorization transfers under paragraph (2) of this section, any NJPDES permit, except a UIC permit for a well injecting hazardous waste, may be automatically transferred to a new permittee provided that the conditions set forth in N.J.A.C. 7:14A-2.11 et seq. are met.

U. *Severability*

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby (N.J.A.C. 7:14A-1.5).

V. *Stay of Conditions, N.J.A.C. 7:14A-8.10*

A request for an adjudicatory hearing, or any other review or hearing, shall not automatically result in a stay of the conditions of this permit.

W. *Annual Permit Fee, N.J.A.C. 7:14A-1.8*

The permittee shall pay the annual NJPDES permit fee which has been assessed by the Department.

X. *Existing Manufacturing, Commercial, Mining, and Silvicultural Dischargers and Research Facilities*

All existing manufacturing, commercial, mining, silvicultural dischargers and research facilities shall comply with the notification requirements specified in N.J.A.C. 7:14A-3.11(a)1i.

Y. *Definitions*

The definitions set forth at N.J.A.C. 7:14A-1.9 are incorporated into this permit.

Z. *Reopener Clause Regarding Stormwater Pollution Prevention Plan Certification

Notwithstanding any other condition of this permit, if the Department promulgates rules prescribing the minimum qualifications of persons qualified to review Stormwater Pollution Prevention Plans, conduct annual inspections, and/or prepare annual reports under Part III, this permit may be modified upon the Department's initiative to require the use of such persons in the development of stormwater pollution prevention plans, the conduct of annual inspections, and/or the preparation of annual reports under Part III. The procedures in N.J.A.C. 7:14A-7 and 14A-8 and in the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., shall apply to such a modification.*

[APPENDIX] ***ATTACHMENT*** A: *RFA Certification*

Every Request for Authorization (RFA) shall include the following RFA certification. All signatures on this RFA certification shall be notarized Notary Public.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Request for Authorization and all attached documents, and that this Request for Authorization and all attached documents were prepared by personnel under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete, and that as far as I know, none of the stormwater discharges for which this Request for Authorization is submitted are excluded from authorization by part I.B of NJPDES Permit No. NJ0088315.

"I also certify that I have made arrangements for publication, in a daily or weekly newspaper within the area affected by the facility identified in this RFA, of a notice *[wich]* ***which*** states that a request for authorization under general permit no. NJ0088315 to discharge stormwater to surface water(s) has been submitted pursuant to N.J.A.C. 7:14A-3.9(b)2. This notice identifies the general permit number, the legal name and address of the owner and operator, the facility name and address, ***and*** type of facility or discharges*[, and the receiving surface water(s)]*.

"I am aware that pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., there are significant civil and criminal penalties for making a false statement, representation or certification in any application, record, or other document filed or *[returned]* ***required*** to be maintained under that Act, including fines and/or imprisonment."

The RFA certification shall be signed as follows:

(1) For a corporation, by a principal executive officer of at least the level of vice president;

(2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal or other public agency*,* by either a principal executive officer or ranking elected official.

A separate RFA certification shall be signed and submitted for each person submitting the RFA.

[APPENDIX] ***ATTACHMENT*** B: *Contents of the Stormwater Pollution Prevention Plan*

A. Inventory Requirements

The SPPP shall contain an inventory that includes the following:

1. A list of general categories of all "source materials" used, stored, or otherwise located at the facility. As used in this permit, the term "source materials" means any materials or machinery, located at the facility and directly or indirectly related to process or other industrial activities, which could be a source of pollutants in a stormwater discharge associated with industrial activity that is subject to 40 CFR 122.26. Source materials include, but are not limited to: raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels; and lubricants, solvents, and detergents that are related to the process or other industrial activities. Materials or machinery that are not exposed to stormwater or that are not located at the facility are not "source materials".

2. A list of any domestic wastewater, non-contact cooling water, or process waste water (including leachate and contact cooling water) other than stormwater, that is generated at the facility and discharged through separate storm sewers to surface waters.

3. For discharges identified in A.2. above, a list of any final or draft NJPDES permits, pending NJPDES permit applications, or pending request for authorization under another general NJPDES permit (including the NJPDES permit number where available).

B. Mapping Requirements

The SPPP shall include a map of the entire facility that depicts the approximate location of all the items listed below. All of the information specified below should be shown on one map unless, for the sake of clarity, additional maps are needed.

1. Existing buildings and other permanent structures;

2. All paved areas, including roads;

3. Generalized stormwater flow and drainage patterns;

4. Location of each of the facility's stormwater discharges associated with industrial activity that is subject to 40 CFR 122.26, including longitude and latitude to the nearest 15 seconds.

5. All surface drainage, inlet and discharge structures, including swales and ditches, but excluding rooftop drainage.

6. Location of each point or sewer segment, if any, where domestic wastewater, non-contact cooling water, or process waste water (other than stormwater) generated by the facility enters storm sewers that discharge to surface waters.

7. All locations where source materials are reasonably likely to be present. In doing so, the map shall at a minimum depict the location(s) of any of the following activities that occur at the facility and address all materials and machinery listed under the definition of "source materials" in A.1. above.

a. Outdoor handling, treatment, storage, or disposal activities;

b. Loading and unloading areas;

c. Outdoor manufacturing, processing, or cleaning activities; and other activities that disturb the land surface, except for construction or mining authorized under NJPDES Permit No. NJ0088323;

d. Significant dust or particulate generating processes, except those where dust or particulates are transmitted entirely off-site through the air or are regulated under an effective permit to construct, install or alter control apparatus or equipment pursuant to N.J.A.C. 7:27-8.1;

e. Hazardous waste storage or disposal facilities;

f. On-site waste management, storage and disposal practices, including wastes not associated with or derived from on-site industrial activities;

g. Access routes. As used in this permit, the term "Access routes" means any immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility.

C. Narrative Description of Existing Conditions

The SPPP shall include a narrative description concerning the management of all source materials at the facility which are handled, treated, stored, disposed, or which otherwise exist in a manner allowing contact with stormwater. The narrative description shall address the following:

1. Location and method of materials transport, loading and unloading;

2. Existing management practices employed to minimize contact of source materials with stormwater;

3. Existing structural and non-structural measures employed to reduce pollutants in stormwater;

4. Existing practices employed to divert stormwater to specific areas on or off-site, including diversion to containment areas, holding tanks, treatment facilities, or sanitary ***or combined*** sewers; and

5. A description of any treatment the stormwater already receives;

6. Any discharges of domestic wastewater, non-contact cooling water, or process waste water (other than stormwater) that the SPPP lists in accordance with B.6. above (unless such discharges have been authorized by other NJPDES permits or identified in applications or request for authorization submitted for other NJPDES permits). The narrative description shall also discuss any existing practices to prevent ***or permit*** such discharges.

D. Description of Required Best Management Practices

The SPPP shall identify and discuss the best management practices (BMPs) that will be implemented at the facility to:

1. Ensure that the facility does not discharge, through separate storm sewers to surface waters, any stormwater that is exposed to source materials located at the facility; and

2. Ensure that the facility does not generate and discharge, through storm sewers to surface waters, any domestic wastewater, non-contact cooling water, or process waste water (other than stormwater), unless that discharge is authorized by another NJPDES permit or identified in an application or request for authorization submitted for another NJPDES permit.

E. Implementation Schedule

The SPPP shall include a schedule for full implementation of the BMPs identified in accordance with D, above. This schedule must provide for full implementation by the applicable deadlines specified in Part III of this permit.

F. Maintenance Schedule

The SPPP shall include a schedule for providing regular and appropriate maintenance and repairs of all structural BMPs identified in accordance with D, above.

G. Inspection Schedule

The SPPP shall include a schedule for regular inspection by facility personnel of designated areas, operations, and equipment. An annual inspection of the entire facility shall also be conducted in accordance with part III.C. to identify areas contributing to the stormwater discharge authorized by this permit and to evaluate whether the SPPP complies with part III.B. and is being properly implemented, or whether additional measures are needed in order to meet the conditions of this permit.

H. Internal Reporting

The SPPP shall include a report summarizing, in accordance with III.D., each annual inspection performed under G. above. The report shall indicate whether the facility was found to be in compliance with the SPPP and the conditions of this permit. In the case of non-compliance, the report shall identify measures taken to remedy any non-compliance discovered during the inspection. All instances of non-compliance with the permit or the SPPP not reported under N.J.A.C. 7:14A-2.5(a)12 and (a)14 and N.J.A.C. 7:14A-3.10 shall be reported to the Department annually.

The SPPP shall record any incidents such as leaks or accidental discharges, and any failures or breakdowns of structural BMPs. The SPPP shall also ensure that, in such instances, corrective measures are implemented and inspected, and verify that full remediation is achieved.

I. Special Requirements

The following are special requirements for certain types of facilities with stormwater discharges associated with industrial activity. For such facilities, the SPPP must satisfy these special requirements as well as all the requirements provided above.

1. Facilities Discharging Through Municipal Separate Storm Sewer Systems

For any discharges of stormwater associated with industrial activity through a municipal separate storm sewer system that has a final NJPDES discharge permit, the SPPP shall also require compliance with all applicable requirements of the municipal stormwater management program developed under that permit.

2. Facilities Subject to SARA Title III, Section 313 Requirements

The SPPP shall include, or cite the location of, any spill reports prepared under section 313 in Title III of the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§9601 et seq.

3. Facilities With SPCC Plans, DPCC Plans, and DCR Plans

The SPPP shall include, or cite the location(s) of, any Spill Prevention Control and Countermeasure Plan (SPCC Plan) prepared under 40 CFR 112 and section 311 of the Clean Water Act, 33 U.S.C. §1321; and any discharge prevention*[;]**,* containment and countermeasure plan (DPCC plan) and discharge cleanup and removal plan (DCR plan) prepared under N.J.A.C. 7:1E.

4. Facilities Undergoing Construction

Whenever construction activities are undertaken at the facility, the SPPP shall be amended, if necessary, so that the SPPP continues to be accurate and to meet the requirements of part III.B of this permit.

Additionally, for construction activities disturbing less than five acres of total land area which are not part of a larger common plan of development or sale, the SPPP shall include proof that any certification or municipal approval required under the Soil Erosion and Sediment Control Act (N.J.S.A. 4:24-39 et seq.) has been obtained.

For construction activities disturbing five acres or more of total land area, authorization must be obtained under NJPDES Permit No. NJ0088323, or under an individual NJPDES permit, for stormwater from such construction activities that would be discharged to surface waters.

[APPENDIX] ***ATTACHMENT*** C: *Stormwater Pollution Prevention Plan Preparation Certification*[s]**

The following certification*[s]* shall be signed and submitted ***by the owner/operator*** to the Department using the appropriate Department forms.

**[Engineer's Certification:*

"I certify, under penalty of law, that the information I am providing in this certification is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment.

"I further certify that I have signed and sealed a stormwater pollution prevention plan (SPPP) for this facility, the implementation of which will, in my professional opinion as a licensed professional engineer, ensure that there will be no exposure, during and after storm events, of industrial materials, machinery, waste products or other source materials located at the facility, to stormwater that is discharged through separate storm sewers to surface waters, and that this plan has been signed in accordance with part III.B of that permit. I am aware that pursuant to the Water Pollution Control Act (see N.J.S.A. 58:10A-1 et seq.), there are significant civil and criminal penalties for making a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under that Act, including fines and/or imprisonment."

This certification shall be signed and sealed (embossed) by a New Jersey Licensed Professional Engineer.

*Owner/Operator's Certification:]**

"I certify under penalty of law that I have personally examined and am familiar with the information in *[these Phase I]* ***this*** Stormwater Pollution Prevention Plan ***Preparation*** Certification*[s]* and all attached documents, and in the stormwater pollution prevention plan referred to in *[these]* ***this*** certification*[s]*. I ***further*** certify that I have signed this stormwater pollution prevention plan ***(SPPP), the implementation of which will ensure that there will be no exposure, during and after storm events, of industrial materials, machinery, waste products or other source materials located at the facility, to stormwater that is discharged through separate storm sewers to surface waters***.

"I further certify that this *[Phase I]* Stormwater Pollution Prevention Plan ***Preparation*** Certification, all attached documents, and stormwater pollution prevention plan were prepared by personnel under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate this information. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information *[on these Phase I]* ***in this*** Stormwater Pollution Prevention Plan ***Preparation*** Certification*[s]*, all attached documents, and stormwater pollution prevention plan is true, accurate and complete.

"I certify that the stormwater pollution prevention plan referred to in these Stormwater Pollution Prevention Plan Preparation Certifications has been signed and is being retained at the facility in accordance with part III.B of NJPDES Permit No. NJ0088315, and that this stormwater pollution prevention plan will be fully implemented at the facility in accordance with the terms and conditions of that permit. I am aware that pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., there are significant civil and criminal penalties for making a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under that Act, including fines and/or imprisonment."

This certification shall be signed as follows:

(1) For a corporation, by a principal executive officer of at least the level of vice president;

(2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.

This signature shall be notarized by an authorized Notary Public. Whenever there are two or more permittees for the facility, all of those permittees shall jointly submit *[these]* ***this*** Stormwater Pollution Prevention Plan Preparation Certification*[s]*. *[(However, if the permittees have had their SPPP reviewed by a single Professional Engineer, they need to submit only a single Engineer's Certification.)]*

A copy of the RFA form that was originally submitted to the Department (in accordance with Part II of this permit) must be submitted along with *[these]* ***this*** certification*[s]* (with updated names, addresses and telephone numbers attached), unless the certification*[s are]* ***is*** submitted concurrently with the RFA.

[APPENDIX] ***ATTACHMENT*** D: *Stormwater Pollution Prevention Plan Implementation and Inspection Certification*[s]**

The following certification*[s]* shall be signed and submitted ***by the owner/operator*** to the Department using the appropriate Department forms.

*[*Engineer's Certification:*

"I certify, under penalty of law, that the information I am providing in this certification (including any report attached to it) is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment.

"I certify that I have inspected the facility to identify areas contributing to the stormwater discharge authorized under NJPDES Permit No. NJ0088315 and have evaluated whether the stormwater pollution prevention plan (SPPP) prepared under that permit complies with part III.B. of that permit and is being properly implemented.

"I certify that, in my professional opinion as a licensed professional engineer, if the SPPP is implemented as specified in that document, during and after storm events, there will be no discharge, through separate storm sewers to surface waters, of stormwater that is exposed to source materials (including raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels; and lubricants, solvents and detergents that are related to industrial activities) located at the facility.

"I certify that, in my professional opinion, if the SPPP is implemented as specified in that document, this facility will not generate and discharge, through storm sewers to surface waters, any domestic wastewater, non-contact cooling water, or process waste water (including leachate and contact cooling water) other than stormwater, unless that discharge is authorized by another NJPDES permit or identified in an application (or request for authorization) submitted for another NJPDES permit."

"I also certify that I have no reason to believe that this facility is in violation of any conditions of NJPDES Permit No. NJ0088315, including requirements in part III of that permit for preparation and implementation of a stormwater pollution prevention plan, except for any incidents of noncompliance (which are noted in my attached report). For any incidents of noncompliance identified by my annual inspection (or made known to me during the course of the past year), I have attached a report identifying these incidents, and recommending steps taken or being taken to remedy the noncompliance and to prevent such incidents from recurring. I am aware that pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., there are significant civil and criminal penalties for making a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under that Act, including fines and/or imprisonment."

This certification shall be signed and sealed (embossed) by a New Jersey Licensed Professional Engineer. The engineer shall also identify the number of the NJPDES permit of any discharges through storm sewers to surface waters of domestic wastewater, non-contact cooling water, or process waste water other than stormwater generated by the facility. If no NJPDES permit number has been assigned yet, the engineer shall provide a copy of the cover page of the application or request for authorization in an attachment to this certification.

Owner/Operator's Certification:]*

"I certify under penalty of law that I have personally examined and am familiar with the information in *[these]* ***this*** Stormwater Pollution Prevention Implementation and Inspection Certification*[s]* and all attached documents, and in the stormwater pollution prevention plan referred to in *[these]* ***this*** certification*[s]*.

"I certify that *[these]* ***this*** Stormwater Pollution Prevention Implementation and Inspection Certification*[s]* and all attached documents were prepared by personnel under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate this information. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information in *[these]* ***this*** Stormwater Pollution Prevention Implementation and Inspection Certification*[s]* and all attached documents is true, accurate and complete.

"I certify that the facility has been inspected to identify areas contributing to the stormwater discharge authorized under NJPDES permit No. NJ0088315 and to evaluate whether the stormwater pollution prevention plan (SPPP) prepared under that permit complies with part III.B. of that permit and is being properly implemented.

"I certify that the stormwater pollution prevention plan referred to in *[these]* ***this*** Stormwater Pollution Prevention Implementation and Inspection Certification*[s]* has been and will continue to be fully implemented at this facility in accordance with the terms and conditions of part III of NJPDES Permit No. NJ0088315. I specifically certify that there is no exposure, during and after storm events, of industrial materials, machinery, waste products or other source materials located at the facility, to stormwater that is discharged through separate storm sewers to surface waters (except for any incidents of non-compliance identified in *[my engineer's]* ***the attached*** report). ***I also specifically certify that this facility does not generate and discharge, through storm sewers to surface waters, any domestic wastewater, non-contact cooling water, or process waste water (including leachate and contact cooling water) other than stormwater, unless that discharge is authorized by another NJPDES permit or identified in an application (or request for authorization) submitted for another NJPDES permit.***

"I also certify that this facility is not in violation of any conditions of NJPDES Permit No. NJ0088315, including requirements in part III of that permit for preparation and implementation of a stormwater pollution prevention plan, except for any incidents of noncompliance (which are noted in the attached report). For any incidents of noncompliance identified in the annual inspection (or made known to me during the course of the past year), I have attached a report identifying these incidents, and identifying steps taken or being taken to remedy the noncompliance and to prevent such incidents from recurring. If *[my engineer has prepared a report identifying]* ***the attached report identifies*** any incidents of noncompliance, I certify that any remedial or preventative steps identified therein were or will be taken in compliance with the schedule set forth in the attachment to this certification. I am aware that pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., there are significant civil and criminal penalties for making a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under that Act, including fines and/or imprisonment."

This certification shall be signed as follows:

(1) For a corporation, by a principal executive officer of at least the level of vice president;

(2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.

This signature shall be notarized by an authorized Notary Public.

A copy of the RFA form that was originally submitted to the Department (in accordance with Part II of this permit) must be submitted along with *[these]* ***this*** certification*[s]* (with updated names, addresses and telephone numbers attached), unless the certification*[s are]* ***is*** submitted concurrently with the RFA.

The permittee shall also identify the number of the NJPDES permit of any discharges through storm sewers to surface waters of domestic wastewater, non-contact cooling water, or process waste water other than stormwater generated by the facility. If no NJPDES permit number has been assigned yet, the permittee shall provide a copy of the cover page of the application or request for authorization in an attachment to this certification.

APPENDIX B

PERMIT NUMBER NJ0088323

NJPDES/DSW GENERAL PERMIT CONSTRUCTION ACTIVITY STORMWATER

PERMIT NUMBER NJ0088323
NJPDES/DSW GENERAL PERMIT CONSTRUCTION ACTIVITY STORMWATER

Permittee	Co-Permittee
GENERAL PERMIT—CATEGORY 5G3 PER INDIVIDUAL NOTICE OF AUTHORIZATION	
Property Owner	**Location of Activity**
GENERAL PERMIT—CATEGORY 5G3 PER INDIVIDUAL NOTICE OF AUTHORIZATION	GENERAL PERMIT—CATEGORY 5G3 PER INDIVIDUAL NOTICE OF AUTHORIZATION

Current Authorization Covered By This Approval And Previous Authorization	Issuance Date	Effective Date	Expiration Date
5G3: GEN PERMIT CONSTRUCT ACTIVITY	*[00/00/0000]* ***10/01/1992***	*[00/00/0000]* ***11/02/1992***	*[00/00/0000]* ***11/01/1997***

By Authority of: ***SCOTT A. WEINER, COMMISSIONER***

[DEPE AUTHORIZATION]

PART I. *AUTHORIZATION UNDER THIS PERMIT*

A. *Permit Area*

This permit applies to all areas of the State of New Jersey.

B. *Eligibility*

1. Except as provided in B.2 below, this permit may authorize all new and existing stormwater discharges associated with industrial activity that are subject to Federal stormwater permitting requirements at 40 CFR 122.26 and that are from the following facilities:

a. Construction activities including clearing, grading and excavation activities, except for construction activities disturbing less than five acres of total land area which are not part of a larger common plan of development or sale.

b. Active or inactive operations for mining or quarrying of stone, gravel, sand, soil, shale, or clay; including crushing, grinding, pulverizing and washing activities at such mines or quarries, but excluding:

i. Facilities where mined or quarried material is treated with detergents, oils, acids, or other chemicals.

ii. Facilities that include active or inactive mining or quarrying for metallic minerals (ores).

2. The following stormwater discharges are not authorized by this permit:

a. Stormwater discharges subject to any of the following effluent guideline limitations for stormwater: cement manufacturing, materials storage piles (40 CFR 411, Subpart C); feedlots (40 CFR 412); fertilizer manufacturing (40 CFR 418); petroleum refining (40 CFR 419); phosphate manufacturing (40 CFR 422); steam electric, coal pile runoff (40 CFR 423); mineral mining and processing (40 CFR 436); ore mining and dressing (40 CFR 440); and *[paving and roofing materials]* ***asphalt emulsion*** (40 CFR 443 ***Subpart A***).

b. Stormwater discharges from facilities with "sanitary landfills" or "hazardous waste landfills" as defined in N.J.A.C. 7:26-1.4, unless:

i. The landfill is under construction and has not received any solid waste (including hazardous waste) as defined at N.J.A.C. 7:1E-1.6; or

ii. The landfill has been closed in compliance with N.J.A.C. 7:26-2A.9 or 7:26-9.8 (the Solid Waste rules), the appropriate certifications have been submitted in accordance with N.J.A.C. 7:26, and the landfill is not disrupted.

