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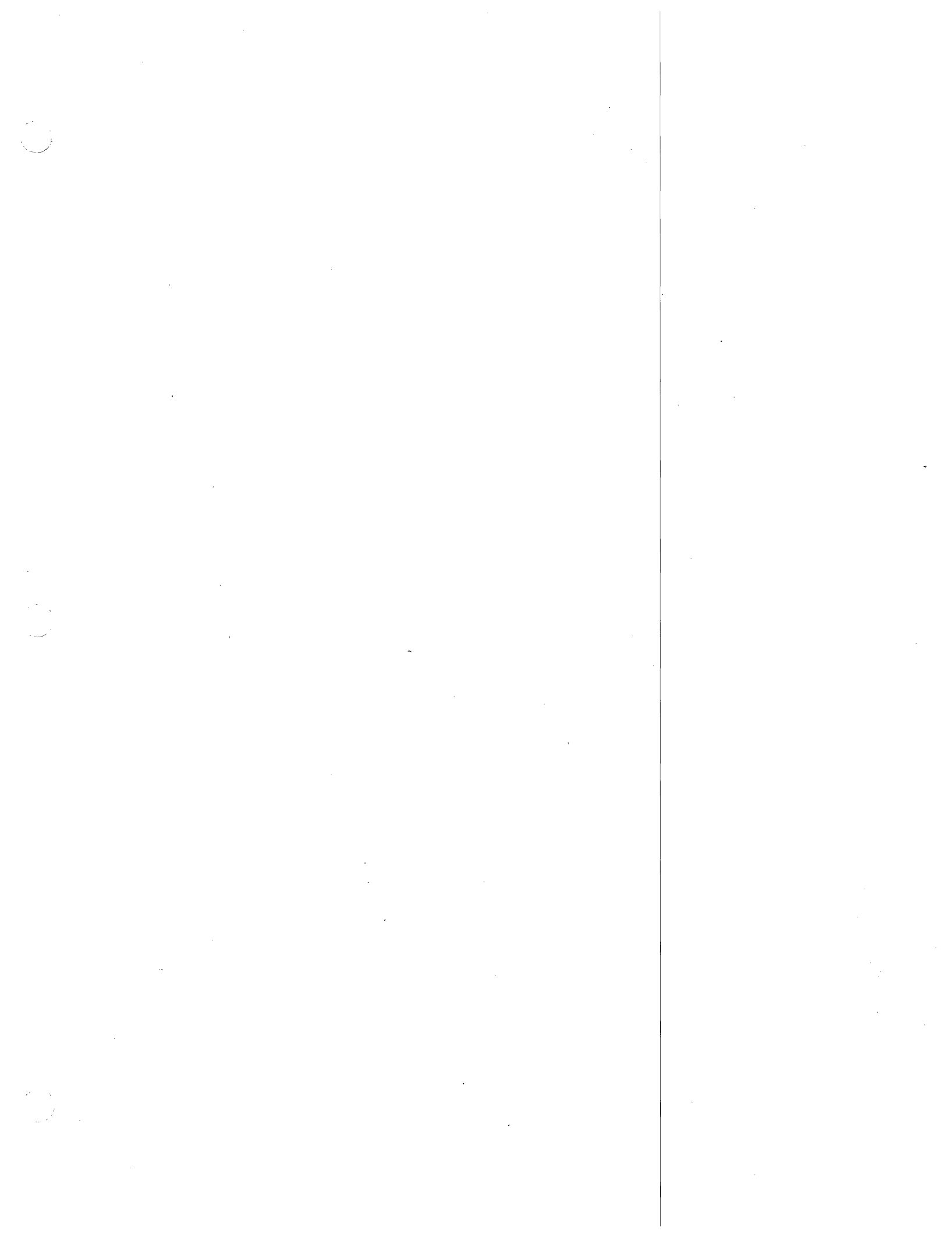
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THE NEW JERSEY CONTINUING PLANNING PROCESS FOR WATER QUALITY MANAGEMENT

Descriptions of Selected
Management Processes

March 1987

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THE NEW JERSEY CONTINUING PLANNING PROCESS
FOR WATER QUALITY MANAGEMENT

DESCRIPTIONS OF SELECTED MANAGEMENT PROCESSES

New Jersey Department of Environmental Protection
Division of Water Resources
Bureau of Water Resources Management Planning
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March 1987

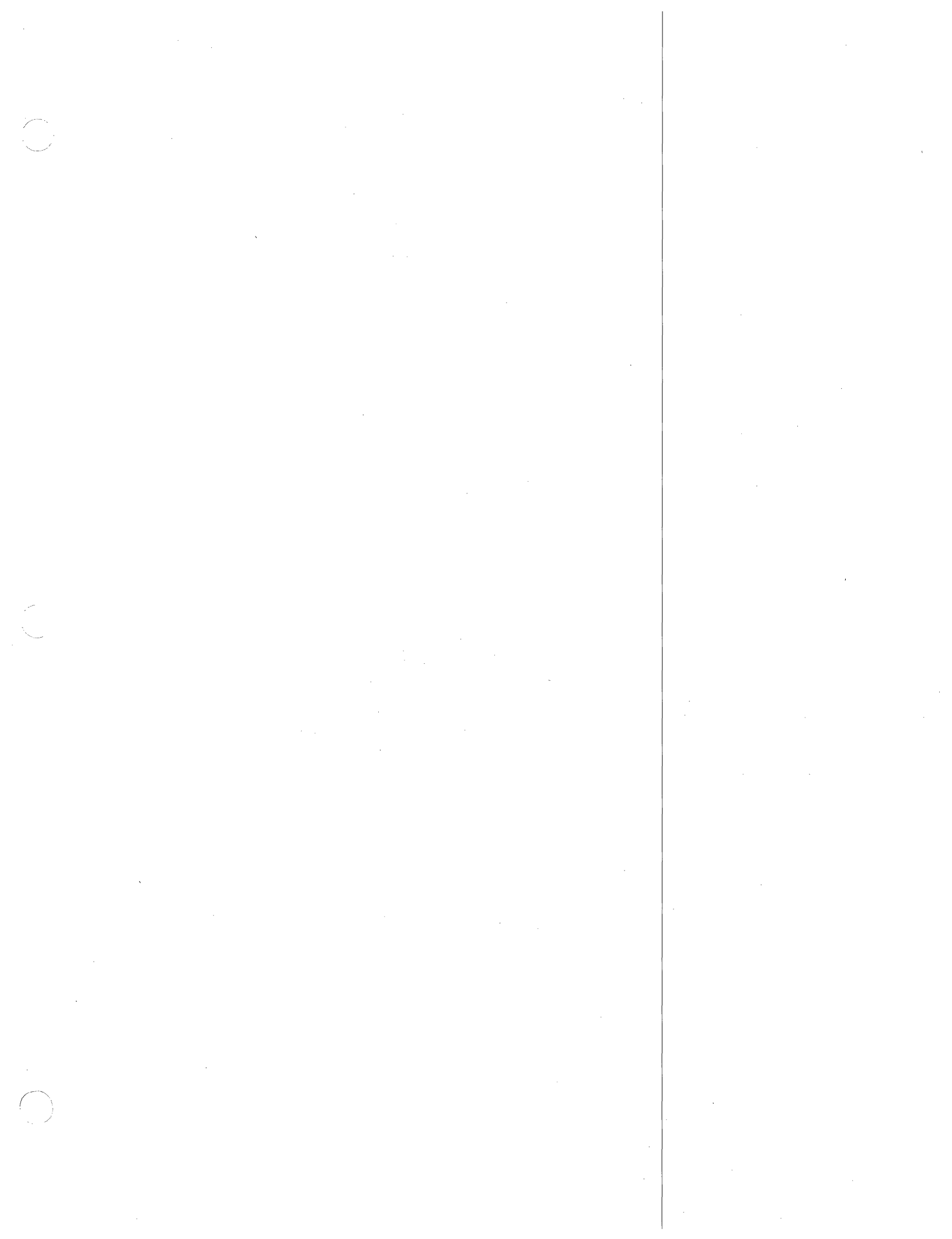


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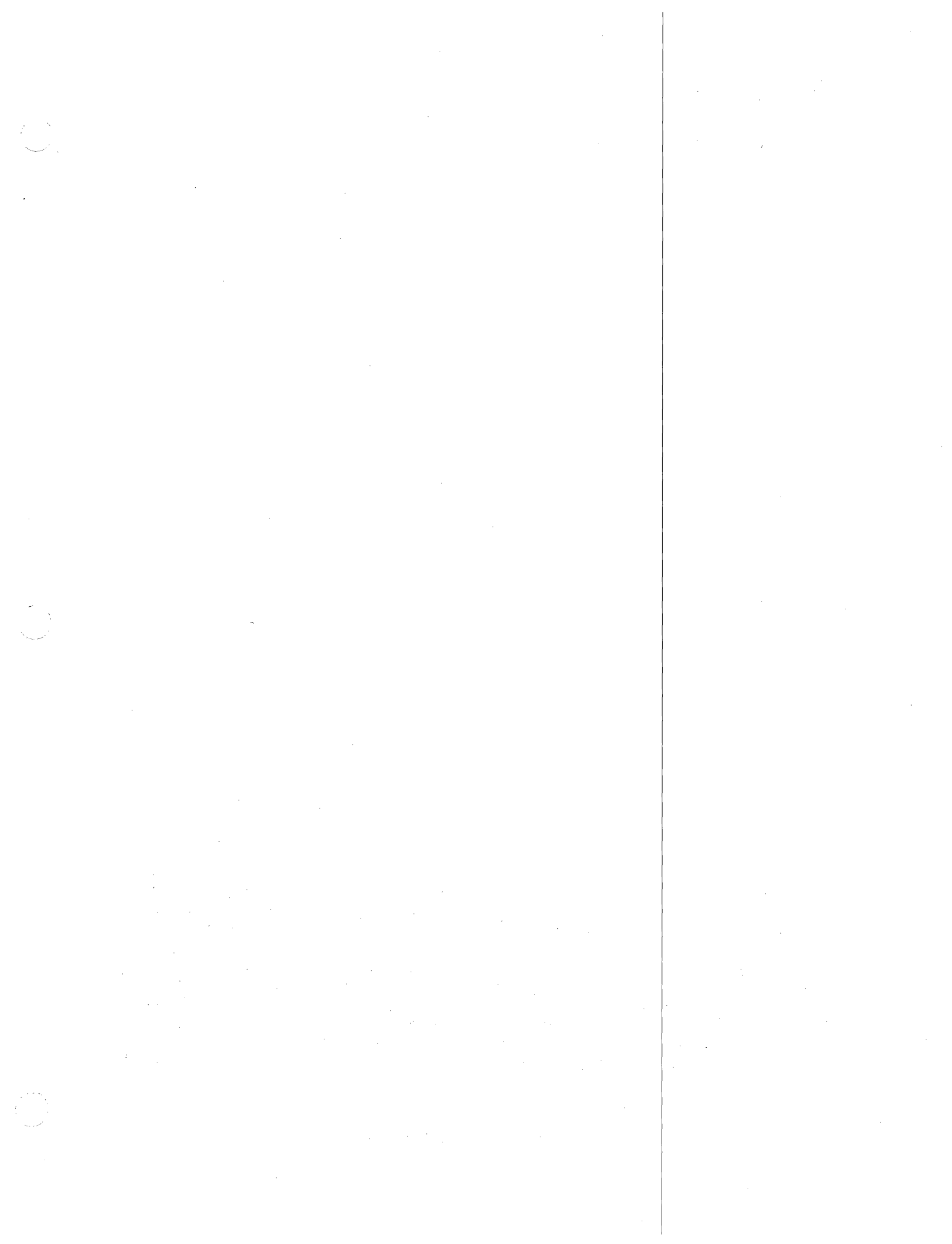
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CHAPTER I. INTRODUCTION

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CHAPTER I. INTRODUCTION

A. OVERVIEW

Both Federal and State law require the New Jersey Department of Environmental Protection (Department) to have a Continuing Planning Process (CPP) for water quality management. Under Department rules adopted in 1984, the Statewide Water Quality Management Plan (Statewide WQM Plan) contains the written provisions of the CPP (N.J.A.C. 7:15-2.2(a)). The Department adopted its initial Statewide WQM Plan on December 5, 1985.

The Department has amended Chapter I.D (page I-6) of the main text of the Statewide WQM Plan to identify the document entitled "The New Jersey Continuing Planning Process for Water Quality Management -- Descriptions of Selected Management Processes" as one of the components of that Plan. This document supplements the CPP provisions contained elsewhere in the Statewide WQM Plan. The Department is now submitting the entire, amended Statewide WQM Plan, including this document, to the United States Environmental Protection Agency (EPA) as the Department's updated CPP description.

This document was prepared in response to a request made by EPA in 1983. The phrase "Selected Management Processes" in the document title refers to eight management processes that were of particular nationwide interest to EPA. This document consists of an introductory chapter and eight chapters for the eight processes. The common format for these eight chapters was jointly selected by the Department and EPA.

The Department did not want to use this format for the rest of the Statewide WQM Plan, and the subject matter of this document and the rest of the Statewide WQM Plan partially overlap. Where the subject matter overlaps, the chapters in this document include references to appropriate components of the Statewide WQM Plan.

This document is descriptive, does not establish new legal requirements, and is not binding upon the Department or other parties. If any statements in this document conflict with federal or State statutes or regulations, or with the "policies and procedures" component of the Statewide WQM Plan, such statements shall be superseded to the extent that such conflict exists. References in this document to various statutory or regulatory provisions should not preclude the State of New Jersey from changing or seeking to change those provisions or from citing or enforcing different applicable statutory or regulatory provisions in legal proceedings. This document shall not be construed to affect the power of the Department to administer its water quality management program in a manner consistent with applicable statutes and regulations.

The Department has issued this document in looseleaf form, to allow for the convenient addition, deletion, or revision of individual chapters at later dates. The Department and EPA-Region II will discuss the need and schedule for revision of this document as annual Department work plans are developed (see 40 CFR 130.10(c)). Because this document is part of the Statewide WQM Plan, the document may be changed under Department rules applicable to that Plan (N.J.A.C. 7:15).

For purposes of this document, the term "Continuing Planning Process" or "CPP" means only the State "continuing planning process" required by section 303(e) of the federal Clean Water Act and the Statewide "continuing planning process" defined and required by sections 2, 3, and 7 of the New Jersey Water Quality Planning Act. In this document, the term "Continuing Planning Process" or "CPP" does not mean the "continuing areawide waste treatment management planning process" required by section 208(b) of the federal Clean Water Act or the "areawide waste treatment management planning process" required by sections 2 and 5 of the New Jersey Water Quality Planning Act. It is not the purpose of this document to summarize the areawide water quality management planning activities of the Department and the seven designated areawide planning agencies, except insofar as such activities are part of the eight management processes described in this document.

The remainder of this introductory chapter discusses the general statutory and regulatory framework for the CPP; provides further background information about the CPP in New Jersey and the development of this document; identifies statutes, rules, and other documents that are cited as basic references; and presents basic information about the the Department's Division of Water Resources (Division), the State agency with primary responsibility for the CPP. Statutory provisions related to the CPP are quoted at the end of the chapter under "Legal Basis for the Continuing Planning Process".

B. GENERAL STATUTORY AND REGULATORY FRAMEWORK

Section 2 of the New Jersey Water Quality Planning Act declares that the "Department of Environmental Protection shall establish a continuing planning process which will encourage, direct, supervise and aid areawide planning and which will also incorporate water quality management plans into a comprehensive and cohesive Statewide program directed toward the achievement of water quality objectives". Section 3 of that Act defines the "continuing planning process" as "the Statewide planning process conducted by the Department of Environmental Protection as authorized in section 7 of this Act". In the supplementary information accompanying the present EPA Water Quality Planning and Management Regulation, EPA states that "the CPP describes the processes used by the State in making water quality decisions" (50 FR 1774; January 11, 1985). The CPP is the management approach used by the Department for carrying out the water quality management requirements of the federal Clean Water Act (33 U.S.C. 1251 et seq.), the New Jersey Water Quality Planning Act (N.J.S.A. 58:11A-1 et seq.), the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.), the County Environmental Health Act (N.J.S.A. 26:3A2-21 et seq.), and the Department of Environmental Protection Act of 1970 (N.J.S.A. 13:1D-1 et seq.).

Section 303(e) of the federal Clean Water Act and Sections 2 and 7 of the New Jersey Water Quality Planning Act specifically require the Department to have a Continuing Planning Process. (The full text of these statutory requirements, which have several common features, is presented later in this chapter under "Legal Basis for the Continuing Planning Process".) Under one or both of these statutes, the CPP shall include, but not be limited to, the State's approaches for:

- The statewide assessment of water quality.
- The establishment and implementation of water quality standards.

- Intergovernmental cooperation for water quality management.
- The integration and unification of the statewide and areawide water quality management planning processes.
- The incorporation of all elements of areawide waste management plans (under section 208 of the federal Clean Water Act and section 5 of the New Jersey Water Quality Planning Act) and water resources basin plans (under section 209 of the federal Clean Water Act).
- The revision of water quality management plans.
- The establishment of total maximum daily loads for pollutants.
- The determination of effluent limitations and schedules of compliance.
- The inventory and ranking, in order of priority, of needs for construction of waste treatment works.
- The control of residual waste from any water treatment processing.

Section 303(e) of the federal Clean Water Act stipulates that the EPA "shall from time to time review each State's approved planning process for the purpose of insuring that such planning process is at all times consistent with this Act" and that EPA "shall not approve any State permit program under title IV of this Act for any State which does not have an approved continuing planning process under this section."

In the supplementary information accompanying the present EPA Water Quality Planning and Management Regulation, EPA states that "the regulation does not require a single CPP document but emphasizes the importance of effective processes which contribute to managing the implementation of water quality controls" and that "each State must review and update, as necessary, its CPP processes to meet its needs and the requirements of this regulation" (50 FR 1774; January 11, 1985). The EPA regulation establishes the following requirements for the CPP (40 CFR 130.5):

"(a) General. Each State shall establish and maintain a continuing planning process (CPP) as described under section 303(e)(3)(A-H) of the Act. Each State is responsible for managing its water quality program to implement the processes specified in the continuing planning process. EPA is responsible for periodically reviewing the adequacy of the State's CPP.

"(b) Content. The State may determine the format of its CPP as long as the minimum requirements of the CWA [Clean Water Act] and this regulation are met. The following processes must be described in each State CPP, and the State may include other processes at its discretion.

"(1) The process for developing effluent limitations and schedules of compliance at least as stringent as those required by section 301(b)(1), section 301(b)(2), section 306 and section 307, and at least as stringent as any requirements

contained in applicable water standards in effect under authority of section 303 of the Act.

"(2) The process for incorporating elements of any applicable areawide waste treatment plans under section 208, and applicable basin plans under section 209 of the Act.

"(3) The process for developing total maximum daily loads (TMDLs) and individual water quality based effluent limitations for pollutants in accordance with section 303(d) of the Act and...130.7(a) of this regulation.

"(4) The process for updating and maintaining Water Quality Management (WQM) plans, including schedules for revision.

"(5) The process for assuring adequate authority for intergovernmental cooperation in the implementation of the State WQM program.

"(6) The process for establishing and assuring adequate implementation of new or revised water quality standards, including schedules of compliance, under section 303(c) of the Act.

"(7) The process for assuring adequate controls over the disposition of all residual waste from any water treatment processing.

"(8) The process for developing an inventory and ranking, in order of priority, of needs for construction of waste treatment works required to meet the applicable requirements of sections 301 and 302 of the Act.

"(9) The process for determining the priority of permit issuance.

"(c) Regional Administrator review. The Regional Administrator shall review approved CPPs from time to time to ensure that the planning processes are consistent with the Act and this regulation. The Regional Administrator shall not approve any permit program under Title IV of the Act for any State which does not have an approved continuing planning process."

The EPA regulation also specifies that "the need for revision and schedule of submittals" (including State submittals of the CPP) "shall be agreed to annually with EPA as the State's annual work program is developed" (40 CFR 130.10(c)).

The Department's Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15) include a section entitled "Continuing Planning Process (CPP)" whose provisions are as follows (N.J.A.C. 7:15-2.1):

"(a) The Department shall develop a Continuing Planning Process describing operating policies, procedures, and practices that comprise the water quality management planning process. This CPP is based upon formal State policy and on the policies, objectives, and programs in the areawide plans.

"(b) The policies, goals, and objectives of the CPP which have Statewide or multi-county significance will be contained in the Statewide Water Quality Management Program Plan. In addition, elements of the adopted areawide plans having Statewide or multi-county significance may also be contained in the Statewide Plan. The remaining data and recommendations of the areawide and county plans will be incorporated by reference.

"(c) The CPP may include, but is not limited to the following:

"1. The following four-step process to insure that pollution problems are adequately addressed and solutions implemented:

"i. Identification of existing and/or potential pollution problems related to surface and ground waters. (The 305(b) Water Quality Inventory Report shall be considered as the principal problem identification component of the Plan.)

"ii. Development and recommendation of alternative technical solutions based upon available technology, effectiveness, economy, implementability, and public acceptance.

"iii. Identification of strategies for the implementation of the aforesaid solutions through regulatory and non-regulatory programs, to include appropriate institutional and financial considerations.

"iv. Designation of management agencies to carry out program activities.

"2. Areawide Water Quality Management Plans, 201 Facilities Plans, the 305(b) Water Quality Inventory Report, and 303(e) and 209 Basin Plans.

"3. Strategies, policies, standards, and criteria for point and non-point pollution control, protecting water resources, protecting environmentally sensitive areas and/or other water quality related issues.

"4. Waste load allocation policy and effluent limitations for point sources.

"5. A description of coordination activities of State, county and local agencies pursuant to applicable water quality related laws and regulations.

"6. A description of existing and anticipated wastewater treatment needs, together with a description of actions and priorities to meet these needs.

"7. Identification of measures necessary to implement the Water Quality Management Plans.

"8. All regulations and modifications thereto adopted pursuant to all State laws that are applicable to water quality management and to water pollution control.

"9. A description of a public participation strategy.

"10. A description of delegated responsibilities of the CPP."

The Department rules further specify that "the Statewide Water Quality Management Plan contains the written provisions of the Continuing Planning Process" (N.J.A.C. 7:15-2.2(a)) and that the Statewide Water Quality Management Program Plan "means the document containing the written policies, procedures and practices developed through the Continuing Planning Process..." (N.J.A.C. 7:15-1.5). The Department shall "establish a Statewide Plan as part of its CPP responsibilities" and "delegate aspects and responsibilities of the CPP to other State, Federal, interstate, county or local agencies" (N.J.A.C. 7:15-2.3).

C. STATUS OF THE CONTINUING PLANNING PROCESS

The Department issued a comprehensive description of its Continuing Planning Process in 1976. Extensive changes in the Department's water quality management program since 1976 required the comprehensive revision of the 1976 CPP description. In the fall of 1983, at the request of EPA, the Division of Water Resources began work on a document that would update the CPP description for eight program management processes that were of particular nationwide interest to EPA (as identified in EPA Office of Water Operating Guidance for fiscal year 1983). These eight processes were:

- Determining Priority Water Bodies
- Identifying Water Quality Limited Segments
- Developing Total Maximum Daily Loads and Wasteload Allocations
- Reviewing Water Quality Standards
- Conducting Water Quality Monitoring Activities and Developing Monitoring Strategies
- Developing the Construction Grant Priority List
- Reviewing Discharge Permits and Construction Grants for Consistency With Water Quality Management Plans
- Completing the Water Quality Inventory (305(b)) Report

These eight processes constitute much, but not all, of the Department's full Continuing Planning Process. The document drafted by the Division included a chapter for each of the eight processes. At the request of EPA each of these chapters had the following common format:

- A. DATE OF THE SUMMARY DESCRIPTION OF THE PROCESS
- B. TITLE OF PROCESS
- C. LEAD ADMINISTRATIVE UNIT FOR THE PROCESS
- D. OBJECTIVE OF THE PROCESS
- E. LEGAL BASIS FOR THE PROCESS
- F. SUMMARY DESCRIPTION OF THE PERFORMANCE OF THE PROCESS
- G. COORDINATION OF THE PROCESS

Individual chapters were drafted and distributed for internal review within the Division between late 1983 and early 1985. Preliminary drafts of the first few chapters and then of the entire document were forwarded to EPA in March 1984 and December 1984, respectively.

In January 1985, as the document was moving towards completion, the EPA adopted a new Water Quality Planning and Management Regulation (40 CFR 130) whose requirements concerning the CPP did not fully coincide with the guidance EPA had given in 1983. In discussions with the Division (confirmed in a February 28, 1986 letter to the Division), EPA-Region II agreed that the Division should complete and submit the document that was prepared under the 1983 guidance (for the eight identified processes), and subsequently update the document to bring its contents into conformance with the 1985 EPA regulation. (The Division has revised the document to replace references to the previous EPA regulation with references to the 1985 EPA regulation.)

The context for the CPP has also changed at the State level between 1983 and 1986. In April 1984, the Department adopted its Water Quality Management Planning and Implementation Process rules, which declared that the "Statewide Water Quality Management [Program] Plan contains the written provisions of the Continuing Planning Process" (N.J.A.C. 7:15-2.2(a)). Early in 1985, the Department completed a draft of the initial Statewide WQM Plan, notice of which was published in the New Jersey Register on April 1, 1985 (17 N.J.R. 842(c)). The Department adopted its initial Statewide WQM Plan on December 5, 1985 (notice of this adoption was published in the New Jersey Register on January 6, 1986 at 18 N.J.R. 110(b)). The Statewide WQM Plan includes statements that the Plan "presents the written strategies and policies developed through" the Continuing Planning Process and that the Plan is a "component" of the Continuing Planning Process (p. I-2), and that the plan "is the Department's initial compilation and summary of work conducted through its Continuing Planning Program" (p. I-4). On December 30, 1985, the Commissioner of the Department of Environmental Protection submitted the initial Statewide WQM Plan to EPA for approval. In that letter, the Commissioner stated that "because the Department expects to update the Statewide WQM Plan in 1986 to include substantial additional information about the Department's Continuing Planning Process, I am not at this time submitting the Statewide WQM Plan as the written description of the Continuing Planning Process."

The Statewide WQM Plan that the Department adopted on December 5, 1985 was separate from, and did not include, the document that was prepared at EPA request for the eight processes identified in 1983. (This was because the draft of this document was not completed in time to be internally reviewed

within the Department as part of the draft Statewide WQM Plan. Because the document was not included in the draft Statewide WQM Plan, the document did not receive public review in 1985, and could not be included in the initial Statewide WQM Plan that the Department adopted on December 5, 1985.) The Department has now amended Chapter I.D (page I-6) of the main text of the Statewide WQM Plan to identify the document as one of the components of that Plan, so that the document can be considered part of the Continuing Planning Process under N.J.A.C. 7:15-2.2. The Department is now submitting the amended Statewide WQM Plan, including this document, to EPA as the written description of its Continuing Planning Process.

Another major change in Department rules occurred on April 29, 1985, when the Department repealed its former Surface Water Quality Standards and rules concerning Treatment of Wastewater Discharged Into Surface Waters of the State, and adopted new Surface Water Quality Standards (N.J.A.C. 7:9-4) and Wastewater Discharge Requirements (N.J.A.C. 7:9-5). In response to this change, which became effective on May 20, 1985 (17 N.J.R. 1270(a)), the Division revised much of Chapter IV of the document ("Developing Total Maximum Daily Loads and Wasteload Allocations") and nearly all of Chapter V ("Reviewing Water Quality Standards"). (Index D in these Standards was amended on August 7, 1985; see Chapter V.)

Revised drafts of the document were distributed for internal review within the Division and the Department in the second half of 1985. In January 1986, a draft document was distributed for review and comment to selected organizations and agencies outside the Department. After January 1986 the document was further updated. Notice of the Department's intention to propose to amend the Statewide WQM Plan to incorporate the document was published in the New Jersey Register on April 7, 1986 (18 N.J.R. 711(d)). Notice that the Department had completed a final draft of the document (dated May 1986), and notice of the proposed amendment to the Statewide WQM Plan, was published in the New Jersey Register on September 8, 1986 (18 N.J.R. 1842(c)). More information about the Department's 1986 public participation activities concerning the proposed amendment, and about the Department's response to public comments, is provided in Appendix A of this document.

Only Chapters I and VIII of this document have been updated since May 1986. (Note the "Date of the Summary Description of the Process" in Chapters II through IX.) Some information in the other chapters is already outdated. For example, in July 1986 all four Bureaus in the Division's Monitoring and Planning Element were renamed as follows:

<u>Old Name</u>	<u>New Name</u>
Bureau of Monitoring and Data Management	Bureau of Monitoring Management
Bureau of Shellfish Control	Bureau of Marine Water Classification and Analysis
Bureau of Planning and Standards	Bureau of Water Resources Management Planning
Bureau of Systems Analysis and Wasteload Allocation	Bureau of Water Quality Standards and Analysis

In June 1986, the Department's Division of Waste Management was reorganized into a Division of Solid Waste Management, a Division of Hazardous Waste Management, and a Division of Hazardous Site Mitigation. Many Department units mentioned in these chapters have moved since May 1986 into the new Department headquarters building at 401 East State Street in Trenton.

D. BASIC REFERENCES

This document makes reference to several statutes, regulations, and other documents that are cited in the subsequent chapters because of their significance to the processes described in these chapters. These documents are essential to the understanding of this document and are as follows:

- The New Jersey Water Quality Planning Act (N.J.S.A. 58:11A-1 et seq.)
- The New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.)
- The Department's Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15)
- The Department's Surface Water Quality Standards (N.J.A.C. 7:9-4)
- The Department's New Jersey Pollutant Discharge Elimination System rules (N.J.A.C. 7:14A)
- The Department's "Statewide Water Quality Management Program Plan" (adopted in December 1985 and subsequently amended)
- The Department's "New Jersey 1982 State Water Quality Inventory Report" and "New Jersey 1984 State Water Quality Inventory Report"
- The Department's "Priority System and Project Priority List for Fiscal Year 1986"
- The Division's "Monitoring and Planning Element - State FY 87 Consolidated Work Plan"

E. AGENCY ORGANIZATION

The State agency with primary responsibility for the Continuing Planning Process is the Department's Division of Water Resources. The present organizational structure of the Division is depicted on Figure I-1. The principal Division units include:

- The Monitoring and Planning Element, which administers monitoring and planning programs and which is the lead administrative unit for most of the eight processes discussed in this document.
- The Water Quality Management Element, which issues treatment works approvals and permits for discharges to surface and ground waters pursuant to the New Jersey Pollutant Discharge Elimination System. (On April 15, 1982, the Department took over the National Pollutant Discharge Elimination System (NPDES) established by the federal Clean Water Act.)

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF WATER RESOURCES

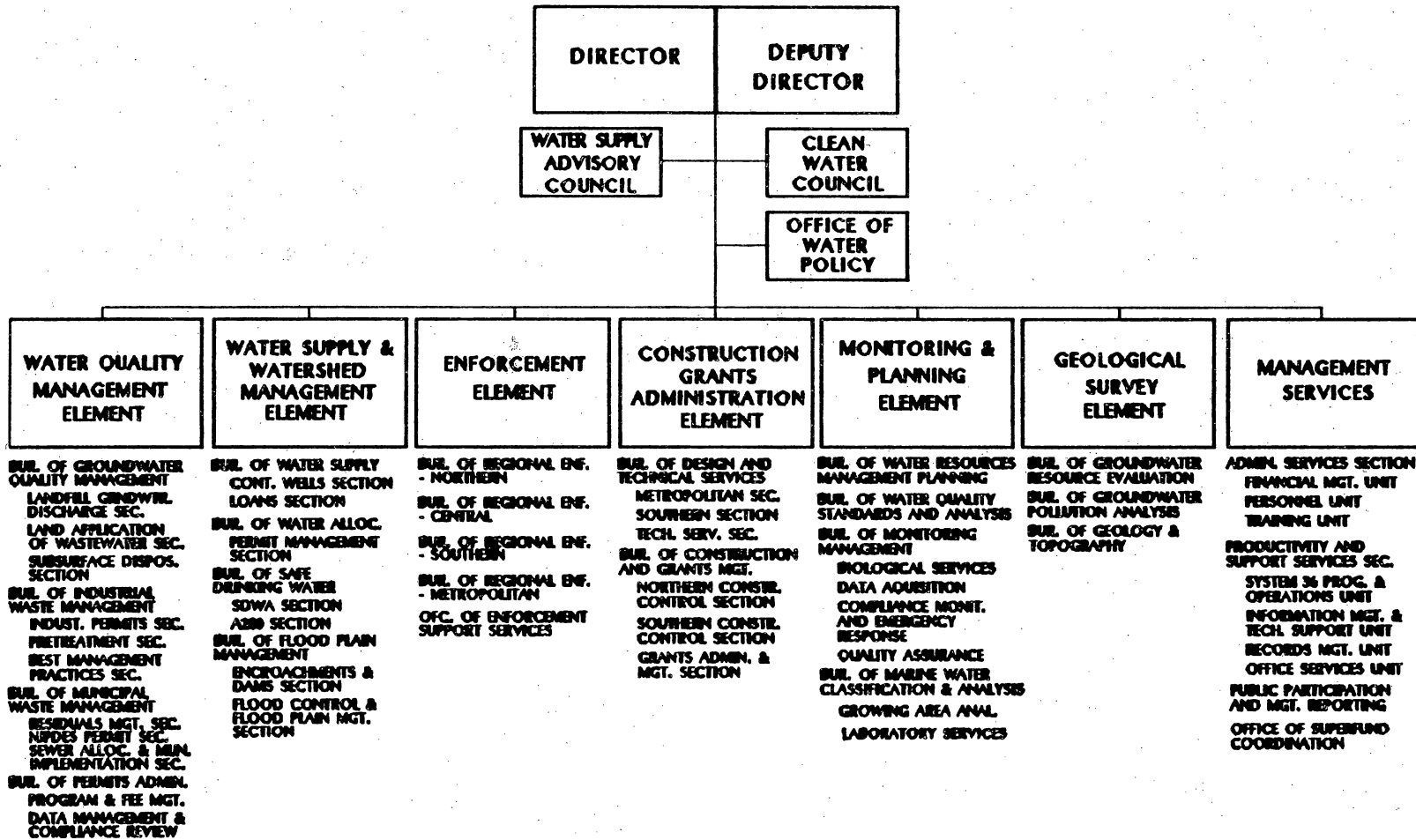


Figure I-1
Division of Water Resources
Organization Chart

- The Water Supply and Watershed Management Element, which has responsibility for water supply management, potable water programs, flood plain management, and storm water management.
- The Enforcement Element, which is responsible for the enforcement of statutes and regulations administered by the Division, and for the enforcement of corresponding permits, approvals, authorizations, orders and penalties issued by the Division.
- The Construction Grants Administration Element, which administers the construction grants program authorized by Title II of the federal Clean Water Act, and which develops the construction grant priority list. (The Clean Water Act provides for substantial delegation of construction grant program responsibilities to the States. Pursuant to that mandate, EPA-Region II and the Department executed a Delegation Agreement on October 7, 1981 providing for total program assumption by the Department including full responsibility for program review and certification of projects to EPA.)
- The Geological Survey Element, which assembles, generates, and analyzes geologic data which are interpreted in reports and on maps used to make decisions about water supply management, water quality management (especially ground water contamination from waste disposal), engineering works, mineral resources, and natural hazards, and which maintains the State Geodetic Control Network.
- The Office of Management Services, which provides administrative, productivity, and support services within the Division, and provides coordination with the Department's Division of Waste Management.

The Office of Water Policy has responsibilities concerning the Statewide Water Supply Master Plan, water conservation measures, and other water supply related matters. The Clean Water Council and Water Supply Advisory Council are advisory groups created by statute, which include representatives from outside the Department.

A more detailed description of the various Division units is included in the Appendix to the main text of the Statewide WQM Plan (in the Appendix section entitled "Summary of the Division of Water Resources Water Quality Management Implementation Program").

The Division coordinates its activities in the Delaware River Basin and in the tidal interstate waters of the New Jersey-New York metropolitan area with the Delaware River Basin Commission (DRBC) and the Interstate Sanitation Commission (ISC), respectively. (Much of the Division's coordination with DRBC takes place through the DRBC Water Quality Advisory Committee, which has representatives from EPA and the water pollution control agencies of each member State.)

The Division also coordinates with county and regional water quality management planning activities under the New Jersey Water Quality Planning Act. In particular, the Division works with the following designated areawide water quality management planning agencies:

Atlantic County Board of Chosen Freeholders
Cape May County Board of Chosen Freeholders
Delaware Valley Regional Planning Commission
Mercer County Board of Chosen Freeholders
Middlesex County Board of Chosen Freeholders
Ocean County Board of Chosen Freeholders
Sussex County Board of Chosen Freeholders

(Figure VIII-1 in Chapter VIII shows the approximate location of the planning areas of these designated planning agencies.)

The Division also works with county and local health agencies under the County Environmental Health Act, federal agencies such as EPA and the U.S. Geological Survey, and other Department units such as the Division of Fish, Game and Wildlife, the Green Acres/Recreation Program, the Division of Hazardous Site Mitigation, the Office of Regulatory Services, and the Office of Science and Research.

F. LEGAL BASIS FOR THE CONTINUING PLANNING PROCESS

1. Clean Water Act References

Section 303(e) of the federal Clean Water Act states:

"(1) Each State shall have a continuing planning process approved under paragraph (2) of this subsection which is consistent with this Act.

"(2) Each State shall submit not later than 120 days after the date of enactment of the [Federal] Water Pollution Control Act Amendments of 1972 to the Administrator [of EPA] for his approval a proposed continuing planning process which is consistent with this Act. Not later than thirty days after the date of submission of such a process the Administrator shall either approve or disapprove such process. The Administrator shall from time to time review each State's approved planning process for the purpose of insuring that such planning process is at all times consistent with this Act. The Administrator shall not approve any State permit program under title IV of this Act for any State which does not have an approved continuing planning process under this section.

"(3) The Administrator shall approve any continuing planning process submitted to him under this section which will result in plans for all navigable waters within such State, which include, but are not limited to, the following:

"(A) effluent limitations and schedules of compliance at least as stringent as those required by section 301(b)(1), section 301(b)(2), section 306, and section 307, and at least as stringent as any requirements contained in any applicable water quality standard in effect under authority of this section;

"(B) the incorporation of all elements of any applicable areawide waste treatment management plans under section 208, and applicable basin plans under section 209 of this Act;

"(C) total maximum daily load for pollutants in accordance with subsection (d) of this section;

"(D) procedures for revision;

"(E) adequate authority for intergovernmental cooperation;

"(F) adequate implementation, including schedules of compliance, for revised or new water quality standards, under subsection (c) of this section;

"(G) controls over the disposition of all residual waste from any water treatment processing;

"(H) an inventory and ranking, in order of priority, of needs for construction of waste treatment works required to meet the applicable requirements of sections 301 and 302."

Other sections of the federal Clean Water Act that pertain to individual "processes" are quoted later in this document in the individual chapters for each process, under the heading "Legal Basis for the Process". For example, section 303(d) is quoted in Chapter IV ("Developing Total Maximum Daily Loads and Wasteload Allocations") and section 303(c) is quoted in Chapter V ("Reviewing Water Quality Standards"). In addition, sections 101(b) and 510 of the federal Clean Water Act recognize, preserve, and protect the primary responsibilities and rights of States to control water pollution and to plan the development and use of land and water resources.

No part of this document has been updated in response to the federal "Water Quality Act of 1987".

2. State Law

In section 2 of the New Jersey Water Quality Planning Act, the Legislature declared that the "Department of Environmental Protection shall establish a continuing planning process which will encourage, direct, supervise and aid areawide planning and which will also incorporate water quality management plans into a comprehensive and cohesive Statewide program directed toward the achievement of water quality objectives" and that the "Department of Environmental Protection through the continuing planning process and the planning agencies through the areawide planning process shall coordinate and integrate water quality management plans with related Federal, State, regional and local comprehensive land use, functional and other relevant planning activities, programs and policies".

Section 3.c of the New Jersey Water Quality Planning Act defines "Continuing planning process" as "the Statewide planning process conducted by the Department of Environmental Protection as authorized in section 7 of this act". Section 7 states:

"The commissioner shall conduct a continuing planning process which shall:

"a. Integrate and unify the statewide and areawide water quality management planning processes;

"b. Conduct a statewide assessment of water quality and establish water quality goals and water quality standards for the waters of the State;

"c. Develop a statewide implementation strategy to achieve the water quality standards, which shall include, but not be limited to:

"(1) the determination of effluent limitations and schedules of compliance at least as stringent as those required by the Federal [Water Pollution Control] Act;

"(2) the determination of the total maximum daily load for pollutants necessary to meet the water quality standards;

"(3) the incorporation of all elements of any areawide waste management plan prepared pursuant to this act;

"(4) an inventory and ranking of needs, in order of priority, for the construction of municipal waste treatment works needed to meet the water quality goals and standards;

"(5) methods for controlling all residual wastes from any water treatment processing.

"The commissioner may delegate aspects of the continuing planning process to other State, Federal, interstate or local agencies. The commissioner shall coordinate and integrate the continuing planning process with related Federal, State, regional and local comprehensive, functional and other relevant planning activities, programs and policies."

Section 9 of the New Jersey Water Quality Planning Act authorizes the Department to "adopt rules and regulations...in order to effectuate the purposes of this act." Section 10 of the same Act pertains specifically to Chapter VIII of this document ("Reviewing Discharge Permits and Construction Grants for Consistency With Water Quality Management Plans") and is quoted in that chapter under "Legal Basis for the Process".

Although the New Jersey Water Pollution Control Act, County Environmental Health Act (N.J.S.A. 26:3A2-21 et seq.), and Department of Environmental Protection Act of 1970 (N.J.S.A. 13:1D-1 et seq.) do not mention the "continuing planning process" by name, each of these statutes contributes to the legal basis for the CPP. The New Jersey Water Pollution Control Act includes several provisions that pertain to individual processes; these provisions are quoted later in this document in the individual chapters for each process, under "Legal Basis for the Process". For example, excerpts from Section 4 are quoted in Chapter V ("Reviewing Water Quality Standards") and excerpts from Section 6 are quoted in Chapter VIII ("Reviewing Discharge

Permits and Construction Grants for Consistency With Water Quality Management Plans"). Section 5 empowers the Department to "exercise general supervision of the administration and enforcement of this act and all rules, regulations and orders promulgated hereunder" and to "advise, consult, and cooperate with other agencies of the State, the Federal Government, other states and interstate agencies, including the State Soil Conservation Committee, and with affected groups, political subdivisions and industries in furtherance of the purposes of this act". The County Environmental Health Act includes provisions that pertain to Chapter VI of this document ("Conducting Water Quality Management Activities and Developing Monitoring Strategies"); these provisions are quoted in that chapter under "Legal Basis for the Process").

The Department of Environmental Protection Act of 1970 directs the Department to "formulate comprehensive policies for the conservation of the natural resources of the State, the promotion of environmental protection and the prevention of pollution of the environment of the State", and authorizes the Department to "prepare, administer and supervise State-wide, regional and local programs of conservation and environmental protection, giving due regard for the ecology of the varied areas of the State and the relationship thereof to the environment..." The Act also authorizes the Department to:

"Encourage, direct and aid in coordinating State, regional and local plans and programs concerning conservation and environmental protection in accordance with a unified State-wide plan which shall be formulated, approved and supervised by the department. In reviewing such plans and programs and in determining conditions under which such plans may be approved, the department shall give due consideration to the development of a comprehensive ecological and environmental plan in order to be assured insofar as is practicable that all proposed plans and programs shall conform to reasonably contemplated conservation and environmental protection plans for the State and the varied areas thereof."

These provisions apply to the entire CPP and are not cited again in each individual chapter. Other provisions of this Act pertain specifically to Chapter VI of this document ("Conducting Monitoring Activities and Developing Monitoring Strategies") and are quoted in that chapter under "Legal Basis for the Process".

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CHAPTER II. DETERMINING PRIORITY WATER BODIES

A. DATE OF THE SUMMARY DESCRIPTION OF THE PROCESS

May 1986

B. TITLE OF PROCESS

Determining Priority Water Bodies

C. LEAD ADMINISTRATIVE UNIT FOR THE PROCESS

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D. OBJECTIVE OF THE PROCESS

The identification of priority water bodies for various water quality management activities in order to encourage the best use of available manpower and funds.

E. LEGAL BASIS FOR THE PROCESS

1. Clean Water Act References

Section 101(f) of the federal Clean Water Act states that "it is the national policy that to the maximum extent possible the procedures utilized for implementing this Act shall encourage...the best use of available manpower and funds..." Section 303(e) of the Act requires States to prepare "an inventory and ranking, in order of priority" of needs for construction of waste treatment works. Section 303(d) of the Act requires the States to "establish a priority ranking" for waters requiring establishment of total maximum daily loads. By analogy and by reference to section 101(f), the Act can be interpreted as implicitly authorizing the identification of priority water bodies for other water quality management activities that are required or authorized by the Act, in order to encourage the best use of available manpower and funds.

2. State Law

Section 7 of the New Jersey Water Quality Planning Act requires the Department to "conduct a statewide assessment of water quality and establish water quality goals and water quality standards for the State" and "develop a statewide implementation strategy to achieve the water quality standards". Section 5 of the New Jersey Water Pollution Control Act empowers the Department to "exercise general supervision of the administration and enforcement of this act and all rules, regulations and orders promulgated thereunder". These provisions can be interpreted as implicitly authorizing the identification of priority water bodies for water quality management activities in order to encourage the best use of available manpower and funds.

F. SUMMARY DESCRIPTION OF THE PERFORMANCE OF THE PROCESS

In the supplementary information accompanying the most recent EPA Water Quality Planning and Management regulation (40 CFR 130), EPA made the following statements about "priority water bodies" (50 FR 1775):

"The term 'priority water bodies' is a management concept originated by EPA to encourage States to focus resources and control activities in areas where water quality decisions are needed. States are encouraged to identify priority water bodies--those waters for which regulatory or water quality control decisions are needed. State priority water body lists should provide an overall agenda of needed control actions and may include waters not meeting standards, as well as waters where controls are needed to maintain uses. Other priority setting mechanisms, such as the construction grants list and the list of water quality limited segments requiring TMDL analysis, should be consistent with, but will probably not be identical to, the priority water body list.

"Since the CWA [Clean Water Act] does not require States to develop a general priority water body list, this regulation does not require States to develop a list of priority water bodies. We do expect, though, that States will find it useful to develop a priority water body list as the primary determinant for establishing State pollution control priorities in response to their most significant water quality problems. States may use this list to coordinate construction grants, planning and standards, monitoring, permit and enforcement program activities.

