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STATE OF NEW JERSEY

Annual Report

of the

COMMISSIONER OF CONSERVATION

AND ECONOMIC DEVELOPMENT

1956 - 1957

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STATE OF NEW JERSEY

ANNUAL REPORT

of the

**COMMISSIONER OF CONSERVATION
AND ECONOMIC DEVELOPMENT**

1956 - 57



Joseph E. McLean, Commissioner

Department of Conservation and Economic Development
State House Annex
Trenton 25, New Jersey

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Letter of Transmittal

*To the Honorable Robert B. Meyner, Governor,
and to Members of the Senate and General
Assembly of the State of New Jersey:*

I have the honor to transmit this report concerning the activities of the Department of Conservation and Economic Development during the fiscal period 1956-57.

JOSEPH E. McLEAN
Commissioner

Departmental Councils

FISH AND GAME COUNCIL

LAWRENCE BOHM, Eldora
CHARLES H. CANE, Rosemont
HARRY FROME, Blairstown
EARL HEIDE, New Milford
HENRY KELLY, Cranford
WILLIAM C. LUNSFORD, Cape May
EARL L. MCCORMICK, Bridgeton
RALPH T. McNEEL, Stanhope
GEORGE ONKST, Penns Grove
RAYMOND T. RICHARDSON, Port Monmouth
CLARENCE SHEPPARD, Pittstown

PLANNING AND DEVELOPMENT COUNCIL

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HARRY L. DERBY, Montclair
CHARLES W. ENGELHARD, Far Hills
WILLIAM HAFFER, JR., Sea Isle City
JACK M. KANE, Madison
EUGENE L. LORA, Tenafly
WAYNE D. McMURRAY, Asbury Park
EDWARD C. ROSE, Sea Girt
BELFORD C. SEABROOK, Alloway
GEORGE F. SMITH, Metuchen
FRANK J. VALGENTI, JR., Madison
WILLIAM E. WATERS, Woodbury

SHELL FISHERIES COUNCIL (Atlantic Coast Section)

LESLIE W. ALLEN, New Gretna
WILLIAM DENNIS, Port Monmouth
FRANK GARRISON, West Creek
DORSEY LeCOMPTE, Pleasantville
JOHN M. PANCOAST, Hancock's Bridge

SHELL FISHERIES COUNCIL (Maurice Cove Section)

JOHN M. PANCOAST, Hancock's Bridge
WILLIAM H. RIGGIN, Port Norris
LEO ROBBINS, Port Norris

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RICHARD P. DONOVAN, East Orange
SARGENT DUMPER, Short Hills
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FRANK BOGDAN, Trenton
JOSEPH G. CARTY, Plainfield
ALBERT J. GIFFORD, Camden
CHARLES E. KINNEY, Newark
WILLIAM G. McKINLEY, Jersey City
THOMAS F. MURRAY, New Brunswick
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I. RALPH FOX, Millburn
MAX GROSSMAN, Atlantic City
KENNETH H. MURRAY, Califon
THURLOW C. NELSON, Cape May Court House
AUGUST C. SCHULTES, Woodbury
LILLIAN M. SCHWARTZ, Highland Park
VINTON N. THOMPSON, Vincentown

Special Boards and Committees

STATE SOIL CONSERVATION COMMITTEE

PHILLIP ALAMPI, Trenton
LINDLEY G. COOK, New Brunswick
FRANK C. EDMINISTER, New Brunswick
WILLIAM H. MARTIN, New Brunswick
GEORGE R. MOOREHEAD, Trenton
FRANKLIN C. NIXON, Vincentown
HERBERT W. VOORHEES, Trenton

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WILLIAM A. BURRILL, East Orange
THOMAS L. BALL, Jersey City
JAMES A. COX, Elizabeth
HAROLD CRAVEN, Allendale
WILLIAM W. KHUNE, Sparta
WALTER E. MALONEY, Madison

EXAMINING BOARD OF WELL DRILLERS

BENJAMIN FURMAN, Trenton
MEREDITH JOHNSON, Trenton
CHARLES MOLLITOR, Bridgeboro
MARVIN PARKHURST, Verona
AUGUST C. SCHULTES, SR., Woodbury
W. LUTHER STOTHOFF, Flemington
KEMBLE WIDMER, Trenton

STATE RECREATION ADVISORY COMMITTEE

JOHN AIELLO, Boonton
THOMAS CAVANAUGH, Passaic
GEORGE T. CRON, Elizabeth
HARRY L. DERBY, Montclair
PROFESSOR GEORGE DOCHAT, New Brunswick
J. W. FAUST, East Orange
VICTOR DIFILIPPO, Newark
WILLIAM GEISLER, Tenafly
WILLIAM G. GETTY, Rummel
EDWIN H. GOODWIN, Plainfield
CHARLES L. JULIANA, Wildwood
REVEREND MORGAN KELLY, Hopewell
HANS LORENTZEN, Upper Montclair
PETER ROSSI, Trenton
ROBERT W. SINKLER, Princeton
FRANCIS TORPEY, Somerville
CLAUDE WALCK, Somerville
MRS. KENNETH B. C. WALLACE, Newark
MONTE WEED, Fair Lawn
ROLLYN P. WINTERS, Scotch Plains

DEPARTMENT OF CONSERVATION & ECONOMIC DEVELOPMENT

COMMISSIONER

COMMISSIONER'S
OFFICE

DIVISION OF
FISH & GAME

COUNCIL

DIVISION OF
SHELL FISHERIES

COUNCIL
ATLANTIC COAST

COUNCIL
MAURICE RIVER COVE

DIVISION OF
PLANNING
&
DEVELOPMENT

COUNCIL

DIVISION OF
WATER POLICY
AND SUPPLY

COUNCIL

DIVISION OF
VETERANS SERVICES

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STATISTICS
RECREATION

BUREAU OF
STATE PLANNING

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NAVIGATION

BUREAU OF
HOUSING
STATE HOUSING
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SPECIAL
AGENCIES
MORRIS CANAL & BANKING CO.
N.J. PILOTAGE COMMISSIONERS
OLD BARRACKS ASSOCIATION
SOIL CONSERVATION COMMITTEE

STATE OF NEW JERSEY



SUPERVISORY STAFF

Of The

DEPARTMENT OF CONSERVATION

AND ECONOMIC DEVELOPMENT

JOSEPH E. McLEANCommissioner of Conservation and
Economic Development

SALVATORE A. BONTEMPODeputy Commissioner of Conservation
and Economic Development

KENNETH H. CREVELINGExecutive Assistant to the
Commissioner

SALVATORE A. BONTEMPODirector, Division of Veterans
Services

THEODORE J. LANGANDirector, Division of Planning
and Development

CHRIS RILEYDirector, Division of Shell
Fisheries

GEORGE SHANKLINActing Director, Division of Water
Policy and Supply

A. HEATON UNDERHILLDirector, Division of Fish
and Game



PREFACE

The first annual report of the Department of Conservation and Economic Development was published some two years ago, covering the fiscal period ending June 30, 1955. Another appeared last year, dealing with the activities of 1955-56. These reports were designed to serve a two-fold purpose—to give the public a comprehensive view of the operations of the Department and to define for the personnel of one unit the duties of their colleagues in other units in order that all agencies might gain a better understanding of one another's problems and goals. The latter was part of a general movement to enhance the vitality of the Department by coordinating the activities of its numerous offices. This is imperative if the organization is to discharge the diversified responsibilities assigned to it when it was established in 1949 through the consolidation of a large group of agencies previously independent of one another.

The first two annual reports outlined specific functions of the Divisions and Bureaus and included detailed information and statistical data concerning long-standing operations of these units. Within the limitations of the space available, moreover, outstanding issues, along with the major programs initiated to resolve these issues, were analyzed.

Most of these programs were undertaken at the beginning of the three

years ending June 30, 1957. The first two of these may be regarded as years of "tooling up." They were marked by a variety of changes intended to make the Department a more effective instrument for executing its several tasks during an era when this burgeoning state is undergoing large-scale transformation and, as a matter of sheer necessity, must embrace new formulas to solve the problems born of change.

During the past fiscal year, the efforts of the first two years began to bear fruit. As a result it was decided that the 1956-57 report should be focused on paramount challenges and the principal action taken in response to these challenges. A report of this kind presumably should be more meaningful both to specialists and the lay public, since it places the main new objectives of the Department in bolder relief.

Another value of a report of this nature deserves comment. Whereas the two earlier accounts of the stewardship of the present managerial staff treated in detail the operations of particular Divisions, this report will consist of a discussion of a group of topics or problems cutting across Divisional lines that can be solved only on a Departmental basis.

The Department of Conservation and Economic Development is but one of fourteen Departments of State Govern-

ment, and all of these find themselves presented with new and difficult situations demanding original action. This Department is unique only from the standpoint of the more diversified character of its responsibilities. It is concerned with water supply, forestry, beach preservation, soil conservation, recreation, and wildlife management. At the same time it has duties in the fields of economic development, planning, geology, aeronautics and housing. The Department also performs such functions as the acquisition of sites for water supply reservoirs, maintenance of Morven (official residence of New Jersey's Governors), the management and preservation of other historic places, and assistance to New Jersey veterans.

Obviously all these functions are not directly related, but many, if not most, of them are. I observed in a foreword to the 1955-56 report: "We are much too prone to view conservation as an all-inclusive term for a group of separate activities. We think of the conservation of forests and of the conservation of water resources. We think of the conservation of fish and game and of the conservation of wildlands for hunting and fishing and general recreation. What must be understood is that all these and others are interrelated and that we ignore the interrelationship only at our peril. Water supply facilities cannot be constructed in any area without some effect on the recreational potential of that area. The management of forests and rural lands inevitably figures in the preservation of fish and game. And so it goes, all along the line." Thus in taking a bird's-eye view of major Departmental operations, the fact that the activities of one set of agencies dovetail with those of others should be kept in view at all times, and it is my belief that this can be more easily done if the report is organized on a topical basis.

The subject matter is divided into a series of sections. The topics of some of these possibly seem unusual, at first

glance. One might expect a Department designated as the conservation arm of State Government to be concerned almost entirely with matters relating to forests, rivers and streams, wildlife, and other natural phenomena. As the table of organization appearing on a preceding page confirms, these are, indeed, major interests of the Department of Conservation and Economic Development. But as the table also shows, the Department has a variety of additional functions. And in any event, the conservation of natural resources—with all its ramifications—demands a different approach in a state like New Jersey.

WRESTLING WITH GROWTH

Ours is officially classified as the most highly urbanized state in the nation. Its population density per square mile is exceeded by only one other state. And census returns are highly significant. According to reliable estimates, New Jersey's total population has risen by more than 700,000 since the last federal census was taken in 1950. Our rate of growth, in brief, has surpassed the rate of the nation as a whole. Yet at the same time there are only four other states with smaller land areas. Much has been written in the past few years about the urban problem. No one who considers it, however casually, can doubt its reality and seriousness. It would be unrealistic in the light of this problem to write about conserving and developing our natural resources without recognizing that this is an enterprise which cannot be conducted in a vacuum. It must be coordinated with the attack on the new crisis in urban life. In other words, most residents of New Jersey are either city-dwellers or suburbanites living on the fringe of the city, and certainly the urban problem must receive uppermost consideration in utilizing our physical assets, in stimulating economic development and in fashioning the structure of government agencies.

Another point regarding the general

approach should be made. This report naturally is concerned with New Jersey and with New Jersey's problems. The state, however, is not an island unto itself. It is part of a larger national democracy, whose regions have been drawn ever closer together in the present century. It should be borne in mind that many of the problems with which New Jersey is grappling are really national problems and must be solved on a national basis through the medium of genuine state-federal cooperation. It also should be borne in mind that developments affecting the nation as a whole inevitably have had an impact on the measures that New Jersey has taken in reaction to various conditions, and such is likely to be even more the case in future decades. This report is not the proper place to explore the broader issues of national life. Yet it is essential to recognize that many state affairs with which the report deals will be significantly affected by the attitudes of the federal government towards issues of importance to the nation at large. The obvious corollary is that from the standpoint of New Jersey's own welfare, the state has a vital interest in the direction of national policy. To ignore this in discussing certain questions would be equivalent to writing American history without mention of the Constitution or the battle of Gettysburg.

As a final note on procedure, the discussion will center around developments of major significance during the fiscal period 1956-57. The operations of Government, of course, are comparable to the flow of a river, for what happens during any one particular year in most cases is influenced by what already has occurred. And, further, during the interval subsequent to the

end of a fiscal year when reports of this kind are prepared, situations may arise that are especially pertinent to topics under consideration. Thus while the spotlight will fall on the events of 1956-57, this review will not be arbitrarily restricted to occurrences within that time span if greater clarity can be achieved by citing episodes that belong to another period.

The reader who is interested in more detailed information about specific functions and operations may find it worthwhile to examine the annual reports for the fiscal periods 1954-55 and 1955-56. Copies of these can be found in many public libraries or may be obtained upon request from the central office of the Department in Trenton as long as there is an available supply. In addition the different Divisions have prepared detailed reports as to their activities during the year 1956-57, which are accessible to anyone who wishes more data concerning specific policies and programs.

These accounts of Divisional operations, it should be added, have served in large measure as a basis for this comprehensive report. It is only fitting for me, in concluding these prefatory remarks, to acknowledge my own appreciation to the personnel of all agencies for the material that they have assembled. Let me also acknowledge my appreciation for the efforts that they have exerted to infuse new life into the operation of the Department—indispensable efforts at a time when the price of business-as-usual can only be a steady spread of chaos and steady aggravation of existing difficulties.

JOSEPH E. McLEAN
COMMISSIONER

January 31, 1958.

The Urban Problem

During the latter part of 1957 two conditions dominated the thinking of the American people. The first was the unquestionable emergence of Soviet strength, which could reverse the world power balance in the not too distant future and seriously undermine the position of the United States unless the nation comes fully to terms with all aspects of the Russian challenge. The gravity of the situation was acknowledged by many men noted for an even-balanced approach to international relations, who viewed Sputnik as symbolic of a long-range threat to the survival of our traditional free institutions.