If the landfill meets i. or ii. above, the discharge is eligible for authorization under this permit.

c. Stormwater discharges from the following facilities where the stormwater comes into contact with petroleum-based oil and grease in raw materials, intermediate products, finished products, byproducts, or waste products located on the facility site:

i. Facilities classified as Standard Industrial Classification (SIC) Code 29 (Petroleum Refining and Related Industries); and

ii. Facilities that are defined as "major facilities", at N.J.S.A. 58:10-23.11b.1 and N.J.A.C. 7:1E-1.6 and that also have a total combined storage capacity of 200,000 gallons or more for petroleum or petroleum products.

d. Stormwater discharges from construction, mining or quarrying activities that are not regulated under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., or that are not within the definition of "project" at N.J.S.A. 4:24-41.g.

e. A stormwater discharge from a mining or quarrying operation authorized by an effective individual DSW permit for that discharge.

f. Stormwater discharges that occur after the construction activities under 1.a above have been completed, unless such discharges are from mining or quarrying operations eligible for authorization under 1.b above. (If the facility being constructed is in one or more of the categories identified in 40 CFR 122.26(b)(14)(i) through (ix) or (xi), and is not such a mining or quarrying operation, then authorization for that stormwater discharge must be obtained under another NJPDES permit *(*such as NJPDES Permit No. NJ0088315, where applicable), even if authorization for the stormwater discharge from the construction activity has been obtained under this permit.)

3. Other discharges are not authorized by this permit, even if such discharges are combined with stormwater discharges, that are authorized by this permit.

C. *Requiring an Individual Permit or Other General Permit*

1. The Department may require any permittee authorized under this permit to apply for and obtain an individual DSW permit, or seek and obtain authorization under another general permit. Conversely, any permittee authorized under this permit may request to be excluded from authorization under this permit by applying to the Department for an individual DSW permit. Termination of existing permits under such circumstances is governed by N.J.A.C. 7:14A-3.9.

2. If, after receiving authorization under this permit, a facility is required by the Department to obtain another NJPDES DSW permit that would also cover the authorized stormwater discharge, then authorization under this permit shall remain in effect only until either:

a. The date such other permit becomes effective; or

b. The date the application for such other permit (or request for authorization under another general permit) is denied.

If such a facility fails to submit an application or request for authorization by the date specified by the Department, then the general permit authorization remains in effect only until *[the application deadline specified by the Department]* ***that date***.

D. *Authorization*

In order to obtain authorization under this permit, a complete Request for Authorization (RFA) and the $200 fee required under N.J.A.C. 7:14A-1.8(j) shall be submitted in accordance with the requirements of part II of this permit.

1. For stormwater discharges that existed prior to the effective date of this permit, authorization becomes effective when the facility's soil

erosion and sediment control plan is certified by the soil conservation district, the New Jersey Department of Transportation (DOT) or the State Soil Conservation Committee (pursuant to N.J.S.A. 4:24-43, and where applicable, N.J.S.A. 4:24-6.1); or when the facility has been approved under a municipal ordinance pursuant to N.J.S.A. 4:28-48. If certification or municipal approval was issued before the effective date of this permit, authorization under this permit shall be effective on the effective date of this permit.

2. For new stormwater discharges, authorization becomes effective when the soil conservation district or DOT certifies the RFA.

3. For new stormwater discharges commencing in the Pinelands Area (as defined by N.J.S.A. 13:18A-11) after the effective date of this permit, authorization under this permit becomes effective only if, pursuant to N.J.S.A. 13:18A-15, the Pinelands Commission has determined that:

a. The Pinelands Commission will not review the ***facility based upon the issuance of a*** certification of the facility's soil erosion and sediment control plan issued by the soil conservation district or the State Soil Conservation Committee, or the approval of the facility's soil erosion and sediment control requirements issued by the municipality (whichever is applicable);

b. The Pinelands Commission has reviewed and approved the ***facility following issuance of a*** certification of the facility's soil erosion and sediment control plan issued by the soil conservation district or the State Soil Conservation Committee, or the approval of the facility's soil erosion and sediment control requirements issued by the municipality (whichever is applicable); or

c. The Pinelands Commission has, pursuant to N.J.A.C. 7:50-4.51 et seq., reviewed and approved the development application of the DOT.

4. Authorizations under this general permit cease to be effective:

a. If a complete RFA and $200 fee are not submitted in accordance with Part II of this permit (in which case the discharge shall be deemed never to have been authorized);

b. When the certification or municipal approval of the facility's soil erosion and sediment control plan expires ***without being renewed or extended***; or

c. When the State Soil Conservation Committee rejects (pursuant to N.J.S.A. 4:24-6.1 and N.J.A.C. 2:90-1.6) a decision by the soil conservation district to certify the facility's soil erosion and sediment control plan.

5. For a stormwater discharge authorized under this permit, the permittee is exempt from the provision in N.J.A.C. 7:14A-2.5(a)1 which declares that the discharge of any pollutant not specifically regulated in the NJPDES permit or listed in the NJPDES application shall constitute a violation of the permit.

PART II. *REQUEST FOR AUTHORIZATION REQUIREMENTS*

A. *Deadlines for Requesting Authorization*

1. A Request for Authorization (RFA) for an existing stormwater discharge must be submitted within 180 days after the effective date of this permit.

2. An RFA for a new stormwater discharge must be submitted at least 30 days prior to the commencement of the land disturbance that may result in that discharge.

3. The soil conservation district or DOT may, at its discretion, accept an RFA submitted after the foregoing deadlines; however, the discharger may still be held liable for any violations that occurred prior to the submission of the RFA.

B. *Persons Requesting Authorization*

The RFA must be jointly submitted by all persons who currently own or operate any part of the facility requiring a NJPDES permit for the stormwater discharge at the facility. For example, if the facility is owned by one person but operated by another, both the owner and the operator must jointly submit a single RFA for the facility.

C. *Contents of the Request for Authorization*

A completed RFA shall include all of the following information regarding the regulated facility, using the Department's RFA form. A fee of $200, paid by check or money order payable to "Treasurer, State of New Jersey", shall be submitted along with the completed RFA.

1. The legal name and address of all current owners and operators.

2. The facility name and address.

3. A brief description of the facility and its current and proposed uses.

[4. The name of the receiving surface water(s).]

[5.]**4. The RFA certification contained in *[Appendix]* ***Attachment*** A.

[6.]**5. For stormwater discharges occurring in the Pinelands Area (as defined in N.J.S.A. 13:18A-11) prior to the effective date of this permit, a Pinelands Commission "no call up" letter or public development approval.

D. *Where to Submit*

1. For projects that the New Jersey Department of Transportation (DOT) is constructing or proposes to construct, a completed, signed, and certified RFA (see II.E.1 below) and the $200 fee shall be submitted by DOT to the Department at the address specified on the Department's RFA form.

2. For all other projects, a completed and signed RFA and $200 fee shall be submitted to the soil conservation district.

E. *Certifying the Request for Authorization*

1. For projects that the DOT is constructing or proposes to construct, the DOT shall certify the RFA if the requirements in II.C above have been satisfied, and if the DOT has certified the facility's plan for soil erosion and sediment control under N.J.S.A. 4:24-43.

2. For other projects, the soil conservation district shall certify the RFA if the requirements in II.C above have been satisfied, and if:

a. The soil conservation district has certified the facility's plan for soil erosion and sediment control under N.J.S.A. 4:24-43; or

b. The State Soil Conservation Committee has certified the facility's plan for soil erosion and sediment control under N.J.S.A. 4:24-6.1 and N.J.S.A. 4:24-43; or

c. The facility has been approved under a municipal ordinance for soil erosion and sediment control pursuant to N.J.S.A. 4:24-48.

3. The district shall grant or deny certification of the RFA within a period of 30 days after submission of a complete RFA unless, by mutual agreement in writing between the district and the persons requesting authorization, the period of 30 days shall be extended for an additional period of 30 days. Failure of the district to grant or deny certification within such time period shall constitute certification of the RFA.

4. RFAs certified by the soil conservation districts shall be submitted by those districts to the State Soil Conservation Committee, which shall submit them to the Department at the address specified on the Department's RFA form.

F. *Additional Notification*

1. Facilities that discharge stormwater associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) must also submit a copy of the RFA to the owner and operator of that system.

2. The permittee is responsible for publishing a notice in a daily or weekly newspaper within the area affected by the permitted facility stating that a request for authorization under general permit no. NJ0088323 to discharge stormwater to surface water has been submitted in accordance with N.J.A.C. 7:14A-3.9(b)2. This notice shall also identify the legal name and address of the owner and operator, the facility name and address, ***and*** type of facility and discharges*[, and the receiving surface water(s)]*. A certification stating that arrangements for such notification have been made is contained in *[Appendix]* ***Attachment*** A and shall be signed and submitted as part of the RFA.

G. *Reauthorization*

[As stated on the cover page, this] ***This*** permit expires in five years. If the Department reissues this permit, and if a stormwater discharge authorized by this permit will continue after the expiration of this permit, the permittee is required to submit a RFA within 180 days after the effective date of the reissued permit in order to be reauthorized.

PART III. *EFFLUENT LIMITATIONS*

A. *Hazardous Substances*

The permittee shall comply with the applicable provisions of N.J.A.C. 7:1E (Department rules entitled "Discharges of Petroleum and Other Hazardous Substances") relevant to the stormwater discharges authorized by this permit. No discharge of hazardous substances (as defined in N.J.A.C. 7:1E-1.6) shall be deemed to be "pursuant to and in compliance with permit" within the meaning of the Spill Compensation and Control Act at N.J.S.A. 58:10-23.11c.

B. *Stormwater Pollution Prevention Plan*

1. Land disturbances that may result in a stormwater discharge authorized by this permit shall be executed only in accordance with a soil erosion and sediment control plan certified pursuant to N.J.S.A. 4:24-43, or requirements for soil erosion and sediment control established in or pursuant to a municipal ordinance in accordance with N.J.S.A. 4:24-48, whichever is applicable. ***A copy of this plan shall be retained by the permittee for a period of at least five years after the completion of construction.***

2. Land disturbances that may result in a stormwater discharge authorized by this permit shall not commence until authorization is effective under I.D. above.

3. For purposes of this permit, the soil erosion and sediment control plan or requirements implemented under B.2. above, and a Department-approved discharge prevention, containment and countermeasure (DPCC) plan and discharge cleanup and removal (DCR) plan, if any, prepared under N.J.A.C. 7:1E and the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq., constitute the facility's stormwater pollution prevention plan (except for any provisions that are not relevant to the stormwater discharge authorized by this permit).

C. *Public Review*

All SPPPs prepared under this permit are considered reports that shall be available to the public for inspection and duplication under N.J.S.A. 58:10A-9c. However, the permittee may claim any portion of a SPPP as confidential in accordance with N.J.A.C. 7:14A-11. The Department's decision on such claims shall be made in accordance with N.J.A.C. 7:14A-11.

PART IV. *INSPECTION AND REPORTING REQUIREMENTS*

A. *Annual Inspections*

The permittee shall conduct an annual inspection of the facility to identify areas contributing to the stormwater discharge authorized by this permit and evaluate whether the stormwater pollution prevention plan (SPPP) identified under III.B above is being properly implemented, or whether additional measures are needed to implement the SPPP.

B. *Annual Reports and Certifications*

The permittee shall prepare an annual report summarizing each inspection performed under IV.A above. This report shall be accompanied by an annual certification that the facility is in compliance with its SPPP and this permit, except that if there are any incidents of noncompliance, those incidents shall be identified in the certification. If there are incidents of noncompliance, the report shall identify the steps being taken to remedy the noncompliance and to prevent such incidents from recurring. The report and certification shall be signed by the permittee in accordance with N.J.A.C. 7:14A-2.4(a)2i, and shall be maintained for a period of five years. This period may be extended by written request from the Department at any time.

C. *Reports of Noncompliance*

All instances of noncompliance not reported under N.J.A.C. 7:14A-2.5(a)12 and (a)14 and N.J.A.C. 7:14A-3.10 shall be reported to the Department annually.

D. *Other Permits and Regulatory Requirements*

Compliance with the conditions of this permit does not exempt the permittee from any other applicable permit or other regulatory requirements including, but not limited to, all other Department rules and the Pinelands rules (N.J.A.C. 7:50).

PART V. *CONDITIONS APPLICABLE TO GENERAL PERMITS AUTHORIZING STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY*

A. *Duty to Comply*

1. The permittee shall comply with all conditions of this New Jersey Pollutant Discharge Elimination System (NJPDES) permit. Any permit noncompliance constitutes a violation of the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq., hereinafter referred to as the State Act) or other authority of the NJPDES regulations (N.J.A.C. 7:14A) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application (N.J.A.C. 7:14A-2.5(a)1).

2. The permittee shall comply with applicable effluent standards or prohibitions established under section 307(a) of the "Federal Water Pollution Control Act" (33 U.S.C. §1251 et seq.); hereinafter referred to as the Federal Act) and Section 4 of the State Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement (N.J.A.C. 7:14A-2.5(a)3).

3. The permittee is required to comply with all other applicable federal, state, and local laws, rules, regulations, or ordinances. The issuance of this permit shall not be considered a waiver of any requirements other than the requirement that any discharge of stormwater associated with industrial activity be authorized by a permit.

B. *Permit Expiration*

1. This permit and the authorization to discharge shall expire at 11:59 P.M. on the expiration date of the permit. The permittee may discharge after the above date of expiration of the permit only in conformance with N.J.A.C. 7:14A-2.1 ("Application for a NJPDES Permit") and 2.3 ("Continuation of Expired Permits").

2. The conditions of an expired permit are continued in force pursuant to N.J.A.C. 7:14A-2.3, and remain fully effective and enforceable.

3. When the permittee is not in compliance with the conditions of the expiring or expired permit, the Department may, in accordance with N.J.A.C. 7:14A: (1) initiate enforcement action based upon the permit which has been continued, (2) issue a notice of intent to deny the new permit, (3) issue a new permit, or (4) take other actions authorized by the NJPDES regulations or the State Act.

C. *Duty to Halt or Reduce Activity*

It shall not be a defense in an enforcement action to assert that the only possible alternative to maintain compliance with the conditions of this permit would have been to cease or reduce the permitted discharge activity (see N.J.A.C. 7:14A-2.5(a)5i).

D. *Duty to Mitigate*

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit, including, but not limited to, halting or reducing the permitted activity and temporary repairs. (N.J.A.C. 7:14A-2.5(a)6).

E. Proper Operation and Maintenance

The permittee referenced herein shall be responsible for supervising and managing the operation and maintenance of any facilities or systems which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements identified in the stormwater pollution prevention plan. Proper operation and maintenance also requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit.

F. *Permit Actions*

This permit may be modified, suspended, revoked and reissued, or terminated in accordance with the provisions set forth in N.J.A.C. 7:14A-2.

G. *Property Rights, Liability, and Other Laws*

1. This permit does not convey any property rights of any sort or any exclusive privileges (N.J.A.C. 7:14A-2.5(a)9).

2. Nothing in this permit shall be construed to exempt the permittee from complying with the rules, regulations, policies, and/or laws lodged in any agency or subdivision in this State having legal jurisdiction.

H. *Duty to Provide Information*

1. The permittee shall furnish to the *[Wastewater Facilities Regulation Program Administrator, NJDEPE (hereinafter referred to as the Administrator)]* ***Department***, within a reasonable time, any information which the *[Administrator]* ***Department*** may request to determine whether cause exists for modifying, suspending, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the *[Administrator]* ***Department***, upon request, copies of records required to be kept by this permit (N.J.A.C. 7:14A-2.5(a)10).

2. When the permittee becomes aware that he has failed to submit any relevant facts in a request for authorization, or has submitted incorrect information in a request for authorization or in any report to the *[Administrator]* ***Department***, the permittee shall promptly submit such facts or the correct information.

I. *Inspection and Entry*

1. The permittee shall allow the Regional Administrator of the United States Environmental Protection Agency (USEPA), the Department, or any authorized representative(s), upon the presentation of credentials and other documents as may be required by law, to inspect the permittee's premises in accordance with N.J.A.C. 7:14A-2.5(a)11 et seq.

2. Any refusal by the permittee, facility land owner(s), facility lessee(s), their agents, or any other person(s) with legal authority, to allow entry to the authorized representatives of the NJDEPE and/or USEPA shall constitute grounds for suspension, revocation and/or termination of this permit, or other permit or enforcement action.

3. By acceptance of this permit, the permittee consents to any inspections by authorized representatives of the NJDEPE and/or USEPA to determine the extent of compliance with any and all conditions of this permit and agrees not to, in any manner, seek to charge said representatives with a civil or criminal act of trespass when they enter the premises occupied by the permittee for said inspection purposes.

J. *Signatory Requirements*

1. All permit applications, reports, certifications, or other information required by the Department shall be signed in accordance with the requirements set forth at N.J.A.C. 7:14A-2.4 ("Signatories") and N.J.A.C. 7:14A-3.9 ("General Permits").

2. False Statements. Any person who purposely, knowingly, recklessly, or negligently makes a false statement, representation, or certification in any application, record, or other document filed or required to maintained under the State Act shall upon conviction, be subject to a civil penalty, or by imprisonment, or by both (N.J.S.A. 58:10A-1 et seq. and N.J.A.C. 7:14-8 et seq.).

K. *Reporting Changes and Violations*

1. Planned Changes. The permittees shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could change the nature or increase the quantity of the pollutants discharged (N.J.A.C. 7:14A-2.5(a)14i).

2. Anticipated Noncompliance. The permittee shall give reasonable advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with the permit requirements (N.J.A.C. 7:14A-2.5(a)14ii).

L. *Reporting Noncompliance*

The permittee shall report to the Department any noncompliance including, but not limited to, violations of effluent limitations that cause, or have the potential to cause, injury to persons or to the environment or poses a threat to human health or the environment. Reporting shall be as stipulated in N.J.A.C. 7:14A-2.5(a)14vi and N.J.A.C. 7:14A-3.10(a).

M. *Bypass*

1. A bypass is the anticipated or unanticipated intentional diversion of waste streams from any portion of a treatment works.

2. Bypasses shall be subject to the requirements and conditions set forth in N.J.A.C. 7:14A-3.10(e), (f), and (g).

N. *Upset*

1. An upset is an exceptional incident in which there is unintentional and temporary noncompliance with an effluent limitation because of an event beyond the reasonable control of the permittee, including fire, riot, sabotage, or flood, storm event, natural cause, or other act of God, or other similar circumstance, which is the cause of the violation. Upset also means noncompliance consequent to the performance of maintenance operations for which a prior exception has been granted by the Department or a delegated local agency.

2. An upset does not include noncompliance to the extent caused by operational error, improperly designed facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

3. Upsets shall be subject to the requirements and conditions set forth in N.J.A.C. 7:14A-3.10(h).

O. *Emergency Plan*

Liability. The submission of an emergency plan or an exemption from the development of an emergency plan does not exempt the permittee from liability for violations arising from an emergency situation as per N.J.A.C. 7:14A-3.12(g) and (h).

P. *Discharge Permitted*

The permittee shall discharge to surface waters of the State only as authorized herein and consistent with the terms and conditions of this permit.

Q. *Reopener Clause for Toxic Effluent Limitations*

Notwithstanding any other condition of this permit, if any applicable toxic effluent standard, limitation, or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Federal Clean Water Act or Sections 4 or 6 of the State Act for a toxic pollutant and that effluent standard, limitation, or prohibition is more stringent than any limitation on the pollutant in the permit (or controls a pollutant not limited in the permit), this permit shall be promptly modified or revoked and reissued to conform to that effluent standard, limitation, or prohibition (N.J.A.C. 7:14A-3.13 et seq.).

R. *Availability of Information*

Public access and confidentiality requirements regarding NJPDES permits, effluent data, and information required by NJPDES application forms shall be as set forth in N.J.A.C. 7:14A-11 et seq.

S. *Effective Date of Permit*

1. This permit shall become effective in its entirety on the date indicated (Effective Date) on the first page of this permit unless a request for an adjudicatory hearing is granted and a stay is granted pursuant to the provisions of N.J.A.C. 7:14A-8 et seq. ("Public Comment and Notice Procedures").

2. For purposes of judicial review, final agency action on a permit does not occur unless and until a party has exhausted its administrative remedies under N.J.A.C. 7:14A-3 and 7:14A-8. Any party which neglects or fails to seek such review thereby waives its opportunity to exhaust available agency remedies.

T. *Transfer of Permit Authorizations*

1. An authorization issued pursuant to this permit may not be transferred to any person except in compliance with 2 and 3 below and after notice to the Department. The Department may require modification, or revocation and reissuance of the authorization to change the name of the entity authorized and incorporate such other requirements as may be necessary under the Act.

2. Transfer by Modification. Except as provided in paragraph (3) of this section, an authorization issued under this permit may be transferred by the entity authorized to a new owner or operator only if the authorization has been modified or revoked and reissued (N.J.A.C. 7:14A-2.12) or a minor modification is made (pursuant to N.J.A.C. 7:14A-2.14(a)4) to identify the new entity authorized and incorporate such other requirements as may be necessary under the State and Federal Acts.

3. Automatic Transfers. As an alternative to the authorization transfers under paragraph (2) of this section, any NJPDES permit, except a UIC permit for a well injecting hazardous waste, may be automatically transferred to a new permittee provided that the conditions set forth in N.J.A.C. 7:14A-2.11 et seq. are met.

U. *Severability*

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby (N.J.A.C. 7:14A-1.5).

V. *Stay of Conditions, N.J.A.C. 7:14A-8.10*

A request for an adjudicatory hearing, or any other review or hearing, shall not automatically result in a stay of the conditions of this permit.

W. *Existing Manufacturing, Commercial, Mining, and Silvicultural Dischargers and Research Facilities*

All existing manufacturing, commercial, mining, and silvicultural dischargers and research facilities shall comply with the notification requirements specified in N.J.A.C. 7:14A-3.11(a)1i.

X. *Definitions*

The definitions set forth at N.J.A.C. 7:14A-1.9 are incorporated into this permit.

*Y. *Reopener Clause Regarding Stormwater Pollution Prevention Plan Certification*

Notwithstanding any other condition of this permit, if the Department promulgates rules prescribing the minimum qualifications of persons qualified to review Stormwater Pollution Prevention Plans, conduct annual inspections, and/or prepare annual reports under Part III or Part IV, this permit may be modified upon the Department's initiative to require the use of such persons in the development of stormwater pollution prevention plans, the conduct of annual inspections, and/or the preparation of annual reports under Part III or Part IV. The procedures in N.J.A.C. 7:14A-7 and 14A-8 and in the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., shall apply to such a modification.*

[APPENDIX] ***ATTACHMENT*** A: *RFA Certification*

Every Request for Authorization (RFA) shall include the following RFA certification. All signatures on this RFA certification shall be notarized by an authorized Notary Public.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Request for Authorization and all attached documents, and that this Request for Authorization and all attached documents were prepared by personnel under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete, and that as far as I know, none of the stormwater discharges for which this Request for Authorization is submitted are excluded from authorization by part I.B of NJPDES Permit No. NJ0088323.

"I also certify that I have made arrangements for publication, in a daily or weekly newspaper within the area affected by the facility identified in this RFA, of a notice *[wich]* ***which*** states that a request for authorization under general permit no. NJ0088323 to discharge stormwater to surface water(s) has been submitted pursuant to N.J.A.C. 7:14A-3.9(b)2. This notice identifies the general permit number, the legal name and address of the owner and operator, the facility name and address, ***and*** type of facility or discharges*[, and the receiving surface water(s)]*.

