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PART II

# Surface Water Control In New Jersey

Drainage, Flood Control and  
Related Policies in an Urban State

STEPHEN A. DECTER

BUREAU OF GOVERNMENT RESEARCH  
RUTGERS • THE STATE UNIVERSITY  
NEW BRUNSWICK, NEW JERSEY



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## PART II

# SURFACE WATER CONTROL IN NEW JERSEY

Drainage, Flood Control and Related  
Policies in an Urban State

### PART I

1. Framework for Water Policy
2. New Jersey Water Control Laws
3. Administration of Water Resources

### PART II

- Findings and Recommendations
1. Organizational Structure
  2. Substantive Programs

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Research Associate

The Bureau of Government Research

Final Report Submitted by

THE BUREAU OF GOVERNMENT RESEARCH

RUTGERS • THE STATE UNIVERSITY

to the

NEW JERSEY JOINT COMMITTEE ON DRAINAGE

August 1967





## PREFACE

The management of water resources is a difficult subject to divide into independent categories. The origins of this study may be traced to concern over the possibility that pools of stagnant water had facilitated the breeding of encephalitis-carrying mosquitos. But the consideration of legal means for eliminating such stagnant water almost inevitably led to consideration of many other features of surface water control. The resulting study encompasses an analysis both of the competing objectives of water resource management and of the administrative and legal framework within which they may be accommodated.

Part I of the report contains three chapters describing and analyzing the current situation in water control legislation and administration. Part II, printed separately, contains the final two chapters, which include the recommendations made as a part of the study.

The study was made possible by grants from the New Jersey Departments of Conservation and Economic Development and of Health, and from the New Jersey Water Resources Research Institute.

Ernest C. Reock, Jr., Director  
Bureau of Government Research



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OUTLINE OF FINDINGS  
AND RECOMMENDATIONS

Summary of Chapters IV and V and  
Suggested Means of Implementation

*Submitted to the Joint Committee  
on Drainage by the Bureau of Government  
Research, Rutgers - The State University*

# Chapter IV Recommendations

## Implementation

### I. ORGANIZATION: GENERAL FINDINGS (pp. 126-129)

- A. Organizing Principle: the relationship of goals and functions pertaining to water control, development, conservation and protection, and land use control.
- B. Organizational Needs:
  - 1. The creation of mechanisms at each governmental level through which conflicting resource and governmental goals can be accommodated to the greatest degree.
  - 2. Enabling governing agencies to undertake a full range of water management functions on each government level.
  - 3. Allocating functions among agencies at appropriate government levels; positing ultimate authority and powers of coordination at the State level.

### II. STATE LEVEL ORGANIZATION

- A. Organizational Goal: The integration and coordination of interrelated water resource management functions on all levels.
- B. Recommended Interagency Mechanism; Organization:
  - 1. Creation of Division of Water Resources consisting of:
    - a. Water Resources Council
    - b. Water Resources Advisory Committee
    - c. Executive Officer
    - d. Staff bureaus

New legislation;  
Repeal of existing legislation

Implementation

2. Water Resources Council (pp. 141-144)  
New legislation;  
Repeal of existing legislation
  - a. Located in Department of Conservation and Economic Development (hereafter C. & E.D.).
  - b. 9 members, four year staggered terms.
  - c. Chairman chosen by Governor.
  - d. 5 members, each from designated drainage basin regions (p. 142).
  - e. 4 members (including chairman) chosen at-large from State.
  - f. Members removable by Governor for cause.
  - g. Remuneration for costs entailed in work.
  - h. Decisions made by majority vote.
  
3. Staff Bureaus: to coordinate all water resource management functions (pp. 142-144)  
New legislation;  
Repeal of existing legislation;  
Increased appropriations
  - a. Staff selected by Commissioner of C. & E.D.
  - b. Executive officer appointed by Governor.
  
4. Water Resources Advisory Committee (pp. 145-146)  
New legislation;  
New appropriations;  
Membership list
  - a. Initially, 20 members; members can be added.
  - b. 11 State agency representatives from the departments of C. & E.D., Health, Agriculture, Transportation and Community Affairs, and the Agricultural Experiment Station.
  - c. 5 county representatives; four chosen by boards of chosen freeholders and one chosen by county mosquito extermination commissions.
  - d. 3 regional representatives from Delaware River Basin Commission, Interstate Sanitation Commission, and North Jersey District Water Commission.

C. Recommended Interagency Mechanism: Functions and Powers

1. Jurisdiction of Water Resources Council New legislation  
(pp. 148,149) Waters of the State and adjacent land for water resources management purposes.
2. Statement of Purposes (p. 149) New legislation
  - a. Extension of police power over water control, conservation and protection.
  - b. Creation of new agency to integrate interrelated functions.
3. Functions and Powers of Water Resources Council New legislation; Administrative rules and regulations; New appropriations
  - a. Corporate powers, general powers  
(pp. 149,150)
  - b. Formulation of plans and standards and research (pp. 150,151), including:
    - (1) delineation of floodways and flood plains;
    - (2) designation of channels to be protected;
    - (3) standards for flood plain use;
    - (4) land use practices;
    - (5) sewage disposal standards; and
    - (6) stream standards
  - c. Assignment of responsibilities for maintenance of stream channels  
(p. 153)
  - d. Review and regulatory authority  
(pp. 152,153), encompassing:
    - (1) Review and regulation of activities affecting comprehensive plans and standards;
    - (2) Requirement of reporting by other agencies to Council; and
    - (3) Procedures for review; time limit of 30 days.
  - e. Authority to undertake projects and operations. (p. 154)
  - f. Authority associated with collection and development of water resources data  
(pp. 151,152)

Implementation

- g. Increased funds and authority for pro-  
ffering technical and financial aid  
(pp. 155,156)

4. Joint Functions of C. & E.D. and Depart-  
ment of Health (pp. 147,148)

New legislation;  
Interdepartmental  
administrative  
agreements

- a. Joint review of designated  
activities.  
b. Established procedures for review.  
c. Joint administration of aid funds.

5. Water Resources Advisory Committee:  
Functions (pp. 146,147)

New legislation;  
Administrative  
rules and regu-  
lations

- a. To meet regularly.  
b. To aid in planning and in resolving  
conflicts.  
c. To review State agency plans.  
d. To vote on major recommendations.

F. Possible Additional Reorganization

1. Navigation, port development and the  
administration of riparian rights (pp. 156,157)  
Transfer of some functions of the  
Resources Development Council and the  
functions of the Bureau of Navigation to  
the Water Resources Council and to new  
division or staff bureau or bureaus.

New legislation;  
Repeal of existing  
legislation

2. Mosquito Control (p. 157)

New legislation;  
Repeal of existing  
legislation

- a. Alternative #1: Create a new  
division of Mosquito Control in  
C. & E.D.; transfer functions of  
Agricultural Experiment Station to new  
division; reconstitute State Mosquito  
Extermination Committee which would  
become Mosquito Control Council.
- b. Alternative #2: Transfer mosquito con-  
trol functions of Agricultural Experi-  
ment Station and State Mosquito Extermi-  
nation Committee to Water Resources  
Council and staff bureaus; possibly form  
bureau of mosquito control in Division of  
Water Resources.

Implementation

3. Soil Conservation (p. 158)

New legislation;  
Interagency  
administrative  
agreement

a. Alternative #1

- (1) Keep Soil Conservation Committee in Department of Agriculture.
- (2) Provide for joint supervision of transitional soil conservation districts which choose to become watershed districts through the new Water Resources Council and the State Soil Conservation Committee.

b. Alternative #2: Change status of

New legislation

State Soil Conservation Committee;

- (1) Locate in C. & E.D. as district division; or
- (2) transfer functions to Water Resources Council and to new Bureau of Soils Management in the Division of Water Resources.

III. COUNTY LEVEL ORGANIZATION

A. Organizational Goals (p. 159)

1. Enable counties to perform more functions effectively.
2. Fit county functions into overall State framework.

B. County Reorganization

1. County Water Control Agency

a. Organization (p. 161)

New legislation;  
County appropriations

- (1) 5 to 7 members.
- (2) Ex-officio members; county engineer, director of county planning department, director of mosquito extermination commission and county attorney.
- (3) Other members appointed by board of freeholders.
- (4) Decisions made by majority vote.

Implementation

- b. Functions and Powers (p. 162)
    - (1) Formulation of plans and standards; adopted by board of freeholders.
    - (2) Review and regulation of activities affecting plans and standards adopted.
  
  - 2. Employment of County Hydraulic Engineer (p. 162)
    - a. Located in office of County Engineer of each county.
    - b. Possible sharing of salary by State which certifies qualifications of hydraulic engineers.
    - c. Functions:
      - (1) to aid county Water Control Agency and State Division of Water Resources;
      - (2) to undertake technical water control functions.
- New legislation;  
Administrative agreements with State Water Resources Council and watershed districts
- County and State appropriations;  
State rules and regulations

IV. REGIONAL ORGANIZATION

A. Organizational Criteria for Use of Special Regional Agencies (p. 164)

- 1. Use only to solve interjurisdictional problems, when existing units are unable or unwilling to do so.
- 2. Should be subject to control by general governing agencies.
- 3. Should be multipurpose special agencies.

B. Optional Watershed Districts (pp. 165-174)

- 1. Enabling legislation providing for:
    - a. Initiation for formation of district;
    - b. State administrative review of petitions and designation of districts;
    - c. Creation of districts by fiat or pursuant to referendum vote;
    - d. Annexation and consolidation procedures;
    - e. Varying organizational schemes.
- New legislation

Implementation

2. Organization

- a. Size of governing boards, 5 to 11 members, depending on number of participating counties.
- b. Governor appoints chairman of governing board.
- c. Governor appoints one member from each county, from freeholder nominations.
- d. Majority of governing body members elected at-large from district area.
- e. Appointed members removable for cause by Governor; chairman serves at Governor's pleasure.

New legislation

3. Powers

- a. Corporate powers.
- b. Authority to acquire, construct, operate, and maintain water resources projects and facilities and pertinent lands.
- c. Authority to formulate and promulgate plans and standards.
- d. Authority to issue bonds and to impose taxes, assessments and charges.

New legislation;  
Administrative agreements with State Council, County Agency and Soil Conservation districts

4. Control of Exercise of Powers

- a. Required cooperation with other agencies.
- b. Required reporting, audits.
- c. Required hearings.