The second condition preoccupying our thinking was a general slackening in the pace of business activity, with increases in unemployment and widespread uncertainty as to the immediate future of the economy. There was concern, and there was every reason for concern, because of the effects of a recession on the morale and welfare of its victims and also because, with so much to be done, the United States cannot afford to have a sizeable portion of its immense productive resources lying idle.

Along with the never-ending struggle to keep pace with security requirements and apprehension over an economic decline possibly more serious than any since World War II, there was a third

condition that had come to assume emergency proportions. It was not wholly new. Perhaps because of this, it was the subject of less dramatic discussion, and its emergency character was frequently overlooked. Yet it was striking at millions of Americans in a variety of ways, and as for the future, what we do about it inevitably will be a major determinant of total national strength.

This condition was characterized in the preface as the urban problem. It also might be described as urban disorganization, which involves the many dilemmas today burdening the metropolitan area—central city and suburbs alike. That it is a national problem can be confirmed by a mere glance at out-of-state newspapers. But as the most highly urbanized state in the United States—located between two huge and expanding metropolitan areas—New Jersey naturally has experienced the problem in its acutest form.

THE PRICE OF DISORDER

The urban problem is anything but an abstract matter. It is an urgently practical concern. The term itself is no more than shorthand for a large set of circumstances encumbering the daily lives of countless individuals, while imposing severe stresses and strains on hundreds of communities in New Jersey alone. We find that traffic on city streets is

becoming more tangled and highways more congested, that as a result time is lost and efficiency reduced, that both merchants and their customers are frustrated by parking difficulties, that many urban areas are short on water or are threatened with shortages, that too many schools are deficient in too many respects despite unprecedented expenditures, and that recreation facilities often fail to meet existing needs. In addition, the location of industrial and commercial establishments frequently is improper from the standpoint of everyone concerned. Many owners of residential and commercial property are subject to disadvantages and inequities. Urban crime is rising and causing, in turn, a rise in the cost of crime prevention and control. For thousands of citizens, available housing is completely unsatisfactory, while all past and present programs to arrest the spread of slum and blight have been too limited to prevent urban decay. Nuisances as well as jeopardy to life and property increase as the density of air traffic increases. Withal, the financial difficulties of government in urban areas are mounting, and, in some instances, have reached the critical stage.

These and other characteristics of the urban scene, of course, affect the work of all branches of State Government. As has been noted above, they have figured significantly in the over-all operations of the Department of Conservation and Economic Development. To repeat, the fact is that virtually every activity of the Department has been influenced by the urban problem in one way or another, and although the subject constitutes only one section of this particular report, it is not inaccurate to describe the report as, in many respects, a summing up of the general response that one organization of the Executive Branch is making to new factors in the urban equation.

Meanwhile some may suggest that the urban problem has been with us for many decades and is far from

new. This is entirely true. The migration of Americans from the farm and small town to the city and its environs has been under way since the turn of the century. By now, we are accustomed to thinking of the United States as predominantly an urban nation.

NEW FEATURES OF THE CRISIS

If the urban problem is not new, however, it has taken on crucial new features. It is new, for example, in its magnitude. It is new in the sense that it has become more urgent, and more dangerous tendencies have developed. Beyond this, it is no longer possible to consider the problem merely as one involving certain forms of social distress in a single city. It must be viewed, rather, in terms of the total needs and total difficulties of a vast urban area experiencing disorganization in various fields. To sum it up, the story of the metropolitan area, figuratively speaking, is the story of a run-away giant. It has spread across municipal lines, extending far beyond the central city. It has crossed county borders, taking in several counties in the process, and, in New Jersey's case, has ranged across state boundaries.

The problem has not arisen from growth and change as such. What has happened is that as the fabric of the urban region has undergone drastic alterations over the decades, and especially since World War II, it has done so, in some instances, according to little plan and, in other instances, according to no plan whatsoever. The expansion and alteration of the urban area as a consequence have been haphazard. There has been a minimum of needed guide lines and integrated action. Even though the metropolitan region must be regarded as a single unit, it falls under the jurisdiction not of one but scores of independent local governments, and New Jersey's problem is compounded by the fact that different parts of the same metropolitan region may be sub-

ject to the jurisdiction of two or more states.

There is no single or easy solution to the urban problem. Regardless of the particular steps taken, moreover, the only basis for a real solution is a greater measure and new spirit of cooperation among various units of government and private individuals and groups. The seriousness of the situation, it should be added, has been described here in bold letters. This should not obscure the increasing public awareness of the confusion that has stemmed from the sit-

uation nor the many encouraging movements generated by this awareness, which promise in time to give us mastery over numerous existing difficulties. It must be emphasized simultaneously, however, that we are still far from any general solution. On the contrary, circumstances will become worse instead of better unless the emergency nature of the situation is recognized all along the line; and imagination, originality of ideas and forcefulness of action are accepted as the prerequisites of genuine improvement.

New Directions in State Planning

Planning, in a sense, has become the alpha and omega of the quest for a solution to the urban problem. Only the most wishful of thinkers, of course, could be under the illusion that the planning process is a universal panacea. Its limitations as well as its value should be clearly understood. Planning is a mode of procedure—a systematic application of common sense to the short-term and long-term problem besetting the municipality, the county, the state and the nation. If planning attained a state of perfection, however, no one should assume that this would mean the end of all the headaches that have left the metropolitan region in a state of collective dizziness.

To acknowledge this, however, is not to forget that much of our present trouble is traceable to the hitherto inadequacy or non-existence of planning for state and community development. Nor is it to forget that we shall be in even more trouble tomorrow unless the scope and quality of planning come closer to meeting the demands of the twentieth century.

The reason that planning has not been carried out on a sufficient scale in the past can be attributed, in part, to a failure to anticipate the extent of urban change. But there have been other reasons. One of these undoubtedly has been a misunderstanding of the nature

of a sound planning program. There has been a tendency to regard planning as a narrow form of specialization only incidentally concerned with pressing practical affairs of the state and community. There also has been a tendency by some to view planning as an effort to produce an urban utopia—and it is true that there have been members of the profession who have strayed off on tangents, presenting quixotic blueprints for reshaping the city and its surroundings closer to their heart's desire.

PLANNING AND COMMON SENSE

Yet none of this alters the fact that planning really is a broad application of common sense in determining how the state and community can solve or avoid major practical problems and how they can gain maximum benefit from the assets at hand. Briefly, planning entails analysis of our total needs along with an effort to balance such needs against available resources in the best possible way to satisfy existing and future requirements and avoid the waste and contradictions associated with unplanned growth. A planning agency sets its sights on a coordinated program of action on matters such as transportation, recreation, housing, water supply and industrial and commercial development. Economic progress, it goes without saying, is not the sole consideration. The convenience of the public and the op-

portunity for good living are equally important. If we are interested in economic progress, however, the necessary conditions can be created only if urban growth is directed along such lines as to eliminate conflict and confusion.

Government plays the key role in the planning process because it alone is invested with authority to act in this field. At the local level during the past two or three decades, the quality of planning has varied substantially. Some counties and municipalities have established excellent programs of comprehensive planning; others in the state have lagged behind for a variety of reasons, one of the most notable being insufficient funds. On the whole, however, progress at the local level over the years has outweighed progress in state planning, and if this is true in New Jersey, it probably is even more so in the majority of other states.

State planning, in most cases, goes back to the 1930s when, with encouragement from the federal government, many states, including New Jersey, created official planning agencies for the first time to investigate such subjects as land use, economic development, population trends and conservation of natural resources. Unfortunately, state planning hardly had been inaugurated when the United States was drawn into World War II. The paramount consideration thereafter inevitably was mobilization of the nation's resources for the war effort. Many of the state planning offices established in the 1930s thus disappeared while most of those that survived hardly had enough funds even to maintain files. New Jersey's experience was not untypical, although we were fortunate in the sense that the state planning agency remained intact notwithstanding the limited scope of its activities during the war and for years afterwards.

REVITALIZING STATE PLANNING

A movement to revitalize state planning was launched in 1954. This was a

vital necessity. It is only factual to point out that such action should have been taken years ago, and if it had been, the recent growth and transition of the state might not have been altogether painless, but surely would have been more orderly.

The revitalization of state planning has proceeded along several lines. The first requirement was a transfusion of strength for the planning agency itself. Although funds for this have been limited, the staff of the Bureau of Planning has been substantially enlarged in the past three years. Another aim was to place the agency in a position to provide technical assistance to municipalities. It is hardly enough for the staff merely to be offering casual advice on an intermittent basis to communities suffering because of unbalanced development or confronted with the threat of imbalance—and this had been the extent of municipal planning assistance provided by the state prior to 1954. What communities must receive is professional help in projecting inclusive, long-term plans for growth. Meanwhile, planning for state development has become ever more imperative, and this has prompted, among other things, a renewed attempt to improve coordination among state agencies in planning long-range state development programs. Finally, the Bureau of Planning has been assigned the duty of aiding the Office of the Commissioner of Conservation and Economic Development in integrating operations of the Department itself—a responsibility significant in any event but particularly so in view of the substantial amount of land and natural resources managed by the Department.

Progress in state planning during the past three years is indicated by New Jersey's leadership in making available technical planning assistance to municipalities. The way was opened in 1954 with Congressional passage of the National Housing Act. Along with other provisions, this legislation authorized

federal grants to state planning agencies for the purpose of furnishing technical aid to communities whose populations are under 25,000. (These grants must be matched by the states and participating municipalities on a dollar-for-dollar basis.) It is generally acknowledged that New Jersey holds first place among the states in taking advantage of the opportunities presented by the legislation. By the end of the fiscal period 1956-57, sixty municipalities had been included in the program, and the Bureau of Planning was preparing to request another federal grant to assist sixty additional communities.

HOW COMMUNITIES PROFIT

With the inauguration of the program, the state not only for the first time extended aid of this nature to local governments, but began coming to the assistance of the communities typical of those across the nation located in urban regions that have suddenly found themselves faced with pressures generated by expansion. Heretofore they engaged in little or no planning at all and have had to pay a certain price for this. They have now undertaken planning of a type that without this program might not have been started for another five or ten years. While all the distortions caused by past failures to prepare for community development cannot be eliminated in one stroke, state aid has served, in effect, to place local planning some five years ahead of what it might have been, which is unusually important to communities only beginning to experience an intensified tempo of development, for it places them in a stronger position to control the process of growth.

Meanwhile, a series of other measures is under way, reflecting a new concept of the serious nature of the state's responsibility in the planning field. New Jersey now, for example, is the pace-setter among the forty-eight states in cooperating with federal government in advance planning for public works.

At the same time the state has applied for a federal grant to help finance a survey envisioning a regional approach to urban redevelopment in the northeastern metropolitan area.

This survey deserves special comment for a number of reasons. First, it would throw new light on questions such as where is the need for redevelopment most acute and how can the state and federal governments cooperate most fruitfully in ridding cities and suburbs of existing troubles and preventing further difficulties. In addition, one of the overriding goals in state planning today is the formulation of an integrated plan for all aspects of the physical development of the state. A plan of this kind was drafted and presented to the Legislature in 1951, but because of the rapid and extensive alterations in patterns of land use, this now must be revised, and work on the revisions has been going forward for the past two years. If they are to be meaningful, however, the state must acquire thorough insight into the direction in which the densely populated and highly developed northeastern counties are moving. The direction of movement, in turn, must be related to plans for general state development, for otherwise these might immediately become a dead letter because they are not grounded in the realities of the situation in the region of the state with the greatest concentration of population.

Despite the many words written on the subject there remains a distinct need for more reliable information in order to coordinate local and regional improvements such as road building, construction of water supply facilities, development of areas for recreation, rapid transit, and the attack against slum and blight. The importance of obtaining more complete data on the complex interrelationships among the elements comprising the urban scene that must be reconciled in planning redevelopment can be discerned from this simple example: A renewal project may

fail from the standpoint of its principal objectives if it is carried out in such a manner that it conflicts with plans for new road construction, and, of course, the reverse also might be true. The issue of land use in a state constantly in flux, then, is crucial, and its various forms must be brought into harmony. If they are not, the most progressive action to make urban life more livable not only is likely to end in frustration; it might even compound existing confusion.

INTEGRATING REGIONAL ACTIVITY

The survey also is needed because it will provide facts and figures necessary to integrate the activities of numerous state and interstate bodies responsible for specific functions in the region, such as the New Jersey State Highway Department, the Metropolitan Rapid Transit Commission, the Port Authority of New York, the State Division of Water Policy and Supply and private groups, like the Regional Plan Association, interested in resolving the urban crisis.

As far as is known the survey would be the first of its sort to be conducted. The results for this reason almost certainly would be of value both to the northern metropolitan area and other regions of the state as well as to other states in the nation plagued with urban problems.

In a separate but related action the Department soon will begin an investigation constituting the initial phase of a study designed to obtain information in regard to transportation problems. This was requested last year by the Mayor of Newark. The first stage will be completed sometime in 1958. Naturally, this study has been ordered because of increasing traffic congestion both in and around our cities, but attention will be focused on the relationship between this condition and other urban problems.

While the Department has moved into new paths outlined above, the state planning agency still has a fundamental responsibility to contribute as much as

possible to reducing waste, increasing efficiency and achieving integration in the operation of State Government to the end that the state can serve the public as it should. This, as was mentioned, has been one of the goals in the movement to buttress the framework of state planning and has led to varied action. The Bureau of Planning, for example, has completed an inventory of all state properties and plotted these on atlas maps. It also has begun evaluating contemplated sales and transfers of surplus holdings and the acquisition of new properties. This is designed to assure orderly disposition of property, while promoting full utilization of all state assets, and will furnish information required in revising the state development plan formulated in 1951. As to the future, it is hoped that the agency will be able to play an even more vital role in providing guides for state operations as a service to all parts of the Executive Branch.

PLANNING VERSUS CHAOS

If New Jersey has pushed to the forefront in the emphasis laid on planning, this is more than coincidental. In all essential respects, our problems are the same that are being experienced by urban states throughout the nation. Whatever differences exist are chiefly a matter of degree. Geographical location, the size of the state's population in relation to its total land area, the pace of change in all regions during the past ten to twenty years, and certain other factors, however, have combined in such fashion as to aggravate these problems in New Jersey. The corollary is that planning has become more than merely one of many desirable governmental functions. It is rather an inescapable necessity if New Jersey is to carry on as a state with ample opportunities for good living and with an economy sufficiently vigorous to enhance the economic welfare of every individual and family.