"I am aware that pursuant to the Water Pollution Control Act (see N.J.S.A. 58:10A-10f(2) and (3)), there are significant civil and criminal penalties for making a false statement, representation or certification in any application, record, or other document filed or *[returned]* ***required*** to be maintained under that Act, including fines and/or imprisonment."

The RFA certification shall be signed as follows:

(1) For a corporation, by a principal executive officer of at least the level of vice president;

(2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal or other public agency*,* by either a principal executive officer or ranking elected official.

A separate RFA certification shall be signed and submitted for each person submitting the RFA.

7:14A-7.8 Fact sheet

(a) A fact sheet shall be prepared for every draft permit or draft DAC for a major facility or activity, for every general permit (40 CFR Section 122.28 and N.J.A.C. 7:14A-3.9), for every draft DAC or draft permit that incorporates a variance or requires an explanation under N.J.A.C. 7:14A-9.6, and for every draft DAC or draft permit which the Department finds is the subject of widespread public interest or raises major issues. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit or draft DAC. The Department shall send this fact sheet to the applicant and, on request, to any other person.

(b) (No change.)

7:14A-9.1 Permits required on a case-by-case basis

(a) Various sections of these regulations allow the Department to determine, on a case-by-case basis, that certain concentrated animal feeding operations (N.J.A.C. 7:14A-3.4), concentrated aquatic animal production facilities (N.J.A.C. 7:14A-3.5), stormwater discharges (N.J.A.C. 7:14A-3.8) and certain other facilities authorized by general permits (N.J.A.C. 7:14A-3.9) that do not generally require individual DSW permits may be required to obtain an individual DSW permit because of their contribution to water pollution.

(b) (No change.)

7:14A-10.3 Discharges to surface waters (DSW)

(a) *[This section is applicable only to persons who are required by N.J.A.C. 7:14A-3.2 to apply for an individual DSW permit.]* Except as exempted pursuant to N.J.A.C. 7:14A-2.1(g)1, any person planning to discharge pollutants from a point source to surface waters of the State must apply for a Discharge Allocation Certificate (DAC) prior to applying for a NJPDES permit. Any person with a valid NPDES or NJPDES permit shall apply for a NJPDES permit in accordance with the schedules in N.J.A.C. 7:14A-2 and 10. Pre-application conferences with the Department are strongly recommended. The following information, in addition to the requirements of N.J.A.C. 7:14A-2, shall be required for a DAC or NJPDES permit ***(unless different information is required by a general permit to be included in the request for authorization for that permit, pursuant to N.J.A.C. 7:14A-3.9(b)2ii*:**

1. (No change.)

2. Expiration date of existing permit or proposed start up date for new source. Applications must be received at least 180 days prior to expiration of existing permits or 180 days before proposed start up for new sources. Facilities proposing a new discharge of stormwater associated with industrial activity shall submit an application at least 180 days before that facility commences industrial activity which may result in a discharge of stormwater associated with that industrial activity. Construction activity facilities described under 40 CFR 122.26(b)(14)(x) shall submit applications at least 90 days before the date on which construction is to commence. See also 40 CFR 122.21(k), 122.26(c)(1)(i)(G) and 122.26(c)(1)(ii).

3.-4. (No change.)

5. Average flows and treatment. A narrative identification of each type of process, operation, or production area which contributes wastewater to the effluent for each outfall, including process wastewater, cooling water, and stormwater, the average flow which each process contributes, and a description of the treatment the wastewater receives, including the ultimate disposal of any solid or fluid wastes other than by discharge. Processes, operations or production areas may be described in general terms (for example, "dye-making reactor", "distillation tower"). For a privately owned treatment works, this information shall include the identity of each user of the treatment works. The average stormwater flow may be estimated. The method of estimation and the basis for the total estimated rainfall must be described. If discharge is due to stormwater, for each outfall the application must state the number of acres of land drained, the runoff coefficient(s) applicable, and also a calculated flow based on a 10 year storm frequency.

6. Intermittent flows. If any of the discharges described in (a)5 above are intermittent or seasonal, a description of the frequency, approximate time of day where practicable, duration and flow rate of each discharge occurrence (except for stormwater, spillage or leaks).

7.-8. (No change.)

9. Effluent characteristics. When "quantitative data" for a pollutant is required, the applicant must collect a sample of effluent and analyze it for the pollutant in accordance with analytical methods approved under 40 CFR Part 136. When no analytical method is approved, the applicant must comply with N.J.A.C. 7:14A-2.5(a)12ii. The requirements in (a)9iv and v below that an applicant must provide quantitative data for certain pollutants known or believed to be present do not apply to pollutants present in a discharge solely as the result of their presence in intake water; however, an applicant must report such pollutants as present. Grab samples must be used for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform and fecal streptococcus. For all other pollutants, 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period greater than 24 hours. In addition, for discharges other than

stormwater discharges, the Director may waive composite sampling for any outfall for which the applicant demonstrates that the use of an automatic sampler is infeasible and that the minimum of four grab samples will be a representative sample of the effluent being discharged. Additional requirements for stormwater discharges are contained in the introductory text of 40 CFR 122.21(g)(7). An applicant is expected to "know or have reason to believe" that a pollutant is present in an effluent based on an evaluation of the expected use, production, or storage of the pollutant, or on any previous analyses for the pollutant. (For example, any pesticide manufactured by a facility may be expected to be present in contaminated stormwater runoff from the facility.) Each applicant shall report as follows:

i.-vi. (No change.)

10.-16. (No change.)

17. Applicants for a discharge which is composed entirely of stormwater associated with industrial activity are exempt from the requirements of (a)4, 5, 6, 7, 9i, 9iii, 9vi, and 15 above ***if such applicants provide the information required under 40 CFR 122.26(c)(1)(i)***.

18. Applicants for an existing or new stormwater discharge that is associated with construction activity solely under 40 CFR 122.26(b)(14)(x) are exempt from the requirements of (a)3 through 15 above, and 40 CFR 122.26(c)(1)(i). Such applicants shall not submit Form 2F, but shall provide the information required under 40 CFR 122.26(c)(1)(ii) and such information as the Department may require under 40 CFR 122.26(c)(1)(v).

19. Applicants for a discharge from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Department or the Regional Administrator pursuant to 40 CFR 122.26(a)(1)(v) are exempt from the requirements of (a)3 through 16 above. Such applicants shall provide the information required under 40 CFR 122.26(d).

20. Permit applications for discharges of stormwater shall include the information required under applicable provisions of 40 CFR 122.26, 40 CFR 122.21(g), and other applicable provisions of this chapter, with the following qualifications and exceptions:

i. References to a "NPDES permit" or "permit" in 40 CFR 122.26 shall be understood to mean a DSW permit under this chapter.

ii. The duties that 40 CFR 122.26 imposes on the operator of a stormwater discharge are also imposed on persons who own any part of the facility.

iii. The reference to the "Director" in 40 CFR 122.26(e)(2)(ii) shall be understood to mean the Director of the EPA Office of *[Water]* ***Wastewater*** Enforcement and Permits. For group applications submitted to EPA pursuant to 40 CFR 122.26(c)(2), the references to the "Director" in 40 CFR 122.21(g)(7) shall be understood to mean the Director of the EPA Office of *[Water]* ***Wastewater*** Enforcement and Permits.

iv. The definition of "Outfall" in 40 CFR 122.26(b)(9) is applicable only to 40 CFR 122.26(d).

v. Notwithstanding 40 CFR 122.26(c)1, an applicant for a stormwater discharge associated with industrial activity shall not submit EPA's Form 1. Until December 31, 1992, Form 2C rather than Form 2F may be submitted by applicants for renewal of a DSW permit or for a new or modified DSW permit, if the permit or application addresses all such stormwater discharges.

vi. The information which 40 CFR 122.26(c)1(i)(B) and (D) requires about events in the three years prior to the submittal of the application shall also be provided about events in previous years, if the applicant is aware of such events.

vii. 40 CFR 122.26(c)(1)(i)(E)(5) shall be replaced by the following: "Measurements or estimates of the maximum flow rate and of the total amount of discharge for the storm event(s) sampled, and the method of flow measurement or estimation."

viii. New applications required by 40 CFR 122.26(e)(6) shall be submitted in accordance with the requirements of N.J.A.C. 7:14A-3.8 and 10.3(a)20.

21. Except as provided in (a)22, (a)23, or (a)26 below, permit applications for discharges of stormwater shall be submitted by the deadlines specified in 40 CFR 122.26(e).

22. The references in 40 CFR 122.26(e)(1)(i) and (e)(2)(iv)(B) to "October 1, 1992" shall be replaced by "April 1, 1993." 40 CFR 122.26(e)(2)(iv)(A) shall be replaced by the following: "Except as provided in paragraph (e)(2)(iv)(B) of this section, facilities that are rejected as members of the group shall submit an individual application (or obtain authorization under an applicable general permit) no later than April 1, 1993."

23. If a facility is approved by the EPA as a member of a group application pursuant to 40 CFR 122.26(e)(2), or if a facility which is a participant of a group application has not been approved or rejected by the EPA pursuant to 40 CFR 122.26(e)(2) by April 1, 1993, the owner and operator shall, by October 1, 1993, either apply for an individual DSW permit, or submit a written request for authorization under an applicable general DSW permit issued under N.J.A.C. 7:14A-3.9. This paragraph shall not apply to a facility that is owned or operated by a municipality with a population of less than 100,000 other than an airport, powerplant, or uncontrolled sanitary landfill.

24. Any entity whose group application to EPA pursuant to 40 CFR 122.26(c)(2) lists New Jersey facilities shall, *[within 30 days of the effective date of N.J.A.C. 7:14A-10.3(a)24]* ***by December 2, 1992***, provide the following information to the Department:

i. An identification, by name and location, of all New Jersey facilities participating in the group application, including all facilities that the group or trade association approves as an addition to a group application pursuant to 40 CFR 122.26(e)(2)(v); and

ii. A narrative description summarizing the industrial activities of participants of the group application.

iii. Any entity whose group application to EPA includes New Jersey facilities shall provide to the Department, within 30 days of the Department's request, a copy of the entire group application or any portion thereof specified by the Department.

25. Any entity whose group application to EPA pursuant to 40 CFR 122.26(c)(2) lists New Jersey facilities shall, within 30 days of the EPA decision to approve or deny the members of the group application (see 40 CFR 122.26(e)(2)(ii)) or *[30 days of the effective date of N.J.A.C. 7:14A-10.3(a)25,]* whichever is later, provide the following information to the Department;

i. An identification, by name and location, of all New Jersey facilities participating in the group application;

ii. A copy of the EPA decision to approve or deny the participating New Jersey facilities as members of the group application; and

iii. A narrative description summarizing the industrial activities of participants of the group application.

iv. The entity shall also provide to the Department the information in (a)25i and ii above for any New Jersey facility that the group or trade association approves as an addition to a group application pursuant to 40 CFR 122.26(e)(2)(v). The entity shall provide this information within 30 days of the EPA approval or denial of the addition or *[30 days of the effective date of N.J.A.C. 7:14A-10.3(a)25]* ***by December 2, 1992***, whichever is later.

26. For any stormwater discharge associated with industrial activity, the Department may require the discharger to apply for an individual DSW permit prior to the deadlines or date identified in (a)21, (a)22, or (a)23 above, only if the discharger has been notified in writing that an earlier application is required. This notice shall include a brief statement of the reasons for this decision, an application form, and a statement setting a time for the discharger to file the application.

27. When an individual application for discharges of stormwater is submitted pursuant to 40 CFR 122.26(c)(1) and this chapter for a facility that already has an individual DSW permit that does not authorize all of those discharges, then that application shall be submitted in the following manner:

i. If that DSW permit has expired, or is due to expire within 180 days of the submission of that application, then that application shall be submitted as part of the application for renewal of that DSW permit (such submission may supplement a renewal application previously submitted to the Department).

ii. If that DSW permit has not expired and is not due to expire within 180 days of the submission of that application, then that

application shall be submitted either as part of the application for renewal of that DSW permit, or in a request under N.J.A.C. 7:14A-7.5 to modify that DSW permit to authorize all of those dischargers of stormwater.

(b) (No change.)

(c) NJPDES Permit: Upon receipt of a Discharge Allocation Certificate, the applicant may design and construct a treatment works to meet the limits stated unless the Department determines that a treatment works approval is also required in accordance with N.J.A.C. 7:14A-12. At least 60 days prior to planned discharge, the applicant shall apply for a NJPDES permit to discharge in accordance with N.J.A.C. 7:14A-2.1 and 7.2. The following items and the information required for a DAC must be submitted for the NJPDES permit:

1.-7. (No change.)

8. This subsection does not apply to discharges from separate storm sewers; however, this subsection does apply to discharges into storm sewers of domestic wastewater, non contact cooling water, or process waste water other than stormwater. This paragraph does not exempt any person from any requirement to obtain a treatment works approval under N.J.A.C. 7:14A-12.

(d) (No change.)

7:14A-14.8 Exemptions

(a)-(b) (No change.)

(c) Except as provided in (d) below, the DSW permits and discharges listed in (c)1 and 2 below are excluded from the requirements of N.J.A.C. 7:14A-14.4(a), 14.4(c), 14.5(a), and 14.5(c). For such permits and discharges, the DSW permit shall stipulate the effluent limitations and monitoring frequency, if any, for oil and grease.

1. General DSW permits for stormwater point sources or separate storm sewers; and

2. DSW from separate storm sewers that are not industrial treatment works.

(d) Despite (c) above, owners and operators of facilities listed in (d)1 or 2 below must comply with the requirements of N.J.A.C. 7:14A-14.4(a), 14.4(c), 14.5(a), 14.5(c), and 14.5(e) regarding any stormwater that has come into contact with petroleum-based oil or grease in raw material, intermediate products, finished products, byproducts, or waste products located on the site of such facilities.

1. Facilities classified as Standard Industrial Classification (SIC) Code 29 (Petroleum Refining and Related Industries); and

2. Facilities that are defined as "major facilities" at N.J.S.A. 58:10-23.11b.1 and N.J.A.C. 7:1E-1.6 and that also have a total combined storage capacity of 200,000 gallons or more for petroleum or petroleum products.

Appendix H
Schedule of Monitoring

Wastewater Treatment Plant (or discharge) Size	Raw + Final, COD, BOD, and Suspended Solids	pH, Residual Chlorine, Settable Solids, Temperature	Fecal Coliform Grab
<.05 MGD	1/Month, Grab	Daily, Grab	1/Month
.05-.1 MGD	2/Month, 4 hr.	Daily, Grab	1/Month
.1-.5 MGD	2/Month, 6 hr.	Daily, Grab	2/Month
.5-1 MGD	3/Month, 6 hr.	Daily, Grab	2/Month
1-5 MGD	1/Week, 24 hr.	2/Day, Grab	4/Month
5-10 MGD	2/Week, 24 hr.	3/Day, Grab	8/Month
10-15 MGD	3/Week, 24 hr.	3/Day, Grab	8/Month
>15 MGD	Daily, 24 hr.	6/Day, Grab	Daily

Notes: COD Testing may be deleted for POTW.

COD, BOD, TSS, pH, and/or settleable solids monitoring may be relaxed (or deleted) for non-contact cooling water discharges if the applicant's activities will not affect these constituents.

Residual chlorine monitoring will not be required at facilities which do not add chlorine to their discharge.

Fecal Coliform monitoring may be relaxed (or deleted) for facilities which do not receive domestic wastewater and which do not receive wastewaters containing pathogenic and/or coliform organisms.

Appendix H does not apply to ***general DSW permits for stormwater point sources or*** discharges from separate storm sewers. For such discharges, the schedule of monitoring, if any, shall be stipulated in the NJPDES permit. ***However, Appendix H may be used as a guide in establishing the schedule of monitoring, if any, in individual DSW permits for stormwater point sources or separate storm sewers. Also*** *[However]*, Appendix H does apply to discharges into storm sewers of domestic wastewater, non contact cooling water, or process wastewater other than stormwater.

(a)

BUREAU OF WATER ALLOCATION

Notice of Administrative Change
Revision to the Fee Schedule for Water Supply Allocation Permits
N.J.A.C. 7:19-3.9

Take notice that since the readoption of N.J.A.C. 7:19-1, 2, 3, 6 and 7 et seq. in March of 1990, the Bureau of Water Allocation has been able to maintain the initial Fee Schedule as listed in N.J.A.C. 7:19-3.9. However, it has become necessary at this time to adjust the Fee Schedule in accordance with N.J.A.C. 7:19-3.5. This allows an adjustment to the fee schedule based upon the previous 12 months inflation factor as published in the Consumer Price Index (U.S. city average, all items, all urban consumers). The new fee schedule represents a 3.0 percent increase in fees based on the May 1992 CPI. The new fee schedule will become effective January 1, 1993.

Full text of the changed rule follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

7:19-3.9 Fee schedule

(a) Fees shall be charged for permits, as applicable, pursuant to the following schedules:

[1. Initial fees for new applications:

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
i. Surface water diversions	$2160	$2430	$3135	$5400	$5900	$6400
ii. Ground water diversions	$2700	$3030	$3915	$6750	$7350	$7850
iii. Ground and surface water diversions in which waters are returned undiminished to the source	$1290	$1725	$2160	$2595	$2995	$3395
2. Modification fees:						
i. Surface water diversions	$1000	$1135	$1465	$2520	$3020	$3520
ii. Ground water diversions	$1260	$1415	$1825	$3150	$3650	$4150
iii. Ground and surface water diversions in which waters are returned undiminished to the source	$ 600	$ 805	$1110	$1210	$1310	$1410
3. Annual fees for permits:						
i. Surface water diversions	$1040	$1220	$2090	$3600	$4600	$5600
ii. Ground water diversions	$1400	$1620	$2610	$4500	$5500	$6500
iii. Ground and surface water diversions in which waters are returned undiminished to the source	$ 460	$ 750	$1440	$1730	$2020	$2310]

Water Allocation Permit Fee Schedule
(Effective January 1, 1993)

1. Initial fees for new applications:

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
i. Surface water diversions	**$2220**	**$2500**	**$3225**	**$5560**	**$6075**	**$6590**
ii. Ground water diversions	**$2780**	**$3120**	**$4030**	**$6950**	**$7570**	**$8085**
iii. Ground and surface water diversions in which waters are returned undiminished to the source	**$1325**	**$1775**	**$2220**	**$2670**	**$3080**	**$3495**
2. Modification fees:						
i. Surface water diversions	**$1030**	**$1165**	**$1505**	**$2595**	**$3110**	**$3625**
ii. Ground water diversions	**$1295**	**$1455**	**$1875**	**$3240**	**$3755**	**$4270**
iii. Ground and surface water diversions in which waters are returned undiminished to the source	**$ 615**	**$ 825**	**$1140**	**$1245**	**$1345**	**$1450**
3. Annual fees for permits:						
i. Surface water diversions	**$1070**	**$1255**	**$2150**	**$3705**	**$4735**	**$5765**
ii. Ground water diversions	**$1440**	**$1665**	**$2685**	**$4635**	**$5665**	**$6695**
iii. Ground and surface water diversions in which waters are returned undiminished to the source	**$ 470**	**$ 770**	**$1480**	**$1780**	**$2080**	**$2375**

(a)

DIVISION OF FISH, GAME AND WILDLIFE

Fish and Game Council

1993-94 Fish Code

Adopted Amendments: N.J.A.C. 7:25-6

Proposed: July 20, 1992 at 24 N.J.R. 2539(a)

Adopted: September 8, 1992 by the Fish and Game Council, Cole Gibbs, Chairman

Filed: October 8, 1992 as R.1992 d.439, **with technical changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-4.3)

Authority: N.J.S.A. 13:1B-30 et seq. and 23:1-1 et seq.

DEPE Docket Number: 30-92-06.

Effective Date: November 2, 1992.

Operative Date: January 1, 1993.

Expiration Date: February 15, 1996.

Summary of Public Comments and Agency Responses:

Secondary notice was achieved by mailing news releases to 72 newspapers of general circulation and approximately 50 outdoor writers and specialty publications.

A public hearing concerning the proposal was held before the Fish and Game Council on August 11, 1992 at the Assunpink Wildife Conservation Center of the Division of Fish, Game and Wildlife (Division) located on Eldridge Road within the Assunpink Wildlife Management Area, Robbinsville, New Jersey. Notice of the hearing was filed with the Secretary of State on August 7, 1992, was posted on the Secretary of State's bulletin board and was delivered to the Newark Star-Ledger and Atlantic City Press. The hearing was attended by 76 members of the general public of which 28 presented verbal comment. Three letters relevant to the proposal were received by the Division during the public comment period which closed on August 14, 1992. The record of the public hearing may be inspected or a copy obtained by contacting Robert McDowell, Director, New Jersey Division of Fish, Game and Wildlife, CN 400, Trenton, NJ 08625.

The commenters at the public hearing were:

1. Jerry Bisignano
2. Larry Strang, Paradise Fishing Club

3. Gary Kreckie
4. Dave Paulich
5. David P. Stewart, N.J. Bass Federation
6. Bill Loveland
7. Kai Zimmerman
8. Tony Going, N.J. Bass Federation
9. Al Van Nortwich, Ocean County Bass Club
10. Ed Panick
11. Mark Bengel, Knee Deep Club
12. Agust Gudmundsson
13. George Hutchinson
14. Dominick Bizzari
15. Rich Bizzari
16. Richard Whitner
17. Tim G. Simos
18. Don Pallante
19. Mike Egan
20. Joe Wildberg, Delaware River Fisherman's Association
21. Steve Guerriero, New Jersey Anglers Association
22. Glen Palmer
23. Paul Renaldo
24. Marc Goldberg
25. Tom Bertles
26. Scot Kirkpatrick
27. John Vafiadis, Jackson Bass Anglers
28. Jim Perry, New Jersey Hog Hunters

Written comment was received from:

1. Emidio Catalano
2. Oliver Shapiro
3. Janet L. Castello, Paradise Fishing Club

N.J.A.C. 7:25-6.3(i)

COMMENT: The Paradise Fishing Club supports the proposal which would allow fishing in Swartswood Lake during the closed season for trout.

RESPONSE: The council and the Division acknowledges the support of the Paradise Fishing Club and recognizes it as being made up of sportsmen that fish at Swartswood Lake.

N.J.A.C. 7:25-6.4(a)

COMMENT: The Ken Lockwood Gorge on the South Branch of the Raritan River should be restricted to fly fishing only throughout the entire year.