"The priority ranking of segments needing TMDL calculations as required under section 303(d) of the Act and section 130.5(b)(1) of this regulation is not the same as the priority water body list. The section 303(d) ranking reflects the priority with which the States intend to complete TMDLs for specified segments."

The Division understands that EPA is developing guidelines for priority water body lists that would answer various questions including whether or not individual water bodies could be identified as priority water bodies for some water quality management activities without being identified as priority water bodies for other water quality management activities. As discussed below, the Division is refining and promoting the use of a waterbody rating system whose water quality and water use information can be used with other program information outside the rating system in the establishment of priorities for individual water quality management activities.

In the past few years, State water pollution control agencies have been making significant efforts to set priorities for their activities, in order to encourage the best use of available manpower and funds. These efforts have largely been driven by reduced operational resources, as well as increased emphasis by EPA on the need for States to set priorities on their water quality management activities and water bodies. The Division recognizes that there is a need for systematic evaluation of the State's waters so that

limited pollution control resources are allocated in an efficient and effective manner. Throughout the Division there has been an increasing interest in the use of a waterbody rating system to help identify the greatest water quality management needs.

Chapter II of the "New Jersey 1982 State Water Quality Inventory Report" (the "1982 305(b) report") included a "Surface Water Rating System" that consisted of a Water Quality Index and a Water Use Index calculated for 29 "segments" (individual watersheds, sections of watersheds, or grouped watersheds). The Water Quality Index considered dissolved oxygen, total phosphorus, total dissolved solids, un-ionized ammonia, and toxic substances. The Water Use Index considered surface water diversions for potable water supplies and agriculture, fish stocking, confirmed anadromous fish spawning runs, numbers of bathing beaches, approved or seasonal shellfish waters, and shellfish harvests. The 1982 Surface Water Rating System did not, by itself, establish priorities for water quality management actions. However, the 1982 Surface Water Rating System did provide a systematic approach for presenting various kinds of water quality and water use information that has been used with other information in the design of some water quality management programs.

For example, on September 10, 1984 the Division submitted to EPA-Region II a "Supplement to Implementation of the National Municipal Policy in New Jersey" (the policy for bringing municipal dischargers into compliance with discharge permits). As described in this Supplement (and in the "Municipal Management Strategy" in the Statewide Water Quality Management Program Plan), all municipal non-compliers were grouped into one of five categories in priority order (federally funded facilities, raw dischargers, primary dischargers, inadequate secondary dischargers, and required advanced wastewater treatment). In order to further define priorities within the individual categories, a review of the water quality and water use points for each receiving stream as documented in the 1982 Surface Water Rating System was made. These points were then assigned to each facility and listed in descending order, recognizing that the higher scores reflect water use and water quality priorities within the State. This process illustrates the combination of information from a waterbody rating system with other programmatic information (the five categories) in the implementation of a major water quality management policy.

Information from the 1982 Surface Water Rating System was also used with other information in the identification of intensive surveys for state fiscal years 1985 and 1986, and in the conceptual development of a permit fee methodology for wastewater dischargers. Some of the water quality parameters and water uses that were considered in the 1982 Surface Water Rating System have also been considered in the "Water Use/Water Quality Segment Priorities" that have been part of the Division's priority system for construction grants since fiscal year 1982.

As discussed in Chapter IV of the "New Jersey 1984 State Water Quality Inventory Report" (the "1984 305(b) report"), the 1982 Surface Water Rating System had some limitations. The rating system did not consider the potential for improving or restoring water uses. The information used in the system was limited to quantitative data that could be easily assembled and compared. Many of the 29 "segments" encompassed more than one distinct watershed. A refined rating system, which took into account and attempted to correct these limitations, was developed for the 1984 305(b) report and was called "A System for Rating Waterbodies and Their Water Quality Management Needs".

As described in the 1984 305(b) report, the refined rating system used 148 segments, based principally on the approximately 140 "small watersheds" that have been delineated for New Jersey by the federal Soil Conservation Service. The refined rating system consisted of two components - a quantitative assessment and a qualitative assessment. The quantitative system was based on the 1982 Surface Water Rating System (using 148 segments instead of 29 segments) and incorporated many of the same elements found in that system. Like the 1982 system, the quantitative assessment contained a Water Quality Index and a Water Use Index. However, there were differences in the individual parameters and how they were evaluated. The Water Quality Index considered dissolved oxygen, total phosphorus, total dissolved solids, un-ionized ammonia, biochemical oxygen demand, fecal coliform, and toxic substances. The Water Use Index considered surface water diversions for potable water supplies, fish stocking, confirmed anadromous fish spawning runs, bathing beaches, and approved or seasonal shellfish waters. The qualitative assessment was new and was called the Water Use and Resource Assessment. The qualitative assessment considered freshwater fisheries, marine fisheries, shellfisheries, primary contact recreation, and potable water supplies. The information in the Water Use and Resource Assessment was to be based on questionnaires, prepared by the Division for completion by State and local agencies, concerning the quality of the existing resource base, the intensity of the use, and the potential for impairing or restoring the resource or use.

For the 1986 305(b) report which is now being prepared, the Division is using portions of the rating system in the 1984 305(b) report and has further modified the Water Quality Index. (The Water Quality and Water Use Indices, but not the qualitative assessment, will be presented in the 1986 305(b) report.) The Water Quality Index is now based on the Profile Water Quality Index developed by EPA Region X, not on the percentage of water quality data above the Department's Surface Water Quality Standards as described in the 1982 and 1984 305(b) reports. The Profile Water Quality Index is a modified version of the National Sanitation Foundation's Water Quality Index that involves the use of water quality severity curves to assign index values to raw data. The Profile Water Quality Index has already been successfully applied to a number of States across the country. The Water Quality Index for New Jersey is made up of eight categories (temperature, oxygen, pH, bacteria, nutrients, solids, un-ionized ammonia, and metals), with each category containing from two to five components. Index values range from zero (highest quality water) to 100 (worst case) and are calculated for data from the long-term ambient monitoring stations for a particular time period. The Profile Water Quality Index has been incorporated into STORET for direct use of STORET data. The application of this Index for use with New Jersey water quality data has been accomplished with the assistance of EPA Region X staff.

As noted in Chapter IX of this description of the Continuing Planning Process ("Completing the State Water Quality Inventory (305(b)) Report"), the 1982 and 1984 305(b) reports (including their waterbody rating systems) constitute the "problem identification component of the Statewide WQM Plan" that the Department adopted on December 5, 1985. Future waterbody rating systems will be included in future 305(b) reports, which will be incorporated into the Statewide WQM Plan following the submission of such reports to EPA pursuant to section 305(b) of the federal Clean Water Act.

G. COORDINATION OF THE PROCESS

The lead administrative unit for the process is the Monitoring and Planning Element. The Surface Water Rating System in the "New Jersey 1982 State Water Quality Inventory Report" coordinated data from several sources within and outside the Division. The Water Supply and Watershed Management Element provided information about surface water diversions for potable water supplies and agriculture. The Department's Division of Fish, Game and Wildlife provided information about fish stocking and anadromous fish spawning runs. The Department's Office of Science and Research provided data on toxic substances. County and local health agencies provided information about bathing areas. The National Marine Fisheries Service provided information about harvests of shellfish meat. (Within the Monitoring and Planning Element, the Bureau of Shellfish Control provided information about shellfish growing waters, the Bureau of Monitoring and Data Management provided retrievals of water quality data from STORET, and the Bureau of Planning and Standards designed and applied the water quality and water use indexes.)

Coordination has also occurred in the design and use of the 1982 Surface Water Rating System. Various Division Elements and Department units were given the opportunity to comment on the draft of the 1982 305(b) report including the draft 1982 Surface Water Rating System. The Monitoring and Planning Element worked with the Division's Executive Staff to incorporate results from the 1982 Surface Water Rating System in the "Supplement to Implementation of the National Municipal Policy in New Jersey". The Water Quality Management Element incorporated results from the 1982 rating system in the conceptual development of a permit fee methodology for wastewater discharges. The Monitoring and Planning Element provided water quality and water use information to the Construction Grants Administration Element for incorporation in the construction grant priority system.

Likewise, the "System for Rating Waterbodies and Their Water Quality Management Needs" in the 1984 305(b) report (as subsequently modified by the Division) coordinates data from sources within and outside the Division. Staff from EPA Region X in Seattle, Washington have been instrumental in applying and modifying the Profile Water Quality Index to reflect New Jersey's needs and data strengths. The Bureau of Management Service now provides retrievals of water quality data from STORET. The Water Supply and Watershed Management Element provides information about surface water diversions for potable water supplies. The Division of Fish, Game and Wildlife provides information about fish stocking, anadromous fish spawning runs, and the assessment of fisheries and shellfisheries resources and their aquatic environments. The Division of Parks and Forestry, the Green Acres program, and local health agencies provide information about bathing areas and the suitability of waters for primary contact recreation. The segmentation in the rating system is based principally on the approximately 140 "small watersheds" that have been delineated for New Jersey by the federal Soil Conservation Service. Within the Monitoring and Planning Element, the Bureau of Planning and Standards designs and refines the rating system, addresses inquiries to information sources within and outside the Division, and processes the information provided by these sources into the rating system. In conjunction with the U.S. Geological Survey and the county health departments in the County Cooperative Network (see Chapter VI), the Bureau of Monitoring and Data Management is responsible for most of the water quality data used in the rating system's Water Quality Index. The Bureau of Shellfish Control provides information about shellfish growing waters.

Various Division Elements and Department units were given the opportunity to comment on the draft 1984 305(b) report including the draft "System for Rating Waterbodies and Their Water Quality Management Needs". The Bureau of Planning and Standards will hold discussions with other Division Elements to promote the use of the rating system in Division programs.

As noted in this chapter, the Department has incorporated the 1982 and 1984 305(b) reports (including their waterbody rating systems) into the Statewide Water Quality Management Program Plan (the Statewide WQM Plan). The Department held a nonadversarial public hearing on the draft Statewide WQM Plan on May 15, 1985, and written comments were accepted until May 31, 1985 (15 N.J.R. 842(c)). Through this procedure, other agencies such as designated planning agencies and county health departments, as well as various interest groups and the general public, had the opportunity to comment on the use of these 305(b) reports (including their waterbody rating systems) as the problem identification component of the Statewide WQM Plan. When future waterbody rating systems are included in future 305(b) reports that are proposed for incorporation into the Statewide WQM Plan, such agencies, interest groups, and the general public may likewise have the opportunity to comment on these waterbody rating systems by commenting on the use of these 305(b) reports.

CHAPTER III. IDENTIFYING WATER QUALITY LIMITED SEGMENTS

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CHAPTER III. IDENTIFYING WATER QUALITY LIMITED SEGMENTS

A. DATE OF THE SUMMARY DESCRIPTION OF THE PROCESS

May 1986

B. TITLE OF PROCESS

Identifying Water Quality Limited Segments

C. LEAD ADMINISTRATIVE UNIT FOR THE PROCESS

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D. OBJECTIVE OF THE PROCESS

The identification of segments where it is known that water quality does not meet (or is not expected to meet) applicable water quality standards even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the federal Clean Water Act.

E. LEGAL BASIS FOR THE PROCESS

1. Clean Water Act References

Section 303(d)(1)(A) of the federal Clean Water Act requires States to "identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) are not stringent enough to implement any water quality standard applicable to such waters". Section 303(e) of the Act requires States to provide for "adequate implementation...for revised or new water quality standards". The identification of water quality limited segments is part of a water quality standards implementation strategy.

2. State Law

Section 7 of the New Jersey Water Quality Planning Act requires the Department to "develop a statewide implementation strategy to achieve the water quality standards". The identification of water quality limited segments is part of the Department strategy to achieve water quality standards.

F. SUMMARY DESCRIPTION OF THE PERFORMANCE OF THE PROCESS

1. Segment Boundaries

a. Introduction

The recently adopted EPA Water Quality Planning and Management Regulation requires the State Continuing Planning Process to describe "the process for

identifying water quality limited segments still requiring wasteload allocations, load allocations, and total maximum daily loads..." (40 CFR 130.7(a)). This chapter describes one part of this process, the identification of water quality limited segments (whether or not such segments still require wasteload allocations, load allocations, and total maximum daily loads). The development of total maximum daily loads and wasteload allocations (including the identification of water quality limited segments still requiring total maximum daily loads and wasteload allocations) is discussed in the next chapter.

The same EPA regulation indicates that the term "segment" now applies to "waters", not "planning areas" (see 40 CFR 130.7(b), (d), and (e)). Previous EPA water quality planning regulations once defined "segment" as "a portion of an approved [water quality management] planning area, the surface waters of which have common hydrologic characteristics (or flow regulation patterns); common natural physical, chemical and biological characteristics and processes; and common reactions to external stresses, such as the discharge of pollutants" (40 CFR 130.2(o), 44 FR 55337, November 28, 1975). A similar definition of "segment" appeared in past Department regulations at N.J.A.C. 7:9-5.3 (with the term "study area" used instead of "planning area"), but those regulations were repealed in April 1985. The term "segment" is not defined in the new Surface Water Quality Standards (N.J.A.C. 7:9-4) or Wastewater Discharge Requirements (N.J.A.C. 7:9-5) that the Department adopted in April 1985. In the supplementary information accompanying the present EPA Water Quality Planning and Management Regulation, EPA states (50 FR 1778, January 11, 1985) that "to the extent practicable, segment boundaries should be established to facilitate developing WLAs/LAs and TMDLs" (wasteload allocations, load allocations, and total maximum daily loads).

b. Existing Segment Boundaries

As stated in the Department's 1976 State Continuing Planning Process Description and in the five initial areawide Water Quality Management Plans prepared by the Department in the late 1970s, the Department has applied the following criteria in identifying segments:

- Each segment should contain generally similar physical characteristics.
- Similar technical approaches should be applicable for managing water quality within a segment.
- Common needs for the preservation of high quality water should exist within a segment.

The Department's 1976 State Continuing Planning Process Description divided New Jersey into 26 segments and classified each segment as "water quality limited" or "effluent limited". In much of the State, these segment delineations and classifications have been superseded by segment delineations and classifications in areawide Water Quality Management Plans prepared by the Department and designated planning agencies. These are the only segment delineations that have been officially adopted by the Department for the specific purpose of identifying water quality limited segments. Although other "segments" have been defined for other purposes in other Department documents (e.g., the 76 "segments" in the fiscal year 1981 construction grant priority system and the 148 "segments" in the waterbody rating system in the "New

Jersey 1984 State Water Quality Inventory Report"), these other "segments" have not been used in the classification of water quality limited segments.

c. Review of Existing Segment Boundaries

A single list of all of the segments delineated in the 1976 Continuing Planning Process Description and subsequent areawide Water Quality Management Plans does not exist. Some of the segment boundaries are ambiguous or mutually inconsistent. (For example, the Upper Raritan Water Quality Management Plan identifies the Millstone River and all of its tributaries as one segment (the "Millstone River Segment") and identifies the South River and all of its tributaries as another segment (the "South River Segment"). In contrast, the Monmouth County Water Quality Management Plan identifies a single "Raritan River Drainage" segment including "a) Upper Tributaries of the South River" and "b) Upper Millstone River and Tributaries".) Segment boundaries also differ from the 148 "segments" in the waterbody rating system in the "New Jersey 1984 State Water Quality Inventory Report" (the "1984 305(b) report"), which (with modifications) will be used increasingly by the Division to organize water pollution and water use information.

The Department expects to draft and propose an amendment to the Statewide Water Quality Management Program Plan (the Statewide WQM Plan) that would replace the segments delineated in the 1976 Continuing Planning Process Description and subsequent areawide Water Quality Management Plans with segments that are, to the maximum extent practicable, the same as the 148 segments in the waterbody rating system in the 1984 305(b) report. Such an amendment would eliminate the present ambiguities and inconsistencies and would substantially assist the collection of information about water pollution and water use in each segment, and thus facilitate the establishment of priority rankings under section 303(d) of the federal Clean Water Act.

Some of the segments delineated in the 1976 Continuing Planning Process Description and subsequent areawide Water Quality Management Plans, and even some of the segments in the waterbody rating system in the 1984 305(b) report, may have boundaries that are not fully suitable for the final establishment of total maximum daily loads and wasteload allocations. As discussed in Chapter IV, the Department expects to draft and propose an amendment to the Statewide WQM Plan that would establish priority rankings for water quality limited segments still requiring total maximum daily loads and wasteload allocations. The Department expects that the proposed amendment would further refine in at least some cases the boundaries of high priority segments. Final refinements to these segment boundaries may be made when Department establishes the total maximum daily loads and wasteload allocations.

Any change to existing segment boundaries would be submitted to EPA for approval as an amendment to the Statewide WQM Plan, made in accordance with the Department's rules concerning the "Water Quality Management Planning and Implementation Process" (N.J.A.C. 7:15). The Department adopted its initial Statewide WQM Plan on December 5, 1985 (notice of this adoption was published in the New Jersey Register on January 6, 1986 at 18 N.J.R. 110(b)).

2. Segment Classifications

a. Introduction

The term "water quality limited segment" is defined in the EPA Water Quality Planning and Management Regulation (40 CFR 130.2(i)) as:

"any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by Sections 301(b) and 306 of the [federal Clean Water] Act."

(Previous EPA regulations included a slightly different definition of "water quality segment" and also defined the term "effluent limitation segment"; see 40 CFR 130.2(o), 40 FR 55337, November 28, 1975. Under these previous regulations, each segment had to be classified as either a "water quality segment" or an "effluent limitation segment".)

b. Existing Segment Classifications

Water quality limited segments have been identified in the five areawide Water Quality Management Plans prepared by the Department (Lower Delaware, Monmouth, Northeast, Upper Delaware, and Upper Raritan planning areas). Some of these plans identified water quality limited and effluent limited segments in areas adjacent to the planning area as well as within the planning area. (The Upper Raritan Water Quality Management Plan classified segments within the entire Raritan River/Raritan Bay drainage area, and the Northeast Water Quality Management Plan classified segments within the entire Arthur Kill/Rahway River drainage area.)

Water quality limited segments have also been identified in each of the seven areawide Water Quality Management Plans prepared by designated planning agencies. Some of these plans include unintentional errors. The Atlantic County Water Quality Management Plan did not make the necessary distinction between the former "CW-2" coastal waters, which are classified by the Department as effluent limited, and the former "CW-1" coastal waters, which are classified by the Department as water quality limited. (In the new Surface Water Quality Standards adopted by the Department in April 1985, the CW-1 and CW-2 classifications were changed to SC. The SC waters that were formerly classified as CW-1 waters are still classified as water quality limited, and the SC waters that were formerly classified as CW-2 waters are still classified as effluent limited.) The statement in the Lower Raritan/Middlesex County Water Quality Management Plan that the Department has classified portions of the Raritan River upstream from Raritan Bay as effluent limited is now incorrect. The statement was based on a draft Department "Phase 1 Water Quality Management Basin Plan" whose segment classifications for the Raritan River were superseded by the Upper Raritan Water Quality Management Plan prepared by the Department. Also incorrect is the depiction in Figure 4 of the Lower Raritan/Middlesex County Water Quality Management Plan of Raritan Bay as water quality limited (a depiction contrary to the narrative text of the plan). The entire New Jersey portion of Raritan Bay is classified by the Department as effluent limited. The statement in the Sussex County Water Quality Management Plan that the Department has classified a segment including

Flat Brook and certain other waters as effluent limited is incorrect. The statement was probably based on a draft "Phase 1 Water Quality Management Plan" that was never adopted by the Department. This segment is classified by the Department as water quality limited.

For segments of the mainstem Delaware River that were not classified in areawide Water Quality Management Plans, the segment classifications given on page V-4 of the 1976 Continuing Planning Process Description remain in effect. The correct segment classifications are summarized on a statewide basis on the following page (Table III-1).

The classification of a segment as water quality limited does not necessarily mean that any or all point source discharges in that segment will receive more stringent effluent requirements. For example, segments can be classified as water quality limited because of known or suspected water quality problems caused partly or entirely by nonpoint sources. For water quality problems that are caused entirely by nonpoint sources, more stringent point source control is inappropriate. For water quality problems that are caused jointly by point and nonpoint sources, control of nonpoint sources may be preferable in some cases to more stringent control of point sources. In order to minimize total expenditures (subject to social and environmental constraints), some dischargers in water quality limited segments may be assigned more stringent requirements while other dischargers are not assigned more stringent requirements (see N.J.A.C. 7:9-4.5(e).1). Some individual discharges in water quality limited segments may not be assigned more stringent effluent limitations, because of the minimal water quality impact of those particular discharges. In some cases, more stringent requirements may be necessary for some parameters (such as total residual chlorine) but not necessary for other parameters (such as biochemical oxygen demand).

Conversely, the Department reserves the right to establish water quality based effluent limitations in appropriate circumstances for discharges to segments presently classified as effluent limited. The present classification of effluent limited segments was based on a general (and sometimes preliminary or outdated) analysis for at most a few conventional pollutants, not on the detailed, up-to-date consideration of every pollutant from every existing and potential discharge. The Department considers the present classification of effluent limited segments to be a general planning tool without rigorous regulatory significance. As discussed below, the Department may propose to amend the Statewide Water Quality Management Program Plan to change the classification of all segments presently classified as effluent limited, to prevent any contrary interpretations.

In general, the Department's reasons for classifying all New Jersey inland waters (except for the New Jersey portion of Zones 1C, 1D, and 1E of the mainstem Delaware River) as being in water quality limited segments can be summarized as follows:

- 1) New Jersey inland waters generally have a low base stream flow and a corresponding low assimilative capacity for wastewater discharges. (For example, the concentration of total residual chlorine (TRC) in chlorinated domestic wastewater is often 300 or more times the 3 ug/l criterion for TRC specified in the Department's Surface Water Quality Standards for FW2 waters. During base flow periods, 300-to-1 or greater dilution is not available for most discharges of domestic wastewater to

Table III-1

EXISTING CLASSIFICATIONS OF SEGMENTS (SUMMARY)

All streams and water bodies in or bordering New Jersey are included within water quality limited segments except the following water bodies, which are included within effluent limited segments:

Hudson River (New Jersey portion)

Upper New York Bay (New Jersey portion)

Kill Van Kull (New Jersey portion)

Arthur Kill (New Jersey portion)

Raritan Bay (New Jersey portion)

Atlantic Ocean (All SC waters formerly classified as CW-2 waters)

Delaware River (Zones 1C, 1D, and 1E; New Jersey portion)

Delaware Bay (Zone 6, New Jersey portion)

All New Jersey tributaries to the above eight water bodies are included in water quality limited segments. Zones 1C, 1D, and 1E of the Delaware River, and Zone 6 of Delaware Bay, are described in Index C of the Department's present Surface Water Quality Standards (N.J.A.C. 7:9-4). The SC waters that were formerly classified as CW-2 waters were described (as CW-2 waters) in the Department's Surface Water Quality Standards that were adopted in March 1981 and repealed in April 1985.

New Jersey inland waters.) Many of the inland waters receive considerable pollutant loadings from domestic treatment plants and other point and nonpoint sources associated with urban and suburban development. Suburban development continues to occur in rural areas of the state where such development was previously absent, and the Department continues to receive proposals for new discharges of domestic wastewater to surface waters in some of these areas.

- 2) According to the "New Jersey 1982 State Water Quality Inventory Report" (p. III-12), the water quality data analyzed for that report "indicates that there is widespread fecal coliform contamination and excessive nutrients (total phosphorus) in the surface waters of the State". Although the criteria for bacterial quality and total phosphorus in the Department's Surface Water Quality Standards include qualifying statements which may prevent definitive conclusions about contravention of water quality standards from being made solely on the basis of that data, the data does indicate the widespread presence of water quality problems that will not be remedied by the technology-based effluent limitations required by sections 301(b) and 306 of the federal Clean Water Act. According to Table III-1 in the "New Jersey 1982 State Water Quality Inventory Report", only 13 of the state's 45 major streams have generally "excellent" or "good" water quality. Also, transient violations of the suspended solids criteria in the Department's Surface Water Quality Standards may occur during high flow conditions along streams which receive considerable amounts of eroded soil from cropland, construction sites, or other sources.
- 3) The Department's Surface Water Quality Standards include antidegradation policies that apply to all surface waters of the State (N.J.A.C. 7:9-4.5(d)) and that can require the establishment of effluent limitations more stringent than those necessary to meet the minimum water quality criteria (for water quality characteristics that are presently better than the criteria).

c. Review of Existing Segment Classifications

The Department does not expect rapid change in the factors just listed (some of the factors may not change at all) and does not presently expect to change any segment classifications from water quality limited to effluent limited (although some segment boundaries may be revised to be consistent with the waterbody rating system in the 1984 305(b) report and to facilitate the development of total maximum daily loads and wasteload allocations). In the Department's judgment, the detailed review of these existing segment classifications is not a high priority activity. Segments can be classified as water quality limited for so many different reasons (low assimilative capacity for existing or potential point source discharges of conventional or toxic pollutants, frequent or infrequent contravention of water quality standards for one or more parameters due to existing or potential nonpoint sources, the requirements of antidegradation policy) that a very detailed study would be necessary to demonstrate that the classification of a particular segment should be changed from water quality limited to effluent limited. The resources that would have to be used for the detailed review of these existing segment classifications could better be used for more productive water quality planning and management activities. (Also, the technology-based effluent requirements of the federal Clean Water Act have not yet been firmly

established for many industrial point source categories.)

The Department does expect to review the classification of all segments that are presently classified as effluent limited. In consultation with the Delaware River Basin Commission and other member states, the present effluent limited classification of the New Jersey portions of Zones 1C, 1D, and 1E of the mainstem Delaware River and Zone 6 of Delaware Bay may be reconsidered because of antidegradation policy and minor or localized water pollution problems. In consultation with the Interstate Sanitation Commission and other member states, the present effluent limited classification of the New Jersey portion of the New Jersey-New York interstate tidal waters may be reconsidered because of water pollution problems and antidegradation policy. The present effluent limited classification of some SC waters in the Atlantic Ocean (the waters formerly classified as CW-2) may also be reconsidered because of antidegradation policy and water pollution problems. The result of these various reviews may be the conclusion that no New Jersey surface waters should be classified as effluent limited. As discussed above, such a conclusion would not necessarily mean that any or all point source discharges to waters presently classified as effluent limited would receive more stringent effluent limitations. Such a conclusion would, however, express the judgement that technology-based effluent requirements of the federal Clean Water Act cannot automatically be assumed to be adequate, by themselves, to ensure complete implementation of the Department's Surface Water Quality Standards applicable to these waters.

Any change to existing segment classifications would be submitted to EPA for approval as an amendment to the Statewide Water Quality Management Program Plan (Statewide WQM Plan), made in accordance with the Department rules concerning the "Water Quality Management Planning and Implementation Process" (N.J.A.C. 7:15). The Department adopted its initial Statewide WQM Plan on December 5, 1985 (notice of this adoption was published in the New Jersey Register on January 6, 1986 at 18 N.J.R. 110(b)).

G. COORDINATION OF THE PROCESS

The lead administrative unit for the process is the Monitoring and Planning Element. Any review of existing segment boundaries or segment classifications would be discussed with EPA-Region II. The review of existing segment boundaries or segment classifications for the mainstem Delaware River and Delaware Bay would be coordinated with the Delaware River Basin Commission and other member states. The review of existing segment boundaries or segment classifications for interstate tidal waters in the New Jersey-New York metropolitan area would be coordinated with the Interstate Sanitation Commission and other member states. The Department will not delegate the review of existing segment boundaries or segment classifications to other water quality management planning agencies, but would allow such agencies to provide comments during the review process.

The Monitoring and Planning Element would review the segment boundaries or segment classifications and arrange for the proposal and adoption of revised boundaries or classifications as amendments to the Statewide WQM Plan. Other Division Elements such as the Water Quality Management Element, the Water Supply and Watershed Management Element, the Enforcement Element, and the Construction Grants Administration Element, would be given the opportunity to comment on the draft plan amendments before such amendments would be formally

proposed. After the plan amendment is formally proposed for adoption, other agencies such as designated planning agencies and county health departments, as well as various interest groups, dischargers, and the general public, would have the opportunity to comment on the proposed revisions prior to the final adoption of the plan amendment.

Depending on the specific approach that would be used for the review of existing segment classifications, various kinds of technical information could be required for the review process. For example, if water quality impacts from specific point source discharges need to be evaluated, information concerning the discharges could be provided by the Water Quality Management Element, Enforcement Element, and Construction Grants Administration Element. The Bureau of Management Services could provide retrieval of water quality data from STORET. If special monitoring programs had to be performed, coordination with such agencies as EPA, the U.S. Geological Survey, or county or local health agencies could be necessary. If information on soil erosion or agricultural activities was required, coordination with the New Jersey Department of Agriculture and the U.S. Department of Agriculture could be necessary.

Within the Monitoring and Planning Element, the Bureau of Systems Analysis and Wasteload Allocation would have the principal responsibility for the review of existing segment boundaries or segment classifications. The Bureau of Planning and Standards would make the administrative arrangements for the adoption of revised segment boundaries or segment classifications as amendments to the Statewide WQM Plan, and could provide population projections or other information as necessary. The Bureau of Monitoring and Data Management could perform monitoring as necessary.

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CHAPTER IV. DEVELOPING TOTAL MAXIMUM DAILY LOADS AND WASTELOAD ALLOCATIONS

A. DATE OF THE SUMMARY DESCRIPTION OF THE PROCESS

May 1986

B. TITLE OF PROCESS

Developing Total Maximum Daily Loads and Wasteload Allocations

C. LEAD ADMINISTRATIVE UNIT FOR THE PROCESS

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D. OBJECTIVE OF THE PROCESS

The establishment of total maximum daily loads and wasteload allocations, at levels necessary to implement applicable surface water quality standards.

E. LEGAL BASIS FOR THE PROCESS

1. Clean Water Act References

a. Total Maximum Daily Loads

Section 303(d) of the federal Clean Water Act states:

"(1)(A) Each State shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.

"(B) Each State shall identify those waters or parts thereof within its boundaries for which controls on thermal discharges under section 301 are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife.

"(C) Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator [of EPA] identifies under section 304(a)(2) as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of

knowledge concerning the relationship between effluent limitations and water quality. [EPA has declared that "all pollutants, under the proper technical conditions, are suitable for the calculation of total maximum daily loads" (43 FR 60665; December 28, 1978).]

"(D) Each State shall estimate for the waters identified in paragraph (1)(D) of this subsection the total maximum daily thermal load required to assure protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for such protection and propagation in the identified waters or parts thereof.

"(2) Each State shall submit to the Administrator from time to time, with the first such submission not later than one hundred and eighty days after the date of publication of the first identification of pollutants under section 304(a)(2)(D) [i.e., not later than 180 days after December 28, 1978], for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission. If the Administrator approves such identification and load, such State shall incorporate them into its current plan under subsection (e) of this section. If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan under subsection (e) of this section.

"(3) For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (1)(A) and (1)(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margins of safety, for those pollutants which the Administrator identifies under section 304(a)(2) as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish and wildlife."

Section 303(e)(3)(C) of that Act also requires the incorporation of total maximum daily loads in State plans under section 303(e).

b. Wasteload Allocations

The term "wasteload allocation" is not used in the federal Clean Water Act. The present EPA Water Quality Planning and Management Regulation states that wasteload allocations "constitute a type of water quality-based effluent limitation" (40 CFR 130.2(g)). Section 303(e) of the federal Clean Water Act requires State plans to identify "effluent limitations...at least as stringent as those required by section 301(b)(1)..and at least as stringent as any requirements contained in any applicable water quality standard..." Section 301(b)(1) requires the achievement of effluent limitations "necessary to meet water quality standards...established pursuant to any State law...or required to implement any applicable water quality standard established pursuant to this Act."

Also, in the supplementary information accompanying the EPA Water Quality Planning and Management Regulation, EPA states (50 FR 1775; January 18, 1975):

"Although section 303(d)(2) of the Act does not specifically mention either WLAs [wasteload allocations] or LAs [load allocations], it is impossible to evaluate whether a TMDL [total maximum daily load] is technically sound and whether it will be able to achieve standards without evaluating component WLAs and LAs and how these loads were calculated. Thus, it is necessary for EPA to review and approve or disapprove a TMDL in conjunction with component WLAs and LAs."

According to EPA, therefore, wasteload allocations are "components" of total maximum daily loads, whose legal basis in the federal Clean Water Act was quoted earlier in this subchapter.

2. State Law

a. Total Maximum Daily Loads

Section 7 of the New Jersey Water Quality Planning Act specifically requires the Department to determine "the total maximum daily load for pollutants necessary to meet the water quality standards".

b. Wasteload Allocations

As discussed in this chapter, wasteload allocations are a type of water quality based effluent limitation. Section 4 of the New Jersey Water Pollution Control Act authorizes the Department to "prepare, adopt, amend, repeal and enforce...reasonable codes, rules and regulations" that "may include...provisions concerning...the classification of the surface and ground waters of the State and the determination of water quality standards for each such classification" and "the limitation of effluents". Section 6 of the same Act states that "a permit under this act shall require the permittee...to achieve effluent limitations...as may be necessary to meet water quality standards..." Section 8 of the same Act states that the Department "may establish...effluent limitations...which...can reasonably be expected to contribute to the attainment and maintenance of the applicable water quality standards". Section 7 of the New Jersey Water Quality Planning Act requires the Department to "develop a statewide implementation strategy to achieve the water quality standards", including "the determination of effluent limitations...at least as

stringent as those required by the Federal Act".

Also, because wasteload allocations are considered to be components of total maximum daily loads, the requirement for total maximum daily loads in section 7 of the New Jersey Water Quality Planning Act also provides legal basis in State law for the development of wasteload allocations.

F. SUMMARY DESCRIPTION OF THE PERFORMANCE OF THE PROCESS

1. Introduction

The present EPA Water Quality Planning and Management Regulation includes the following related definitions (40 CFR 130.2):

"(d) Load or Loading. An amount of matter or thermal energy that is introduced into a receiving water; to introduce matter or thermal energy into a receiving water. Loading may be either man-caused (pollutant loading) or natural (natural background loading).

"(e) Loading capacity. The greatest amount of loading that a water can receive without violating water quality standards.

"(f) Load allocation (LA). The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads should be distinguished.

"(g) Wasteload allocation (WLA). The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.

"(h) Total maximum daily load (TMDL). The sum of the individual WLAs for point sources and LAs for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs."

The above-quoted EPA statement that wasteload allocations "constitute a type of water quality-based effluent limitation" directly implies that, in EPA's view, not every "water quality-based effluent limitation" is a "wasteload allocation". Moreover, in the supplementary information accompanying the EPA

regulation, EPA states that "once a TMDL has been completed, a wasteload allocation or load allocation (WLA/LA) for that TMDL forms the basis for permit limitations for individual dischargers", and refers to wasteload allocations as a "component" of total maximum daily loads (50 FR 1774-1775, January 11, 1985). These statements, together with the consistent joint references to total maximum daily loads and wasteload allocations in 40 CFR 130.7, seem to imply that, for purposes of the EPA regulation, a State cannot establish a "wasteload allocation" for a point source discharge unless the State also establishes a "total maximum daily load" for the receiving waters under section 303(d) of the federal Clean Water Act. (The State may, however, establish another type of "water quality-based effluent limitation", not called a "wasteload allocation", without establishing a total maximum daily load under section 303(d).)

This chapter has been written in a manner consistent with the above interpretation of the EPA regulation. For purposes of this chapter, the Department has restricted the term "wasteload allocation" to those water quality based effluent limitations that are components of total maximum daily loads established under section 303(d) of the federal Clean Water Act. Department rules define "wasteload allocation" as "the assignment of maximum waste loads to point source discharges so as to maintain water quality standards" (N.J.A.C. 7:15-1.5, N.J.A.C. 7:14A-1.9).

Other EPA regulatory provisions concerning total maximum daily loads and wasteload allocations are found at 40 CFR 130.7. Among these provisions are requirements that the State Continuing Planning Process describe the process for:

- Identifying water quality limited segments still requiring total maximum daily loads and wasteload allocations.
- Setting priorities for developing total maximum daily loads and wasteload allocations.
- Establishing total maximum daily loads and wasteload allocations for the segments identified, including water quality monitoring, modeling, data analysis, calculation methods, and list of pollutants to be regulated.
- Submitting the State's list of segments identified, priority ranking, and total maximum daily loads and wasteload allocations established to EPA for approval.
- Incorporating the approved total maximum daily loads and wasteload allocations into the State's Water Quality Management Plans and discharge permits.
- Involving the public, affected dischargers, designated areawide agencies, and local governments in this process.

A discussion of the first five of these topics follows. (The sixth topic is discussed later in this chapter under "Coordination of the Process".)

2. Identifying Water Quality Limited Segments Still Requiring Total Maximum Daily Loads and Wasteload Allocations

The EPA regulation (40 CFR 130.7(b)) specifies that:

"(1) Each State shall identify those water quality limited segments still requiring WLAs...and TMDLs within its boundaries for which:

"(i) technology-based effluent limitations required by sections 301(b), 306, 307, or other sections of the Act;

"(ii) more stringent effluent limitations (including prohibitions) required by either State or local authority preserved by section 510 of the Act, or Federal authority (e.g., law, regulation, or treaty); and

"(iii) other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority

are not stringent enough to implement any water quality standard (WQS) applicable to such waters..."

As discussed in the preceding chapter ("Identifying Water Quality Limited Segments"), the Department has identified all New Jersey inland surface waters (except for Zones 1C, 1D, and 1E of the mainstem Delaware River) as being included within water quality limited segments (and may propose to identify all New Jersey surface waters as water quality limited segments).

The Department has never formally established a "total maximum daily load" under section 303 of the federal Clean Water Act (or section 7 of the New Jersey Water Quality Planning Act) for any pollutant in any New Jersey waterway. Because the Department is, for purposes of this chapter, restricting the term "wasteload allocation" to those water quality based effluent limitations that are components of total maximum daily loads, it follows that the Department has never formally established a "wasteload allocation" for any pollutant in any point source discharge. (The Department has, however, established water quality based effluent limitations for certain pollutants from many point source discharges.) The "wasteload allocations" included in the Northeast and Sussex County Water Quality Management Plans, the "wasteload allocations" that have been established for the Delaware Estuary by the Delaware River Basin Commission (and mentioned in the Mercer and Tri-County Water Quality Management Plans), all "wasteload allocations" or "water quality based effluent limitations" established under the previous Department rules concerning Treatment of Wastewater Discharged Into Surface Waters of the State that were repealed on April 29, 1985, and all water quality based effluent limitations established to date under the Department's present Surface Water Quality Standards (N.J.A.C. 7:9-4, adopted on April 29, 1985 and amended on August 7, 1985) are not considered to be "wasteload allocations" within the meaning of the EPA regulation, but are considered to be water quality based effluent limitations.

As indicated above, the Department has, under federal and State authority, established water quality based effluent limitations more stringent than the

technology-based requirements of the federal Clean Water Act for certain pollutants (or properties of pollution) from many point source discharges. These effluent limitations will not ensure complete implementation of the applicable water quality standards until all pollutants are regulated and nonpoint sources contributing to the same receiving waters are controlled. Also, these effluent limitations are not permanent requirements. They are found in discharge permits that expire after fixed terms, or in Water Quality Management Plans that are subject to revision, update, and amendment. Existing water quality based effluent limitations may need to be revised in the future for various reasons, including changes in surface water quality standards; changes in effluent flows, discharge locations, or hydrologic conditions; and the availability of new data and improved methodologies. (The same considerations apply to the "waste load allocations" established by the Delaware River Basin Commission.) The Division of Water Resources views the development of total maximum daily loads and wasteload allocations as a continuing process. Even after the Department establishes total maximum daily loads and wasteload allocations for particular pollutants in particular segments, the Department will reserve the right to revise those total maximum daily loads and wasteload allocations in response to changed circumstances.

The Department has also established some more stringent effluent limitations (apart from water quality based effluent limitations) under State authority preserved under section 510 of the federal Clean Water Act (e.g., the effluent standard for toxic discharges in N.J.A.C. 7:9-5.7 and some of the minimum treatment requirements for BOD in N.J.A.C. 7:9-5.8). The Delaware River Basin Commission has also established some more stringent effluent limitations (apart from its water quality based "wasteload allocations") for Delaware River Basin dischargers in its "Basin Regulations - Water Quality". Other examples of more stringent effluent limitations applicable in some areas of New Jersey include the Pinelands Commission prohibition of new direct discharges of wastewater in the Pinelands Area and some of the effluent requirements of the Hackensack Meadowlands Development Commission. (The Division is not aware of any more stringent effluent limitations, apart from water quality based effluent limitations, that have been required in New Jersey by Federal authority.) Some other pollution control requirements such as best management practices also apply in New Jersey (e.g., requirements under New Jersey's Soil Erosion and Sediment Control Act and various storm water management requirements by the Department or local governments). However, these effluent limitations and pollution control requirements were not designed to ensure complete implementation of the applicable surface water quality standards, and do not, in the Division's judgment, ensure such implementation.

Accordingly, the Department expects to propose an amendment to the Statewide Water Quality Management Program Plan (the Statewide WQM Plan) that would identify all of the water quality limited segments in New Jersey as "water quality limited segments still requiring total maximum daily loads". Such an identification would record the Department's presumption that, for water quality limited segments, total maximum daily loads are generally required for at least some pollutants or properties of pollution, and would identify all such segments as potential candidates for the development of total maximum daily loads. Such an identification would not, by itself, impose effluent limitations or pollution control requirements on any point or nonpoint source. Indeed, subsequent analysis of individual segments (in the development of total maximum daily loads) may allow the Department to identify specific

segments that do not require total maximum daily loads for some specific pollutants or properties of pollution. In the Division's judgment, however, the resources that would have to be used in a deliberate search for such segments could better be used for the actual development of total maximum daily loads in accordance with the priority ranking.

The Division also believes that wasteload allocations are required for at least some pollutants, for at least some point source discharges, in most, if not all, water quality limited segments. The Department expects to consider this matter further (and propose a corresponding amendment to the Statewide WQM Plan) after it revises the existing segment boundaries to eliminate the present ambiguities and inconsistencies and obtain general consistency with segments identified in the 1984 305(b) report (see the preceding chapter, "Identifying Water Quality Limited Segments"), and identifies the permitted point source discharges in each segment. In the Division's judgment, however, the resources that would have to be used in a deliberate, detailed search to identify water quality limited segments that do not require wasteload allocations could better be used for the actual development of wasteload allocations in accordance with the priority ranking. The Division expects to begin developing wasteload allocations for high priority segments long before it could complete a definitive evaluation of whether each individual segment requires wasteload allocations.

3. Setting Priorities for Developing Total Maximum Daily Loads and Wasteload Allocations

The EPA regulation (40 CFR 130.7(b)) specifies that "the State shall establish a priority ranking for...water quality limited segments still requiring WLAs...and TMDLs, taking into account the severity of the pollution and the uses to be made of such waters and shall identify the pollutants causing or expected to cause violations of the water quality standards." In the supplementary information accompanying the regulation, EPA said that "priorities may also take into account such factors as the need to refine National Pollutant Discharge Elimination System (NPDES) permit limits and pending construction grant decisions" (50 FR 1775; January 11, 1985).

At present, the Department does not have in effect a priority ranking for water quality limited segments still requiring total maximum daily loads and wasteload allocations. (In the 1970's, what might be termed "general purpose" segment rankings were submitted by the Department to EPA-Region II in annual "State strategies" pursuant to past EPA regulations (40 CFR 130.20(a)(2); 40 FR 55341; November 28, 1975), but these rankings were not suitable for the development of total maximum daily loads and wasteload allocations and have in any case expired.) The Department's practice has been to establish "water quality based effluent limitations" without formally establishing total maximum daily loads and "wasteload allocations". EPA had itself stated in 1978 that:

"...EPA has not considered the development of TMDL's as a high priority since many of the practical results are being achieved through State water quality management processes. EPA does not consider the establishment of TMDL's as essential to setting of water quality based effluent limits. Development of TMDL's pursuant to section 303(d) is not a necessary prerequisite to adoption and enforcement of water quality standards..." (43 FR

In the supplementary information accompanying the present EPA Water Quality Planning and Management Regulation, however, EPA states that "TMDLs are important elements of WQM plans...Once a TMDL has been completed, a wasteload allocation or load allocation (WLA/LA) for that TMDL forms the basis for permit limitations for individual discharges" (50 FR 1774; January 11, 1985). In the Department's judgement, however, the formal establishment of total maximum daily loads and wasteload allocations is still a low priority activity that is often not the most practical means for the setting of water quality based effluent limitations or the implementation of water quality standards. The resources that would have to be used for the formal establishment of total maximum daily loads and wasteload allocations could better be used for more directly productive water quality planning and management activities.

The Department expects to draft and propose an amendment to the Statewide WQM Plan that would establish a priority ranking system and a priority ranking for water quality limited segments still requiring total maximum daily loads and wasteload allocations. The proposed amendment would link the establishment of total maximum daily loads to the establishment of wasteload allocations based on intensive water quality surveys conducted or otherwise directly supported by the Department. Segments that receive high priority for the performance of intensive surveys to establish wasteload allocations would also receive equivalently high priority for the establishment of total maximum daily loads. (This linkage is consistent with the EPA statement (50 FR 1775; January 11, 1985) that "it is impossible to evaluate whether a TMDL is technically sound without evaluating component WLAs and LAs and how these loads were calculated" and that "it is necessary for EPA to review and approve or disapprove a TMDL in conjunction with component WLAs and LAs".)

Under the proposed amendment, total maximum daily loads and wasteload allocations would be established first for segments that are already (at the time of the proposed amendment) scheduled for the establishment of intensive-survey-based water quality based effluent limitations pursuant to the annual State work program under 40 CFR 130.11. In assigning priorities for future intensive surveys to support the establishment of wasteload allocations and total maximum daily loads, the Department would consider various factors including the requirements and schedules of the discharge permit, enforcement, public sewerage construction, and water supply management programs; the size, pollutant loading, and toxicity of the discharges; and the sensitivity and complexity of the receiving waters (to the extent that information on these factors is available).

Total maximum daily loads and wasteload allocations would be established for the same pollutants. Two of the five areawide Water Quality Management Plans prepared by the Department (Monmouth and Upper Raritan planning areas) include a table entitled "Water Quality Parameters to be Considered in Total Maximum Daily Load Allocation Process". This table, which in principle applied to both the establishment of total maximum daily loads and the establishment of wasteload allocations, was superseded by the Surface Water Quality Standards that the Department adopted in 1981, which were in turn replaced by the revised Surface Water Quality Standards that the Department adopted on April 29, 1985 and amended on August 7, 1985 (N.J.A.C. 7:9-4).