The gains in planning recorded in the past year should not be construed as

having equipped the state fully for the task to be performed. Actually, they represent more of a beginning—substantial, perhaps, by comparison; but nonetheless still a beginning. The scope of the effort surely must be expanded. It is equally necessary to start thinking of planning in broader terms. The growing interdependence of communities, of regions and of states involved in the same regions must be accepted as an elementary fact of life.

Furthermore the need for closer inter-governmental relationships and better techniques of governmental cooperation must be recognized as urgent. In planning, the municipality, the county, the region, and the state first must know what one another is doing and plans to do. But this is not enough. The gears must mesh. Orderly development of the state and all its parts depends emphatically upon coordination of the planning activities of all units of government.

The Challenge of Urban Redevelopment

The urban problem in New Jersey, as in other states, is a two-fold dilemma. It springs, in part, from the enormous expansion of the state in the recent past. It also springs from maturity. New Jersey is one of the oldest states; its development was well advanced before the end of the nineteenth century, and many of its cities trace their beginnings to a much earlier time. For this reason the urban problem cannot be treated solely as a matter of explosive growth despite the large numbers of new communities built up virtually overnight with a minimum of advance thought as to how the functions that must be performed in any community would be performed. Indeed, some of the municipalities that have come up against the urban problem in its severest form are expanding very little, if at all.

These, to be sure, are the older cities of the state—many of them central cities. They have developed along lines that often are incompatible with the modern scheme of things. As a consequence they must struggle lest they be overwhelmed by such conditions as slum and blight, the over-taxing of existing facilities, improper land use, distorted patterns of transportation, increasing obsolescence, and, as a by-product of these and other factors, extreme difficulty in financing public services.

To point up this distinction in the manifestation of the urban problem is not to suggest that the situations facing the older communities and the new centers of development are unrelated. The heavy turnover of population in long established cities and the ongoing exodus to the suburbs obviously have figured in the troubles of the former. Nor is the long-term challenge posed for the two types of communities entirely dissimilar. For instance, the financial dilemmas of some of the older municipalities already are shared by many of the communities expanding at an unusual rate. Furthermore, the manner in which some of the latter communities have developed presents the threat of suburban blight within the next two or three decades unless the leadership of "suburbia" takes vigorous remedial measures.

But despite these relationships and similarities, the special plight of the older cities must be kept in focus in considering the question of urban redevelopment because they are the ones today with such a vital stake in redevelopment policies.

In keeping with New Jersey's tradition of home rule, the principal initiative in modernizing the city comes from local groups. At the same time it has been accepted for years that because of a variety of circumstances —

with financial requirements for successful urban renewal heading the list — the higher levels of government must assist the municipalities in checking urban decay in the practical interest of the residents of the cities and everyone dependent upon them. Although the amount of assistance has fluctuated over the years the federal government has steadily enlarged the scope of its aid. Similarly, state action has become increasingly important in the fate of New Jersey's cities.

All departments of State Government are involved in one way or another in helping them assert mastery over their problems. As to the Department of Conservation and Economic Development, it plays a number of roles of varying significance. Its responsibility for administering state housing laws, for example, is a function of limited range at present because existing legislation gives State Government little power to act in helping municipalities cope with the many aspects of the housing issue, particularly the long-standing shortage of decent housing for families with low and moderate incomes. Similarly, responsibility for maintaining records of slum clearance and urban redevelopment programs projected on a municipal-federal basis is largely a matter of bookkeeping.

SPURRING REDEVELOPMENT

On the other hand, the Department has become increasingly conscious of its obligation to help spur urban renewal, and much recent action has been directed toward that goal. The greater emphasis on planning for development of the physical assets of New Jersey obviously is basic. As was underscored above, urban renewal in a vacuum might prove in some instances worse than no urban renewal at all, for the cure of slum and blight can no more be separated from the endeavor to solve other problems than one illness of the individual can be treated without reference to his other illnesses or disabili-

ties. More specifically related to the redevelopment of New Jersey's cities as such, of course, is what the Department has done in laying the groundwork for an urban renewal survey in the northeastern metropolitan region. No less consequential has been the extensive inquiry into New Jersey's housing needs and the search for practical means to satisfy these needs—an inquiry inaugurated in 1955 at the request of Governor Meyner, who deplored "the widespread inadequacies in low and middle income housing" and called for workable plans to remove the barriers to progress in resolving an issue of great moment in the lives of thousands of New Jersey's families. In addition to measures directly bearing on urban redevelopment, it goes without saying that virtually all units of the Department are concerned with plans for land use. Although this concern is not limited to land use in urban areas, much of it is so oriented. The operations of agencies like the Bureau of Aeronautics, the Bureau of Recreation and the Bureau of Commerce—to cite only three instances—may appear only incidentally related to the subject. But certainly their findings must be incorporated in any balanced design for modernizing the city.

What the efforts recounted in the previous paragraph mean, in essence, is that by the end of 1956-57, the Department's interest in the task of reclaiming the deteriorating areas of urban New Jersey had been extended substantially. For many years prior thereto the municipalities and federal government had shared the burden of urban renewal, with the state remaining largely in the position of an observer. Yet this is not a field in which State Government can afford to play a passive part. The redevelopment of our cities is a major consideration for the state in discharging its responsibility to promote the orderly development of New Jersey as a whole. It is this consideration that has led the Department to give

much more attention to the predicament of older urban centers and to assist them, within the limitations of its resources, in the search for new formulas pointing to a way out of the predicament.

WHERE NEW JERSEY STANDS

With respect to the present status of the urban redevelopment movement in New Jersey, the growing alertness of civic leaders and municipal officials to the scope and the danger of urban decay is apparent. In recent years twenty-nine public agencies have been created locally to direct the clearance of neighborhoods honeycombed with blight, taking advantage of federal aid available for this purpose under the urban renewal program established in 1949. Some of these agencies already have received grants from the Urban Renewal Administration, and eventually all will receive federal aid. Their progress inevitably has varied. Some are still making the preliminary studies that common sense dictates before embarking upon improvements. Others have both completed the clearance of blighted sections and begun utilizing these sites for new purposes. By the end of 1956-57 the statistical history of urban redevelopment since 1949 was as follows: Twenty-nine projects initiated, involving clearance of approximately 1,000 acres; more than \$60 million (gross) invested in urban redevelopment; a return of \$14 million on the sale of land cleared; and approximately \$30 million awarded in the form of federal grants matched by the outlay of some \$15 million in local funds.

In converting the land that has been cleared and will be cleared to new uses, plans differ widely. Some of the sites will be used for commercial and industrial purposes; others will become playgrounds; and still others will be utilized for the construction of housing, schools, churches and other types of buildings.

The advances that have been made

cannot be dismissed as gains of minor consequence because they might appear small in comparison with the need. They represent solid achievement; and perhaps what is most noteworthy, they reflect an appreciation on the part of official and unofficial groups of the unavoidable necessity of action before action is too late. The formation of citizen organizations comprising a broad cross-section of the public, in particular, is significant because the restoration of the city depends upon more than the insight of officials. They must have unqualified public support in order to proceed effectively and energetically with any over-all plan. In addition to other contributions, the citizen organizations being created throughout the state therefore are essential in galvanizing the community will for the effort requisite to check the decline of the city.

NEW POLICIES NEEDED

Without minimizing the importance of this awakening to the urgency of the situation, it is nevertheless necessary to observe that existing redevelopment policies are deficient—that the federal program, as now projected, is too narrow; and that it is not doing the job, nor will it do the job as it must be done, until revised in light of the realities of municipal affairs.

On the basis of casual observation, it is evident that only the surface has been scratched in urban renewal. Why so? The reason is not one-dimensional, but the main explanation is that the governing bodies of municipalities simply lack money to avail themselves — except to a limited degree — of the grants that they can obtain. Under the present legislation the municipality must absorb one-third of the loss incurred in clearing and selling land for redevelopment. On the face of it the arrangement appears reasonable enough. Unfortunately, the typical municipality is already so hard-pressed financially that it is a strain to cover even one-third of the loss. The incen-

tive to tackle the financial hurdle has been diminished, moreover, by the experience of certain municipalities after the removal of obsolete structures. In a number of instances, the difficulty of financing the construction of new buildings has held up renewal for a long period, a difficulty partially attributable to the reluctance of private builders to participate. Some sites, unfortunately, have remained vacant for several years after being cleared, an extremely costly turn of events for local governments because the losses in tax revenue strike a heavy blow at the financial health of the city.

It would be rash here to try to prescribe a remedy for weaknesses in the present approach to redevelopment. The question is complex. Numerous factors must be weighed. The failure of the program to fulfill the hopes of its original sponsors, nonetheless, is distressingly apparent, and in view of the critical demand for more fruitful strategy, the need for a reappraisal of existing policies can hardly be doubted.

THE HOUSING SITUATION

This need is well illustrated if we contemplate the situation in housing. Urban redevelopment, of course, involves more than housing. By the same token the solution of housing problems involves more than eradication of slums. But no plan for redevelopment that lacks provisions to meet the claims of countless families for more adequate opportunities to rent or purchase decent housing rests on a secure foundation.

That housing has ceased to exist as a problem for New Jersey is a myth. To measure the need, an advisory committee of private citizens with substantial and varied experience in this field was appointed by the Department and asked to study all phases of the subject. In essence, the committee found that despite post-war building, some 200,000 additional dwelling units were needed at once to make it possible for families not readily served by priv-

ate builders to obtain standard housing—mostly the so-called middle income families, who, on the basis of their income, are neither eligible for public housing nor able to pay for satisfactory accommodations at the prevailing price in the private market. The committee's investigation produced evidence of widespread occupancy of unsafe and unsanitary dwellings. Time and again the survey brought to light the familiar story of large families compelled to live cramped up in small apartments, and, even then, to go without many basic facilities.

This shortage of decent dwellings is not the only element of the housing problem. The situation is further clouded by the virus of prejudice, which stands in contradiction of all professions of dedication to the principles of equal opportunity for every citizen to share in the benefits of American society, without regard to creed or origin.

The practical result of this virus is that members of so-called minority groups, more often than not, are arbitrarily denied access to many types of housing. Beyond this, they pay exorbitant rents for the hovels that they frequently do occupy. This is an issue that is itself properly the topic for a report. Suffice it to say here that the issue cannot be ignored. It will become more rather than less insistent. It must be resolved with all practical speed — and resolved in the best spirit of the democratic tradition.

Another aspect of the problem is the obstacle that many older persons are encountering in obtaining suitable accommodations at reasonable prices. This is a recent development. Yet its seriousness cannot be questioned by anyone close to what is happening, and it is no less clear that steps to deal with the matter cannot be put off.

With respect to the general shortage of good housing, the findings of the advisory committee underscore two points: (1) Existing state legislation passed to encourage private builders to

construct middle income housing has had negligible results. (2) There is little hope of relieving the shortage without positive governmental action. The findings of the advisory committee have been affirmed by the report of the Special Legislative Study Committee on Low and Middle Income Housing as well as by federal officials who have reviewed the picture.

Acting on the results of all these inquiries, the Department proposed last year that the state enter upon a determined effort to master this long unmastered problem — most acute in the older, central cities of the state, though not confined to these cities. According to the proposal, the state's contribution would take the form of a no-cash subsidy, and no additional taxes would be required. Instead, state credit would be pledged to guarantee bonds issued by a State Public Housing and Development Authority. Funds thus could be obtained at lowest interest rates, and private groups would be furnished with more incentive to construct middle income housing.

During the 1957 session of the Legislature six bills were introduced providing for various types of state action to help expand the housing supply. Unfortunately, at the time of this writing, State Government still does not have the warrant needed for a full assault on the problem.

SOME GUIDING IDEAS

In reflecting upon this question, these ideas commend themselves to the attention of the public. First, the demand for action coming from those living in substandard dwellings cannot — and should not — be ignored. Secondly, the situation lends itself to a number of approaches. This report presents the thinking of the Department regarding the possible role of the state. Admittedly, the role would be new, yet how can the principal unit of government in New Jersey stand by idly when, in spite of

years of analysis, debate and ineffective legislation, so many families — victims of circumstance and nothing more — still must live from day to day in totally unacceptable dwellings. But if the state has a duty here, this does not suggest that the solution of the problem belongs exclusively to the state. Since the 1930s the federal government has participated in the attempt to solve the housing problem through the construction of low-rent public housing. Time may prove that the solution of the problem, as a whole, depends upon combined state-federal-local action and the use of a number of different devices to attain the objective.

Housing would be a paramount issue even if only remotely identified with urban redevelopment, for, to repeat, few things loom so large in the personal life of an individual as the roof over his head. Parenthetically, it is not only distressing but contradictory to find that in one of the most prosperous states of the world's most prosperous nation large numbers of families are priced out of the market for good housing. Housing, however, is one of the paramount factors in the renewal of our cities. This is true for many reasons. One of the most fundamental is that it is neither right nor practical to begin demolishing homes, regardless of how miserable they might be, unless accommodations are available for the families who must be relocated.

ROLE OF THE CENTRAL CITY

Viewing urban redevelopment from the broadest standpoint, it is painfully obvious that our older cities are crying out for rejuvenation. It behooves all to heed this cry — whether we live in the city itself or beyond its boundaries. The flight to the suburbs is characteristic of our times. In all likelihood it will continue, and the residents of "suburbia," or "exurbia," might have a tendency to take little personal interest in the affairs of the urban center. Regardless of the magnitude of the suburban

movement, however, it is improbable that the day will ever come when the health of a metropolitan region will be unaffected by what happens to the central city. The function that it performs is too vital. Almost of necessity it will remain the major source of goods and services as well as the major source of economic opportunity and cultural advantages for the majority of the regional population.