RESPONSE: The proposal extends the fly fishing only regulations to cover a period of time that is, (November 30 to the following closure for pre-season trout stocking) during which this area was previously open to all methods of fishing. The Council was reluctant to extend this restriction to cover the entire year, thereby eliminating the period following opening day when the area is most heavily fished by anglers using bait.

N.J.A.C. 7:25-6.13(c)

COMMENT: Several commenters expressed support for the 25 fish possession limit for those species of fish not previously covered by a daily creel or possession limit.

RESPONSE: The Council and the Division acknowledges the support of the proposal by these commenters.

N.J.A.C. 7:25-6.13(d) and (e)

The majority of the comments were relative to these two proposed amendments and that to N.J.A.C. 7:25-6.13(f) which was closely related to them. The difference between N.J.A.C. 7:25-6:13(d) and 6.13(e) is that the former deals with smallmouth bass, while the latter deals with largemouth bass. The proposed amendments were identical for both species. The public did not differentiate between the two species when they presented their comment.

COMMENT: The Division should implement a "slot limit" rather than an 18 inch minimum size limit to regulate the take of bass during the restrictive harvest season. Three different slot limits (15 to 20 inches, 12 to 15 inches and 15 to 18 inches) were suggested.

RESPONSE: A slot limit is not appropriate in this situation. Slot limits are used to protect a specific size range of fish, while allowing the harvest of fish both larger and smaller than that size range. It is most useful when there is an extremely large number of small fish and an inadequate forage base to allow for their maximum growth. This situation has not been detected in any New Jersey bass population. Previously, there had been considerable public support for a 12 inch minimum size limit for bass; the slot limits suggested by the commenters would make it legal to take these fish. In view of these facts, the Council chose to reject the implementation of a slot limit until sufficient data exists to justify one, in which case, it would apply only to a specific body of water.

COMMENT: There should be no harvest of bass of any size during the restrictive harvest season.

RESPONSE: The Council had proposed the 18 inch minimum size limit and one bass daily creel limit to allow for a fisherman to keep one trophy sized bass, which might be his "bass of a lifetime." There was no biological significance attached to this proposal. In view of the considerable public support for a total catch and release situation as opposed to the allowance of a single large bass in possession, the Council will consider a future amendment to the Code which would prohibit the taking of bass during this period.

N.J.A.C. 7:25-6.13(f)

COMMENT: The time limitations for the restrictive harvest season are overly conservative.

RESPONSE: The Council agrees. Based on the best information available concerning the spawning of New Jersey bass, an April 15th date should be sufficient to accomplish the objectives of the restrictive harvest season. The Council has revised proposed N.J.A.C. 7:25-6.13(d), (e) and (f) accordingly.

COMMENT: A permit system should be devised which would allow for bass tournaments to catch, hold and release bass during the restrictive harvest season.

RESPONSE: Because the suggested permit system is beyond the scope of the proposed amendment, such cannot be considered for inclusion in this rulemaking. However, the Council will consider the matter for possible future rulemaking. It was also noted that the concept of protecting spawning bass was supported by most all commenters, including those that had objected to specific aspects of the method by which that protection would be achieved.

COMMENT: Sufficient data does not exist to warrant the implementation of a restrictive harvest season.

RESPONSE: A restrictive harvest season for largemouth bass was implemented in 1987. At that time the Council and the Division recognized that this proposal was more of a sociological nature (that is, to extend the duration of the catch of large bass) rather than one which provides biological benefits (that is, there is no need for greater spawning success). The 1987 proposal had considerable public support, which was demonstrated again for the current 1993 proposal. The restrictive harvest season as adopted in 1987 was discontinued, except for Lake Hopatcong where the local support for the regulation was so strong that the Council allowed for its continuance there. Angler perception, as witnessed by their comments, was that the 1987-1989 restrictive harvest seasons were successful and that angling quantity declined once this regulation was discontinued. The Council and the Division still maintain that there is no biological significance to the regulation, but that the sociological aspects of the proposal justify its reinstitution.

N.J.A.C. 7:25-6.20

COMMENT: There is no justification for a 36 inch size limit on the striped bass hybrid because this hybrid does not get that large.

RESPONSE: This regulation only applies to the Delaware River, which is also inhabited by striped bass. The striped bass does reach this size and the regulations for this species call for a 36 inch size limit in the Delaware River. The striped bass and its hybrid may be confused by the average angler and to adequately protect the striped bass population in the river it was felt necessary to make the regulations, for both, uniform. There have been no intentional stockings of hybrids made in the river and no management plan proposed, while the striped bass is a species of major significance, whose population is still in the recovery mode.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *[thus]*):

SUBCHAPTER 6. 1993-94 FISH CODE

7:25-6.2 Definitions

The following words and terms shall have the following meanings, unless the context clearly indicates otherwise.

...

"Fathom" shall mean a unit of measure equal to six feet.
...

7:25-6.3 Trout Season and Angling in Trout Stocked Waters

(a) Except as provided in N.J.A.C. 7:25-6.4, 6.6 to 6.9, 6.18, 6.19, and (i) below, the trout season for 1993 shall commence 12:01 A.M. January 1, 1993 and extend to midnight March 21, 1993. The trout season shall re-open at 8:00 A.M. Saturday, April 10, 1993 and extend to include March 20, 1994.

(b) Except as provided in N.J.A.C. 7:26-6.4, 6.6 and 6.7 and (i) below, it shall be unlawful to fish for any species of fish from midnight March 21, 1993 to 8:00 A.M. on April 10, 1993 in ponds, lakes or those protions of streams that are listed herein for stocking during 1993.

(c) (No change.)

(d) Except as provided in N.J.A.C. 7:25-6.6 to 6.9, in trout-stocked waters for which in-season closures will be in force, waters will be closed from 5:00 A.M. to 5:00 P.M. on dates indicated, provided that in the event of emergent conditions, the Division may suspend stocking of any or all of the following:

1. Big Flat Brook—100 ft. above Steam Mill Bridge on Crigger Road in Stokes State Forest to Delaware River—April 16, 23, 30; May 7, 14, 21, 28.

2. Black River—Route 206 Chester, to the posted Black River Fish and Game club property at the lower end of Hacklebarney State Park—April 15, 22, 29; May 6, 13, 20, 27.

3. Manasquan River—Route 9 bridge downstream to Bennetts Bridge, Manasquan Wildlife Management Area—April 12, 19, 26; May 3, 10, 17, 24.

4. Metedeconk River, N. Br.—Aldrich Road Bridge to Ridge Avenue—April 12, 19, 26; May 3, 10, 17, 24.

5. Metedeconk River, S. Br.—Bennetts Mills Dam to twin wooden foot bridge, opposite Lake Park Boulevard, on South Lake Drive, Lakewood—April 12, 19, 26; May 3, 10, 17, 24.

6. Musconetcong River—Lake Hopatcong Dam to Delaware River including all main stem impoundments, but excluding Lake Musconetcong, Netcong—April 16, 23, 30; May 7, 14, 21, 28.

7. Paulinskill River and E. Br. and W. Br.—Limecrest Railroad Spur Bridge on E. Br., Sparta Township, and Warbasse Junction Road, Route 663, on W. Br., Lafayette Twp., to Columbia Lake—April 15, 22, 29; May 6, 13, 20, 27.

8. Pequest River—Source to Delaware River—April 16, 23, 30; May 7, 14, 21, 28.

9. Pohatcong Creek—Route 31 to Delaware River—April 13, 20, 27; May 4, 11, 18, 25.

10. Ramapo River—State line to Pompton Lake—April 15, 22, 29; May 6, 13, 20, 27.

11. Raritan River, N. Br.—Peapeck Road Bridge in Far Hills to Jct. with S. Br. Raritan River—April; 14, 21, 28; May 5, 12, 19, 26.

12. Raritan River, S. Br.—Budd Lake dam through Hunterdon and Somerset Counties to Jct. with N. Br. Raritan River—April 13, 20, 27; May 4, 11, 18, 25.

13. Rockaway River—Longwood Lake dam to Jersey City Reservoir in Boonton—April 12, 19, 26; May 3, 10, 17, 24.

14. Toms River—Ocean County Route 528, Holmansville, to confluence with Maple Root Branch and Route 70 to County Route 571—April 12, 19, 26; May 3, 10, 17, 24.

15. Wallkill River—Lake Mohawk Dam to Route 23, Hamburg—April 12, 19, 26; May 3, 10, 17, 24.

16. Wanaque River—Greenwood Lake Dam to Jct. with Pequannock River, excluding Wanaque Reservoir, Monksville Reservoir and Lake Inez—April 16, 23, 30; May 7, 14, 21, 29.

(e) (No change.)

(f) Trout stocked waters for which no in-season closures will be in force. Figure in parenthesis indicates the anticipated number of stockings to be carried out from April 12 through May 31, provided that, in the event of emergency conditions, the Division may suspend stocking of any or all of the following:

1.-9. (No change.)

10. Hunterdon County
...
Hakihohake Creek—Holland Township, entire length—(2)

11.-12. (No change.)

13. Monmouth County
...
Holmdel Park Pond—Holmdel—(3)
...

14. Morris County
...
Drakes Brook—Flanders, entire length—(3)
...
Passaic River—White Bridge to Dead River—(4)
...

15.-17. (No change.)

18. Somerset County
...
Raritan River—Jct. of Raritan River N. Br. and S. Br. to Rt. 206 Bridge—(4)
...

19. Sussex County
...
Lake Musconetcong—Netcong—(3)
...

20. (No change.)

21. Warren County
...
Beaver Brook—Silver Lake Dam to Pequest River—(4)
...

(g) (No change.)

(h) A person shall not take, kill or have in possession in one day more than six in total of brook trout, brown trout, rainbow trout, lake trout or hybrids thereof during the period extending from 8:00 A.M. April 10, 1993 until midnight May 31, 1993 or more than 4 of these species during the periods of January 1, 1993 to midnight March 21, 1993 and June 1, 1993 through midnight March 20, 1994 except as designated in N.J.A.C. 7:25-6.4 to 6.9.

(i) Spruce Run Reservoir, Hunterdon County, Swartswood Lake, Sussex County, and the Manasquan Reservoir, Monmouth County, will remain open to angling year-round. Trout, if taken during the period commencing at midnight, March 21, 1993 and extending to 8:00 A.M. April 10, 1993 must be returned to the water immediately and unharmed.

7:25-6.4 Special Regulation Trout Fishing Areas—Fly-Fishing Waters

(a) From 5:00 A.M. on Monday, April 19, 1993 to and including March 20, 1994 the following stretches are open to fly-fishing only, and closed to all fishing from 5:00 A.M. to 5:00 P.M. on the days listed for stocking:

1.-2. (No change.)

(b) Beginning January 1, 1993 to midnight March 21, 1993 and from 8:00 A.M. on April 10, 1993 to midnight March 20, 1994 the following stretch is open to fly-fishing only, but is closed to all fishing from 5:00 A.M. to 5 P.M. on days listed for stocking:

1. (No change.)

(c)-(d) (No change.)

7:25-6.5 Special Regulation Trout Fishing Areas Seasonal-Trout Conservation Areas

(a) The following stream segments are designated as Seasonal Trout Conservation Areas and are subject to the provisions at (b) below governing these areas during the period of May 24, 1993 through March 20, 1994.

1.-2. (No change.)

(b) (No change.)

7:25-6.6 Special Regulation Trout Fishing Areas—Wild Trout Streams

(a) (No change.)

(b) The following regulations shall apply to the Wild Trout Streams designated at (a) above:

1.-4. (No change.)

5. During the period extending from 8:00 A.M. April 10, 1993 to September 15, 1993, no person shall have in possession while fishing any more than two legally sized dead, creeled or otherwise appropriated trout. No trout may be killed or possessed during other times of the year. Any number of trout may be caught provided they are immediately returned to the water unharmed.

6. (No change.)

7:25-6.8 Special Regulation Trout Fishing Areas—Trophy Trout Lakes

(a) (No change.)

(b) The following rules apply to the Trophy Trout Lakes designated at (a) above:

1. The minimum size of brown trout and rainbow trout shall be 15 inches. Daily bag and possession limit for brown trout and rainbow trout shall be two in total.

2.-3. (No change.)

4. The season for lake trout shall extend from 12:01 A.M., January 1, 1993 to midnight, September 15, 1993 and from December 1, 1993 to midnight, September 15, 1994.

5. (No change.)

7:25-6.9 Special Regulation Trout Fishing Areas—Major Trout Stocked Lakes

(a) The following lakes are designated as Major Trout Stocked Lakes:

1. Canistear Reservoir;
2. Clinton Reservoir;
3. Lake Hopatcong;
4. Monksville Reservoir; and
5. Wawayanda Lake.

(b) The following apply to the Major Trout Stocked Lakes designated in (a) above:

1.-2. (No change.)

3. A person shall not take, kill or have in possession, in one day, more than six in total of brook trout, brown trout, rainbow trout, lake trout or hybrids thereof during the period extending from 8:00 A.M. April 10, 1993 until May 31, 1993 or more than four of these species during the periods of January 1, 1993 to midnight March 21, 1993 and June 1, 1993 through midnight March 20, 1994. Trout, if taken during the period commencing at midnight, March 21, 1993 and extending to 8:00 A.M., April 10, 1993 must be returned to the water immediately and unharmed.

7:25-6.10 Baitfish

(a) (No change.)

(b) In waters listed in N.J.A.C. 7:25-6.3 to be stocked with trout, it is prohibited to net, trap or attempt to net or trap baitfish from March 21 to June 15 except where the taking is otherwise provided for. For the remainder of the year, up to 35 baitfish per person per day may be taken with a seine not over 10 feet in length and four feet in depth or a minnow trap not larger than 24 inches in length with a funnel mouth no greater than two inches in diameter or an umbrella net no greater than 3.5 feet square.

(c)-(d) (No change.)

7:25-6.13 Warmwater fish

(a)-(b) (No change.)

(c) For those species of fish, which do not have specific daily creel and possession limits, the daily creel and possession limit shall be 25 in total.

(d) The minimum size of smallmouth bass shall be 12 inches except that during the period of April *[1]* **15* through June 15, an 18 inch minimum size limit shall be in effect.

(e) The minimum size of largemouth bass shall be 12 inches, except that during the period of April *[1]* **15* through June 15, an 18 inch minimum size limit shall be in effect.

(f) The daily creel and possession limit for largemouth bass and smallmouth bass shall be five in total except that during the period of April *[1]* **15* through June 15, the limit is one in total.

(g)-(p) (No change.)

7:25-6.16 Closed waters

(a) It is illegal to fish, place any contrivance for the taking of fish, or attempt to catch or kill fish by any manner or means in any fish ladder or within 100 feet, or as posted feet, of any fish ladder entrance or exit.

(b) (No change.)

7:25-6.18 Wanton waste of fish prohibited

Fish, of any species, taken, by any means, which are purposely killed, become part of the fisherman's daily creel or possession limit and must be removed from the waters from which they were taken, and any adjacent lands, pursuant to N.J.S.A. 23:5-28. This section shall not apply to those fish which are released while still alive, by the angler, and subsequently die as a result of stress or hooking mortality.

7:25-6.19 Greenwood Lake

(a) In cooperation with the New York State Department of Environmental Conservation, Division of Fish, Game and Wildlife, the following regulations for Greenwood Lake, which lies partly in Passaic County, New Jersey, and partly in Orange County, New York, are made a part of the New Jersey State Fish and Game Code and will be enforced on the whole lake by the conservation authorities of both States.

1.-4. (No change.)

5. Bow and arrow fishing for carp, suckers, herring, catfish and eels by properly licensed fishermen, will be permitted on Greenwood Lake.

7:25-6.20 Delaware River between New Jersey and Pennsylvania

(a) In cooperation with the Pennsylvania Fish Commission, the following regulations for the Delaware River between New Jersey and Pennsylvania are made a part of the New Jersey State Fish and Game Code and will be enforced by the conservation authorities of each state.

1.	Season	Size Limit	Daily Bag Limit
Trout	April 10- Sept. 30	no minimum	5
...			
Stripped bass × white bass hybrid	Downstream of Trenton Falls— March 1-30 and June 1-Dec. 31 Upstream of Trenton Falls March 1-Dec. 31	36 inch minimum	1

...

2.-7. (No change.)

7:25-6.21 (No change in text.)

(a)

HAZARDOUS WASTE REGULATION

Hazardous Waste Criteria, Identification, and Listing

Adopted Amendment: N.J.A.C. 7:26-8.16

Proposed: October 21, 1991 at 23 N.J.R. 3093(b) (see also 24 N.J.R. 2003(a)).

Adopted: October 5, 1992 by Scott A. Weiner, Commissioner, Department of Environmental Protection and Energy.

Filed: October 8, 1992 as R.1992 d.440, **with technical changes** not requiring additional public notice and comment (See N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 13:1E-1 et seq., particularly 13:1E-6.

DEPE Docket Number: 037-91-09.

Effective Date: November 2, 1992.
Expiration Date: October 25, 1995.

Summary of Public Comments and Agency Responses:
The amendments were proposed October 21, 1991. **No comments were received.** The amendments at N.J.A.C. 7:26-8.16 are being adopted with six technical corrections due to misspellings and typographic errors.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *[thus]*).

7:26-8.16 Hazardous constituents

(a) Waste streams containing the hazardous constituents listed below, classified as hazardous waste by the generator or the Department pursuant to N.J.A.C. 7:26-8.6 and 8.7, shall be manifested with the corresponding waste code numbers. Test methods approved by the Department shall be used in determining whether the waste in question contains a given hazardous constituent. (NOTE: The abbreviation N.O.S. signifies those members of the general class "not otherwise specified" by name in this listing*[).]* ***.)*** These wastes and their corresponding Hazardous Waste Numbers and Chemical Abstracts Service (CAS) Registry Numbers are:

NJ Hazardous Waste Number	Substance	Chemical Abstracts Number
C102	(Acetato) phenylmercury	62-38-4
C103	Acetonitrile	75-05-8
C463	Acetophenone	98-86-2
C105	2-Acetylaminofluorene	53-96-3
C106	Acetyl chloride	75-36-5
C107	1-Acetyl-2-thiourea	591-08-2
C108	Acrolein	107-02-8
C109	Acrylamide	79-06-1
C110	Acrylonitrile	107-13-1
C111	Aflatoxins	1402-68-2*
C324	Aldicarb	116-06-3
C112	Aldrin	309-00-2
C113	Allyl alcohol	107-18-5
C497	Allyl chloride	107-05-1
C114	Aluminum phosphide	20859-73-8
C115	4-Aminobiphenyl	92-67-1
C116	*[6-Amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxy-methyl[)-8a-methoxy]-5-methylcarbamate azirino-(2,3,:3,4)pyrrolo (1,2-a)indole-4,7-dione (ester)]* ***6-Amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxy-methyl) [-8a-methoxy]-5-methylcarbamate azirino-(2,2:3,4) pyrrolo(1,2-a)indole-4,7-dione (ester)***	50-07-7
C117	5-(Aminomethyl) 3-isoxazolol	2763-96-4
C118	4-Aminopyridine	504-24-5
C119	Amitrole	61-82-5
C457	Ammonium Vanadate	7803-55-6
C120	Aniline	62-53-3
C121	Antimony and compounds, N.O.S.	7440-36-0*
C122	Aramite	140-57-8
C123	Arsenic and compounds, N.O.S.	7440-38-2*
C124	Arsenic acid	7778-39-2*
C125	Arsenic pentoxide	1303-28-2
C126	Arsenic trioxide	1327-53-3
C127	Auramine	492-80-8
C128	Azaserine	115-02-6
C129	Barium and compounds, N.O.S.	7440-39-3*
C130	Barium cyanide	542-62-1
C131	Benz[c]acridine	25-51-4
C464	Benzal chloride	98-87-3
C132	Benz[a]anthracene	56-55-3
C133	Benzene	71-43-2
C464	Benzene, (dichloromethyl)	98-87-3
C500	Benzene, 2-amino-1-1 methyl	95-53-4
C501	Benzene, 4-amino-1 methyl	
C134	Benzenearsonic acid	98-05-5
C135	Benzenethiol	108-98-5
C136	Benzidine	92-87-5
C138	Benzo[b]fluoranthene	205-99-2
C139	Benzo[j]fluoranthene	205-82-3
C140	Benzo[a]pyrene	50-32-8
C519	p-Benzoquinone	106-51-4
C141	Benzotrichloride	98-07-7
C142	Benzyl chloride	100-44-7
C143	Beryllium and compounds, N.O.S.	7440-41-7*
C144	Bis(2-chloroethoxy) Methane	111-91-1
C145	Bis(2-chloroethyl) ether	111-44-4
C146	N,N'-Bis(2-chloroethyl) -2-naphthylamine	494-03-1
C147	Bis(2-chloroisopropyl) ether	108-60-1
C148	Bis(chloromethyl) ether	542-88-1
C149	Bis(2-ethylhexyl) phthalate	117-81-7
C150	Bromoacetone	598-31-2
C438	Bromoform	75-25-2
C151	Bromomethane	74-83-9
C152	4-Bromophenyl phenyl ether	101-55-3
C153	Brucine	357-57-3
C154	2-Butanone peroxide	1338-23-4
C465	Butyl benzyl phthalate	85-68-7
C156	2-sec-Butyl-4,6-dinitrophenol	88-85-7
C476	Cacodylic acid	75-60-5
C157	Cadmium and compounds, N.O.S.	7440-43-9*
C158	Calcium chromate	13765-19-0
C159	Calcium cyanide	592-01-8
C160	Carbon disulfide	75-15-0
C466	Carbon oxyfluoride chloral	353-50-4
C416	Carbon tetrachloride	56-23-5
C508	Chloral	75-87-6
C161	Chlorambucil	305-03-3
C162	Chlordane and alpha and gamma isomers	57-74-9*
C163	Chlorinated benzenes, N.O.S.	**
C164	Chlorinated ethane, N.O.S.	**
C467	Chlorinated fluorocarbons, N.O.S.	**
C165	Chlorinated naphthalene, N.O.S.	**
C166	Chlorinated phenol, N.O.S.	**
C146	Chlornaphazine	494-03-1
C167	Chloroacetaldehyde	107-20-0
C168	Chloroalkyl ethers, N.O.S.	**
C169	p-Chloroaniline	106-47-8
C170	Chlorobenzene	108-90-7
C171	Chlorobenzilate	510-15-6
C172	2-Chloro-1,3-butadiene	126-99-8
C173	p-Chloro-m-cresol	59-50-7
C174	1-Chloro-2,3-expoxybutane	106-89-8
C175	2-Chloroethyl vinyl ether	110-75-8
C176	Chloroform	67-66-3
C177	Chloromethane	74-87-3
C178	Chloromethyl methyl ether	107-30-2
C179	2-Chloronaphthalene	91-58-7