4. Establishing Total Maximum Daily Loads and Wasteload Allocations for the Segments Identified

a. Introduction

The EPA regulation requires that the process for establishing total maximum daily loads and wasteload allocations "including water quality monitoring, modeling, data analysis, calculation methods, and list of pollutants to be regulated...shall be clearly described in the State Continuing Planning Process" (40 CFR 130.7(a)). In addition to requirements copied nearly verbatim from section 303(d) of the federal Clean Water Act (but applied to wasteload allocations as well as total maximum daily loads), the EPA regulation further specifies (40 CFR 130.7(c)) that:

"Determinations of WLAs...and TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters...TMDLs may be established using a pollutant-by-pollutant or biomonitoring approach. In many cases both techniques may be needed. Site-specific information should be used wherever possible."

The Department expects to propose the adoption of total maximum daily loads and wasteload allocations as amendments to the Statewide WQM Plan. Because of the proposed linkage between the establishment of total maximum daily loads and the establishment of wasteload allocations based on intensive surveys, and because wasteload allocations are a type of water quality based effluent limitation, the Department would, in the establishment of total maximum daily loads and wasteload allocations, follow regulatory requirements and technical procedures similar to those used by the Department for the establishment of water quality based effluent limitations based on intensive surveys.

As discussed below, the wasteload allocation procedures that were set forth in the initial areawide Water Quality Management Plans have been superseded by subsequently adopted Department rules. The Statewide WQM Plan includes two strategies related to water quality based effluent limitations. However, the most important elements of the Department's process for establishing total maximum daily loads and wasteload allocations are the provisions concerning water quality based effluent limitations in Department rules (including the Department's Surface Water Quality Standards), and the Department's approach for implementing those rules (including the technical procedures to be used in the Department's wasteload allocation studies).

b. Water Quality Management Plans

Each of the five areawide Water Quality Management Plans prepared by the Department (Lower Delaware, Monmouth, Northeast, Upper Delaware, and Upper Raritan planning areas) include a subchapter entitled "Wasteload Allocation Process". This subchapter (including "Attachment A" in the "Supplement" to each of the five plans) was superseded by the Department rules concerning Surface Water Quality Standards and the Department rules concerning Treatment of Wastewater Discharged Into Surface Waters of the State that were adopted in March 1981. Likewise, any general descriptions of the wasteload allocation process in the seven areawide Water Quality Management Plans prepared by designated planning agencies (Atlantic, Cape May, Lower Raritan/Middlesex County, Mercer, Ocean, Tri-County, and Sussex planning areas) were also

superseded in March 1981. Both of the above-mentioned rules were repealed on April 29, 1985, and the provisions in those rules that were applicable to the wasteload allocation process were thereby themselves superseded by the Department's new Surface Water Quality Standards (N.J.A.C. 7:9-4). Under N.J.A.C. 7:15-3.4(d), any "water quality related...regulation formally adopted by the Governor, or his designee", including the Department's Surface Water Quality Standards, "shall be considered to be adopted in the Water Quality Management Plans without the need for further adoption procedures". The new Surface Water Quality Standards became effective on May 20, 1985, when notice of their adoption was published in the New Jersey Register (17 N.J.R. 1270(a)). (Index D in these Standards was amended on August 7, 1985; see Chapter V.)

The Department adopted its initial Statewide WQM Plan on December 5, 1985. Notice of this adoption was published in the New Jersey Register on January 6, 1985 at 18 N.J.R. 110(b). (Under N.J.A.C. 7:15-2.2(b), the "areawide plan and its amendments shall be consistent with the Continuing Planning Process and the Statewide Plan", and "all policies, objectives, and recommendations adopted in the Statewide Plan shall be concurrently adopted in the areawide plans without the need for separate hearings".) As noted on page I-5 of the Statewide WQM Plan, one component of that Plan is the Department's Surface Water Quality Standards (N.J.A.C. 7:9-4). The Statewide WQM Plan also includes a "Surface Water Quality Standards Review" strategy that is discussed in the next chapter ("Reviewing Water Quality Standards").

As noted in this chapter, "wasteload allocations" are a type of water quality based effluent limitation. The Statewide WQM Plan also includes (p. II-40) a "Water Quality Based Effluent Limitations" strategy that is applicable to wasteload allocations as well as other water quality based effluent limitations. (The strategy uses the term "water quality based effluent limitations" exclusively and does not use the term "wasteload allocations".) The strategy briefly outlines, in general terms, suggested future actions to be taken by the Division, including:

- 1) The development of water quality based effluent limitations for some parameters on the basis of simple mass balances including toxicity limitation formulas, with or without the collection of new hydrologic, chemical, or biological data.
- 2) The development of water quality based effluent limitations using more complex procedures (intensive water quality surveys, water quality models, consideration of point source and nonpoint source control tradeoffs).
- 3) The development of water quality based effluent limitations for whole effluent toxicity and for specific chemical toxic pollutants, for industrial discharges and publicly owned treatment works that have significant industrial contributions.

Like the other "strategies" in the Statewide WQM Plan, the "Water Quality Based Effluent Limitations" strategy is not binding on the Division or other parties. On December 30, 1985, the Statewide WQM Plan was submitted to EPA for approval under the federal Clean Water Act.

c. Existing Department Rules

Because "wasteload allocations" are a type of water quality based effluent limitation, the establishment of wasteload allocations (and, therefore, the establishment of total maximum daily loads) is directly governed by the provisions concerning water quality based effluent limitations in the Department's Surface Water Quality Standards (N.J.A.C. 7:9-4). These Standards were adopted on April 29, 1985, became effective on May 20, 1985 (17 N.J.R. 1270(a)), and were approved by EPA on July 8, 1985. (Index D in these Standards was amended on August 7, 1985; see Chapter V.) Because total maximum daily loads and wasteload allocations will be adopted as amendments to the Statewide WQM Plan, the Department's Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15) are significant for certain administrative elements of the process.

The present EPA Water Quality Standards Regulation provides (40 CFR 131.13) that:

"States may, at their discretion, include in their State standards, policies generally affecting their application and implementation, such as mixing zones, low flows and variances. Such policies are subject to EPA review and approval."

In addition to surface water classifications, use designations, water quality criteria, and antidegradation policies, the Department's Surface Water Quality Standards include several provisions directly applicable to the establishment of water quality based effluent limitations (including wasteload allocations). These include the following:

N.J.A.C. 7:9-4.5	Statements of Policy
N.J.A.C. 7:9-4.6	Establishment of Water Quality Based Effluent Limitations
N.J.A.C. 7:9-4.7	Water Quality Based Effluent Limitations and Water Quality Management Planning
N.J.A.C. 7:9-4.8	Procedures for Modifying Water Quality Based Effluent Limitations for Individual Dischargers to Category One Waters
N.J.A.C. 7:9-4.9	Procedures for Modifying Water Quality Based Effluent Limitations for Individual Discharges to Category Two Waters

These provisions should be read in full for a proper appreciation of the Department rules that directly govern the wasteload allocation process. The following discussion highlights selected features of these provisions but does not fully summarize these provisions.

The "Statements of Policy" at N.J.A.C. 7:9-4.5 include, for example:

- general technical policies, including policies concerning low stream flows and mixing zones (N.J.A.C. 7:9-4.5(c)).

- antidegradation policies, including antidegradation policies for Nondegradation waters, Pinelands waters, Category One waters, and Category Two waters (N.J.A.C. 7:9-4.5(d)).
- water quality based effluent limitation policies (N.J.A.C. 7:9-4.5(e)), including a policy allowing the establishment of water quality based effluent limitations so as to minimize total expenditures, subject to social and economic constraints, so that the provisions of the Surface Water Quality Standards are met (a policy which may result in the assignment of different levels of treatment to different dischargers in the same study area).
- bioassay and biomonitoring policies, including policies concerning the normal use of acute definitive bioassay tests and the use of other procedures such as chronic bioassay testing (N.J.A.C. 7:9-4.5(f)).
- nutrient policies, including policies concerning the establishment of site-specific water quality criteria and the control of nonpoint sources (N.J.A.C. 7:9-4.5(g)).

N.J.A.C. 7:9-4.6 ("Establishment of Water Quality Based Effluent Limitations") and N.J.A.C. 7:9-4.7 ("Water Quality Based Effluent Limitations and Water Quality Management Planning") identify two different procedures for the establishment of water quality based effluent limitations. The first procedure is the establishment of water quality based effluent limitations through the New Jersey Pollutant Discharge Elimination System (NJPDES). Under N.J.A.C. 7:9-4.6(c), the Department "may develop water quality based effluent limitations for a single point source discharge in response to an application for a DAC or NJPDES permit" under the New Jersey Pollutant Discharge Elimination System. These 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 Surface Water Quality Standards (N.J.A.C. 7:9-4.6(b)). In N.J.A.C. 7:9-4.7(a), the effluent limitations established under this first procedure are referred to as "water quality based effluent limitations established as a NJPDES permit condition under N.J.A.C. 7:14A-8.6", which "may be adopted as an amendment to the Statewide [WQM] Plan... without further adoption proceedings as long as proper notice is given with the NJPDES notice". In N.J.A.C. 7:9-4.8 and 4.9, these same effluent limitations are referred to as "water quality based effluent limitations for individual dischargers" and "water quality based effluent limitations established on a case-by-case basis".

The second procedure is the establishment of water quality based effluent limitations by the direct amendment of Water Quality Management Plans, without the use of the NJPDES program. Under this procedure, water quality based effluent limitations are proposed not as conditions of Draft NJPDES permits or Draft DACs, but as proposed amendments to the Statewide (or appropriate areawide) WQM Plan, and public hearings are held not under the New Jersey Pollutant Discharge Elimination System rules (N.J.A.C. 7:14A) but under the Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15). This second procedure is the subject of N.J.A.C. 7:9-4.7(a)2, which states that "water quality based effluent limitations established as an amendment to the Statewide or appropriate Areawide [WQM] 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".

Wasteload allocations are a type of water quality based effluent limitation that will be established only through this second procedure (which may also be used to establish water quality based effluent limitations other than wasteload allocations). In particular, all total maximum daily loads and wasteload allocations will be proposed and adopted as amendments to the Statewide WQM Plan. On their face, most of N.J.A.C. 7:9-4.6, and all of N.J.A.C. 7:9-4.8 and 4.9, apply only to water quality based effluent limitations that are established through the NJPDES program, and therefore do not apply to wasteload allocations. As noted above, however, under N.J.A.C. 7:9-4.7(a)2 water quality based effluent limitations (including wasteload allocations) must be consistent with all of the provisions of the Surface Water Quality Standards, including all of the provisions of N.J.A.C. 7:9-4.6, 4.8, and 4.9.

N.J.A.C. 7:9-4.6 includes provisions concerning:

- implementation of antidegradation policy for Category One and Category Two waters (N.J.A.C. 7:9-4.6(c)1 and 2).
- for chemical specific water quality based effluent limitations, consideration of nonpoint sources and the need for reserve capacity, and the requirement for scientifically defensible technical approaches, such as calibrated and verified mathematical water quality models developed or adapted for a particular waterway, simplified modeling approaches, a simple mass balance, or bioassay procedures (N.J.A.C. 7:9-4.6(c)4).
- effluent toxicity limitation formulas for use when acute definitive bioassays or chronic bioassays are used as the measure of whole effluent toxicity (N.J.A.C. 7:9-4.6(c)5).
- discharge of intermittently chlorinated, non-contact cooling water (N.J.A.C. 7:9-4.6(c)6).

If the Department proposes or adopts wasteload allocations that are less stringent than those necessary to meet the applicable water quality criteria and antidegradation policies, such action must be consistent with the provisions of N.J.A.C. 7:9-4.8 ("Procedures for Modifying Water Quality Based Effluent Limitations for Individual Dischargers to Category One Waters") and N.J.A.C. 7:9-4.9 ("Procedures for Modifying Water Quality Based Effluent Limitations for Individual Dischargers to Category Two Waters"). Because the granting of such variances is considered to be a revision of the applicable water quality standards (see the EPA statement at 48 FR 51403; November 8, 1983), this subject is discussed in the next chapter ("Reviewing Water Quality Standards").

Under the Department's Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15), the Department's Continuing Planning Process "may include...waste load allocation policy and effluent limitations for point sources" (N.J.A.C. 7:15-2.1(c)), and it is the responsibility of the Department to "establish waste load allocations on a case by case basis" (N.J.A.C. 7:15-2.3). Administrative procedures for all amendments to the Statewide WQM Plan (including wasteload allocations) are specified in N.J.A.C. 7:15-3.4 ("Water Quality Management Plan Amendment Procedures") and 7:15-3.5

("Water Quality Management Plans Review, Adoption and Certification"). These provisions address such matters as public notice of proposed amendments and opportunities to request public hearings.

d. Revisions to Department Rules

On April 29, 1985, the Department adopted new Surface Water Quality Standards that directly govern the establishment of total maximum daily loads and wasteload allocations. On July 8, 1985, the EPA approved these Standards under section 303(c) of the federal Clean Water Act. Index D in these Standards was amended on August 7, 1985. Section 303(c) of the federal Clean Water Act requires the States to review "applicable water quality standards" at least once every three years. The next triennial review of the Surface Water Quality Standards is scheduled for completion by May 1988. The Department may also propose revisions to parts of the Surface Water Quality Standards before May 1988. All provisions of the Surface Water Quality Standards, including provisions directly applicable to the establishment of wasteload allocations, will be reviewed by or before May 1988. The process for the review of these standards is further discussed in the next chapter ("Reviewing Water Quality Standards").

The Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15) are not "applicable water quality standards" under section 303(c) and are not subject to the above review process. However, the Expiration Date for these rules pursuant to Executive Order No. 66 (1978) is April 2, 1989; these rules cannot continue in effect beyond that date unless they have been formally proposed for re-adoption and have been re-adopted. As part of its FY 87 work program under section 205(j) of the federal Clean Water Act, the Department expects to propose revisions to these regulations for adoption in 1987. The administrative process for the review of these regulations is similar to the review process for the Surface Water Quality Standards (except that the adopted rules are not submitted to EPA under section 303(c)).

e. Technical Procedures

To develop total maximum daily loads and wasteload allocations, water quality surveys will be performed, taking into account point and nonpoint sources of pollution. Using the field data, other technical data, a water quality model, and information about control methods, various alternatives will be evaluated to estimate whether water quality standards are attainable, to estimate the effectiveness of point source control, and to identify treatment level requirements. For a given segment, total maximum daily loads and wasteload allocations for some parameters would be based on calibrated and verified water quality models, while total maximum daily loads and wasteload allocations for other parameters may be based on other scientifically defensible technical approaches such as simplified modeling approaches, as outlined in "Water Quality Assessment" (EPA-600/6-82-004), a simple mass balance, or bioassay procedures (as provided for in N.J.A.C. 7:9-4.6(c)4.ii). Examples of existing Department reports concerning the development of water quality based effluent limitations based on intensive surveys are identified below. These reports include descriptions of water quality monitoring, modeling, data analysis, and calculation methods, and identify pollutants to be regulated. These descriptions illustrate, in a general manner, the kinds of technical approaches that the Department expects to use for the establishment

of total maximum daily loads and wasteload allocations, with appropriate changes in response to such factors as revisions to the Department's Surface Water Quality Standards and the Department's Quality Assurance program.

The Department report entitled "Water Quality Modeling of the Upper Lamington River" (March 1985) described the development of a calibrated and verified, steady-state dissolved oxygen model for a non-tidal stream, and the use of this model and antidegradation policy to recommend seasonal water quality based effluent limitations for biochemical oxygen demand (5-day), suspended solids, ammonia, dissolved oxygen, total phosphorus, and total residual chlorine in a wastewater effluent. The Department report entitled "Steady State Water Quality Modeling of Conventional Pollutants in the Berry's Creek Estuary" (June 1984) described the development and use of a calibrated and verified, steady-state dissolved oxygen model for an estuarine system. The application of a simplified dissolved oxygen model to Cuckels Brook was described in the Department report entitled "Effluent Limitations for the Somerset Raritan Valley Sewerage Authority Based on Water Quality Impacts on the Raritan River and Cuckels Brook" (April 1984), which also discussed effluent limitations for total residual chlorine. Examples of Department studies concerning water quality based effluent limitations for ammonia toxicity include the Department reports entitled "Ammonia Limitation for the Borough of Mendham STP" (November 1983) and "Effluent Limitations for the Somerset Raritan Valley Sewerage Authority Based on Water Quality Impacts on the Raritan River and Cuckels Brook" (April 1984).

5. Submitting the List of Segments, Priority Ranking, Total Maximum Daily Loads, and Wasteload Allocations to EPA

The EPA regulation requires that the process for "submitting the State's list of segments identified, priority ranking, and loads established (WLAs/LAs/TMDLs) to EPA for approval...shall be clearly described in the State Continuing Planning Process" (40 CFR 130.7(a)). The EPA regulation further specifies (40 CFR 130.7(d)) that:

"Each State shall submit to the Regional Administrator from time to time for approval the listing of water quality limited segments still requiring WLAs...and TMDLs identified under paragraph (b) of this section. All WLAs...and TMDLs established under paragraph (c) for water quality limited segments shall continue to be submitted to EPA for review and approval. Schedules for submission of WLAs...and TMDLs shall be determined by the Regional Administrator and the State."

Also, 40 CFR 130.10(b)(2) and (3) require the submission by the States to EPA of "identification and ranking by priority of water quality limited segments" and "total maximum daily loads".

As noted above, the Department expects to propose amendments to the Statewide WQM Plan that would:

- 1) Identify water quality limited segments still requiring total maximum daily loads and wasteload allocations;
- 2) Establish a priority ranking system and a priority ranking for water quality limited segments still requiring total maximum daily loads and

wasteload allocations; and

3) Establish total maximum daily loads and wasteload allocations.

(The proposals would be made after the Department amends the Statewide WQM Plan to revise segment boundaries to eliminate the present ambiguities and inconsistencies and obtain general consistency with segments identified in the 1984 305(b) report (see Chapter III). The Department adopted its initial Statewide WQM Plan on December 5, 1985.)

The Department would submit a draft of these amendments to EPA before the Department would adopt and certify such amendments. This submission of draft amendments would not constitute formal submission under section 303(d) of the federal Clean Water Act and 40 CFR 130.7, but would give EPA (and others) the opportunity to comment on the draft amendments prior to their adoption and certification. Immediately after the Department adopts and certifies one or more of these amendments, the Department would submit them to EPA pursuant to 40 CFR 130.6 and 130.10(b)(4). This submission would also constitute (and be specifically identified as) formal submission under section 303(d) and 40 CFR 130.7. The same process would be followed for the updating of adopted amendments.

6. Incorporating Approved Total Maximum Daily Loads and Wasteload Allocations Into Water Quality Management Plans and Discharge Permits

The EPA regulation requires that the process for "incorporating the approved loads [WLAs/LAs/TMDLs] into the State's WQM plans and NPDES permits...shall be clearly described in the State Continuing Planning Process" (40 CFR 130.7(a)). Other sections of the EPA regulation also require the incorporation of segment listings, total maximum daily loads, and wasteload allocations approved or established by EPA into Water Quality Management Plans (40 CFR 130.6(c) and 130.7(d)).

The Department interprets 40 CFR 130.7 as requiring the incorporation of total maximum daily loads into Water Quality Management Plans and the incorporation of wasteload allocations for individual discharges into Water Quality Management Plans and discharge permits. The Department does not interpret 40 CFR 130.7 as requiring the incorporation of total maximum daily loads into discharge permits. Such incorporation would be illogical because the total maximum daily load represents the sum of contributions from all point and nonpoint sources and natural background, not the contribution from an individual point source. Discharge permits must, however, be consistent with any total maximum daily loads that have been incorporated in Water Quality Management Plans.

As noted above, the Department expects to adopt and certify the identification of water quality limited segments still requiring total maximum daily loads and wasteload allocations, and the total maximum daily loads and wasteload allocations themselves, as amendments to the Statewide WQM Plan before EPA approves or disapproves such segment listings and loads pursuant to section 303(d) of the federal Clean Water Act and 40 CFR 130.7. (The Department would take such action under authority preserved under section 510 of the federal Clean Water Act.) The normal administrative process will be followed for the amendment of the Statewide WQM Plan, as specified in N.J.A.C. 7:9-3.4 and N.J.A.C. 7:9-3.5. The Department also expects to propose an amendment to its

Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15) which would stipulate that any segment listings, total maximum daily loads, and wasteload allocations established by EPA shall be considered to be adopted in the Statewide WQM Plan without the need for further adoption procedures, and which would also preserve the Department's authority to include in the Statewide WQM Plan segment listings, total maximum daily loads, and wasteload allocations more stringent than those established by EPA.

The process for ensuring that discharge permits are consistent with Water Quality Management Plans (including total maximum daily loads and wasteload allocations in the Statewide WQM Plan) is described in Chapter VIII ("Reviewing Discharge Permits and Construction Grants for Consistency With Water Quality Management Plans").

G. COORDINATION OF THE PROCESS

The EPA regulation requires that the process for "involving the public, affected dischargers, designated areawide agencies, and local governments in this process shall be clearly described in the State Continuing Planning Process" (40 CFR 130.7(a)) and that "calculations to establish WLAs...and TMDLs shall be subject to public review as defined in the State CPP" (40 CFR 130.7(c)(ii)).

The lead administrative unit for the process is the Monitoring and Planning Element. For the mainstem Delaware River and Delaware Bay, the development of total maximum daily loads and wasteload allocations (including segment listing and priority ranking) will be closely coordinated with the Delaware River Basin Commission and the other member states. (The Delaware River Basin Commission has the lead role in the development of water quality models for the mainstem Delaware River and Delaware Bay, and will have the lead role, in concert with member States, in the establishment of total maximum daily loads and wasteload allocations for these waterways. The Department actively participates in DRBC technical and policy activities related to these responsibilities.) For the interstate tidal waters in the New Jersey-New York metropolitan area, the development of total maximum daily loads and wasteload allocations should be closely coordinated with the Interstate Sanitation Commission and the other member states. The Department will not delegate the development of total maximum daily loads and wasteload allocations to other water quality management planning agencies, but will allow such agencies to provide comments before segment listings, priority rankings, total maximum daily loads, or wasteload allocations are adopted.

As discussed earlier in this chapter, the Department expects to propose amendments to the Statewide WQM Plan (in accordance with N.J.A.C. 7:15) that would identify water quality limited segments still requiring total maximum daily loads and wasteload allocations, establish a priority ranking system and a priority ranking for these segments, and establish total maximum daily loads and wasteload allocations, and to propose an amendment to N.J.A.C. 7:15 concerning the incorporation into the Statewide WQM Plan of segment listings and total maximum daily loads and wasteload allocations established by EPA. The Monitoring and Planning Element would develop these amendments and arrange for their proposal and adoption. Other Division Elements, such as the Water Quality Management Element, the Water Supply and Watershed Management Element, the Enforcement Element, and the Construction Grants Administration Element, would be given the opportunity to comment on the draft amendments before such

amendments are formally proposed. After the amendments are formally proposed for adoption in accordance with N.J.A.C. 7:15, other agencies such as EPA-Region II, designated planning agencies, county health departments, and local governments, as well as various interest groups, dischargers, and the general public, would have the opportunity to comment on the proposed amendments prior to their final adoption.

The Department's Surface Water Quality Standards directly govern the establishment of total maximum daily loads and wasteload allocations. The process used for the review of these standards is discussed in the next chapter ("Reviewing Water Quality Standards").

The number, kind, and location of intensive surveys that can be performed in a given time period to develop total maximum daily loads and wasteload allocations depend on Department priorities and the availability of manpower and resources. In drafting the priority ranking system and the priority ranking for water quality limited segments still requiring total maximum daily loads and wasteload allocations, the Monitoring and Planning Element will consult with the Construction Grants Administration Element, the Water Quality Management Element, the Water Supply and Watershed Management Element, and the Enforcement Element. Consultation with EPA-Region II will also be important because of the frequent use of Clean Water Act funds to support these intensive surveys and because the Department is required to submit the priority ranking to EPA.

The design and performance of individual intensive surveys would often require coordination with such agencies as EPA-Region II, the U.S. Geological Survey, and county and local health agencies. Information concerning point source discharges would be provided by the Water Quality Management Element, the Enforcement Element, and the Construction Grants Administration Element. The Bureau of Management Services would provide retrievals of water quality data from STORET. In some cases, the development of total maximum daily loads and wasteload allocations would need to be closely coordinated with water supply management decisions; this would require coordination with the Water Supply and Watershed Management Element. The Construction Grants Administration Element, Water Quality Management Element, Enforcement Element, and Water Supply and Watershed Management Element would be given the opportunity to comment on the technical reports that would be produced as a result of the intensive surveys. After the internal review of the technical reports within the Department, the technical reports would be made available to point source dischargers and other interested parties for review and comment.

Within the Monitoring and Planning Element, the Bureau of Systems Analysis and Wasteload Allocation has the principal responsibility for the development of total maximum daily loads and wasteload allocations (including segment listing and priority ranking and the review of the Department's Surface Water Quality Standards). The Bureau of Planning and Standards will make the administrative arrangements for the proposal and adoption of amendments to the Statewide WQM Plan and N.J.A.C. 7:15, may assist in the development of the priority ranking for water quality limited segments still requiring total maximum daily loads and wasteload allocations, and has assisted in the review of the Surface Water Quality Standards. The Bureau of Monitoring and Data Management and the Bureau of Systems Analysis and Wasteload Allocation would jointly design and coordinate the intensive surveys that would support the development of total maximum daily loads and wasteload allocations.

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CHAPTER V. REVIEWING WATER QUALITY STANDARDS

A. DATE OF THE SUMMARY DESCRIPTION OF THE PROCESS

May 1986

B. TITLE OF PROCESS

Reviewing Water Quality Standards

C. LEAD ADMINISTRATIVE UNIT FOR THE PROCESS

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D. OBJECTIVE OF THE PROCESS

The review of the Department's Surface Water Quality Standards, in accordance with the requirements of the federal Clean Water Act, EPA regulations, and Department rules.

E. LEGAL BASIS FOR THE PROCESS

1. Federal Law References

Section 101(a) of the federal Clean Water Act states:

"The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this Act—

...

"(2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983..."

Section 303(c) of the federal Clean Water Act states:

"(1) The Governor of a State or the State water pollution control agency of such State shall from time to time (but at least once each three year period beginning with the date of enactment of the Federal Water Pollution Control Act Amendments of 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. Results of such review shall be made available to the Administrator [of EPA].

"(2) Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

"(3) If the Administrator, within sixty days after the date of submission of the revised or new standard, determines that such standard meets the requirements of this Act, such standard shall thereafter be the water quality standard for the applicable waters of that State. If the Administrator determines that any such revised or new standard is not consistent with the applicable requirements of this Act, he shall not later than the ninetieth day after the submission of such standard notify the State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standard pursuant to paragraph (4) of this subsection.

"(4) The Administrator shall promptly prepare and publish proposed regulations setting forth a revised or new water quality standard for the navigable waters involved--

(A) if a revised or new water quality standard submitted by such State under paragraph (3) of this subsection for such waters is determined by the Administrator not to be consistent with the applicable requirements of this Act, or

(B) in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of this Act.

The Administrator shall promulgate any revised or new standard under this paragraph not later than ninety days after he publishes such proposed standards, unless prior to such promulgation, such State has adopted a revised or new water quality standard which the Administrator determines to be in accordance with this Act."

Section 24 of the Municipal Wastewater Treatment Construction Grant Amendments of 1981 (P.L. 97-117) states:

"The review, revision, and adoption or promulgation of revised or new water quality standards pursuant to section 303(c) of the Federal Water Pollution Control Act [i.e., the federal

Clean Water Act] shall be completed by the date three years after the enactment of the Municipal Wastewater Treatment Construction Grant Amendments of 1981 [i.e., by December 29, 1984]. No grant shall be made under title II of the Federal Water Pollution Control Act after such date until water quality standards are reviewed and revised pursuant to section 303(c), except where the State has in good faith submitted such revised water quality standards and the Administrator has not acted to approve or disapprove such submission within one hundred and twenty days of receipt."

2. State Law

Section 7 of the New Jersey Water Quality Planning Act requires the Department to "establish water quality standards for the waters of the State". Section 4 of the New Jersey Water Pollution Control Act authorizes the Department to "prepare, adopt, amend, repeal and enforce...reasonable codes, rules and regulations" that "may include...provisions...concerning...the classification of the surface and ground waters of the State and the determination of water quality standards for each such classification".

F. SUMMARY DESCRIPTION OF THE PERFORMANCE OF THE PROCESS

1. Introduction

a. Scope of Chapter

The subject of this chapter is the review of "applicable water quality standards" pursuant to section 303(c) of the federal Clean Water Act. Because section 303(c) applies only to "navigable waters" and does not apply to "ground waters" (note the distinction between "navigable waters" and "ground waters" in sections 106(e)(1) and 304(f)(2)(F) of the federal Clean Water Act), the Department's present Ground-Water Quality Standards (N.J.A.C. 7:9-6) are not "applicable water quality standards" within the meaning of section 303(c). Also, the Wastewater Discharge Requirements (N.J.A.C. 7:9-5) that the Department adopted on April 29, 1985 are not in any sense "water quality standards" and have not been submitted to EPA as revised water quality standards under section 303(c). The review of the Department's Ground-Water Quality Standards or Wastewater Discharge Requirements is outside the scope of this chapter. This exclusion does not in any way affect the validity or enforceability of these Ground-Water Quality Standards and Wastewater Discharge Requirements under State law and Section 510 of the federal Clean Water Act. (The Department's previous rules concerning Treatment of Wastewater Discharged Into Surface Waters of the State, which were repealed on April 29, 1985, had been considered part of the "applicable water quality standards" because they included provisions that affected the application and implementation of the Department's then applicable Surface Water Quality Standards. When the Department adopted new Surface Water Quality Standards and new Wastewater Discharge Requirements, all such provisions were transferred (with any appropriate modifications) into the Surface Water Quality Standards, and none were retained in the Wastewater Discharge Requirements.)

b. Overview of EPA Regulations

The present EPA Water Quality Standards Regulation defines "water quality standards" as follows (40 CFR 131.3(i)):

"Water quality standards are provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act."

The same EPA regulation also requires States to develop and adopt a statewide "antidegradation policy" (40 CFR 131.12), and provides that "States may, at their discretion, include in their State standards, policies generally affecting their application and implementation, such as mixing zones, low flows and variances", such policies being subject to EPA review and approval (40 CFR 131.13). Among the other provisions of the regulations are specific requirements concerning "Minimum Requirements for Water Quality Standards Submission" (40 CFR 131.6), "Designation of Uses" (40 CFR 131.10), "Criteria" (40 CFR 131.11), "State Review and Revision of Water Quality Standards" (40 CFR 131.20), "EPA Review and Approval of Water Quality Standards" (40 CFR 131.21) and "EPA Promulgation of Water Quality Standards" (40 CFR 131.22). The regulation describes the purpose of water quality standards as follows (40 CFR 131.2):

"A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States adopt water quality standards to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (the Act). 'Serve the purposes of the Act' (as defined in Sections 101(a)(2) and 303(c) of the Act) means that water quality standards should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value of public water supplies, propagation of fish, shellfish, and wildlife, recreation in and on the water, and agricultural, industrial, and other purposes including navigation.

"Such standards serve the dual purposes of establishing the water quality goals for a specific water body and serve as the regulatory basis for the establishment of water-quality-based treatment controls and strategies beyond the technology-based levels of treatment required by sections 301(b) and 306 of the Act."

A similar statement appears in the present EPA Water Quality Planning and Management Regulation (40 CFR 130.3). This regulation also requires the State Continuing Planning Process to describe "the process for establishing...new or revised water quality standards...under section 303(c) of the Act" (40 CFR 130.5(b)(6)).

c. Status of Present Surface Water Quality Standards

Surface water quality standards are one of the principal elements of the Department's water pollution control program. In 1964, surface water quality standards were adopted by the New Jersey Department of Health. Subsequently, surface water quality standards have been reviewed, revised, and adopted by the Department of Environmental Protection at approximately three year intervals. The most recent comprehensive revision of the surface water quality standards occurred on April 29, 1985 when the Department repealed the Surface Water Quality Standards (N.J.A.C. 7:9-4) and rules concerning Treatment of Wastewater Discharged Into Surface Waters of the State (N.J.A.C. 7:9-5) that it had adopted on March 3, 1981, and adopted new Surface Water Quality Standards (N.J.A.C. 7:9-4). The new Surface Water Quality Standards became effective on May 20, 1985, when notice of their adoption was published in the New Jersey Register (17 N.J.R. 1270(a)), and became the "applicable water quality standards" under section 303(c) of the federal Clean Water Act when EPA issued its approval of these Standards on July 8, 1985. On August 7, 1985, the Department adopted amendments to part of the Surface Water Quality Standards (N.J.A.C. 7:9-4 Index D), based on a use attainability analysis of SE2 and SE3 waters within the Passaic, Hackensack and New York Harbor Complex Basin. These amendments became effective on September 3, 1985, when notice of their adoption was published in the New Jersey Register (17 N.J.R. 2109(a)), and became "applicable water quality standards" under section 303(c) when EPA issued its approval of these amendments on September 13, 1985.

Comprehensive Revision of Standards (Adopted April 29, 1985)

The present EPA Water Quality Standards Regulation includes requirements for the submission of water quality standards at 40 CFR 131.6 and 131.20(c). On May 28, 1985, the Department submitted its new Surface Water Quality Standards to EPA for review and approval under section 303(c) and these EPA requirements. The Department submittal package consisted of the following documents:

- 1) A cover letter for the submittal. (The cover letter, together with its Attachment I, included a schedule for the completion of use attainability analyses and public review procedures for the review of the adopted Surface Water Quality Standards for waters whose designated uses do not include all of the uses specified in section 101(a)(2) of the federal Clean Water Act.)
- 2) The Department document entitled "Basis and Background for the Proposed Surface Water Quality Standards & Wastewater Discharge Requirements", hereinafter called the Basis and Background Document (November 1984).
- 3) The Department documents entitled "Proposed Surface Water Quality Standards N.J.A.C. 7:9-4.1 et seq." and "Proposed Wastewater Discharge Requirements N.J.A.C. 7:9-5.1 et seq." (October 1984). (The "Proposed Surface Water Quality Standards N.J.A.C. 7:9-4.1 et seq." included the proposed Indexes A through F, which was referenced (but, for reasons of economy, not reprinted) in the November 19, 1984 New Jersey Register proposal.)
- 4) The proposal entitled "Surface Water Quality Standards and Treatment of Wastewater Discharged Into Surface Waters of the State", as published in

the New Jersey Register on November 19, 1984 (16 N.J.R. 3080(a), DEP Docket No. 069-84-10).

- 5) The Department document entitled "Errata Proposed Surface Water Quality Standards and Proposed Wastewater Discharge Requirements Revised January 7, 1985".
- 6) The Department document entitled "Response to Public Comments on the Surface Water Quality Standards & Wastewater Discharge Requirements", hereinafter called the Response to Comments Document (April 29, 1985).
- 7) The adoption document entitled "Surface Water Quality Standards and Treatment of Wastewater Discharged Into Surface Waters of the State" (DEP Docket No. 069-84-10), which was signed by the Commissioner of the Department of Environmental Protection on April 29, 1985. (This document was published in the New Jersey Register on May 20, 1985, at 17 N.J.R. 1270(a).)
- 8) The May 7, 1985 memorandum from the New Jersey Department of Law and Public Safety which certified that the "regulations concerning Surface Water Quality Standards and Treatment of Wastewater Discharged into the Surface Waters of the State" that were adopted on April 29, 1985 "were duly adopted pursuant to the laws of the State of New Jersey".

The Surface Water Quality Standards that the Department adopted on April 29, 1985 consisted of 1) the "Subchapter 4. Surface Water Quality Standards" section of the proposal published in the New Jersey Register on November 19, 1984, 2) the proposed Indexes A through F that were referenced in that proposal and that were included in the Department document entitled "Proposed Surface Water Quality Standards N.J.A.C. 7:9-4.1 et seq." (October 1984), and 3) the additions and deletions identified in the "Subchapter 4. Surface Water Quality Standards" section of the adoption document signed by the Commissioner of the Department of Environmental Protection on April 29, 1985 and published in the New Jersey Register on May 20, 1985. The cover letter stated that "although this submittal package contains both N.J.A.C. 7:9-4 and 5, the Surface Water Quality Standards being submitted for your review are contained entirely in N.J.A.C. 7:9-4". Except for the Indexes (which are being published separately), the adopted Surface Water Quality Standards have been published in more convenient form in a document distributed by the Department on September 6, 1985.

The methods used and analyses conducted to support these Surface Water Quality Standards were described in the Basis and Background Document (November 1984) and the Response to Comments Document (April 29, 1985). The water quality criteria in these Standards are sufficient to protect the designated and existing uses, and the antidegradation policy is consistent with 40 CFR 131.12. The Standards also include other policies affecting their application and implementation, as permitted by 40 CFR 131.13.

As discussed in the Response to Comments Document (April 29, 1985), the Department held three public hearings, provided a public comment period on the proposed Surface Water Quality Standards, and carefully reviewed the comments made at these public hearings and submitted during the comment period. This subject is further discussed later in this chapter under "Coordination of the Process". EPA-Region II approved the Department's Surface Water Quality

Standards on July 8, 1985, in conformance with the provisions of section 303(c) of the federal Clean Water Act and 40 CFR 131.21.

Amendments to Index D (Adopted August 7, 1985)

For the August 7, 1985 amendments to Index D, the Department's August 14, 1985 submittal package to EPA consisted of the following documents:

- 1) A cover letter for the submittal.
- 2) The Department document entitled "Use Attainability Analysis of the New York Harbor Complex" (June 1985).
- 3) The Department document entitled "Surface Water Quality Standards, Proposed Amendments: N.J.A.C. 7:9-4 Index D", DEP Docket No. 032-85-06 (June 1985). (This proposal was published in the New Jersey Register on July 1, 1985 at 17 N.J.R. 1625(a).)
- 4) The Department document entitled "Response to Public Comments on the Amendments to the Surface Water Quality Standards (N.J.A.C. 7:9-4 Index D)" (August 1985).
- 5) The adoption document entitled "Surface Water Quality Standards, Adopted Amendments: N.J.A.C. 7:9-4 Index D" (DEP Docket No. 032-85-06), which was signed by the Commissioner of the Department of Environmental Protection on August 7, 1985. (This document was published in the New Jersey Register on September 3, 1985, at 17 N.J.R. 2109(a).)
- 6) The August 9, 1985 memorandum from the New Jersey Department of Law and Public Safety which certified that the "regulations concerning Surface Water Quality Standards, N.J.A.C. 7:9-4 Index D" that were adopted on August 7, 1985 "were duly adopted pursuant to the laws of the State of New Jersey".

The methods used and analyses conducted to support the amendments to Index D were described in the "Use Attainability Analysis of the New York Harbor Complex" document (June 1985). As discussed in the "Response to Public Comments on the Amendments to the Surface Water Quality Standards (N.J.A.C. 7:9-4 Index D)" document (August 1985), the Department held a public hearing, provided a public comment period on the proposed amendments, and carefully reviewed the comments made at the public hearing and submitted during the comment period. This subject is further discussed later in this chapter under "Coordination of the Process". EPA-Region II approved the amendments on September 13, 1985, in conformance with the provisions of section 303(c) of the federal Clean Water Act and 40 CFR 131.21.

d. Use Attainability Analysis

Except for waters classified as SE2, SE3, the lower 16 miles of Zone 2 of the Delaware River, the upper 11 miles of Zone 5 of the Delaware River, Zone 3 of the Delaware River, and Zone 4 of the Delaware River, the designated uses contained in the Surface Water Quality Standards include all of the uses specified in section 101(a)(2) of the federal Clean Water Act. For those waters whose designated uses do not include all of these uses, use attainability analyses have been completed or are being conducted.

The EPA Water Quality Standards Regulation requires the performance and submission of a use attainability analysis whenever the designated uses of a waterway do not include all of the uses specified in section 101(a)(2) of the federal Clean Water Act (see 40 CFR 131.6(f), 131.10(j), and 131.20(c)). The EPA regulation defines use attainability analysis (40 CFR 131.3(g)) as "a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in [40 CFR] 131.10(g)". Under 40 CFR 131.10(g), the State may omit section 101(a)(2) uses if the State can demonstrate (in a use attainability analysis) that the use is not attainable because:

- 1) Naturally occurring pollutant concentrations prevent the attainment of the use; or
- 2) 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
- 3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
- 4) Dams, diversions or other types of hydrologic modifications preclude the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or
- 5) Physical features related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, preclude attainment of aquatic life protection uses; or
- 6) Controls more stringent than those required by sections 301(b) and 306 of the federal Clean Water Act would result in substantial and widespread economic and social impact.

A use attainability analysis is a type of water quality standards review, focusing on the designated uses of specified waters. After a use attainability analysis is completed, the Department makes a formal proposal to change or leave unchanged the designated uses for the specified waters; holds at least one public hearing; provides a public comment period on the proposal; considers the comments made at the public hearing(s) and submitted during the comment period; adopts, as appropriate, new or revised Surface Water Quality Standards; and submits the new or revised Standards (and other results of the review, such as decisions to retain existing use designations) and the use attainability analysis to EPA for review. These administrative procedures may be performed as part of the triennial review of the entire Surface Water Quality Standards, or may be performed at other times as reclassification proceedings under N.J.A.C. 7:9-4.10 (where the Department proposes to remove existing designated uses) or N.J.A.C. 7:9-4.11 (where the Department proposes to add new designated uses), or under the "general review process" (where the Department proposes to continue the existing designated uses).

On August 7, 1985, the Department adopted amendments to Index D of the Surface Water Quality Standards. These amendments became effective on September 3, 1985, when notice of their adoption was published in the New Jersey Register (17 N.J.R. 1625 (a)), and became "applicable water quality standards" under section 303(c) of the federal Clean Water Act when EPA issued its approval of these amendments on September 13, 1985. These amendments were based on a use attainability analysis of SE2 and SE3 waters within the Passaic, Hackensack and New York Harbor Complex Basin. The following waters were upgraded: the Hackensack River (from the Route 1 & 9 crossing to Berry's Creek) from SE3 to SE2, and the Hudson River (north of the Harlem River) from SE2 to SE1. The other SE2 and SE3 waters in this Basin were retained at their existing classification. Because final Department action on this completed use attainability analysis was, in part, a reclassification proceeding under N.J.A.C. 7:9-4.11, it is discussed later in this chapter as part of the "provision-specific review process" under "Reclassifying Specific Segments for Less Restrictive or More Restrictive Uses".

On April 2, 1986, the Department submitted a "short term" report on the "Use Attainability Analysis of the Delaware River Estuary" to EPA-Region II for review and approval. This "short term" report concluded that the presently designated uses in the Delaware River Estuary should remain unchanged until a more detailed ("long term") use attainability analysis is performed. This "long term" use attainability analysis is being conducted by the Delaware River Basin Commission with the support of the Department and other agencies. Because the Department expects that this use attainability analysis will be formally considered by the Department as part of the next triennial review of its entire Surface Water Quality Standards, this use attainability analysis is discussed later in this chapter as part of the "general review process" under "Use Attainability Analysis (Delaware River Basin)".

e. Water Quality Management Plans and Related Department Rules

Pursuant to the Department's Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15), the Department shall not establish water quality standards that are "inconsistent with applicable sections" of Water Quality Management Plans (N.J.A.C. 7:15-3.1(a)). At present, none of the approved Water Quality Management Plans in New Jersey include specific provisions that are binding upon the review of the Department's present water quality standards. (Each of the initial areawide Water Quality Management Plans that were adopted before 1981 included descriptions or recommendations concerning the then applicable Department water quality standards. These descriptions and recommendations were superseded by the Department rules concerning Surface Water Quality Standards (N.J.A.C. 7:9-4) and the Department rules concerning Treatment of Wastewater Discharged Into Surface Waters of the State (N.J.A.C. 7:9-5) that were adopted on March 3, 1981 and repealed on April 29, 1985). Under N.J.A.C. 7:15-3.4(d), any "water quality related regulation formally adopted by the Governor, or his designee", including the Surface Water Quality Standards adopted on April 29, 1985 (as amended on August 7, 1985), "shall be considered to be adopted in the Water Quality Management Plans without the need for further adoption procedures".

The Department adopted its initial Statewide WQM Plan on December 5, 1985. Notice of this adoption was published in the New Jersey Register on January 6, 1986 at 18 N.J.R. 110(b). (Under N.J.A.C. 7:15-2.2(b), the "areawide plan and

its amendments shall be consistent with the Continuing Planning Process and the Statewide Plan", and "all policies, objectives, and recommendations adopted in the Statewide Plan shall be concurrently adopted in the areawide plans without the need for separate hearings".) As noted on page I-5 of the Statewide WQM Plan, one component of that Plan is the Department's Surface Water Quality Standards (N.J.A.C. 7:9-4).

The Statewide WQM Plan also includes a "Surface Water Quality Standards Review" strategy (p. II-2). Like the other "strategies" in that Plan, the Surface Water Quality Standards Review strategy outlines suggested future actions but is not binding upon the Department or other parties. The strategy discusses five "priority topics" that have been identified by the Department: use attainability analyses, toxic substances, chlorine criteria, pending reclassification requests for two specific waterways, and mapping of FWL waters. This chapter is consistent with the "Surface Water Quality Standards Review" strategy, and discusses these five topics in equal or greater detail, along with some additional aspects of the review process. The strategy itself notes (p. II-6) that "it would now be premature for the Department to attempt to identify all of the priority topics for review between 1985 and 1988", and that "the Department may identify additional priority topics as EPA proposes or adopts new Section 304(a) Guidance or revises its water quality standards policies, and as the Department gains experience during the implementation of the Standards, prepares future annual work programs under section 205(j) of the federal Clean Water Act, updates the Statewide WQM Plan, and meets with various interest groups". On December 30, 1985, the Department submitted the initial Statewide WQM Plan to EPA for approval. The Department expects to update the adopted Statewide WQM Plan periodically, and this may include the updating of the "Surface Water Quality Standards Review" strategy.