No common-sense analysis of the elements involved in urban renewal could treat such an undertaking as easy, and no attempt has been made in this report to play down the formidable nature of the chasm to be bridged. An understanding that it is not easy is really a

first requirement in revitalizing the city. With all the difficulties, however, it should be written in large letters that the city can be revitalized if the measure of effort is sufficient. This calls for many things. It calls for a general moratorium on inertia and resistance to new courses of action. It calls for vigorous leadership, official and unofficial. It calls for much closer intergovernmental cooperation of all types and a revision of present redevelopment policies. It calls for better planning at every level of government. It calls, above all, for proceeding as rapidly as possible in order to prevent further deterioration, which can be prevented if old roadblocks are destroyed.

Aviation: Present and Future

In the fall of 1957 the nuclear age became also the age of man's struggle for the conquest of outer space. The scientific, military, and diplomatic implications hardly could be overestimated. Nor could the at least temporary inability of the United States to match achievements of the Soviet Union fail to arouse alarm among the American people.

Yet this was not the only space problem in 1957. For while speculation as to the date of a landing on the moon abounded and while many were discussing the necessity of international conventions governing man's action in the realm beyond the earth's gravitational pull, the control of inner space ironically had also become a grave problem, especially for states like New Jersey.

One of the units of the Department of Conservation and Economic Development is the Bureau of Aeronautics. We are accustomed to think of aeronautics in the United States as almost exclusively the responsibility of the federal government. The existence of a state agency concerned solely with aviation thus might seem anomalous. It is true that the burden of regulating flight in the United States must be borne by the federal government because of the interstate character of aviation. It is equally true, however, that the functions performed by the Bureau of Aeronautics

have become more and more crucial in recent years. The explanation is clear when one considers New Jersey's position. The number of movements to and from airports within the state or immediately beyond its borders has steadily increased. Already air traffic over New Jersey is as dense as in any other area of the United States, or the world for that matter, and surely will continue to rise in the future. Inescapably, the control of air traffic has become harder and more complicated.

The rise in the density of traffic has been accompanied by a rise in the hazards associated with the movement of aircraft—a development naturally calculated to cause apprehension for persons both in the air and on the ground.

The apprehension is felt more strongly by citizens living in the vicinity of airports but is not limited to these individuals. Complaints come from persons as far as fifty miles away. Daily they see and hear low-flying planes. All are disturbed by noise, which raises another question, namely, how to combat nuisances created by the ever growing number of planes filling New Jersey's air corridors. What disturbs all these citizens even more than nuisances, however, is the prospect of mid-air collisions or of aircraft motors plunging to earth and other possible accidents endangering life and property. The fears are real, and

the anxiety is based on facts. No responsible public official could view this anxiety lightly or fail to realize that something must be done to curb the dangers that exist.

AVIATION AND PROGRESS

Meantime, there is another issue for a department of State Government expected to help stimulate economic development. Beyond doubt, airport facilities will figure prominently in our future economic progress. To ignore this, to make no preparations for the changes likely to occur in the technology of flight would be inexcusable negligence when the economic welfare of so many citizens will be affected. While New Jersey's airport facilities today may be above average, the airport system must be improved and expanded to measure up to the requirements of the future. To cite only one case in point, we soon shall witness the introduction of the jet-propelled airliner in commercial transport. At present, however, none of New Jersey's civil airports is equipped to accommodate this type of aircraft. Certainly, here is a gap in our general transportation system that must be closed as quickly as possible.

During the past year, as during the two preceding years, the Department sought, through the Bureau of Aeronautics, to make more adequate arrangements for safeguards to life and property in face of the increased density of air traffic. Simultaneously, it widened its effort to anticipate and help prepare New Jersey for the kind of airport system necessary to keep in step with technological changes in aviation. Action has gone forward on several fronts. The staff of the Bureau of Aeronautics, joined by the planning staff of the Department, has projected a master plan for state airports to serve as a frame of reference in programming new facilities. This conforms with the objective of the Bureau to integrate airport development with other features of urban growth, such as highways and

home construction. The Department also has coordinated its action with the recently established Air Transport Facilities Committee, appointed by Governor Meyner to investigate and submit recommendations covering all phases of aviation in New Jersey. In addition, the Department and its aeronautics staff have given all possible assistance to Burlington County in the groundwork on a proposed new airport in central Jersey with runways and other facilities required for commercial "jet" landings and take-offs, which apparently are but a few years away. In conjunction with these activities, consultation with municipal and county authorities and with representatives of the federal government has been carried on more vigorously than at any time in the past, since most of the problems in aviation today are manageable only with intergovernmental cooperation.

To carry this last point further, it has been emphasized here that state and local governments have a vital interest in aviation policies. It also has been emphasized that because of the interstate character of flight, the federal government—while coordinating its decisions with those of state and local officials—must accept the primary duty for insuring air safety and promoting progress in aviation. The consultation with federal agencies has been aimed at measures to step up the attack on the perils and nuisances accompanying the increase in the density of air traffic. Another goal has been to ascertain the federal government's long-range policy for airport development as it relates to the needs and problems of the state and its municipalities. Success in forging stronger bonds among different levels of government in charting the future course of aviation is undoubtedly one of the most valuable contributions that the Bureau of Aeronautics could make.

The last annual report of the Department described the need for improving intergovernmental cooperation in the field of aeronautics as "one of

the most dramatic instances of the growing interdependence of the different levels of government." This is well demonstrated by the safety issue. In overcoming the nuisances and perils ushered in by the increasing density of air traffic, nothing is more essential than technical research aimed at devising more reliable means of combating noise and danger. This is an acknowledged function of the federal government. When, as has been the case for the past few years, this research is curtailed, the effects are felt at distant points. The Mayors of Newark and New York find themselves compelled to answer to anxious constituents, and so, too, do officials of suburban municipalities. Likewise State Government—including the Bureau

of Aeronautics—experiences a sense of urgency and feels under pressure to exert itself in every conceivable way to remove sources of danger and alleviate the legitimate fears of the public. If this example points up the necessity for looking upon aviation as a joint concern of all levels of government, it also explains the length to which the Department is going to foster the only kind of cooperation among state, local and federal governments that promises results. Aeronautics, as this report has noted, is of great moment from the standpoint of New Jersey's future. The development of an airport system for the new age before us must, however, be so oriented that life and property will not be placed in jeopardy.

Recreational Needs of a Growing Population

"The public recreation movement in America represents a conscious cultural ideal of the American people, just as the great system of public education represented such an ideal."

So concluded the National Parks Service in a report submitted more than twenty years ago to what was then the Land Planning Committee of the National Resources Board. How valid is the conclusion? Its validity, it would appear, has been more than confirmed by the spiraling interest in all types of recreation during the post-war period.

Recreation may not be peculiar to the urban problem. But whether peculiar to it or not, it is definitely a part of the problem, especially in this state where urbanization is further advanced than anywhere else in the nation. Population growth in all sectors of New Jersey has generated an intense demand for more adequate facilities for recreation. Urban expansion accompanying this growth, on the other hand, is steadily reducing the number of acres available for recreational purposes, and this calls more than ever before for imaginative planning as a means of obtaining the most efficient use of the land that is available. Recreation also is an urban problem because the urban environment, symbolized by endless rows of buildings and crowded streets, affords little occasion for recreation unless public action is

taken to bring about opportunities for play.

RECREATION AND LIFE TODAY

Many articles and essays have been devoted to the role of recreation in the life of the individual. Nothing could be added to what already has been said in the ample literature on the subject. It is sufficient to stress here that the Department fully recognizes the importance of recreation in enriching the life of every citizen. It might be added that the development of recreational facilities possibly is even more important in a state whose residents must adjust themselves to the ever faster tempo of the urban situation.

The Department has an impact on recreation in New Jersey in a variety of ways. To cite the most direct of these, it is responsible for the operation of state forests and parks. It is responsible, too, for fish and game management. It has been charged by the Legislature to assist municipalities in formulating plans for community recreation. In recent years, there has been a marked unfolding of interest in boating, which naturally has its implications for the operations of the Bureau of Navigation.

Recreation, to be sure, is a personal matter. It is meaningful only when it serves as an outlet for a person's genuine impulses, and what is meaningful to

one individual certainly will not be meaningful to another. It is not the place of government—state, federal, or local—to decide upon the most rewarding forms of recreation and attempt to persuade the public to engage in them. Apart from being improper, it would be impossible because of the pronounced differences in personal temperament. This, however, does not relieve government of responsibility in the recreational field. It has a definite obligation to go as far as its resources permit in creating diversified recreational opportunities in order that the largest possible number of citizens can pursue their interests, whatever these may be.

Unhappily, despite this obligation, public recreation has been unusually vulnerable to budgetary shoals. This has been strikingly evident in the case of New Jersey's state forests and parks. Through gifts and purchases the state has been acquiring forest and park land since 1905. But the budgets of former years have been bare of items for improving these properties or equipping them with the facilities necessary for public use. If one found any improvements at all in the state park system two or three years ago, these were the by-product of the depression of the thirties and the activities of a long-defunct federal agency that had its birth in the depression years, the Civilian Conservation Corps (CCC). The young men who joined it and were assigned to New Jersey transformed state forests and parks with the construction of lakes, cabins, group camps, roads and trails, picnic grounds and camp sites.

Then came World War II, the dissolution of the CCC, and the end of state park development, at least for another fifteen years or more. During this interval New Jersey's population followed an ascending curve. With the end of war, moreover, leisure increased at the same time that incomes were rising to higher levels. More families owned automobiles, and highways were better for those who wished to visit outdoor

areas beyond the city where they could relax for a few hours in an attractive natural environment. But since the development of state forests and parks had been at a standstill from 1940 onward it is not surprising that by the early fifties available facilities were taxed far beyond capacity. Nor is it surprising that public demand for improvements had passed the point of urgency.

DEVELOPING STATE PARKS

In 1954 the Department began laying the foundation for the first program of park development to be undertaken by State Government. Although only one of several measures intended to expand recreational opportunities, this has been the most prominent in terms of its scope and its status as a major new state activity. Plans provided for the use of some funds to rehabilitate existing facilities and the investment of a greater amount in new facilities, such as picnic tables, outdoor fire places, wading pools, dressing rooms, boat houses and sanitary facilities. The proposals also provided for the opening of several areas that had been presented to the state as gifts but had remained unuseable because of the lack of development. Finally, the blueprint called for the construction of permanent quarters for park supervisors and other personnel to maintain park property more satisfactorily.

The Department's proposals were accepted by the Legislature, and with the appropriation of the initial funds, detailed work on the program started. The mere approval of such a program does not mean that all projected improvements will be completed immediately. For numerous reasons, the planning process is complex, and no little time elapses before the end product appears. Nonetheless, implementation of the program has proceeded steadily. At the end of the last fiscal period many of the projects had been completed, while others were to be completed in 1958.

With the improvements, there has been a corresponding rise in park at-

tendance. The program in its present form does not cover every park and forest in the state system, but it will benefit all citizens because it does provide for park improvements in every region of the state.

Two phases of this general effort call for an extra word. The first is the development of the Wharton Tract. The state paid \$3 million to acquire this 100,000-acre reservation from the heirs of the Philadelphia industrialist, Joseph Wharton. It is a vast pine forest, criss-crossed by rivers and streams, abounding in deer and other forms of wildlife, and containing a group of isolated villages established before the American Revolution. Aside from its valuable water resources and the potential forest product yield, the reservation presents a diversity of possibilities for recreation in addition to being centrally located, lying within two or three hours driving distance of the remotest corner of the state.

As soon as the reservation was acquired, it was decided that the area should be put to all practical uses. The formulation of a long-range development plan began immediately, and this has been completed. Meanwhile, the reservation has been opened to the public. Full exploitation of its advantages as a recreation center—capable eventually of accommodating thousands of visitors daily—will require a generation or more. The initial stages of the long-range plan, however, already are being carried out (\$600,000 was appropriated for development last year), and with an eye to the future it is clear that this plan represents a step forward in coming to terms with the recreational needs of a state with "more and more people and fewer and fewer acres."

The other phase of the program that should be mentioned because it has captured the interest of countless citizens is the development of Island Beach, a ten-mile barrier overlooking the Atlantic in Ocean county. The Jersey shore is famous the world over. Strangely enough,

however, in all the years of New Jersey's history, no state-owned public park has been established at any point along this whole sweep of shoreline. Island Beach, approximately midway between the northern and southern ends of the shore, was acquired as an answer to this glaring shortcoming in the state park system. The property is important because of its potential as a seashore park and for other reasons. It has been described by the National Parks Service as the "last remaining significant stretch of dune land in the northeastern United States." It contains unique flora and fauna and other features that have attracted artists and naturalists from many parts of the nation. The Department has felt that Island Beach is too unusual for the state to seal its future on the basis of vague impressions. Its development, rather, should be the result of close study and imagination. The long-range development plan for the park not only should be appropriate but also should insure that the projected uses of the area are compatible. On the basis of exhaustive investigation, the Department believes (1) that the rare botanical features of the barrier should be carefully preserved, (2) that it should remain a sanctuary for the more than seventy species of birds nesting there at different times during the year, and (3) that as the common property of the five to six million residents of New Jersey, it should be developed for recreation in areas where this is suitable. In connection with the third point, all studies tend to confirm the fact that if caution is exercised, there is no reason why recreational development should conflict with the other goals of maintaining Island Beach as a botanical preserve and bird sanctuary.

OPENING ISLAND BEACH

The long-standing objective of the Department has been to open Island Beach to the public at the earliest possible date. The principal obstacle has been a lack of satisfactory access roads linking the

barrier with major highways. Clearly, it would be irresponsible to open the park on an unregulated basis before these roads are built because the resulting traffic congestion would be intolerable for everyone concerned. The Department has been in continuous consultation with the State Highway Department regarding this question, and plans for the roads, costing some \$20 million, have been reviewed.

Since the opening of the park at an early date is a matter of high priority, however, the Department in 1957 turned its attention to the idea of regulated public attendance during the period prior to completion of the road program. By the end of the year, procedures were being formulated to implement this idea. Under the procedures, any organization interested in visiting Island Beach would so inform the Department, and a date would be reserved for its visit. The plan is scheduled to go into effect in 1958. Lifeguards will be on duty, and various facilities will be available. Under the plan, some two thousand persons will be accommodated daily.