C179	beta-*[c]**C*hloronaphthalene	91-58-7
C180	2-Chlorophenol	95-57-8
C180	*[0-chloronaphthalene]* ***O-Chloronaphthalene***	95-57-8
C181	1-(o-Chlorophenyl)thiourea	5344-82-1
C172	Chloroprene	126-99-8
C497	3-Chloropropene	107-05-1
C182	3-Chloropropionitrile	542-76-7
C497	3-Chloropropene	107-05-1
C183	Chlorotoluene, N.O.S.	**
C184	Chromium and compounds, N.O.S.	7440-47-3*
C185	Chrysene	218-01-9
C186	Citrus red No. 2	6358-53-8
C509	Coal tars	8007-45-2
C509	Coal Tar Creosote	8007-45-2
C187	Copper cyanide	544-92-3
C188	Creosote, coal tar	8001-58-9
C468	Cresol	1319-77-3
C468	Cresylic acid	1319-77-3
C189	Crotonaldehyde	4170-30-3
C190	Cyanides (soluble salts and complexes), N.O.S.	**
C191	Cyanogen	460-19-5
C192	Cyanogen bromide	506-68-3
C193	Cyanogen chloride	506-77-4
C194	Cycasin	14901-08-7
C195	2-Cyclohexyl-4,6-dinitrophenol	131-89-5
C196	Cyclophosphamide	50-18-0
C223	2,4-D, and salts and esters	94-75-7*
C197	Daunomycin	20830-81-3
C198	DDD	72-54-8
C199	DDE	72-55-9
C200	DDT	50-29-3
C242	DFP	55-91-4
C201	Diallate	2303-16-4
C202	Dibenz[a,h]acridine	226-36-8
C203	Dibenz[a,j]acridine	224-42-0
C204	Dibenz[a,h]anthracene	53-70-3
C205	7H-Dibenzo[c,g]carbazole	194-59-2
C206	Dibenzo[a,e]pyrene	192-65-4
C207	Dibenzo[a,h]pyrene	189-64-0
C208	Dibenzo[a,i]pyrene	189-55-9
C209	1,2-Dibromo-3-chloropropane	96-12-8
C210	1,2-Dibromoethane	106-93-4
C211	Dibromomethane	74-95-3
C212	Di-n-butyl phthalate	84-74-2
C493	m-Dichlorobenzene	541-73-1
C492	o-Dichlorobenzene	95-50-1
C494	p-Dichlorobenzene	106-46-7
C213	Dichlorobenzene, N.O.S.	25321-22-6
C214	3,3'-Dichlorobenzidine	91-94-1
C469	1,4-Dichloro-2-butene	764-41-0
C470	Dichlorodifluoromethane	75-71-8
C215	1,1-Dichloroethane	75-34-3
C216	1,2-Dichloroethane	107-06-2
C217	trans-1,2-Dichloroethene	156-60-5
C145	Dichloroethyl ether	111-44-4
C219	1,1-Dichloroethylene	75-35-4
C217	1,2-Dichloroethylene	156-60-5
C218	Dichloroethylene, N.O.S.	25323-30-2
C147	Dichloroisopropyl ether	108-60-1
C144	Dichloromethoxy ethane	111-91-1
C148	Dichloromethyl ether	542-88-1
C220	Dichloromethane	75-09-2
C221	2,4-Dichlorophenol	120-83-2
C222	2,6-Dichlorophenol	87-65-0
C223	2,4-Dichlorophenoxyacetic acid, salts and esters	94-75-7*
C225	Dichlorophenylarsine	696-28-6
C226	1,2-Dichloropropane	78-87-5
C224	Dichloropropane, N.O.S.	26638-19-7
C227	Dichloropropanol, N.O.S.	26545-73-3
C228	Dichloropropene, N.O.S.	26952-23-8
C229	1,3-Dichloropropene	542-75-6
C230	Dieldrin	60-57-1
C471	Diepoxybutane	1464-53-5
C232	Diethylarsine	692-42-2
C263	1,4-Diethyleneoxide	123-91-1
C149	Diethylhexyl phthalate	117-81-7
C234	1,2-Diethylhydrazine	1615-80-1
C234	N,N-Diethylhydrazine	1615-80-1
C235	0,0-Diethy-s-methylester phosphorodithioic acid	3288-58-2
C235	0,0-Diethyl S-methyl phosphorodithioate	3288-58-2
C236	Diethyl-p-nitrophenyl phosphate	311-45-5
C237	Diethyl phthalate	84-66-2
C238	0,0-Diethyl-o-(2-pyrazinyl) phosphorothioate	297-97-2
C239	Diethylstilbestrol	56-53-1
C240	Dihydrosafrole	94-58-6
C241	3,4-Dihydroxy-alpha-[(methylamino)-methyl] benzyl alcohol	51-43-4
C242	Diisopropyl fluorophosphate	55-91-4
C243	Dimethoate	60-51-5
C244	3,3'-Dimethoxybenzidine	119-90-4
C245	p-Dimethylaminoazobenzene	60-11-7
C246	7,12-Dimethylbenz[a]anthracene	57-97-6
C247	3,3'-Dimethylbenzidine	119-93-7
C248	Dimethylcarbamoyl chloride	79-44-7
C249	1,1-Dimethylhydrazine	57-14-7
C250	1,2-Dimethylhydrazine	540-73-8
C251	3,3-Dimethyl-1-(methylthio)-2-butanone 0-(methylamino)carbonyl oxime	39196-18-4
C253	alpha,alpha-Dimethylphenethylamine	122-09-8
C254	2,4-Dimethylphenol	105-67-9
C255	Dimethyl phthalate	131-11-3
C256	Dimethyl sulfate	77-78-1
C257	Dinitrobenzene, N.O.S.	25154-54-5
C258	4,6-Dinitro-o-cresol and salts	534-52-1*
C259	2,4-Dinitrophenol	51-28-5
C260	2,4-Dinitrotoluene	121-14-2
C261	2,6-Dinitrotoluene	606-20-2
C156	Dinoseb	88-85-7
C262	Di-n-octyl phthalate	117-84-0
C263	1,4-Dioxane	123-91-1
C510	Diphenylamine	122-39-4
C265	1,2-Diphenylhydrazine	122-66-7
C266	Di-n-propylnitrosamine	621-64-7
C267	Disulfoton	298-04-4
C268	Dithiobiuret	541-53-7
C156	DNBP	88-85-7
C269	Endosulfan	115-29-7
C370	Endothall	145-73-3
C270	Endrin and metabolites	72-20-8*
C174	Epichlorohydrin	106-89-8
C241	Epinephrine	51-43-4
C506	Ethanol, 2-ethoxy	110-80-5
C272	Ethyl Carbamate	51-79-6
C472	Ethyl methacrylate	97-63-2
C278	Ethyl methanesulfonate	62-50-0
C272	Ethyl cyanide	107-12-0
C210	Ethylene dibromide	106-93-4
C215	Ethylene dicholride	75-34-3
C506	Ethylene glycol monoethyl ether	110-80-5
C274	Ethylenebisdithiocarbamic acid, salts and esters	111-54-6*
C275	Ethyleneimine	151-56-4
C276	Ethylene oxide	75-21-8
C277	Ethylenethiourea	96-45-7
C215	Ethylidene dichloride	75-34-3
C498	Famphur	52-85-7

C279	Fluoranthene	206-44-0
C280	Fluorine	7782-41-4
C281	Fluoroacetamide	640-19-7
C282	Fluoroacetic acid, sodium salt	62-74-8
C283	Formaldehyde	50-00-0
C479	Fulminic acid, mercury(2') salt	628-86-4
C473	Formic acid	64-18-6
C284	Glycidaldehyde	765-34-4
C285	Halomethane, N.O.S.	**
C286	Heptachlor	76-44-8
C287	Heptachlor epoxide (alpha, beta, and gamma isomers)	1024-57-3*
C288	Hexachlorobenzene	118-74-1
C289	Hexachlorobutadiene	87-68-3
C290	Hexachlorocyclohexane (all isomers)	58-89-9*
C291	Hexachlorocyclopentadiene	77-47-4
C474	Hexachlorodibenzo-p-dioxins	**
C475	Hexachlorodibenzofurans	**
C292	Hexachloroethane	67-72-1
C293	1,2,3,4,10,19-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, endo-dimethanonaphthalene	465-73-6
C294	Hexachlorophene	70-30-4
C295	Hexachloropropene	1888-71-7
C296	Hexaethyl tetraphosphate	757-58-4
C297	Hydrazine	302-01-2
C298	Hydrocyanic acid	74-90-8
C298	Hydrogen cyanide	74-90-8
C511	Hydrogen fluoride	7664-39-3
C299	Hydrogen sulfide	7783-06-4
C476	Hydroxydimethylarsine oxide	75-60-5
C300	Indeno(1,2,3-cd)pyrene	193-39-5
C301	Iodomethane	74-88-4
C477	Isobutyl alcohol	78-83-1
C302	Isocyanic acid, methyl ester	624-83-9
C293	Isodrin	465-73-6
C303	Isosafrole	120-58-1
C304	Kepone	143-50-0
C305	Lasiocarpine	303-34-4
C307	Lead acetate	301-04-2
C306	Lead and compounds, N.O.S.	7439-92-1*
C308	Lead phosphate	7446-27-7
C309	Lead subacetate	1335-32-6
C290	Lindane	58-89-9
C310	Maleic anhydride	108-31-6
C478	Maleic hydrazide	123-33-1
C311	Malononitrile	109-77-3
C319	MEK	78-93-3
C312	Melphalan	148-82-3
C313	Mercury and compounds, N.O.S.	7439-97-6*
C479	Mercury fulminate	628-86-4
C480	Methacrylonitrile	126-98-7
C314	Methapyrilene	91-80-5
C315	Methomyl	16752-77-5
C513	Methoxychlor	72-43-5
C316	2-Methylaziridine	75-55-8
C151	Methyl bromide	74-83-9
C177	Methyl chloride	74-87-3
C481	Methyl chlorocarbonate	79-22-1
C440	Methyl chloroform	71-55-6
C317	3-Methylcholanthrene	56-49-5
C318	4,4'-Methylene-bis-(2-chloroaniline)	101-14-4
C211	Methylene bromide	74-95-3
C220	Methylene chloride	75-09-2
C319	Methyl ethyl ketone	78-93-3
C319	Methyl ethyl ketone Peroxide	78-93-3
C320	Methyl hydrazine	60-34-4
C301	Methyl iodide	74-88-4
C302	Methyl isocyanate	624-83-9
C321	2-Methyllactonitrile	75-86-5
C322	Methyl methacrylate	80-62-6
C323	Methyl methanesulfonate	66-27-3
C324	2-Methyl-2-(methylthio)	116-06-3
C325	N-Methyl-N'-nitro-N-nitrosoguanidine	70-25-7
C326	Methyl parathion	298-00-0
C327	Methylthiouracil	56-04-2
C116	Mitomycin C	50-07-7
C325	MNNG	70-25-7
C328	Mustard gas	505-60-2
C239	Naphthalene	91-20-3
C330	1,4-Naphthoquinone	130-15-4
C331	1-Naphthylamine	134-32-7
C331	alpha-Naphthylamine	134-32-7
C332	2-Naphthylamine	91-59-8
C332	beta-Naphthylamine	91-59-8
C333	1-Naphthyl-2-thiourea	86-88-4
C333	alpha-Naphthylthiourea	86-88-4
C334	Nickel and compounds, N.O.S.	7440-02-0*
C335	Nickel carbonyl (T-4)	13463-39-3
C336	Nickel cyanide	557-19-7
C337	Nicotine and salts	54-11-5*
C338	Nitric oxide	10102-43-9
C339	p-Nitroaniline	100-01-6
C340	Nitrobenzene	98-95-3
C341	Nitrogen dioxide	10102-44-0
C342	Nitrogen mustard and hydrochloride salt	51-75-2*
C343	Nitrogen mustard N-oxide and hydrochloride salt	126-85-2*
C346	Nitroglycerine	55-63-0
C347	4-Nitrophenol	100-02-7
C507	2-Nitropropane	79-46-9
C348	4-Nitroquinoline,1-oxide	56-57-5
C349	Nitrosamine, N.O.S.	35576-91-1
C350	N-Nitrosodi-n-butylamine	924-16-3
C351	N-Nitrosodiethanolamine	1116-54-7
C352	N-Nitrosodiethylamine	55-18-5
C353	N-Nitrosodimethylamine	62-75-9
C356	N-Nitroso-N-ethylurea	759-73-9
C357	N-Nitrosomethylethylamine	10595-95-6
C358	N-Nitroso-N-methylurea	684-93-5
C359	N-Nitroso-N-methylurethane	615-53-2
C360	N-Nitrosomethylvinylamine	4549-40-0
C361	N-Nitrosomorpholine	59-89-2
C362	N-Nitrosonornicotine	16543-55-8
C363	N-Nitrosopiperidine	100-75-4
C482	N-Nitrosopyrrolidine	930-55-2
C365	N-Nitrososarcosine	13256-22-9
C366	5-Nitro-o-toluidine	99-55-8
C367	Octamethylpyrophosphoramide	152-16-9
C369	Osmium tetroxide (T-4)*[-]*	20816-12-0
C370	7-Oxabicyclo heptane-2,3-dicarboxylic acid	145-73-3
C483	Paraldehyde	123-63-7
C371	Parathion	56-38-2
C374	PCNB	82-68-8
C372	Pentachlorobenzene	608-93-5
C484	Pentachlorodibenzo-p-dioxins	**
C485	Pentachlorodibenzofurans	**
C373	Pentachloroethane	76-01-7
C374	Pentachloronitrobenzene	82-68-8
C375	Pentachlorphenol	87-86-5
C376	Phenacetin	62-44-2
C377	Phenol	108-95-2
C514	Phenylenediamine	25265-76-3
C102	Phenylmercury acetate	62-38-4
C381	Phenylthiourea	103-85-5
C381	N-Phenylthiourea	103-85-5
C384	Phorate	298-02-2
C382	Phosgene	75-44-5

C383	Phosphine	7803-51-2
C498	Phosphorothioic acid, 0,0-dimethyl ester, 0-ester with p-hydroxy-N,N-dimethyl benzene sulfonamide	52-85-7
C385	Phthalic acid esters, N.O.S.	**
C386	Phthalic anhydride	85-44-9
C517	2-Picoline	109-06-8
C387	Polychlorinated biphenyl, N.O.S.	**
C388	Potassium cyanide	151-50-8
C389	Potassium silver cyanide	506-61-6
C390	Pronamide	23950-58-5
C507	Propane, 2-nitro	79-46-9
C392	1,3 Propane Sultone	1120-71-4
C449	Propane, 1,2,3-trichloro-	96-18-4
C486	n-Propylamine	107-10-8
C226	Propylene dichloride	78-87-5
C316	1,2-Propylenimine	75-55-8
C394	Propylthiouracil	51-52-5
C395	2-Propyn-1-ol	107-19-7
C396	Pyridine	110-86-1
C397	Reserpine	50-55-5
C518	Resorcinol	108-46-3
C398	Saccharin and salts	81-07-2*
C399	Safrole	94-59-7
C400	Selenious acid	7783-00-8
C401	Selenium and compounds, N.O.S.	7782-49-2*
C400	Selenium dioxide	7783-008
C402	Selenium sulfide	7488-56-4
C403	Selenourea	630-10-4
C404	Silver and compounds, N.O.S.	7440-22-4*
C405	Silver cyanide	506-64-9
C447	Silvex	93-72-1
C406	Sodium cyanide	143-33-9
C407	Streptozotocin	18883-66-4
C409	Strychnine and salts	57-24-9*
C446	2,4,5-T	93-76-5
C441	TCCD	1746-01-6
C447	2,4,5-TP	93-72-1
C410	1,2,4,5-Tetrachlorobenzene	95-94-3
C411	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6
C487	Tetrachlorodibenzo-p-dioxins	**
C488	Tetrachlorodibenzofurans	**
C412	Tetrachloroethane, N.O.S.	25322-20-7
C413	1,1,1,2-Tetrachloroethane	630-20-6
C414	1,1,2,2-Tetrachloroethane	79-34-5
C415	Tetrachloroethene	127-18-4
C415	Tetrachloroethylene	127-18-4
C416	Tetrachloromethane	56-23-5
C417	2,3,4,6-Tetrachlorophenol	58-90-2
C418	Tetraethyldithiopyrophosphate	3689-24-5
C419	Tetraethyl lead	78-00-2
C420	Tetraethyl pyrophosphate	107-49-3
C489	Tetranitromethane	509-14-8
C422	Thallic oxide	1314-32-5
C423	Thallium(I) acetate	563-68-8
C421	Thallium and compounds, N.O.S.	7440-28-0*
C424	Thallium(I) carbonate	6533-73-9
C425	Thallium(I) chloride	7791-12-0
C426	Thallium(I) nitrate	10102-45-1
C427	Thallium selenite	12039-52-0
C428	Thallium(I) sulfate	7446-18-6
C429	Thioacetamide	62-55-5
C251	Thiofanox	39196-18-4
C520	Thiomethanol	74-93-1
C135	Thiophenol	108-98-5
C430	Thiosemicarbazide	79-19-6
C431	Thiourea	62-56-6
C432	Thiram	137-26-8
C433	Toluene	108-88-3
C502	2,4-Toluenediamine	95-80-7
C503	2,6-Toluenediamine	823-40-5
C504	3,4-Toluenediamine	496-72-0
C505	Toluenediamine, N.O.S.	25376-45-8
C436	Toluene diisocyanate	26471-62-5
C500	o-Toluidine	95-53-4
C435	o-Toluidine hydrochloride	636-21-5
C501	p-Toluidine	106-49-0
C437	Toxophene	8001-35-2
C438	Tribromomethane	75-25-2
C439	1,2,4-Trichlorobenzene	120-82-1
C440	1,1,1-Trichloroethane	71-55-6
C441	1,1,2-Trichloroethane	79-00-5
C442	Trichloroethene	79-01-6
C442	Trichloroethylene	79-01-6
C443	Trichloromethanethiol	75-70-7
C490	*[Trichloromonoflouormethane]* ***Trichloromonofluoromethane***	75-69-4
C444	2,4,5-Trichlorophenol	95-95-4
C445	2,4,6-Trichlorophenol	88-06-2
C446	2,4,5-Trichlorophenoxyacetic acid	93-76-5
C447	2,4,5-Trichlorophenoxypropionic acid	93-72-1
C448	Trichloropropane, N.O.S.	25735-29-9
C449	1,2,3-Trichloropropane	96-18-4
C450	0,0,0-Triethyl phosphorothioate	126-68-1
C451	Trinitrobenzene	99-35-4
C452	Tris(1-aziridinyl)phosphine sulfide	52-24-4
C453	Tris(2,3-dibromopropyl)phosphate	126-72-7
C491	Trypan blue	72-57-1
C455	Uracil mustard	66-75-1
C456	Urethane	51-79-6
C457	Vanadic acid, ammonium salt	7803-55-6
C458	Vanadium pentoxide and dust	1314-62-1
C459	Vinyl chloride	75-01-4
C104	Warfarin and salts	81-81-2*
C461	Zinc cyanide	557-21-1
C462	Zinc phosphide	1314-84-7

*CAS Number is given for the parent compound only.
**More than one CAS Number applies.

(b) (No change.)

7:26-8.19 Incorporation by reference

(a)-(d) (No change.)

PUBLIC NOTICES

EDUCATION

(a)

STATE BOARD OF EDUCATION

Notice of Public Testimony Session

Wednesday, November 18, 1992

Take notice that the following agenda items are scheduled for Notice of Proposal in the November 16, 1992 New Jersey Register and are, therefore, subject to public comment. Pursuant to the policy of the New Jersey State Board of Education, a public testimony session will be held for the purpose of receiving public comment on Wednesday, November 18, 1992 from 3:00 P.M. to 6:00 P.M. in the State Board Conference Room, Department of Education, 225 West State Street, Trenton, New Jersey.

To reserve time to speak call the State Board Office at (609) 292-0739 by 12:00 noon Friday, November 13, 1992.

Rule Proposal: N.J.A.C. 6:29, Health, Safety and Physical Education (amendments).

Please note: Publication of the above items are subject to change depending upon the actions taken by the State Board of Education at the October 8, 1992 monthly public meeting.

(b)

THE COMMISSIONER

Public Notice for Special Education

Approval of Department Application for Extended Participation under Part H of the Individuals with Disabilities Education Act for Fiscal Year 1991

Take notice that the New Jersey Department of Education has received approval of its application for extended participation under Part H of the Individuals with Disabilities Education Act for fiscal year 1991 by the Federal Office of Special Education and Rehabilitative Services (OSERS) in the United States Department of Education. This approval entitles New Jersey to receive an IDEA-H grant award of $2,216,127 for fiscal year 1991. Eligible agencies receive notice of grant application procedures through the Department of Education.

Copies of the approved Part H application are available to interested parties through the Division of Special Education, 225 West State Street, CN 500, Trenton, New Jersey, 08625.

For further information regarding the Part H application, contact Arlene Roth at (609) 292-4692.

ENVIRONMENTAL PROTECTION AND ENERGY

(c)

GREEN ACRES PROGRAM

Notice of Public Hearing

Proposed Sale of Surplus Property Located at Greenwood Lake State Park

Take notice that the State of New Jersey, Department of Environmental Protection and Energy, Green Acres Program, will hold a **public hearing** to seek comments on the proposed sale of the following State-owned lands:

Block 3610, Lots 27, 18 and 19 totalling 5.77 acres located in West Milford Township, Passaic County.

The subject lands were intended to be an open space recreational facility and provide access to Greenwood Lake. However, the development of residential housing within the former project area and the location of Greenwood Lake Turnpike has rendered the park project nonviable as a recreational unit. The property will be sold at public auction and the proceeds returned to the Green Acres fund for the purchase of other land with recreational potential or conservation value.

The **public hearing** will be held on:

Monday, December 7, 1992 at 11:00 A.M. at the
West Milford Township Municipal Building
1480 Union Valley Road
West Milford, New Jersey 07480

Persons wishing to make oral presentation are asked to limit their comments to a five minute time period. Presenters should bring a copy of their comments to the hearing for use by the Department.

Interested persons may submit written comments until December 14, 1992 to:

Thomas Wells, Administrator
Green Acres Program
Department of Environmental Protection and Energy
CN 412
Trenton, NJ 08625

(d)

GREEN ACRES PROGRAM

Notice of Public Hearing

Proposed Easement on Lands Located within Assunpink Wildlife Management Area

Take notice that the State of New Jersey, Department of Environmental Protection and Energy, Green Acres Program, will hold a **public hearing** to seek comments on the proposed easement on the following state owned land:

Lands located within a portion of the Assunpink Wildlife Management Area, in the Township of Washington in Mercer County.