New legislation

C. Regional Water Resources Advisory Boards

1. Organization (p. 175)

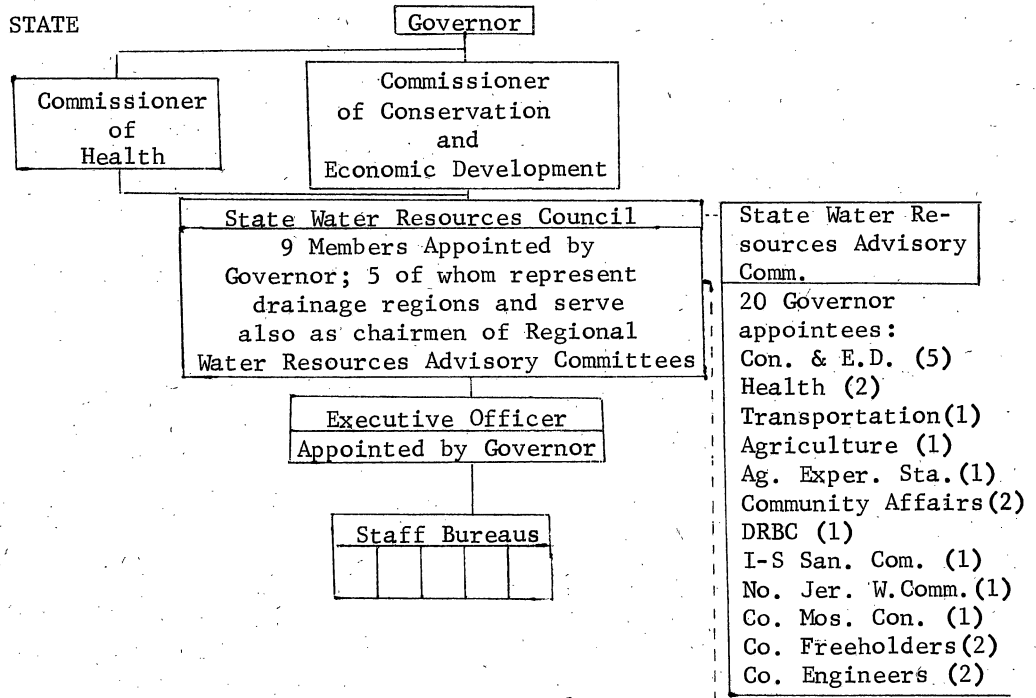
- a. 5 boards, one in each of designated drainage basin regions.
- b. Governor appoints four regional residents as voting members.
- c. Regional representative on State Water Resources Council is a fifth voting member; serves as chairman.
- d. Flexible number of non-voting representatives on board including; local agencies; special agencies; State agencies; private interests.

New legislation;  
State appropriations; Administrative agreements with State Council, County Agency and watershed districts and other appropriate agencies

Implementation

- e. Financed from State and local sources.
2. Functions (p. 176)
- a. Preparation of regional studies, surveys and proposed plans and standards, submitted to appropriate action agencies.
  - b. Review of State, County and watershed district plans and proposals.
  - c. Educational programs in each region.

Chart  
Water Resources Organization Plan



5 DRAINAGE BASIN REGIONS

Regional Water Resources Advisory Committees  
5 Members Appointed by Governor;  
Chm. is member of State Council

21 COUNTIES

Boards of Chosen Freeholders

County Water Control Agency  
5 to 7 Members  
Freeholders Appointees  
County Engineer  
County Planning Director  
Mosquito Control Director  
County Attorney

County Engineer  
Hydraulic Engineer

49 SECONDARY DRAINAGE BASINS

Optional Watershed Districts  
Governor appoints one member from each county, plus a chairman.  
Voters elect members exceeding appointed members by one

# Chapter V Recommendations

## Implementation

### I. WATER MANAGEMENT FUNCTIONS: AN OVERVIEW

#### A. Program Goals

1. Enable single agencies on each governmental level to perform the widest range of functions consistent with their size and fiscal capabilities.
2. Provide for the formulation and promulgation of minimum standards at the State level.
3. Permit agencies on lower levels to promulgate more restrictive standards.

#### B. Basic Water Management Functions

##### 1. Formulation of Water Management Plans and Standards (p. 179)

- a. By the State Council
- b. By watershed districts; county water control agencies and municipal planning boards.

Amend existing legislation;  
New legislation

##### 2. Regulation of Land and Water

- a. By the State Water Resources Council: (p. 181)
  - (1) withdrawal and diversion of waters;
  - (2) waste disposal and stream quality;
  - (3) stream encroachments;
  - (4) maintenance of drainage channels and facilities;
  - (5) standards for flood plain use;
  - (6) supervision of intercounty activities;
  - (7) activities of public agencies and private persons affecting plans and standards.

Existing legislation; New legislation; Interlevel administrative agreements

Implementation

b. By watershed district, county  
and municipal governing bodies

(p. 182)

- (1) maintenance of drainage rights-of-way;
- (2) installation of storm drainage facilities;
- (3) maintenance of channels and drainage facilities;
- (4) land use control;
- (5) water quality control;  
(p. 183)
- (6) activities affecting plans and standards.

3. Authority to Construct, Operate, Maintain and Acquire Projects and Facilities (p. 183)

Existing legis-  
lation; New  
legislation

a. By the State Division of Water Resources

b. By watershed district, county  
and municipal governing bodies.

4. Systematic Acquisition of Lands and Waters for water control, conservation and recreation purposes.

Existing legis-  
lation; Increased  
appropriations;  
Bond issues

(p. 184)

a. By the State Division of Water Resources.

b. By watershed district and county  
governing bodies.

5. Collection and Development of Data so that agencies and persons have convenient access to useful data pertaining to all aspects of water resources management. (p. 184)

a. The State Division of Water Resources would undertake:

- (1) to act as a data clearinghouse, to require information and to undertake investigations;
- (2) to be a repository for maps and to undertake or aid in the preparation of interpreted drainage maps;

New legislation;  
Administrative  
rules and regula-  
tions; Increased  
State appropria-  
tions

Implementation

- (3) to act as a repository for soils data and aid in soils surveys;
  - (4) to survey stream channels.
  - b. County and municipal governing bodies would be authorized to include more water resources data on official maps. (p. 185) Amend existing legislation
  - c. Municipal governing bodies would be required to include more water resource data on municipal tax maps; counties would be required to act as a depository for municipal tax maps. (p. 185) Amend existing legislation
6. Financing Authority and Appropriations
- a. State level
    - (1) Increased appropriations to finance operations of Division of Water Resources. (p. 187) Increased State appropriations
    - (2) Establishment of State fund (s) for financial aid to local units for various water management activities. (187) Increased State appropriations; Bond issue(s)
    - (3) Establishment of fund for State acquisition of lands and waters. (p. 187) Increased State appropriations; Bond issue
  - b. Local level: enable watershed district boards, county and municipal governing bodies to finance water management activities by means of (p. 188):
    - (1) general taxation;
    - (2) imposing benefit assessments;
    - (3) issuing revenue and general obligation bonds;
    - (4) imposing user charges.Some new legislation; Amendment to existing legislation

II. REGULATING CHANNEL ENCROACHMENTS

A. Program Goals (p. 189)

- 1. Enable the State to take the initiative in delineating and regulating stream encroachment.

Implementation

2. Extend regulatory controls to storm water drainage channels.
3. Allocate responsibilities for regulating encroachments.

B. Recommended Legislative Program

1. Formulation of Definitions to include: (pp. 190-192) natural stream channel or watercourse; drainage channel, storm water drainage channel; natural storm water drainage channel; waterway; flood plain; flood channel; floodway; approved floodway; encroachment lines. New legislation, Titles 58 and 40
2. Statement of Public Purpose to be served by regulating channels. New legislation, Titles 58 and 40
3. The Delineation of Channels to be Regulated by means of the preparation of interpreted drainage maps. (p. 192) New legislation; State appropriation
4. The Regulation of Established Floodways by the State Water Resources Council (pp. 192-194) Amendment of existing legislation; Preparation of State manual of procedures and practices; Increased State appropriations
  - a. Establishment of floodways, after hearings.
  - b. The review and regulation of encroachment applications.
  - c. The removal or acquisition of existing encroachments; the declaration and regulation of nonconforming uses.
5. State Aid to offset local regulatory administrative expenses. State appropriation; or bond issue
6. The Regulation of Adopted Drainage Rights-of-Way by County and Watershed District Governing Bodies

## Implementation

- |  |   |
|--|---|
| a. The adoption of drainage rights-of-way into county and watershed district master plans by the governing bodies, after hearings. (p. 194)  | New legislation; County and watershed district appropriations; Administrative agreements;                           |
| b. The regulation of the obstruction or alteration of adopted rights-of-way by the county water control agencies and watershed district boards. (p. 195)                           | Manuals of procedures and practices for and among the State Council, county and watershed district governing bodies |
| c. The removal of existing encroachments (after the passage of legislation); their acquisition; the declaration and regulation of nonconforming uses. (p. 196)                     |   |
| d. Permission granted to county and watershed district boards to promulgate more restrictive regulations than those formulated by the State Council.                               |   |
| e. The requirement of submittal of plats and plans from all plat-reviewing, permit granting and zoning agencies to county water control agencies and watershed districts. (p. 195) |   |
| f. Imposition of time limitations on review. (p. 195)  |   |
|  |   |
| 7. <u>Regulation of Channels by Municipalities.</u> (p.197) Permission granted to promulgate more restrictive standards than those formulated by higher level agencies.            | New legislation; Administrative agreements  |

### III. MAINTENANCE OF CHANNELS

- A. Program Goals (p. 199)
1. Require and supervise the maintenance of designated channels pursuant to the State's police power.
  2. Provide means for undertaking of timely drainage work by appropriate agencies with adequate funds to do so.

Implementation

3. Equitably allocate the costs of undertaking drainage work.

B. Allocation of Maintenance Responsibilities

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>1. <u>Statement of Public Purpose</u> to maintain a system of drainage channels. (p. 199)</li><li>2: <u>Definitions and Delineation</u> of channels to be regulated. (p. 199)</li><li>3. <u>Incorporation of Delineated Channels into Adopted Master Plans.</u> (p. 200)<ol style="list-style-type: none"><li>a. <u>State Comprehensive Plan.</u></li><li>b. <u>County, watershed district and municipal master plans.</u></li></ol></li><li>4. <u>Review and Regulation of Drainage and Channel Work</u> by the State Council, watershed district boards and the county water control agencies, including:<ol style="list-style-type: none"><li>a. drainage, land and stream reclamation;</li><li>b. improvement, construction and alteration of channels.</li></ol></li><li>5. <u>Review and Regulation of Land Use Practices</u> affecting water control.<ol style="list-style-type: none"><li>a. <u>By county water control agencies and watershed district boards</u> pursuant to encroachment regulations;<ol style="list-style-type: none"><li>(1) enforcement of grading standards;</li><li>(2) control of erosion and siltation.</li></ol></li><li>b. <u>By means of existing zoning and land use regulatory authority.</u> (p. 201)</li></ol></li></ol> | <p>New legislation, Titles 58 and 40</p> <p>New legislation, Titles 58 and 40</p> <p>New legislation, Titles 58 and 40</p> <p>New legislation; Manual of procedures and practices; Administrative agreements</p> <p>New legislation; Administrative rules and regulations</p> <p>Existing legislation</p> |
|---|---|

Implementation

6. Assignment of Maintenance Responsibilities

- |    |  |   |
|----|--|---|
| a. | Establishment of drainage policies for each drainage basin and county. (p. 202 Appendix A-2)   | Administrative policy statements  |
| b. | Assignment of maintenance responsibilities by the State Council. (pp. 203-205)   | New legislation; State administrative rules and regulations;              |
| c. | Establishment of procedures for determining the existence and scope of drainage problems at appropriate governmental levels. (pp. 204,205) | Manual of procedures and practices; Inter-level administrative agreements |
| d. | Establishment of procedures to allocate costs of undertaking drainage work. (p. 206)   |   |
| e. | Provisions for the enforcement of responsibilities assigned. (p. 206)  |   |

C. Performance of Drainage Work

- |    |   |   |
|----|---|---|
| 1. | Authority to <u>municipalities and watershed district boards</u> to undertake drainage work as a public benefit.  | New legislation   |
| 2. | <u>Creation of Drainage Taxing Districts</u> by county boards of freeholders after appropriate reviewing agency determines the scope of drainage problem and the work to be done. | Existing legislation; Manual of procedures and practices; Administrative Agreements |

IV. REGULATING STORM DRAINAGE FACILITIES

A. Program Goals (pp. 208,209)

1. Insure the installation of adequate storm drainage facilities.
2. Enforce consistent standards within entire drainage basins.
3. Equitably allocate financial burdens entailed in facilitating increased storm water runoff attending urban development.