UPSURGE IN BOATING

The discussion in this section thus far has been focused on the question of expanding general recreational opportunities. As has been noted, however, the Department is also concerned with specialized forms of recreation, including boating, which has aroused remarkable enthusiasm since World War II. The result for the Department has been an extension of activity in an area where its duties have always been considerable but nothing comparable to their present magnitude.

The upsurge in boating presents a two-fold challenge. There first is the safety problem. With waterways more crowded, an intensification of effort to protect life and property by vigorously enforcing regulations for the operation of power vessels is compelling. The responsible agency of the Department, the State Bureau of Navigation, has there-

fore formed Harbor Master Patrols in the coastal sections to promote an understanding of safe boating practices and to bring charges against persons who flout the state code governing water traffic. In 1957 these patrols covered a large part of the tidal area on weekends during the boating season. The Department has been aware that further steps are essential to bring law enforcement into line with the growth in the number of boats plying coastal waters. Additional personnel and equipment must be obtained in order to patrol all bays, inlets and other bodies of water. At the same time, however, law enforcement has improved and will improve even more as the Department acquires the wherewithal to handle a traffic problem on water which is coming to resemble the traffic problem on land. In 1957 the Bureau of Navigation drew up plans for strengthening Harbor Master Patrols and sending officers into two areas not previously covered because of budgetary limitations.

The upsurge in boating has been equally strong in non-tidal or inland waters. According to available data, in fact, boating on lakes, rivers and streams was at a record height in 1957. Also in these waters, of course, a larger force of inspectors has become necessary to safeguard life and property and to distribute information with respect to state boating regulations and safety practices. A fatal lake accident occurred on a night in June, 1957, and to prevent a recurrence, the Department immediately issued a new regulation limiting the rate of speed between sunset and sunrise.

As the recreational value of boating is widely acknowledged, so is the responsibility of the state to make it possible for citizens to engage in boating without being exposed to serious hazards. The attempt to organize more effective patrols in tidal waters has been cited. Likewise the facilities and headquarters of inspectors in non-tidal waters leave much to be desired. The Department

therefore not only is seeking better quarters for these men but a more appropriate location. In addition, if recent experience means anything, certain legislation must be passed to insure a greater measure of safety.

Legislation is needed, for instance, that would require the lighting of sail boats, rowboats and canoes. The Legislature moved in this direction in 1957. But provisions of the bill that was enacted apply only to non-tidal waters and, further, apply to bodies of water of stipulated size. Water skiing also has become more perilous and the dangers that it involves must be combated. In non-tidal areas this sport is subject to Bureau of Navigation controls. Similar controls in tidal waters, however, may require special legislation. Another matter that has become a proper subject of legislative action is the conduct of small-boat owners along the coast. Tidewater Jersey is largely under federal jurisdiction. State laws apply only to the reckless operation of boats, speeding, and operation of boats under the influence of alcohol or narcotics. Since, under federal procedures for registering water craft, boats fewer than fifteen feet in length do not have to be marked, many boats with outboard motors cannot be identified for purposes of court action. Legislation is needed that would make state registration of all boats operating in coastal regions compulsory.

JUVENILE OFFENDERS

Finally, the problem of juvenile offenders remains to be solved. Under existing law, anyone—regardless of age—may operate a boat with an outboard motor, and in New Jersey a person under the age of eighteen is legally a juvenile. Because of this, his offense must be referred to a Juvenile Court, where, if the calendar happens to be crowded, much time will pass prior to the disposition of the case. In the interim the youthful defendant, rather than receiving prompt punishment, remains free to continue his activities and frequently

displays a contempt both for law and for those charged with its enforcement. Licenses held by juveniles to operate boats with outboard motors on inland waters may be revoked, but it is possible that for tidewater areas legislation will have to be enacted before the Bureau of Navigation can follow this procedure. (State motor vehicle laws do not exempt persons under eighteen from standing trial in regular courts. With water traffic substantially increasing, it would appear that violations of regulations for the operation of all power vessels, regardless of size, should be treated in like manner).

The space devoted to law enforcement in this part of the report is only proper, because without a safe framework for boating, it is impossible for citizens who make this their chief avocation to realize its recreational value. On the other hand, the new popularity of boating has prompted the Department to enlarge upon other functions. Extensive dredging of rivers and streams has been undertaken to make them more navigable and thereby give boat operators a wider range for their activities. Navigation aids on principal waterways are being added or improved. Interest in boating naturally has been accompanied by the need for more berths to store water craft, and though the state's financial resources are such that this need is far from satisfied, existing state marinas have been rehabilitated and expanded insofar as feasible. The major project in 1957 was at Atlantic City, where the marina administration and concessions building was completed, while construction of a timber boardwalk and a boat landing stage was in progress. Plans for 1958 call for construction of two additional piers accommodating seventy-five boats, meaning a total of 153 berths in the marina. In the meantime, various improvements either were under way or had been completed at the other state boat facilities administered by the Department.

Owing to the understandable insist-

ence of the public upon governmental action to increase recreational opportunities, the supervisory staff of the Department concluded four years ago that this question must be approached with perspective and that long-term as well as short-term factors must be weighed in reaching decisions. This is why the organization of a State Recreation Advisory Committee in 1955 to assist the Commissioner of Conservation and Economic Development in formulating recreational policies is one of the most significant measures to date. The committee's functions are:

1. To appraise recreation needs of the state and assemble and disseminate information relative to recreation.
2. To cooperate in the promotion and organization of local recreational systems for counties, municipalities, townships, and other political sub-divisions of the state; to aid them in designing and laying out recreational areas and facilities; and to advise them in the planning and financing of recreational programs.
3. To establish and promote recreational standards.
4. To cooperate with all agencies,

public and private, in the promotion of recreational opportunities.

It is hardly necessary to observe that one of the biggest items as far as the Department's participation in the recreation movement is concerned is its responsibility for the state wildlife program, a function of the Division of Fish and Game. For convenience, this program and the problems encountered in conducting it will be discussed in sections devoted to conservation and utilization of natural resources. It should be recalled here, however, that as part of the new emphasis on recreation, one of the leading steps has been to bring the Division of Fish and Game into over-all Departmental planning for recreational development. There should be nothing surprising about this. A previous annual report contained the following quotation: "Probably the most important job in conservation for the immediate future is to establish the fact in the minds of the general public that man is a part of a complex environment which must be studied, treated, and modified as a whole and not on the basis of isolated projects." The idea receives proof day after day in our common-sense experience and is as applicable to recreation as any other topic reviewed in this report.

New Jersey State Library

Conservation of Water Resources

The disposition of New Jersey's water resources assuredly is and will remain one of the foremost public questions confronting the people of this state. From an historical standpoint such a conclusion hardly seems unusual. Many great nations and great civilizations have declined and fallen chiefly as a result of the way that they managed their water resources. Countless wars have been fought for the control of rivers and streams, while some of the most deep-seated differences among nations today revolve around the same issue. In our own national history inter-state and intra-state feuds have flared perennially in the face of conflicting claims to sources of water supply.

If, then, the utilization of water resources has become a transcendent issue for New Jersey, the State is undergoing an age-old experience. It appears rare because up until recent years, thanks to a combination of factors, a water supply abundance was taken for granted. Thanks to a fresh combination of factors, however, abundance has given way to shortage. Traditionally the battle against water supply deficiencies in the United States has been centered in the West. It is still being waged in that region but no longer exclusively so, for today the water problem is assuming critical proportions in numerous parts of the densely populated East despite its humid climate.

No one who has lived in New Jersey since the late forties can doubt that this state is a major party to the problem. It has been necessary on more than one occasion and in more than one community to ration water while imposing heavy fines on citizens guilty of violating regulations for water use. At the same time the increase in the water needs of industry has been outrunning the development of new sources of supply.

NATURE OF THE SHORTAGE

Of course, the urgency of this problem varies from region to region within the state. The shortage is most acute in the northeastern metropolitan counties, containing fifty to seventy-five percent of the state's population. Since local resources in these counties have been developed virtually to capacity, they have no alternative but to look beyond their immediate boundaries for additional supply or, in other words, to "import" water from areas of surplus. Fortunately, other parts of the state, except in isolated cases, have not yet encountered serious shortages. Inevitably, however, their needs are on the rise, and herein lies the crux of the matter: We find that some regions today are beset with water shortages that cannot be described as anything but critical, while others have been spared thus far. But sooner or later almost every community is destined to feel the

pinch—that is, unless New Jersey acts to insure every region, county and municipality ample water. Although the topic will be discussed below, it should be added at this point that such a plan depends, above all, upon genuine cooperation among communities and regions and different units of government, not only because cooperation is desirable in human affairs but because, in this instance, it is a necessity of the first order.

Although New Jersey has only recently found itself plagued with a water crisis, it did not come into being overnight nor is there any mystery about its origin. On the contrary men warned four or five decades ago of a day when the state would come face to face with major water supply problems unless steps were taken to acquire reservoir sites then available and to prepare a long-term development program. Our misfortune is that these voices went unheeded.

Meanwhile, New Jersey has been changing. It has been expanding. We have entered an age with new forms of production which are pushing up industrial demand for water to unforeseen heights. We have seen only the beginning of this. Furthermore, the challenge is not merely to supply industry with sufficient water; it is to do so at a price that industry can pay without a crushing overhead. Paralleling this rise in the rate of industrial water consumption, public demand for additional water supply has been on the ascendant. As noted, total population has increased remarkably since 1940, and the prospect is that this certainly will continue. The effect of absolute population growth on water supply needs is sharp enough. Yet, along with it, per capita consumption of water also has moved steadily upward as personal income has attained higher levels and technological discoveries have given birth to new appliances, swelling the volume of water used in most households. Finally, there has been a substantial increase in irrigation, which has

served to enhance New Jersey's agricultural economy.

WATER SUPPLY POTENTIAL

Under the circumstances, it would be cause for wonder if by the middle of the twentieth century water supply had not become a crucial issue. But, ironically, if a shortage has developed, it must be traced to errors in human judgment. Surely it is no product of the state's natural endowment. As far as water potential is concerned, New Jersey's position is very favorable. Average rainfall is forty-five inches a year, hardly a dust-bowl rate of precipitation. Although the total area of the state is not extensive and it has no long and complex river systems to draw upon, there are many smaller rivers and streams that can be tapped. (Equally important, vast quantities of water lie beneath the surface, stored in crevices and pore space of the bed rock as well as in sand and gravel formations). Today New Jersey would have water to spare if more of the state's rainfall were captured and stored instead of being permitted to run out to sea. Several decades ago advance arrangements for containing this water could have been made easily, but no action was taken, and today the storage problem is far from simple. As population has increased and industry expanded, the number of suitable reservoir sites available in a state of only 8,204 square miles has been continuously decreasing. We have reached the stage where it is virtually impossible to construct a reservoir on any site without causing at least minor dislocations.

Coupled with the failure to obtain suitable reservoir sites and to set them aside for future use has been protracted delay in constructing new water supply facilities. Despite a rising demand for additional water, more than a generation has passed since a major water supply project has been completed in New Jersey to impound the state's potentially bountiful supply.

The fact that New Jersey should not have to be wrestling with a water crisis—that it could have been avoided with more foresight in the conservation and development of natural resources—of course, does not cancel out the reality of the crisis. Nor does it remove major dangers implicit in the present situation. Since New Jersey's water shortages are comparatively recent, it is easy to overlook the disruptive impact of a mounting deficiency of supply. Little imagination is necessary, however, to realize that such a condition could strike at many vital points. It would mean inconveniences in an aggravated form. It is conceivable that standards of health and welfare might be endangered. And the economic consequences for both industry and labor must be considered. A report concerning this, prepared for the State Planning and Development Council (an official advisory agency of the Department), contained these conclusions:

"Water supply yields in the highly industrialized northeastern counties barely meet the day-to-day demands. Virtually no excess water capacity is available for expansion of firms now located in the state. Worse yet, water costs are not competitive with other states for firms needing large quantities of water for processing, conveying, cooling, or cleaning raw materials or manufactured products. New Jersey exists fundamentally as a processing, manufacturing state. It has almost no raw materials. The state leads the nation in chemical production. It is in the top five states in the production of wearing apparel, instruments, petroleum and coal products, rubber products, tobacco manufacture, and electrical machinery. New Jersey is in the top ten states in the manufacture of stone, clay and glass products, food, textiles, primary metal industries, paper products, transportation equipment, printing and publishing, leather products and machinery. With one or two exceptions all these industries are large water-users."

It is generally acknowledged that one of the primary responsibilities of State Government is to assist in maintaining a foundation for economic progress, thereby insuring the new jobs required for New Jersey's expanding working-age population. No single factor will determine the scope or rate of economic growth. Yet it is self-evident that economic development and employment opportunities will be profoundly affected by what is done—or not done—in the management of water resources.

THE STATE'S RESPONSIBILITY

Obviously, conservation of these assets is one of the primary duties of the Department, a duty discharged by the Division of Water Policy and Supply under the direction of the Commissioner of Conservation and Economic Development. For many years State Government has regulated the utilization of water resources by controlling diversions from sources of supply. Under law, water must be allocated on an equitable basis with a view to both present and future requirements of all regions. The water conservation statute is administered by the State Water Policy and Supply Council, a quasi-judicial body associated with the Division of Water Policy and Supply. As demand for water has risen to a point where it no longer can be satisfied in certain parts of the state by developing the resources immediately at hand, equitable allocation inevitably has become more complex. This has necessitated new policies and procedures to make certain that sufficient water supply is available for the continued growth and prosperity of the state generally as well as for the protection of legitimate present and future interests and needs of all areas.

The vital service performed by the Water Policy and Supply Council in acting on applications for permits to utilize water resources cannot be overstated. At the same time the current water crisis cannot be overcome by regulation alone. It will subside only as a

result of an intensive movement to develop New Jersey's water resources.

Upon assuming responsibility for state affairs in 1954, the present State Administration adopted the view that the water problem ranks second to none in degree of urgency. It accepted the problem as one that compelled immediate and decisive action. It was the first State Administration to recognize that state leadership is essential to a solution even though traditionally water supply has been almost exclusively a local function.