Under N.J.A.C. 7:15, the Department's Continuing Planning Process "may include...strategies, policies, standards, and criteria for point and non-point source pollution control, protecting water resources, protecting environmentally sensitive areas and/or other water quality related issues" (N.J.A.C. 7:15-2.1(c)), and it is the responsibility of the Department to "establish policies, procedures, standards, criteria, and regulations for water quality issues" (N.J.A.C. 7:15-2.3). The scope of these provisions includes the Department's Surface Water Quality Standards and related documents.

f. Overview of Review Process

The Department's next triennial review of its entire Surface Water Quality Standards is scheduled for completion by May 1988. The Department will be reviewing parts of these Standards before 1988. As discussed in the next sections of this subchapter, the Department's process for the review of these Standards consists of two basic elements:

- The general review process (reviews that are not conducted pursuant to specific provisions of the Surface Water Quality Standards).
- The provision-specific review process (reviews that are conducted pursuant to specific provisions of the Surface Water Quality Standards).

The general review process includes the triennial review of the entire Surface Water Quality Standards as well as other reviews (i.e., reviews of parts of

these Standards conducted at other times) that are not conducted pursuant to specific provisions of these Standards. The general review process uses the general administrative procedure for the review of Department rules and is not performed through the administrative procedures of the New Jersey Pollutant Discharge Elimination System (NJPDDES) or the Water Quality Management Plan amendment process under N.J.A.C. 7:15.

The provision-specific review process is restricted to the establishment of new or revised water quality criteria for toxic substances and nutrients pursuant to N.J.A.C. 7:9-4.5(f) and (g), the modification of water quality based effluent limitations pursuant to N.J.A.C. 7:9-4.8 and 4.9 ("variances" under the EPA Water Quality Standards Regulation), and the reclassification of specific waterway segments for more restrictive or less restrictive uses pursuant to N.J.A.C. 7:9-4.10 and 4.11. In some cases, the provision-specific review process is performed in conjunction with the administrative procedures of the NJPDDES permit process or the Water Quality Management Plan amendment process. In other cases, the same basic procedures used for the general review process are followed. Reviews conducted under the general review process and the provision-specific review process can, where appropriate, be performed concurrently in common administrative proceedings. For example, in a single administrative proceeding concerning a use attainability analysis, the Department may propose to reclassify some segments for more restrictive uses (under the provision-specific review process, using N.J.A.C. 7:9-4.11) and may concurrently propose that other segments continue at their present classification (under the general review process).

The Department's review of Surface Water Quality Standards is a continuing process. It is essential that these Standards be kept complete, detailed, and up to date. The Standards are an evolving set of rules and should be continually evaluated to identify priority topics for formal public review as part of, or prior to, the next scheduled triennial review. As noted above, the "Surface Water Quality Standards Review" strategy in the Statewide WQM Plan identifies five priority topics under both the general review process and the provision-specific review process, and this strategy may be periodically updated. The Monitoring and Planning Element's FY 87 work program under section 205(j) of the federal Clean Water Act includes a program activity entitled "Water Quality Standards Review and Revision", which includes tasks related to these priority topics. The Department expects that each of the future annual section 205(j) work plans will also include this program activity (with updated tasks). The Department will, as appropriate, propose major revisions to some specific sections of the Surface Water Quality Standards in the periods between triennial reviews.

2. General Review Process

a. Introduction

The single largest activity that the Department conducts under the general review process is the review of the entire Surface Water Quality Standards that is scheduled to be performed every three years. As noted earlier in this chapter, the next triennial review of these Standards is scheduled for completion by May 1988. The administrative procedure that will be followed for the triennial reviews can be summarized as follows:

- The Division performs a preliminary review of the entire Surface Water Quality Standards and drafts a revised version of these Standards. The Division holds informational meetings on the draft proposed revisions with various interest groups. The Division also distributes the draft Standards to other units of the Department and to other regulatory agencies (e.g., DRBC, ISC, and EPA) for preliminary review and comment.
- After considering the comments received on these draft Standards, the Department prepares a formal proposal for new or revised Surface Water Quality Standards and arranges for its publication in the New Jersey Register. At least one public hearing and a public comment period is provided on the entire contents of the Surface Water Quality Standards (including proposed changes and provisions that are proposed for re-adoption without change), pursuant to section 303(c) of the federal Clean Water Act and the New Jersey Administrative Procedure Act. (Three public hearings were held for the triennial review completed in April 1985.)
- After considering the comments made at the public hearing(s) and submitted during the comment period, the Department adopts, as appropriate, new or revised Surface Water Quality Standards and submits them for EPA review pursuant to section 303(c).

The administrative procedure (under the general review process) for reviews of specific sections of the Surface Water Quality Standards that are conducted in the periods between triennial reviews is the same as the administrative procedure for triennial reviews, except that the informational meetings with interest groups and other preliminary discussions may be omitted if the proposed revisions are considered to be minor or noncontroversial (or if there is insufficient time), and the scope of public review is limited to the specific sections proposed for review (not the entire Surface Water Quality Standards).

As noted in the "Surface Water Quality Standards Review" strategy in the Statewide WQM Plan, it would now be premature for the Department to attempt to identify all of the priority topics for review between now and 1988. The Department adopted new Surface Water Quality Standards in 1985, and its review of these Standards would benefit from further experience gained during their implementation. A major factor in the review of these Standards is the future publication of proposed and final EPA section 304(a) Guidance (the schedule for which is not fully predictable). The five priority topics that have been identified to date in the "Surface Water Quality Standards Review" strategy are "Use Attainability Analyses", "Water Quality Criteria for Toxic Substances", "Water Quality Criteria for Chlorine", "Morses Creek and Cuckels Brook Reclassification", and "Mapping of FWL Waters".

All but the fourth of these five topics fall mainly or entirely under the general review process. The consideration of reclassification requests for Morses Creek and Cuckels Brook constitutes reclassification proceedings under N.J.A.C. 7:9-4.10, therefore falls under the "provision-specific review process" rather than the "general review process", and is discussed later in this chapter. (The completion of final action on the use attainability analysis of SE2 and SE3 waters in the Passaic, Hackensack and New York Harbor Complex basin, was, in part, a reclassification proceeding under N.J.A.C. 7:9-4.11, and is therefore also discussed later in this chapter.)

The schedule for the formal Department proposal of water quality criteria for toxic substances and possible revisions to water quality criteria for chlorine has not yet been developed. The Department may make formal proposals on these subjects prior to the next triennial review of the entire Surface Water Quality Standards. Formal proposals that result from the mapping of FWL waters and from use attainability analysis will likely be part of the next triennial review.

Closely related priority topics were also identified in the description of the program activity entitled "Water Quality Standards Review and Revision" in the FY 87 section 205(j) work program, which stated:

"The most recent triennial review of the Surface Water Quality Standards was completed in April 1985. Tasks identified for completion after the triennial review/revision, that are still being worked on are: 1) Development and selection, in cooperation with the [Drinking] Water Quality Institute pursuant to A-280, of [human] health related water quality criteria for promulgation; 2) Processing of requests for reclassification of waterways, including public hearings, received by the Division; 3) Evaluation of Disinfection Practices/Total Residual Chlorine Criteria; 4) Continued participation in ongoing Use Attainability Analyses of the Delaware River. In addition to work on tasks from the last triennial review/revision, work will commence on the next triennial review/revision of the Surface Water Quality Standards, including refinement of technical procedures for implementation of water quality based whole effluent toxicity limitations."

b. Use Attainability Analysis (Delaware River Basin)

In the Surface Water Quality Standards that the Department adopted on April 29, 1985 (as amended on August 7, 1985), a number of stream classifications for waters within the Delaware River basin do not include all of the section 101(a)(2) uses (the lower 16 miles of Zone 2 of the Delaware River, the upper 11 miles of Zone 5 of the Delaware River, Zones 3 and 4 of the Delaware River, and all Delaware River tributaries classified as SE2). In the May 28, 1985 cover letter to EPA, the Department stated that "the use attainability analyses for waters in the Delaware River Basin are being conducted by the Delaware River Basin Commission in cooperation with this Department, the Pennsylvania Department of Environmental Resources and EPA Regions II and III under the proposed schedule enclosed as Attachment I."

A revised Plan of Study for the Delaware Estuary Use Attainability Project was issued in May 1986. This project is sometimes referred to as the "long term" use attainability analysis, as opposed to the "short term" report submitted on April 2, 1986. A copy of the "Summary of Work Elements" in this Plan of Study is on the following page. (Element 12 is optional and Elements 13, 16, and 18 are tentative.) Although the Summary indicates that the States will adopt water quality standards by the end of 1987, the next triennial review of the Department's Surface Water Quality Standards is scheduled for completion by May 1988. The Department expects that the "final report" mentioned in the description of Element 20 in the Plan of Study will be formally considered by the Department as part of that triennial review.

DELAWARE ESTUARY USE ATTAINABILITY PROJECT
SUMMARY OF WORK ELEMENTS

Element	Description	Responsible Agency	Primary Source \$	Schedule
1	Study Management	DRBC	DRBC 106	to Dec. 1987
2	Advisory Committees/Public Input	DRBC	DRBC 106	to Dec. 1987
3	Data Atlas	DRBC	DRBC 106 ^{1/}	by June 1987
4	Quality Assurance	DRBC	DRBC 106	As needed
5	Publications	DRBC	DRBC 106	As needed
6	Interface with On-Going Studies	DRBC	DRBC 106	to Dec. 1987
7	Zone 2/Upper 3 Bacterial Study	DRBC	DRBC ^{2/}	Summer 1986
8	Site Specific CSO/SWO/Trib Study	DRBC	DRBC 106	by Spring 1987
9	Fish Population Study	PFC	PFC	Summer/Fall 1986
10	Fish Contamination Study	NJDEP	CZM	Summer/Fall 1986
11	Fish Suitability Assessment Study	DRBC	CZM	Nov. 1986
12	Additional Fisheries Work	NJ/DE	Unknown	Spring 1987
13	Bioassays for Element 9	USEPA	Unknown	Summer/Fall 1986
14	Sediment Oxygen Demand Study	USEPA	USEPA	Spring 1986
	Field Work	DRBC	DRBC	Summer 1986
	Interpretation of Findings			
15	Sediment/Water Toxics for Element 14	PADER/NJDEP	In-kind	Summer 1986
16	Development of Phase I Toxics Report	DNREC	In-kind	Fall 1986
17	Follow up Studies	Unknown	Unknown	Unknown
18	Assessment of costs/alternative strategies	U.S. EPA	Unknown	Spring 1987
19	Assessment of Potential Uses	DRBC	DRBC 106	by Spring 1987
20	Adoption of Standards, Allocation, etc.	DRBC/States	DRBC 106	by end 1987

1/ Portion of this element funded outside DRBC 106 Grant.

2/ Most of this element funded outside DRBC 106 Grant.

As stated in the "short term" report (p. 2), the Delaware River Basin Commission (DRBC) will undertake the long term use attainability analysis with the support of EPA Regions II and III, the Delaware Department of Natural Resources and Environmental Control, this Department, the Pennsylvania Department of Environmental Resources, the New York State Department of Environmental Conservation, and State and federal fisheries experts. The Commonwealth of Pennsylvania, the State of Delaware, and DRBC, as well as the State of New Jersey, will be reviewing their water quality standards as a result of this use attainability analysis. The Department's Surface Water Quality Standards cannot be less stringent than, and should be fully consistent with, the prevailing "Basin Regulations - Water Quality" adopted by the DRBC as part of the DRBC Comprehensive Plan (and referenced in N.J.A.C. 7:9-4.5(b)1). To promote such consistency and prevent unnecessary duplication, the Department, DRBC, the Pennsylvania Department of Natural Resources, and the Delaware Department of Natural Resources and Environmental Control should, if practicable, coordinate their administrative procedures by such means as joint public notices and public hearings.

c. Water Quality Criteria for Toxic Substances

As the magnitude of the problem of toxic chemical contamination has become apparent in recent years, the need to establish additional water quality criteria for the control of toxic substances has received increased attention. As discussed in the Basis and Background Document (November 1984), the Department's decision to defer consideration of criteria based on protection of human health was prompted by the ongoing development of maximum contaminant levels for finished drinking water as required by recent State legislation generally known as A-280 (N.J.S.A. 58:12A-12 et seq.). This legislation established a Drinking Water Quality Institute to recommend maximum contaminant levels for potable water that will protect human health. In order to avoid potential inconsistencies and potential duplication of effort, the Department will defer consideration of human health concerns until adoption of the maximum contaminant levels. The Department will also review water quality criteria for un-ionized ammonia, metals, and other toxic substances, as related to the protection of aquatic life, sometime after EPA publishes final water quality criteria for these substances under section 304(a) of the federal Clean Water Act (as EPA did for un-ionized ammonia and several metals on July 29, 1985 at 50 FR 30784). (As discussed later in this subchapter, new or revised water quality criteria for toxic substances can also be established through the provision-specific review process, pursuant to N.J.A.C. 7:9-4.5(f).)

d. Water Quality Criteria for Chlorine

As noted in the Response to Comments Document (April 29, 1985), the Department received several comments on the water quality criteria for chlorine (N.J.A.C. 7:9-4.14(c)14viii) and on the disinfection policies (N.J.A.C. 7:9-5.4(b)) in the present Surface Water Quality Standards (N.J.A.C. 7:9-4) and Wastewater Discharge Requirements (N.J.A.C. 7:9-5). The Department is charged with establishing disinfection requirements for wastewater discharges that might contain pathogenic organisms in order to protect the public health from exposure to such organisms through primary contact recreation and shellfish consumption, and to protect the designated uses of New Jersey's surface waters. Disinfection and the chlorine criteria are linked because chlorine is currently the most widely used wastewater disinfectant. Chlorine is also

commonly used as a biofouling control agent in cooling water discharges. Chlorine and its by-products are known to be toxic to aquatic life, and there is concern about the human health effects of the chlorinated organic compounds formed as a result of chlorination of wastewaters. In order to meet its obligation to protect aquatic life, the Department imposes water quality based effluent limitations for chlorine on appropriate dischargers, based on the water quality criteria for chlorine included in the Surface Water Quality Standards. The Department, recognizing the need to better address these somewhat conflicting responsibilities, is undertaking a detailed review of chlorine criteria and disinfection policies in New Jersey. Although related to the Surface Water Quality Standards, the disinfection policies are included in the Department's Wastewater Discharge Requirements (not the Surface Water Quality Standards), and the review of these policies is outside the scope of this chapter.

The major task of the chlorine criteria review will be to evaluate EPA's recently revised 304(a) chlorine water quality criteria for the protection of aquatic life (50 FR 30784; July 29, 1985). During the recent triennial review the Department delayed a review of its existing chlorine criteria pending the availability of the revised EPA criteria.

The Department also plans to investigate the need for additional chlorine criteria designed to protect aquatic life from intermittent exposures to chlorine. The Department's existing criteria, as well as EPA's revised criteria, were developed using toxicological data based on continuous chlorine exposure. Available scientific evidence, submitted to the Department during the public comment period, indicates that utilizing these criteria to develop water quality based effluent limitations for intermittent chlorine dischargers (i.e., once-through cooling water dischargers) is overly restrictive. A limited exemption for certain intermittent dischargers of chlorine was therefore included in the present Surface Water Quality Standards (N.J.A.C. 7:9-4.6(c)6). Among other things, the Department intends to review approaches to intermittent chlorine discharges that have been adopted by several other States.

e. Mapping of FWL Waters

In the Surface Water Quality Standards that the Department adopted on April 29, 1985 (as amended on August 7, 1985), "FWL" is defined as "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 Index A incorporated into this subchapter". FWL waters are different from Category One waters, which are defined in these Standards as "those waters designated in Indexes B, C, D, E and F incorporated into this subchapter, 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)..." (N.J.A.C. 7:9-4.4).

As noted in the "Guide to Use of Indexes B Through F", which is part of the Surface Water Quality Standards, the Department has mapped Category One (C1)

waters on USGS 7.5' quadrangle base maps, and these maps are used to identify the classification of water bodies that do not appear in the listings in Indexes B through F. The Basis and Background Document (November 1984) noted, however, that:

"Because of resource limitations and mapping techniques, some waters which appear on the maps as C1 may actually be FWL waters. The Department intends to correct this by also mapping the FWL waters on the same maps. Mapping of FWL waters is expected to begin around May 1985."

Under the schedule in the FY 86 section 205(j) work program, the mapping of FWL waters on USGS maps would be completed by June 1986.

The mapping of FWL waters has required a detailed examination of the listings in Index A. As the mapping has proceeded, the Department has discovered some erroneous listings. The Department expects to propose to correct such erroneous listings as part of the next triennial review of the entire Surface Water Quality Standards. (Such corrections would not constitute a change in designated uses.) The Department may also identify some additional waters that should be considered for reclassification as FWL, in which case the Department would propose upgrading the classification of these waters to FWL as part of the next triennial review. (Under N.J.A.C. 7:9-4.11(b), the Department could also upgrade the classifications before the next triennial review if it received a petition to do so.)

Under the EPA Water Quality Standards Regulation, the correction of Index A listings and the upgrading of additional waters to the FWL classification would not require use attainability analysis. However, such changes to the Surface Water Quality Standards would still require a public hearing and EPA approval. As indicated above, this would be expected to be provided through the triennial review process.

f. Additional Topics

Two possible additional topics for the next triennial review were also identified in the Response to Comments Document (April 29, 1985). These topics include:

- Modification of either the acute or the chronic toxicity limitation formulas in N.J.A.C. 7:9-4.6(c)5, if significant experience during the next three years with chronic toxicity limits and discharge specific application factors indicates that either of the formulas needs to be modified.
- The establishment of alternative water quality criteria for intermittent discharges (for parameters other than total residual chlorine), if the discharger submits specific recommendations that are based upon appropriate testing or modeling studies for consideration in the next triennial review.

The same document identified four other possible topics for the water quality standards review process, not specifically tied to the next triennial review:

- Reclassification of SE2 and SE3 waters to include shellfish harvesting as a designated use, when these waters are cleaned up to the point that shellfish harvesting is an attainable use. (This can be handled during a triennial review of the entire Standards or as a reclassification proceeding under N.J.A.C. 7:9-4.11.)
- Review of the Department's water quality criteria for bacterial quality and dissolved oxygen, sometime after EPA publishes final water quality criteria under section 304(a) for these parameters. (EPA published bacteriological water quality criteria on March 7, 1986 at 51 FR 8012.)
- Raising with DRBC the issue of possible changes to the criteria in the DRBC water quality regulations for Zones 4, 5, and 6 (where public water supply is not a designated use).
- Review of the nontrout classification of Cupsaw Brook above the Cupsaw Lake Dam, based upon sampling performed by the Department's Bureau of Freshwater Fisheries.

The identification in the preceding paragraphs of topics mentioned in the Response to Comments Document (April 29, 1985) is not intended to restrict the Department or other interested parties in the identification of priority topics for water quality standards review, but simply to identify topics that have already been mentioned as a result of the most recent triennial review process. The Department may identify additional priority topics as EPA proposes or adopts new Section 304(a) Guidance or revises its water quality standards policies, and as the Department gains experience during the implementation of the Standards, prepares future annual work programs under section 205(j) of the federal Clean Water Act, updates the Statewide WQM Plan, and meets with various interest groups.

3. Provision-Specific Review Process

a. Water Quality Criteria for Toxic Substances and Nutrients

In the following discussion, information about the three individual provisions is followed by a discussion of the administrative procedures common to all three provisions.

Toxic Substances

The term "toxic substances" is defined in the Department's Surface Water Quality Standards as "those substances, or combinations of substances, which upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly 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" (N.J.A.C. 7:9-4.4). The term "toxic substances" is not limited to the 129 substances identified as "toxic pollutants" pursuant to section 307(a)(1) of the federal Clean Water Act.

Pursuant to the "Bioassay and Biomonitoring Policies" in the Surface Water Quality Standards, the Department "may allow or require the use of alternative application factors based upon acute and chronic toxicity testing of specific

discharge-receiving water combinations" (N.J.A.C. 7:9-4.5(f)4). The term "application factor" is defined in the Surface Water Quality Standards as "a number applied to an LC50 or an EC50 to estimate the concentration of a substance that will not be harmful to any life stage(s) of the test organisms in waters of varying quality, or to other organisms within the aquatic environment that may be more sensitive than the test organism" (N.J.A.C. 7:9-4.4). Unless "alternative application factors" are used pursuant to this provision, the application factors that are used are those specified in the section of the Surface Water Quality Standards entitled "Establishment of Water Quality Based Effluent Limitations" (at N.J.A.C. 7:9-4.6(c)5i) and in the general criteria for toxic substances in FW2, SE, and SC waters (at N.J.A.C. 7:9-4.14(c)13iv and v). The use of an "alternative application factor" pursuant to N.J.A.C. 7:9-5.4(f) constitutes a site-specific modification of water quality criteria for toxic substances.

In the Basis and Background Document (November 1984), proposed N.J.A.C. 7:9-4.5(f)4, which was identical to the adopted N.J.A.C. 7:9-4.5(f)4, was discussed as follows (pp. 13-14):

"Policy (f)4 is proposed in response to continuing concerns by some dischargers that the application factors used by the Department may be more stringent than necessary. While the Department believes the application factors it is using are the best available general application factors, it recognizes that it is possible to develop discharge specific application factors that more accurately reflect the factor that should be used to protect the aquatic biota from chronic toxicity based on acute toxicity testing. Development of such discharge specific application factors would involve extensive chronic and acute toxicity testing of a discharge using several test species covering the various trophic levels. The Department has not required such development work because it would be time consuming and expensive. However, should a discharger decide to undertake such testing, with the approval of the Department, the Department will consider establishing discharge specific application factors after examining the data. Additionally, the Department may require the use of alternative application factors in specific situations where there is reason to believe that the general application factors do not adequately protect the aquatic biota."

One of the comments on the proposed Surface Water Quality Standards was that the subject of alternative application factors in N.J.A.C. 7:9-4.5(f)4 should be substantially expanded to specify how such alternative application factors would be calculated. In the Response to Comments Document (April 29, 1985), the Department gave the following response (p. 28):

"Since the Department has no specific experience in developing alternative application factors, it is preferable to delay the inclusion of rigid regulatory procedures for their development in the regulations. The Department will work closely with the discharger(s) who select this option, in the development of scientifically valid and regulatorily acceptable application factors. It is anticipated that any alternative application factors will have to address the uncertainty and safety factors

discussed in the EPA guidance document (1984) [i.e., the draft EPA 1984 'Technical Support Document for Water Quality-based Toxics Control']."

The "Bioassay and Biomonitoring Policies" in the Surface Water Quality Standards also include the following provision (N.J.A.C. 7:9-4.5(f)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 available.

- i. Appropriate bioassays, for purposes of this policy, shall include both acute definitive and chronic definitive bioassays.
- 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."

Pursuant to N.J.A.C. 7:9-4.5(f)5, existing parameter specific water quality criteria in N.J.A.C. 7:9-4.14(c)14 can be modified, and water quality criteria can be established for parameters not presently listed in N.J.A.C. 7:9-4.14(c)14.

In the Basis and Background Document (November 1984), proposed N.J.A.C. 7:9-4.5(f)5, which was identical to the adopted N.J.A.C. 7:9-4.5(f)5, was discussed as follows (p. 14):

"Policy (f)5 is proposed to allow the Department to establish parameter specific water quality criteria for toxic substances. It is not anticipated that this will be undertaken upon promulgation, but is included to allow for the use of site specific methodologies being developed by EPA and for situations in which it is demonstrated to the Department's satisfaction that parameter specific water quality criteria are appropriate. Adoption of such criteria would be in compliance with applicable regulations concerning public participation in the revision of Surface Water Quality Standards."

One of the comments on the proposed Surface Water Quality Standards was that the Department should be aware of the complexities and limitations of the approach in N.J.A.C. 7:9-4.5(f)5. The comment stated that factors to be considered and evaluated should include the inherent variability in effluent quality, ambient water quality, and community structure and function; minimum database requirements; quality assurance, including analytical methods and experimental design; factors affecting toxicity, including water quality characteristics, chemical speciation, and bioavailability; and data analysis and interpretation. In the Response to Comments Document (April 29, 1985), the Department gave the following response (p. 29):

"The Department is aware of the complexities and limitations of the parameter specific approach, and has chosen the whole effluent toxicity approach to regulate the toxicity of complex

effluents. However, because of the importance of controlling the discharge of toxic substances, the Department does not want to preclude the use of any regulatory approach at this time. The Department intends to act cautiously in this area, and carefully evaluate proposals from any discharger that wishes to pursue this option."

Nutrients

The Department's Surface Water Quality Standards include "Nutrient Policies" that apply to all FW waters of the State and that include the following provision (N.J.A.C. 7:9-4.5(g)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 7:9-4.14, when necessary to protect existing or designated uses. Such criteria shall become part of these Surface Water Quality Standards."

The term "nutrient" is defined in the Surface Water Quality Standards as "a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the growth and development of organisms" (N.J.A.C. 7:9-4.4).

Administrative Procedure

As discussed below, the Department has linked the establishment of water quality criteria under N.J.A.C. 7:9-4.5(f)4 and 5 and 7:9-4.5(g)3 to the establishment of water quality based effluent limitations in NJPDES permits or as amendments to Water Quality Management Plans. Before the Department formally issues a draft NJPDES permit, a draft DAC, or a proposed WQM Plan amendment that includes draft water quality based effluent limitations, the Department may entertain petitions to establish such water quality criteria or decide to develop such criteria on its own. Such criteria shall be sufficient to protect the designated and existing uses and shall be feasible to administer. Any proceedings to establish such criteria shall include full documentation of the scientific basis of the criteria. The documentation will be prepared by the petitioner, where one exists, or by the Department, where it decides to initiate the proceeding on its own. Petitions (including documentation) shall be submitted in writing to the Bureau of Systems Analysis and Wasteload Allocation.

Any new or modified water quality criteria developed under N.J.A.C. 7:9-4.5(f)4 and 5 and 7:9-4.5(g)3 must be subject to public review prior to their adoption by the Department. In the Response to Comments Document (April 29, 1985) the Department stated (p. 30):

"Public review of such criteria will be provided through the procedures in the NJPDES permit process. When such criteria are developed and proposed for use, they will be included in a draft NJPDES permit or DAC. A single public notice will be issued on the draft permit or DAC, which will also provide notice of any criteria under consideration, and public review/comments requested on both the draft NJPDES permit/DAC and the criteria. Any criteria adopted through this process would be

part of the Surface Water Quality Standards (N.J.A.C. 7:9-4)."

This statement reflects the fact that most water quality based effluent limitations are established through the NJPDES permit process, the administrative procedures for which are set forth in the Department's New Jersey Pollutant Discharge Elimination System rules (N.J.A.C. 7:14A). As discussed in the previous chapter ("Developing Total Maximum Daily Loads and Wasteload Allocations"), however, water quality based effluent limitations can also be established by the direct amendment of Water Quality Management Plans, without the use of the NJPDES permit program. Under this procedure, such effluent limitations are proposed not as conditions of draft NJPDES permits or draft DACs, but as proposed amendments to the Statewide (or appropriate areawide) WQM Plan, and public review is provided not under the NJPDES rules but under the Department's Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15). This procedure is the subject of N.J.A.C. 7:9-4.7(a)2, which states that "water quality based effluent limitations established as an amendment to the Statewide or appropriate Areawide [WQM] 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".

To provide consistency with N.J.A.C. 7:9-4.5(f)4 and 5 and N.J.A.C. 7:9-4.5(g)3, draft water quality based effluent limitations that are included in proposed amendments to WQM Plans may include criteria developed under these provisions. Public review of such criteria will be provided through the WQM Plan amendment process, the administrative procedures for which are set forth in N.J.A.C. 7:15. A single public notice will be issued on the proposed plan amendment, which will also provide notice of any criteria under consideration, and public review and comments will be requested on both the plan amendment and the criteria. Any criteria adopted through this process would be part of the Surface Water Quality Standards (N.J.A.C. 7:9-4).

Whether new or modified criteria for toxic substances and nutrients are established through the NJPDES process or the WQM Plan amendment process, any new or modified criteria adopted by the Department will be submitted for EPA review and approval in accordance with section 303(c) of the federal Clean Water Act and the EPA Water Quality Standards Regulation.

b. Modifying Water Quality Based Effluent Limitations (Variances)

According to the EPA Water Quality Standards Regulation, "States may, at their discretion, include in their State standards, policies generally affecting their application and implementation, such as...variances", and "such policies are subject to EPA review and approval" (40 CFR 131.13). In the supplementary information accompanying this regulation, EPA stated (48 FR 51403):

"EPA has approved State-adopted variances in the past and will continue to do so if: each individual variance is included as part of the water quality standard, subject to the same public review as other changes in water quality standards and if each individual variance is granted based on a demonstration that meeting the standard would cause substantial and widespread economic and social impact, the same test as if the State were changing a use based on substantial and widespread social and economic impact. EPA will review for approval

individual variances, not just an overall State variance policy."

The Department's Surface Water Quality Standards include two variance provisions:

- N.J.A.C. 7:9-4.8 ("Procedures for Modifying Water Quality Based Effluent Limitations for Individual Discharges to Category One Waters").
- N.J.A.C. 7:9-4.9 ("Procedures for Modifying Water Quality Based Effluent Limitations for Individual Discharges to Category Two Waters").

All variances from the Surface Water Quality Standards must be consistent with these provisions. Both provisions are cross-referenced elsewhere in the Surface Water Quality Standards at N.J.A.C. 7:9-4.5(d)9 and (e)5 and 7:9-4.6(b). ("Category One Waters" are identified with the "(C1)" designation in Indexes B through F of the Surface Water Quality Standards. "Category Two Waters" are defined in these Standards (N.J.A.C. 7:9-4.4) as those waters not designated in the Standards as Nondegradation Waters (FWI waters), Pinelands Waters, or Category One Waters. Variances are not available under N.J.A.C. 7:9-4.8 or 4.9 for discharges to Pinelands Waters, and Nondegradation Waters shall not be subject to any man-made wastewater discharges.)

These two variance provisions in the Department's Surface Water Quality Standards supersede any provisions in the Department's New Jersey Pollutant Discharge Elimination System rules (N.J.A.C. 7:14A) that are inconsistent with these two variance provisions. The NJPDES rules include a section entitled "Variances Under the State and Federal Acts" (N.J.A.C. 7:14A-9.6), which includes references to "modification under...Section 8 of the State [Water Pollution Control] Act". Any such modification, however, must be made in accordance with N.J.A.C. 7:9-4.8 or 4.9. The same section of the NJPDES rules also includes a reference to "N.J.A.C. 7:9-5.12", which was a variance provision in the Department rules concerning Treatment of Wastewater Discharged Into Surface Waters of the State that were repealed on April 29, 1985. Variances are now granted under N.J.A.C. 7:9-4.8 or 4.9, not the repealed 7:9-5.12. The NJPDES rules also include a provision that "upon notice to all persons involved in a specific proceeding, and after public notice in the DEP Bulletin with a 30-day comment period, the Commissioner or an authorized representative may, in the public interest, relax the application of these regulations" (N.J.A.C. 7:14A-1.7). As discussed in the Response to Comments Document (April 29, 1985), the present language of N.J.A.C. 7:14A-1.7 is not part of the Surface Water Quality Standards, cannot be used to grant variances from the Surface Water Quality Standards, and will be removed from the NJPDES rules when those rules are repromulgated.

Under N.J.A.C. 7:9-4.8(a), for individual discharges to Category One Waters, "the criteria for modifying water quality based effluent limitations established on a case-by-case basis are":

"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. Some change in ambient water quality should be allowed because of necessary and justifiable social or economic development; and
- "ii. 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 with nor be injurious to the existing or designated uses; and
- "iii. 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) The water quality criteria are not attainable because of natural background; or
 - (2) The water quality criteria are not attainable because of irretrievable man-induced conditions; or
 - (3) 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) 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."

Also, under N.J.A.C. 7:9-4.8(b), "it is the responsibility of the applicant to provide the Department with all of the information needed to evaluate the requested modification(s)".

Under N.J.A.C. 7:9-4.9(a), for individual discharges to Category Two Waters, "the criteria for modifying water quality based effluent limitations established on a case-by-case basis are:

- "1. The applicant for modification of effluent limitations for parameters that are currently better than the water quality criteria 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. Some degradation of water quality parameters currently better than the water quality criteria should be allowed because of necessary and justifiable social or economic development; and

ii. 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 (where applicable) in N.J.A.C. 7:9-5.1 et seq., whichever are more stringent, will not interfere with nor be injurious to the existing or designated uses.

"2. The applicant for modification of effluent limitations for parameters that are currently equal to or currently do not meet the water quality criteria in this subchapter 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. The water quality criteria are not attainable because of natural background; or

ii. The water quality criteria are not attainable because of irretrievable man-induced conditions; or

iii. Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the water quality criteria, 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

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."

(In the Basis and Background Document (November 1984), the meaning of "substantial and widespread adverse social and economic impact" was discussed as follows (p. 16):

"The substance of the 'substantial and widespread' test is not clearly defined. The Department intends to rely on developing case law and EPA guidance in applying this section instead of trying to define the test as it would apply in New Jersey. This will ensure consistency in the use of this section with that of neighboring states and is expected to be more equitable."

However, the Department will act on applications even if there is no applicable case law or EPA guidance.)

For both Category One and Category Two Waters, there are additional common requirements. Under N.J.A.C. 7:9-4.8(f) and N.J.A.C. 7:9-4.9(b), "where water quality criteria are not currently met the Department shall not grant a modification, as set forth in this subsection, establishing an effluent

limitation less stringent than the limitation(s) in the existing permit, unless the criteria are not met because of natural conditions". Under N.J.A.C. 7:9-4.8(d) and 4.9(c), "modified effluent limitations may be granted for a time period not to exceed three years or the time period of the permit in which the modified effluent limitations appear, whichever is shorter". Under N.J.A.C. 7:9-4.8(e) and 4.9(d), "modified effluent limitations may be renewed if the discharger demonstrates, to the Department's satisfaction, after public notice (including notice to affected municipalities) and a public hearing (where sufficient interest exists), that the basis for issuing the variance still exists and there have been no adverse impacts on the existing uses".

In the Basis and Background Document (November 1984), the Department stated (p. 16) that "reviews of requests for modifications of water quality based effluent limitations will be handled as part of the NJPDES process and review/input by interested parties will be allowed in accordance with the procedures in the NJPDES Regulations". This statement is consistent with the language in the adopted Surface Water Quality Standards, and reflects the fact that most water quality based effluent limitations are established through the NJPDES program. The references in N.J.A.C. 7:9-4.8 and 4.9 to "water quality based effluent limitations for individual discharges", "water quality based effluent limitations established on a case-by-case basis" and "the permit in which the modified effluent limitations appear" correspond to the language in N.J.A.C. 7:9-4.6(c), which states that "the Department may develop water quality based effluent limitations for a single point source discharger in response to an application for a DAC or NJPDES permit". When water quality based effluent limitations are established through the NJPDES program, no formal request for modification can be made under N.J.A.C. 7:9-4.8 or 4.9 until the Division issues a draft Discharge Allocation Certificate (DAC) or draft NJPDES permit that includes draft water quality based effluent limitations. The administrative procedures for the NJPDES permit program are set forth in N.J.A.C. 7:14A. Any modified water quality based effluent limitations that the Department adopts in a final DAC or NJPDES permit will be submitted for EPA review and approval as a variance in accordance with section 303(c) of the federal Clean Water Act and the EPA Water Quality Standards Regulation.

On their face, N.J.A.C. 7:9-4.8 and 4.9 apply only to water quality based effluent limitations that are established through the NJPDES permit program. As discussed in the previous chapter ("Developing Total Maximum Daily Loads and Wasteload Allocations"), however, water quality based effluent limitations can also be established by the direct amendment of Water Quality Management Plans, without the use of the NJPDES permit program. Under this procedure, such effluent limitations are proposed not as conditions of draft NJPDES permits or draft DACs, but as proposed amendments to the Statewide (or appropriate areawide) WQM Plan, and public review is provided not under the New Jersey Pollutant Discharge Elimination System rules (N.J.A.C. 7:14A) but under the Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15). This procedure is the subject of N.J.A.C. 7:9-4.7(a)2, which states that "water quality based effluent limitations established as an amendment to the Statewide or appropriate Areawide [WQM] 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".

To provide consistency with N.J.A.C. 7:9-4.8 and 4.9, any water quality based effluent limitation that is included in a Water Quality Management Plan may be modified by amendment of that plan, provided that the water quality based

effluent limitation incorporated into the adopted amendment must be consistent with the provisions of N.J.A.C. 7:9-4 (including, but not limited to, 7:9-4.5, 4.6(c), 4.8, and 4.9). Reviews of requests for modification of such water quality based effluent limitations will be handled as part of the WQM Plan amendment process, and review and input by interested parties will be allowed in accordance with the procedures in N.J.A.C. 7:15. Public notice must include notice to affected municipalities and a public hearing must be held where sufficient public interest exists. Dischargers must make the same demonstrations required of applicants by N.J.A.C. 7:9-4.8 and 4.9 in order to have such effluent limitations modified, and modifications must otherwise conform to the substantive requirements of these provisions. Modified effluent limitations may be granted for a time period not to exceed three years, and may be renewed if the discharger demonstrates, to the Department's satisfaction, after public notice (including notice to affected municipalities) and a public hearing (where sufficient interest exists), that the basis for issuing the variance still exists and there have been no adverse impacts on the existing uses. Any modified water quality based effluent limitation that the Department adopts in a Water Quality Management Plan will be submitted for EPA review and approval as a variance in accordance with section 303(c) of the federal Clean Water Act and the EPA Water Quality Standards Regulation.

c. Reclassifying Specific Segments for Less Restrictive or More Restrictive Uses

Applicable Regulations

The EPA Water Quality Standards Regulation includes specific provisions concerning the designation of uses, especially in relation to section 101(a)(2) of the federal Clean Water Act and the removal of already designated uses (40 CFR 131.10). All provisions of the Department's Surface Water Quality Standards, including the designated uses of all surface waters of the State, are subject to triennial review under the general review process. The Surface Water Quality Standards include two provisions that, together with the EPA regulations, govern the reclassification of specific segments between triennial reviews:

- N.J.A.C. 7:9-4.10 ("Procedures for Reclassifying Specific Segments for Less Restrictive Uses")
- N.J.A.C. 7:9-4.11 ("Procedures for Reclassifying Specific Segments for More Restrictive Uses")

Both provisions require that the Department "shall issue public notice to all interested parties (including affected municipalities) and shall hold public hearing(s) as part of any reclassification proceeding" (N.J.A.C. 7:9-4.10(c), N.J.A.C. 7:9-4.11(d)). Any reclassification performed under either provision must be proposed and adopted as a formal revision to the Surface Water Quality Standards in the New Jersey Administrative Code, and such proposal and adoption must conform to the standard administrative procedures governing such revisions (including the publication of the proposed revision in the New Jersey Register). The results of any formal review of use designations performed under either provision (including any revised use designations) will be submitted for EPA review and approval in accordance with section 303(c) of the federal Clean Water Act and the EPA Water Quality Standards Regulation.

("Specific segments" that are identified for purposes of either provision need not have the same boundaries as segments that are used in the classification of water quality limited segments.)

Under N.J.A.C. 7:9-4.10(a), the Department "may entertain petitions, sponsored or endorsed by County or Municipal Governing Bodies, for reclassification of specific segments to less restrictive uses, or decide to initiate reclassification proceedings on its own, at any time". Under N.J.A.C. 7:9-4.10(e), the Department "may establish less restrictive uses than the designated uses only after it has been demonstrated to the satisfaction of the Department that:

- "1. None of the uses being removed are existing uses; and
- "2. The uses to be removed will not be attained by implementing effluent limits required by Sections 301(b) and 306 of the Federal Clean Water Act in conjunction with implementation of cost-effective and reasonable best management requirements for nonpoint source pollution control; and
- "3. The existing designated use is not attainable because of natural background; or
- "4. The existing designated use is not attainable because of irretrievable man-induced conditions; or
- "5. 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
- "6. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of the use; or
- "7. 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."

Any reclassification proceeding for the establishment of less restrictive uses shall include "full documentation" of the applicable criteria in N.J.A.C. 7:9-4.10(e), including "appropriate water quality studies and analyses, biological studies and analyses, environmental, social, and economic studies as are necessary to demonstrate the satisfaction of (e)1 and (e)2...in addition to at least one of the remaining criteria in (e)" (N.J.A.C. 7:9-4.10(b) and (d)). "Any reclassification for less restrictive uses, established pursuant to this section shall be reviewed during each review of water quality standards pursuant to Section 303 of the Federal Clean Water Act (at least once every three years). Either the Department or the original petitioner...shall be responsible for supplying documentation showing that the bases for the

reclassification still exist" (N.J.A.C. 7:9-4.10(f)).

Under N.J.A.C. 7:9-4.11, there are two different sets of circumstances in which segments may (or must) be reclassified for more restrictive uses. One set of circumstances is defined by N.J.A.C. 7:9-4.11(a) and (e); the other set is defined by N.J.A.C. 7:9-4.11(b) and (f).

Under N.J.A.C. 7:9-4.11(a), the Department "will entertain petitions, sponsored by County or Municipal Governing Bodies, for reclassification of specific segments, pursuant to (e) below, or may decide to initiate reclassification proceedings on its own, at any time". N.J.A.C. 7:9-4.11(e) states that "a reclassification for more restrictive uses shall be made whenever:

- "1. It is demonstrated to the satisfaction of the Department that there are existing uses of the specific segment that are not included in the designated uses; or
- "2. Where a reclassification for less restrictive uses has been granted pursuant to N.J.A.C. 7:9-4.10, the bases for that reclassification no longer exist; or
- "3. It is demonstrated to the satisfaction of the Department that any uses in Section 101(a)(2) of the Federal Clean Water Act, protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water, which are not included in the designated uses listed in this subchapter are attainable."

Under N.J.A.C. 7:9-4.11(b), the Department "may entertain petitions for reclassification of specific segments, pursuant to (f) below, at any time". (The petitions need not be sponsored or endorsed by county or municipal governing bodies, but the Department may elect to review such petitions during or before the next triennial review. The Department may propose reclassifications for more restrictive uses without petitions.) N.J.A.C. 7:9-4.11(f) states that "a reclassification for more restrictive uses may be made when:

- "1. It is demonstrated to the satisfaction of the Department that the waters should be set aside to represent the natural aquatic environment and its associated biota, or;
- "2. It is demonstrated to the satisfaction of the Department that a more restrictive use is necessary to protect a unique ecological system or threatened/endangered species."

The procedures for reclassifying segments for less restrictive or more restrictive uses have some additional common requirements. Under N.J.A.C. 7:9-4.10(c) and N.J.A.C. 7:9-4.11(d), documentation supporting the proposed reclassification will be prepared by either the petitioner for reclassification or by the Department (where the Department has initiated the reclassification on its own). Under N.J.A.C. 7:9-4.10(g) and 4.11(g), "in those cases in which a thermal discharge is involved, the procedures for reclassifying segments...shall be consistent with section 316 of the Federal

Clean Water Act".

In the Response to Comments Document (April 29, 1985), the Department noted that "petitions may be submitted by any interested party for reclassification of a waterway/waterbody during the triennial review of the Surface Water Quality Standards". Such petitions need not be endorsed by county or municipal governing bodies.

Completed Reclassification Proceeding (More Restrictive Uses)

In the Surface Water Quality Standards that the Department adopted on April 29, 1985, the designated uses for SE2 and SE3 waters within the Passaic, Hackensack and New York Harbor Complex basin did not include all of the section 101(a)(2) uses. To avoid jeopardizing construction grant funds for essential water pollution control projects in the Passaic, Hackensack and New York Harbor Complex basin, expeditious resolution of use attainability issues in this basin was one of the Division's high priority activities. In June 1985, in cooperation with the Interstate Sanitation Commission, EPA-Region II, and the New York State Department of Environmental Conservation, the Department completed a use attainability analysis report, based on existing technical studies and water quality data. On July 1, 1985, notice of proposed amendments to Index D of the Surface Water Quality Standards was published in the New Jersey Register (17 N.J.R. 1625(a)). Based on the use attainability analysis report, the following waters were proposed for upgrading: the Hackensack River (from the Route 1 & 9 crossing to Berry's Creek) from SE3 to SE2, and the Hudson River (north of the Harlem River) from SE2 to SE1. This proposal was considered a reclassification proceeding initiated by the Department under N.J.A.C. 7:9-4.11(a), and the Department issued public notice to all interested parties (including affected municipalities and dischargers). The Department concurrently proposed (under the general review process in the same administrative proceeding) that the remaining SE2 and SE3 waters continue at their present classification. The Department held a public hearing on July 16, 1985 concerning the classification of all waters in the basin presently classified as SE2 or SE3. The public comment period on the proposal ended on July 31, 1985.

After carefully reviewing the comments made at the public hearing and submitted during the comment period, the Department adopted, without change, the proposed amendments to the Surface Water Quality Standards on August 7, 1985 and submitted them (and the decision to retain existing classifications for the remaining SE2 and SE3 waters) for EPA review and approval on August 14, 1985. The amendments became effective on September 3, 1985, when notice of their adoption was published in the New Jersey Register at 17 N.J.R. 2109(a), and became "applicable water quality standards" under section 303(c) of the federal Clean Water Act when EPA-Region II issued its approval of the amendments on September 13, 1985.

The Department recognizes the limitations of the existing studies and data. Subsequent use attainability analysis activities will be performed by the Department in cooperation with other agencies. The Department expects that further studies and continued water quality monitoring, related to abatement of combined sewer overflows and other wastewater discharges in New Jersey and New York and the evaluation of the New York City "208" water quality model, will be assessed as part of future triennial reviews of the Surface Water Quality Standards.

Pending Reclassification Proceedings (Less Restrictive Uses)

During the public comment period on the proposed Surface Water Quality Standards that were adopted (with additions and deletions) on April 29, 1985, the Department received requests from two dischargers that two specific stream segments be reclassified for less restrictive uses (January 17, 1985 letter from Exxon Company, U.S.A. (Exxon) concerning the tidal portion of Morses Creek; January 7, 1985 letter from the Somerset Raritan Valley Sewerage Authority (SRVSA) concerning a portion of Cuckels Brook). In the Response to Comments Document (April 29, 1985), the Department stated that it will consider these reclassification requests under separate, future proceedings covering only these requests, and that this procedure will allow the dischargers to revise their applications to comply with the applicable reclassification procedures. As noted earlier in this chapter, the consideration of these reclassification requests is one of the five priority topics identified in the "Surface Water Quality Standards Review" strategy in the Statewide WQM Plan.