Implementation

4. Minimize the costs entailed in the alleviation of downstream surface water problems.

B. Regulation of the Installation of Storm Drainage Facilities

1. The Adoption of Drainage Master Plans  
Authority granted to the State Council, watershed district, county and municipal governing bodies. New legislation;  
Amendment to existing legislation; Existing legislation
2. Enhanced Municipal Regulatory Authority  
  - a. Extension of review and approval authority to individual development sites.
  - b. Designation of minimum size lots for the extension of regulatory authority.
  - c. Permission granted to enforce standards more restrictive than those of higher level governing bodies.Amend existing legislation;  
Administrative rules and regulations
3. Authority to Counties, Watershed District Boards and the State Council to Regulate Storm Water Drainage including:  
  - a. Review and regulation of all development sites within their jurisdictions. (pp. 212,213)
  - b. Designation of the scope of their regulatory jurisdiction.
  - c. Allocation of financial responsibilities to private persons and public agencies contributing to problem to be alleviated; enforcement of such responsibility. (pp. 214,215)
  - d. Imposition of a time limit on review authority. (p. 215)New legislation;  
Manual of procedures and practices; Interlevel administrative agreements
4. Regulation of Channel Improvement  
by the State Council, watershed district boards and county water control agencies. New legislation;  
Administrative agreements

Implementation

C. Public Acquisition of Drainage Rights-of-Way

1. Delineation and Designation of drainage rights-of-way to be acquired. (p. 218)
    - a. By the State Council.
    - b. By county water control agencies and watershed district boards.
  2. Authority to Acquire drainage rights-of-way (p. 219) for water control purposes by all means, including condemnation.
    - a. To the State Council.
    - b. To county and watershed district governing bodies.
  3. State Aid to assist local acquisition programs.
- New legislation; Interlevel administrative agreements. Increased State appropriations; Local appropriations
- New legislation; Existing legislation; Interlevel administrative agreements; State and local appropriations; Bond issues

V: CONTROL OF THE USE AND OCCUPANCY OF FLOOD PLAINS

A. Program Goals (pp. 219,220)

1. Minimize flood damage and unsanitary conditions.
2. Minimize costs of engineering works.
3. Preserve wetland areas.

B. Suggested Programs

1. State Programs to Effect Control (p. 221)
    - a. The delineation of flood plain areas by the State Council.
    - b. The formulation of standards for flood use, after hearings by the State Council. (p. 221)
- Existing legislation; Increased State appropriations
- New legislation

Implementation

- c. Authority to aid local units on the condition that they undertake activities to give effect to State standards. (p. 223)      New legislation; Amend existing legislation; Increased State appropriations;
  - d. Authority to aid local units to offset regulatory administrative expenses. (p. 223)      Bond issue(s); Administrative rules and regulations
  - e. Legal and technical assistance to local units.      Increased State operational appropriations
2. Public Acquisition of Flood Plain Areas (pp. 223-225)
- a. By State Council:
    - (1) identification of flood plain areas;
    - (2) inventory of public lands;
    - (3) coordination of acquisition programs;
    - (4) State aid for local acquisition programs.      Principally, State appropriations, bond issue(s); also local appropriations, bond issues
  - b. Authority to the State Council, watershed district and county governing bodies to acquire development rights, and conservation easements by all means, including condemnation.      New legislation





**OUTLINE OF ALTERNATIVES  
TO RECOMMENDATIONS**

**Summary of Some Alternatives Considered  
and Rejected in Chapters IV and V**

Submitted to the Joint Committee  
on Drainage by the Bureau of Government  
Research, Rutgers - The State University



I. STATE LEVEL ORGANIZATION ALTERNATIVES

A. Least Radical Alternative: Effecting Improvements Within the Present Organizational Framework (pp. 130-134)

- |  |  |
|--|--|
| 1. <u>Augmenting the Powers of the Department of Conservation and Economic Development</u> (Hereafter, C. & E.D.) (p. 130)   | Existing legis-<br>lation; Increas-<br>ed State appropr-<br>iations<br>New legislation               |
| a. Revitalization of the Water Policy and Supply Council planning authority.   | New legislation  |
| b. Enhanced review power of the Council.   | New legislation  |
| c. Power to assign responsibilities to maintain channels.  | New appropria-<br>tions  |
| d. Increased aid funds.  | Amend legisla-<br>tion   |
| e. Enhanced powers to construct, operate and maintain facilities, projects.  | Amend legisla-<br>tion   |
| f. Assumption of a data clearing-house function.   |  |
| g. Augmentation of staff.  |  |
| 2. <u>Formalizing relationships</u> between the departments of C. & E.D. and Health. (p. 131)  | New legislation;<br>Administrative<br>agreement; Bond<br>issue or in-<br>creased appro-<br>priations |
| a. Joint formulation of plans and standards.   |  |
| b. Joint review power over designated activities.  |  |
| c. Administration of a common aid fund.  |  |
| 3. <u>Expediting legal processes.</u> (p. 132)<br>Enhancing the capacity of the Attorney General's office to expetiously handled referrals from water management agencies. | Increased<br>operational<br>appropriations   |
| 4. <u>Creation of an Advisory Committee,</u> an interlevel, interdepartmental body:  | New legislation;<br>Membership list;<br>Increased State<br>appropriations                            |
| a. to assist in data collection and planning;  |  |
| b. to aid in resolving conflicts.  |  |

Implementation

5. Reasons for Rejecting Alternative
  - a. Imperfect means of resolving conflict; no positing of ultimate authority to coordinate.
  - b. Division of Water Policy and Supply, as presently constituted, in outlook and in personnel, is not sufficiently comprehensive to assume water resource management coordinating functions.

B. Most Radical Alternative: Establishment of New Department (pp. 134-139)

1. Department Encompassing Land and Water Management (p. 135) New legislation
  - a. Organizing principle: the integration of functions pertaining to water and land
  - b. Consolidation of agencies.  
Departments of Agriculture, C. & E.D.; environmental health functions of the Department of Health; drainage aspects of mosquito control functions of Agricultural Experiment Station.
  
2. Department of Water Resources (p. 135) New legislation
  - a. Organizing principle: the integration of all water resource management functions.
  - b. Consolidation of agencies.  
Conservation functions of C. & E.D.;  
Water control functions of Department of Health;  
The Soil Conservation Committee;  
The mosquito control functions of the Agricultural Experiment Station.

Implementation

3. Reasons for Rejection of New Department Alternative

- a. Full evaluation was considered to be outside the scope of our study.
- b. There are too many agencies involved in water resource management activities to be included in a single department; many agencies which could be included in a new department perform functions logically related to the functions of their present departments.
- c. Such radical reorganization would involve the creation of more than one new department.
- d. In light of the need for speedy implementation, the present political atmosphere does not appear to be favorable for the formation of one or more new departments.
- e. It is likely that adequate coordination can be effected by means other than the creation of a new department.

II. COUNTY LEVEL ORGANIZATION ALTERNATIVE

- A. Enhanced Powers of County Planning Boards to assume the principal water management functions at this level. (p. 160)

Amend existing county, planning legislation

1. Authorizing the formulation of comprehensive water management plans and standards.
2. Broadening the membership of planning boards and the personnel of planning departments to encompass varied water management skills.
3. Enhancing the powers of planning boards to act as a repository for pertinent water management data.
4. Increasing the subdivision regulatory powers of the boards.

## Implementation

5. Authorizing the board to exercise recommended new encroachment legislation.

### B. Evaluation of Enhanced Planning Board Powers

1. Separate small body with peculiar water management skills and with no other functions is needed.
2. Need to have similar water control agencies in every county.

## III. DRAINAGE DISTRICT LEGISLATION (pp. 175-207)

### A. Amending Drainage District Legislation

1. To permit action by property owners to undertake drainage work.
2. To provide for the imposition of special assessments for work done.
3. To meet objections raised in the veto message of Governor Meyner to Assembly Bill 287 passed in 1956. (p. 175, Appendix E-1)

### B. Evaluation of Drainage District Legislation

1. Considered to be too narrow in scope and to lack sufficient financial flexibility to solve drainage problems in an urban environment.
2. Considered to require too many complicated steps for their creation, operation and financing.







## Chapter IV

# FINDINGS AND RECOMMENDATIONS PERTAINING TO ORGANIZATIONAL STRUCTURE AND ADMINISTRATION

### A.

#### GENERAL CONSIDERATIONS IN FORMULATING ORGANIZATION RECOMMENDATIONS

In formulating recommendations pertaining to the organization and administration of water management programs a number of steps were performed.

#### 1. The Identification of Program Goals and Techniques

An examination of goals indicated that water control goals affect other goals pertaining to the allocation of scarce water and land resources. Conversely, other goals pertaining to such allocation affect water control goals.

A second finding was that water alone is not an adequate organizing principle. The problems leading to the undertaking of this study involve the relation of water and land. (Some would contend that the physical or natural environment, water, land, and air, is the most logical organizing principle. For a brief discussion of this, see page 135 of this report.)

From the initial analysis, some organizational objectives were posited:

- (1) The creation of mechanisms through which the inter-related consequences of land and water decisions can be measured, anticipated, and to a degree controlled.
- (2) The creation of mechanisms to insure that all competing and complementary goals and values, whether determined as primary or secondary, are considered together so that conflict can be minimized and complementarity maximized.

- (3) The structuring of mechanisms to allocate functions in such a way as to achieve goals effectively and efficiently, while equitably distributing financial burdens.
- (4) The structuring of mechanisms in such a way as to achieve and preserve democratic values of government.

2. Examination of the Allocation of Functions, Responsibilities, and Powers, and Actual Administrative Experiences

The procedure in determining organizational patterns has been to examine pertinent functions to be performed, their territorial scope, their degree of application to policy goals, and then to determine legal and administrative patterns of responsibility.