The Department of Transportation seeks the easement for the installation of left turn areas for Route 130 which will be part of their overall safety improvement project.

One location selected to ensure adequate circulation is in proximity of the Assunpink Creek crossing of Route 130 and impacts a portion (approximately 1,140 square feet) of the Assunpink Creek Wildlife Management Area.

The **public hearing** will be held on:

Thursday, December 3, 1992 at 10:00 A.M. at the
Assunpink Wildlife Management Conservation Center
Eldridge Road
Roosevelt, New Jersey
(609) 259-7954

Persons wishing to make oral presentation are asked to limit their comments to a five minute time period. Presenters should bring a copy of their comments to the hearing for use by the Department. The hearing records will be kept open for a period of seven days following the date of the public hearing so that additional written comments can be received.

Interested persons may submit written comments until December 14, 1992 to:

Thomas Wells, Administrator
Green Acres Program
Department of Environmental Protection and Energy
CN 412
Trenton, New Jersey 08625

HEALTH

(a)

DIVISION OF HEALTH FACILITIES EVALUATION AND LICENSING

Notice of Receipt of Petition for Rulemaking

Hospital Licensing Standards

N.J.A.C. 8:43G-4.1, 8:43G-5.2, and 8:31B-3.35

Petitioner: Frank R. Ciesla, Esq., representing the New Jersey Hospital Association.

Take notice that on September 16, 1992, the New Jersey State Department of Health received a petition from Frank R. Ciesla, Esq., representing the New Jersey Hospital Association, requesting that the Department amend its hospital licensing standards rule, N.J.A.C. 8:43G-4.1 and 8:43G-5.2, and promulgate a new rule to be known as N.J.A.C. 8:31B-3.35, Non-resident care costs. These amendments and new rules are requested by the New Jersey Hospital Association to relieve hospitals of the regulatory obligations which require they render care to all patients, without regard to the patient's state of residence and need for care.

The requested amendments would require hospitals only to render care to New Jersey residents or those non-residents who are in need of emergency care due to life-threatening conditions. The requested new rule would establish a mechanism enabling hospitals to receive reimbursement for non-life-threatening care rendered to bad debt and indigent non-residents through a hospital-specific cost factor.

Full text of the New Jersey Hospital Association petition is on file at the New Jersey State Department of Health. Requests to view the petition can be made by writing to:

Susan Eates
Office of Legal and Regulatory Affairs
CN 360
Trenton, NJ 08625-0360.

STATE

(b)

NEW JERSEY STATE COUNCIL ON THE ARTS

Notice of Grants Application Process and Deadlines

Fellowship Support

Fiscal Year 1994 (July 1, 1993-June 30, 1994)

Take notice that the New Jersey State Council on the Arts, acting under the authority of P.L. 1966, c.214, hereby announces, in accordance with N.J.S.A. 52:14-34.4 et seq., the availability of the following grant program.

Name of program: Fellowship Support, Fiscal Year 1994.

Purpose: In recognition of outstanding artistic work, Fellowships are awarded to New Jersey artists to enable them to pursue their artistic goals. Fellowships are awarded in choreography, music composition, opera/music theatre composition, theatre (mime), experimental art, graphics, painting, sculpture, design arts, crafts, photography, media arts (film/video), prose, playwrighting, poetry, and interdisciplinary.

Eligible applicants: Artists who are residents of the State of New Jersey (all awards are subject to verification of New Jersey residency); artists who have not received a fellowship since Fiscal Year 1990-91; artists who are not students matriculating in an undergraduate program at the time of application. (Fellowships do not provide funding for scholarships or academic study in pursuit of a college degree). NOTE: Artists may apply in one discipline only and only in one category of a single discipline.

Ineligible applicants: Artists who are residents in another state, are students matriculating in an undergraduate program at the time of application, or who received an NJSCA Fellowship during Fiscal Years 1991-92 or 1992-93.

Amount of awards: Contingent upon the availability of funds and Council action. For Fiscal Year 93, 73 awards ranging from $5,000 to $12,000 were made from among the 993 applicants.

Match: This is a non-matching award.

Deadline for submission: Complete applications, including all support materials, must be postmarked or delivered to Council Offices no later than February 4, 1993 (5:00 P.M. if delivered in person to office).

Decision-making process: All complete applications by eligible applicants are evaluated by an independent panel of experts in the applicant's discipline for evidence of artistic excellence and promise, which is the sole criteria. The Council reviews the evaluations of all applicants as well as Council funding priorities and issues. Its final recommendations are voted upon by the full Council at its annual meeting, tentatively scheduled for July 27, 1993. Applicants are notified in writing of the Council's decision within six weeks following the annual meeting.

To receive a set of guidelines and application forms, call (609) 292-6130 or write FELLOWSHIPS 94, New Jersey State Council on the Arts, CN-306, Trenton, NJ 08625.

TRANSPORTATION

(c)

DIVISION OF POLICY, CAPITAL PROGRAMMING, AND AUTHORITIES

Permits

Notice of Permit Extensions

Public Notice

Take notice that, pursuant to the "Permit Extension Act," P.L. 1992, c.82, and subject to the limitations therein set forth, the following permit approvals granted by the Department of Transportation in compliance with N.J.S.A. 27:7-1 et seq, 27:1A-5, and 27:1A-6, and N.J.A.C. 16:41, that expired on or after January 1, 1989, or that are scheduled to expire at any time prior to December 31, 1994, are hereby extended to December 31, 1994:

1. Access Driveway Permits
2. Pole Permits
3. Drainage Permits
4. Bridge Attachment Permits
5. Street Intersection Permits
6. Curb Construction Permits
7. Sidewalk Permits
8. Left Turn Slot Permits
9. Grading Permits
10. Test Hole Permits
11. Guide Rail Permits
12. Landscape Permits
13. Cross Over Permits
14. Concept Approvals
15. Agreements in lieu of or as a condition of a permit issued by the Department of Transportation related to physical development and concerning access to State highways or improvements to the State highway system.

When an approval by the Department is extended pursuant to the provisions of this Act, all terms and conditions of the original approval still continue; that is the exclusions, limits, and restrictions, of the original permit are also extended.

The Department reserves the right to modify permits and agreements, at no cost to the permittee or developer, to make them conform with conditions which currently exist.

REGISTER INDEX OF RULE PROPOSALS AND ADOPTIONS

The research supplement to the New Jersey Administrative Code

A CUMULATIVE LISTING OF CURRENT PROPOSALS AND ADOPTIONS

The **Register Index of Rule Proposals and Adoptions** is a complete listing of all active rule proposals (with the exception of rule changes proposed in this Register) and all new rules and amendments promulgated since the most recent update to the Administrative Code. Rule proposals in this issue will be entered in the Index of the next issue of the Register. **Adoptions promulgated in this Register have already been noted in the Index by the addition of the Document Number and Adoption Notice N.J.R. Citation next to the appropriate proposal listing.**

Generally, the key to locating a particular rule change is to find, under the appropriate Administrative Code Title, the N.J.A.C. citation of the rule you are researching. If you do not know the exact citation, scan the column of rule descriptions for the subject of your research. To be sure that you have found all of the changes, either proposed or adopted, to a given rule, scan the citations above and below that rule to find any related entries.

At the bottom of the index listing for each Administrative Code Title is the Transmittal number and date of the latest looseleaf update to that Title. Updates are issued monthly and include the previous month's adoptions, which are subsequently deleted from the Index. To be certain that you have a copy of all recent promulgations not yet issued in a Code update, retain each Register beginning with the September 8, 1992 issue.

If you need to retain a copy of all currently proposed rules, you must save the last 12 months of Registers. A proposal may be adopted up to one year after its initial publication in the Register. Failure to adopt a proposed rule on a timely basis requires the proposing agency to resubmit the proposal and to comply with the notice and opportunity-to-be-heard requirements of the Administrative Procedure Act (N.J.S.A. 52:14B-1 et seq.), as implemented by the Rules for Agency Rulemaking (N.J.A.C. 1:30) of the Office of Administrative Law. If an agency allows a proposed rule to lapse, "Expired" will be inserted to the right of the Proposal Notice N.J.R. Citation in the next Register following expiration. Subsequently, the entire proposal entry will be deleted from the Index. See: N.J.A.C. 1:30-4.2(c).

Terms and abbreviations used in this Index:

N.J.A.C. Citation. The New Jersey Administrative Code numerical designation for each proposed or adopted rule entry.

Proposal Notice (N.J.R. Citation). The New Jersey Register page number and item identification for the publication notice and text of a proposed amendment or new rule.

Document Number. The Registry number for each adopted amendment or new rule on file at the Office of Administrative Law, designating the year of adoption of the rule and its chronological ranking in the Registry. As an example, R.1992 d.1 means the first rule adopted in 1992.

Adoption Notice (N.J.R. Citation). The New Jersey Register page number and item identification for the publication notice and text of an adopted amendment or new rule.

Transmittal. A series number and supplement date certifying the currency of rules found in each Title of the New Jersey Administrative Code: Rule adoptions published in the Register after the Transmittal date indicated do not yet appear in the loose-leaf volumes of the Code.

N.J.R. Citation Locator. An issue-by-issue listing of first and last pages of the previous 12 months of Registers. Use the locator to find the issue of publication of a rule proposal or adoption.

MOST RECENT UPDATE TO THE ADMINISTRATIVE CODE: SUPPLEMENT AUGUST 17, 1992

NEXT UPDATE: SUPPLEMENT SEPTEMBER 21, 1992

Note: If no changes have occurred in a Title during the previous month, no update will be issued for that Title.

N.J.R. CITATION LOCATOR

If the N.J.R. citation is between:	Then the rule proposal or adoption appears in this issue of the Register	If the N.J.R. citation is between:	Then the rule proposal or adoption appears in this issue of the Register
23 N.J.R. 3193 and 3402	November 4, 1991	24 N.J.R. 1841 and 1932	May 18, 1992
23 N.J.R. 3403 and 3548	November 18, 1991	24 N.J.R. 1933 and 2102	June 1, 1992
23 N.J.R. 3549 and 3678	December 2, 1991	24 N.J.R. 2103 and 2314	June 15, 1992
23 N.J.R. 3679 and 3840	December 16, 1991	24 N.J.R. 2315 and 2486	July 6, 1992
24 N.J.R. 1 and 164	January 6, 1992	24 N.J.R. 2487 and 2650	July 20, 1992
24 N.J.R. 165 and 318	January 21, 1992	24 N.J.R. 2651 and 2752	August 3, 1992
24 N.J.R. 319 and 508	February 3, 1992	24 N.J.R. 2753 and 2970	August 17, 1992
24 N.J.R. 509 and 672	February 18, 1992	24 N.J.R. 2971 and 3202	September 8, 1992
24 N.J.R. 673 and 888	March 2, 1992	24 N.J.R. 3203 and 3454	September 21, 1992
24 N.J.R. 889 and 1138	March 16, 1992	24 N.J.R. 3455 and 3578	October 5, 1992
24 N.J.R. 1139 and 1416	April 6, 1992	24 N.J.R. 3579 and 3784	October 19, 1992
24 N.J.R. 1417 and 1658	April 20, 1992	24 N.J.R. 3785 and 4144	November 2, 1992
24 N.J.R. 1659 and 1840	May 4, 1992		

N.J.A.C. CITATION		PROPOSAL NOTICE (N.J.R. CITATION)	DOCUMENT NUMBER	ADOPTION NOTICE (N.J.R. CITATION)
ADMINISTRATIVE LAW—TITLE 1				
1:1-1.5, App. A	Conduct of administrative law judges	24 N.J.R. 2755(a)	R.1992 d.430	24 N.J.R. 4028(a)
1:6A-9.2, 14.1, 14.4, 18.1, 18.3, 18.5	Special Education Program	24 N.J.R. 1936(a)	R.1992 d.331	24 N.J.R. 3091(a)
1:13A-1.2, 18.1, 18.2	Lemon Law hearings: exceptions to initial decision	24 N.J.R. 1843(a)	R.1992 d.430	24 N.J.R. 4028(a)
1:31-3.1	Conduct of administrative law judges	24 N.J.R. 2755(a)		
	Most recent update to Title 1: TRANSMITTAL 1992-3 (supplement May 18, 1992)			
AGRICULTURE—TITLE 2				
2:6	Animal health: biological products for diagnostic or therapeutic purposes	24 N.J.R. 2974(a)		
2:69-1.11	Commercial values of primary plant nutrients	24 N.J.R. 2318(a)	R.1992 d.373	24 N.J.R. 3511(a)
2:71-2.2, 2.4, 2.5, 2.6	Jersey Fresh Quality Grading Program	24 N.J.R. 2318(b)	R.1992 d.374	24 N.J.R. 3511(b)
2:71-2.28, 2.29	Inspection and grading charges for fruits and vegetables	24 N.J.R. 2321(a)	R.1992 d.375	24 N.J.R. 3513(a)
2:76-3.12, 4.11	Farmland Preservation Program: pre-existing uses of enrolled lands	24 N.J.R. 2831(a)		
2:76-6.15	Farmland Preservation Program: pre-existing uses on lands permanently deed restricted	24 N.J.R. 2833(a)		
2:90-1.4, 1.5	Certification of soil erosion and sediment control plans	24 N.J.R. 3587(a)		
	Most recent update to Title 2: TRANSMITTAL 1992-4 (supplement August 17, 1992)			
BANKING—TITLE 3				
3:1-2.1–2.9, 2.18, 2.20, 2.21	Branch and charter application procedures for banks, savings banks, and savings and loan associations	24 N.J.R. 3034(a)		
3:18-1, 2.1, 3, 4.1, 4.2, 5.1, 5.2, 5.3, 7.4, 7.5, 8.1, 8.2, 9, 10.5, 10.7, 10.8, 11	Secondary Mortgage Loan Act rules	24 N.J.R. 2760(a)		
3:38	Mortgage bankers and brokers	24 N.J.R. 2653(a)	R.1992 d.378	24 N.J.R. 3514(a)
3:38-1.6	Mortgage bankers and brokers: administrative correction regarding surety bonds	———	———	24 N.J.R. 3514(b)
3:38-1.9, 5.2, 5.3	Branch offices; mortgage services licensure exemption; solicitor registration	24 N.J.R. 1937(a)	R.1992 d.431	24 N.J.R. 4032(a)
	Most recent update to Title 3: TRANSMITTAL 1992-6 (supplement August 17, 1992)			
CIVIL SERVICE—TITLE 4				
	Most recent update to Title 4: TRANSMITTAL 1990-3 (supplement July 16, 1990)			
PERSONNEL—TITLE 4A				
4A:1	General rules and Department organization	24 N.J.R. 2490(a)	R.1992 d.416	24 N.J.R. 3715(a)
4A:2	Appeals, discipline, separations	24 N.J.R. 2491(a)	R.1992 d.414	24 N.J.R. 3716(a)
4A:2-2.13	Expungement from personnel files of references to disciplinary action	23 N.J.R. 2906(a)	Expired	
4A:3-5.3, 5.6, 5.9	Comparable time off restrictions	24 N.J.R. 3588(a)		
4A:4-2.6, 2.15	Promotional examinations	24 N.J.R. 3589(a)		
4A:4-3.7, 7.10, 7.12	Reinstatement of permanent employee following disability retirement	24 N.J.R. 2107(a)	R.1992 d.338	24 N.J.R. 3091(b)
4A:4-6.5	Medical and psychological examinations as condition of employment	24 N.J.R. 3596(a)		

N.J.A.C. CITATION		PROPOSAL NOTICE (N.J.R. CITATION)	DOCUMENT NUMBER	ADOPTION NOTICE (N.J.R. CITATION)
4A:4-7.11	Transfers and retention of employee rights in a consolidation	24 N.J.R. 2494(a)	R.1992 d.419	24 N.J.R. 3718(a)
4A:5	Veterans and disabled veterans preference	24 N.J.R. 2495(a)	R.1992 d.415	24 N.J.R. 3719(a)
4A:6	Leaves, hours of work, employee development	24 N.J.R. 3590(a)		
4A:6-1, 2, 3, 4, 5	Leaves, hours of work, and employee development: preproposed readoption	24 N.J.R. 2496(b)		
4A:6-1.6	Sick leave injury (SLI) benefits: carpal tunnel syndrome and asbestosis	24 N.J.R. 2108(a)	R.1992 d.413	24 N.J.R. 3720(a)
4A:6-6	Awards program: preproposed readoption	24 N.J.R. 2496(a)		
4A:7	Equal employment opportunity and affirmative action	24 N.J.R. 2496(c)	R.1992 d.420	24 N.J.R. 3721(a)
4A:9-1	Political subdivisions	24 N.J.R. 2498(a)	R.1992 d.418	24 N.J.R. 3722(a)
4A:10	Violations and penalties	24 N.J.R. 2499(a)	R.1992 d.417	24 N.J.R. 3723(a)
	Most recent update to Title 4A: TRANSMITTAL 1992-1 (supplement January 21, 1992)			
COMMUNITY AFFAIRS—TITLE 5				
5:4-2	Debarment and suspension from Department contracting	24 N.J.R. 2322(a)	R.1992 d.389	24 N.J.R. 3515(a)
5:10-25	Indirect apportionment of heating costs in multiple dwellings: methods, devices, and systems	24 N.J.R. 1844(a)	R.1992 d.390	24 N.J.R. 3515(b)
5:10-25.2	Indirect apportionment of heating costs in multiple dwellings	24 N.J.R. 3597(a)		
5:12-2.1	Homelessness Prevention Program: eligibility	23 N.J.R. 3439(a)	R.1992 d.433	24 N.J.R. 4035(a)
5:14-1.6, 2.2, 3.1, 4.1, 4.5, 4.6, 4.7	Neighborhood Preservation Balanced Housing Program: per unit developer fees and costs; other revisions	24 N.J.R. 1144(a)		
5:18-1.5, 2.4A, 2.4B, 2.7, 2.8	Uniform Fire Code: life hazard uses and permits	24 N.J.R. 2654(a)	R.1992 d.385	24 N.J.R. 3519(a)
5:18-1.5, 4.7	Uniform Fire Code: eating and drinking establishments; exemption from fire suppression system requirement	24 N.J.R. 1938(a)	R.1992 d.405	24 N.J.R. 3723(b)
5:19	Continuing care retirement communities	24 N.J.R. 1146(a)		
5:23	Uniform Construction Code	24 N.J.R. 1420(b)		
5:23-2.1, 2.15	Uniform Construction Code: licensing disputes	24 N.J.R. 4(a)		
5:23-2.5	UCC: increase in building size	24 N.J.R. 1421(a)		
5:23-2.17, 8	Asbestos Hazard Abatement Subcode	24 N.J.R. 1422(a)		
5:23-3.4, 4.4, 4.18, 4.20, 5.3, 5.5, 5.19A, 5.21, 5.22, 5.23, 5.25	Uniform Construction Code: mechanical inspector license and mechanical inspections	24 N.J.R. 3457(a)		
5:23-3.7, 3.8, 4.20	Indirect apportionment of heating costs in multiple dwellings: methods, devices, and systems	24 N.J.R. 1844(a)	R.1992 d.390	24 N.J.R. 3515(b)
5:23-3.14	Uniform Construction Code: tent permits	24 N.J.R. 2656(a)	R.1992 d.391	24 N.J.R. 3521(a)
5:23-3.21	UCC: one and two family dwelling subcode	23 N.J.R. 3444(b)		
5:23-4.5, 4.19–4.22, 4A.12, 5.21, 5.22, 8.6, 8.10, 8.18, 8.19, 12.5, 12.6	UCC: State Training Fee Report; fees	24 N.J.R. 2657(a)	R.1992 d.392	24 N.J.R. 3521(b)
5:23-4.18, 4.20	UCC enforcing agencies: minimum fees	24 N.J.R. 169(b)		
5:23-5.7	UCC: subcode official requirements	24 N.J.R. 2661(a)	R.1992 d.393	24 N.J.R. 3525(a)
5:23-5.19	UCC: elevator inspector H.H.S. requirements	24 N.J.R. 2662(a)	R.1992 d.394	24 N.J.R. 3525(b)
5:23-9.7	Uniform Construction Code: manufacturing, production and process equipment exemption	24 N.J.R. 3458(a)		
5:25-5.4	State new home warranty plan contributions	24 N.J.R. 2663(a)	R.1992 d.395	24 N.J.R. 3525(c)
5:26-2.3, 2.4	Planned real estate development full disclosure: fees	24 N.J.R. 2657(a)	R.1992 d.392	24 N.J.R. 3521(b)
5:30-8.2	Unbudgeted school aid	24 N.J.R. 2766(a)	R.1992 d.426	24 N.J.R. 3723(c)
5:33-1.2, 1.3, 1.5–1.8	Municipal tax collection procedures	24 N.J.R. 2766(a)	R.1992 d.426	24 N.J.R. 3723(c)
5:33-3.2, 3.3, 3.6, 3.8–3.11	Tenant Property Tax Rebate Program	24 N.J.R. 3205(a)		
5:33-4	Property tax and mortgage escrow account transactions	24 N.J.R. 2664(a)	R.1992 d.400	24 N.J.R. 3527(a)
5:34-7	Cooperative purchasing by local contracting units	24 N.J.R. 2667(a)	R.1992 d.401	24 N.J.R. 3529(a)
5:80-32	Housing and Mortgage Finance Agency: project cost certification	24 N.J.R. 2208(a)		
5:91	Council on Affordable Housing: procedural rules	24 N.J.R. 2671(a)		
	Most recent update to Title 5: TRANSMITTAL 1992-8 (supplement August 17, 1992)			
MILITARY AND VETERANS' AFFAIRS—TITLE 5A				
5A:5	State veterans' facilities: admission criteria, care maintenance fee, transfer or discharge	24 N.J.R. 2499(b)	R.1992 d.372	24 N.J.R. 3311(a)
	Most recent update to Title 5A: TRANSMITTAL 1992-1 (supplement February 18, 1992)			
EDUCATION—TITLE 6				
6:3-2.6	Conditions for access to pupil records	24 N.J.R. 3038(a)		
6:8	Thorough and efficient system of public schools	24 N.J.R. 3039(a)		
6:8-6	Programs and services for pupils at risk	24 N.J.R. 3494(a)		
6:8-9	Educational improvement plans in special needs districts	24 N.J.R. 2323(a)	R.1992 d.396	24 N.J.R. 3535(b)