In the Surface Water Quality Standards that the Department adopted on April 29, 1985 (as amended on August 7, 1985), the saline portion of Morses Creek is classified in Index D as SE3 and Cuckels Brook is classified in Index E as FW2-NT. In its August 7, 1985 letter to Exxon and its August 26, 1985 letter to SRVSA, the Department identified N.J.A.C. 7:9-4.10 as the applicable reclassification procedure. Because the requests were received during the public comment period on the proposed Standards, the revised applications did not have to be sponsored or endorsed by county or municipal governing bodies. Exxon and SRVSA submitted revised applications on September 18, 1985 and October 28, 1985, respectively.

G. COORDINATION OF THE PROCESS

1. Introduction

The lead administrative unit for the entire process (the general review process as well as the provision-specific review process) is the Monitoring and Planning Element, working in conjunction with the Office of Regulatory Services and, in some cases, the Water Quality Management Element (water quality criteria for toxic substances and nutrients proposed through the NJPDES process and modifications of water quality based effluent limitations). The entire review process is the subject of ongoing discussions between the Department and EPA-Region II. The Department will not delegate the general review process or the provision-specific review process to other water quality management planning agencies, but such agencies may provide comments during the review process.

The Department's Surface Water Quality Standards cannot be less stringent than, and should be fully consistent with, the prevailing "Basin Regulations - Water Quality" adopted by the DRBC as part of the DRBC Comprehensive Plan (and referenced in N.J.A.C. 7:9-4.5(b)1). To promote such consistency and prevent unnecessary duplication, the Department, DRBC, the Pennsylvania Department of Natural Resources, and the Delaware Department of Natural Resources and Environmental Control should, if practicable, coordinate their administrative procedures by such means as joint public notices and public hearings. When revisions to the Department's Surface Water Quality Standards are considered for interstate tidal waters in the New Jersey-New York metropolitan area,

there should be coordination with ISC and the New York State Department of Environmental Conservation.

2. General Review Process

The Surface Water Quality Standards that the Department adopted on April 29, 1985 were the product of a review performed in close coordination with EPA-Region II staff. In these Standards, the designated uses and quality criteria for the mainstem Delaware River and Delaware Bay (N.J.A.C. 7:9-4.13 and 4.14(d)) are identical to those in the present "Basin Regulations - Water Quality" adopted by the DRBC as part of the DRBC Comprehensive Plan. (Among the changes that were accomplished by the adoption of these Standards were the modification of the Department's water quality criteria for Delaware River and Delaware Bay to be identical to those in the DRBC regulations, and the presentation of the Department's criteria for the Delaware River and Delaware Bay in a table similar to that used for the rest of the State.) For the interstate tidal waters in the New Jersey-New York metropolitan area, the review of the Department's Surface Water Quality Standards was discussed with the Interstate Sanitation Commission and EPA-Region II.

Within the Monitoring and Planning Element, the Bureau of Systems Analysis and Wasteload Allocation has the principal responsibility for the general review process. The Bureau of Monitoring and Data Management has assisted in the review of water quality criteria related to lake management. The Bureau of Shellfish Control has assisted in the review of provisions applicable to shellfish waters. The Bureau of Planning and Standards has also provided some general assistance. Other Division elements, such as the Water Quality Management Element, the Water Supply and Watershed Management Element, the Geological Survey Element, and the Construction Grants Administration Element, were given the opportunity to comment on the draft Surface Water Quality Standards before they were formally proposed, as were some other units of the Department (such as the Green Acres/Recreation Program and the Office of Science and Research). The adopted revisions to the Trout Production, Trout Maintenance, and Nontrout subclassifications were based on recommendations from the Division of Fish, Game and Wildlife. Information used in the mapping of Category One waters was contributed by the Bureau of Shellfish Control, the Bureau of Planning and Standards, the Division of Parks and Forestry, the Division of Fish, Game and Wildlife, and the U.S. Fish and Wildlife Service.

As noted in the Response to Comments Document (April 29, 1985), the proposed Surface Water Quality Standards (N.J.A.C. 7:9-4) and the proposed Wastewater Discharge Requirements (N.J.A.C. 7:9-5) were circulated in draft form during September and October 1984 to interested persons and other governmental agencies. Meetings were held on the proposed rules with the following organizations and interest groups:

- Authorities Association of New Jersey
- New Jersey Chamber of Commerce - Environment Committee
- Industrial Advisory Group
- The Clean Water Council
- Joint Liaison Consulting Engineers
- New Jersey Water Resources Coalition
- New Jersey Water Pollution Control Association

Notice of the proposed rules was published in the New Jersey Register on November 19, 1984 (16 N.J.R. 3080, DEP Docket No. C69-84-10). Approximately 1100 copies were mailed to interested parties throughout the State (including all State legislators, county and municipal governments, and sewerage and utilities authorities). Copies of the proposed rules were also available at public depositories throughout the State. Public hearings concerning the proposed rules were held at Glassboro State College on January 3, 1985 and in Parsippany-Troy Hills and New Brunswick on January 8, 1985. Comments received at those hearings and during the public comment period (November 19, 1984 through January 18, 1985) became part of the official record of the administrative procedure. In response to the publication of the proposed rules, comments were received from thirty parties listed in the Response to Comments Document (April 29, 1985), and these comments were carefully reviewed by the Department.

The Department expects to follow generally similar procedures for the next triennial review of the entire Surface Water Quality Standards, which is scheduled for completion by May 1988. For reviews of specific sections of the Standards that are conducted (under the general review process) between triennial reviews the procedure would also be similar, except that the informational meetings with interest groups and other preliminary discussions may be omitted if the proposed revisions are considered to be minor or noncontroversial (or if there is insufficient time), and the number of public hearings may be reduced if such reduction seems appropriate in the particular case.

The Bureau of Systems Analysis and Wasteload Allocation and the Bureau of Planning and Standards drafted the "Surface Water Quality Standards Review" strategy in the Statewide WQM Plan. Changes to the Statewide WQM Plan will be made in accordance with the Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15), including applicable public notice and public hearing requirements. The Bureau of Planning and Standards makes the administrative arrangements for changes to the Statewide WQM Plan.

Some of the priority topics that have been identified in the "Surface Water Quality Standards Review" strategy in the Statewide WQM Plan have their own special coordination features. The development of human health related water quality criteria for toxic substances will be affected by the recommendations of the Drinking Water Quality Institute, which includes representatives from this Department, the New Jersey State Department of Health, the Water Supply Advisory Council, Rutgers University, the University of Medicine and Dentistry, the Passaic Valley Water Commission, the Elizabethtown Water Company, and other expert advisors. The units of State government that are working in cooperation with the Institute to consider maximum contaminant levels include the Department of Health, the Department's Office of Science and Research, and the Water Supply and Watershed Management Element and Monitoring and Planning Element. The mapping of FWI waters has required consultations between the Monitoring and Planning Element and land management agencies such as the Division of Parks and Forestry, the Division of Fish, Game and Wildlife, the U.S. Fish and Wildlife Service, the National Park Service, and the City of Newark. As noted earlier in this chapter, participating agencies in the "long term" use attainability analysis for the Delaware River Basin will include DRBC, EPA Regions II and III, the Delaware Department of Natural Resources and Environmental Control, this Department, the Pennsylvania Department of Environmental Resources, the New York State

Department of Environmental Conservation, and State and federal fisheries experts. It is expected that the existing DRBC Water Quality Advisory Committee and the Technical Committee of the Delaware Basin Fish and Wildlife Management Cooperative will advise the project. (The "short term" report that the Department submitted on April 2, 1986 was prepared through a joint effort coordinated by DRBC in consultation with the Department and EPA-Region II.)

2. Provision-Specific Review Process

a. Water Quality Criteria for Toxic Substances and Nutrients

Within the Monitoring and Planning Element, the Bureau of Systems Analysis and Wasteload Allocation has the principal responsibility for the establishment of water quality criteria. If that Bureau drafts criteria on its own, the Bureau of Monitoring and Data Management and the Bureau of Systems Analysis and Wasteload Allocation would jointly design and coordinate any water quality studies that might be required. (Coordination with such agencies as EPA, the U.S. Geological Survey, or county or local health agencies could also be necessary.) When water quality criteria are proposed as amendments to Water Quality Management Plans, the Bureau of Planning and Standards would make the administrative arrangements for the amendment of the plans.

Whether water quality criteria for toxic substances or nutrients are proposed through the NJPDES process or as amendments to WQM Plans, the initial step occurs when the Bureau of Systems Analysis and Wasteload Allocation drafts criteria on its own, or tentatively agrees to the proposal (with or without changes) of draft criteria presented to it in a petition. The subsequent elements of the process depend on whether the criteria are proposed through the NJPDES permit process or as WQM plan amendments, but the basic structure of the process is similar in either case (as illustrated by the following descriptions). Because EPA will subsequently review for approval the adopted water quality criteria under the federal Clean Water Act and the EPA Water Quality Standards Regulation, the Division should notify EPA of water quality criteria proposals as early as possible, prior to the close of the public comment period on the draft NJPDES permit or the proposed WQM Plan amendment. Any water quality criteria adopted through the NJPDES process or as amendments to WQM Plans are subject to review as part of the triennial review of the entire Surface Water Quality Standards.

NJPDES Permit Process

If site-specific water quality criteria for toxic substances or nutrients are proposed through the NJPDES permit process pursuant to N.J.A.C. 7:9-4.5 and the NJPDES rules (N.J.A.C. 7:14A), the basic procedure can be summarized as follows:

- The Bureau of Systems Analysis and Wasteload Allocation distributes a draft of the proposed site specific water quality criteria to the Water Quality Management Element and other Elements for preliminary review and comment. After necessary approvals are obtained within the Division, the Bureau of Systems Analysis and Wasteload Allocation transmits draft water quality criteria to the Water Quality Management Element, for inclusion in a draft NJPDES permit or draft DAC.

- The Water Quality Management Element provides a dual public notice, in accordance with the NJPDES rules, that a draft NJPDES permit or DAC has been prepared. The public notice specifically includes notice of the proposed water quality criteria included in the draft permit, and solicits public comment on the proposed water quality criteria and on the rest of the draft permit or DAC. The public notice states that all inquiries and written comments on the draft permit or DAC (including the proposed water quality criteria) shall be submitted to the Water Quality Management Element. The Water Quality Management Element forwards a copy of the public notice, the draft permit, and any comments or inquiries to the Bureau of Systems Analysis and Wasteload Allocation.
- If the Department holds a public hearing on the draft NJPDES permit or DAC, the Division Hearing Officer conducts the public hearing. Based on the administrative record existing at the close of the public comment period, the Hearing Officer makes a written report (including recommendations) to the Water Quality Management Element, and forwards a copy of the report to the Monitoring and Planning Element. (For purposes of this chapter, the concern here is only with those sections of the administrative record and any sections of the Hearing Officer's report that address the proposed water quality criteria.)
- The Bureau of Systems Analysis and Wasteload Allocation may also make recommendations to the Water Quality Management Element, if such recommendations differ from those of the Hearing Officer, or if the Department did not hold a public hearing. In such cases, the Bureau of Systems Analysis and Wasteload Allocation recommendations must be based on the same administrative record and must specify the reasons for any recommendations that differ from those of the Hearing Officer.
- The Water Quality Management Element considers any written recommendations from the Hearing Officer and the Bureau of Systems Analysis and Wasteload Allocation, and performs its own review of the administrative record. The written report from the Hearing Officer is not binding on the Water Quality Management Element. If the Bureau of Systems Analysis and Wasteload Allocation and the Water Quality Management Element cannot reach agreement on the establishment of water quality criteria, the issue is resolved by the Director's Office.
- The Department, through the Water Quality Management Element, issues a response to the comments received on the draft NJPDES permit or draft DAC (including any comments on the proposed water quality criteria), and, based on the administrative record, issues the final NJPDES permit or final DAC (including any adopted water quality criteria). The Water Quality Management Element forwards a copy of the response document and the final NJPDES permit or DAC to the Bureau of Systems Analysis and Wasteload Allocation.

WQM Plan Amendment Process

When water quality criteria for toxic substances or nutrients are proposed as amendments to Water Quality Management Plans pursuant to N.J.A.C. 7:9-4.5, N.J.A.C. 7:9-4.7(a)2, and the Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15), the basic procedure can be summarized as follows:

- The Bureau of Systems Analysis and Wasteload Allocation distributes a draft of the proposed water quality criteria to the Bureau of Planning and Standards, the Water Quality Management Element, and other Elements for preliminary review and comment. After the necessary approvals are obtained within the Division, the Bureau of Systems Analysis and Wasteload Allocation transmits draft water quality criteria to the Bureau of Planning and Standards, for inclusion in a proposed amendment to a Water Quality Management Plan (an amendment that includes a water quality based effluent limitation). The Commissioner must approve any proposal to amend the Statewide WQM Plan.
- The Bureau of Planning and Standards gives public notice in the New Jersey Register and two appropriate newspapers, in accordance with N.J.A.C. 7:15, that a proposed amendment has been prepared for a Water Quality Management Plan. The public notice specifically includes notice of the proposed water quality criteria included in the proposed amendment, and solicits public comments on the proposed water quality criteria and on the rest of the proposed amendment. The public notice states that all inquiries and written comments on the proposed amendment (including the proposed water quality criteria) shall be submitted to the Bureau of Planning and Standards. The Bureau of Planning and Standards forwards a copy of the public notice and the proposed amendment to the Bureau of Systems Analysis and Wasteload Allocation.
- The Bureau of Planning and Standards forwards a copy of all comments received during the public comment period on the proposed water quality criteria and the water quality based effluent limitations to the Bureau of Systems Analysis and Wasteload Allocation. The Bureau of Systems Analysis and Wasteload Allocation reviews these comments, decides whether the proposed criteria or water quality based effluent limitations need revision and develop such revisions, and prepare responses to the comments. Any revised criteria and water quality based effluent limitations and the responses to comments are forwarded to the Bureau of Planning and Standards. If the Bureau of Planning and Standards and the Bureau of Systems Analysis and Wasteload Allocation are not in agreement on the water quality criteria or the water quality based effluent limitations, the issue is resolved by the Assistant Director of the Monitoring and Planning Element.
- The Bureau of Planning and Standards prepares a response to comments document on the comments received on the proposed amendment (including any comments on the proposed water quality criteria) and a decision on the amendment for approval by the Director (pursuant to Administrative Order No. 75 issued by the Commissioner of the Department of Environmental Protection on September 14, 1984) or by the Commissioner (for amendments to the Statewide WQM Plan). The Department, through the Division as appropriate, issues a response to the comments received on the proposed amendment and, based on the administrative record, renders a final decision on the amendment (including any proposed water quality criteria). The Bureau of Planning and Standards forwards a copy of the final response to comments document and the final decision document on the amendment to the Bureau of Systems Analysis and Wasteload Allocation.

b. Modifying Water Quality Based Effluent Limitations (Variances)

Within the Monitoring and Planning Element, the Bureau of Systems Analysis and Wasteload Allocation has the principal responsibility for the granting of variances. When variances are proposed as amendments to WQM Plans, the Bureau of Planning and Standards makes the administrative arrangements for the amendment of the plans.

The administrative procedures for variances depend on whether the variances are proposed through the NJPDES permit process or as WQM plan amendments, but the basic structure of the process is similar in either case (as illustrated by the following descriptions). Because EPA will subsequently review for approval each individual variance (48 FR 51403; November 8, 1983), the Division should notify EPA of individual variance proposals as early as possible, prior to the close of the public comment period on the draft NJPDES permit or the proposed WQM Plan amendment. Any variances adopted through the NJPDES process or as amendments to WQM Plans are subject to review as part of the triennial review of the entire Surface Water Quality Standards.

NJPDES Permit Process

When variances are proposed through the NJPDES permit process pursuant to N.J.A.C. 7:9-4.8 or 4.9 and the NJPDES rules (N.J.A.C. 7:14A), the basic procedure can be summarized as follows:

- After the Water Quality Management Element issues the draft NJPDES permit or draft DAC, the discharger submits (by the close of the public comment period) to the Water Quality Management Element its request for modification of water quality based effluent limitations.
- The Water Quality Management Element forwards a copy of the request to the Bureau of Systems Analysis and Wasteload Allocation. The Water Quality Management Element and the Bureau of Systems Analysis and Wasteload Allocation evaluate the request against the requirements of N.J.A.C. 7:9-4.8 or 4.9 to determine if the request has sufficient merit to warrant further consideration. (If the Bureau of Systems Analysis and Wasteload Allocation and the Water Quality Management Element cannot reach agreement, the issue is resolved by the Director's Office.)
- If the Division determines that the request does not have sufficient merit under N.J.A.C. 7:9-4.8 or 4.9 to warrant further consideration, the Water Quality Management Element includes a statement to this effect in the Response to Comments Document and issues the final NJPDES permit without the requested modification. If the Division determines that the request has sufficient merit to warrant further consideration, the Water Quality Management Element gives public notice that it is reopening the public comment period to solicit public comment on the modification requested by the discharger (and any other substantial new questions raised during the initial public comment period). As required by N.J.A.C. 7:9-4.8 and 4.9, the public notice shall include notice to affected municipalities. The public notice states that all inquiries and written comments on the requested modification shall be submitted to the Water Quality Management Element. The Water Quality Management Element forwards a copy of the public notice to the Bureau of Systems Analysis and Wasteload Allocation. As required by N.J.A.C. 7:9-4.8 and 4.9, a public

hearing is held where sufficient public interest exists.

- If the Department holds a public hearing, the Division Hearing Officer conducts the public hearing. Based on the administrative record existing at the close of the public comment period, the Hearing Officer makes a written report (including recommendations) to the Water Quality Management Element, and forwards a copy of the report to the Monitoring and Planning Element. (For purposes of this chapter, the concern here is only with those sections of the administrative record and any sections of the Hearing Officer's report that address the modification request.)
- The Bureau of Systems Analysis and Wasteload Allocation may also make recommendations to the Water Quality Management Element, if such recommendations differ from those of the Hearing Officer, or if the Department did not hold a public hearing. In such cases, the Bureau of Systems Analysis and Wasteload Allocation recommendations must be based on the same administrative record and must specify the reasons for any recommendations that differ from those of the Hearing Officer.
- The Water Quality Management Element considers any written recommendations from the Hearing Officer and the Bureau of Systems Analysis and Wasteload Allocation, and performs its own review of the administrative record. The written report from the Hearing Officer is not binding on the Water Quality Management Element. If the Bureau of Systems Analysis and Wasteload Allocation and the Water Quality Management Element cannot reach agreement on the modification request, the issue is resolved by the Director's Office.
- The Department, through the Water Quality Management Element, issues a response to the comments received on the draft NJPDES permit or draft DAC (including the modification request) and, based on the administrative record, issues the final NJPDES permit or final DAC. The terms of the final NJPDES permit or final DAC incorporate the decision to grant or deny the requested modification. The Water Quality Management Element forwards a copy of the response document and the final NJPDES permit or DAC to the Bureau of Systems Analysis and Wasteload Allocation.

WQM Plan Amendment Process

Because the present Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15) do not include a provision for reopening the public comment period analogous to the provision in the NJPDES rules (N.J.A.C. 7:14A-8.5), and because variances must (under N.J.A.C. 7:9-4.8 and 4.9 and the EPA Water Quality Standards Regulation) be subject to public review before they can be granted, variances may be granted through the WQM Plan amendment process only if the variances are proposed as amendments to existing, adopted WQM Plans that already include (at the time of the proposed amendment) the water quality based effluent limitations whose modification is requested. Because a variance is "part of the water quality standard" (48 FR 51403; November 8, 1983) and because the revision of water quality standards is a direct Department responsibility, all requests to establish variances as amendments to WQM Plans shall be submitted directly to the Department (not to designated planning agencies).

When variances are proposed as amendments to WQM Plans pursuant to N.J.A.C. 7:9-4.7(a)2, N.J.A.C. 7:9-4.8 or 4.9, and N.J.A.C. 7:15, the basic procedure can be summarized as follows:

- The discharger submits to the Bureau of Planning and Standards a written request for an amendment to a WQM Plan that would modify water quality based effluent limitations already included in that Plan.
- The Bureau of Planning and Standards forwards a copy of the request to the Bureau of Systems Analysis and Wasteload Allocation and the Water Quality Management Element. The Bureau of Systems Analysis and Wasteload Allocation evaluates the request against the requirements of N.J.A.C. 7:9-4.8 or 4.9 to determine if the request has sufficient merit to warrant further consideration. (If the Bureau of Systems Analysis and Wasteload Allocation and the Bureau of Planning and Standards cannot reach agreement, the issue is resolved by the Assistant Director of the Monitoring and Planning Element. If the Monitoring and Planning Element and the Water Quality Management Element cannot reach agreement, the issue is resolved by the Director's Office.) The Bureau of Planning and Standards develops the formal recommendations for consideration by the Director (on behalf of the Commissioner pursuant to Administrative Order No. 75 issued by the Commissioner on September 14, 1984) or by the Commissioner (for amendments to the Statewide WQM Plan).
- The Director or Commissioner, as appropriate, makes a preliminary decision based upon a complete review of the case file, the formal recommendation package, and any other pertinent information. If the Director or Commissioner disapproves the amendment request at this stage, the request is returned to the discharger for appropriate revision, if the discharger so chooses. If the Director or Commissioner makes a preliminary approval of the amendment request, then a public notice is published in the New Jersey Register and two appropriate newspapers, in accordance with N.J.A.C. 7:15. As required by N.J.A.C. 7:9-4.8 and 4.9, the public notice shall include notice to affected municipalities. The public notice states that all inquiries and written comments on the proposed amendment shall be submitted to the Bureau of Planning and Standards. The Bureau of Planning and Standards forwards a copy of the public notice and the proposed amendment to the Bureau of Systems Analysis and Wasteload Allocation and the Water Quality Management Element. As required by N.J.A.C. 7:9-4.8 and 4.9, a public hearing is held where sufficient public interest exists.
- Based on the administrative record existing at the close of the public comment period, the Bureau of Systems Analysis and Wasteload Allocation makes recommendations concerning the proposed amendment to the Bureau of Planning and Standards. If the Bureau of Systems Analysis and Wasteload Allocation and the Bureau of Planning and Standards cannot reach agreement on the proposed amendment, the issue is resolved by the Assistant Director of the Monitoring and Planning Element. If the Monitoring and Planning Element and the Water Quality Management Element cannot reach agreement on the proposed amendment, the issue is resolved by the Director's Office.
- The Bureau of Planning and Standards prepares a response to comments document on the comments received on the proposed amendment and a

decision document on the amendment for approval by the Director or Commissioner, as appropriate. The Department, through the Division as appropriate, issues a response to the comments received on the proposed amendment and, based on the administrative record, renders a final decision on the amendment. The Bureau of Planning and Standards forwards a copy of the response to comments and the final decision on the amendment to the Bureau of Systems Analysis and Wasteload Allocation and the Water Quality Management Element.

c. Reclassifying Specific Segments for Less Restrictive or More Restrictive Uses

In general outline, the coordination for reclassification proceedings under N.J.A.C. 7:9-4.10 or 4.11 resembles the coordination for the general review process, in that it basically follows the standard administrative procedure for the revision of the New Jersey Administrative Code and is not performed through the NJPDES rules or the WQM Plan amendment procedures. As required by N.J.A.C. 7:9-4.10 and 4.11, all petitions for reclassification of segments for less restrictive uses, and some petitions for reclassification of segments for more restrictive uses, must be sponsored or endorsed by county or municipal governing bodies in order to be entertained by the Department between the triennial reviews of the entire Surface Water Quality Standards. Also as required by N.J.A.C. 7:9-4.10 and 4.11, the Department shall issue public notice to all interested parties and shall hold public hearing(s) as a part of any reclassification proceeding.

Within the Monitoring and Planning Element, the Bureau of Systems Analysis and Wasteload Allocation has the principal responsibility for reclassification proceedings. When the Department initiates the reclassification proceeding for a particular waterway, the Bureau of Monitoring and Data Management and the Bureau of Systems Analysis and Wasteload Allocation jointly design and coordinate any water quality studies that might be required. (Coordination with such agencies as EPA, the U.S. Geological Survey, or county or local health agencies could also be necessary.) If the reclassification proceeding would affect the maintenance, migration, propagation, or harvesting of shellfish, there would generally be coordination with the Bureau of Shellfish Control. The Bureau of Planning and Standards could help to review or perform studies of social and economic impact.

Other Elements will generally be given the opportunity to comment on a reclassification proceeding prior to the public proposal. In particular, where the reclassification is directly related to permitting, enforcement, or grant decisions, coordination with the Water Quality Management Element, Enforcement Element, or Construction Grants Administration Element would be necessary. If the reclassification would affect the public potable water supply use of the waterway, coordination with the Water Supply and Watershed Management Element would be necessary. Each of these Elements could also provide technical information as appropriate.

If the reclassification under consideration would affect such uses as the maintenance, migration, and propagation of natural and established biota, primary or secondary contact recreation, or shellfish harvesting, the Department's Division of Fish, Game and Wildlife and Green Acres/Recreation Program would generally be given the opportunity to comment prior to the public proposal. (In some cases, these Department units might be asked to

evaluate the suitability of the waterway for such uses.) If the reclassification would apply to waters in the New Jersey Coastal Zone or the Pinelands, the Department's Division of Coastal Resources or Pinelands Commission, respectively, would generally be given the opportunity to comment prior to the public proposal. The Division could also hold meetings with local officials, organizations, businesses, and residents in the geographic area that would be most directly affected by a reclassification.

Special circumstances affected, to some extent, the coordination for each of the completed or currently pending reclassification proceedings. For the SE2 and SE3 waters in the Passaic, Hackensack, and New York Harbor Complex basin, the Department accelerated the schedule for final action on the use attainability analysis (including the reclassification proceeding), to avoid jeopardizing construction grant funds for essential water pollution control projects. (The review process still conformed, however, to the applicable requirements of N.J.A.C. 7:9-4.11, the New Jersey Administrative Procedure Act, and the EPA Water Quality Standards Regulation.) In preparing the use attainability analysis for these SE2 and SE3 waters, the Bureau of Systems Analysis and Wasteload Allocation obtained information from the Water Quality Management Element and the Construction Grants Administration Element; worked closely with ISC, EPA-Region II, and the New York State Department of Environmental Conservation; and made use of technical reports from the New York City Water Quality Management Planning Program.

As noted in the "Response to Public Comments on the Amendments to the Surface Water Quality Standards (N.J.A.C. 7:9-4 Index D)" document (August 1985), the proposed amendments to Index D were circulated in draft form during June and July, 1985 to interested persons and groups, and other governmental agencies. Public notice of the proposed amendments to Index D was published in the New Jersey Register on July 1, 1985. Copies of the use attainability report were made available at all 75 depository libraries for State documents. Copies of the report and the proposed amendments were also mailed to ISC, EPA-Region II, the New York State Department of Environmental Conservation, the eight New Jersey municipalities that border the parts of the Hackensack and Hudson Rivers that were proposed for upgrading, and several environmental groups. The Department also mailed copies of the proposed amendments and an executive summary of the report to over 200 dischargers in the study area.

A public hearing concerning the proposed amendments was held at the Hackensack Meadowlands Environmental Center, Lyndhurst, New Jersey on July 16, 1985. Comments received at that hearing and during the public comments period, which closed on July 31, 1985, became part of the official administrative record. Comments were received from the Bergen County Utilities Authority, the Hackensack River Coalition, ISC, the Passaic River Coalition, and the Public Service Electric & Gas Company, and these comments were carefully reviewed by the Department.

The Department expects to schedule public hearings concerning the reclassification of portions of Morses Creek and Cuckels Brook, based on the revised applications that the Department has received from Exxon Corporation, U.S.A. and the Somerset Raritan Valley Sewerage Authority, respectively. Because the original requests were received during the public comment period on the proposed Surface Water Quality Standards, the revised applications did not have to be sponsored by county or municipal governing bodies. The Department, in its November 15, 1985 letter to SRVSA, indicated its intent to

publish a summary of the SRVSA reclassification request in the New Jersey Register along with dates for a public comment period and a public hearing, after which the Department will make an initial decision on the SRVSA request.

CHAPTER VI. CONDUCTING WATER QUALITY MONITORING ACTIVITIES AND DEVELOPING MONITORING STRATEGIES

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CHAPTER VI. CONDUCTING WATER QUALITY MONITORING ACTIVITIES AND DEVELOPING MONITORING STRATEGIES

A. DATE OF THE SUMMARY DESCRIPTION OF THE PROCESS

May 1986

B. TITLE OF PROCESS

Conducting Water Quality Monitoring Activities and Developing Monitoring Strategies

C. LEAD ADMINISTRATIVE UNITS FOR THE PROCESS

This chapter discusses a wide range of monitoring activities related to water pollution control, including monitoring of surface waters, monitoring of ground waters, monitoring of wastewater discharges, and associated quality assurance, data management, and laboratory service functions. No single administrative unit has lead responsibility for all of these activities. As indicated below and elsewhere in this chapter, several administrative units have (or share) lead responsibility for one or more monitoring activities.

1. Douglas Clark, Assistant Director
Monitoring and Planning Element
Division of Water Resources
New Jersey Department of Environmental Protection
25 Arctic Parkway
P.O. Box CN 029
Trenton, New Jersey 08625

Surface water monitoring; ambient groundwater monitoring (in conjunction with the Geological Survey Element); compliance monitoring of wastewater discharges (including 24 hour sampling and special toxic sampling requested by the Enforcement Element and the Water Quality Management Element, compliance monitoring performed for the Delaware River Basin Commission and EPA-Region II, and compliance bioassay monitoring); coordination with county and substate agencies; general program information exchange.

2. Assistant Director
Enforcement Element
Division of Water Resources
New Jersey Department of Environmental Protection
Twin Rivers Office Plaza
State Highway 33
Hightstown, New Jersey 08520

Division of Water Resources ground water pollution investigations (with technical support from the Geological Survey Element); review of self-monitoring reports from wastewater dischargers; compliance monitoring of wastewater discharges (except for 24 hour sampling and special toxic sampling performed by the Monitoring and Planning Element at the request of the Enforcement Element and the Water Quality Management Element, and other Monitoring and Planning Element activities such as compliance monitoring performed for the Delaware River Basin Commission and EPA-

Region II, and compliance bioassay monitoring).

3. Arnold Schiffman, Administrator
Water Quality Management Element
Division of Water Resources
New Jersey Department of Environmental Protection
1474 Prospect Street
P.O. Box CN 029
Trenton, New Jersey 08625

Establishment of self-monitoring requirements for wastewater dischargers (in conjunction with the Monitoring and Planning Element, in some cases).

4. Haig Kasabach, State Geologist
Geological Survey Element
Division of Water Resources
New Jersey Department of Environmental Protection
1474 Prospect Street
P.O. Box CN 029
Trenton, New Jersey 08625

Ambient ground water monitoring (in conjunction with the Monitoring and Planning Element); ground water pollution monitoring (technical support to the Enforcement Element and the Division of Waste Management).

5. Margaret Miller, Chief
Bureau of Management Services
Division of Water Resources
New Jersey Department of Environmental Protection
1474 Prospect Street
P.O. Box CN 029
Trenton, New Jersey 08625

Data management (in conjunction with the Monitoring and Planning, Enforcement, Water Quality Management, and Geological Survey Elements).

6. Thomas Burke, Director
Office of Science and Research
New Jersey Department of Environmental Protection
436 East State Street
P.O. Box CN 409
Trenton, New Jersey 08625

Quality assurance (in conjunction with Division of Water Resources elements responsible for monitoring programs); monitoring of toxic contamination in biota (in conjunction with the Division of Water Resources and the Division of Fish, Game and Wildlife).

7. John Gaston, Jr., Acting Director
Division of Waste Management
New Jersey Department of Environmental Protection
32 East Hanover Street
P.O. Box CN 028
Trenton, New Jersey 08625

Ground water pollution monitoring at landfills and hazardous waste disposal sites (with technical support from the Geological Survey Element).

D. OBJECTIVE OF THE PROCESS

The collection and analysis of scientifically valid physical, chemical, and biological data on water quality and discharge characteristics, as necessary to determine pollution abatement and control priorities; develop and review water quality standards, total maximum daily loads, wasteload allocations, load allocations, and water quality based effluent limitations; protect public health; determine compliance with the conditions of wastewater discharge permits; and report information to the public through section 305(b) reports.

E. LEGAL BASIS FOR THE PROCESS

1. Clean Water Act References

Section 305(b) of the federal Clean Water Act requires each State to submit to EPA, every two years, a report that shall include (among other requirements) "a description of the water quality of all navigable waters in such State during the preceding year" and "an analysis of the extent to which all navigable waters of such State provide for the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water". Each State that receives grants under section 106 of the same Act must provide for "the establishment and operation of appropriate devices, methods, systems, and procedures necessary to monitor, and to compile and analyze data on...the quality of navigable waters and to the extent practicable, ground waters including biological monitoring; and provision for annually updating such data and including it in the report under section 305 of this Act". Section 205(j) of the same Act provides for grants to States for "water quality management planning, including...determining the nature, extent, and causes of water quality problems in various areas of the State and interstate region, and reporting of these annually". Section 402(b) of the same Act provides that a State cannot administer its own discharge permit program (in lieu of a program directly administered by EPA) unless the State has adequate authority to "inspect, monitor, enter, and require reports to at least the same extent as required in section 308 of this Act". Section 308(c) provides that if EPA "finds that the procedures and the law of any State relating to inspection, monitoring, and entry are applicable to at least the same extent as those required by this section, such State is authorized to apply and enforce its procedures for inspection, monitoring, and entry with respect to point sources located in such State..." Moreover, the Clean Water Act requires the States to perform various activities (such as the identification of effluent limitations necessary to meet water quality standards pursuant to section 303(e)) for which the monitoring of waterways and discharges is necessary or desirable.

2. State Law

Section 7 of the New Jersey Water Quality Planning Act requires the Department to "conduct a statewide assessment of water quality", and authorizes the Department to "delegate aspects of the continuing planning process to other State, Federal, interstate or local agencies". Section 4 of the New Jersey Water Pollution Control Act authorizes the Department to "assess compliance of

a discharger with applicable requirements of State and Federal law pertaining to the control of pollutant discharges and the protection of the environment", and section 6 of the same Act grants the Department "a right of entry to all premises in which a discharge source is or might be located...for purposes of inspection, sampling..." Moreover, the New Jersey Water Quality Planning Act and the New Jersey Water Pollution Control Act authorize or require the Department to perform various activities (such as the identification of effluent limitations necessary to meet water quality standards) for which monitoring of waterways and discharges is necessary or desirable. Also, the Department of Environmental Protection Act of 1970 authorizes the Department to "enter and inspect any building or place for the purpose of investigating an actual or suspected source of pollution of the environment and ascertaining compliance with any code, rules and regulations of the department".

The County Environmental Health Act requires county health departments (or, in some cases, municipal or regional health agencies) to provide "environmental health services", including the "monitoring and enforcement of environmental health standards" (including the control of water pollution injurious to human health or welfare, animal or plant life, or property), in accordance with the performance standards and standards of administrative procedure promulgated by the Department. The same act authorizes the Department to "delegate the administration of one or more aspects of the environmental health laws of this State or of the rules and regulations adopted thereto" to county health departments.

F. SUMMARY DESCRIPTION OF THE PERFORMANCE OF THE PROCESS

1. Conducting Monitoring Activities

a. Introduction

The present EPA Water Quality Planning and Management Regulation includes the following statement (40 CFR 130.4):

"(a) In accordance with section 106(e)(1), States must establish appropriate monitoring methods and procedures (including biological monitoring) necessary to compile and analyze data on the quality of waters of the United States and, to the extent practicable, ground-waters.

"(b) The State's water monitoring program shall include collection and analysis of physical, chemical and biological data and quality assurance and control programs to assure scientifically valid data. The uses of these data include determining abatement and control priorities; developing and reviewing water quality standards, total maximum daily loads, wasteload allocations and load allocations; assessing compliance with National Pollutant Discharge Elimination System (NPDES) permits by dischargers; reporting information to the public through the section 305(b) report and reviewing site-specific monitoring efforts."

The activities discussed in this chapter include monitoring of surface waters (water column, sediments, and aquatic life), monitoring of ground water, and

monitoring of wastewater discharges. Also included are the quality assurance, data management, and laboratory service activities that are an important part of monitoring programs.

The following summary emphasizes monitoring activities that produce data regularly used by the Division of Water Resources in the administration of the federal Clean Water Act, the New Jersey Water Pollution Control Act, and the New Jersey Water Quality Planning Act. Most of these activities are discussed in the Division of Water Resources work plans for state fiscal year 1987 (in the work plans for the Monitoring and Planning Element, Enforcement Element, and Water Quality Management Element, and in the "New Jersey 1982 State Water Quality Inventory Report". (The fiscal year 1987 work plans are subject to change as a result of EPA review prior to their effective date, July 1, 1986.) Other Division and Department monitoring activities that produce surface or ground water quality data for other purposes (e.g., administration of the federal and state Safe Drinking Water Acts and of fisheries management programs) are also briefly noted in this summary. Additional information about individual monitoring activities is available in the fiscal year 1983 "Water Monitoring Activities Document" that was issued in 1982 by the Bureau of Monitoring and Data Management, and in the "Work/Quality Assurance Plans" (also known as "Quality Assurance Project Plans") that have been completed (or are nearly complete) for most of the individual activities.

The work plans for the Bureau of Monitoring and Data Management and the Bureau of Shellfish Control in the Monitoring and Planning Element discuss the following monitoring activities:

- Routine Ambient Monitoring (Surface Water and Ground Water)
- Intensive Survey Monitoring (Surface Water)
- Compliance Monitoring
- Quality Assurance and Data Management
- Marine and Estuarine Monitoring (Shellfish Control)
- Laboratory Services

Following is a summary of each of these activities. (The discussion of "Intensive Survey Monitoring (Surface Water)" also includes sampling to be performed mainly by universities or other institutions for the Bureau of Systems Analysis and Wasteload Allocation. The discussion of "Compliance Monitoring" also includes the activities of the Enforcement and Water Quality Management Elements. The discussion of "Quality Assurance and Data Management" and "Laboratory Services" also includes the activities of the Office of Science and Research and the Bureau of Management Services. The discussion of "Marine and Estuarine Monitoring (Shellfish Control)" also includes sampling to be performed by the Bureau of Shellfish Control for the Delaware River Basin Commission.)

b. Routine Ambient Monitoring (Surface Water and Ground Water)

Surface Water

The EPA established the Basic Water Monitoring Network (a national 1000 station network) to establish baseline water quality data, characterize and define trends in water quality conditions, identify new and existing water quality problems, and measure progress toward national water quality goals. As part of this network, the Division of Water Resources performs quarterly water column monitoring for conventional parameters (and annual monitoring for additional conventional parameters and metals in the water column) at 25 fixed monitoring stations along major New Jersey waterways. The U.S. Geological Survey (USGS) and the Division likewise established the Ambient (or Primary) Surface Water Quality Monitoring Network to establish baseline water quality data, characterize and define trends in water quality conditions, and identify new and existing water quality problems. For this network, USGS and the Division jointly perform water column monitoring for conventional parameters six times a year at approximately 80 fixed monitoring stations (along with supplemental water column monitoring for conventional parameters and metals twice a year at 48 of these stations, and annual monitoring of sediments for metals, PCBs, and pesticides at 32 of these stations). The Division also uses monitoring data generated by the USGS National Stream Quality Accounting Network (500 stations nationwide, six stations in New Jersey) and National Hydrologic Benchmark Network (53 stations nationwide, one station in New Jersey).

Pursuant to the cooperative agreement between the Department and the Delaware River Basin Commission (DRBC), the Division performs monthly water column monitoring for conventional parameters in the Delaware River at Trenton. For the Delaware River estuary and Delaware Bay, the Division uses routine ambient monitoring data generated for the DRBC by the State of Delaware. For the interstate tidal waters in the New Jersey-New York metropolitan area, the Division uses routine ambient monitoring data generated by the Interstate Sanitation Commission (ISC). As part of the EPA New York Bight Monitoring Program, the Division analyzes coastal water samples collected by EPA for phytoplankton species composition and numbers.

The Division and some of the county health departments and lead agencies have established the County Cooperative Network to provide for direct coordination between the Division and county monitoring programs, pursuant to cooperative monitoring agreements between the Division and these departments and agencies. These county monitoring programs can include routine ambient monitoring and other kinds of monitoring; the nature of each county's program depends on the preferences of the county and the available resources. The present County Cooperative Network, which includes Atlantic, Burlington, Cape May, Monmouth, Ocean, and Passaic Counties, includes ongoing or projected routine ambient surface water quality monitoring for chemical and bacteriological parameters throughout each county, and bacteriological monitoring of recreational and bathing waters during the bathing season (a program greatly expanded for coastal bathing waters in fiscal year 1987). Cooperative monitoring agreements will be developed for two additional counties during fiscal year 1987.

(Additional surface water quality monitoring activities are discussed below under "Intensive Survey Monitoring", "Marine and Estuarine Monitoring (Shellfish Control)" and "Other Monitoring Activities".)

Ground Water

USGS and the Division of Water Resources have established the Primary Monitoring Network for routine ambient monitoring of ground water quality. (This is in addition to the USGS Salt Water Encroachment Monitoring Network and Synoptic Water Level Monitoring Program, and other USGS ground water investigations in New Jersey's Coastal Plain.) The purpose of this network is to establish baseline ground water quality data in areas located away from concentrated sources of ground water pollution. Therefore, samples for this network are not taken in the immediate vicinity of known or suspected landfills, dumps, waste lagoons, etc. (Other Department and EPA programs provide for ground water monitoring at such sites.) Although this Primary Monitoring Network is statewide in scope, in any given year the sampling is focused on one or two aquifers of the state. (In FY 87, 30 samples will be taken in the Reading Prong, and 20 samples will be taken in a single glacial buried valley in northern New Jersey.) Each sample will be analyzed for conventional parameters and metals, and about 10 percent of the samples will be analyzed for volatile organic compounds.

As part of the County Cooperative Network, the Ocean County Health Department presently implements, and the Atlantic, Burlington, and Cape May County Health Departments and the Paterson Division of Health (lead agency for Passaic County) have agreed to develop, a program for routine ambient monitoring of ground water quality in these counties.

(Additional ground water quality monitoring activities are discussed below under "Other Monitoring Activities".)

c. Intensive Survey Monitoring (Surface Water)

The routine monitoring networks for surface water discussed above can provide only a general overview of surface water quality conditions in New Jersey. More detailed evaluation of water quality in individual waterways (including the impact of specific existing or potential pollution sources) requires intensive surveys. These intensive surveys can include the sampling of wastewater effluents (or other pollutant sources) as well as the sampling of waterways themselves. The design of individual intensive surveys can vary greatly, depending on the purpose of the particular survey and the available resources. In any given year, intensive surveys can be performed only in a small fraction of the state's waterways, and even these intensive surveys are sometimes restricted to very specific purposes.

The fiscal year 1987 work plan for the Bureau of Monitoring and Data Management identifies the following intensive surveys:

- Baseline water quality studies on Great Egg Inlet and on the coastal waters of Atlantic and Cape May Counties (consistent with the public and agency focus on the quality of the ocean waters off New Jersey). The Department is giving priority consideration to green algal blooms in coastal waters ("Green Tide") such as those that occurred off southern New Jersey during the summers of 1984 and 1985. The Department, EPA-Region II, and the National Atmospheric and Oceanic Administration (NOAA) have made cooperative arrangements to monitor such blooms if they recur.

- Coordination and support for a coastal outfall disinfection study with the University of Rhode Island.
- Continued study of the effects of stormwater discharges on water quality in the Navesink River (in cooperation with the Bureau of Planning and Standards and the Bureau of Shellfish Control).
- Toxics studies on Hohokus Brook and the West Branch of the Elizabeth River, in support of the Enforcement Element.

Surveys will be cooperatively integrated with other Department units, county health departments (Ocean, Atlantic, Cape May, Monmouth), NOAA, and the Environmental Support Division of EPA-Region II. Reports from some of the surveys will be completed prior to the end of FY 87 (June 30, 1987). Reports for the remaining surveys will be completed in FY 88 to allow time for sampling and data analysis. (The FY 85 and FY 86 work plans further illustrate the variety of monitoring activities that can be referred to as intensive surveys.)

In addition, the fiscal year 1987 Monitoring and Planning Element work plan under section 205(j) of the federal Clean Water Act includes a Bureau of Systems Analysis and Wasteload Allocation program activity entitled "Point and Nonpoint Source Tradeoff Studies", which discusses two studies for which intensive surveys would be performed under contract by universities or other institutions:

- Upper Millstone/Stony Brook/Carnegie Lake Point and Nonpoint Tradeoff Study.
- Passaic River Nutrient Study.

Also described there is a study on the South Branch of the Raritan River, for which sampling may be performed by the Bureau of Monitoring and Data Management. Sampling for the Navesink River intensive survey is further described in the Bureau of Planning and Standards 205(j) program activity entitled "Navesink River Nonpoint Source Control Project".

The Division also coordinates with EPA-Region II and its consultants with regards to their intensive survey work in the Great Swamp (Passaic River Basin), and with the USGS study of acid deposition and the hydrologic cycle in the McDonalds Branch Basin in the Pinelands. The Division also makes use of special studies performed by the DRBC along the main stem of the Delaware River and by the ISC in the interstate tidal waters of the New Jersey-New York metropolitan area.

The Division also collects and analyzes samples of coastal water when other phytoplankton blooms (including "Red Tide") are encountered. As part of the County Cooperative Network, the Division may also request the Atlantic, Cape May, Monmouth, and Ocean County Health Departments to collect water samples at bathing areas for phytoplankton analysis. (Additional special surveys are noted below under "Marine and Estuarine Monitoring (Shellfish Control)".)

d. Compliance Monitoring

Compliance monitoring refers to the monitoring of wastewater facilities for compliance with the terms and conditions of wastewater discharge permits. In fiscal year 1987, the Bureau of Monitoring and Data Management will perform 24-hour Compliance Sampling Inspections on ten industrial wastewater treatment facilities. Pursuant to a cooperative agreement between the Department and DRBC, the Bureau of Monitoring and Data Management will also perform 20 additional 24-hour Compliance Sampling Inspections on municipal and industrial wastewater treatment facilities in the New Jersey portion of the Delaware River Basin (at or below Trenton), to determine compliance with DRBC and NJPDES permit requirements. The compliance bioassay monitoring that can be performed in fiscal year 1987 (three flow-through bioassays and three screening bioassays) is limited by the continuing absence of necessary Division laboratory facilities. A move into a new laboratory facility is expected in FY 87.