At this stage of analysis the following functions were identified:

- (1) The formulation of plans and standards encompassing the interrelationship of goals and programs of water management within functional areas.
- (2) The collection and development of data so that data adequate for the making of sound water management decisions are readily available.
- (3) The undertaking of operations, including:
  - (a) designing and constructing works according to uniform standards within functional areas;
  - (b) operating and maintaining structures, facilities, and works by agencies with the capacity to do so.
- (4) The promulgation of plans and standards:
  - (a) uniformly within functional areas;
  - (b) by agencies with powers to do so effectively within such areas.
- (5) Rational and equitable financing of functions to be performed:
  - (a) insuring that agencies have financial resources commensurate with their responsibilities;
  - (b) allocating burdens among persons reasonably related to the benefits received, to their fiscal capacities, and to their contribution to the problems to be alleviated.

### 3. Application of Criteria of Administrative Adequacy

The allocation of functions and of administrative responsibility to public agencies was based on the following criteria:

- (1) A reasonable congruity of area and function.  
Agencies assigned operational or supervisory functions should have the capacity to do so within functional areas encompassing or coterminous with the scope of problems to be alleviated.
- (2) The congruity of functions to be performed by public agencies and their authority to do so.  
Agencies assigned the responsibility for performing functions should be authorized to exercise sufficient powers to do so effectively.
- (3) Administrative integration and coordination.  
Clearances must be systematically formalized and clear lines of responsibility should be maintained or established.
- (4) Political responsiveness, accountability, and viability.  
This criterion should encompass at least access to decision centers by pertinent clientele and interests, the representation of pertinent constituencies, accountability in the making of decisions, and the capacity to gain and keep political support.

### 4. Deduction of Basic Propositions

a. Whenever possible, general-purpose or multipurpose agencies which can consider all water resource goals should be the repositories of major functional or program responsibilities.

b. Water control and other water resource decisions should be made by agencies with adequate powers and with jurisdiction encompassing or coterminous with the scope of water problems.

c. All functions relating to at least water control, and preferably to water resources management, should be posited in single agencies on appropriate governmental levels or at least supervised and to a degree controlled by such agencies. These functions should include: the formulation of plans and standards, the collection and development of data, the undertaking of operations, and the enforcement of regulations. Research, data collection, development, and planning should be geared to specific action programs. Decisional units on every governmental level, integrating such functions, can take their place in an overall organizational structure. The anticipated results of such centralized decision-making and functional integration are: the balancing of competing

claims and programs, the achievement of truly integrated programs and not merely additive agreements among autonomous or semi-autonomous agencies, and the avoidance of the dominance of segmental interests.

d. At the same time clienteles should be afforded access to decision-making centers and agencies should be accountable for their actions to pertinent constituencies.

## B.

### STATE LEVEL ORGANIZATION

#### Interagency Coordination

A major finding of this report is that there is a need for some mechanism on the State level to coordinate goals, programs, and activities of agencies and persons operating on all levels throughout the State. Relationships among State agencies, between Federal agencies and State agencies, and between State agencies and local agencies need to be formalized in order to effect greater coordination.

No single agency on the State level, as presently constituted, is capable of integrating or coordinating interrelated water control and resource management functions. The Department of Conservation and Economic Development is capable of coordinating many of these functions. Yet, its decisions affect and are affected by decisions pertaining to water pollution control, the regulation and protection of potable water, the drainage aspects of mosquito control, agricultural drainage, irrigation and other agricultural water practices, soil erosion control, the construction of highways, and the construction of public utilities. All of these functions are performed by agencies in other departments and are only partially regulated by the Department of Conservation and Economic Development. None of these agencies is directly represented or systematically consulted in making the decisions of the Department. Furthermore, other agencies are responsible for providing services which have an impact on the effectiveness of the programs of the Department.

#### Some Basic Questions: Some Alternative Responses

Given the suggested framework and criteria some basic questions must be answered:

a. Which water management functions should be brought under common control and supervision? To what extent should such functions be brought under such control and supervision?

b. Can it be done essentially within the existing organizational framework? To what extent can existing agencies be brought within a coordinating mechanism? What degree of agency autonomy should persist? What would be accomplished? Given the assumption that in all coordinating efforts some agency autonomy must be sacrificed, to what degree should this be done?

Three types of responses to these questions were considered in this report. Each was evaluated with reference to the likely achievement and accommodation of interrelated water resource management goals, the allocation of functions which must be performed, and conformity with criteria of administrative adequacy.

In the following subsections, three basic approaches are analyzed: (1) effecting improvements essentially within the present framework; (2) the creation of a new department; and (3) a recommended approach, a type of interagency mechanism, positing ultimate authority in the decision-making apparatus.

#### 1. The Least Radical Approach: Effecting Improvements Within the Present Organizational Framework

A number of proposals have been made in chapter five dealing with substantive recommendations which could serve to bolster the capacity of agencies within the existing framework to coordinate various elements of water management programs.

Proposals more directly related to organization will be made here. If the present framework is to remain essentially the same, it was determined that at least the following steps could be taken to provide for coordination at the State level.

##### a. Augmenting the Powers of the Department of Conservation and Economic Development

The Department of Conservation and Economic Development is assigned the most comprehensive water resources management functions and is granted the most extensive regulatory powers of any State agency surveyed. Consequently, if any one of the existing agencies were to be granted powers to effect greater coordination, it would be this department. The following steps are considered basic for the Department to take an enhanced role in this connection.

First, strong leadership must be provided by the commissioner to coordinate all aspects of water resources management.

Second, there is need for a restatement of the authority of the Water Policy and Supply Council to formulate comprehensive plans and standards encompassing all of the elements of water resources management. Funds would have to be made available for the staff and facilities to undertake such activities on a continuing basis.

Third, to give effect to formulated plans and standards, the Water Policy and Supply Council could require that designated public and private programs and activities undertaken on all government levels, involving or affecting water resources management, be reviewed by it before they are undertaken. While this would not constitute the power to reject or approve such undertakings, it would provide for comment by a single agency with reference to comprehensive plans and standards applicable to a wide variety of water management activities.

Fourth, the Department could be authorized to require the maintenance of a system of designated basic watercourses or drainage channels and to delegate responsibility of it. (This would constitute the most far-reaching new power and has been described in chapter five.)

Fifth, the Department could be authorized and allocated the funds to proffer augmented technical and financial aid in the form of loans and/or grants. These loans would be given to local agencies to assist them in undertaking operations, in acquiring flood plain areas and drainage rights-of-way and in enacting regulations to give effect to standards developed on the State level. (See chapter five.)

Sixth, the Department could be authorized to undertake the construction, operation and maintenance of a wide number of water control projects.

Seventh, the Department could be authorized and allocated the funds to develop and collect data on its own on a continuing basis and to act as a clearinghouse for data collected and developed elsewhere.

Eighth, the staff of the Division of Water Policy and Supply would have to be augmented significantly, so that it could effectively perform existing and recommended functions.

b. Formalizing Relationships Between the Departments of Conservation and Economic Development and Health

Of the departments surveyed, only the Department of Health shares with Conservation and Economic Development, extensive regulatory powers applicable to water resources management. For proper coordination of the administration of these interrelated regulatory provisions, relations between the departments could be formalized in a number of areas.

First, the Department of Health could participate in the formulation, adoption, promulgation and periodic revision of comprehensive water resources management plans with the Conservation and Economic Development Department. Basic policy decisions could be coordinated in developing stream quality criteria, as has already been done. Coordination is also necessary in the formulation of policies which: (a) recognize the relationship between the regulation of diversion withdrawals of surface and ground waters, and pollution control; (b) establish and enforce standards regulating the treatment of sewage and wastes before they flow into streams; (c) formulate and promulgate standards pertaining to the location, the dimensions and capacities of sewage disposal and treatment facilities; and (d) involve the relationship of water control, water use, and public health.

Second, joint review by both departments could be exercised over designated activities which affect these comprehensive plans and standards and involve matters affecting public health.

In making this proposal, it is contemplated that the Department of Health would designate those undertakings which have a bearing on public health in order to provide the basis for joint review.

In any event, the Department of Health could endeavor to more effectively enforce those powers which it does possess to control water pollution. It would appear that more funds should be allocated to the Department of Health to augment the staff and facilities needed to effectively enforce stream pollution control laws in particular.

Third, the two departments could supervise and jointly control watershed and sewerage districts and authorities, requiring conformity with uniform standards as to their establishment and operation. (See section C of this chapter for a discussion of watershed districts.)

Fourth, a common fund could be administered by both departments to aid local communities both in the undertaking of water control and conservation projects and in the undertaking of sewage disposal and treatment projects. The fund would give effect to plans and standards formulated jointly.

#### c. Expediting Legal Processes

The Attorney General's Office in the Department of Law and Public Safety should be enabled to handle more expeditiously all referrals to it pertaining to water resources management so as to facilitate rapid enforcement of existing regulations.

Matters concerning water control and conservation and water quality control should be handled together and keyed into

the programs of multipurpose control agencies so that enforcement policies, procedures and schedules are coordinated.

d. Creation of an Advisory Committee

An interdepartmental and interlevel body composed of many of those members presently constituting the Joint Committee on Drainage could be given statutory recognition as an advisory agency to the Governor and to the Commissioners of Conservation and Economic Development and Health.

Representatives of State agencies on the present Joint Committee on Drainage could provide the basis of the advisory committee's membership to be augmented by the addition of a representative of the Department of Community Affairs. County freeholder and county engineer representatives could be chosen by the Governor from nominees suggested by the New Jersey Association of Chosen Freeholders. A member representing county mosquito extermination commissions, could be selected by the Association of Mosquito Extermination Commissions.

First, the Advisory Committee could be authorized to assist in coordinating the investigation, data collection, and planning activities in connection with water resources management.

Second, it could be authorized to participate in making proposals for the formulation, promulgation and the periodic revision of comprehensive plans and standards in connection with water control, and water resources management in general.

Third, it could be authorized to meet regularly to adjust such plans and standards to meet changing conditions and exigencies.

Fourth, it could be authorized to analyze salient policy issues, especially those that interfere with coordination of agency plans, and press for resolution of such issues by those responsible.

e. Evaluation of Such an Approach

The least radical approach, then, would consist of four basic steps which might be taken within the present organizational framework:

- a. the water management powers of the Department of Conservation and Economic Development would be augmented,
- b. the relationship between that department and the Department of Health would be formalized,

- c. the handling of legal processes concerned with water management would be expedited, and
- d. a permanent Advisory Committee would be created as a successor to the Joint Committee on Drainage.

The above proposals would disrupt existing relationships to the least extent. Some of these proposals should be implemented no matter what structure exists. Undoubtedly, they would be the most feasible means of achieving some of the goals posited in this report. However, feasibility alone, is not a virtue.

By merely retaining the present structure with only minor modifications, some of the existing problems persist. First, existing agencies would continue to pursue their programs separately. There would be no ultimate authority to resolve conflicts and to enforce the accommodation of interests. Second, without reconstituting the Water Policy and Supply Council and its staff agencies, they will not have the breadth of outlook and diversity of skills and expertise required for effective coordination.