N.J.A.C. CITATION		PROPOSAL NOTICE (N.J.R. CITATION)	DOCUMENT NUMBER	ADOPTION NOTICE (N.J.R. CITATION)
6:12-1.2, 1.7–1.10, 1.14	Governor's Teaching Scholars Program	24 N.J.R. 3050(a)		
6:21-5, 6, 6A, 6B, 6C, 8, 9	Pupil transportation: school bus and small vehicle standards	24 N.J.R. 2109(a)	R.1992 d.397	24 N.J.R. 4069(a)
6:21-6A.6	Pupil transportation: administrative correction to N.J.A.C. 6:21-6A.6 regarding school bus color	24 N.J.R. 2325(a)		
6:29-2.4	Attendance at school by pupils or adults infected by HIV	24 N.J.R. 2124(a)	R.1992 d.398	24 N.J.R. 3538(a)
6:29-8	Nonpublic school nursing services	24 N.J.R. 3495(a)		
6:31-1.1–1.7, 1.9–1.16	Multiple indicators for exit from bilingual programs	24 N.J.R. 3497(a)		
6:64	Public, school, and college libraries	24 N.J.R. 2126(a)	R.1992 d.399	24 N.J.R. 3538(b)
	Most recent update to Title 6: TRANSMITTAL 1992-4 (supplement August 17, 1992)			
ENVIRONMENTAL PROTECTION AND ENERGY—TITLE 7				
7:0	Well construction and sealing: request for public comment regarding comprehensive rules	24 N.J.R. 3286(a)		
7:1-1	Organization of Department	Exempt	R.1992 d.441	24 N.J.R. 4085(a)
7:1-1.3, 1.4	Delegations of authority within the Department	23 N.J.R. 3276(a)		
7:1-2	Third-party appeals of permit decisions	23 N.J.R. 3278(a)		
7:1C-1.5, 1.6, 1.7	Ninety-day construction permit fees	24 N.J.R. 2768(a)		
7:1J	Spill Compensation and Control Act: processing of damage claims (repeal 17:26)	24 N.J.R. 1255(a)		
7:1K	Pollution Prevention Program	24 N.J.R. 3609(a)		
7:6-1.24, 9.2	Boating rules: rotating lights; "personal watercraft"	24 N.J.R. 1694(a)		
7:7-1.7	Coastal Permit Program fees	24 N.J.R. 2768(a)		
7:7-4.5, 4.6	Coastal Permit Program: public hearings; final review of applications	23 N.J.R. 3280(a)		
7:7A-1.4, 2.7, 8.10	Freshwater wetlands protection: project permit exemptions; hearings on contested letters of interpretation	24 N.J.R. 912(b)		
7:7A-16.1	Freshwater wetlands permit fees	24 N.J.R. 2768(a)		
7:7E-7.5	Alternative traffic reduction programs in Atlantic City	24 N.J.R. 1986(a)		
7:9-6	Ground water quality standards	24 N.J.R. 181(a)		
7:9A-1.1, 1.2, 1.6, 1.7, 2.1, 3.3, 3.4, 3.5, 3.7, 3.9, 3.10, 3.12, 3.14, 3.15, 5.8, 6.1, 8.2, 9.2, 9.3, 9.5, 9.6, 9.7, 10.2, 12.2–12.6, App. A, B	Individual subsurface sewage disposal systems	24 N.J.R. 1987(a)		
7:12	Shellfish-growing water classifications	24 N.J.R. 3657(a)		
7:14A-1, 2, 3, 5–14, App. F	NJPDES program and Clean Water Enforcement Act requirements	24 N.J.R. 344(b)		
7:14A-1.2, 1.7–1.10, 2.1, 2.4, 2.5, 2.12, 2.13, 3.8, 3.9, 3.11, 3.12, 3.13, 3.17, App. A, B, 7.8, 9.1, 10.3, 14.8, App. H	Statewide Stormwater Permitting Program	24 N.J.R. 2352(a)	R.1992 d.434	24 N.J.R. 4088(a)
7:14B	Underground storage tanks	24 N.J.R. 2975(a)		
7:14B	Underground storage tanks: public hearing	24 N.J.R. 3286(b)		
7:15-1.5, 3.4, 3.6, 4.1, 5.22	Statewide water quality management planning	24 N.J.R. 344(b)		
7:19-3.9	Water supply allocation permits: fee schedule	_____	_____	24 N.J.R. 4121(a)
7:25-5.13	1992-93 Game Code: hunting prohibition in Monmouth County	24 N.J.R. 2773(a)	R.1992 d.423	24 N.J.R. 3725(a)
7:25-6	1993-94 Fish Code	24 N.J.R. 2539(a)	R.1992 d.439	24 N.J.R. 4122(a)
7:25-11	Introduction of imported or non-native shellfish or finfish into State's marine waters	24 N.J.R. 3660(a)		
7:25-16.1	Defining freshwater fishing lines	24 N.J.R. 204(a)		
7:25-16.1	Freshwater fishing line for Rahway River in Union County	24 N.J.R. 2977(a)		
7:25-18.1	Filleting of flatfish at sea	24 N.J.R. 1456(a)		
7:25-18.1, 18.5	Atlantic sturgeon management	24 N.J.R. 205(a)		
7:25-18.5	Haul seining and fyke netting regulation	24 N.J.R. 207(a)		
7:25-18.16	Taking of horseshoe crabs	24 N.J.R. 2978(a)		
7:26-1.4, 2.13, 6.3, 6.8	Solid waste management: scrap metal shredding residue, animal manure, interdistrict and intradistrict flow	24 N.J.R. 1995(a)		
7:26-2.11, 2.13, 2B.9, 2B.10, 6.2, 6.8	Solid waste flow through transfer stations and materials recovery facilities	24 N.J.R. 3286(c)		

N.J.A.C. CITATION		PROPOSAL NOTICE (N.J.R. CITATION)	DOCUMENT NUMBER	ADOPTION NOTICE (N.J.R. CITATION)
7:26-4.3	Thermal destruction facilities: compliance monitoring fees and postponed operative date	24 N.J.R. 1999(a)		
7:26-4.3	Thermal destruction facilities: extension of comment period regarding compliance monitoring fees	24 N.J.R. 2687(a)		
7:26-4A.6	Hazardous waste program fees: annual adjustment	24 N.J.R. 2001(a)		
7:26-5.4, 7.4, 7.6, 9.4, 12.4	Hazardous waste manifest discrepancies	23 N.J.R. 3607(a)		
7:26-6.5, 6.6	Interdistrict and intradistrict solid waste flow	24 N.J.R. 3291(a)		
7:26-5.4, 7.4, 7.6, 9.4, 12.4	Hazardous waste manifest discrepancies: reopening of comment period	24 N.J.R. 2002(a)		
7:26-8.2	Hazardous waste exclusions: household waste	23 N.J.R. 3410(a)		
7:26-8.2	Hazardous waste exclusions: used chlorofluorocarbon refrigerants	23 N.J.R. 3692(a)		
7:26-8.16	Hazardous constituents in waste streams	23 N.J.R. 3093(b)	R.1992 d.440	24 N.J.R. 4126(a)
7:26-8.16	Hazardous constituents in waste streams: reopening of comment period	24 N.J.R. 2003(a)		
7:26-8.20	Used motor oil recycling	24 N.J.R. 2383(a)		
7:26A-6	Used motor oil recycling	24 N.J.R. 2383(a)		
7:26B	Environmental Cleanup Responsibility Act rules	24 N.J.R. 2773(b)		
7:26B-1.3, 1.5, 1.6, 1.8, 1.9, 1.10, 1.13, 5.4, 13.1, App. A	Environmental Cleanup Responsibility Act rules	24 N.J.R. 720(a)		
7:26B-1.3, 1.5, 1.6, 1.8, 1.9, 1.10, 1.13, 5.4, 13.1, App. 1	ECRA rules: extension of comment period	24 N.J.R. 1281(a)		
7:26B-7, 9.3	Remediation of contaminated sites: Department oversight	24 N.J.R. 1281(b)		
7:26C	Remediation of contaminated sites: Department oversight	24 N.J.R. 1281(b)		
7:26D	Cleanup standards for contaminated sites	24 N.J.R. 373(a)		
7:26D	Cleanup standards for contaminated sites: additional public hearing and extension of comment period	24 N.J.R. 1458(b)		
7:26D	Cleanup standards for contaminated sites: additional public hearing and extension of comment period	24 N.J.R. 2003(b)		
7:26E	Technical requirements for contaminated site remediation	24 N.J.R. 1695(a)		
7:27-1.4, 1.6–1.30, 8.4, 8.14–8.24, 16.9, 21	Air contaminant emission statements from stationary sources	24 N.J.R. 2979(a)		
7:27-1.4, 1.36, 1.37, 1.38, 8.1, 8.3, 8.4, 8.24, 18	Control and prohibition of air pollution from new or altered sources: emission offsets	24 N.J.R. 3459(a)		
7:27-25	Control and prohibition of air pollution by vehicular fuels: public meeting and hearing on oxygenated fuels program	24 N.J.R. 2128(a)		
7:27-25.1–25.4, 25.7–25.12	Control and prohibition of air pollution by vehicular fuels	24 N.J.R. 2386(a)	R.1992 d.382	24 N.J.R. 3539(a)
7:27-26	Low Emissions Vehicle Program	24 N.J.R. 1315(a)		
7:27-26	Low Emissions Vehicle Program: correction to proposal	24 N.J.R. 1458(c)		
7:27A-3.10	Civil administrative penalties for violations of Air Pollution Control Act	24 N.J.R. 2386(a)	R.1992 d.382	24 N.J.R. 3539(a)
7:27A-3.10	Civil administrative penalties for violations of emission statement requirements	24 N.J.R. 2979(a)		
7:30	Pesticide Control Code	24 N.J.R. 2776(a)		
7:36-9	Green Acres Program: nonprofit land acquisition	24 N.J.R. 2405(a)		
7:61	Commissioners of Pilotage: licensure of Sandy Hook pilots	24 N.J.R. 3477(a)		
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8:21-3.13	Repeal (see 8:21-3A)	24 N.J.R. 3100(a)		
8:21-3A	Registration of manufacturers and wholesale distributors of non-prescription drugs, and manufacturers and wholesale distributors of devices	24 N.J.R. 3100(a)		
8:21-3A	Registration of wholesale distributors of prescription drugs	24 N.J.R. 2410(b)	R.1992 d.354	24 N.J.R. 3100(a)
8:31A-1.5, 7.4, 7.5, App. D	SHARE Manual: per diem add-on fee assessment	24 N.J.R. 2810(a)		
8:31A-App. A	SHARE Manual: administrative correction regarding Cost Center Record	———	———	24 N.J.R. 3103(a)
8:31B-4.40	Uncompensated care collection procedures	24 N.J.R. 1124(c)		
8:33	Health care facilities and services: Certificate of Need application and review process	24 N.J.R. 2222(a)	R.1992 d.342	24 N.J.R. 3104(a)

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8:33-3.11	Certificate of Need process for demonstration and research projects	24 N.J.R. 3104(a)		
8:33C	Regionalized perinatal services: Certificate of Need criteria and standards	24 N.J.R. 2005(a)	R.1992 d.343	24 N.J.R. 3131(a)
8:33C-2.7, 7.2	Regionalized perinatal services: administrative corrections	_____	_____	24 N.J.R. 3727(a)
8:33H	Long-term care services: Certificate of Need policy manual	24 N.J.R. 2014(a)	R.1992 d.344	24 N.J.R. 3144(a)
8:33R	Psychiatric health care facilities and services: policy manual for planning and certificate of need reviews	24 N.J.R. 3598(a)		
8:34-1.7	Licensure examination fee for nursing home administrator	24 N.J.R. 2414(a)	R.1992 d.345	24 N.J.R. 3161(a)
8:34-1.7	Nursing home administrator licensure: examination fee	_____	_____	24 N.J.R. 3179(a)
8:35A	Maternal and child health consortia: licensing standards	24 N.J.R. 2027(a)	R.1992 d.346	24 N.J.R. 3162(a)
8:41	Mobile intensive care programs	24 N.J.R. 3255(b)		
8:43	Residential health care facilities: standards for licensure	24 N.J.R. 2506(a)		
8:43A	Ambulatory care facilities: public meeting and request for comments regarding Manual of Standards for Licensure	24 N.J.R. 3603(a)		
8:43E	Recodification (see 8:33R)	24 N.J.R. 3598(a)		
8:43G-19	Hospital licensing standards: obstetrics	24 N.J.R. 2045(a)	R.1992 d.347	24 N.J.R. 3165(a)
8:43I	Hospital Policy Manual	24 N.J.R. 3280(a)		
8:45-1.3, 2.1	Blood bank licensure fees and Department laboratory services charges	24 N.J.R. 2508(a)	R.1992 d.427	24 N.J.R. 3725(c)
8:65-2.5	Controlled dangerous substances: physical security controls	24 N.J.R. 174(a)		
8:71	Interchangeable drug products (see 24 N.J.R. 145(b))	23 N.J.R. 3258(a)	R.1992 d.136	24 N.J.R. 948(b)
8:71	Interchangeable drug products	24 N.J.R. 59(b)	R.1992 d.137	24 N.J.R. 949(a)
8:71	Interchangeable drug products (see 24 N.J.R. 947(b), 1897(a), 2560(a))	24 N.J.R. 61(a)	R.1992 d.349	24 N.J.R. 3173(b)
8:71	Interchangeable drug products (see 24 N.J.R. 1896(a), 2560(b))	24 N.J.R. 735(a)	R.1992 d.350	24 N.J.R. 3174(a)
8:71	Interchangeable drug products	24 N.J.R. 1673(a)	R.1992 d.296	24 N.J.R. 2559(a)
8:71	Interchangeable drug products (see 24 N.J.R. 2557(b))	24 N.J.R. 1674(a)	R.1992 d.348	24 N.J.R. 3173(a)
8:71	Interchangeable drug products (see 24 N.J.R. 3174(c))	24 N.J.R. 2414(b)	R.1992 d.428	24 N.J.R. 3728(a)
8:71	Interchangeable drug products	24 N.J.R. 2997(a)		
8:100-14.8, 14.13	State Health Plan: hospital inpatient services	24 N.J.R. 2704(a)		
8:100-16	State Health Plan: correction to Economic Impact statement regarding Long-Term Care Services	24 N.J.R. 1675(a)		

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9:1-1.2, 3.1, 3.2, 3.4, 3.5	Teaching university	24 N.J.R. 1464(a)		
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9:6A	State college personnel system	24 N.J.R. 3052(a)		
9:7	Student Assistance Programs	24 N.J.R. 2510(a)		
9:9-7.6	NJCLASS Program: loan interest rate	24 N.J.R. 2687(b)	R.1992 d.436	24 N.J.R. 4035(b)
9:9-7.6, 7.7	NJCLASS program: student loan interest rates	_____	_____	24 N.J.R. 3180(a)
9:11-1.5	Educational Opportunity Fund Program: financial eligibility for undergraduate grants	24 N.J.R. 1859(a)	R.1992 d.353	24 N.J.R. 3091(c)
9:16-1	Primary Care Physician and Dentist Loan Redemption Program	24 N.J.R. 1192(a)		

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10:16	Child Death and Critical Incident Review Board concerning children under DYFS supervision	24 N.J.R. 3506(a)		
10:35	County psychiatric facilities	24 N.J.R. 208(a)	R.1992 d.339	24 N.J.R. 3339(a)
10:46-1.3, 2.1, 3.2, 4.1, 5	Developmental Disabilities: determination of eligibility for division services	24 N.J.R. 211(a)		
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10:51	Pharmaceutical Services Manual	24 N.J.R. 3053(a)		
10:53A	Hospice Services Manual	24 N.J.R. 2778(a)	R.1992 d.442	24 N.J.R. 4036(a)
10:60-2.3, 3.15, 4.2	Home Care Services: personal care assistant services; eligibility for Home Care Expansion Program	24 N.J.R. 2687(c)	R.1992 d.438	24 N.J.R. 4054(a)
10:63-1	Long-Term Care Services Manual: administrative changes	_____	_____	24 N.J.R. 3728(b)

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10:71-5.6	Medicaid Only income eligibility standards for hospice care	24 N.J.R. 2778(a)	R.1992 d.442	24 N.J.R. 4036(a)
10:72	New Jersey Care: Special Medicaid Programs Manual	24 N.J.R. 2145(a)	R.1992 d.364	24 N.J.R. 3343(a)
10:72-1.1, 3.4, 4.1	New Jersey Care: Medicaid eligibility of children	24 N.J.R. 1860(a)		
10:80 et al.	Designation of Division of Economic Assistance as Division of Family Development	————	————	24 N.J.R. 3729(a)
10:81-1.6, 1.11, 1.12, 2.1, 2.2, 2.4, 2.7, 2.8, 3.8, 3.9, 3.18, 3.19, 4.2, 4.23, 5.2, 5.7, 5.8, 7.1, 7.4, 7.20, 8.22, 8.24, 9.1, 14.1, 14.18, 14.20, 14.21	Public Assistance Manual: Family Development Program and REACH/JOBS provisions	24 N.J.R. 2147(a)	R.1992 d.366	24 N.J.R. 3345(a)
10:81-11.4, 11.9	Public Assistance Manual: provision of information regarding services to AFDC clients; legal representation in child support matters	24 N.J.R. 2327(a)		
10:81-11.5, 11.7, 11.9, 11.20, 11.21	Public Assistance Manual: child support and paternity services	24 N.J.R. 2328(a)		
10:82-1.2–1.5, 1.11, 2.7–2.11, 4.4, 4.8	Assistance Standards Handbook: AFDC program requirements	24 N.J.R. 2155(a)	R.1992 d.367	24 N.J.R. 3352(a)
10:82-4.9	Assistance Standards Handbook: DYFS monthly foster care rates	24 N.J.R. 2160(a)	R.1992 d.340	24 N.J.R. 3092(a)
10:83	Service Programs for Aged, Blind or Disabled Persons	24 N.J.R. 3074(a)		
10:83-1.2	Emergency Assistance benefits for SSI recipients	24 N.J.R. 326(a)		
10:83-1.2	Emergency Assistance benefits for SSI recipients: public hearing and extension of comment period	24 N.J.R. 1204(a)		
10:85-1.1, 2.1, 3.1–3.5, 4.1, 4.2, 5.1–5.8, 6.8, 7.2, App. D	General Assistance program: time-limited eligibility for employable persons; alien eligibility; payment of hospital medical services	24 N.J.R. 3075(a)		
10:85-3.2, 10.1	General Assistance Manual: Family Development Program and work training requirements	24 N.J.R. 2160(b)	R.1992 d.368	24 N.J.R. 3356(a)
10:86	Family Development Program Manual	24 N.J.R. 2161(a)	R.1992 d.369	24 N.J.R. 3357(a)
10:87-2.4, 2.6, 2.31, 2.39, 3.8, 3.14, 4.1, 4.8, 5.1, 5.9, 5,10, 6.9, 6.20, 10.3, 10.6, 10.18, 11.26, 11.29, 12.1	Food Stamp Program revisions	24 N.J.R. 3207(b)		
10:87-12	Food Stamp Program: income eligibility, deduction, and coupon allotment standards	————	————	24 N.J.R. 3769(b)
10:97-1.3, 7.3	Business Enterprise Program for the blind and visually impaired: promotion and transfer	24 N.J.R. 2798(a)		
10:120-1.2	Youth and Family Services: scope of responsibilities and services	23 N.J.R. 3420(b)		
10:121A	Manual of Requirements for Adoption Agencies	24 N.J.R. 3500(a)		
10:122B	Division of Youth and Family Services: requirements for foster care	23 N.J.R. 3693(a)		
10:122C	DYFS: approval of foster homes	23 N.J.R. 3696(a)		
10:122D	DYFS: foster care services	23 N.J.R. 3703(a)		
10:122E	DYFS: removal of foster children and closure of foster homes	23 N.J.R. 3708(a)		
10:123-3.4	Personal needs allowance for eligible residents of residential health care facilities and boarding houses	24 N.J.R. 3088(a)		
10:124	Children's Shelter Facilities and Homes: manual of standards	24 N.J.R. 3089(a)		
10:131	DYFS: Adoption Assistance and Child Welfare Act of 1980 requirements	24 N.J.R. 2522(a)	R.1992 d.437	24 N.J.R. 4055(a)
10:133	DYFS: initial response and service delivery	23 N.J.R. 3714(a)		
10:133A	DYFS: initial response and screening	23 N.J.R. 3717(a)		
10:133B	DYFS: information and referral	23 N.J.R. 3720(a)		
10:133C-3	DYFS: assessment of family service needs	24 N.J.R. 217(a)		

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10A:6	Inmate access to courts	24 N.J.R. 2799(a)		
10A:8	Inmate orientation and handbook	24 N.J.R. 2330(a)	R.1992 d.356	24 N.J.R. 3315(a)