The Enforcement Element performs compliance inspections at municipal and industrial wastewater treatment plants; some of these inspections include grab samples or four-hour composite samples. The Enforcement Element and the Water Quality Management Element also review the self-monitoring reports submitted by wastewater dischargers, and also make use of the results of compliance monitoring by EPA-Region II and ISC. The Water Quality Management Element establishes self-monitoring requirements for discharge permits, pursuant to the Department's New Jersey Pollutant Discharge Elimination System rules (N.J.A.C. 7:14A). The Monitoring and Planning Element sometimes assists in the identification of self-monitoring requirements and the review of self-monitoring reports (especially biomonitoring and ambient surface water quality monitoring).

e. Quality Assurance and Data Management

The purpose of the Quality Assurance program is to ensure that monitoring data is scientifically valid and defensible. Data characteristics of major importance are accuracy, precision, completeness, representativeness, and comparability.

In 1981, the Department adopted "Regulations Governing Laboratory Certification and Standards of Performance" (N.J.A.C. 7:18). These regulations require that all water sample analyses performed for the purpose of determining compliance with the New Jersey Water Pollution Control Act or the New Jersey Safe Drinking Water Act must be performed in certified laboratories, which must analyze all water samples in accordance with the procedures and methods required by the regulations (and otherwise meet the requirements of the regulations). These regulations incorporate by reference the EPA "Guidelines Establishing Test Procedures for the Analysis of Pollutants" (40 CFR 136) and the EPA "National Interim Primary Drinking Water Regulations", as amended (40 CFR 141). These regulations were amended in the July 2, 1984 New Jersey Register and now include regulations covering laboratory certification for Assembly Bill A-280 (the amendments to the New Jersey Safe Drinking Water Act). The fiscal year 1987 work plan for the Office of Science and Research is expected to include activities related to laboratory certification for water pollution and drinking water (performance and systems audits). Bioassay laboratory systems audits will be performed by the Bureau of Monitoring and Data Management.

In July 1985, EPA-Region II approved the fiscal year 1986 Quality Assurance Program Plan submitted by the Department. This plan sets forth the organizational and procedural program that the Department will follow to assure that demonstrably valid data is obtained and used by the Department, and applies to all environmental monitoring and measurement efforts performed by or for the Department. In June 1986, the Office of Quality Assurance is required to submit a fiscal year 1987 Quality Assurance Program Plan to EPA-Region II for approval.

The Division of Water Resources prepares individual Work/Quality Assurance Plans (or "Quality Assurance Project Plans") for its individual monitoring activities; the Office of Science and Research approves these plans and audits their implementation. The Division of Water Resources is also responsible for assuring that all of its routine procedures for generating and processing data are incorporated into Standard Operating Procedures Manuals. The Division has already issued a "Field Procedures Manual for Water Data Acquisition", which is used in Division monitoring programs. This manual addresses such subjects as survey planning, sampling equipment and sample collection; analytical instrumentation for field use; sample handling, preservation, and labeling; submission of samples for laboratory analysis; and chain of custody records. The Division of Waste Management has issued a "Field Sampling Procedures Manual". The Office of Quality Assurance eventually intends to coordinate the development of a Department "Field Standard Operating Procedures Manual" that will incorporate (with appropriate revisions to prevent inconsistencies and duplication) the field standard operating procedures manuals prepared by Department units.

The cooperative monitoring agreements between the Department and the county health departments and lead agencies in the County Cooperative Network require quality assurance practices in field procedures, laboratory analysis, and data management.

Water quality data from routine monitoring networks and intensive surveys is entered on the EPA STORET water quality data base. This includes all County Cooperative Network data submitted pursuant to the cooperative monitoring agreements. Data retrievals from STORET (including statistical analyses and graphs) provide much of the information for the State Water Quality Inventory (305(b)) Report and other water quality assessment reports. Data is submitted by the Bureau of Monitoring and Data Management. However, the Bureau of Management Services has responsibility for STORET activities and overall data management.

f. Marine and Estuarine Monitoring (Shellfish Control)

New Jersey's marine and estuarine waters are heavily used for shellfish harvesting, which requires special water quality monitoring programs to protect public health and support water pollution control activities. The Department's Shellfish Growing Water Classifications (N.J.A.C. 7:12) are based mainly on ambient bacteriological monitoring by the Bureau of Shellfish Control. In fiscal year 1987, 2500 stations will be monitored, with special emphasis placed on summer sampling of non-condemned waters. A special survey of toxic contamination of shellfish and sediments in bays and estuaries will be expanded, and a marina impacts study will be continued. Also, the Bureau of Shellfish Control will initiate a two-year program of year-round bacteriological monitoring of upper Delaware Bay as part of the DRBC seasonal

disinfection study. (Other marine and estuarine monitoring activities that are separate from shellfish control monitoring are discussed above under "Routine Ambient Monitoring" and "Intensive Survey Monitoring".)

g. Laboratory Services

The Bureau of Shellfish Control operates the Department's Southern Coastal Regional Laboratory, which provides chemical and bacteriological analysis support to the Enforcement, Monitoring and Planning, and Water Supply and Watershed Management Elements, and to the Atlantic County Health Department. (Many of the samples analyzed at this laboratory are not directly related to shellfish control.) The Bureau of Monitoring and Data Management operates a biological services laboratory for biological analysis. The Division of Water Resources also obtains laboratory services from the New Jersey Department of Health, the Department of Environmental Protection's Environmental Laboratories Administration, USGS, and EPA, pursuant to annual agreements with these agencies. County health departments and other local agencies in the County Cooperative Network also operate their own laboratory facilities. The Office of Quality Assurance develops analytical and quality control requirements for incorporation into Department laboratory service contracts and interagency agreements, and administers those contracts and agreements.

h. Other Monitoring Activities

In addition to its compliance monitoring activities, the Enforcement Element conducts special ground water investigations, with technical support from the Geological Survey Element. Occasionally, the Enforcement Element takes samples of surface waters to document pollution problems (most such sampling is performed by the Bureau of Monitoring and Data Management or by county health departments).

In the Water Supply and Watershed Management Element, the Bureau of Safe Drinking Water takes samples of surface and ground water (usually tap water) in response to citizen complaints about drinking water quality or requests by other agencies or Division of Water Resources units, or as part of its own special investigations of drinking water quality, or as part of its evaluation of new public water supply systems.

In addition to intensive surveys of toxic contamination of surface waters that are performed in cooperation with the Division of Water Resources, the Office of Science and Research performs separate investigations of toxic contamination in selected New Jersey waterways. The Director of the Office of Science and Research is also the chairman of the Department's Toxics in Biota Policy Committee and appoints the group leader of the Department's Toxics in Biota Technical Group.

The Department's Division of Waste Management monitors surface and ground water quality around non-hazardous landfills and forwards the data to the Water Quality Management Element. The Division of Waste Management also monitors surface and ground water quality around hazardous waste disposal sites where public funds are being expended for clean-up activities.

The Department's Division of Fish, Game and Wildlife monitors water quality in connection with its fisheries management activities (including pollution investigations and lake studies). The Division of Fish, Game and Wildlife also

participates (with the Division of Water Resources and the Office of Science and Research) in the Department's Toxics in Biota Policy Committee and Technical Group.

2. Developing Monitoring Strategies

a. Introduction

In the supplementary information accompanying the present EPA Water Quality Planning and Management Regulation, EPA states that "no separate monitoring strategy is required by the regulation" and that the monitoring activities referred to in 40 CFR 130.4(b) "are the State's ongoing monitoring activities required by section 106(e)(1) of the Act and described in the annual State work program" (50 FR 1776; January 11, 1985). Previous EPA regulations had required each State to develop, maintain, and implement a "Statewide monitoring strategy" (44 FR 30041; May 23, 1979).

The Statewide Water Quality Management Program Plan (Statewide WQM Plan) includes a "Surface and Ground Water Quality Monitoring" strategy (p. II-62) that describes the Department's general approach for monitoring in upcoming years. Like the other "strategies" in that Plan, the "Surface and Ground Water Quality Monitoring" strategy is not binding upon the Department or other parties. Some additional recommendations for the revamping of monitoring strategies were made in the Department's "New Jersey 1982 State Water Quality Inventory Report", which is also a component of the Statewide WQM Plan (see p. I-5 of that Plan).

Notice that the Department had prepared a draft Statewide WQM Plan under the Department's Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15) was given in the April 1, 1985 New Jersey Register (17 N.J.R. 842(c)). The Department held a nonadversarial public hearing on the draft Statewide WQM Plan on May 15, 1985, and written comments were accepted until May 31, 1985. The Department adopted its initial Statewide WQM Plan on December 5, 1985 (notice of this adoption was published in the New Jersey Register on January 6, 1986 at 18 N.J.R. 110(b)). The Department submitted that Plan to EPA for approval pursuant to the federal Clean Water Act on December 30, 1985. Changes to the adopted Statewide WQM Plan, including the updated "Surface and Ground Water Quality Monitoring" strategy, may be made pursuant to N.J.A.C. 7:15.

b. Surface Water

For surface waters the "Surface and Ground Water Quality Monitoring" strategy in the Statewide WQM Plan includes the following summary statement (p. II-68):

"The Division [of Water Resources] and the Department are approaching surface water quality monitoring from a number of directions. However, the overall trend for the upcoming years is to promote monitoring by regional or county agencies of fixed-stations to establish background and ambient conditions; and to have state agencies make greater use of intensive surveys that will identify specific pollution sources. This will allow a thorough understanding of the chemical, physical and biological properties of a stream segment, and lead to corrective actions aimed at water quality improvement."

The quality of New Jersey's surface water has most frequently been determined on the basis of water quality monitoring from fixed locations. The "Surface and Ground Water Quality Monitoring" strategy notes that such monitoring is useful for some purposes (e.g., identification of general water quality conditions at these locations). However, the strategy emphasizes the unsuitability of such monitoring for other important purposes, such as evaluating the impact of specific pollution sources. Over a period of years, the Division intends to substantially reduce its direct participation in routine fixed-station monitoring of surface water, in order to expand its intensive surveys of surface water and to support an ambient monitoring program for ground water. The strategy supports continued Division participation in the EPA National Basic Water Monitoring Network, the continuation of the USGS/Division of Water Resources Ambient (or Primary) Monitoring Network for surface water (with eventual reduction of the network to perhaps 30-40 stations statewide), continued routine monitoring of interstate waters by DRBC and ISC, and continued monitoring of shellfish growing waters by the Bureau of Shellfish Control.

The Division intends to coordinate the reduction of the USGS/Division of Water Resources surface water network with the expansion of the County Cooperative Network into additional counties of the State. As the "Surface and Ground Water Quality Monitoring" strategy states (p. II-67), the Division "would like to have counties or other substate agencies conduct most of the routine, fixed-station monitoring for surface waters throughout the State", under the auspices of the County Environmental Health Act.

The strategy states (p. II-67) that "in FY 1986, the Division will continue the use of intensive surveys for the purpose of collecting ambient water quality information, establishing cause and effect relationships and for identifying water quality based effluent limitations and other specific pollution control activities needed to improve water quality in a particular stream segment". The surveys "will be coordinated with other monitoring agencies such as EPA, USGS, Division of Fish, Game and Wildlife and county health departments". The sampling needs will "vary from survey to survey, depending on the suspected source of pollution, understanding of existing conditions, critical periods in the stream, and designated uses affected", and "some intensive surveys will incorporate sampling of point source effluents". The strategy also supports continued programs of compliance monitoring, quality assurance, and data management.

The "New Jersey 1982 State Water Quality Inventory Report" recommended that "all segments or watersheds in the State...be intensively sampled within a period of time that depended upon the availability of manpower and funds (possibly once every 3-5 years)", and otherwise outlined the elements of a recommended "long-term intensive survey monitoring program" (p. III-14). Although the "New Jersey 1982 State Water Quality Inventory Report" recommended that "intensive surveys be emphasized as the primary tool for monitoring water quality" (Executive Summary, p. 6), it is evident from the preceding paragraphs that the Department monitoring strategy includes a substantial amount of fixed-station monitoring by county and substate agencies, DRBC, ISC, USGS, and the Division of Water Resources. However, most of the surface water monitoring performed directly by the Division would consist of intensive surveys. Some intensive surveys may be performed under contract to the Division by other agencies, educational institutions, or consulting firms.

The "New Jersey 1982 State Water Quality Inventory Report" also made recommendations about surface water monitoring as related to specific water uses. Included were recommendations for increased monitoring above surface water intakes and centralization of water quality data collected by water purveyors (p. III-44), increased bacteriological monitoring to determine suitability for primary contact recreation (p. III-65), and increased monitoring of fish populations (p. III-113).

c. Ground Water

As noted in the "Surface and Ground Water Quality Monitoring" strategy in the Statewide WQM Plan, the Division of Water Resources has developed an Integrated Ground Water Monitoring Strategy to provide for continuing, comprehensive ground water monitoring program coordination. The basis for this strategy is to maximize available resources and information through efficient monitoring and data coordination.

The four objectives of the Integrated Ground Water Management Strategy are:

- The elimination of sampling duplication by coordinating the various monitoring programs through the interagency Water Monitoring Work Group;
- The enhancement of information accessibility between monitoring programs by developing a coordinated, computerized data base pool using a common information identifier in all of the existing ground water data files. (This pool includes data from ambient monitoring programs and special or regulatory data such as landfill monitoring well data, Geological Survey Element pollution case files and NJPDES permit compliance monitoring.)
- The assurance that all monitoring programs incorporate a standard level of laboratory and sampling quality control; and
- The establishment of sampling programs to fill existing ambient ground water information gaps.

Programs to accomplish these objectives are currently being implemented.

Future activities in these programs will include:

- Completion of the coordinated data pool currently being developed by the USGS, the Department, USEPA and DRBC, using the various data bases already in place as the ground water data pool framework.
- Continued implementation of the Department's "Regulations Governing Laboratory Certification and Standards of Performance" (N.J.A.C. 7:18).
- Continuation of the USGS/Division of Water Resources Primary Monitoring Network for ambient monitoring of ground water quality (the major focus for the first years of the network is to collect data in the northern section of the state).
- Continued ambient monitoring of ground water quality by Ocean County, and implementation of ambient monitoring of ground water quality by other county or substate agencies pursuant to the County Environmental Health Act.

- Continuation of the USGS Salt Water Encroachment Monitoring Network and Synoptic Water Level Monitoring Program.
- Continuation of compliance monitoring of ground water discharges, including the establishment of self-monitoring requirements in discharge permits and the review of self-monitoring data.
- Continuation of ground water pollution investigations by the Enforcement Element and the Division of Waste Management (with technical support from the Geological Survey Element).

In 1985 the Department received a supplementary EPA grant under section 106 of the federal Clean Water Act to support a Ground Water Work Plan. Under one of the five tasks in the work plan ("Data Management and Coordination"), recommendations for changes to the data collection and management system will be developed for inclusion as part of a comprehensive Ground-Water Quality Management Strategy.

G. COORDINATION OF THE PROCESS

1. Conducting Monitoring Activities

As discussed in this chapter, monitoring activities are performed in New Jersey by various agencies besides the Department (e.g., EPA-Region II, USGS, ISC, DRBC, county health departments), by various divisions or offices within the Department (e.g., Division of Water Resources, Division of Waste Management, Division of Fish, Game and Wildlife, Office of Science and Research), and by several elements or units within the Division of Water Resources (e.g., Monitoring and Planning Element, Enforcement Element, Water Quality Management Element, Geological Survey Element, Water Supply and Watershed Management Element, Bureau of Management Services). Coordination of monitoring activities is essential to avoid unnecessary duplication of effort and to make the most effective use of available monitoring resources. Such coordination has been accomplished by several means, including the establishment of interagency work groups and committees; other ongoing discussions between or within agencies; the establishment of cooperative monitoring networks, cooperative monitoring agreements, and short-term contracts; the implementation of quality assurance programs; the use of coordinated data management systems; and cooperative arrangements for laboratory services.

In 1982, the Water Monitoring Work Group (WMWG) was established to act as a forum for the exchange of information and to facilitate interagency cooperation. The WMWG was composed of representatives from the water monitoring units of the DRBC, ISC, the New Jersey Departments of Environmental Protection and Transportation, EPA-Region II, and USGS. The "Water Monitoring Activities Document, Fiscal Year 1983" (September 1982) that was prepared for the WMWG by the Bureau of Monitoring and Data Management summarized the monitoring programs of these agencies as they pertained to eight program categories (streams, lakes, estuarine-marine, ground water, potable water, dischargers, landfills, emergency response).

In recognition of the need to continue and expand the Department's efforts to evaluate the problem of PCB and other toxic contamination of New Jersey fisheries and biota, the Department established in August 1983 a Toxics in

Biota Policy Committee and Technical Group. The Director of the Office of Science and Research is the chairman of the Policy Committee, which also includes the Directors of the Division of Fish, Game and Wildlife and the Division of Water Resources. The Policy Committee evaluates the objectives and reviews the progress of the Department in evaluating toxics in biota, oversees the administration of regulatory actions, and disseminates information concerning all results. The Technical Group works under the direction of the Policy Committee and includes the Chief of the Bureau of Freshwater Fisheries and the Administrator for Marine Fisheries (Division of Fish, Game and Wildlife) and the Chief of the Bureau of Monitoring and Data Management (Division of Water Resources). The purpose of the Technical Group is to develop and implement an integrated program addressing chemical contaminants in fish, shellfish, and wildlife. The Technical Group is responsible for sampling design and strategy, sampling schedules, data analysis and any regulatory recommendations indicated by project results.

Also in 1983, the Department established the Intra-agency Acid Rain Committee within the Department to coordinate acid rain research and make recommendations for research projects, which in some cases may include some form of water quality monitoring. The committee includes representatives from the Office of the Commissioner, the Office of Science and Research, the Division of Parks and Forestry, the Division of Fish, Game and Wildlife, the Division of Water Resources, and the Division of Environmental Quality.

In 1986, EPA-Region II, NOAA, and the Department (the Bureau of Monitoring and Data Management and the Planning Group) created the Interagency Committee on the Green Tide to design and implement monitoring of green algae in New Jersey coastal waters. Also, NOAA will convene a scientific panel to assess observed bloom conditions from a local and global perspective; the Department has offered assistance in organizing the panel and will participate in its proceedings.

As discussed earlier in this chapter, the Department received a supplemental EPA grant in 1985 to support a Ground Water Work Plan. A Ground-Water Working Group was created within the Department to implement the work plan (one of whose tasks is the development of recommendations for changes to the data collection and management system). The Ground-Water Working Group consists of representatives from the Division of Water Resources (Monitoring and Planning Element, Water Quality Management Element, Water Supply and Watershed Management Element, and Geological Survey Element), the Division of Waste Management, and the Office of Science and Research. EPA representatives from the Office of Ground-Water Programs also attend. The Ground-Water Working Group meets at least monthly, and more often if necessary. Meetings will also be held periodically with county officials involved with ground water and public health programs (through a County Review Committee to be organized in fiscal year 1987), and with local officials and interested members of the public.

The monitoring program for the Great Swamp water quality study was discussed with an advisory group established for that study. The advisory group includes representatives from county and local governments, sewerage authorities, environmental organizations, and federal agencies (EPA-Region II and the U.S. Fish and Wildlife Service). The Division of Water Resources arranges for meetings of the advisory group.

Much coordination occurs through ongoing discussions that are separate from these work groups and committees. For example, representatives from the Bureau of Monitoring and Data Management and EPA-Region II meet every two months to discuss the Bureau's monitoring activities. The Bureau of Monitoring and Data Management consults with the Enforcement Element, EPA-Region II, and ISC to prevent duplication of compliance monitoring activities. The Bureau of Monitoring and Data Management and the Bureau of Systems Analysis and Wasteload Allocation jointly design and coordinate intensive surveys that are used in the development of water quality based effluent limitations.

Coordination has also taken place in the identification of monitoring activities in the Division of Water Resources work plans for fiscal year 1987. Division staff worked directly with EPA-Region II staff in the development of these work plans. Also, the Bureau of Monitoring and Data Management consulted with USGS about the USGS/Division of Water Resources ambient monitoring networks, and with DRBC about the monitoring performed by that Bureau for DRBC. The Bureau of Monitoring and Data Management and the Bureau of Planning and Standards jointly prepared the Bureau of Monitoring and Data Management work plan for intensive surveys, which together with the intensive surveys in the 205(j) work plan incorporates recommendations from these Bureaus, the Bureau of Systems Analysis and Wasteload Allocation, and the Bureau of Shellfish Control, as well as the Enforcement Element, the Construction Grants Administration Element, the Water Supply and Watershed Management Element, and the Water Quality Management Element. The Bureau of Monitoring and Data Management work plan also responds to widespread public and agency interest in the quality of ocean waters. As required by the federal Clean Water Act, the Division of Water Resources has also provided opportunity for local, regional, and interstate agencies to participate in the development of the work plan under section 205(j) of the federal Clean Water Act.

In fiscal year 1987, Bureau of Monitoring and Data Management intensive surveys will be cooperatively integrated with other Department units (Division of Coastal Resources, Division of Fish, Game and Wildlife, Office of Science and Research, Planning Group), county health departments (Ocean, Atlantic, Cape May, Monmouth), NOAA, and the Environmental Support Division of EPA-Region II.

Many of the monitoring activities discussed in this chapter are performed through cooperative monitoring networks. By definition, cooperative monitoring networks are based on coordination between the monitoring agencies. For example, the Work/Quality Assurance Plan for the USGS/Division of Water Resources Ambient (Primary) Surface Water Quality Monitoring Network specifies: 1) which stations will be sampled by USGS; 2) which stations will be sampled by the Bureau of Monitoring and Data Management; 3) which parameters will be analyzed at the USGS laboratory; 4) which parameters will be analyzed at the New Jersey Department of Health laboratory; and 5) features applicable to the entire network (e.g., monitoring network design, monitoring frequency, sampling procedures). In the USGS/Division of Water Resources Primary Monitoring Network for ambient ground water quality, samples are collected by the Bureau of Monitoring and Data Management and analyzed at the USGS laboratory. The design of this network is based on consultations between USGS, the Geological Survey Element, and the Bureau of Monitoring and Data Management.

The Bureau of Monitoring and Data Management performs the New Jersey portion of the EPA national Basic Water Monitoring Network; the design of that network in New Jersey is based on discussions between that Bureau and EPA-Region II. Pursuant to the Cooperative Agreement between the Department and DRBC, the Bureau of Monitoring and Data Management performs routine ambient monitoring (Delaware River at Trenton) and compliance monitoring of wastewater discharges in the Delaware River Basin at and below Trenton, and the Bureau of Shellfish Control will initiate a two-year program of year-round bacteriological monitoring of upper Delaware Bay as part of the DRBC seasonal disinfection study. Of increasing importance are the Cooperative Monitoring Agreements between the Department and county or other substate agencies. Agreements have now been signed with the Atlantic, Burlington, Cape May, Monmouth, and Ocean County Health Departments and with the Paterson Division of Health (lead agency for Passaic County), and agreements with additional county or substate agencies are expected in the future. For special, short-term monitoring projects, another coordination mechanism is a short-term contract between the Department and other monitoring agencies. A recent example was the July 1, 1983 contract between the Department and the Passaic Valley Water Commission, whereby the Commission performed sampling and analysis to support a special Passaic River water quality study (whose other participants include the U.S. Geological Survey and Rutgers University).

Quality assurance programs assist the coordination of monitoring activities by ensuring the comparability of data from the various monitoring programs. The preparation and approval of Work/Quality Assurance Plans (or "Quality Assurance Project Plans") before monitoring projects are performed, and the preparation and approval of Standard Operating Procedures Manuals, ensures that adequate coordination occurs between the Department's divisions and the Office of Quality Assurance in the Office of Science and Research. The specific responsibilities of the Office of Quality Assurance and individual Department divisions are set forth in the Department's Quality Assurance Program Plan.

The use of coordinated data management systems also assists the coordination of monitoring activities by ensuring the accessibility of monitoring data and preventing unnecessary duplication of effort. For surface water, the entry of quality assured water quality data into the EPA STORET system is well established. For ground water, an important development has been the creation of a coordinated data pool using a common information identifier in all of the existing USGS, Department, and DRBC ground water data files. The Bureau of Management Services is responsible for the general operation of Division of Water Resources data management systems and for data retrieval, while other Division elements such as the Monitoring and Planning Element and the Geological Survey Element are responsible for the entry of data onto the systems.

Cooperative arrangements have also been made for the provision of laboratory services. For example, the Department's Southern Coastal Regional Laboratory is operated by the Bureau of Shellfish Control but provides analytical support to many Division of Water Resources functions besides shellfish control (as well as analytical support to the Atlantic County Health Department). The Division also obtains laboratory services from the New Jersey Department of Health, the Department of Environmental Protection's Environmental Laboratories Administration, USGS, and EPA, pursuant to annual agreements with these agencies. In 1985, the Office of Quality Assurance prepared (in

cooperation with the Division of Water Resources, the Division of Waste Management, and the Division of Environmental Quality) the RFP for Professional Analytical Services (X-085) for incorporation into Department laboratory service agreements and contracts. Contracts were awarded to commercial laboratories in January 1986; the RFP is scheduled for revision by January 1987.

2. Developing Monitoring Strategies

A "Surface and Ground Water Quality Monitoring" strategy was included in the draft Statewide Water Quality Management Program Plan. Among the Division of Water Resources units that contributed to the strategy were the Bureau of Planning and Standards, the Bureau of Monitoring and Data Management, and the Geological Survey Element. The Department held a nonadversarial public hearing on the draft Statewide WQM Plan on May 15, 1985, and written comments were accepted until May 31, 1985 (15 N.J.R. 842(c)). Through this procedure, other agencies such as USGS, DRBC, ISC, county health departments, and water quality management planning agencies, as well as various interest groups and the general public, had the opportunity to comment on the strategy prior to the final adoption of the Statewide WQM Plan on December 5, 1985. Opportunities for comment may likewise be available for future changes to the monitoring strategy in the adopted Statewide WQM Plan.

CHAPTER VII. DEVELOPING THE CONSTRUCTION GRANT PRIORITY LIST

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CHAPTER VII. DEVELOPING THE CONSTRUCTION GRANT PRIORITY LIST

A. DATE OF THE SUMMARY DESCRIPTION OF THE PROCESS

May 1986

B. TITLE OF PROCESS

Developing the Construction Grant Priority List

C. LEAD ADMINISTRATIVE UNIT FOR THE PROCESS

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D. OBJECTIVE OF THE PROCESS

The development of the State's project priority list for the construction of treatment works to be funded by the federal Clean Water Act, in order to achieve optimum water quality management.

E. LEGAL BASIS FOR THE PROCESS

1. Clean Water Act References

Section 303(e) of the federal Clean Water Act specifically requires the States to prepare plans that include "an inventory and ranking, in order of priority, of needs for construction of waste treatment works required to meet the applicable requirements of sections 301 and 302". Title II of the Clean Water Act identifies the general and specific legislative requirements regarding Grants for Construction of Treatment Works. Section 204(a) of the Act specifies that "before approving grants for any project for any treatment works under section 201(g)(1) the Administrator [of EPA] shall determine...that such works have been certified by the appropriate State water pollution control agency as entitled to priority over such other works in the State in accordance with any applicable State plans under section 303(e) of this Act..."

Section 216 of the Act states:

"Notwithstanding any other provision of this Act, the determination of the priority to be given each category of projects for construction of publicly owned treatment works within each State shall be made solely by that State, except that if the Administrator, after a public hearing, determines that a specific project will not result in compliance with the enforceable requirements of this Act, such project shall be removed from the State's priority list and such State shall submit a revised priority list...It is the policy of Congress that projects for wastewater treatment and management

undertaken with Federal financial assistance under this Act by any State, municipality, or intermunicipal or interstate agency shall be projects which, in the estimation of the State, are designed to achieve optimum water quality management, consistent with the public health and water quality goals and requirements of the Act."

Section 205(j) of the Act directs EPA "to make grants to the States to carry out water quality management planning, including...determining those publicly owned treatment works which should be constructed with assistance under this title, in which areas and in what sequence, taking into account the relative degree of effluent reduction attained, the relative contributions to water quality of other point or nonpoint sources, and the consideration of alternatives to such construction, and implementing section 303(e) of this Act." Such grants, however, may not exceed one percent of the sum allotted to the State within a given fiscal year.

2. State Law

Section 7 of the New Jersey Water Quality Planning Act specifically requires the Department to prepare "an inventory and ranking of needs, in order of priority, for the construction of municipal waste treatment works needed to meet the water quality goals and standards". Section 5 of the New Jersey Water Pollution Control Act empowers the Department to "administer State and Federal grants to municipalities, counties and other political subdivisions, or any recipient approved by the commissioner according to terms and conditions approved by him in order to meet the goals and objectives of this Act."

F. SUMMARY DESCRIPTION OF THE PERFORMANCE OF THE PROCESS

1. General Procedure

The construction grants priority list is a schedule of proposed projects in the State, in a priority order, for the construction of municipal wastewater treatment facilities utilizing Federal construction grant monies. The priority of any particular project is established by the methodologies and criteria contained in the priority system. The priority system also establishes general Department policies which govern the award of Federal grants. The priority list is a significant document because only those projects designated in the fundable range of the list can receive Federal grants for 55 or 75 percent of eligible project costs.

The priority list for any given federal fiscal year expires at the end of the federal fiscal year (September 30). Each year the Department develops a new priority list to fund projects for the upcoming federal fiscal year. The Department holds public hearings annually for the development of priority lists. Any significant change in the priority list must also be the subject of a public hearing.

Each year, the Department forwards a proposed priority system and priority list to units of local and county governments, sewerage authorities, environmental and conservation groups and other organizations, members of the Legislature as well as individuals having an interest in water pollution control in the State. The proposed priority system and priority list is the subject of public hearings held at least 30 days after the documents are

available for public review. Notice of the hearings is also published in the New Jersey Register and DEP Bulletin. As a result of the public hearings and public comments, appropriate changes to the proposed priority system and priority list are made by the Department. The proposed priority system and priority list are then submitted to EPA-Region II, for review for procedural completeness. The Regional Administrator reviews the proposed priority system and list for compliance with the enforceable requirements of the federal Clean Water Act and the requirements of the Municipal Wastewater Treatment Construction Grants Amendments of 1981 and/or subsequently adopted Federal regulations. The Regional Administrator then notifies the Department of the acceptance or rejection of the priority system and priority list within 30 days of receipt from the Department.

Since fiscal year 1982, the Department priority list has consisted of a general section and a separate section for projects that meet the Federal criteria for innovative or alternative (I/A) wastewater treatment systems (to ensure full utilization of the mandatory I/A reserve). All identified project needs appear in either section but in no case do they appear in both. The priority system uses a separate ranking system for I/A projects, based on different categories than those used for the general project priority system, in recognition of the inherent difference in the nature of the proposed I/A technology projects on the list.

The February 17, 1984 EPA construction grants regulation includes specific provisions governing the development of the construction grant priority system and priority list (40 CFR 35.2015, 35.2020). Among these provisions are requirements for the annual submission (after public hearings) of a project priority list developed in accordance with an approved State priority system, the division of the priority list to identify projects within the "fundable portion" (for the current year's available funds) and within the "planning portion" (for anticipated future allotments), the inclusion in the project priority list of an estimate of the eligible cost of each project, the identification of eligible categories of need, and the establishment of "reserves" required or authorized by section 205 of the federal Clean Water Act (e.g., reserves for innovative and alternative technologies and for State management assistance grants). The full text of these provisions should be consulted to understand these EPA requirements. (The EPA water quality planning and management regulation (40 CFR 130) also includes some references to the construction grant priority system.)

The October 7, 1981 construction grants program Delegation Agreement between the Department and EPA-Region II consists of 63 subagreements, including Subagreement A-1 ("Development and Management of Priority List and Coordination with the Needs Survey, Water Quality Management Plans and NPDES Permits"). The Delegation Agreement is presently being updated and revised to address the requirements of the December 1981 amendments to the federal Clean Water Act and subsequent federal regulations.

The Department's "Water Quality Management Planning and Implementation Process" rules provide that the Department's Continuing Planning Process may include "a description of existing and anticipated wastewater treatment needs, together with a description of actions and priorities to meet those needs" (N.J.A.C. 7:15-2.1(c)6). (Some of the initial areawide Water Quality Management Plans that were adopted before 1981 included references to project priority lists for fiscal years 1977-1979. These references no longer have any

practical significance.)

As discussed on pages 4-6 of the "Executive Summary" in the Department's "Priority System and Project Priority List for Fiscal Year 1986", several substantial changes have been made to the overall Construction Grants Program which had an impact on the development of recent priority systems as compared to those prior to FY82. These changes were established by the "1981 Amendments" to the federal Clean Water Act (CWA) and/or the subsequent Federal regulations issued May 12, 1982 (Interim and Proposed Rules) and February 17, 1984 (Final and Interim Rule). The following is a listing of the major changes in the Construction Grants Program that affected the development of the State's priority system and funding policies:

- a. Funding levels dropped from 75 percent to 55 percent after October 1, 1984.
- b. After October 1, 1984, the categories eligible for grants include secondary and advanced treatment plants (categories 1 and 2), interceptors (category 4B) and infiltration/inflow correction (category 3A) projects. New collection systems (category 4A), sewer system replacement (category 3B) and combined sewer overflow correction (CSO-category 5) projects are not eligible after October 1, 1984. However, at the request of the Governor, States may use up to 20 percent of its annual allotment after October 1, 1984 for otherwise ineligible categories (i.e., the "Governor's discretionary fund"). In addition, the Federal regulations further indicate that CSO projects may be funded in excess of 20 percent of the annual allotment, if requested by the Governor, in cases where it is documented that these projects are necessary to improve existing impaired uses of receiving waters for fishing and swimming. Finally, it should also be noted that section 201(n)(2) of the CWA establishes a separate funding mechanism for addressing impaired uses or public health risks resulting from CSO's in marine bays and estuaries. The Department certified in FY84 five of the total of fourteen grant applications that were received by the USEPA-Washington Office by the established application deadline. While five of the fourteen applications had been denied by the USEPA, the Hudson County U.A.'s CSO project had received Headquarter's approval for a grant award in FY84. Through subsequent review by Headquarters, three other New Jersey projects were approved by the USEPA under the 201(n)(2) marine CSO program in FY85.
- c. After October 1, 1984, reserve capacity for new treatment works is not eligible for grant reimbursement. Eligible capacity is limited to needs existing on the date of the step 3 (construction) grant award, or 1990, whichever is earlier. However, if a project segment was funded prior to October 1, 1984 (for primary, secondary or advanced treatment, I/I correction or interceptors), then remaining segments may be eligible for 20 year reserve capacity (for interceptors partially funded (step 3) before December 29, 1981, 40 year capacity may be eligible). The February 17, 1984 Federal regulations include additional information regarding grandfathering of reserve capacity funding.
- d. No new step 1 (planning) and step 2 (design) grants may be awarded (since December 29, 1981). The applicable allowance to offset some of the planning and/or design costs is provided at the time a construction (step

3) grant is given. Federal regulations governing this allowance are included as Appendix B to 40 CFR Part 35 Subpart I, issued February 17, 1984.

- e. Notwithstanding item d above, States can reserve up to 10 percent of their annual allocations as advances to small communities that would otherwise be unable to afford the planning or design costs on their own. Small communities are presently defined as communities with a population of less than 3,500 or as otherwise defined by the State.
- f. At least four percent (to a maximum of seven and one-half percent) of the annual allotment must be reserved to award bonuses for Innovative or Alternative treatment works (at least one-half percent must be spent on innovative systems). Innovative systems are defined as improved wastewater treatment systems that result in substantial life cycle cost savings or significant environmental benefit. Alternative systems are generally wastewater treatment systems which utilize land as a part of the treatment process (e.g., spray irrigation or static-pile/windrow composting systems).
- g. Up to four percent of the annual authorization can be used for managing the State Construction Grants Program and certain other State water pollution control programs.
- h. A minimum of \$100,000, up to a maximum of one percent of the allocation, must be used for water quality management planning. This can include any studies necessary to identify solutions or implement plans to meet water quality standards or to determine the nature and extent of water quality problems (e.g., studies necessary to develop wasteload allocations could be conducted with the planning monies).
- i. No mandatory reserve for project increases is required.
- j. There is an increased emphasis to achieve optimum water quality management consistent with State and Federal water quality goals. The major criteria required in the development of priority systems is the need to give high priority to those projects that provide for water use restoration and public health improvement.

2. Fiscal Year 1986

On May 16, 1986, EPA-Region II approved the Department's "Priority System and Project Priority List for Fiscal Year 1986". These will remain in effect (with revisions to the priority list, if any, as permitted under the adopted priority system provisions) until the end of federal fiscal year 1986 (i.e., until September 30, 1986).

a. Administrative Procedure for Priority List Development

On July 26, 1985, the Department gave notice of public hearings for the development of the priority system and project priority list for federal fiscal year 1986 (October 1, 1985 - September 30, 1986). In addition, the Department published notice of the hearings in the August 19, 1985 New Jersey Register (17 N.J.R. 2051(a)) and in the DEP Bulletin (August 14 and 28, 1985 issues). In accordance with the provisions of 40 CFR 35.2015, public hearings

on the proposed priority system and project priority list were held on September 10, September 11, and September 12, 1985.

On August 9, 1985, copies of the Department's "Proposed Priority System and Project Priority List for Fiscal Year 1986" were mailed for review and comment to units of local and county governments, sewerage authorities, environmental and conservation groups and other organizations, members of the Legislature as well as individuals having an interest in water pollution control in the State. In addition, a copy of the detailed project narratives and ranking worksheets was distributed to one library in each county for review by the public.

Oral presentations were made at the public hearings. Written statements must have been hand delivered (or postmarked) no later than September 19, 1985 to be accepted by the Division of Water Resources. All information that was submitted in accordance with the above procedures was given due consideration in the preparation of the final documents, and was reflected in the Department's Responsiveness Summary.

As a result of the public hearings and public comments, appropriate changes to the proposed priority system and project priority list were made by the Department. The Department then submitted the priority system and project priority list proposal, as well as supporting documentation including the Responsiveness Summary, to EPA-Region II, for review for procedural completeness. The Regional Administrator reviewed the priority system and list for compliance with the enforceable requirements of the federal Clean Water Act and the requirements of the Municipal Wastewater Treatment Construction Grant Amendments of 1981 and/or subsequently adopted Federal regulations. On May 16, 1986, the Regional Administrator notified the Department of the acceptance of the priority system and priority list (which is required to be within 30 days of receipt from the State).

As discussed below, the priority list is subject to revision following its approval by the Regional Administrator.

b. Progress Evaluation and Priority List Revision

As discussed on page 25 of the Department's "Priority System and Project Priority List for Fiscal Year 1986", the Department will continuously evaluate the progress of projects on the priority list within the fundable range. The primary purpose of this evaluation is to determine whether a project has made sufficient progress to receive a step 3 construction grant within the fiscal year the project is scheduled to receive funding. If it is determined that the project is not on schedule, the funding date may be deferred to a future fiscal year.

The schedule for fundable projects on the FY 86 priority list was based on the Department's knowledge that all requirements to complete a step 3 application can be satisfied by that date. In order to track the projects in the fundable range of the priority list, grant applicants should submit updated cost estimates and detailed work schedules for the completion of their step 3 application within thirty (30) days from the adoption of the FY 86 priority list (i.e., within 30 days from May 16, 1986). Further, to effectuate the timely review and certification of projects, the Department is adopting (implemented in FY 85) the following project schedule deadlines:

For municipalities targeted to receive Federal grant awards in FY 86, all planning documents must be submitted to the Department by February 3, 1986; all design documents and a complete step 3 construction grant application package must be submitted to the Department by July 1, 1986. Failure to meet these deadlines may preclude funding award within the fiscal year, as the Department may, at its option, bypass the project.

The Department will review each project schedule as required. When it can be determined that a project may be deferred from funding to a future fiscal year, the applicant will be so notified. The funds that were to be used for a deferred project will be utilized to fund operable segments of the highest ranked project that is targeted for funding from FY 86 or anticipated FY 87 authorizations and can submit a complete grant application. If the situation occurs that none of the projects targeted to be funded in FY 86 or FY 87 are ready and the State will lose construction grants through reallocation, projects ranked below those that are scheduled for funding in FY 86 or FY 87 will receive grant awards (the highest ranked projects that are ready to proceed will be funded).

As discussed on page 34 of the Department's "Priority System and Project Priority List for Fiscal Year 1986", any significant revisions to the FY 86 priority list would be the subject of a public hearing. The Department will not, however, consider the following revisions to the priority list to be significant:

- Bypassing (i.e., deferring funding of) a project to a future fiscal year if all requirements to complete a step 3 grant application have not been satisfied on schedule.
- Increases or decreases in eligible project costs that may influence the fundable range of the priority list.
- The addition of projects to the fundable range as a result of their qualifying under the Public Health Hazard Bypass criteria.
- The revision of the fundable range of the priority list as a result of a change in the allocation that New Jersey receives for federal grant awards (differing from the \$99.97 million funding level projected to be available through reauthorization of the federal Clean Water Act).
- The revision of the fundable range of the priority list as a result of minor changes in the eligibility of project costs to be included under the federal Clean Water Act's reauthorization.

As discussed on page 35 of the Department's "Priority System and Project Priority List for Fiscal Year 1986", a project may be removed from the priority list if one or more of the following conditions are met:

- Funding for the project is complete.
- The project is no longer entitled to funding under the program.
- The EPA Regional Administrator determines after a public hearing that the project will not contribute to compliance with the enforceable

requirements of the federal Clean Water Act. (The February 17, 1984 EPA regulations, however, provide that up to 25 per cent of the State's annual allotment can be applied to projects that do not meet the enforceable requirements of the Act.)

- The project is found to be ineligible for Federal funding.
- The grantee requests the project to be removed from the list.

Also, in accordance with the procedures described on pages 35-37 of the Department's "Priority System and Project Priority List for Fiscal Year 1986", in instances where project conditions are determined to constitute a public health hazard by the Commissioner of the Department of Environmental Protection in consultation with the Commissioner of Health, the project will receive high funding priority over other projects on the priority list. However, funding of Public Health Hazard Bypass projects will be limited to a maximum of three percent of the State's allocation for FY 86.

c. Summary of FY86 Priority System

The approved FY86 priority system establishes the project ranking methodology and funding policies that will govern the award of Federal grants in FY86. (The Department is optimistic that the federal Clean Water Act will be reauthorized in the near future.) The priority list identifies which projects are targeted to receive federal construction grants (with the monies that are anticipated to be allocated to the state, approximately \$100 million).

The approved FY86 priority system is similar in nature to the FY85 priority system and has been designed to be compatible with the December 1981 amendments to the federal Clean Water Act. Federal assistance will continue to be awarded as grants in FY86 for all wastewater treatment construction projects. However, in order to further address New Jersey's clean water needs, the State is now in the process of implementing a "Wastewater Treatment Trust/Fund" program to supplement and expand the Construction Grants Program. The Trust/Fund legislation establishes a revolving loan program to be subsidized initially by \$190 million in bond funds (overwhelmingly approved by the public in the November 1985 Bond Act referendum). Approval of this legislation now allows New Jersey the opportunity to implement a long-term, self-sustaining funding program to continue the progress the federal program has begun to enable New Jersey to meet its water quality improvement needs. In addition, the viability of using private sources of capital to assist in achieving the State's water quality goals was investigated, with encouraging results. With the adoption of the wastewater privatization bill (C.58:27-1 et al.) in 1985, the State has provided the necessary incentives and assurances needed by the private investor while protecting the interests of the public, and municipalities are encouraged to seriously investigate this financing option (see pages 2-4 in the "Executive Summary" in the "Priority System and Project Priority List for Fiscal Year 1986").

The following summary of the FY86 priority system was generally copied from pages 6-11 of the "Executive Summary" in the "Priority System and Project Priority List for Fiscal Year 1986" and includes cross-references to other portions of that document (e.g., "section VIII 5"). As a result of changes in the federal Clean Water Act and the Federal regulations, particularly in regard to eligible categories of need as discussed previously, several changes

in the funding program have been included in the FY86 priority system (although generally consistent with the FY85 priority system) in order to provide improved management of the State's program within existing funding constraints. In summary, the following highlights the provisions of the FY86 priority system:

- 1) Funding for new project segments will be awarded in FY86 at the 55 percent level to cover the low bid construction cost* (i.e., no construction cost overruns or contingencies) and will include administrative/fiscal/legal costs (limited to one percent of the total eligible building cost), engineering costs, as well as the appropriate allowances. Further, grants will only be awarded to distinct project segments that will result in itself, in an operable treatment works (i.e., not relying on award of construction grants for additional portions of the project).

In addition to the above, the federal Clean Water Act and EPA's National Municipal Policy mandates that all wastewater facilities must meet secondary treatment requirements by July 1, 1988. Therefore, construction grants awards cannot be made to any project whose construction schedule will exceed the July 1, 1988 deadline. An exception to this project construction deadline will be made in those cases where a court-sanctioned order specifying a compliance schedule beyond the July 1, 1988 date has been established. The construction grant may then be awarded, with the project schedule in compliance with the judicial order.

- 2) The FY86 priority system establishes the ranking criteria and funding policies for two components of the priority list, the general and the I/A projects, and is consistent with the system adopted in FY85. However, the format of the priority list has been revised from those of previous years to identify fundable projects (i.e., eligible project categories) as well as related but currently ineligible project categories. In addition, the priority list presents the total eligible building costs under the appropriate treatment category. The figure under the "Total Eligible Project Cost" column includes the total eligible building costs and related step 3 services (i.e., administrative, legal, engineering, inspection, one year start-up services, etc.) and the appropriate allowance. The figure under the "Total Federal Share" column, which has been identified for the projects found within the fundable range of the FY86 priority list, includes 55 percent of the total eligible project costs and the applicable I/A bonus. The FY86 project priority list and its revised format serves several purposes:

- a) It identifies the anticipated fundable range of the priority list for FY86 grant awards (which assumes a continuation of the \$99.97 million Federal funding level to New Jersey through reauthorization of the federal Clean Water Act).
- b) By listing all projects (eligible and currently ineligible categories), a more complete indication of the State's actual water quality needs is presented. Therefore, the priority list can be utilized for current and future planning and funding-need (including

* The "low bid construction cost" as discussed throughout this document is the actual bid from the lowest responsive and responsible bidder.

the State's Wastewater Treatment Fund/Trust program) purposes, as well as identifying projects that may be eligible for assistance through the Governor's discretionary fund under the FY86 or future Federal priority systems.

It must also be noted here that the Federal Administration's proposal for the federal Clean Water Act's reauthorization includes a provision that will preclude grant assistance awards on or after October 1, 1985 to "new-start" projects (i.e., projects that have not received grants prior to February 4, 1985 for sequential phases or segments of the project, for construction of category 1, 2, 3A or 4B wastewater facilities). Therefore, "new-start" projects in the fundable range of the FY86 list that would be impacted if this provision of the Clean Water Act is adopted have been identified by asterisk on the FY86 priority list for information purposes.