There are several reasons why state leadership is indispensable, including the magnitude of the problem, its gravity, and the disastrous consequences of any failure to master it without delay. The coordination required in conveying water over long distances from sources of supply to areas of need is another reason for state action. It is also necessary because of the amount of capital that must be raised to acquire reservoir sites and build additional water supply facilities, a task that would impose a severe financial burden on municipalities already under pressure in providing new services.

NECESSITY OF LONG-RANGE PLAN

Beyond all this, the final answer to the water problem does not lie in any single project. It will be found only in a comprehensive, long-range water resource plan for the state as a whole, and State Government, charged as it is with safeguarding the rights of all communities and regions, is the only proper agency to undertake this planning function. With state direction of the planning, provision would be made to protect the future interests of areas of origin—the areas in which new water supply reservoirs would be located—and at the same time to develop the additional water supply required for the more densely populated areas that already are short on water. According to Departmental policy, whatever additional supply might be developed would be allotted on the basis of underlying principles of

existing legislation for equitable allocation of untapped water resources.

The general objective, then, has been to set in motion a state program adequate to relieve immediate shortages and to project an integrated, long-range plan for harnessing New Jersey's water resources in order that every community will be guaranteed access to sufficient water as its need increases. Defining the general approach more completely, the Department at no time has envisioned a state water monopoly. As a practical matter, the success of the attack on this problem depends upon the combined efforts of State Government, municipalities and private water companies. Though no final policy decisions will be made until the path is cleared for proposed action, a large measure of consensus appears to have emerged regarding three further points: (1) State participation should take the form of the construction of water storage facilities. (2) Facilities for the treatment, pumping and transmission of potable water supply to areas of need would be furnished, in turn, by the water-users. (3) Proposed state reservoirs would be operated either by the Division of Water Policy and Supply or a special agency established for this purpose in the same manner that the Division now operates the Delaware and Raritan Canal as a source of water supply. (Water from the canal, which was closed as a traffic artery in 1934 and subsequently rehabilitated by the state, is sold to industry and public water supply systems). In other words, the projects would be self-liquidating, since the charge for users would be sufficient to cover amortization costs. Another point that should be underscored in defining the general approach is this: One of the predominant considerations of the Department in reviewing proposals for coping with the problem has been to hold upheaval of population and dislocation of facilities to a minimum even though in a densely populated state with a small land area, it is virtually impossible to build any

water supply reservoir without some effect on patterns of land use.

Although the necessity for state initiative in water resource development was widely recognized by 1954, the process of clearing the stage for action has not been a simple one. There has been conflict, which probably was only to be expected in the face of proposals for new strategy in attacking a problem of such gravity. There has been debate, and in some instances it has been highly constructive. In others it has been anything but constructive, serving only to slow down the drive to achieve a fair and effective solution of the problem. Naturally, too, there have been claims and counterclaims. These often have confused the public, obscuring real issues and distorting the nature of various proposals. Yet, fortunately, emerging from the welter of controversy has been a series of progressive tendencies and genuine accomplishments that should enable New Jersey to master the water problem if we follow through in years and decades to come.

First, Round Valley, a large natural water supply reservoir site in Hunterdon County, has been acquired by the state with a minimum of inconvenience to property owners. This should be understood in its broader context. It is not an isolated event, but, rather, part of the attempt to develop the Raritan River basin comprehensively in the interest of communities located within the basin as well as those outside that must "import" additional water supply. The importance of an over-all plan for the Raritan prompted the appointment of the non-partisan State Water Resources Advisory Committee, whose members represent labor, business, agriculture, recreation and the general public. The mandate that the committee received was not confined to a study of the Raritan. This, however, was the first order of business since the immediate objective of the Department was a plan that would provide an additional water supply up to one hundred million gallons

daily by realizing the potentialities of the river system.

Development of the Raritan holds top priority for several reasons. It is one of the largest undeveloped waterways located wholly within the state. This means that its resources can be put to use in a shorter time because there are no serious legal hurdles. The point is especially significant, for the Raritan is in close proximity to many of the cities and towns that already have experienced water shortages or soon will do so unless additional supply becomes available.

ADDITIONAL BENEFITS

Though the need for additional water supply has been a primary factor in the Department's attempt to prepare a plan as soon as possible for harnessing the Raritan, it should be stressed that the contemplated program would entail other benefits. Among these would be stream flow regulation, pollution abatement, new recreational opportunities, additional water for purposes of irrigation and other advantages for owners of riparian property.

In its first report the Water Resources Advisory Committee recommended the construction of smaller "on-channel" reservoirs as a means of bringing the quickest possible relief to shortage-stricken communities. The committee also considered the question of developing Round Valley, which is within the Raritan basin but off the river channel. Although acquisition of Round Valley had been authorized at the time the committee commenced its study, the Legislature had stipulated that the site should be used only for the storage of waters of the Delaware River. Since the Delaware is an interstate river, this stipulation served as an impediment to early construction of a reservoir at Round Valley because agreement on a formula for the use of interstate waters usually comes only after several years of negotiation. Since the restriction on the diversion of water from the Raritan to Round Valley was being reconsid-

ered by the Legislature when the committee was writing its first report, the group did not submit detailed recommendations with reference to use of the site.

After some four years of debate on bringing the resources of the Raritan to bear in fighting the water shortage, the final month of 1957 witnessed the removal of some of the most formidable barriers to action. The restriction on diversion of water from the Raritan to Round Valley was lifted. The Legislature also appropriated \$250,000 for investigations necessary to project more complete plans for harnessing the waters of the basin. Therefore, for the first time, the Department received funds for a major step in the field of water resource planning. Beyond this there was every indication that a referendum on the issuance of state bonds for the construction of a reservoir at Round Valley and a companion reservoir at Spruce Run—both self-liquidating—would be called in 1958. A corner definitely had been turned.

PROTECTION OF ALL AREAS

Some of the original opposition to Departmental policies appears to have been the product of groundless fear that areas with a current surplus might be deprived of water required for future growth. And this, unfortunately, was a consequence of misunderstanding. It should be reemphasized that the Department has been resolved at all times to develop New Jersey's water resources only in such fashion that the right of all areas will be scrupulously protected. There is no alternative to regional cooperation in coping with the water shortage. But this does not mean that the problems of one area should ever be solved at the expense of another.

The advances in the movement to develop the Raritan will probably be regarded by readers as the most eventful step in the period being considered. There were, however, other measures being taken by the Department in its

effort to lay the basis for a long-range water supply program for the state as a whole.

One of the paramount items was the continuation of the groundwork for integrated development of the resources of the Delaware River basin. New Jersey, Pennsylvania, New York and Delaware all have a stake in this. The desire to bring the water of the Delaware fully into play in serving the states of the Delaware Valley is hardly new. What is new is the approach. Beginning in 1954, the Department urged the preparation of a plan for the basin that could be used as the framework for a comprehensive program of development. Experience leaves no doubt that a river system must be treated as a unit in preparing plans for the utilization of its resources. A plan dealing with only one or two phases of development not only is inadequate; it may lead to complications and conflicts that cannot be overcome.

While urging this broader approach in planning the program of development, the Department also concluded in 1954 that new forms of governmental cooperation were imperative. As a practical matter, the success of the program, both in the planning stage and in the stage of execution, depends upon a productive working relationship between the federal government and the states of the Delaware Valley. (In the past the idea of federal participation was rejected). The flood of August, 1955, the most disastrous Delaware flood of record, had a strong influence on federal thinking in this regard. Soon thereafter the Public Works Committee of the United States Senate directed the Army Corps of Engineers to conduct a survey of the Delaware, investigating the question of flood control and drafting comprehensive plans for developing the waters of the basin. The Corps of Engineers went to work immediately and set a target date of January, 1959, for completion of the study. Simultaneously, a Delaware Basin Survey Coor-

dinating Committee was established with a membership comprised of representatives of the states, other agencies of the federal government cooperating with the Army Engineers, and the cities of Philadelphia and New York. The function of the committee is to make certain that the numerous official groups participating in preparation of the plan act in concert.

ALL FACTORS UNDER STUDY

Two other organizations have been brought into this movement because of the special contributions they can make. One is Incodel (Interstate Commission on the Delaware River Basin), which was established through an interstate compact entered into by the states of the Delaware Valley years ago and which invested its energies first in striking at pollution in the basin. Subsequently, it produced a blueprint for developing the Delaware as a source of water supply but was unable to translate it to reality because of the opposition of state officials in Pennsylvania in the early fifties. The other participating organization is the recently created Delaware River Basin Advisory Committee, whose members represent the Governors of New Jersey, Pennsylvania, Delaware, and New York and the Mayors of Philadelphia and New York City. This committee's work supplements the activities of the permanent state and federal agencies involved in the conduct of the survey, for the group is exploring social, economic, and legal issues not normally covered in an engineering study. The value of such a committee is to be underlined because in putting to harness the resources of a river basin, the whole process must be related to social and economic conditions lest the engineering approach go askew. The engineering design, in short, must be fully related to broader trends in the area.

The plan for the Delaware will take into account—and reconcile—all the diverse features of development, such as

water supply, navigation improvements, flood control, stream flow regulation, pollution abatement, recreation, and the conservation of fisheries and wildlife. (Deepening of the channel between Trenton and Philadelphia, strongly advocated by the Department on behalf of New Jersey, has begun and is certain to pave the way in time for an even sharper rate of growth in the already rapidly expanding Delaware Valley).

It should be understood that in terms of the long-range welfare of virtually the whole state, preparation and implementation of the plan is a matter of great moment. First, the Delaware basin is the most substantial source of undeveloped water supply available to New Jersey, a fact of no minor consequence when considered in connection with the lack of suitable reservoir sites within the state. On the one hand, we are obligated to develop our own water resources as fully as possible. On the other hand, prospective demand makes it a certainty that sooner or later New Jersey—particularly the densely populated areas—must have access to the waters of the Delaware, and the amount of water available will be contingent on progress in constructing storage facilities to realize the potential of the basin. Along with this, the need for improved stream flow regulation has intensified for various reasons. Low flows during periods of dry weather may harm the oyster industry centered in Delaware Bay or damage the aquifers of the lower Delaware, upon which much of south Jersey depends. A higher minimum rate of flow is also essential from the standpoint of more adequate public and industrial water supply, irrigation, the curbing of pollution, and recreational development on both the main stem of the Delaware and its tributaries. Another reason why the study is so important is the necessity for flood protection, dramatized by the behavior of the Delaware in the late summer of 1955 when lives were lost, and flood waters laid waste property on a grand scale.

The fate of the plan, once completed, naturally is conjectural at this time. The Department is hopeful, however, that Congress will realize the urgency of the need for its implementation with all reasonable speed. Given the enormous growth of New Jersey, including the post-war expansion of the Delaware Valley, development of the river basin becomes more pressing daily. This in itself appears to be further ground for confidence that combined state-federal action is but a matter of time.

OTHER PROBLEMS AND EFFORTS

Among other measures taken by the Department in its new concern with the management of water resources, the following moves in three fields should be singled out:

(1) Studies of the water reserves of the Wharton Tract are well under way, with a view to the long-term requirements of South Jersey, which since World War II has undergone an economic revolution that has carried it into the top ranks of national industry. The exact extent of these reserves is yet to be determined, but they are vast and believed to have the capacity of yielding more than two hundred million gallons daily. During the past year the Division of Water Policy and Supply installed numerous observation wells with automatic recording devices to obtain more data and determine the best means of employing the waters of the tract to full advantage. Suffice it to note that insofar as water supply needs of New Jersey are concerned, the reservation is undoubtedly one of the state's priceless assets. Every care should be taken, and is being taken, to plan the long-range development of its water resources in a manner assuring the public maximum dividends on its investment.

(2) In a related survey, investigations of New Jersey's sub-surface water resources, recommended in the 1955 report of the consulting engineers to the Legislative Commission on Water Supply, continued. Heretofore the Depart-

ment has been unable to press this inquiry because of a lack of funds. An adequate appropriation to begin the investigation, in cooperation with the United States Geological Survey, was approved by the Legislature two years ago and extended last year. Its significance is apparent when one considers how much of the state's undeveloped water supply is stored beneath the earth in natural "reservoirs." Intelligent action in dealing with the water problem as a whole is close to impossible without thorough knowledge of these resources. The results of the survey, moreover, will be of unusual value to all citizens and industries dependent upon sub-surface water.

(3) The management of water resources involves more than combating shortages of supply. It is no less essential that means be devised to reduce the destructive force of water unleashed by hurricanes and other natural phenomena. Not too many years ago the banks of rivers and streams in this state had been developed on but a minor scale. Periodic floods thus were not usually catastrophic, since few persons were vulnerable. More recently, however, with growth and change and an intense hunger for land, citizens have tended to look upon almost every acre in some areas as a site to be developed. The consequence has been a steady encroachment upon flood plains, especially in the northern metropolitan area. Once bare river banks have been built up to the point that thousands of property owners are placed in some degree of jeopardy. In fact, unless more vigorous efforts are made to relieve the danger, it is not unlikely that almost any major flood in the future will be disastrous.

COMBATING THE FLOOD MENACE

At present the Department possesses neither the authority nor funds to launch a full-scale assault on the flood menace. Insofar as possible, however, the Division of Water Policy and Supply has sought to curb the threat to life and

property by improving flood warnings and advising municipalities with regard to the establishment of encroachment lines prohibiting the erection of structures beyond certain points. It also has provided municipal authorities with information pertaining to flood plain zoning, generally recognized as the most effective means of preventing patterns of land use that cause flood hazards. In addition, the Division has worked with such groups as the Governor's Passaic Valley Flood Control Committee, appointed to recommend a program for coping with one of the most profound flood problems in New Jersey.

(The Passaic Valley experienced a devastating flood in 1903, and since that time the situation has become more perilous year by year as population and industry have moved into the area at an increasing rate. Today residential and commercial properties flank the Passaic River channel in large numbers. The problem is of such a magnitude that it is all but impossible for state and local government, acting alone, to finance the necessary flood protection system. Bearing this in mind, the Governor's committee urged in its report that the Army Corps of Engineers make a fresh survey and prepare an inclusive flood control plan in the light of new conditions, one of which is agreement — hitherto lacking—by all interests in the basin on the need for action. The state, in turn, called upon Congress to make funds available for this purpose, and \$50,000 has been appropriated for the Engineers to begin the study).