## 2. The Establishment of a New Department: The Most Radical Approach

### a. Consideration of Possibilities

Although it goes beyond the scope of this report as originally conceived, a great deal of thought was given to the creation of a new department to encompass those programs and goals which were deemed to be highly interrelated.

In chapter three, a number of findings were posited. First, on the State level, many agencies in at least five major departments perform functions involving or affecting water and land resources. Second, in almost every instance, these functions were logically related to other programs undertaken in their respective departments. Third, the only exceptions to the last propositions were the somewhat illogical existence of some functions involving the drainage aspects of mosquito control in the Agricultural Experiment Station in the Department of Education and the loose integration of the Soil Conservation Committee with the other functions performed by the Department of Agriculture.

On the basis of the analysis appearing in various sections of this report and the findings related in the preceding paragraph, at least two types of departmental reorganization were adjudged to be worthy of consideration, one providing for a department encompassing land and water management, the other providing for a department of water resources.

b. A Department Encompassing Land and Water Management

Since land and water and air comprise the physical or natural environment of the State, the neatest organizational device would be a department which would encompass functions pertaining to their use and control. It is more likely that land and water management functions could be structurally integrated.

A possible reorganization would entail the joining into a single department of the functions of the present Departments of Conservation and Economic Development and Agriculture, the water pollution and possibly the potable water programs of the Department of Health, and at least the drainage aspects of the mosquito control functions performed by the Agricultural Experiment Station. Such a department might be called National Resources, Land and Water Management, or Agriculture, Conservation and Recreation. The latter, by retaining the names of two of the present departments, might prove to be a more palatable designation for re-organizational purposes.

With effective powers, adequate funds and ample staff facilities, such a department could formulate and enforce plans and standards, collect and develop data and generally control the interrelated activities and programs associated with the physical environment of the State. (See chart 4-1)

c. A Department of Water Resources

"Water resources," broadly construed, is a partial, yet comprehensive, organizing principle. Another neat organizational device would be to combine those functions involving the use and control of these resources into a single department.

A possible reorganization would entail the joining of the water supply and control and related conservation functions of the Department of Conservation and Economic Development, the water resources functions (including all functions of the Soil Conservation Committee) of the Department of Agriculture, the stream pollution control and potable water units of the Department of Health, and the drainage aspects of the mosquito control functions of the Agricultural Experiment Station into a single department. (See chart 4-2.)

The most interesting approach in this connection was taken by California in establishing a Department of Water Resources and separate advisory agencies. A Department of Water Resources was established in recognition of the interrelatedness of the administration of water resources, the future role of the State in the management of water resources, and the need for administrative efficiency. The organization of divisions within the department was structured according to four functions: (1) water resources and quality; (2) water rights; (3) project planning and

Chart 4-1

Possible Reorganization  
To Form Department Encompassing  
Land and Water Management

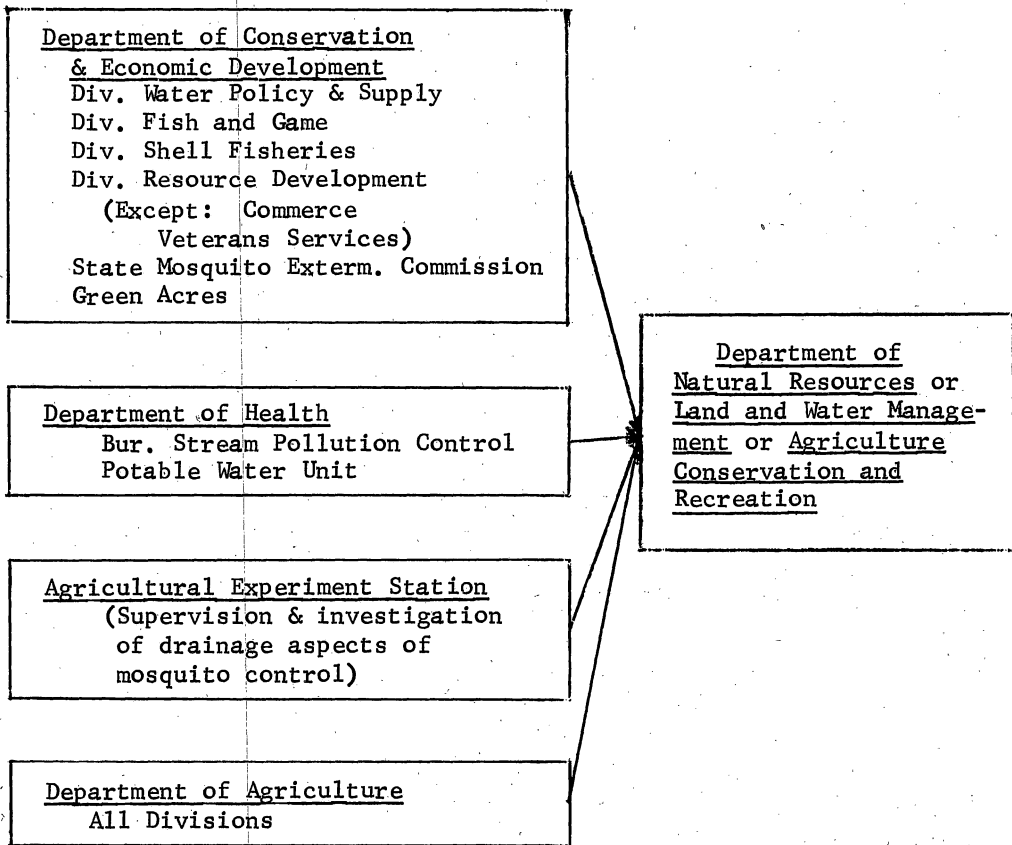
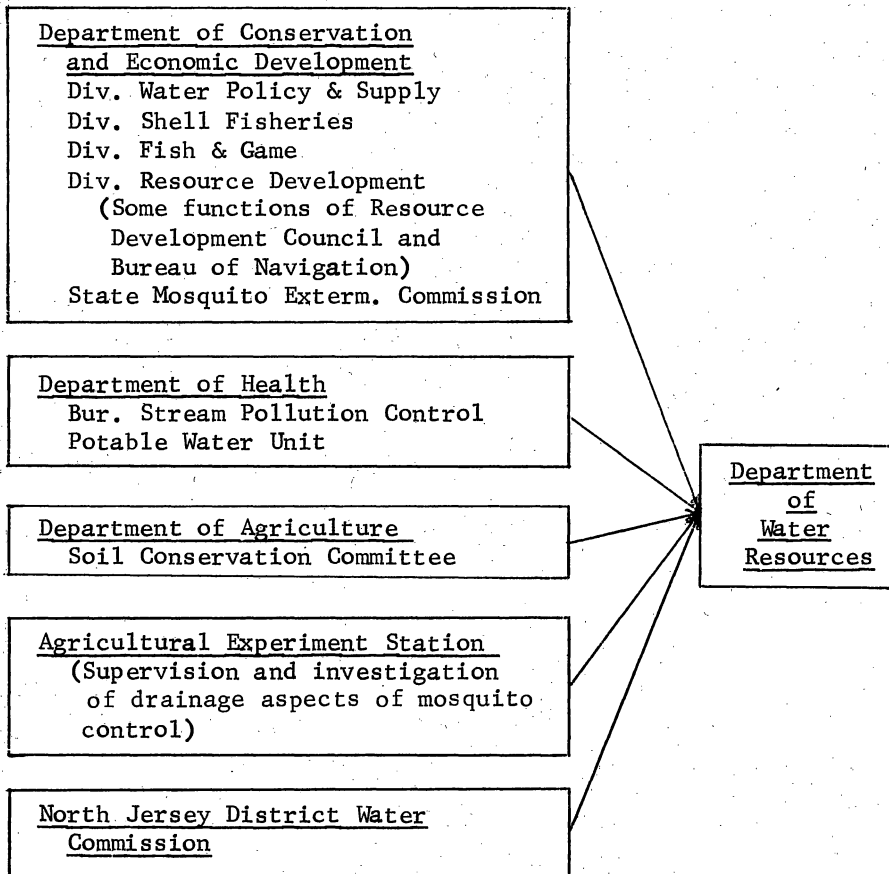


Chart 4-2

Possible Reorganization  
To Form Department of  
Water Resources.



construction; (4) project maintenance and operation. In addition to the department, a State Water Resources Board was established to replace numerous pre-existing boards. Its members are appointed by the Governor from each of the major hydrographic regions in the State. Their duties are confined to study and advisory functions. Finally, seven regional water resources boards were established conforming to the major hydrographic regions of the State. The voting members of these boards are appointed by the Governor from persons residing within the boundaries of each region. They are authorized to act in an advisory capacity to the regional offices of the Department, to initiate studies of water policy, to develop programs to regulate water pollution and to prescribe requirements, to conduct public hearings, and generally to act as a link between area residents and the Department.

Some basic elements in the California plan appear worthy of emulation. First, a single agency combines and divides its major efforts along functional lines pertaining to all aspects of water resources. Second, a State Board acting both in research and advisory capacities is composed of members representing functional areas. Third, regional boards in each functional area provide a closer link between area residents and their State agency in the formulation and promulgation of policies.

#### d. Evaluation of the New Department Approach

In order to fully consider these types of alternatives, much more research would have to be done. Such an exhaustive study was considered to go far beyond the more modest mission of this report. Continuing studies should be undertaken with the objective of proposing organizational adjustments to cope with an ever changing urban environment.

On the basis of research conducted during the preparation of this report, it was decided that at present, the administrative objectives which were stated earlier could be achieved by other means than the creation of a new department. The "new department" approach was rejected for a number of reasons:

First, an examination of Table 3-7 (page 99) and Table 3-11 (page 113) has indicated that too many agencies on all levels pursue programs which affect land and water resources to be included in a single department.

Second, a number of those units which would have to be transferred to a new department undertake programs highly integrated with the programs of other units in their present departments which would not be transferred to a new department.

Third, the new department possibilities considered above would most likely involve creating more than one new department. For example, if only the water supply and conservation functions

of the Department of Conservation and Economic Development were included in a new resources department, then the economic development functions of the present Department would have to be transferred to some other department, either a "Department of Economic Development" or "Commerce" or to the present Department of Labor and Industry. The same problem may exist for some of the commodity aspects of the Department of Agriculture. As another example, some divisions might have to be made between the physical or natural resources on the one hand, and the social or human resources on the other hand. Such a division would logically lead to departments of natural and human resources.

The Legislature has just created two new departments in New Jersey. It was believed that the time may not be propitious for the drafting of legislation involving another new department or departments. The urgency of the problems requiring solution assessed in this report dictates a politically feasible approach which would accomplish objectives which have been identified throughout the report. The realignment or creation of two or three departments should not be considered without more prolonged study.

Fourth, and finally, it was determined that the coordination needed, and the effective enforcement of an adequate array of powers could be accomplished by means other than the formation of a new department.