- 3) As a result of changes in the Federal regulations regarding eligible and ineligible treatment categories, the State has evaluated the significant water quality needs of all projects in light of the limited available Federal monies. In order to channel the Federal allocations to the State's highest water quality improvement projects under the FY86 priority system, the Governor's discretionary fund for FY86 (to provide funding to otherwise ineligible categories of need) will include construction of new collection systems and appurtenances (category 4A). However, only those portions of collection system projects receiving approval for a Public Health Hazard (PHH) Bypass will be eligible for monies under the Governor's discretionary fund in FY86 (refer to section VIII 5 for additional information regarding the PHH Bypass provision of the priority system).

In addition to the above, funding of PHH Bypass projects will be limited to a maximum of three percent of the State's allocation in FY86.

The Department will continue to evaluate overall project needs and water quality goals during FY86, and will reflect this evaluation, including recommendations regarding the project categories of need and the amount of funds to be included in the Governor's discretionary fund, in the development of future priority systems and lists.

- 4) The Innovative/Alternative project funding bonus will be awarded at the 20 percent level for the applicable portions of the project, raising the base grant award from 55 percent to a maximum of 75 percent grants. (10 or 20 percent I/A bonuses will be awarded for qualifying components of projects with 75 or 65 percent previous base grant awards, respectively.)
- 5) The FY86 priority system includes the same reserve fund programs as adopted under the FY85 system, including the: Grant Increase Reserve, State Management Assistance Grant Reserve, I/A Technology Bonus Reserve, Alternative Wastewater Treatment Systems Reserve, Advance of the Allowance to Small Communities Reserve and the Reserve for Water Quality Management planning. These reserve fund programs, and the methodology to award grants from these reserves, are presented in Section VII of this document.

- 6) The grant increase policy is consistent with the policy as adopted in the FY82/83, FY84 and FY85 systems. Grants awarded since FY82 are limited to the bid construction cost (i.e., grants will be adjusted to the 65 or 55 percent level, in conformance with the applicable grant award level). Grants awarded prior to FY82 (at the 75 percent level) are eligible for grant increases based upon the overall base grant amounts (i.e., the total of all previous awards, excluding any I/A bonuses). The amount of the increase will be equivalent to the amount necessary to increase the overall grant to 65 percent of the eligible costs. It should, however, be noted that grant increases for pre-FY82 awards (i.e., 75 percent grants) and post-FY82 awards may be further limited as a result of the Federal regulations, effective February 10, 1986, which establishes a five percent limit on allowable grant increase awards for a project.

The Department identified its intent under the FY84 priority system to deobligate excess grant funds and to use this money to award for additional construction grants (note: monies that may be needed for cost overruns in 75 percent step 3 grants will not be deobligated). Grantees (with excess funds in 75 percent grant awards) were, however, given the opportunity to use these monies for: 1) additional scopes of construction work within the grant or for other grants, or 2) for cost overruns for planning and design work. Grantees requesting approval of additional scopes of work, or for planning or design work overruns, were required to submit applications to meet the following deadlines: August 1, 1984 for the grant decrease package(s) and September 30, 1984 for the grant increase/amendment package(s). While many of these "deob/reob" awards were certified in FY85, there are other such projects that the Department has not completed its review/certification, and these will be processed in FY86.

The Department established an "excess fund account" under the FY84 and FY85 priority systems and will maintain this account under the FY86 priority system. Monies that are deobligated for anticipated reaward to the grantee will be placed within this account. However, the new grant award(s) cannot exceed the amount deobligated for the respective grantee.

The policies regarding grant increases and use of excess funds are discussed in more detail in section VII A of this document.

- 7) As in past years, the Department will continue its policy to evaluate the progress of projects within the fundable range on a periodic basis. However, the Department is adopting (implemented in FY85) a project schedule deadline policy, requiring anticipated FY86 grantees to submit all planning documents by February 3, 1986 and all design documents and a complete step 3 construction grant application package by July 1, 1986. Where a project is not on schedule or does not meet the planning and design/step 3 application submittal deadlines, the Department may defer the project's funding date to a future fiscal year, and may award a grant to a lower ranked project that is ready to proceed. This policy is further discussed in Section VI of this document.
- 8) As required by the Federal regulations, 20 year reserve capacity eligibility for new project segments will be limited to those projects that have received step 3 grants prior to October 1, 1984 for construction of a primary, secondary or advanced treatment facility or

interceptors included in the facility plan (or 40 year reserve capacity for remaining interceptors if a grant for an interceptor has been awarded prior to December 29, 1981).

Grants for all other projects will be based on the capacity necessary to serve existing needs as of the date of the Step 3 grant award or final plan and specification approval for 2 + 3 grants. It should be noted that all projects must be sized in accordance with the cost effective analysis and, as a minimum, to accommodate not only existing needs but also the amount of reserve capacity which is determined to be cost effective over a 20 year planning period. As required by EPA guidance, in no case will a grant be awarded for a project with less than 5 years reserve capacity. However, all incremental costs of reserve capacity beyond the needs existing on the date of grant award or final 2 + 3 approvals shall be borne by the grantee.

As indicated previously, the FY86 priority system establishes the ranking criteria and funding policies for two distinct components, the general project priority list section and the Innovative/Alternative project priority list section. Both priority list sections rank projects, from highest to lowest, based on a summation of various category points (note: the category points are identical to the point system adopted in the FY85 priority system).

The general project list section is comprised of a segment category which ranks projects in accordance with the water quality improvements that will be achieved and the existing water quality conditions, and a discharge category which ranks projects on the basis of the degree of water pollution problems associated with the existing wastewater discharge. Both the segment category and the discharge category assign the highest point values to the most severe water quality conditions. The project priority list is developed by adding the segment category point scores to the discharge category point scores and ordering the projects according to total points, highest to lowest. Equivalent total scores are ranked in accordance with the population served by the particular project, (i.e., the greater the population, the higher the rank). Each project has been subdivided into operable segments which are independently ranked for water quality impacts and discharge conditions.

The segment category assigns points to projects to reflect the existing water quality conditions that are impacted by each project segment. In addition, the segment category also assigns priorities, in descending order, to projects that adversely impact potable water supplies, primary recreation and shellfish areas, trout production and maintenance areas, public nuisances, non-trout areas, industrial and agricultural water uses. The water quality conditions assign highest priority to areas experiencing unsatisfactory dissolved oxygen and fecal coliform impacts, with lower values for elevated nutrients and toxic substances.

The discharge category assigns highest priority to primary discharges followed by routine raw sewage overflows from inadequate sewer systems, then inadequate secondary discharges. New wastewater systems have lower points, followed by projects to upgrade from adequate secondary treatment to advanced wastewater treatment. The lowest value is assigned to infiltration/inflow (I/I) correction projects which do not result in direct water quality impacts. (Note: no segment point values were assigned to this type of I/I correction project.)

CSO projects are not ranked on the FY86 priority list, since they are an ineligible category and are not included in the Governor's discretionary fund for FY86. Instead, CSO projects have been grouped together and are presented in alphabetical order at the end of the general list section simply for informational purposes. (Note: the economic and environmental impacts of CSO projects will continue to be evaluated during FY86. As a result of this evaluation, as well as the progress of the separate marine CSO funding program, the State's position regarding the eligibility of CSO projects under the Governor's discretionary fund will be established and will be reflected in future priority systems and lists. It should also be noted that Congress is currently considering reinstating the CSO category under the CWA reauthorization. If this occurs, CSO projects will be ranked within the general section of the priority list, with one point for the CSO discharge category, as well as the applicable water use/water quality segment category points. However, in no case will any CSO project be found within the fundable range of the FY86 list.)

A separate section of the priority list has been developed for projects that meet the Federal criteria for innovative or alternative (I/A) wastewater treatment systems. Current Federal law requires that a minimum of four percent of the monies available for each fiscal year be expended on I/A bonuses, to raise the Federal funding level by 10 to 20 percent. In order to satisfy this mandate and to fully expend the I/A reserve, bonuses will be awarded to qualifying projects. A separate ranking system has been developed for I/A projects based on different categories than those utilized for the general system. (Note: in cases where an I/A project falls within the fundable range of the general list section, the project will be presented on the general rather than the I/A list.) The I/A system also provides the criteria to award advances of the allowance to small communities.

The FY86 priority list only includes step 3 (and eligible 2 + 3) projects. As presented previously, the project costs will be awarded to cover the low bid construction cost (i.e., no construction cost overruns or contingencies) and the administrative/fiscal/legal costs (limited to one percent of the total eligible building cost), engineering costs, as well as the allowance and I/A bonuses, if applicable. The anticipated fundable range of the priority list has been identified for the anticipated FY86 authorization (assuming reauthorization of the federal Clean Water Act at the \$99.97 million level for New Jersey). In the event that the reauthorization act changes the Federal funding level that New Jersey is to receive in FY86, the fundable range of the priority list will be revised accordingly.

The Department has contacted all grantees in order to receive recent cost estimates to present the most up-to-date information on the priority list (including inflation impacts on older cost estimates). Where grantees did not respond or where submitted cost updates appear excessive for the project involved, these costs have been adjusted based on staff knowledge and experience of anticipated project costs. In addition, justified revised costs submitted by grantees in response to the public hearings/public participation program are included on the revised FY86 priority list.

The Department holds public hearings to ensure that municipalities are adequately notified of the changes to the State's FY86 Construction Grants Program that may impact their project(s), and to afford municipalities and the public the opportunity to provide specific comment regarding the FY86 Priority

System/List proposal.

3. Fiscal Year 1987

The Department will develop a priority system and project priority list for fiscal year 1987 under the general procedure described in this chapter. A major factor in the development of the FY87 priority system and project priority list will be the anticipated reauthorization of the federal Clean Water Act, including the resolution of such issues as the use of federal allocations for loans instead of or in addition to grants, the dollar amount and years of authorization, and the identification of eligible categories of projects.

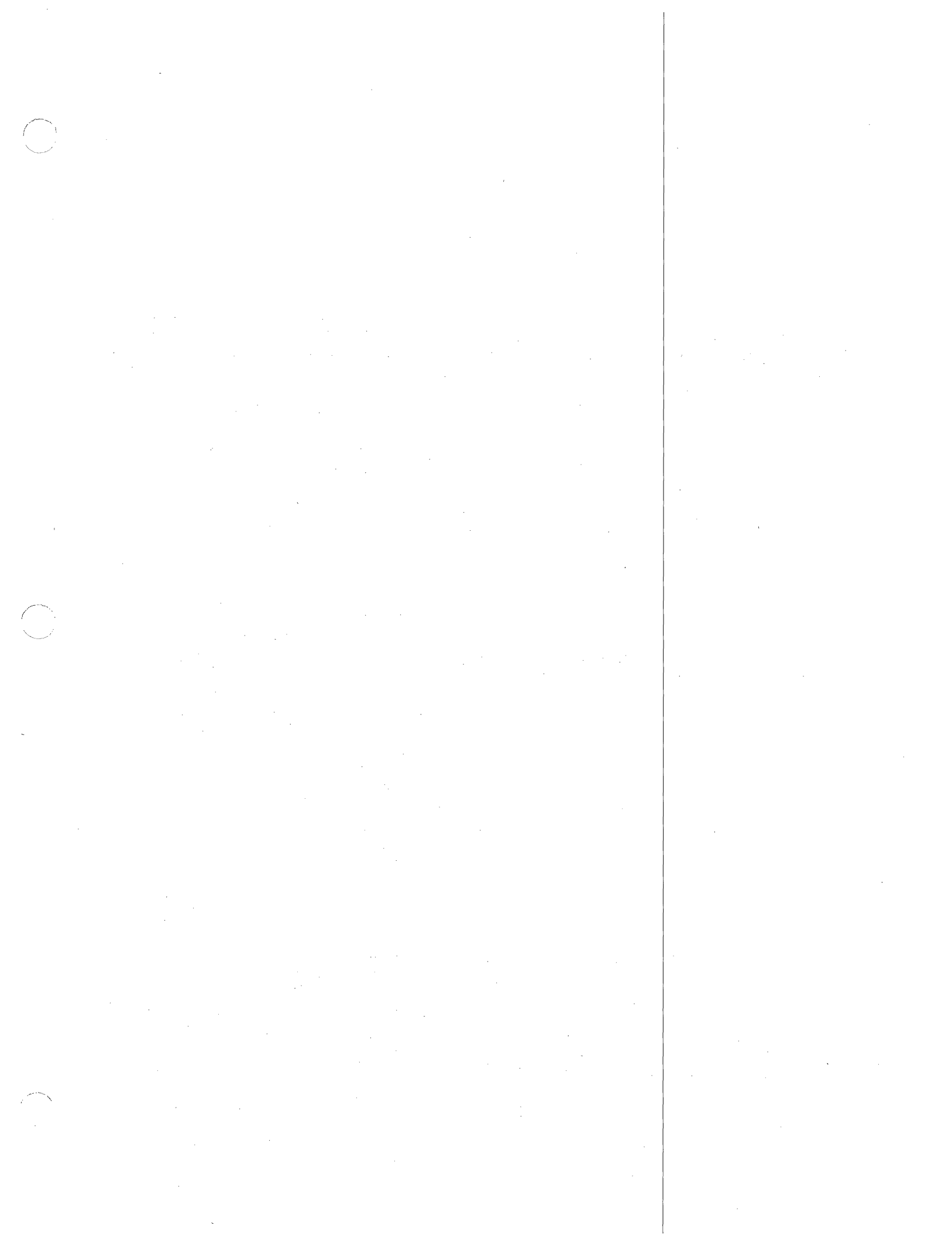
G. COORDINATION OF THE PROCESS

The lead administrative unit for the process is the Construction Grants Administration Element. The Monitoring and Planning Element provides information used in the "Water Use/Water Quality" Segment Priorities category of the ranking methodology for the general project priority list section. All Division Elements are given the opportunity to comment on draft priority systems and priority lists prior to their statewide distribution for public review and comment. The development of the construction grants priority list is the subject of frequent discussions between the Construction Grants Administration Element and EPA-Region II.

After a proposed priority system and priority list is distributed statewide for public review and comment, all interested parties have the opportunity to make presentations at public hearings and provide written comments before the close of the public comment period. Notice of the hearings is also published in the New Jersey Register and DEP Bulletin.

The Construction Grants Administration Element uses cost estimates from prospective grantees in the development of the priority list. (Where appropriate, the Construction Grants Administration Element adjusts these estimates based on staff knowledge and experience of anticipated project costs.) The Construction Grants Administration Element also communicates with prospective grantees as part of its continuing evaluation of the progress of projects on the priority list within the fundable range.

Within the Construction Grants Administration Element, the Office of the Assistant Director and the Bureau of Design and Technical Services are responsible for the development of the construction grants priority system and priority list. The official, detailed priority list is maintained (and updated as needed) in the Grants Information Control System (GICS) by the Bureau of Construction and Grants Management.



CHAPTER VIII. REVIEWING DISCHARGE PERMITS AND CONSTRUCTION GRANTS FOR
CONSISTENCY WITH WATER QUALITY MANAGEMENT PLANS

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CHAPTER VIII. REVIEWING DISCHARGE PERMITS AND CONSTRUCTION GRANTS FOR
CONSISTENCY WITH WATER QUALITY MANAGEMENT PLANS

A. DATE OF THE SUMMARY DESCRIPTION OF THE PROCESS

January 1987

B. TITLE OF PROCESS

Reviewing Discharge Permits and Construction Grants for Consistency With Water Quality Management Plans

C. LEAD ADMINISTRATIVE UNIT FOR THE PROCESS

Douglas Clark, Assistant Director
Monitoring and Planning Element
Division of Water Resources
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P.O. Box CN 029
Trenton, New Jersey 08625

D. OBJECTIVE OF THE PROCESS

The review of discharge permits and construction grants for consistency with Water Quality Management Plans, as required by the federal Clean Water Act and State law.

E. LEGAL BASIS FOR THE PROCESS

1. Clean Water Act References

Section 208(e) of the federal Clean Water Act specifically states that "no permit under section 402 of this Act shall be issued for any point source which is in conflict with a plan approved pursuant to subsection (b) of this section."

Section 208(d) of the same Act specifically states that "after a waste treatment management agency having the authority required by subsection (c) has been designated under such subsection for an area and a plan for such area has been approved under subsection (b) of this section, the Administrator [of EPA] shall not make any grant for construction of a publicly owned treatment works under section 201(g)(1) within such area except to such designated agency for works in conformity with such plan." Section 204(a) of the Act specifically states that "before approving grants for any treatment works under section 201(g)(1) the Administrator shall determine" that "such works are included in any applicable areawide waste treatment management plan developed under section 208 of this Act" and that "such works are in conformity with any applicable State plan under section 303(e) of this Act."

2. State Law

Section 10 of the New Jersey Water Quality Planning Act specifically states that "all projects and activities affecting water quality in any planning area shall be developed and conducted in a manner consistent with the adopted

areawide plan. The commissioner [of the Department] shall not make any grant for construction of a publicly owned treatment works to any agency not identified as the necessary agency to construct said facilities pursuant to any adopted areawide plan. The commissioner shall not grant any permit which is in conflict with an adopted areawide plan." Section 7 of the same Act states that "the commissioner may delegate aspects of the continuing planning process to other State, Federal, interstate or local agencies".

Section 6 of the New Jersey Water Pollution Control Act states that "the commissioner shall not issue any permit for...any discharge which conflicts with an areawide plan adopted pursuant to law" and that "a permit under this act shall require the permittee...to achieve...discharge restrictions...as may be necessary to meet...areawide plans adopted pursuant to law..." Section 5 of that Act empowers the Department to "administer State and Federal grants to municipalities, counties and other political subdivisions, or any recipient approved by the commissioner according to terms and conditions approved by him in order to meet the goals and objectives of this act."

F. SUMMARY DESCRIPTION OF THE PERFORMANCE OF THE PROCESS

1. Introduction

a. Applicable Water Quality Management Plans

The present EPA water quality planning and management regulation defines "water quality management (WQM) plan" as "a State or areawide waste treatment management plan developed and updated in accordance with the provisions of sections 205(j), 208 and 303 of the [federal Clean Water] Act and this regulation" (40 CFR 130.2(j)).

The Department's Water Quality Management Planning and Implementation Process rules (N.J.A.C. 7:15) define "Water Quality Management Plan" or "Plan" as "the documents which encompass the activities, defined in and referred to, in Section 208 and 303 of the Clean Water Act (33 U.S.C. 466 et seq.) and the Water Quality Planning Act (N.J.S.A. 58:11A-1 et seq.) including both Statewide and Areawide Plans".

The "Statewide Plan" (or "Statewide Water Quality Management Program Plan") is defined in these Department rules as "the document containing the written policies, procedures and practices developed through the Continuing Planning Process pursuant to Section 7 of the Water Quality Planning Act (N.J.S.A. 58:11A-7)." Notice that the Department had prepared a draft of the initial Statewide WQM Plan was given in the April 1, 1985 New Jersey Register (17 N.J.R. 842(c)). The Department adopted its initial Statewide WQM Plan on December 5, 1985 (notice of this adoption was published in the New Jersey Register on January 6, 1986 at 18 N.J.R. 110(b)). The Statewide WQM Plan is already in effect under State law, and was certified and submitted to EPA for approval under the federal Clean Water Act on December 30, 1985. All policies, objectives, and recommendations adopted in the Statewide WQM Plan shall be concurrently adopted in the areawide plans without the need for separate hearings (N.J.A.C. 7:15-2.2(b)2). As noted on page II-1 of the Statewide WQM Plan, the policies and procedures in that Plan are "binding as operational requirements in the implementation of the appropriate permit programs".

An "areawide plan" is defined in these Department rules as "the areawide Water Quality Management Plan authorized in Section 5 of the Water Quality Planning Act (N.J.S.A. 58:11A-1 et seq.), and Sections 208 and 303 of the Clean Water Act (33 U.S.C. 466 et seq.)". For purposes of areawide water quality management planning, New Jersey has been divided into twelve planning areas (Figure VIII-1). Seven of these planning areas are "designated areas" for which areawide plans were developed by "designated planning agencies" (substate or interstate agencies designated by the Governor to prepare plans for specified areas of the State). Five of these planning areas are "non-designated areas" for which areawide plans were developed by the Department. Areawide plans have been adopted and certified by the Governor and approved by EPA (with conditions) for all twelve of these planning areas.

N.J.A.C. 7:15-3.4(d) provides that "related portions" of approved "201 Facilities Plans" (and other specified documents) "shall be considered to be adopted in the Water Quality Management Plans without the need for further adoption procedures". This provision has been implemented by the "Policy on Incorporation of 201 Facilities Plans" in the Statewide WQM Plan (p. III-15), which provides that "water quality management planning related documentation in present and future 201 Facilities Plans", approved and certified by the Department and approved by EPA after May 31, 1975, "are hereby incorporated in the appropriate WQM Plans". This documentation "may include, but is not limited to: selected facilities alternative, future design capacity and flows, treatment levels, sewer service areas, septic management areas, sludge and septage management and disposal plans, environmental constraints mapping, identification of management agencies, and grant conditions". Itemized abstracts of the appropriate documentation are available at the Division. The policy also provides that water quality management planning related documentation in 201 Facilities Plans completed on or prior to May 31, 1975 may be incorporated into appropriate Water Quality Management Plans on a case-by-case basis, through the WQM Plan amendment process in N.J.A.C. 7:15.

b. Consistency Reviews

The review of discharge permits, construction grants, and other projects and activities that affect water quality for consistency with Water Quality Management Plans (including related portions of approved facilities plans) is referred to as the "Water Quality Management (WQM) Consistency Determination Program", which is now governed by N.J.A.C. 7:15 and by the policies and procedures in the Statewide WQM Plan. Selected features of N.J.A.C. 7:15 are discussed in this chapter; the complete text of N.J.A.C. 7:15 is included in the Appendix in the Statewide WQM Plan.

The opening paragraphs of N.J.A.C. 7:15-3.1 ("Water Quality Management Plan(s) Consistency Determinations") state:

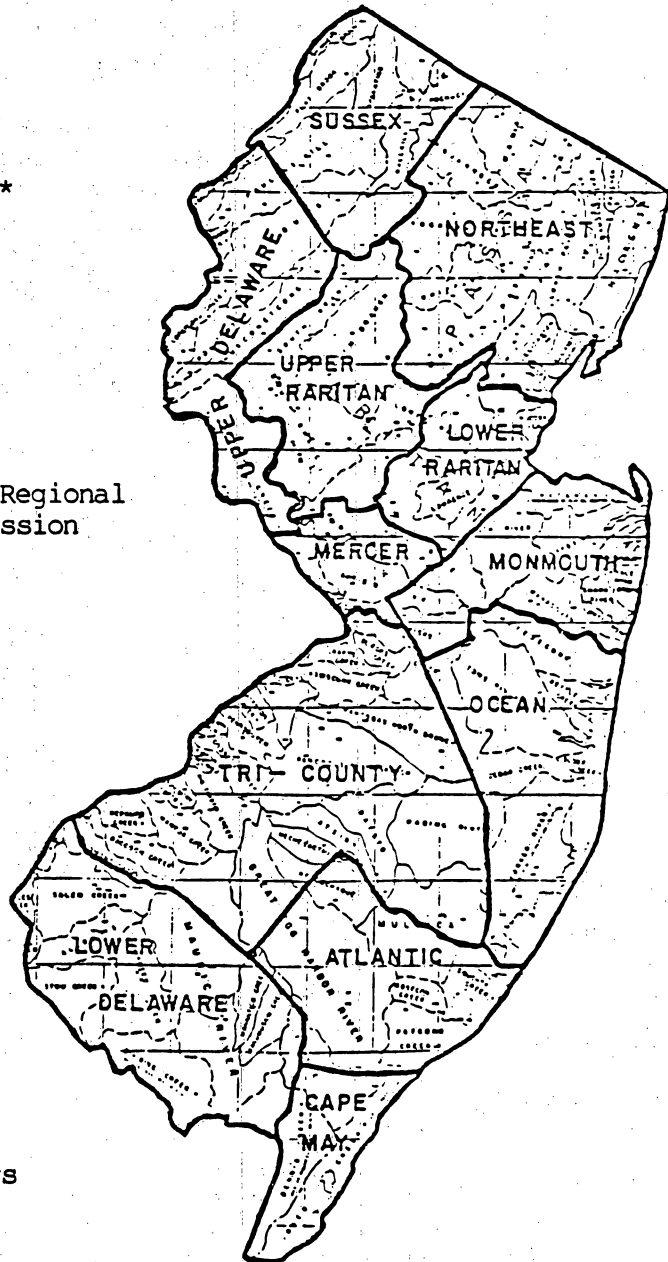
(a) The Commissioner shall not undertake, nor shall he authorize through the issuance of a permit, approval, or any similar action, any project or activity that is inconsistent with applicable sections of the areawide, county and/or Statewide Plans. This requirement shall apply, but not be limited, to the following:

"1. No permit shall be issued by the Department for a project or activity that is inconsistent with an approved Water

Figure VIII-1

WATER QUALITY MANAGEMENT PLANNING AREAS

<u>Planning Area</u>	<u>WQM Planning Agency</u>
Sussex County	Sussex County*
Northeast	NJDEP
Upper Delaware	NJDEP
Upper Raritan	NJDEP
Lower Raritan/ Middlesex County	Middlesex County*
Monmouth County	NJDEP
Mercer County	Mercer County*
Ocean County	Ocean County*
Tri-County Area	Delaware Valley Regional Planning Commission
Atlantic County	Atlantic County*
Lower Delaware	NJDEP
Cape May County	Cape May County*



* County Board of Chosen Freeholders

Quality Management Plan.

"2. For certain projects and activities which will require NJDEP permits, the Department (where it is responsible) and the designated planning agencies (where they are responsible) shall perform the consistency determination, however all projects and activities shall still be consistent with the approved areawide water quality management plans."

N.J.A.C. 7:15-3.1 identifies the kinds of projects and activities that require formal "consistency determinations" and the kinds of projects and activities that do not require formal "consistency determinations" but that still must be consistent with approved Water Quality Management Plans (including related portions of facilities plans). Because formal "consistency determinations" are required for some kinds of discharge permits but are not directly required for construction grants, additional information about "consistency determinations" is presented below under "Discharge Permits".

2. Discharge Permits

a. New Jersey Pollutant Discharge Elimination System

Section 101(b) of the federal Clean Water Act declares that it is the policy of Congress that the States implement the permit program under section 402 of that Act. Section 2 of the New Jersey Water Pollution Control Act declares that it is in the interest of the people of New Jersey that the State be enabled to implement the permit system required by the federal Clean Water Act. Pursuant to these mandates, New Jersey has administered its own permit program under section 402 for waters within its jurisdiction since April 15, 1982. This permit program is called the New Jersey Pollutant Discharge Elimination System (NJPDES). Under the New Jersey Water Pollution Control Act, the NJPDES program regulates discharges to ground waters as well as discharges to surface waters. For purposes of this summary, a "discharge permit" means a permit for a "discharge to surface water" (DSW) or a "discharge to ground water" (DGW) or a "Discharge Allocation Certificate" (DAC), as those terms are used in the NJPDES rules (N.J.A.C. 7:14A).

N.J.A.C. 7:15-3.1 states that "no permit shall be issued by the Department for a project or activity that is inconsistent with an approved Water Quality Management Plan". This provision is applicable to all discharge permits under the NJPDES program. The NJPDES rules state that a "NJPDES permit shall not be issued...for any discharge inconsistent with any areawide plan or plan amendment" (N.J.A.C. 7:14A-1.3). The NJPDES rules also state that permits for discharges to surface water shall "ensure consistency with the requirements of a Water Quality Management Plan approved by EPA under Section 208(b) of the Federal Act, the New Jersey Water Quality Planning Act; N.J.S.A. 58:11A-1 et seq. or Section 6 of the State [Water Pollution Control] Act" (N.J.A.C. 7:14A-3.13(a)).

Where a proposed discharge (including the renewal of an existing permitted discharge) has been found to be inconsistent with a Water Quality Management Plan and the applicant chooses to resolve the conflict, the applicant may pursue the conflict resolution procedure established by N.J.A.C. 7:15-3.3 ("Procedures for Resolution of Conflicts in Plan Consistency"). As a result of the conflict resolution conference, the applicant may either revise the

proposed discharge to conform with the Water Quality Management Plan, or seek an amendment to the Water Quality Management Plan pursuant to N.J.A.C. 7:15-3.4, or appeal the decision pursuant to the Administrative Procedure Act (N.J.S.A. 52:14B-1 et seq.) for findings made by the Department.

It is important to emphasize that the Water Quality Management Plans are subject to amendment and are not static documents. Petitions for plan amendment may be submitted by government agencies and interested citizens (including prospective applicants for discharge permits) in advance of actual applications. The Department has itself identified several elements in most or all of the twelve areawide Water Quality Management Plans that need to be strengthened so that they may be more properly considered in the consistency review process. (These elements were identified as updated certification conditions in Appendix III of the Statewide WQM Plan, and in Part III of the Attachment to Commissioner Dewling's September 26, 1986 letter to Mr. Christopher Daggett, Regional Administrator, EPA-Region II.) Several of these plan elements are directly related to sewerage service or wastewater management.

b. New Discharges and Existing Discharges Proposing Major Modifications

As stated in Table 1 in N.J.A.C. 7:15-3.1(a)3, new surface and ground water discharges, and existing surface and ground water discharges proposing "major modifications", that are regulated under the NJPDES program require formal "consistency determinations". A "consistency determination" is defined in these rules as "the determination by the Department or designated planning agency as to whether a project or activity affecting water quality is either consistent, or not inconsistent with an adopted areawide plan and/or the Statewide Plan" (N.J.A.C. 7:15-1.5). A consistency determination is a written document that is issued prior to the issuing of a Department permit (N.J.A.C. 7:15-3.1(b)) and which states that the project is either consistent, not inconsistent, or inconsistent with the Water Quality Management Plan (N.J.A.C. 7:15-3.2(b)3). An example of a blank consistency determination form used by the Department is presented on the following page.

N.J.A.C. 7:15 includes several provisions specifically applicable to consistency determinations. These include the following:

N.J.A.C. 7:15-2.3	Role of the Department
N.J.A.C. 7:15-2.4	Role of Designated Water Quality Management Planning Agencies
N.J.A.C. 7:15-3.1	Water Quality Management Plan(s) Consistency Determinations
N.J.A.C. 7:15-3.2	Procedures for Making Consistency Determinations

Pursuant to N.J.A.C. 7:15-2.3 and N.J.A.C. 7:15-3.1(f), the Department (or its "delegated agency") prepares consistency determinations for non-designated areas, for those designated areas where the Department is responsible for consistency determinations, and for projects and activities either proposed, constructed, and/or operated by the State. At present, no delegations are in effect and the Department prepares all consistency determinations.

Determination by the WQMP Agency*

This project or activity, as proposed, has been reviewed by this agency in accordance with the Areawide Water Quality Management Plan (WQMP). The following determination has been made by either the appropriate designated WQMP agency, or the Department (where appropriate).

_____ Project is consistent with Plan
_____ Project is not inconsistent with Plan**
_____ Project is inconsistent with Plan***

(Name of Project)

(Type of Permit)

(Type of Development)

(Name of Plan)

Bureau of Water Resources Management Planning, NJDEP
(Name of Agency)

(Authorized Signature)

Date

Name

(Title)

Note: For the name of the appropriate WQMP agency, or any other questions, contact the Bureau of Water Resources Management Planning, NJDEP at (609) 633-7026.

- * This form may be necessary for the submission of other NJDEP permits.
- ** A finding of not inconsistent has the same effect as a finding of consistent.
- *** A finding of inconsistent precludes the Department from issuing a permit.

Also be aware that a consistent or not inconsistent finding does not imply permit approval.

Pursuant to N.J.A.C. 7:15-2.4, a designated planning agency shall make consistency determinations upon mutual agreement between such agency and the Department, or if the Department assigns the responsibility for making consistency determinations to such agency. At present, no designated planning agency has the responsibility for making consistency determinations.

Some of the applicable features of N.J.A.C. 7:15-3.1 have already been discussed. Prior to issuing a final discharge permit for a new surface or ground water discharge (or for a major modification to an existing surface or ground water discharge), the Department shall require the applicant to obtain a consistency determination from the applicable designated planning agency or from the Department (or its delegated agency) stating that the discharge is consistent (or not inconsistent) with the Water Quality Management Plan (including related portions of approved facilities plans). The consistency determination review by the designated planning agency or the Department (or its delegated agency) may be conducted either concurrently with the review of the discharge permit or prior to such review on a pre-application basis. If reviews are conducted concurrently, no final discharge permit may be issued if the discharge is found to be inconsistent with the Water Quality Management Plan (see also N.J.A.C. 7:15-3.2(b)5).

If the discharge is in a designated area where the designated planning agency is responsible for consistency determinations, then the applicant must follow the consistency determination procedure established by the designated planning agency and approved by the Department. The procedure in N.J.A.C. 7:15-3.2 shall be used by the designated planning agency until their procedure is adopted by them and has been approved by the Department. If the designated planning agency finds that the discharge is inconsistent with the Water Quality Management Plan, then the conflict resolution process appropriate to that agency will be followed. The conflict resolution procedure in N.J.A.C. 7:15-3.3 shall be used by the designated planning agency until their procedure is adopted, and has been approved by the Department.

Pursuant to N.J.A.C. 7:15-3.2, proposals for discharges that are submitted to the Department for consistency determination shall include (where applicable), but not be limited to, the following information:

- A narrative description of the project, including: discussion of geographic location, type and number of development units, anticipated population, anticipated wastewater flow, availability of existing wastewater treatment works, proposals for new wastewater treatment works (to include proposed owner and operator), potential water quality impacts, and storm water control plan.
- A USGS quadrangle map (1:24,000 scale topographic map) showing the project site [including project service area, where appropriate] and discharge location.
- Drawings and/or plans which illustrate the above narrative description.

Upon receipt of a completed proposal, the Department will review the appropriate areawide plan and the Statewide WQM Plan to determine whether the discharge is consistent with the provisions and recommendations of the Plan. This review shall include, but not be limited to, the following plan components where applicable:

- Population forecast(s).
- Wastewater flow projection(s).
- Availability of wastewater treatment works (treatment plant, interceptor lines).
- Identification of appropriate wastewater treatment works (regional or municipal facility, on-site treatment facility, on-site septic system, other).
- Identification of appropriate project management agency.
- Use of Best Management Practices for stormwater.
- Other water quality based policies, goals, objectives, and/or recommendations.
- Consistency with appropriate elements of applicable, adopted [i.e., approved] 201 Facilities Plans.

The consistency determination review will be completed within 90 days of receipt of a completed discharge proposal. Upon completion of the review, the Department will issue a consistency determination, which states that the discharge is either consistent, not inconsistent, or inconsistent with the Water Quality Management Plans. A discharge will be determined to be "consistent" if it is in accordance with the policies, goals, objectives and/or recommendations of the Water Quality Management Plans. If these plans do not contain provisions precluding a discharge, then this will be interpreted to mean that the project is "not inconsistent". A finding of "not inconsistent" is equivalent in effect to a finding of "consistent". A finding of "inconsistent" means that the discharge is in conflict with the provisions of the Water Quality Management Plan.

If a discharge is found to be consistent or not inconsistent, then the applicant may proceed to apply formally for a discharge permit, or may be issued a discharge permit applied for concurrently (where appropriate). If a discharge is found to be inconsistent, then the applicant will be notified of the reasons for this finding. The applicant may request a resolution of the conflict pursuant to N.J.A.C. 7:15-3.3.

Under the "Policy for Interim Construction, Expansion, Upgrade and Unplanned Wastewater Treatment Facilities" in the Statewide WQM Plan (p. III-8), all "unplanned" domestic or industrial wastewater treatment facilities "are considered to be inconsistent with the WQM Plans and shall require WQM Plan amendment" (p. III-10). The policy defines "unplanned" as "either the construction of a new domestic wastewater treatment facility or industrial wastewater treatment facility not identified in either the WQM Plan(s), a Wastewater Management Plan, or approved 201 Facilities Plan(s); or an expansion of an existing facility above the capacity allocated in the Plan(s)". (In the draft Statewide WQM Plan, these "unplanned" facilities were referred to as "alternative" facilities in the draft "Policy for Interim Construction, Expansion, Upgrade and Alternative Wastewater Treatment Facilities".) "Wastewater Management Plans" are defined and discussed in the "Policy On Wastewater Management Plans" in the Statewide WQM Plan (p. III-6).

Interested parties may comment on the consistency of the discharge with Water Quality Management Plans through the public comment process established by the NJPDES rules (N.J.A.C. 7:14A). Such comments will be taken into consideration prior to the issuance of a final discharge permit.

c. Renewals or Modifications of Existing Permitted Discharges That Do Not Propose Major Modifications

In accordance with N.J.A.C. 7:15-3.1(a), formal consistency determinations are not required for renewals or modifications of existing permitted discharges that do not propose major modifications (as determined by the Department). However, such renewals or modifications must still be consistent with Water Quality Management Plans (including related portions of approved facilities plans).

Ensuring that these renewals or modifications are consistent with Water Quality Management Plans is an integral part of the Department process for reviewing discharge permit applications and issuing discharge permits through the NJPDES program. The Department does not intend to delegate this element of the NJPDES program to designated planning agencies, county governments, or other agencies.

The principal means of ensuring consistency is the review of the draft discharge permit (prior to its issuance) by Department staff. Interested parties may comment on the consistency of the discharge with Water Quality Management Plans through the public comment process established by the NJPDES rules (N.J.A.C. 7:14A) Such comments will be taken into consideration prior to the issuance of a final discharge permit.

3. Construction Grants

Section 101(b) of the federal Clean Water Act declares that it is the policy of Congress that the States manage the construction grant program under that Act. Pursuant to that mandate and section 205(g) of that Act, EPA-Region II and the Department executed a Delegation Agreement on October 7, 1981 providing for total program assumption by the Department including full responsibility for program review and certification of projects to EPA. (The Delegation Agreement is presently being revised to address the requirements of the December 1981 amendments to the federal Clean Water Act and subsequent federal regulations.)

The February 17, 1984 EPA construction grants regulation requires applicants for construction grants to submit their grant applications to the State (40 CFR 35.2040). All States delegated authority to manage the construction grants program are required (when approving a facilities plan or certifying a grant application) to furnish a written certification to the EPA Regional Administrator, on a project-by-project basis, stating that the applicable Federal requirements within the scope of authority delegated to the State under the delegation agreement have been met. The Regional Administrator shall approve or disapprove the grant within 45 calendar days of receipt of the certification (40 CFR 35.2042(b), 40 CFR 35.3020).

For New Jersey, the "applicable Federal requirements" include the EPA requirement that "the project shall be consistent with the approved elements of any applicable water quality management (WQM) plan approved under section

208 or section 303(e) of the Act; and the applicant shall be the wastewater management agency designated in that WQM Plan" (40 CFR 35.2102).

N.J.A.C. 7:15-3.1 includes the following provision applicable to construction grants:

"(a) The Commissioner shall not undertake, nor shall he authorize through the issuance of a permit, approval, or any similar action, any project or activity that is inconsistent with applicable sections of the areawide, county and/or Statewide Plans. This requirement shall apply, but not be limited, to the following:

...

"4. Grants for construction of publicly-owned treatment works, facilities planning, design, and construction may be awarded only to appropriately designated management agencies as identified in the approved Water Quality Management Plan."

Because construction grants are not listed in Table 1 (N.J.A.C. 7:15-3.1(a)3) as projects or activities that require formal "consistency determinations", such "consistency determinations" are not directly required for construction grants. However, in accordance with N.J.A.C. 7:15-3.1(a), the Department shall not certify a grant application that is inconsistent with a Water Quality Management Plan (including related portions of the applicable facility plan). Moreover, if the project for which a construction grant is sought requires one or more Department permits, a formal "consistency determination" may be required before the Department could issue those permits; consult Table 1 in N.J.A.C. 7:15-3.1(a)3.

Ensuring that construction grants are consistent with Water Quality Management Plans is accomplished through the Department approval of facilities plans that are part of construction grant applications. The Department does not intend to delegate this element of the construction grants program to designated planning agencies, county governments, or other agencies. (However, the Department may delegate to such agencies the authority to issue consistency determinations for Department permits applicable to the project for which a construction grant is sought.)

Pursuant to Subagreement F-2 of the October 7, 1981 Delegation Agreement ("Preparation and Processing of the Federal Offer for a Step III Grant"), step 3 grant offers submitted by the Department to EPA must include "back-up material" including the "fact sheet" described in Appendix B-4(h) of the Delegation Agreement ("Preparation of Grant Project Information Fact Sheet"). Among the items that must be included in the fact sheet is a statement as to whether the project will be developed in accordance with applicable Water Quality Management Plans (item 3.c).

Each application for a Step 3 (or Step 2 & 3) construction grant must include a facilities plan (40 CFR 35.2020). Each facilities plan must be submitted to the State for review (40 CFR 35.2030(c)). The Department's determination that a construction grant is consistent with applicable Water Quality Management Plans is based on the Department approval of the facilities plan included in the grant application. Pursuant to Subagreement C-3 of the October 7, 1981

Delegation Agreement ("Facilities Plan Review"), the Department reviews each facilities plan for conformance with all applicable federal and State requirements, including "specific determination that...the plan is consistent with any applicable water quality management plan". Because the "Policy on Incorporation of 201 Facilities Plans" in the Statewide WQM Plan provides that water quality management planning related documentation in present and future 201 Facilities Plans, approved and certified by the Department and approved by EPA after May 31, 1975, "are hereby incorporated in the appropriate WQM Plans" (and supersede any provisions in those WQM Plans that conflict with such documentation), any facilities plan that is approved by the Department after May 31, 1975 is automatically consistent with applicable Water Quality Management Plans. (The policy also provides that water quality management planning related documentation in 201 Facilities Plans completed on or prior to May 31, 1975 may be incorporated into appropriate Water Quality Management Plans on a case-by-case basis, through the WQM Plan amendment process in N.J.A.C. 7:15.)

If the project for which the construction grant is sought would result in a new discharge to surface water or a substantial modification in an existing discharge to surface water, the NJPDES rules require that a Discharge Allocation Certificate (DAC) be obtained prior to Department approval of the facilities plan (N.J.A.C. 7:14-3.3(f)3). A formal consistency determination would be required before the Department could issue the DAC; see the above discussion of "Discharge Permits" for a review of consistency determination procedures.

The Department may approve and certify a facilities plan as part of its certification of a construction grant application. The Department may also approve and certify a facilities plan (or a portion of such a plan) in advance of its certification of a grant application (in some cases, however, such a facilities plan might have to be reviewed at the time of the grant application to conform with new requirements including new provisions of Water Quality Management Plans). Also, as specified in 40 CFR 35.2030(a)(2), grant assistance may be awarded in some cases on the basis of "substantially completed" facilities planning, before certification of the completed facilities plan.

G. COORDINATION OF THE PROCESS

1. Introduction

Pursuant to Division Order Number 46, which became effective on June 14, 1984, the lead administrative unit for the process is the Bureau of Water Resources Management Planning in the Monitoring and Planning Element. According to that Order, "the Bureau will be responsible for coordinating and processing determination reviews for WQM Plans and 201 Facility Plans, conducting conflict resolution conferences, coordinating the activities of delegated review agencies, and preparing plan amendments".

The Bureau of Ground Water Quality Management in the Water Quality Management Element has been delegated the responsibility to perform consistency reviews for NJPDES permits for land application of sludge and septage. Some administrative functions related to these consistency reviews continue to be performed by the Bureau of Water Resources Management Planning. These administrative functions include providing direction to applicants, entering

consistency review requests on the Bureau's computer files, processing completed consistency reviews and their transmission to applicants, and responsibility for conflict resolution procedures (with assistance from the Bureau of Ground Water Quality Management). The Bureau of Ground Water Quality Management also reviews Sludge and Septage Management Plans.

As stated previously in this chapter, the consistency review process is now governed by N.J.A.C. 7:15 and by policies and procedures in the Statewide WQM Plan. These were adopted after public notice in the New Jersey Register and public hearings. Designated planning agencies and other interested parties were given the opportunity to comment on the proposed rules and the draft Statewide WQM Plan prior to their adoption.

2. Discharge Permits

a. New Discharges and Existing Discharges Proposing Major Modifications

At present, all "consistency determinations" for these discharges (NJPDES permits for land application of sludge and septage excepted) are issued by the Bureau of Water Resources Management Planning. In appropriate cases, the Bureau may request and consider comments from the Water Quality Management Element, the Construction Grants Administration Element, the Bureau of Water Quality Standards and Analysis, other Division units, or designated planning agencies before issuing the consistency determination. (For NJPDES permits for land application of sludge and septage, the Bureau of Water Resources Management Planning sends the documentation to the Bureau of Ground Water Quality Management. The consistency determination issued by the Bureau of Ground Water Quality Management is returned to the applicant by the Bureau of Water Resources Management Planning.)

Pursuant to the NJPDES rules all applications for discharge permits shall be submitted to the Water Quality Management Element (N.J.A.C. 7:14A-2.1). If the application does not already include a consistency determination from the Bureau of Water Resources Management Planning (or the Bureau of Ground Water Quality Management, for NJPDES permits for land application of sludge and septage), the Water Quality Management Element informs the applicant of the need to obtain a consistency determination through the Bureau of Water Resources Management Planning before the Water Quality Management Element can issue the final discharge permit. (For NJPDES permits for land application of sludge and septage, the Bureau of Water Resources Management Planning sends the documentation to the Bureau of Ground Water Quality Management. The consistency determination issued by the Bureau of Ground Water Quality Management is returned to the applicant by the Bureau of Water Resources Management Planning.) As indicated above, a prospective applicant may obtain a consistency determination through the Bureau of Water Resources Management Planning before submitting an application for a discharge permit to the Water Quality Management Element. After a consistency determination is issued by the Bureau of Water Resources Management Planning or the Bureau of Ground Water Quality Management, as appropriate, a final discharge permit may be issued by the Water Quality Management Element. Interested parties may comment on the consistency of the discharge with Water Quality Management Plans (including related portions of approved facilities plans) through the public comment process established by the NJPDES rules (N.J.A.C. 7:14A). Such comments will be considered by the Bureau of Water Resources Management Planning (or the Bureau of Ground Water Quality Management, as appropriate) before the Water

Quality Management Element issues a final discharge permit.