The flood danger in the Passaic Valley is the most conspicuous because of the tendency of the Passaic River to overflow at frequent intervals and because of the population of the area. Needless to say, however, the menace is not confined to this region. Fortunately, during the last two or three decades intrastate floods have not been

so disastrous as they might have been, but this has hardly been more than coincidental; under the circumstances a flood disaster of record proportions is hardly a remote possibility. Beyond this, the circumstances are becoming more rather than less critical, and unquestionably effective control over floods on intrastate water-ways looms as one of the paramount issues of the times.

OUTLOOK FOR A SOLUTION

In a more detailed report, other activities designed to conserve and develop state water resources might be mentioned. Here the objective has been to define the challenge, to describe the Department's over-all response, and to explain what has been accomplished to date. As gains should not be underestimated, neither should the impression be created that water supply had ceased to be an issue in New Jersey by the end of 1957. Many difficult and complex questions remain to be settled. Cooperation among all interested groups must be maintained. A non-partisan approach will be necessary at all times—and there is no reason why such an approach should be lacking, for if water shortages continue to mount, everyone will lose regardless of partisan inclination.

Notwithstanding possible obstacles still to be surmounted, however, the outlook for overcoming the water crisis is encouraging. Much is yet to be done, but the strides that have been taken in the recent past would seem at least to place us on the road to a solution. Over and above this, the past few years have been marked by a growing appreciation of the implications of the water shortage on the part of the public. Nothing could be more conducive to confidence about the prospect for a solution. There is no substitute for public understanding of the need to insure sustained action.

Conservation of Land and Other Natural Resources

Measured by per capita income, New Jersey's standard of living is close to the highest in the nation. Though it is not lacking in natural wealth, location and human resources have figured to a much greater extent in the position that the state has attained. But as the foregoing discussion of water supply should make dramatically clear, the advantages that New Jersey enjoys by virtue of location and human resources might be offset in the absence of the most careful use of all physical assets.

This has always been true in some measure. Yet today, with so high a rate of population and economic growth, wise and imaginative use of our natural wealth is a more insistent policy objective than ever before. It is more insistent because improper utilization of natural resources could undermine the state's economy. But this is not the only reason. One of the overriding aims of a democratic government should be the creation of conditions that lend themselves to good living, and in innumerable ways these conditions will be determined by the policies and plans adopted for protecting the natural resources of the state.

Among the recurring themes of this report has been the idea that all forms of conservation are interrelated and consequently must be brought into harmony in the formulation of policy. Wa-

ter resources were treated in a special section, not because their utilization can be separated from other phases of conservation but because of the urgency of the water supply problem. This section will be devoted to other conservation issues that have demanded major attention from the Department and will exert a major influence on New Jersey's future.

TEST FOR NEW JERSEY

New Jersey ranks eighth among the states in population. At the same time, it ranks forty-fourth in area.

Little more should have to be said to point up the basic significance of land conservation. The test for New Jersey is the test for a highly urbanized, densely populated, expanding state that must find means of deriving the maximum value from a relatively small acreage in order that it will serve all public needs. If there is any doubt as to the sternness of this test, it is only necessary to recall the difficulties encountered in attempting to acquire suitable water reservoir sites.

The amount of land available in relation to population and industry, of course, hardly means that a dim view of the future of New Jersey is in order. It does mean, however, that much more deliberation is required to determine the most appropriate uses of land. It means,

too, that New Jersey cannot indulge in the luxury of waste, but instead must conceive of ways of putting its acres to a variety of uses whenever this is feasible.

The state's authority to insure wise utilization of land is, of course, limited—and that is as it should be, for it would be a complete and unhappy departure from our political traditions to have the pattern of land use for each of New Jersey's several hundred municipalities determined in Trenton. Whether or not land conservation practices are adequate thus depends in the main upon the good judgment of many different local governing bodies. While the authority of the state is restricted, however, it is in a position to promote proper land use. For instance, this demands, above all, efficient planning. Consequently, the state program of municipal planning assistance is of primary importance. Likewise, State Government can encourage establishment of municipal, county, and regional planning boards where they do not now exist, and the Department is attempting to provide this encouragement and furnish new boards with all possible aid. Furthermore, the state itself holds title to thousands of acres of public land. In the management of these properties it not only can set an example; it can make a substantial contribution in its own right to solving the problem of "more and more people and fewer and fewer acres."

PRINCIPLE OF MULTIPLE USE

This last point is especially pertinent to the operations of the Department of Conservation and Economic Development. In the past four years more than one hundred thousand acres of state forest and park land have been acquired. During the same period twenty-five thousand acres have been added to the state's public shooting and fishing grounds. The Department now is responsible for the administration of a greater amount of state-owned land than any other agency. It is a crucial responsibility and can be discharged satisfactorily only

by giving it due weight and moving along new lines to keep pace with changing events.

The most notable recent innovation in land management is the Department's stress on the principle of multiple land use. The principle itself has been traditionally associated with the conservation movement but regrettably has been little honored, perhaps because of the very territorial expanse of the continental United States. With such an abundance of acres, there has been little pressure in the past to realize all potentialities of the nation's land. This still may hold true in some states. It ceased long ago, however, to be true in New Jersey. The principle of multiple use is not an ideal for this state to pursue in leisurely fashion. It is an immediate and overriding practical objective, for New Jersey cannot expect the available land area to serve the state's total needs without attempts to capitalize on all its possibilities.

Obviously, the concept of multiple use cannot be put into practice successfully on a spasmodic basis or without certain machinery. For this reason a Departmental Land Use Committee was established in the summer of 1954 composed of officials of the various units concerned with conservation. Its membership was so designed that all conservation problems would receive consideration in charting a course of development for the properties under the Department's jurisdiction and that no possibilities would be overlooked. The committee meets on a regular basis, submitting its recommendations to the Commissioner of Conservation and Economic Development. It reviews all proposals for the use of particular areas and all transactions affecting the physical assets administered by the Department. Through its studies, waste in the management of thousands of acres is being curbed or, to state it in more positive terms, the foundation is being laid for employing this land to maximum advantage. An outstanding illustration is the

long-range plan prepared by the committee for the Wharton Tract, providing for the development of its water resources as needed, improvement of timber production on the reservation, restoration of historic sites, and establishment of a diversified recreation program, including camping, hiking, fishing, swimming, canoeing and other water sports.

The principle of multiple use obviously cannot be applied indiscriminately. There are many instances where land cannot be used for one purpose without defeating others. The point must be borne in mind in projecting plans for the development of every area and is another reason why a representative group such as the Land Use Committee is essential.

Apart from its determination to realize maximum value from state-owned lands in the interest of recreation, water supply and other public needs, the Department also must combat destructive natural forces.

THE SCOURGE OF FIRE

Protection against fire must be provided on approximately three million acres or more than one-half of the total area of the state. Some 1,500,000 of these acres lie in central and south Jersey, which is as vulnerable to fire as any section of the United States because of natural debris and atmospheric conditions. In addition, with more people living in the vicinity of woodlands or visiting them for outdoor recreation, the number of fires has increased, and the task of fire prevention and control has assumed much larger dimensions. During the period 1914-1923, the number of fires averaged 860 a year. This compares with 1,220 during the period 1956-57, a typical figure for recent years. Fortunately, new equipment and methods of fighting fires have enabled the Department to achieve better control, so, whereas the average fire during the earlier period burned one hundred and one acres, the average fire last year burned only twenty. Greater care on the part of the individual citizen will tend to hold

back the rise in the absolute number of fires. Even so, however, it is likely that the number will rise further, and there must be a constant study of new techniques that will improve the measure of prevention and make it possible to extinguish fires quickly when they do occur, keeping damage to a minimum.

THE SEA AGAINST THE LAND

As fire constitutes the paramount threat in some regions, the destructive force of the sea is the main cause of apprehension along the coast. Since 1842 the water line in Cape May County is believed to have receded approximately 1,200 feet. Then, too, there was a time when areas in the vicinity of Long Branch, presently covered by more than thirty feet of water, were excellent for farming. To define the problem, the most recent of the authoritative studies of the subject indicate that the shoreline has been undergoing a recession since 1836.

During the 1920s the Legislature passed the first bill authorizing state financial aid to municipalities to resist the decades-old assault of the sea upon the land. Since then state assistance has been available to shore communities continuously and presently local governments match state funds on an equal basis. (The engineering staff of the Bureau of Navigation supervises the program.) In the recent past the annual state appropriation for this purpose has been \$1 million a year, which means that \$2 million has been available for shore protection annually when the state's appropriation has been fully matched.

In the meantime, the national government has come to treat beach erosion as a matter of federal concern, and during the past few years the Army Corps of Engineers has been surveying the shoreline to determine means of further reducing losses and damage caused by erosion. Federal funds may be obtained to implement the Corps' plans. Under the formula for allocating the cost, however, the state's share would be more than it could carry.

The Department, as would be expected, views beach erosion with much alarm. What happens to the shore is of interest to every citizen of the state. It is a first-rate economic asset, with its many attractions for tourists and its commercial and industrial potential. It is important as a site for residential development, and, to repeat, in New Jersey every acre carries a high premium. Obviously it is invaluable from the standpoint of recreation at a time when public yearning for more adequate outdoor recreational opportunities is keenest. In addition to building jetties and other structures for beach protection the Department is investigating more economical and effective methods of checking erosion. In this context, it is only proper to note that greater federal participation in safeguarding the nation's shorelines would open the way for a more decisive effort to preserve a vital resource and would advance the cause of conservation to the benefit of everyone, regardless of place of residence.

PRESERVING WILDLIFE

Closely related to land conservation is the conservation of fish and game, singled out earlier as a top public issue in New Jersey today. A few years ago the late editor of *Harper's*, Frederick Lewis Allen, urged "as a first order of business for every suburban governmental body and for every suburban citizen association a consideration of ways and means of preserving open land for the benefit of succeeding generations." He went on to say: "For the change to the greater metropolitan region is upon us. We cannot stop it. We can only channel and direct it. And we cannot even do that unless we act in good season. For it is later than you think."

This lays bare the root of the problem. New Jersey traditionally has enjoyed a bountiful natural supply of wildlife. But the supply has been left in jeopardy by ongoing expansion from one corner of the state to another. The metropolis has overtaken woods, fields and streams.

This is an index of our growth, but the impact on wildlife habitats has been devastating, and grounds for breeding fish also have been adversely affected. Yet while this has been occurring, the increase in population, going hand in hand with the new interest in outdoor recreation, has resulted in the legitimate insistence upon more opportunities for good hunting and fishing. Although this is not an easy order to fill, nothing in the situation justifies a defeatist attitude. On the other hand, the fact that the problem entails struggle cannot be ignored, and the struggle has to be waged vigorously at all times.

Thanks to resourceful management by the Division of Fish and Game, the wildlife supply is still relatively abundant in spite of urban expansion. The research programs of the Division, moreover, have led to many fruitful discoveries upon which new conservation practices will be based. The substantial increase in the forest and park land owned by the state as well as public shooting and fishing grounds—when coupled with the policy of multiple use—also represents gains in creating an environment in which fish and wildlife can flourish. These developments and others suggest that even in the face of existing difficulties, New Jersey can preserve its wildlife resources. They also suggest, however, that the problem will not solve itself. The solution will come only from thorough understanding that changing conditions make intelligent long-range planning and continuing adjustments in fish and game management imperative.

While seeking to preserve hunting and fishing opportunities for sportsmen, the Department also has been wrestling with a related problem, the crisis in the oyster industry precipitated by the decline in the productivity of seed beds in Delaware Bay. The decline has been under way for a number of years. By 1955 it had reached a point where oyster beds might be unable to recover through natural reproduction of seed. The Department responded with emergency con-

servation measures, which have had to be repeated in varying forms on subsequent occasions. It has resorted to these measures out of the conviction that the survival of an industry with a leading role in the economic life of south Jersey hangs in the balance. Obviously, restoration of the beds to full vitality cannot be expected immediately. The setting of seed oysters in 1957 proved encouraging, however, and this at least raised the hope of rejuvenation of the beds in the foreseeable future. Meanwhile, the Department has also turned its attention to the possibility of an increased oyster yield from shellfish resources on the coast, and experiments have been in progress in the Mullica River area for some time. The comprehensive study of the potential productivity of coastal shellfish resources now is far enough advanced to warrant the verdict that not only can oyster production be expanded but the yield of hard and soft shell clams also can be improved.

DISCOVERY OF ILMENITE

Another major conservation function performed by the Department is the search for mineral resources. The investigations and accompanying analytical work are the responsibility of the Bureau of Geology. The year 1957 was particularly outstanding because of the discovery of ilmenite sands of commercial grade and in commercial quantities. The sands are located in the western part of Ocean County.

Ilmenite is a mineral used in the manufacture of a superior white pigment. One of its distinctive features is that it will not turn yellow when exposed to "smog" or chemical fumes. It has been for this reason very much in demand. In 1956 (the last year for which statistics are available) total production in the United States exceeded 600,000 tons,

and more than 300,000 tons were imported. Since domestic production is centered in Florida, freight charges on ilmenite delivered to New Jersey firms and other manufacturers of titanium pigment are substantial, and material savings could be expected with development of a source in this area.

On the basis of the most conservative appraisal, the potential value of deposits discovered to date in New Jersey is more than \$400 million. (This does not take into account the value of zircon and other heavy minerals that might be recovered in addition to ilmenite.) More than a dozen firms have sent representatives into Ocean County and they have explored the sand to depths in excess of seventy feet. The extent to which the deposits will be mined remains to be seen, but two companies have gone far enough in their investigation, while also obtaining sufficient acreage from property owners in the area, to justify commercial operations. Some of the deposits are on the public shooting and fishing grounds at Collier's Mill. If it should be decided to permit mining operations on this tract, a number of companies would be interested. Royalties accruing to the state, in turn, likely would total several million dollars.