### 3. A Modified Interagency Mechanism: A Recommended Intermediate Approach

It is recommended that the structure of a State level coordinating mechanism should occupy a middle ground between minor adjustments in the present framework and the creation of a new department. The creation of an interagency mechanism is recommended.

#### a. Pitfalls of an Interagency Approach

The difficulties entailed in the creation of interagency mechanisms have been chronicled in the public administration literature; they should be recognized.

First, coordination is difficult to achieve when basic policy differences exist among agencies which retain veto powers over decisions.

Second, if each agency representative is subject to a superior, effective decision-making is hampered.

Third, if staff work is farmed out to various agencies, or undertaken according to ad hoc arrangements, it becomes difficult to coordinate planning and investigative activities.

Fourth, if no central leadership is provided, instead of integrated policy decisions, only additive plans can be formulated.

Fifth, without external controls, agencies will be sitting in judgment of their own plans and actions.

Sixth, the creation of functional interagency boards or committees may result in the return of the complicated administration and vague lines of responsibility which were supposed to be remedied in 1947 by the institution of a modern State Constitution. Furthermore, there is danger in adding another layer of governmental review upon existing review agencies, which might result in inordinate delays and unnecessary complications.

#### b. Some Advantages of an Interagency Approach

By overcoming some of these pitfalls, there can be advantages in adopting an interagency approach.

First, an interagency mechanism can provide for representation of a diversity of interests, as well as unified decision-making. By largely retaining the identity of existing agencies, they can continue to perform other functions which are closely related to the programs of the departments in which they are located. At the same time, special governmental access points would remain through which various interests can be represented.

Second, by instituting tools for strong internal leadership within such a mechanism, means exist for settling conflicts.

Third, by combining planning, research, data collection, operational and regulatory functions within such an agency, a great degree of program integration can be achieved. By providing an interagency mechanism with its own staff, research, data collection and planning activities can be coordinated and geared to the enforcement of regulatory powers and the undertaking of operations.

#### c. Basic Elements of the Recommended Agency

The following series of proposals in basic outline appears to be similar to the first alternative approach cited on pages 130 to 134. What it does accomplish is the positing of some ultimate authority in an agency constituted in such a way that it provides for consideration of the programs in other departments and agencies on all levels, and which possesses multipurpose skills and expertise. In effect, it is a broadening and strengthening of the present Water Policy and Supply Council, which allows for interagency participation in basic policy formation.

d. Creation of a Division of Water Resources

In broad outline, some reorganization of the present Division of Water Policy and Supply is proposed.

First, it is suggested that the name of the division be changed to the Division of Water Resources to indicate the expanded scope of its jurisdiction and powers.

Second, it is proposed that the existing Water Policy and Supply Council be reconstituted (hereafter called the Council) and granted additional powers as the policy-making body of the Division. It is suggested that its name become the Water Resources Council.

Third, it is proposed that a Water Resources Advisory Committee be created and given statutory recognition and advisory authority.

Fourth, it is proposed that staff agencies of the Division be organized to perform distinct functions designated below.

Fifth, it is suggested that the approval powers over the agencies within their respective departments of the commissioner of Health and of the commissioner of Conservation and Economic Development be retained; and in some designated instances, both commissioners should be granted approval powers over the decisions of the Council.

e. The Structure of the Division of Water Resources; Location; Voting Members of the Water Resources Council

It is recommended that the existing Water Policy and Supply Council be reconstituted along the following lines:

- (1) The Council should be located in the Department of Conservation and Economic Development.
- (2) It should be composed of nine members appointed by the Governor for four-year, staggered terms.
- (3) Members should be removable for cause after notice and hearing.
- (4) A chairman of the Council should be chosen by the Governor and should serve at the Governor's pleasure.
- (5) Five members of the Council, not including the chairman, should be residents of each of five major drainage basin regions in the State, so that all are represented.

These drainage basin regions should be the following:

- (a) The Lower Delaware Basin
  - (b) The Hackensack, Passaic and Hudson Basins
  - (c) The Wallkill and Upper Delaware Basins
  - (d) The Raritan Basin
  - (e) The Atlantic Coastal Basin.
- (6) Four members of the Council (three and the chairman) should be chosen at-large from among the residents of the State.

#### Qualifications and Remuneration of Council Members

It is suggested that the Council members possess a wide variety of skills and expertise encompassing all aspects of water resources management including: development and conservation of water supplies, protection of water quality, flood control, drainage, soil conservation and the public health aspects of water resources management (including mosquito control). In addition, they should have some understanding of promotional and control aspects, planning, and legal aspects of water resources management.

It is suggested that Council members be compensated only for direct expenses associated with the performance of their duties. Such remuneration should be sufficient so as not to discourage the participation of highly qualified individuals.

To facilitate the performance of the adjudicative functions assigned to the Council, consideration should be given to the employment of full-time hearing examiners, whose reports would provide the basis for final decisions made by Council members. Furthermore, adequate staffing of the Division is required to perform effectively the technical aspects of the Council's work.

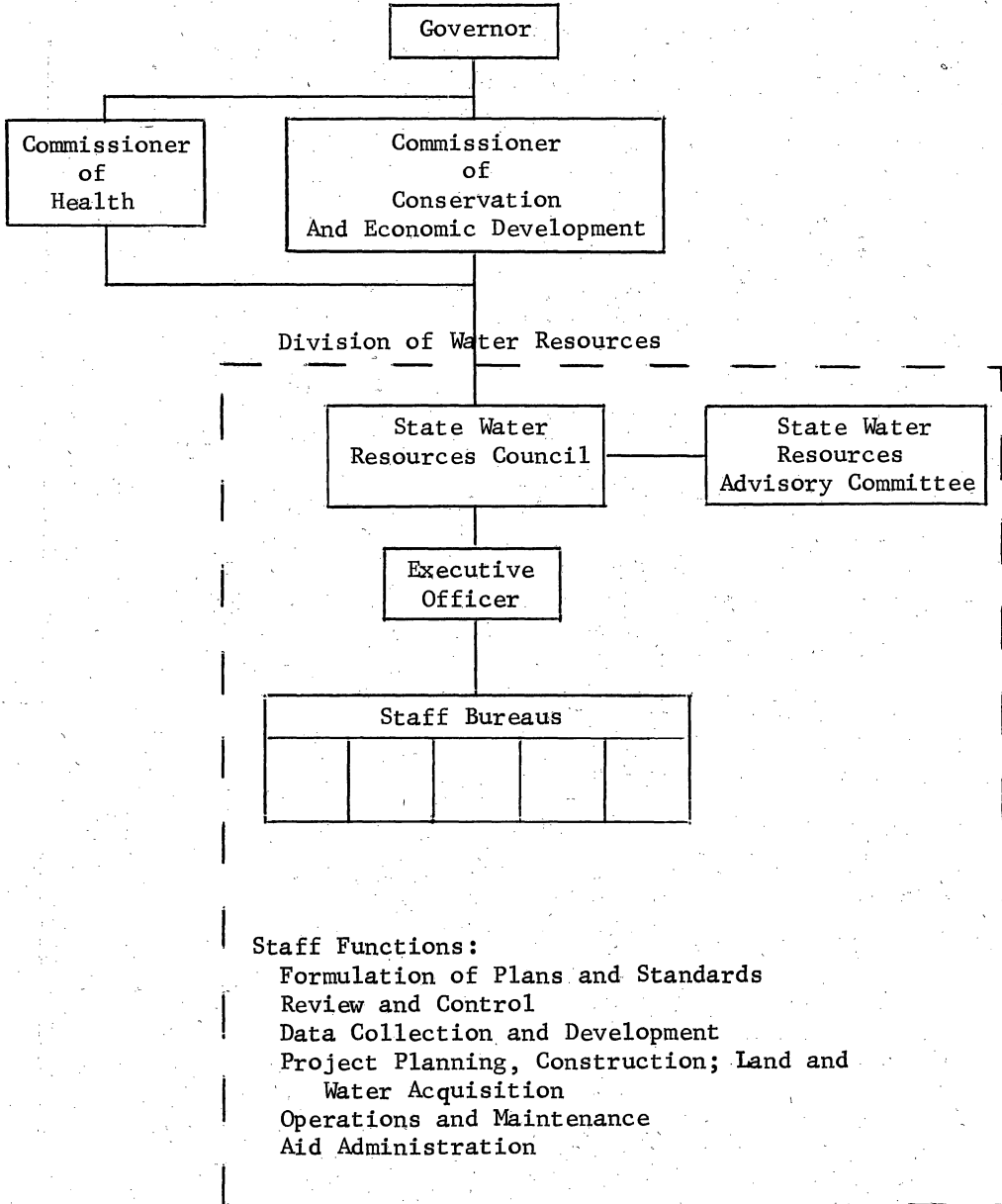
#### Staff Agencies

Similarly, it is suggested that the staff agencies of the Division be constituted to encompass skills and expertise pertaining to all aspects of water resources management. Bureaus should be organized on a multipurpose basis (that is, encompassing control, developmental and conservation aspects of water resources management), so that all elements of such management activities are considered together by qualified personnel.

Six functional divisions are suggested for the distribution of the staff work undertaken by the Division. (See chart 4-3.) These are considered to be distinct functions, although they may not be logically distinct bureaus.

Chart 4-3

Proposed Organization of the  
Division of Water Resources



- (1) Formulation of Plans and Standards.
- (2) Review and Control, including:
  - (a) flood control drainage activities;
  - (b) mosquito control activities;
  - (c) water withdrawals and diversions;
  - (d) encroachment regulations enforcement;
  - (e) dam regulations enforcement;
  - (f) creation and operation of sewerage districts, watershed districts;
  - (g) generally, public and private activities affecting water resources;
  - (h) hearing examiner function.
- (3) Data Collection and Development, including:
  - (a) clearinghouse function;
  - (b) maps repository;
  - (c) surveillance.
- (4) Project Planning and Construction; Land and Water Acquisition.
- (5) Operation and Maintenance of Facilities, Projects, including:
  - (a) surveillance of public facilities;
  - (b) enforcement of channel maintenance assignments.
- (6) Aid Administration:
  - (a) financial aid;
  - (b) technical aid;
  - (c) legal aid.

The staff agencies should be selected by the Commissioner, in the same manner as are other such agencies in other department divisions.

An executive officer should be authorized to oversee or supervise the staff agencies of the Division. He would serve in a counterpart role of the present director of the Division of Water Policy and Supply. Consequently, as is presently the case, he should be appointed by the Governor and would serve during the Governor's term of office and until a successor has been appointed. He would report to the Commissioner through the State Water Resources Council.

f. Water Resources Advisory Committee

It is proposed that an advisory committee of the kind suggested on page 133 of this report be given statutory recognition and authorized to advise the proposed Council.