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11:1-32.4	Automobile insurance: limited assignment distribution servicing carriers	24 N.J.R. 519(a)		
11:1-32.4	Workers' compensation self-insurance	24 N.J.R. 1944(a)		
11:1-32.4	Workers' compensation self-insurance: extension of comment period	24 N.J.R. 2708(b)		
11:1-33	Public Advocate reimbursement disputes	24 N.J.R. 2706(a)		
11:2-17.7	Payment of health insurance claims	23 N.J.R. 3196(c)		
11:2-17.11	Payment of third-party claims: written notice to claimant	24 N.J.R. 522(a)		
11:2-26	Insurer's annual audited financial report	24 N.J.R. 1940(a)		
11:2-26	Insurer's annual audited financial report: extension of comment period	24 N.J.R. 2708(a)		
11:2-33	Workers' compensation self-insurance	24 N.J.R. 1944(a)		
11:2-33	Workers' compensation self-insurance: extension of comment period	24 N.J.R. 2708(b)		
11:2-35.1–35.6	Insurer relief from FAIR Act obligations	24 N.J.R. 3212(a)		
11:3-2	Personal automobile insurance plan	24 N.J.R. 331(a)	R.1992 d.370	24 N.J.R. 3400(a)
11:3-2A	New Jersey Automobile Full Insurance Underwriting Association claims payment deferral for residual bodily injury	24 N.J.R. 3480(a)		
11:3-3	Automobile insurance: limited assignment distribution servicing carriers	24 N.J.R. 519(a)	R.1992 d.371	24 N.J.R. 3414(a)
11:3-16.7	Automobile insurance: rating programs for physical damage coverages	24 N.J.R. 3604(a)		
11:3-19.3, 34.3	Automobile insurance eligibility rating plans: incorporation of merit rating surcharge	24 N.J.R. 2332(a)		
11:3-28.8	Reimbursement of excess medical expense benefits paid by insurers	24 N.J.R. 3215(a)		
11:3-29.1, 29.2, 29.4	Motor bus medical expense benefits coverage	24 N.J.R. 3605(a)		
11:3-29.6	Automobile PIP coverage: physical therapy services	24 N.J.R. 2998(a)		
11:3-33.2	Appeals from denial of automobile insurance: failure to act timely on written application for coverage	24 N.J.R. 2128(b)		
11:3-34.4	Automobile insurance coverage: eligible person qualifications	Emergency (expires 11-3-92)	R.1992 d.380	24 N.J.R. 3420(a)
11:3-35.5	Automobile insurance rating: eligibility points of principal driver	24 N.J.R. 2331(a)		
11:3-36.12	Automobile physical damage photo inspection	24 N.J.R. 2708(c)	R.1992 d.424	24 N.J.R. 3729(b)
11:3-42	Producer Assignment Program	Emergency (expires 11-3-92)	R.1992 d.381	24 N.J.R. 3421(a)
11:3-43	Private passenger automobile insurance: personal lines rating plans	23 N.J.R. 3221(a)		
11:4-14.1, 15.1, 16.2, 19.2, 28.3, 36	BASIC health care coverage	24 N.J.R. 1205(a)		
11:4-16.5	Individual health insurance: disability income benefits riders	24 N.J.R. 338(a)		
11:4-16.8, 23, 25	Medicare supplement coverage: minimum standards	24 N.J.R. 12(a)		
11:5-1.8	Real Estate Commission: deposit of monies paid to broker	24 N.J.R. 3483(a)		
11:5-1.9, 1.38	Real Estate Commission: fee cap for mortgage services; transmittal of funds to lenders	24 N.J.R. 1957(a)		
11:5-1.9, 1.38	Real Estate Commission: extension of comment period regarding fee cap for mortgage services; transmittal of funds to lenders	24 N.J.R. 2129(a)		
11:5-1.15	Real Estate Commission: advertising by brokers and licensees	24 N.J.R. 3484(a)		
11:5-1.16	Real Estate Commission: documentation of offers and counter-offers	24 N.J.R. 3485(a)		
11:5-1.23	Real Estate Commission: transmittal by licensees of written offers on property	24 N.J.R. 3486(a)		
11:5-1.28	Real Estate Commission: surety bond posting by prelicensure schools	24 N.J.R. 3488(a)		
11:5-1.38	Real Estate Commission: pre-proposal regarding buyer-brokers	24 N.J.R. 3488(b)		
11:7	Insurance of municipal bonds	24 N.J.R. 1958(a)	R.1992 d.425	24 N.J.R. 3729(c)
11:13	Commercial lines insurance	24 N.J.R. 2830(a)		
11:16-2	Reports to National Insurance Crime Bureau regarding motor vehicle theft or salvage	24 N.J.R. 3606(a)		
11:17-1.2, 2.3–2.15, 5.1–5.6	Insurance producer licensing	24 N.J.R. 3216(a)		
11:17A-1.2, 1.7	Appeals from denial of automobile insurance: failure to act timely on written application for coverage; premium quotation	24 N.J.R. 2128(b)		

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11:19-2	Financial Examination Monitoring System: data submission by domestic insurers	24 N.J.R. 2999(a)		
11:19-3	Financial Examination Monitoring System: data submission by surplus lines producers and insurers	24 N.J.R. 3003(a)		
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12:16-4.8	Board and room, meals and lodging in lieu of wages: 1993 rates	_____	_____	24 N.J.R. 3182(a)
12:60-3.2, 4.2	Prevailing wages on public works contracts: telecommunications worker	24 N.J.R. 2689(a)		
12:60-3.2, 4.2	Prevailing wages on public works contracts: extension of comment period	24 N.J.R. 3015(b)		
12:60-3.2, 4.2	Prevailing wages for public works: extension of comment period	24 N.J.R. 3607(a)		
12:100-4.2	Public employee safety and health: occupational exposure to bloodborne pathogens	24 N.J.R. 3607(b)		
12:100-4.2, 10, 17.1, 17.3	Safety standards for firefighters	24 N.J.R. 73(a)		
12:235-1.6	Workers' Compensation: 1993 maximum benefit rate	24 N.J.R. 3015(a)		
12:235-9.4	Workers' Compensation: appeal procedures regarding discrimination complaint decisions	24 N.J.R. 1684(a)		
12:235-9.4	Workers' Compensation appeal procedures regarding discrimination complaint decisions: extension of comment period	24 N.J.R. 3090(a)		
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13:20-37	Motor vehicles with modified chassis height	24 N.J.R. 3662(a)		
13:21-19.9	Motor Vehicle Franchise Committee: administrative hearing costs	24 N.J.R. 3015(c)		
13:28-5.1, 6.35	Schools of cosmetology and hairstyling: use of annex classrooms	24 N.J.R. 2333(a)	R.1992 d.444	24 N.J.R. 4057(a)
13:30-8.5	Board of Dentistry: complaint review procedures	24 N.J.R. 2800(a)		
13:30-8.6	Board of Dentistry: professional advertising	24 N.J.R. 2801(a)		
13:31-1.11, 1.17	Electrical contractor's business permit: telecommunications wiring exemption	24 N.J.R. 339(a)		
13:32	Rules of Board of Examiners of Master Plumbers	24 N.J.R. 2334(a)		
13:34-1.1	Board of Marriage Counselor Examiners: annual license fees and charges	24 N.J.R. 2522(b)	R.1992 d.386	24 N.J.R. 3533(a)
13:35-2.6–2.12, 2.14, 2A	Certified nurse midwife practice	23 N.J.R. 3632(a)	R.1992 d.332	24 N.J.R. 3094(a)
13:35-6.5	Medical practice: preparation of patient records	24 N.J.R. 50(a)	R.1992 d.429	24 N.J.R. 3729(d)
13:35-6.17	Corporate medical practice: petition for rulemaking and notice of delayed operative date regarding allowable fees for medications and health aids	_____	_____	24 N.J.R. 3443(b)
13:36-5.12, 5.20	Mortuary Science: licensee advertising; referral fee prohibition	24 N.J.R. 3016(a)		
13:37	Certification of homemaker-home health aides: open public forum	24 N.J.R. 1861(a)		
13:38-2.4, 4, 5.1	Board of Optometrists: issuing prescriptions; certification by examination; fees	24 N.J.R. 2802(a)	R.1992 d.443	24 N.J.R. 4058(a)
13:40-5.1	Land surveys: setting of corner markers	24 N.J.R. 51(a)		
13:40-5.1	Land surveys: extension of comment period regarding setting of corner markers	24 N.J.R. 554(a)		
13:40A-1, 2, 2A, 3.6, 6.1, 6.2, 6.3	Board of Real Estate Appraisers: certified residential classification; general appraiser; temporary visiting license; fees and designations	24 N.J.R. 3489(a)		
13:41-2.1	Board of Professional Planners: professional misconduct	24 N.J.R. 3221(a)		

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13:44-2.5, 2.7, 2.11	Veterinary Medical Examiners: referral fee prohibition; product endorsements; licensee advertising	24 N.J.R. 3017(a)		
13:44B	Per diem compensation for members of professional and occupational licensing boards	24 N.J.R. 3019(a)		
13:44E-2.7	Chiropractic practice: referral fees	24 N.J.R. 1470(a)		
13:44F	Rules of State Board of Respiratory Care	24 N.J.R. 2336(a)		
13:44G-14.1	Board of Social Work Examiners: fees for licensure, certification, and services	24 N.J.R. 2523(a)		
13:45A-9.2, 9.3, 9.4	Advertising of merchandise by manufacturer	24 N.J.R. 684(a)		
13:45A-24	Toy and bicycle safety	24 N.J.R. 3019(b)		
13:45A-24	Toy and bicycle safety: extension of comment period	24 N.J.R. 3666(a)		
13:45B	Employment and personnel services	23 N.J.R. 2470(a)	R.1992 d.357	24 N.J.R. 3316(a)
13:45B	Employment and personnel services: extension of comment period	23 N.J.R. 2919(a)		
13:46-9.17	Boxing inspectors	24 N.J.R. 3492(a)		
13:47A-1–8, 10, 11	Bureau of Securities rules	24 N.J.R. 2524(a)	R.1992 d.435	24 N.J.R. 4060(a)
13:47K-5.2	Weights and measures: magnitude of allowable variations for packaged commodities	24 N.J.R. 1233(a)		
13:54-1.15	Confidentiality of information regarding firearms permits, ID cards, licenses and registration	24 N.J.R. 3022(a)	R.1992 d.446	24 N.J.R. 4068(a)
13:71-10.5	Harness racing: programmed trainer	24 N.J.R. 2340(a)	R.1992 d.388	24 N.J.R. 3533(b)
13:72	Casino simulcasting of horse races	24 N.J.R. 3666(b)		
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14:3-3.2, 7.12	Discontinuance of fire protection service by water utility	24 N.J.R. 2341(a)		
14:3-5.1	Relocation or closing of utility office	24 N.J.R. 2132(a)		
14:3-6.5	Public records	24 N.J.R. 1966(a)		
14:3-7.15	Discontinuance of services to customers: notification of municipalities and others	24 N.J.R. 3023(a)		
14:3-10.15	Solid waste collection: customer lists	24 N.J.R. 3286(c)		
14:3-11	Solid waste collection regulatory reform	24 N.J.R. 1459(a)		
14:5A	Nuclear generating plant decommissioning: periodic cost review and trust funding reporting	23 N.J.R. 3239(b)		
14:6-5	Natural gas service: preproposal on inspection and operation of master meter systems	24 N.J.R. 1862(b)		
14:9B	Private domestic wastewater treatment facilities	24 N.J.R. 1863(a)		
14:10-5	Competitive telecommunications services	24 N.J.R. 1868(a)		
14:10-7	Telephone access to adult-oriented information	24 N.J.R. 1238(a)		
14:11	Board of Regulatory Commissioners: administrative orders	24 N.J.R. 1684(b)		
14:11-7.10	Solid waste disposal facilities: initial tariff for special in lieu payment	24 N.J.R. 3286(c)		
14:12-1.2, 3.6, 4.1–4.3, 5.3	Demand side management	24 N.J.R. 2804(a)		
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15:10-1.5, 7	Distribution of voter registration forms through public agencies: extension of comment period	24 N.J.R. 1688(a)		
15:10-1.5, 7	Distribution of voter registration forms through public agencies: extension of comment period	24 N.J.R. 2531(a)		
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16:28-1.41	Speed limit zones along Route U.S. 9 in Atlantic County	24 N.J.R. 2806(a)	R.1992 d.408	24 N.J.R. 3731(a)
16:28A-1.1, 1.2, 1.3, 1.7, 1.97, 1.106	Restricted parking and stopping along U.S. 1, U.S. 1 and 9, and Route 3 in northern and central counties, and U.S. 9 in Atlantic County	24 N.J.R. 2807(a)	R.1992 d.407	24 N.J.R. 3732(a)

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16:28A-1.4, 1.5, 1.6, 1.13, 1.30	Restricted parking and stopping zones along Routes 4 and 5 in Bergen County; Route 7 in Kearny, Jersey City, Nutley and Belleville; U.S. 22 in Readington; and Route 44 in Greenwich and West Deptford	24 N.J.R. 3024(a)		
16:28A-1.5, 1.61, 1.71	Bus stop zones along Route 5, U.S. 9W, and Route 67 in Bergen County	24 N.J.R. 3673(a)		
16:28A-1.27	Restricted parking and stopping along Route 38 in Burlington County	24 N.J.R. 3492(b)		
16:28A-1.57	Parking along U.S. 206 in Lawrence Township	24 N.J.R. 2342(a)	R.1992 d.336	24 N.J.R. 3097(a)
16:41	Permits for work or activities involving State highway rights-of-way	24 N.J.R. 2237(a)	R.1992 d.341	24 N.J.R. 3097(b)
16:53D-1.1	Zone of Rate Freedom for regular route autobus carriers: 1993 percentage maximums	24 N.J.R. 2343(a)	R.1992 d.355	24 N.J.R. 3097(c)
16:54	Licensing of aeronautical and aerospace facilities	24 N.J.R. 2542(a)		
16:54	Licensing of aeronautical and aerospace facilities: extension of comment period	24 N.J.R. 3026(a)		
16:83	Conduct and safety of public in use of NJ TRANSIT equipment and facilities	24 N.J.R. 3674(a)		
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17:3-4.1	Teachers' Pension and Annuity Fund: creditable salary	23 N.J.R. 3274(a)		
17:9-4.1, 4.5	State Health Benefits Program: "appointive officer" eligibility	24 N.J.R. 3493(a)		
17:9-4.2	State Health Benefits Program: part-time deputy attorneys general	24 N.J.R. 2345(a)		
17:9-5.6	Health maintenance organization charges: administrative correction	———	———	24 N.J.R. 4068(b)
17:20-2.1, 4.3, 4.4	Background checks and training of lottery agents and employees	24 N.J.R. 2238(a)	R.1992 d.376	24 N.J.R. 3533(c)
17:20-4.8	Sale of lottery tickets at specific locations licensed	24 N.J.R. 2239(a)	R.1992 d.378	24 N.J.R. 3534(b)
17:20-6.2	Redemption of winning lottery tickets	24 N.J.R. 2239(b)	R.1992 d.377	24 N.J.R. 3534(a)
17:26	Repeal interim rules regarding Spill Compensation and Control Act (see 7:1J)	24 N.J.R. 1255(a)		
17:28-2.8	Applications for State Employee Charitable Fund-Raising Campaign: administrative change	———	———	24 N.J.R. 3534(c)
17:42-1	Lottery prize offset against overdue child support and public assistance overpayments	24 N.J.R. 2343(b)	R.1992 d.337	24 N.J.R. 3098(a)
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18:7-3.18	Corporation Business Tax: recycling tax credit	24 N.J.R. 2809(a)		
18:7-13.1	Corporation Business Tax: abatements of penalty and interest	23 N.J.R. 3275(a)	R.1992 d.404	24 N.J.R. 3733(a)
18:22-1.3, 3.3, 6.1, 6.2, 6.3, 8.1, 9.2, 9.6, 10.1	Public utility corporations	24 N.J.R. 2531(b)		
18:26-3.2, 6.4, 11.20–11.28	Transfer Inheritance and Estate Tax: State death tax credit; tenancy by the entirety in personal property; release of safe deposit box contents	24 N.J.R. 2533(a)	R.1992 d.402	24 N.J.R. 3734(b)
18:35-1.27	Gross Income Tax: interest on overpayments	24 N.J.R. 2419(a)		
18:35-2.11	Gross income tax refunds and homestead rebates: priorities in claims to setoff	24 N.J.R. 1967(b)		
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19:4-6.28	Official Zoning Map: redesignation of site in Kearny	24 N.J.R. 2346(a)	R.1992 d.422	24 N.J.R. 3734(b)
19:8-1.2	Garden State Parkway speed limits	24 N.J.R. 3222(a)		
19:9-1.1	Definition of "New Jersey Turnpike"	24 N.J.R. 2692(a)	R.1992 d.379	24 N.J.R. 3534(d)
19:25-3.1, 12.7, 16.3, 16.5, 16.16, 16.18, 16.24, 16.25, 16.27–16.30, 16.39, 16.43, 16.48	ELEC: Pre-candidacy activity; independent expenditures; public financing of gubernatorial primary candidates	24 N.J.R. 3026(a)		
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19:31-7	EDA: Local Development Financing Fund	24 N.J.R. 2534(a)	R.1992 d.421	24 N.J.R. 3735(a)
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19:40-1.2	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:40-2.1	Organization of Commission	Exempt	R.1992 d.410	24 N.J.R. 3737(a)
19:40-2.5	Delegation of Commission authority	24 N.J.R. 2348(a)		
19:41-1.1, 2, 3.1, 4.2, 13	Casino licensure and financial stability	24 N.J.R. 3225(a)		
19:41-1.2, 3.2, 9.9A, 9.11A, 11.1–11.4	Junkets; casino service industries	24 N.J.R. 2695(b)	R.1992 d.412	24 N.J.R. 3738(a)
19:41-1.3	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:41-1.11	Casino licensee-bus company agreements	24 N.J.R. 3694(a)		
19:41-14	Renewal of employee licenses	24 N.J.R. 2133(a)		
19:42-5.9, 5.10	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:42-10	Administrative suspension of license or registration, or dismissal of application upon determination of unpaid fees or civil penalties	23 N.J.R. 3249(a)		
19:43	Casino licensure and financial stability	24 N.J.R. 3225(a)		
19:43-1.1–1.5, 1.8, 1.12, 1.13, 1.14	Junkets; casino service industries	24 N.J.R. 2695(b)	R.1992 d.412	24 N.J.R. 3738(a)
19:43-1.2	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:44-8.3	Implementation of pai gow	24 N.J.R. 558(a)	R.1992 d.411	24 N.J.R. 3753(a)
19:44-8.3	Implementation of pai gow poker	24 N.J.R. 569(a)	R.1992 d.406	24 N.J.R. 3742(a)
19:44-9.4	Gaming school tables	24 N.J.R. 1471(a)	R.1992 d.333	24 N.J.R. 3099(a)
19:45-1.1, 1.2, 1.7, 1.8, 1.10–1.16, 1.19, 1.20, 1.20A, 1.25, 1.27, 1.33, 1.46	Casino simulcasting horse races	24 N.J.R. 3695(a)		
19:45-1.1, 1.2, 1.9, 1.9B, 1.9C, 1.46	Complimentary cash and noncash gifts	24 N.J.R. 2692(b)		
19:45-1.1, 1.2, 1.11, 1.12, 1.14, 1.15, 1.16, 1.20, 1.24, 1.24A, 1.24B, 1.25, 1.25A–1.25I, 1.26, 1.27, 1.27A, 1.28, 1.29, 1.33, 1.34	Authorized financial statements: acceptance and processing	24 N.J.R. 3232(a)		
19:45-1.1, 1.2, 1.16, 1.18, 1.20, 1.33, 1.46	Exchange of coupons at gaming tables for gaming chips	24 N.J.R. 2536(a)		
19:45-1.1, 1.36A, 1.38, 1.41	Hopper storage areas in slot machines	24 N.J.R. 2137(a)	R.1992 d.360	24 N.J.R. 3336(a)
19:45-1.1, 1.40	Jackpot payouts not paid directly from slot machine	24 N.J.R. 3251(a)		
19:45-1.4, 1.7	Records on ownership; public holding	24 N.J.R. 3225(a)		
19:45-1.8	Licensee records retention and destruction	24 N.J.R. 2348(b)	R.1992 d.361	24 N.J.R. 3332(a)
19:45-1.8	Records retention schedules	24 N.J.R. 3694(b)		
19:45-1.11, 1.12	Implementation of pai gow	24 N.J.R. 558(a)	R.1992 d.411	24 N.J.R. 3753(a)
19:45-1.11, 1.12	Implementation of pai gow poker	24 N.J.R. 569(a)	R.1992 d.406	24 N.J.R. 3742(a)
19:45-1.12	Supervision of table games	24 N.J.R. 1249(b)	R.1992 d.335	24 N.J.R. 3099(c)
19:45-1.12	Baccarat staffing requirements	24 N.J.R. 2136(a)	R.1992 d.334	24 N.J.R. 3099(b)
19:45-1.14	Coin vault security	24 N.J.R. 2136(b)	R.1992 d.358	24 N.J.R. 3335(a)
19:45-1.16, 1.17, 1.36	Internal design and operation of bill changers	24 N.J.R. 1472(b)	R.1992 d.359	24 N.J.R. 3335(b)
19:45-1.19	Implementation of game of pokette	24 N.J.R. 2140(a)		
19:45-1.33	Asset numbers on slot machines and bill changers	24 N.J.R. 3253(a)		
19:45-1.42	Slot drop and slot cash storage box procedures	24 N.J.R. 2695(a)	R.1992 d.432	24 N.J.R. 4068(c)
19:45-1.46	Coupon redemption and complimentary distribution programs: reporting requirements	24 N.J.R. 3254(a)		
19:45-1.46A	Location of automated coupon redemption machines	24 N.J.R. 3255(a)		
19:46-1.1, 1.13D, 1.17, 1.18, 1.20	Implementation of game of pokette	24 N.J.R. 2140(a)		
19:46-1.2, 1.3, 1.5, 1.6, 1.9–1.20, 1.27	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:46-1.7	Quadrant wager in roulette	24 N.J.R. 1871(a)		
19:46-1.7, 1.9	Single zero roulette	24 N.J.R. 3033(a)		
19:46-1.10	Double exposure blackjack table layout	24 N.J.R. 2350(a)	R.1992 d.362	24 N.J.R. 3338(a)
19:46-1.10, 1.17, 1.20	Use of card reader device in blackjack	24 N.J.R. 2351(a)		
19:46-1.13B, 1.15–1.19	Implementation of pai gow poker	24 N.J.R. 569(a)	R.1992 d.406	24 N.J.R. 3742(a)

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19:46-1.25	Internal design and operation of bill changers	24 N.J.R. 1472(b)	R.1992 d.359	24 N.J.R. 3335(b)
19:46-1.26	Asset numbers on slot machines and bill changers	24 N.J.R. 3253(a)		
19:46-1.27	Slot machine density	24 N.J.R. 2138(a)	R.1992 d.363	24 N.J.R. 3338(b)
19:47-1.3–1.6, 2.3, 5.1, 5.6, 8.2	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:47-2.1, 2.6, 2.9, 2.15	Use of card reader device in blackjack	24 N.J.R. 2351(a)		
19:47-5.2	Quadrant wager in roulette	24 N.J.R. 1871(a)		
19:47-5.2	Single zero roulette	24 N.J.R. 3033(a)		
19:47-8.2, 10	Game of pai gow	24 N.J.R. 558(a)	R.1992 d.411	24 N.J.R. 3753(a)
19:47-8.2, 11	Pai gow poker	24 N.J.R. 569(a)	R.1992 d.406	24 N.J.R. 3742(a)
19:47-8.2, 11	Pai gow poker: temporary adoption of new rules and amendments	————	————	24 N.J.R. 1517(a)
19:47-8.2, 12	Implementation of game of pokette	24 N.J.R. 2140(a)		
19:47-8.4	Submission and approval of new games	24 N.J.R. 3223(a)		
19:49	Junkets	24 N.J.R. 2695(b)	R.1992 d.412	24 N.J.R. 3738(a)
19:49-1.4	Advertising	24 N.J.R. 3225(a)		
19:50-1.4, 3.6	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:51-1	Persons doing business with casino licensees	24 N.J.R. 3225(a)		
19:51-1.2	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:52-1.1, 1.2	Entertainment	24 N.J.R. 3225(a)		
19:52-1.2	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:53-1.13	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:55	Casino simulcasting of horse races	24 N.J.R. 3695(a)		
19:65	Casino Reinvestment Development Authority: project criteria and conditions	24 N.J.R. 1692(b)	R.1992 d.383	24 N.J.R. 3535(a)

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