Many other items relating to conservation and development of natural resources might be examined if space permitted. Those discussed in the foregoing pages happen only to be of unusual interest at the moment. The spotlight in this report has been focused on the urban problem and the necessity of devising means to cope with all its manifestations. More is involved, to be sure, than policies for the management of natural resources. On the basis of the facts, however, there can be little doubt that these policies are fundamental in mastering the problem and must be coordinated with other plans for state and community development.

Towards Building a Stronger Economy

It is appropriate to conclude this report with a section on economic development. Most of the policies and programs delineated above have a crucial bearing on the state's economic well-being. If the goal is to establish a broad and durable base for the economy, it will be attained only as a result of a whole series of activities, many of which are not of a purely economic character. As far as future economic conditions are concerned, for example, what could be more significant than plans for utilizing water resources, modernization of New Jersey's air transport facilities, renewal of cities, navigation improvements and the blueprinting of state, regional, and community development? To a degree, then, virtually all operations of the Department might be construed as contributing to the building of a more dynamic economy. The same, it hardly need be said, applies to the operations of most units of State Government. The role of this Department is distinctive chiefly because it has been assigned formal responsibility for economic development.

NEW JERSEY'S POSITION

For decades New Jersey has ranked high in American economic leadership. The dimensions of the economy spring from the advantages of proximity to a highly prosperous market. This has been reinforced by unusual technological

skills, superior transportation facilities, and an ability to adjust to new inventions and methods of productions. Moreover, the state's topography is well suited for industrial construction and operations. And, still further, New Jersey has become one of the research centers of the world, with hundreds of laboratories engaged in almost every conceivable type of scientific inquiry. The economy also is highly diversified, with ninety per cent of all forms of American manufacturing represented and with the combined employment of the two largest types of industry accounting for less than one-fourth of total employment. New Jersey's per capita income is now the third highest in the nation.

Given these facts, the only possible deduction is that the state's position is one of substantial economic strength. The duty of the Department is to help preserve this position and make it even sturdier. To cite a truism, no state is perpetually insured against the multitude of economic vicissitudes that occur in the United States. The future economic strength of New Jersey will be governed by the foresight displayed in establishing a setting conducive to expanding business and industry regardless of changes in the nature and structure of the national economy.

With this in mind, the Department has inaugurated various programs in the past

few years directly designed to improve the climate for industrial and commercial activity. Generally speaking, these programs are directed to the long term. The short-term situation is of no less concern, however, and before turning to the long-range effort, New Jersey's immediate economic problem bears examination.

RECESSION SETS IN

During 1956 and the first part of 1957 the state witnessed the highest rate of investment in plant and equipment in its history. The period was prosperous for most individuals and most industries. During the latter part of the year, however, the tide abruptly shifted. There was marked slackening in the pace of business, and unemployment in November, 1957, rose twenty per cent above the figure for the corresponding month of 1956. At the time this report was being completed, there were indications of a deepening of the recession, which had become nation-wide. How far the downswing of the pendulum might go could only be guessed. Certainly, however, the atmosphere had its uncertainties, including the puzzling flow of international events as well as the scope of the national defense program, which over the years inevitably has had more of an impact on New Jersey's economy than on that of many another state.

As the decline became evident, Governor Meyner appointed a special committee composed of the Commissioner of Conservation and Economic Development, as chairman, the Commissioner of Labor and Industry, and the State Treasurer. The function of this committee is to keep the Governor's Cabinet closely informed of the short-term economic trend. It has also been asked to suggest ways in which the state can help relieve the plight of both the unemployed and the under-employed and to propose programs to help stimulate recovery. This is in accord with Governor Meyner's view that to initiate cer-

tain projects of long-standing urgency now would serve a dual purpose.

It is recognized, of course, that the ability of a single state to grapple with the consequences of a nation-wide recession is limited. A recession of this scope is a national problem and must be attacked on a national basis by the federal government. By the end of the year, many experienced and respected economists were predicting that unemployment might reach or go beyond six million before the economy turned upward. In any case, the depth of the decline by January, 1958, was sufficiently alarming to demand counter-measures. While recognizing the need for care in framing policies to reverse the downturn, the Department was convinced that decisive federal action had become necessary to give the economy the stimulus that was patently lacking and did not appear in immediate prospect.

It should be recalled that one of the worst aspects of a recession is the destructive effect on morale. Few things are more depressing for an individual than to find himself suddenly unemployed, through no fault of his own, but still faced with such items as mortgage payments on his home, family medical costs, and the expense of educating his children. And not only is the morale of the unemployed affected. Millions of others who still are employed develop a sense of anxiety about the future of their own jobs, which tends to influence their spending habits in a fashion that only aggravates conditions. The human factor therefore towers above all others and should be uppermost in the thinking of public officials, state and federal, in their approach to economic troubles. Certainly, too, this is hardly a time for any of our vast productive power to be lying idle, with so much to be done at home and abroad if we are to preserve our national strength and furnish the non-communist world with true leadership.

All this points to but one conclusion:

The first order of business today is to restore the health of the nation's economy. Yet at the same time, as far as New Jersey is concerned, it would be a mistake to lose sight of the fact that from a long-range viewpoint, the economic potential is exceptionally favorable, and the state cannot afford to neglect long-term needs even though we must seek a quick end to present difficulties.

NECESSITY OF EXPANSION

One of the main reasons why everything possible must be done to buttress the underpinnings of the state economy is the certain need for expanding job opportunities. The impending bulge in the job market will be set off by those who today are still of school age. For an accurate measure of the probable increase in job requirements we have only to consider how many students are enrolled, how many new schools and classrooms are being built, and how many dollars are being invested in education. The leaders of today could hardly be more derelict in their duty to youth than by failing to do everything that must be done to brace the economy for expansion.

The prospective need for more jobs has served only to spur the Department to a greater extent in helping stimulate economic development. As this report has noted several times, the various factors that go into moulding the character of a community—highways, recreational facilities, schools, cultural advantages, water supply, planning and many others—are the real determinants of whether the climate is favorable or unfavorable to growth. There is, on the other hand, a definite place for direct moves to push economic development, and, as mentioned previously, these should be examined here.

First, it is essential for New Jersey that American industry be familiarized with the advantages of operating in the state. The Department therefore continues to place regular promotional ma-

terial in different media outlining the benefits of locating in New Jersey. State funds for this purpose are limited. The State Bureau of Commerce maintains a close working relationship with other official and unofficial groups conducting similar programs, however, and as a consequence better coordination of these programs is being achieved, with a resultant increase in effectiveness. More recently another step has been taken along these lines with the Governor's appointment of a corps of Economic Ambassadors, comprised of successful executives in many fields of business. Their mission is to encourage desirable industry to locate in New Jersey by bringing out the state's advantages in informal discussions with other industrial leaders throughout the nation. The assumption underlying the appointment of the Economic Ambassadors is that in all human activity the information that leaders in a particular field pass on to other leaders in that field leaves the most lasting impression.

State Government, incidentally, is but one of numerous agencies investing time and energy in an attempt to attract new industry. Many have been formed in the past few years and are engaged in activities on all fronts, realizing that economic development does not lend itself to a single-factor approach. Most of the groups have already made notable contributions, and the policy of the Department has been to cooperate and to assist them on all occasions in fulfilling their goals.

PROMOTING TOURISM

The brisker pace in the drive to advance the industrial economy of the state—which is responsible for the employment of more than fifty per cent of the working force—has been accompanied by new efforts to promote New Jersey's resort tourist trade. This trade today is big business, having expanded almost without interruption since the end of World War II. In 1950 it was a business with a range of \$500 to \$800

million a year. Today, it is estimated, establishments oriented to the tourist and vacationist are doing a business of more than \$1,500,000, and the figure should soon pass the two billion-dollar mark. In line with its obligations to help all sectors of the economy realize their potential, the Department has been constantly stepping up its promotion of the tourist trade. In the past year the Promotion Section provided 70,000 copies of a brochure to serve as a guide for persons vacationing in New Jersey. Thousands of additional copies were distributed at conferences and conventions. Arrangements also were made for a color film depicting New Jersey's resort attractions to be exhibited throughout the United States as well as on transatlantic ships. All of this was in addition to regular promotion through the media of press and radio. Finally, a campaign is under way to extend the length of the tourist season, thus encouraging increased utilization of New Jersey's resort facilities. A State Committee on Resorts and Travel was organized to formulate a plan of action, and the program blocked out by the committee holds much promise.

The success of direct promotional programs calls for a thorough knowledge of the direction of economy, as do other measures—direct and indirect—to strengthen the economic base. In view of this, one of the most prominent events of the past year was the decision of the Department to undertake a comprehensive state-wide economic survey in cooperation with Rutgers University, the most inclusive survey of its type ever conducted. A 24-man task force drawn from the Rutgers faculty was organized, and the study was divided into three parts, the first of which was completed during the year. It deals with the recent growth of the economy and goes into such topics as population, climate, natural resources, labor markets, and personal income. The second part will analyze the state's over-all economic structure, examining the nature

of manufacturing in New Jersey, the service trades, housing and other items, such as finance, banking, communications, transportation, public utilities, agriculture and industrial research. The third part will take up the role of government, reviewing the relationship between government and business, the state's fiscal system, and New Jersey's educational resources.

The inquiry is not merely another study. It is a carefully planned move to obtain the facts—and all the facts—that must be gathered as a prelude to plotting the broader strategy for promoting economic development. Despite all the information compiled in the past, there are still many gaps. In some instances, we must rely on data no longer current. In other cases we are handicapped because certain features of the economy have not been studied in depth. It makes no difference how much we may be interested in economic expansion or how much we recognize the necessity for special action and are resolved to take this action. We can expect results only if we have up-to-date information that pinpoints both the state's strengths and weaknesses and discloses problems to be solved as well as opportunities to be pursued. Hundreds of constantly changing circumstances must be weighed in fostering economic development. One of the foremost risks is that of proceeding on false assumptions. Although the risk cannot be written off altogether, it is possible to guard against it by objective analysis of what is happening now and what is likely to happen in the future.

USE OF FINDINGS

The findings of the task force, which will supplement the continuing social and economic studies of the Research and Statistics Section of the Bureau of Commerce, should be of value to all private companies in deciding upon alternative courses. As suggested, too, the data also will enable economic development agencies to do their work with

increased confidence in their tactics. Finally, results of the survey will enable the individual community to plan its development in a sounder way.

Though the accent on planning stems from a desire to foster the general welfare of the state, interest in orderly economic expansion has been one of the primary objectives. With our private enterprise economy, government does not build plants or establish new industries. But the part that it does play in economic development is decisive, for economic vigor, as much as anything else, depends upon how skillfully the physical assets of the community are exploited. Here, in turn, the planning function is pivotal and rests squarely on the shoulders of government. It is unlikely today that a community will expand on any scale, unless, through applying the common-sense techniques of planning, it eliminates waste and confusion and develops its resources to the maximum. It is surely not enough for a community merely to designate arbitrarily certain tracts for industrial use and stop there. It must acquire an understanding of industry's needs. By the same token it must understand itself fully in relation to industry and should strive to create a suitable industrial climate on the basis of this insight. Most companies have a stake in community order. They are not likely to give a second thought to a town or city where growth is haphazard, where living conditions are unsatisfactory, and where they must struggle to safeguard themselves against consequences of disorderly development. In short, they want a well-planned community, with the planning thoroughly grounded in a knowledge of the economic facts of life.

More inclusive planning and deeper insight into the structure of and probable changes in the state economy are all the more vital when we reflect upon revolutionary technological changes in the making. There is automation. There is nuclear energy, with all its potentialities as a source of power to run

the factories of the world. There is the long-range prospect of more leisure for the public, with its implications for our general economic life and especially the service trades. These developments and others unquestionably will affect New Jersey profoundly. They must receive more thought, and more thought now, in order that the state will be adequately prepared for inescapable adjustments and will not be waging a new "war" with the strategy and tactics of the old. In this regard the Department has put forth special efforts to accelerate the development of industries involved in the peaceful application of nuclear energy. New Jersey is in a favorable position to pioneer in the technology of the nuclear age. In time the production of nuclear reactors and other goods associated with the use of this new source of power could become one of our principal industrial activities if the proper foundation is laid.

The Department has no direct responsibilities in the field of education. This report would be incomplete, however, if it did not underscore the fact that New Jersey's economic future is dependent on the progress of education. We must have technicians competent for work in all phases of the new technology. We must have scientists who will press forward with research to determine the potentialities of technological innovations and scientific discoveries. All this calls for a broadening of New Jersey's system of higher education. It also means that secondary schools must gear themselves to help meet the need for more technicians, engineers, and scientists.

PROSPECTUS

In summing up, it is reasonable to conclude that New Jersey can look forward to increased economic strength and rising standards of living. Though the recession understandably has obscured the importance of the recent unparalleled expansion of the state's over-all industrial plant — especially when it is operating well below capacity,

as evidenced by unemployment statistics—this expansion has placed us in a more secure position for a future that will bring a sharp demand for additional job opportunities. The shape of the future, of course, will differ from the shape of the present and the past. Industrial rivalry among the states will be more intense than anything New Jersey knew in the latter part of the nineteenth century or the first part of this century. We shall benefit from the economic gains of other regions in the sense that, as their per capita income advances to higher levels, the market for the types of goods in which New Jersey specializes will be enlarged. But this is no invitation to complacency. To safeguard its interest, New Jersey must enter into the competition for plants with all the ingenuity at its command. Another factor to be weighed is the development of the St. Lawrence River. What the effect of

this will be on the economy of the Northeast, with its long-existing stake in ocean-going commerce, cannot be reliably predicted, but the possible implications must be thoroughly explored.

Neither the contest among the states for industry nor the opening of the St. Lawrence Seaway casts any pall over New Jersey's long-range prospects. The advantages that the state offers to all kinds of industry are too numerous to warrant any lack of confidence in the future. But these new sources of competition should bolster our determination to put our own house in the best possible order by coming to terms with such needs as adequate water supply, improved transportation facilities of all kinds, greater emphasis on education, increased efficiency in the use of land, and firmer insistence on balance in mapping the over-all development of state and community.

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