Organization of the Advisory Committee

The Advisory Committee should be constituted so as to embrace as many of the agencies involved in water resources management as possible without becoming unwieldy. Clearly, what appears called for is the existence of a committee embracing functional agencies within a number of departments on the State level and various agencies on other levels. The membership of the existing Joint Committee on Drainage provides a clue to the composition of such an advisory group. It is proposed that the Committee be appointed by the Governor, along the following lines. (The proposed number of Committee representatives appears in brackets.)

(1) State Agencies. [11] In the formulation of water resources policies, the viewpoints of agencies in a number of departments with pertinent primary missions should be heard. In some departments, more than one agency representative is required to attain the necessary breadth of outlook and concern.

(a) Department of Conservation and Economic Development [5]

Division of Water Resources  
Division of Fish and Game  
Division of Shell Fisheries  
Bureau of Navigation  
Mosquito Extermination Commission

(b) Department of Health [2]

Bureau of Stream Pollution Control  
Potable Water Unit

(c) State Soil Conservation Committee, Department of Agriculture [1]

(d) Agricultural Experiment Station [1]

(e) Department of Transportation, Drainage Engineer [1]

(f) Department of Community Affairs [2]

Division of State and Regional Planning  
Division of Local Government

(2) County Agencies [5] There are a number of agencies on the county level which should be represented in the formulation of water resources policies. The following deal primarily with water control functions.

- (a) Four representatives chosen by the Association of County Freeholders

Two freeholders [2]  
Two county engineers [2]

- (b) One representative of the county mosquito extermination commissions [1]

(3) Regional Agencies [3] At least three regional agencies, two interstate and one intrastate, should be directly involved in policy formulation. A representative of soil conservation districts and watershed districts also could be considered, but it is felt that they are represented in policy formation by the State representatives and by mechanisms proposed subsequently. The number of regional representatives should be expanded, nevertheless, if it is deemed advisable to include these and other agencies among the members of the Advisory Committee.

- (a) Delaware River Basin Commission [1]  
(b) Interstate Sanitation Commission [1]  
(c) North Jersey District Water Commission [1]

Consequently, twenty [20] members should constitute the Advisory Committee initially. Others should be permitted to be added as the need arises. However, it is suggested that twenty-five members should be the outside limit of committee membership. At the same time, provision could be made for periodic public meetings to permit an airing of a variety of views. Subsequent proposals for watershed advisory boards would serve this function, too. (See section C of this chapter.)

#### Functions of the Advisory Committee

It is suggested that the Advisory Committee could perform an important coordinating function, even though it is not assigned decision-making authority. Some mechanism is needed to articulate and consider all of the related problems and programs of water resources management. At the same time, the pitfalls of inter-agency decision-making must be overcome by positing ultimate authority at some single point in the decision-making apparatus of the State.

Consequently, the Committee, as envisioned, would be advisory to the proposed Council. The chairman of the proposed

Council would preside at its meetings. At the same time, it would be authorized to perform some significant functions.

(1) It should be authorized to meet with the proposed Council periodically to discuss problems, changing conditions and any exigencies which may arise. In addition, it may be convened at the discretion of the chairman of the proposed Council, the Governor, or at the suggestion of any of its member agencies.

(2) It should be required to participate in the formulation and revision of comprehensive plans and standards adopted by the proposed Council. Its role would be to identify problems and competing demands and programs, to suggest resolutions of conflict, to suggest elements and provisions of a comprehensive plan, to propose the scheduling of subjects for research, and to aid in the review of the administrative experience of the Division.

(3) In addition, the proposed Council should be required to submit reports or memoranda to the members of the Advisory Committee on pending policy decisions to the extent that such decisions affect them, and await their review and suggestions within a specified period of time.

(4) Major recommendations of the Advisory Committee should be made by a majority vote, or by some specified proportion of the total membership, with an opportunity provided for the submission of minority recommendations.

g. Allocation of Control Powers to the Departments of Conservation and Economic Development and Health

It has been noted that the Departments of Health and of Conservation and Economic Development surveyed in this report, are the principal repositories of regulatory powers applicable to water resources management on the State level. The problem has been the lack of formal coordination of the two departments and the lack of common comprehensive plans and standards to which to refer in the exercise of their powers. Therefore, it has been deemed advisable to restate the allocation of control powers here and to indicate areas where joint exercise of such powers is called for.

First, the Department of Health (and local boards of health) should retain principal control over nuisances and the State Sanitary Code as they pertain to water control problems. In addition, it should retain principal control over stream and potable water quality.

Second, the Commissioner of Conservation and Economic Development should retain approval power over those functions of the present Water Policy and Supply Council transferred to the proposed Council.

Furthermore, he should exercise his approval power over the present divisions of his department with reference to the plans and standards formulated by the proposed Council.

The Department of Health should be authorized to designate those decisions or activities which have a bearing on public health and submit them to the Commissioner of Conservation and Economic Development. Subsequently, a joint memorandum should be issued designating those decisions of the proposed Council which would be subject to the joint approval by the commissioners. Appeals should be made to the Governor, who will make the final judgment.

Third, it is proposed that the departments of Health and the proposed Division participate jointly in a number of activities suggested on pages 131 and 132 of this report including:

- (1) the formulation of plans and standards;
- (2) the supervision of the creation and operation of sewerage and watershed districts; and (see chapter four)
- (3) the proffering of technical and financial aid to political subdivisions of the State.

Fourth, it is proposed that when designated decisions of the proposed Council involve or affect public health and the pollution and potability of water subject to State jurisdiction, the Commissioner of Health as well as the Commissioner of Conservation and Economic Development be authorized to approve them. (This would be particularly important if the performance of the mosquito control function in the Department were enhanced. For such a possibility, see subsection k of this section.)

Fifth, it is proposed that approvals made by the commissioners jointly and the approvals of the decisions of the proposed Council made by the Commissioner of Conservation and Economic Development separately, be made within 10 days of their submission, or at some time agreeable to the parties involved.

If no such approval action is taken, or in case the commissioners should not agree on joint review, appeals must be made to the Governor for final decision within some specified time.

#### h. Jurisdiction of the Proposed Council

Any legislation authorizing the creation and designating the powers of the council should include a statement concerning its jurisdiction. Such a statement should include the following elements:

The council shall have jurisdiction over the public and private waters in the State, the adjacent lands and connected facilities which are necessary for the control and prevention of water damage and the development, protection and conservation of the water resources of the State.

i. Statement of Purposes

Similarly, a statement of public purposes to be served by the existence of such Council should be explicitly set forth as follows:

- (1) It is declared to be in the public interest to control and prevent situations in which surface water endangers the health, safety, welfare, and economic interests of the State.
- (2) It is declared to be in the public interest to protect from obstruction and to keep in good condition a system of basic flood and drainage channels and floodways, to identify flood plains and portions thereof according to relative risk, and to formulate standards pertaining to their use.
- (3) It is declared to be in the public interest to conserve and develop the water resources of the State for its many uses, and to foster and promote by all effective and reasonable means the relief of surface and ground waters in the State from pollution.
- (4) It is recognized that these matters of public interest and concern are interrelated. Therefore, it is deemed advisable to create an agency to coordinate and supervise all activities pertaining to water resources management in order to protect the health, safety, welfare, and economic interests of the State in the most effective and efficient manner possible.

j. Functions and Powers

It is suggested that the proposed Council exercise at least the following powers, in addition to those already exercised by the existing Water Policy and Supply Council:

Legal Status and General Powers

- (1) The Council should be designated as an agency and instrumentality of the State and considered as a legal entity.

- (2) The Council should be authorized to negotiate, cooperate, and enter into agreements or compacts with authorized agencies representing any one or more states, the United States, or any agency or subdivision of the State of New Jersey in connection with water control and the development, conservation, and protection of the water resources of the State.
- (3) The Council should be authorized to utilize other agencies of the State and to require reports from them.
- (4) The Council should be authorized to enter upon lands and waters of the State to effect its purposes.
- (5) The Council should be authorized to conduct hearings, administer oaths, and issue subpoenas.
- (6) The Council should be authorized to take steps in the courts to bring compliance with its orders.

Formulation of Comprehensive Plans and Standards; Undertaking of Research. The Council should be authorized to formulate, adopt, and revise comprehensive plans and standards pertaining to:

- (1) flood control and drainage activities and regulations;
- (2) the conservation, development, and control of water resources for withdrawal, flow, and on-site uses.
- (3) the protection of water quality; and
- (4) forestry, soil conservation, and watershed protection.

Such plans and standards should be applicable throughout the State and should be uniform within the major drainage basins of the State.

Among the specific functions pertaining to formulating plans and standards the Council should be authorized to:

- (1) delineate floodways and flood plains;
- (2) designate and delineate basic drainage channels;
- (3) establish standards for flood plain use;

- (4) formulate standards and practices for the conservation of soil, the control of soil erosion and sedimentation, the grading of lands and other activities involving or affecting water resources management;
- (5) indicate the locations, dimension, and capacities of sewage disposal and treatment facilities;
- (6) formulate and revise stream quality criteria;
- (7) develop policies to regulate stream flows and the diversion and withdrawals of ground and surface waters;
- (8) formulate standards for flood control and drainage projects and facilities and for regulations pertaining to them;
- (9) identify and suggest policies to accommodate competing goals and programs;
- (10) measure and anticipate consequences of various land and water use practices;
- (11) undertake feasibility studies; and
- (12) review administrative experiences.

The location of the functions of planning and formulation of standards in the proposed Division is important. These functions should be performed by the agency responsible for undertaking action programs and enforcing regulations. Water resources management programs should be coordinated within a truly comprehensive framework.

Collection and Development of Data. Comprehensive planning is difficult without easy access to a wide variety of pertinent data.

- (1) The Council should be authorized to act as a clearinghouse and repository for all water resources data and should be authorized to require pertinent information from any agency or person in the State.
- (2) The Council should be authorized to undertake the preparation of drainage maps for the entire State, and to act as a repository for all maps useful for water resources management.

- (3) The Council should be authorized to perform or aid in the undertaking of concomitant soil surveys and to act as a repository for soils data.
- (4) The Council should be authorized to act as the repository for data pertaining to sewage and waste disposal and water pollution.
- (5) The Council should be authorized to perform those data collection functions presently performed by the Division of Water Policy and Supply.
- (6) The Council should be authorized to act as the repository of stream surveillance data collected and developed by agencies on all governmental levels.

Review and Regulatory Authority. The powers of the present Water Policy and Supply Council should be transferred to the proposed Council. In addition, it should be authorized to review public and private projects and activities and to require conformance with plans and standards formulated, to the extent that such projects or activities involve or affect drainage, flood control, or the development, conservation, and protection of the water resources of the State, including the following:

- (1) the impoundment, diversion, and withdrawal of ground and surface waters;
- (2) the construction and improvement of dams on navigable and non-navigable waters;
- (3) the reclamation, obstruction, or alteration of floodways, flood channels, drainage channels, navigable and tidal waterways, lands flowed by tidewater;
- (4) utilities or pipelines in or adjacent to channels, floodways, and drainage rights-of-way;
- (5) hydroelectric power projects and policies affecting water flows and supplies;
- (6) flood control, drainage, and navigation projects, facilities, and works;
- (7) land use practices affecting water control facilities, water supplies, and the conservation and protection of water resources;
- (8) changes in ground cover of major water infiltration areas;

- (9) land and channel regulations involving or affecting flood control and drainage;
- (10) facilities designated to intercept, transport, dispose, and treat sewage and industrial wastes; and
- (11) in general, projects or activities of all public agencies and private persons undertaken in the State which involve or affect water control and the water resources of the State.