According to the "Water Quality Management Planning Delegation" strategy in the Statewide WQM Plan (p. II-49), it is the objective of the Department to delegate the responsibility for consistency determination to designated planning agencies in the designated areas, and to county governments (where feasible) in the nondesignated areas. However, the delegation process described in that strategy has not proceeded as originally expected (no delegations are now in effect), and the Department is now considering whether to abandon the concept of consistency determinations and permits being issued by different agencies for the same project. (Like the other "strategies" in the Statewide WQM Plan, the "Water Quality Management Planning Delegation" strategy is not binding upon the Department or other parties.)

b. Renewals or Modifications of Existing Permitted Discharges That Do Not Propose Major Modifications

Ensuring that these renewals or modifications are consistent with Water Quality Management Plans (including related portions of approved facilities plans) is an integral part of the NJPDES process for reviewing discharge permit applications and issuing discharge permits through the NJPDES program. The Department does not intend to delegate this element of the NJPDES program to designated planning agencies, county governments, or other agencies.

Pursuant to the NJPDES rules, all applications for discharge permits (including renewals and minor modifications of existing discharge permits) shall be submitted to the Water Quality Management Element (N.J.A.C. 7:14A-2.1). Before the Water Quality Management Element issues a draft discharge permit (NJPDES permits for land application of sludge and septage excepted), that Element sends a copy of the draft permit to the Bureau of Water Resources Management Planning. That Bureau has two weeks to review the discharge for consistency with Water Quality Management Plans. In appropriate cases, the Bureau of Water Resources Management Planning may request and consider comments from the Water Quality Management Element, the Construction Grants Administration Element, the Bureau of Water Quality Standards and Analysis, other Division units, or designated planning agencies before completing its consistency review. The Water Quality Management Element will not issue the final discharge permit if the Bureau of Water Resources Management Planning finds that the discharge is inconsistent with a Water Quality Management Plan. The Bureau of Ground Water Quality Management performs consistency reviews for NJPDES permits for land application of sludge and septage. Designated planning agencies, county governments, and other interested parties may comment on the consistency of the discharge with Water Quality Management Plans through the public comment process established by the NJPDES rules (N.J.A.C. 7:14A). Such comments will be considered by the Bureau of Water Resources Management Planning (or the Bureau of Ground Water Quality Management, as appropriate) before the Water Quality Management Element issues a final discharge permit.

Prospective applicants for renewals or minor modifications of existing permitted discharges may, if they desire, obtain a consistency review from the Bureau of Water Resources Management Planning (or the Bureau of Ground Water Quality Management, as appropriate) before submitting an application for a discharge permit to the Water Quality Management Element.

3. Construction Grants

Ensuring that construction grants are consistent with Water Quality Management Plans is accomplished through the Department approval of facilities plans that are part of construction grant applications. The Department does not intend to delegate this element of the construction grants program to designated planning agencies, county governments, or other agencies. (However, the Department may delegate to such agencies the authority to issue consistency determinations for Department permits applicable to the project for which a construction grant is sought.)

Pursuant to the October 7, 1981 Delegation Agreement, the Construction Grants Administration Element is responsible for administering the construction grants program, and the Monitoring and Planning Element provides support services (expertise in planning, reviews, and wasteload allocation). All applications for construction grants shall be submitted to the Construction Grants Administration Element. The Construction Grants Administration Element will not certify a grant application, or approve and certify a facilities plan, unless the Monitoring and Planning Element and Water Quality Management Element (or, for Sludge and Septage Management Plans, just the Water Quality Management Element) concur with the recommendations in the applicable draft facilities plan. These Elements generally complete their review within three weeks.

County governments, the Hackensack Meadowlands Development Commission, the Pinelands Commission, and certain State agencies may comment on proposed construction grants through the State Review Process for federal financial assistance and direct federal development activities. The State Review Process has been established by the New Jersey Department of Community Affairs pursuant to Presidential Executive Order 12372, federal interagency rules concerning intergovernmental review of federal programs (June 24, 1983 Federal Register), and the Department of Community Affairs rules concerning Intergovernmental Review of Federal Programs and Direct Development Activities and the State Review Process (N.J.A.C. 5:38). The Department of Community Affairs Guidelines for the State Review Process (March 1985) specifically identify (p. 40) the EPA construction grants program as one of the federal programs that is subject to the State Review Process, and specifically identify the reviewing agencies for the construction grants program. (See also the EPA intergovernmental review regulation (40 CFR 29), the EPA general regulation for assistance programs (40 CFR 30.303(b)), and the EPA construction grants regulation (40 CFR 35.2000(b)).)

Each application for a Step 3 (or Step 2 & 3) construction grant must include a certification from the State that there has been adequate public participation based on State and local statutes (40 CFR 35.2040). Also, the public involvement provisions of the EPA National Environmental Policy Act (NEPA) regulation must be satisfied (40 CFR 6). The Construction Grants Administration Element will not certify a grant application, or certify and approve a facilities plan, unless all applicable NEPA requirements have been satisfied.

If the project for which the construction grant is sought would result in a new discharge to surface water or a substantial modification in an existing discharge to surface water, a Discharge Allocation Certificate (DAC) must be obtained prior to Construction Grants Administration Element approval of the

facilities plan. A formal "consistency determination" would be required before the Water Quality Management Element could issue the final DAC. At present, all consistency determinations for DAC's are issued by the Bureau of Water Resources Management Planning. Designated planning agencies, county governments, and other interested parties may comment on the consistency of the discharge with Water Quality Management Plans (including related portions of approved facilities plans) through the public comment process established by the NJPDES rules (N.J.A.C. 7:14A). Such comments would be considered by the Bureau of Water Resources Management Planning prior to the issuance of a final DAC by the Water Quality Management Element.

Likewise, if the project for which the construction grant is sought requires other Department permits, formal consistency determinations may be required for those permits (consult Table 1 in N.J.A.C. 7:15-3.1(a)3), and interested parties could comment on the consistency of the activity with Water Quality Management Plans through the public comment process applicable to the particular Department permit program.

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CHAPTER IX. COMPLETING THE STATE WATER QUALITY INVENTORY (305(b)) REPORT

A. DATE OF THE SUMMARY DESCRIPTION OF THE PROCESS

May 1986

B. TITLE OF PROCESS

Completing the State Water Quality Inventory (305(b)) Report

C. LEAD ADMINISTRATIVE UNIT FOR THE PROCESS

Douglas Clark, Assistant Director
Monitoring and Planning Element
Division of Water Resources
New Jersey Department of Environmental Protection
25 Arctic Parkway
P.O. Box CN 029
Trenton, New Jersey 08625

D. OBJECTIVE OF THE PROCESS

The assessment of water quality conditions throughout the State, the determination of trends in water quality, and the making of recommendations for further improvements in water quality.

E. LEGAL BASIS FOR THE PROCESS

1. Clean Water Act References

Section 305(b) of the federal Clean Water Act states:

"Each State shall prepare and submit to the Administrator [of EPA] by April 1, 1975, and shall bring up to date by April 1, 1976, and biennially thereafter, a report which shall include --

"(A) a description of the water quality of all navigable waters in such State during the preceding year, with appropriate supplemental descriptions as shall be required to take into account seasonal, tidal, and other variations, correlated with the quality of water required by the objective of this Act (as identified by the Administrator pursuant to criteria published under section 304(a) of this Act) and the water quality described in subparagraph (B) of this paragraph;

"(B) an analysis of the extent to which all navigable waters of such State provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water;

"(C) an analysis of the extent to which the elimination of the discharge of pollutants and a level of water quality which provides for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allows

recreational activities in and on the water, have been or will be achieved by the requirements of this Act, together with recommendations as to additional action necessary to achieve such objectives and for what waters such additional action is necessary;

"(D) an estimate of (i) the environmental impact, (ii) the economic and social costs necessary to achieve the objective of this Act in such State, (iii) the economic and social benefits of such achievement, and (iv) an estimate of the date of such achievement; and

"(E) a description of the nature and extent of nonpoint sources of pollutants, and recommendations as to the programs which must be undertaken to control each category of such sources, including an estimate of the costs of implementing such programs."

2. State Law

Section 7 of the New Jersey Water Quality Planning Act requires the Department to "conduct a statewide assessment of water quality" and to "develop a statewide implementation strategy to achieve the water quality standards".

F. SUMMARY DESCRIPTION OF THE PERFORMANCE OF THE PROCESS

The present EPA Water Quality Planning and Management Regulation includes the following statement (40 CFR 130.8(a)):

"Each State shall prepare and submit biennially to the Regional Administrator a water quality report in accordance with section 305(b) of the Act. The water quality report serves as the primary assessment of State water quality. Based upon the water quality data and problems identified in the 305(b) report, States develop water quality management (WQM) plan elements to help direct all subsequent control activities. Water quality problems identified in the 305(b) report should be analyzed through water quality management planning leading to the development of alternative controls and procedures for problems identified in the latest 305(b) report. States may also use the 305(b) report to describe ground-water quality and to guide development of ground-water plans and programs. Water quality problems identified in the 305(b) report should be emphasized and reflected in the State's WQM plan and annual work program under sections 106 and 205(j) of the Clean Water Act."

In the supplementary information accompanying the regulation, EPA states (50 FR 1775; January 11, 1985):

"This [305(b)] report must include recommendations on current and future program activities needed to address problems in priority areas. The reports also form the basis for the National Water Quality Inventory Report to Congress. EPA is expecting the States to use water quality measures developed

through the 'States Evaluation of Progress under Clean Water Program (STEP)' project and additional information noted in the STEP project recommendation as the baseline in their 305(b) reports to improve the comparability of the reports for formulating the Inventory. The additional information requested in the recommendation includes basin/segment summaries and toxic information and other items agreed upon between the State and EPA region."

The Department's Water Quality Management Planning and Implementation Process rules state that the Department shall "prepare a biennial 305(b) Water Quality Inventory Report" (N.J.A.C. 7:15-2.3(a)8) which "shall be considered as the principal problem identification component" of the Statewide Water Quality Management Program Plan (N.J.A.C. 7:15-2.1(c)1.i). Notice that the Department had prepared a draft of the initial Statewide WQM Plan was given in the April 1, 1985 New Jersey Register (17 N.J.R. 842(c)). The Department adopted its initial Statewide WQM Plan on December 5, 1985 (notice of this adoption was published in the New Jersey Register on January 6, 1986 at 18 N.J.R. 110(b)). The plan was submitted to EPA on December 30, 1985, for approval pursuant to the federal Clean Water Act.

Pursuant to N.J.A.C. 7:15-3.4(d), 305(b) Water Quality Inventory Reports that have been formally adopted by the Governor or his designee "shall be considered to be adopted in the Water Quality Management Plans without the need for further adoption procedures". Pursuant to N.J.A.C. 7:15-3.1(a), the Department shall not prepare a 305(b) Water Quality Inventory Report that is "inconsistent with applicable sections" of Water Quality Management Plans. At present, none of the approved Water Quality Management Plans in New Jersey include specific provisions binding upon the preparation of 305(b) Water Quality Inventory Reports. The Statewide Water Quality Management Program Plan incorporates the most recent 305(b) reports as follows (p. I-5):

"New Jersey 1982 State Water Quality Inventory Report' and 'New Jersey 1984 State Water Quality Inventory Report': These reports constitute the problem identification component of the Statewide WQM Plan. They were prepared biennially pursuant to Section 305(b) of the federal Clean Water Act. The reports assess surface water quality conditions throughout the State, estimate where 'fishable and swimmable' clean water goals will or will not be met, identify pollution control actions needed to achieve these goals, and estimate the required costs involved. Also included is a review of ground water quality and quantity conditions in the State as well as an indication of relevant problems."

The Division of Water Resources has produced six 305(b) reports since 1975. Most recently, in May 1984, the Division submitted to EPA the New Jersey 1984 State Water Quality Inventory Report, which was designed to update and supplement the comprehensive New Jersey 1982 State Water Quality Inventory Report (formally submitted to EPA in June 1983). The introductory chapter in the 1984 305(b) report described the relationship between the 1984 305(b) report, the 1982 305(b) report, and future 305(b) reports as follows:

"The New Jersey 1984 305(b) report has been designed to update and supplement the 1982 305(b) report so as to present

an accurate and current picture of water quality conditions in the state. Whereas the 1982 305(b) report reviewed in detail the results of water monitoring during the period 1977 to 1981 and how water quality affected a number of in-stream uses (drinking water supplies, primary contact recreation, shellfish harvesting and fisheries resources), the 1984 305(b) report provides a summary evaluation of the progress in New Jersey's clean water programs, and selected supplemental water quality information based on intensive surveys and other specific programs. Since only two additional years of ambient data (from 1982 and 1983) would be available for evaluating water quality in the state, it was determined that a comprehensive reevaluation of water quality information is not warranted until additional ambient data is collected. As such, descriptions of ambient water quality in the comprehensive 1982 305(b) report along with information in this 1984 report, together present current conditions for rivers and streams throughout New Jersey. Future issues of New Jersey's 305(b) report will contain new and revised water quality assessments for waters throughout the state, based on the additional water quality data collected since 1981."

The next 305(b) report will be called the "New Jersey 1986 State Water Quality Inventory Report" and is scheduled for submission to EPA during the summer of 1986. The report will be consistent with the final EPA Guidance for the 1986 State Water Quality Inventory Reports. The 1986 305(b) report will comprehensively review the results of routine, fixed-station surface water quality monitoring as available in STORET, including data collected since 1981 and data collected through the County Cooperative Network. The Division expects to present quantitative statistical analyses of this data including trend analysis. The 1986 305(b) report will also incorporate summaries of intensive surveys to update the summaries in the 1984 305(b) report. Information presented in elements of the "Water Quality Management Progress Report" that was included in the 1984 305(b) report will also be updated in the 1986 305(b) report. The waterbody rating system included in the 1982 305(b) report will be refined for the 1986 305(b) report along the lines discussed in the 1984 305(b) report. For example, the number of segments in the rating system will be expanded from 29 to approximately 148, and revisions will be made to individual water quality and water use parameters and how they are evaluated. In coming years, the waterbody rating system is anticipated to become increasingly important as it is applied to a larger number of Division programs. The 1986 305(b) report will include a chapter describing ground water conditions and problems, and provide other ground water information as outlined in the final EPA Guidance for the 1986 305(b) report.

Whereas the 1986 305(b) report will be broadly analagous, in its comprehensive scope, to the 1982 305(b) report, the 1988 305(b) report may resemble the 1984 305(b) report (with appropriate modifications to reflect current conditions, Department data strengths, revised EPA guidance, and implementation of the rating system). The 1988 305(b) report may be designed to update and supplement the comprehensive 1986 305(b) report with selective monitoring results, rather than to stand on its own as a comprehensive water quality inventory. Comprehensive 305(b) reports may be prepared every four years, with the next such report (after the 1986 report) being prepared for 1990.

As noted above, the Department has incorporated the 1982 and 1984 305(b) reports into the Statewide Water Quality Management Program Plan that the Department adopted on December 5, 1985. Future 305(b) reports would be proposed for incorporation into the Statewide WQM Plan following the submission of such reports to EPA pursuant to section 305(b) of the federal Clean Water Act.

G. COORDINATION OF THE PROCESS

The lead administrative unit for the process is the Monitoring and Planning Element. The completion of 305(b) reports will be the subject of ongoing discussions between the Department and EPA-Region II. As an important example of coordination with EPA, the "Water Quality Management Progress Report" in Chapter II of the 1984 305(b) report is a modified version of the States Evaluation of Progress ("STEP") Report completed in 1983 by the Division. The STEP Report was prepared in conjunction with the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) which received a grant from EPA to develop a standardized reporting format for evaluating progress towards achieving clean water goals. A national STEP report was compiled by ASIWPCA on the basis of information supplied in the individual State reports. One major outcome of the national STEP report was the incorporation of many STEP features into EPA guidance for use by the States in preparing the 1984 and subsequent 305(b) reports. Information presented in selected elements of the "Water Quality Management Progress Report" will be updated in the 1986 305(b) report.

Future 305(b) reports will continue to include a "Water Quality Inventory Report for the Delaware River" prepared by the Delaware River Basin Commission and a "Status Report on the Interstate Sanitation District Waters" prepared by the Interstate Sanitation Commission. The Department will not delegate the completion of other sections of 305(b) reports to other water quality management planning agencies, but may request such agencies to contribute to 305(b) reports by providing comments to the Department on water quality conditions, water pollution sources, and water uses in their planning areas.

Within the Monitoring and Planning Element, the Bureau of Planning and Standards has the principal responsibility for the preparation of 305(b) reports. The Bureau of Monitoring and Data Management provides summaries of intensive surveys, lake classification surveys, ambient biomonitoring (macroinvertebrate and periphyton) reports, and information on summer ocean monitoring of algal blooms. In conjunction with the U.S. Geological Survey and with county health departments in the County Cooperative Network (see Chapter VI), the Bureau of Monitoring and Data Management is also responsible for most of the ambient monitoring programs whose results are evaluated in comprehensive 305(b) reports such as the upcoming 1986 305(b) report. The Bureau of Shellfish Control provides information about shellfish resources, shellfish harvesting, and water quality conditions of shellfishing waters. The Bureau of Systems Analysis and Wasteload Allocation assists in the interpretation of the results of some of the intensive surveys, and provides results from water quality modeling activities.

The retrieval and processing of water quality data from STORET is a major work element in the preparation of comprehensive 305(b) reports. The Bureau of Management Services has assisted in STORET retrievals and performed statistical analyses for the 1986 305(b) report. The Bureau of Management

Services consulted with the Monitoring and Planning Element about what data was retrieved and how that data was processed. That Bureau also did mapping work for the 1986 305(b) report, preparing or modifying existing watershed and state maps.

Each of the other Division Elements has contributed to 305(b) reports in the past and will probably contribute to 305(b) reports in the future. Information from other Elements is used in assessments of individual sections of the State, in narratives of Statewide application, and in the waterbody rating system. The contribution these Elements have made to the 1986 305(b) report was based on data needs and the availability of these Elements for performing the necessary work. The Water Quality Management Element prepared a Statewide point source discharge inventory. The Enforcement Element provided information about point sources and enforcement actions. The Construction Grants Administration Element provided information about municipal wastewater treatment and municipal facilities investments. The Water Supply and Watershed Management Element provided information about potable water supply diversions for use in the waterbody rating system (as described in the 1984 305(b) report), and provided information about the quality of drinking water supplies as determined pursuant to the New Jersey Safe Drinking Water Act, as amended. Each Element is given the opportunity to review draft 305(b) reports before the submission of final 305(b) reports to EPA.

Other units of the Department have also contributed to 305(b) reports in the past and will contribute to these reports in the future. These units are also given the opportunity to review draft 305(b) reports before the submission of final 305(b) reports to EPA. For the 1986 305(b) report, the Division of Fish, Game and Wildlife provided information about fisheries and shellfisheries resources and their aquatic environments throughout the State. The Green Acres program provided information about recreational uses of New Jersey surface waters. The Division of Waste Management provided lists of hazardous waste disposal sites. The Office of Science and Research provided information about toxics studies in selected waters of the State. The Division of Environmental Quality provided information about acidic deposition.

Coordination also occurs with other agencies outside the Department. As discussed in Chapter IV of the 1984 305(b) report, the refined waterbody rating system that will be included in future 305(b) reports will include information provided by local health agencies about the suitability of waters for primary and secondary contact recreation. Local health agencies may also provide information for use elsewhere in the 305(b) report. The segments used in the refined waterbody rating system are based principally on the approximately 140 "small watersheds" that have been delineated for New Jersey by the federal Soil Conservation Service.

As discussed in this chapter, the Department has incorporated the 1982 and 1984 305(b) reports into the Statewide Water Quality Management Program Plan. The Department held a nonadversarial public hearing on the draft Statewide WQM Plan on May 15, 1985, and written comments were accepted until May 31, 1985 (15 N.J.R. 842(c)). Through this procedure, other agencies such as designated planning agencies and county health departments, as well as various interest groups and the general public, had the opportunity to comment on the use of these 305(b) reports as the problem identification component of the Statewide WQM Plan, prior to the final adoption of the Statewide WQM Plan on December 5, 1985. When future 305(b) reports are proposed for incorporation into the

Statewide WQM Plan, such agencies, interest groups, and the general public may likewise have the opportunity to comment on the use of these 305(b) reports.

APPENDIX A

RESPONSE TO PUBLIC COMMENTS ON THE MARCH 27, 1987 AMENDMENT
TO THE STATEWIDE WATER QUALITY MANAGEMENT PROGRAM PLAN

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SUMMARY OF PUBLIC PARTICIPATION

In 1986 the New Jersey Department of Environmental Protection (Department) proposed to amend the Statewide Water Quality Management Program Plan (Statewide WQM Plan) to identify, as one of the components of that Plan, a Department document entitled "The New Jersey Continuing Planning Process for Water Quality Management -- Descriptions of Selected Management Processes". Opportunities for public participation were provided as follows.

By letter dated January 24, 1986, the Department's Division of Water Resources (Division) distributed a draft of this document for review and comment to the following organizations and agencies:

- Authorities Association of New Jersey
- New Jersey Builders Association
- New Jersey State Chamber of Commerce
- New Jersey Water Pollution Control Association
- Environmental Collegium
- Delaware River Basin Commission (DRBC)
- Interstate Sanitation Commission (ISC)
- Designated areawide water quality management planning agencies
- United States Environmental Protection Agency (EPA), Region II

Only DRBC and ISC replied to this letter and recommended any changes to the January 1986 draft document. Division staff discussed these recommendations with DRBC and ISC staff in April 1986.

Notice of the Department's intention to propose to amend the Statewide WQM Plan was published in the New Jersey Register on April 7, 1986 (18 N.J.R. 711(d)). The notice identified the intended subject matter of the proposed amendment, stated that the Department was completing a final draft of the document, and stated that the Department would mail the final draft document to those who requested the document in writing. Similar notice was given in a letter, dated March 17, 1986, from the Division to over 600 parties including the organizations and agencies listed above, Clean Water Council members, State legislators, sewerage authorities, county and municipal utilities authorities, county planning directors, soil conservation districts, environmental commission chairmen, major environmental organizations, and water resources consulting engineers. A similar notice was published as a legal notice in two New Jersey newspapers: the Courier-Post (March 23, 1986) and the Star-Ledger (March 24, 1986). A summary of this notice was also included in the Spring 1986 issue of the Division newsletter, Water Resource News; the Division distributed approximately 2600 copies of this newsletter. Between March and June 1986 the Department received 90 requests for the final draft document in response to these various notices.

Notice that the Department had completed a final draft of the document (dated May 1986), and notice of the proposed amendment to the Statewide WQM Plan, was published in the New Jersey Register on September 8, 1986 (18 N.J.R. 1842(c)). Similar notice, together with a detailed summary of the final draft document, was provided by a letter, dated August 5, 1986, from the Division to over 600 parties (generally the same as those who were sent the March 17, 1986 letter). The same letter and final draft summary, together with the final draft document, were mailed to EPA Regions II and III, DRBC and ISC, the water

pollution control agencies of adjacent States (Delaware, New York, Pennsylvania), Clean Water Council members, and all others who had already requested the final draft document. A similar notice was published as a legal notice in two New Jersey newspapers: the Courier-Post (August 17, 1986) and the Star-Ledger (August 16, 1986). Copies of the final draft document and final draft summary were also made available for inspection at depository libraries for New Jersey documents. The Department issued a press release concerning the proposed amendment on August 26, 1986. In response to these various notices, the Department received and complied with 16 additional requests for the final draft document and final draft summary.

The September 8, 1986 New Jersey Register notice, the Division's August 5, 1986 letter, and the two newspaper notices stated that any interested person could request in writing that the Department hold a nonadversarial public hearing on the proposed amendment. The Department did not receive any requests for a public hearing. The Middlesex County Planning Board requested a short extension of the public comment period; the Department denied the request for reasons that are discussed below under "Response to Comments".

Comments submitted during the public comment period (which expired on October 8, 1986) became part of the official record of the administrative procedure. Comments were submitted during this period by the following:

Western Monmouth Utilities Authority
Sussex County Water Quality Management Policy Advisory Committee
Middlesex County Planning Board
New Jersey Department of Treasury, Office of Management and Budget
New Jersey Board of Public Utilities
Pennsylvania Department of Environmental Resources

The Department has carefully reviewed the comments submitted during the public comment period. Presented below are statements of the issues raised, the Department's response, and, where necessary, a discussion of the response. Generally, the issues are listed in the order in which the chapters to which they pertain appeared in the final draft document and final draft summary.

RESPONSE TO COMMENTS

CHAPTER I. INTRODUCTION

Issue: The Office of Management and Budget has no objection to the proposed amendment to the Statewide WQM Plan. We concur with your conclusion that a description of management practices is a necessary and integral part of the Statewide WQM Plan. Though we are aware that the proposed amendment does not establish any new legal requirements and are subsequently not binding upon the Department, we commend your efforts to strategically define the processes involved in Water Quality Management Planning.

Response: No response is necessary.

Issue: The Sussex County Water Quality Management Policy Advisory Committee and staff strongly feel that the designated areawide water quality management planning agencies that are still active in continuing planning within their jurisdictions deserve mention in any document entitled "The New Jersey Continuing Planning Process for Water Quality Management". It may not be necessary to go into great detail on each areawide continuing planning program, but to fail to mention them at all is also not accurate or desirable. An example where the active areawide agencies should be listed by name would be on page 2 of the final draft summary, second paragraph which discusses coordination of planning activities between the Department and "other agencies". An EPA reviewer may get the impression from the existing wording that areawide planning programs such as the Sussex County program are no longer in existence or active.

Response: The Department has listed all of the designated areawide water quality management planning agencies by name on page 2 of the final summary and page I-13 of the final document. On page I-3 of the final document, the Department has also added a statement explaining that, for purposes of the document, the term "Continuing Planning Process" means the Statewide "continuing planning process" required by section 303(e) of the federal Clean Water Act and section 7 of the New Jersey Water Quality Planning Act, not the areawide planning process required by section 208(b) of the federal Clean Water Act and section 5 of the New Jersey Water Quality Planning Act.

Discussion: All of the designated areawide water quality management planning agencies still perform areawide planning within their jurisdictions. The Department agrees that all of these agencies should be listed by name in the final summary and final document.

The Department does not agree that the final draft summary and final draft document failed to mention the designated planning agencies, or that an EPA reviewer might reasonably have received the impression that the designated planning agencies such as Sussex County are no longer in existence or active. The second paragraph on page 2 of the final draft summary stated that the Division coordinates with "county and regional water quality management planning activities under the New Jersey Water Quality Planning Act". What the Department meant by this phrase was the continuing activities of the designated planning agencies, and the Department has explained this phrase accordingly on page 2 of the final summary. All of the designated planning agencies, including the Sussex County Board of Chosen Freeholders, were named in Figure VIII-1 (page VIII-6) of the final draft document. The present and presumed future existence of designated planning agencies was clearly evident in various references to "designated planning agencies" in the final draft summary (Chapter II, page 4; Chapter III, page 6; Chapter IV, page 9; Chapter VIII, pages 24-25; Chapter IX, page 28) and in the final draft document (pages I-9, II-7, III-10, IV-21, VIII-16 through VIII-20, IX-7 and IX-8). Page 25 of the final draft summary, and page VIII-18 of the final draft document, specifically named the Sussex County

Board of Chosen Freeholders as one of the designated planning agencies that, the Department then expected, would in the future be delegated the authority to prepare consistency determinations.

The document uses the term "Continuing Planning Process" exactly as that term is defined in the New Jersey Water Quality Planning Act. Section 3.c of that Act specifically defines "continuing planning process" as "the Statewide planning process conducted by the Department of Environmental Protection as authorized in section 7 of this act" (N.J.S.A. 58:11A-3.c.); this definition was quoted in the final draft document (pages I-3, I-14). The New Jersey Water Quality Planning Act clearly distinguishes the Statewide "continuing planning process" from the "areawide" planning process also required by that Act.

The federal Clean Water Act requires two separate "continuing planning processes". Under section 303(e), "each State shall have a continuing planning process" for all waters within such State, and it is this Statewide, section 303(e) continuing planning process that is the direct subject of the document. Accordingly, section 303(e) was cited in the first sentence on page 1 of the final draft summary, and on pages I-3, I-4, I-12, and I-13 of the final draft document. Under section 208(b), each designated planning agency (and the State for areas without a designated planning agency) shall have a "continuing areawide waste treatment management planning process" for specified planning areas. This areawide continuing planning process is not the direct subject of the document, and section 208 was accordingly not cited as part of the "Legal Basis for the Continuing Planning Process" in Chapter I.F of the final draft document. The extent to which a State continuing planning process description under section 303(e) includes activities performed by designated planning agencies depends on whether these activities are part of the specific management processes being described under section 303(e). In 1983 EPA requested the Department to describe eight specific management processes (and provided federal funds to the Department for that purpose), and the Department prepared a document in response to that request. EPA did not request from the Department (or provide funds for) a detailed or even summary description of the various activities now performed by the designated planning agencies, except insofar as such activities were part of the eight specified management processes. When the Department updates its section 303(e) continuing planning process description to conform to the 1985 EPA Water Quality Planning and Management rule, the Department expects to expand the description of certain areawide continuing planning process activities, especially the process for updating and maintaining Water Quality Management Plans as required by 40 CFR 130.5(b)(4).

Issue: The document refers to the requirements which EPA had for the Continuing Planning Process (CPP) in 1983. It is our understanding that more recent EPA guidance contained more detailed CPP requirements. The question we have is: Does New

Jersey's CPP meet EPA's 1986 CPP requirements? Since New Jersey and Pennsylvania are neighboring States, we want to assure that both States use similar guidance information so compatible CPPs are developed. We are particularly interested in EPA's views on the conceptual organization and various details.

Response: No change was made to the document.

Discussion: As explained on page I-8 of the final draft document and final document, EPA-Region II is allowing New Jersey to submit a final document that does not meet all of the CPP requirements in the present EPA Water Quality Planning and Management Regulation (40 CFR 130), with the understanding that New Jersey will subsequently update the final document to conform to that regulation. Based on the 1983 EPA guidance, New Jersey had already completed a preliminary draft of the document before EPA adopted that regulation in January 1985, and submission of the final document would have been delayed considerably had EPA-Region II required New Jersey to expand the final document to meet all of the 40 CFR 130 requirements before such submission. Although it is desirable for neighboring States to use similar EPA guidance in developing their CPPs, use of similar guidance can be impractical when States follow different timetables for CPP development and EPA guidance changes.

The New Jersey Department of Environmental Protection doubts, in any case, that routine EPA guidance will suffice by itself to resolve the most substantive issues of CPP consistency between Pennsylvania and New Jersey. In particular, the Department recommends that DRBC, the member States, and EPA Regions II and III take steps during the next few years to develop consistent CPP policies on the following specific issues:

- 1) Review of the present effluent limited classification of Zones 1C, 1D, and 1E of the mainstem Delaware River and Zone 6 of Delaware Bay (see page III-9 in either the draft final document or the final document); and
- 2) The joint, formal submission by Pennsylvania, Delaware, and New Jersey (or by DRBC on behalf of these States) to EPA, under section 303(d) of the federal Clean Water Act and 40 CFR 130.7, of total maximum daily loads, wasteload allocations, and load allocations established for the Delaware Estuary by DRBC (see pages IV-8 and IV-20 in either the draft final document or final document).

Issue: Staff of the Board of Public Utilities (BPU) has reviewed the proposed amendment to the Statewide WQM Plan for the limited purpose of determining jurisdiction and the impact upon BPU functions. At this time, the Board sees no problem with the Department invoking its statutory jurisdiction in the area of water quality and wastewater management. In addition, we see nothing which encroaches on BPU jurisdiction.

Response: No response is necessary.

CHAPTER III. IDENTIFYING WATER QUALITY LIMITED SEGMENTS

Issue: The use of residual chlorine as a basis for determining that almost all segments are water quality limited is unreasonable. The Department could have required dechlorination years ago. There is no requirement in the Clean Water Act to chlorinate effluents. The question is whether or not a segment can assimilate a secondary effluent. (Page III-6)

Response: The discussion of total residual chlorine (TRC) in Chapter III has not been changed.

Discussion: Chapter III does not identify TRC as the sole basis for classifying nearly all New Jersey inland waters as being in water quality limited segments. Instead, Chapter III uses TRC to illustrate part of the basis for this classification, which is reasonable. Any parameter for which the Department has criteria in its Surface Water Quality Standards is a potential basis for the classification of segments as water quality limited. The Department's Surface Water Quality Standards include TRC criteria at N.J.A.C. 7:9-4.14(c)14.viii.

The question is not simply "whether or not a segment can assimilate a secondary effluent", considering only the parameters addressed by the EPA secondary treatment regulation at 40 CFR 133 (biochemical oxygen demand and suspended solids). Rather, the question is whether the technology-based effluent limitations required by the Clean Water Act (including the EPA secondary treatment regulation) are adequate, by themselves, without any other pollution control requirements whatsoever, to ensure complete implementation of the Department's Surface Water Quality Standards. The classification policy should consider all kinds of point source discharges (including industrial and municipal effluents), all kinds of nonpoint sources, and all parameters in the Surface Water Quality Standards. For municipal effluents the Department should consider not only biochemical oxygen demand and suspended solids, but other parameters in the Surface Water Quality Standards such as total phosphorus, total dissolved solids, and toxic substances (e.g., un-ionized ammonia, metals, TRC, and toxicity as evidenced in bioassays).

Whether or not the federal government (in the Clean Water Act) or the State of New Jersey specify chlorination as the means by which effluents must be disinfected is irrelevant to Chapter III. The relevant considerations are that: 1) chlorine is the most widely used wastewater disinfectant in New Jersey; 2) the Department's Surface Water Quality Standards contain criteria for TRC; and 3) application of Clean Water Act technology-based effluent limitations will not ensure implementation of those TRC criteria. If the Department did not establish effluent limitations for TRC, water quality criteria for TRC in inland

waters would commonly be contravened.

It is also irrelevant to Chapter III that "the Department could have required dechlorination years ago". EPA defines "water quality limited segment" at 40 CFR 130.2(i) as "any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act". The Department interprets this definition to include any segment where implementation of water quality standards for any parameter (including continued attainment of TRC criteria where these criteria are already being met) requires any pollution control requirements (including continuation of existing Department TRC requirements) beyond these Clean Water Act technology-based effluent limitations. The Department interpretation is consistent with 40 CFR 130.7, which provides for consideration of such pollution control requirements in the identification of which water quality limited segments require total maximum daily loads, wasteload allocations, and load allocations.

Finally, as indicated in Chapter III (page III-6), the classification of a segment as water quality limited does not necessarily mean that more stringent than secondary treatment is required for such traditional parameters as biochemical oxygen demand and suspended solids.

Issue: Our opinion is that the Kill Van Kull, Arthur Kill and Raritan Bay are water quality limited segments. On what evidence were these sections judged to be effluent limited? (Page III-7)

Response: The discussion of these water bodies in Chapter III has not been changed.

Discussion: Page III-7 summarizes the segment classifications of Kill Van Kull, Arthur Kill, and Raritan Bay, as contained in existing areawide Water Quality Management Plans. Page III-7 cannot be changed unless and until these segment classifications are officially changed. Moreover, the commenter did not provide any evidence or arguments to support the commenter's opinion that the Kill Van Kull, Arthur Kill, and Raritan Bay should be classified as water quality limited segments. Therefore, the comment provides no basis for making any changes to Chapter III.

The purpose of Chapter III is to summarize the existing segment classifications and to discuss the Department's general strategy for reviewing those classifications. It is not the purpose of Chapter III to make official decisions to change or retain the classification of particular segments. As discussed on pages III-6 and III-9, the Department expects to review the classification of all segments presently classified as effluent limited, including the Kill Van Kull, Arthur Kill, and Raritan Bay. However, because these are interstate waters that are part

of the Interstate Sanitation Commission (ISC) district, the review should be performed in consultation with ISC and the other member states. The Department expects to perform the review in future administrative proceedings that specifically focus on segment classification issues, and that allow public comment on specific Department proposals. Final decisions beforehand would be premature.

The Department itself expressed dissatisfaction in Chapter III with the historical basis for the existing effluent limited classification of these waters. On page III-6, the Department stated that "the present classification of effluent limited segments was based on a general (and sometimes preliminary or outdated) analysis for at most a few conventional pollutants". Because of the incomplete written descriptions in the areawide Water Quality Management Plans and older planning documents, a definitive description of the evidence on which the existing segment classifications of the Kill Van Kull, Arthur Kill, and Raritan Bay were based is apparently not possible. It is certain that the existing classifications of these waters were not developed with the most recent official water quality models for the New York Harbor. More importantly, these existing classifications apparently were based entirely on the expectation that secondary treatment would be adequate to attain the criteria for dissolved oxygen in the Department's Surface Water Quality Standards, with no consideration of other aspects of present antidegradation policies or of water quality criteria for other parameters. The Department expects to follow a broader approach when it reviews the classifications.

CHAPTER IV. DEVELOPING TOTAL MAXIMUM DAILY LOADS AND WASTELOAD ALLOCATIONS

Issue: In general, the Department should review the quality of the various segments. For those segments which do not meet the water quality standards, the total maximum daily load is obviously being exceeded. The Department should prioritize the segments to determine which segments' non-compliance with standards is most significant. Intensive surveys should then be conducted which, when modeled, would generate total maximum daily loads and the wasteload allocations for the segment. If segments are found to meet all standards, they should have no priority until all segments not in compliance have been studied and TMDL's and WLA's assigned.

Response: Chapter IV has not been changed.

Discussion: It would be premature at this time for the Department to make any final decisions about the substance of the priority ranking system for developing total maximum daily loads and wasteload allocations. When the Department drafts and proposes the priority ranking system (see page IV-11), the Department will consider in detail how priorities should be set.

The Department agrees with the basic concept that the priority ranking must take into account "which segments' non-compliance with standards is most significant". Much the same concept is expressed, in different words, by the basic requirement in section 303(d) of the federal Clean Water Act that the priority ranking shall take into account "the severity of the pollution and the uses to be made of such waters". The Department also believes, however, that additional factors should be considered for possible inclusion in the priority ranking system.

For example, the Department believes that total maximum daily loads are generally more useful for point source control than for nonpoint source control, because it is generally more practical to enforce quantitative wasteload allocations for point sources (especially wastewater treatment plants) than to enforce quantitative load allocations for nonpoint sources. Therefore, the Department believes that the priority system should not simply consider "which segments' non-compliance with standards is most significant", but should also consider for particular segments how much of the non-compliance is due to wastewater treatment plants.

If particular wastewater treatment plants are not meeting technology-based requirements such as secondary treatment, the Department may also want to consider whether non-compliance due to such plants will be substantially reduced or eliminated through the technology-based requirements alone. In some cases, the Department may want to assign segments low priority until the technology-based requirements are achieved, in order to check if the segment then warrants high priority and to develop more reliable water quality models if intensive surveys and related modeling are still necessary.

In cases where intensive surveys would be very costly or otherwise require very substantial resources (e.g., manpower or laboratory facilities), or where coordination is required for interstate waters, the Department may have to assign low priority to what would otherwise be high priority segments, until the resources or the coordination can be obtained. In the meantime, the Department may develop total maximum daily loads and wasteload allocations for segments presenting fewer logistical or institutional difficulties.

It may also be reasonable for the ranking system to consider the special needs and schedules of the discharge permit, enforcement, sewerage construction, and water supply programs. Suppose, for example, that pollution in one segment is somewhat more significant than pollution in a second segment, but that wasteload allocations are needed more quickly in the second segment because of discharge permit renewal schedules, court orders or other enforcement activities, pending construction grant decisions, or water supply planning activities. The second segment may warrant a higher rank. As noted on page IV-10, EPA has stated that "priorities may also take into account such factors as the need to refine ... permit limits and pending

construction grant decisions" (50 FR 1775; January 11, 1985).

Some segments may warrant high priority even though their existing water quality meets all water quality standards, because of proposed new discharges that need to be evaluated against the antidegradation policies in the standards. Preventing deterioration of some high quality waters may be at least as important as restoring the quality of some presently degraded waters.

CHAPTER VIII. REVIEWING DISCHARGE PERMITS AND CONSTRUCTION GRANTS FOR CONSISTENCY WITH WATER QUALITY MANAGEMENT PLANS

Issue: On page 22 of the final draft summary, the first paragraph of Chapter VIII should include Sussex County in its list of participants that deal with consistency determinations.

Response: The Department did not list Sussex County on page 23 of the final summary (top paragraph), or on page VIII-3 of the final document.

Discussion: As was clear from the first sentence of the subject paragraph in the final draft summary, the purpose of that sentence was not to list "participants that deal with consistency determinations", but to identify the "lead administrative units for the process" [Department emphasis]. If the word "lead" is to have practical significance, not every agency that participates to some extent in a process is necessarily a "lead administrative unit" for that process. For Chapter VIII, the Department position is that the term "lead administrative unit" should be reserved for 1) the agency with Statewide responsibility for rulemaking and delegation decisions governing consistency review (the Department), 2) the agency or agencies that actually issue consistency determinations and perform consistency reviews (at present, only the Department), and 3) any other agency that has been delegated authority to issue consistency determinations (no other agency, at present, has such delegated authority).

The reason that the Middlesex County Planning Board was the only agency, other than the Department, that was identified as a lead administrative unit on page 22 of the final draft summary was that the Middlesex County Board of Chosen Freeholders was, in May 1986, the only agency that had been delegated responsibility for making consistency determinations. (Because the Department withdrew the Middlesex County delegation in January 1987, the Middlesex County Planning Board is not identified as a lead administrative unit in the final document and final summary.) An agency that issues (or has authority to issue) consistency determinations has a substantially greater role in the process than does an agency that only provides comments about consistency determinations to be issued by the Department. The provision of such comments by designated planning agencies was recognized on page 24 of the final draft summary, which stated that the Bureau "may request comments from ... designated planning agencies", and

on page VIII-16 of the final draft document, which stated that "In appropriate cases, the Bureau may request and consider comments from ... designated planning agencies before issuing the consistency determination". These statements have been retained on page 25 of the final summary and page VIII-15 of the final document.

In support of the decision not to list Sussex County as a "lead administrative unit", the Department also notes that other designated planning agencies deal with consistency determinations in the same manner as Sussex County, and that none of these other agencies requested to be listed as a lead administrative unit.

Issue:

The Middlesex County Planning Board notes that Chapter VIII specifically identifies the Middlesex County Planning Board as a "Lead Administrative Unit" for the water quality plan consistency determination process. At its regularly scheduled meeting of September 9, 1986, the Planning Board discussed the issue of acceptance of the delegation of the consistency determination process within the context of proposed amendments to the Lower Raritan/Middlesex County areawide water quality management plan. The Planning Board agreed that further discussion of this matter with legal counsel and representatives of the Board of Chosen Freeholders is necessary and a position could therefore not be taken at the September 9th meeting.

Concerns have been expressed that while the County should logically carry out the consistency determination process, the separation of the consistency determination step from the actual permit review and issuance step creates a hardship for applicants and makes coordination between reviewers difficult. This issue needs to be resolved as well as the issue of which permit processes will require an initial review for consistency with the areawide WQM plan.

The document now being considered by the Department references only New Jersey Pollutant Discharge Elimination System permits. It was our understanding that the first delegation that would be considered by the Department was to be the consistency procedure preliminary to sewer extension permit reviews. Clarification of this concern would be helpful.

In light of Middlesex County's need to have additional internal discussion prior to making a decision on this matter and the fact that the next regular meeting of the Middlesex County Planning Board will not be until October 14, 1986 we respectfully request that the October 8, 1986 deadline for comments on the proposed document be extended sufficiently to allow official comment from the Planning Board meeting of October 14 to be submitted to you for consideration.

Response:

The Department did not extend the October 8, 1986 deadline for comments on the proposed amendment. The issue became moot on January 26, 1987 when the Department withdrew its March 5, 1985

delegation to Middlesex County of responsibility for the Water Quality Management Consistency Determination Program. The Department then updated Chapter VIII by changing the "Date of the Summary Description of the Process" to January 1987, deleting the listing of the Middlesex County Planning Board as a "Lead Administrative Unit for the Process", and deleting the other special references to Middlesex County in Chapter VIII. As part of this updating, the Department has also deleted most of the discussion in Chapter VIII of the "Water Quality Management Planning Delegation" strategy in the Statewide WQM Plan, and has revised Chapter VIII to state that the Department is now considering whether to abandon the concept of consistency determinations and permits being issued by different agencies for the same project (see page VIII-16 in the final document).

Discussion: The Department has updated Chapter VIII in response to events and Department policy changes that occurred after the close of the public comment period. (The Department has this flexibility because, like the remainder of the final document, the updated Chapter VIII does not establish new legal requirements and is not binding upon the Department or other parties.)

The Department denied the request for an extended public comment period because the Department recognized that an updated Chapter VIII could take into account whatever decision the Middlesex County Planning Board would make at its October 14, 1986 meeting about future Middlesex County participation in the consistency determination program. In this way, the concerns of Middlesex County could be accommodated without the paperwork and delay required to extend the public comment period.

In a letter dated October 14, 1986, the Middlesex County Planning Board did indeed submit additional comments on Chapter VIII. Because these comments were submitted after the close of the public comment period, the Department could not recognize the October 14, 1986 letter as a comment on the proposed amendment. Nevertheless, the October 14, 1986 letter still had independent significance for the consistency determination program. For example, the October 14, 1986 letter clearly established that the Middlesex County Planning Board did not want to issue consistency determinations for discharge permits. Because of this and other statements in the October 14, 1986 letter, the Department acted on January 26, 1987 to withdraw its March 5, 1985 delegation to Middlesex County of responsibility for the Water Quality Management Consistency Determination Program. This Department action was, in turn, a significant event in the administration of the consistency determination program, an event that the Department could properly acknowledge by updating Chapter VIII. Moreover, this Department action was part of a pattern of growing Department dissatisfaction with the "Water Quality Management Planning Delegation" strategy in the Statewide WQM Plan, a change in Department policy which the Department could also properly acknowledge in an updated Chapter VIII. (The "Water Quality Management Planning Delegation" strategy is still part of the Statewide WQM Plan, but this strategy should now be read together

with the statement on page VIII-16 in the final document.)

For purposes of clarification, the Department notes that sewer extension permits are part of the New Jersey Pollutant Discharge Elimination System (NJPDES), and are issued under the NJPDES rules as a type of "Treatment Works Approval" (N.J.A.C. 7:14A-12). However, sewer extension permits are not "discharge permits", as the term "discharge permits" is used in Chapter VIII. Sewer extension permits are therefore outside the scope of Chapter VIII and are not discussed in Chapter VIII. (An explanation of how the term "discharge permit" is used in Chapter VIII was provided on page VIII-7 of the final draft document and retained on that page in the final document.)