Procedural Requirements Connected With Review Authority.

In undertaking such review, the Council should be obligated to function according to specified procedures which should include the following elements:

- (1) The Council should clearly specify the extent to which certain of its powers will be delegated to, and responsibility assigned to, agencies on other levels in the State. To this end, the preparation, periodic revision and wide distribution of a manual of procedures and practices is recommended.
- (2) The Council should be authorized to require reports and the submittal of plans from those agencies generating or receiving them in the first instance. The Council should be authorized to require that such plans or reports contain specified information.
- (3) The decisions of the Council should be made by a majority vote of its voting members.
- (4) Within the scope of its jurisdiction, if it overrides preliminary decisions made by any public agency, the Council should bear the burden of proof in so doing.
- (5) If recommendations, approval, or rejection of such plans are not made by the Council, within 30 days of their submittal to the Council, approval should be deemed to have been made. Extensions of such a 30-day period might be made by mutual agreement.

Assignment of Maintenance Responsibilities. It is recommended that the Council be authorized to assign to public agencies the responsibility to maintain Federal or State-financed projects, to assign responsibility for the maintenance of designated drainage channels, and to provide for the enforcement of this authority. (See chapter five for elaboration.)

Formulation and Promulgation of Rules and Regulations.

It is recommended that the Council be authorized to adopt, from time to time, rules and regulations for the transaction of its business and for the administration and exercise of its powers and duties. Such rules and regulations should include but not be limited to the following:

- (1) The assignment of responsibility to be assumed by public agencies in the State pertaining to: the regulation of flood channels, floodways, and other drainage rights-of-way; the maintenance and reclamation of drainage rights-of-way and the delineation of basic drainage channels; the construction, improvement, and maintenance of drainage or flood control works, projects, and facilities; the public acquisition of drainage rights-of-way.
- (2) The encroachment of established floodways, and regulations adopted by local agencies pertaining to the control of encroachments of floodways, flood channels or other drainage rights-of-way.
- (3) Standards for the creation of sewerage districts and authorities, and watershed districts as recommended below, and for the location, dimensions, and capacities of sewage disposal and treatment facilities.
- (4) The protection and preservation of the public works, improvements, and properties, and State and Federal aid projects.

Such rules and regulations should be formulated after public hearing and published in a prescribed manner before taking effect.

Undertaking of Projects, Operations. It is proposed that the Division of Water Resources be given wide authority to plan, design, acquire, construct, reconstruct, own, improve, operate, and maintain projects and facilities:

- (1) to control, contain, and facilitate flood and drainage channel flows;
- (2) to reclaim lands with impeded drainage and submerged lands;
- (3) to develop, conserve, and protect the water resources of the State.

For these purposes, the Division should be authorized to acquire a full or partial interest in lands and waters, by all means, including condemnation.

Acquisition of Lands and Waters. In addition to existing powers of acquisition, the following authority should be granted to the Division of Water Resources: (See chapter five for further elaboration.)

- (1) The acquisition of the fee or any lesser interest in lands within flood plains to restrict their use, by all means including condemnation;
- (2) The acquisition of the fee or lesser interest in lands lying under water, development rights, waters and other real or personal property.

Technical and Financial Aid. To assist in the undertaking of water control, conservation, and protection projects, it is suggested that more aid funds be made available at the State level.

- (1) It is suggested that a water resources management fund or funds be established at the State level to be administered by the Division of Water Resources.
- (2) Such a fund or funds should be utilized to proffer loans and/or grants to local agencies for the undertaking of flood control, drainage, and soil conservation projects; for the construction, operation, and maintenance of sewage disposal facilities; to acquire areas for surface water storage and water infiltration; to acquire drainage rights-of-way and flood plain areas; and to offset local administrative expenses in the formulation and the enactment of regulations to give effect to the standards established at the State level.
- (3) The activities of recipients should be subject to the approval of and under conditions imposed by the proposed Council.
- (4) The Council should be authorized to specify conditions which must be fulfilled by recipient agencies.
- (5) Provisions must be made for priorities in proffering such aid, the period of loans, the manner of payment and repayment, means of recovering loans, and annual appropriations required to replenish such a fund or funds and to administer aid programs.

- (6) It is suggested that the proposed Division of Water Resources be appropriated the funds and be enabled to hire the personnel to proffer technical and legal assistance to local agencies in the undertaking of projects, in the formulation of plans and standards, and in the enactment and enforcement of regulations. Such aid should be applicable to drainage, flood control, the protection, conservation, and development of water resources, and related land use and soils management programs.

k. Implications of Recommended Approach

Recognizing the relationship of a variety of water resources management functions in the proposed approach, an attempt was made to posit review and control over them at a single point in the decision-making apparatus. Questions arise as to the role of existing agencies in such an organizational scheme. It is possible that the organizational proposals could be effected without transferring the functions of existing agencies into the proposed Division of Water Resources. However, the role of a few agencies, as presently constituted, is put in question. Some further reorganization is indicated, but it would be minimized by adopting the approach taken in this report.

(1) Navigation, port development, and the administration of riparian rights should be considered within the total context of water resources management policy. It is true that the Commissioner of Conservation and Economic Development could effect greater coordination of these functions with other aspects of water management, without any reorganization, if comprehensive plans and standards were developed in the Department. However, consideration should be given to organizationally integrating these functions with those of the proposed Division of Water Resources.

There is logic in transferring some functions performed by the present Resource Development Council and the functions performed by the present Bureau of Navigation to the proposed Division of Water Resources.

First, the powers of the Bureau over improving, maintaining, and reclaiming inland waterways and riparian lands could be transferred to the proposed Division. These functions could be transferred to a bureau which would undertake all projects or to a separate bureau of navigation within the proposed Division.

Second, regulatory powers of the present Division of Resource Development over navigation, navigable waters, waterfront and harbor facilities, inland waterways, and riparian lands could be transferred to the proposed Council. Attending staff functions could be transferred either to a multipurpose bureau

or to a separate bureau of navigation within the proposed Division.

Finally, the controls of the present Resource Development Council over tidal lands and riparian rights could be transferred to the proposed Council. The associated technical work could be transferred to a separate bureau of riparian or water rights in the proposed Division. However, such reorganization should await recommendations made by the groups studying the problem of developing the Hackensack Meadowlands.

(2) Mosquito control functions, or at least the drainage aspects of mosquito control, similarly should be performed within the context of an overall water policy. A strong case can be made for the integration of supervisory functions of the drainage aspects of mosquito control into one water resources management agency.

It has been stated that the supervision by the Agricultural Experiment Station of the drainage aspects of mosquito control does not accord with the same logic as its performance of research in the field of entymology. Indeed, the supervisory function can be separated from the research and advisory function. Alternatives are worthy of consideration along the following lines:

Alternative #1: The present State Mosquito Extermination Commission could be retained in the Department of Conservation and Economic Development and be designated the Mosquito Control Council. The present supervisory and investigative powers of the Agricultural Experiment Station could be transferred to such a Council. The technical and policy-making functions of mosquito control could be undertaken in a Division of Mosquito Control in the Department of Conservation and Economic Development. The Commissioner of the Department could be authorized to supervise and control the new Division in the same manner as other department divisions. In addition, some programs of the Division of Mosquito Control would be subject to the review of the proposed Water Resources Council. (This is one possible area where joint review by the Commissioners of Conservation and Economic Development and Health might be accomplished. See above.) The new Division would be represented on the Water Resources Advisory Committee.

Alternative #2: The present State Mosquito Control Commission could be dissolved. The Commission's powers and the present supervisory and investigatory powers over the drainage aspects of mosquito control of the Agricultural Experiment Station could be transferred to the proposed Water Resources Council. The staff or technical functions associated with these powers could be allocated to one of the multipurpose bureaus of the proposed Division of Water Resources or to a separate bureau of mosquito control.

(3) The soil conservation, flood control, and drainage functions of the present State Soil Conservation Committee (the S.C.C.) in the Department of Agriculture and the soil conservation districts undoubtedly, must be coordinated with other aspects of water policy. The contemplated role of the Water Resources Council and the subsequent recommendations pertaining to watershed districts (see section c of this chapter) leave some doubt as to the role of the S.C.C. and the soil conservation districts. The location of the S.C.C. in the Department of Agriculture does not hamper coordination unduly because of its interagency composition. The importance of the agriculture viewpoint in its policy making is attested by its location in the Department of Agriculture. What is important is that some consistent policies be formulated pertaining to the role and relationship of soil conservation districts and the proposed watershed districts, and that some common controls be exercised over them. Alternative organizational schemes should be considered to effect desired coordination.

Alternative #1: The first alternative involves the transfer of the functions of the S.C.C. to the Department of Conservation and Economic Development. Not much would be gained by such a transfer since both the Secretary of Agriculture and the Commissioner of Conservation and Economic Development are members of the policy-making body. All that would be changed is the source of finances of some of the Committee's activities.

Second, the S.C.C. could be dissolved and its functions transferred to the Water Resources Council. The function of the present executive director of the Committee would be either transferred to one of the multipurpose bureaus of the proposed Division of Water Resources or to a separate bureau of soils management. This scheme would remove the Secretary of Agriculture from any policy-making role.

Alternative #2: Some consistent policy regarding soil conservation districts and proposed watershed districts must be established no matter what organizational scheme is used. Thus, this alternative is not exclusive of alternative #1, but is supplementary to either of the two forms described.

First, existing soil conservation districts should continue in their present form. If proposed watershed legislation is passed, then the soil conservation districts would be provided with the option of reconstituting themselves into watershed districts. Where such watershed districts are formed (no matter how the procedures are set in motion), encompassing all or part of one or more existing soil conservation districts, then the soil conservation districts would cease to exist within the watershed district area.

Second, to avoid administrative confusion, the proposed Water Resources Council and the S.C.C. (wherever it is located), should be authorized to jointly supervise and control the old soil conservation districts. It is possible that such joint supervision would pertain only when existing soil conservation districts are affected by the formation of watershed districts or when they choose to reconstitute themselves as watershed districts.

### C.

#### ORGANIZATION BELOW THE STATE LEVEL

One of the findings of this report is that agencies on all levels should take part in the management of water resources. The State level encompasses the widest range of concerns and resources. Therefore, State level organizational recommendations were all-encompassing.

Below the State level, agencies can be constituted on a less comprehensive basis, but consideration should be made of the widest range of factors consistent with their areas of jurisdiction and resources. What is important is that all parts of the governmental framework mesh so that coverage is complete. Consequently, areas of jurisdiction should be clearly defined and functions and responsibilities assigned. The standards formulated on each lower level should not be inconsistent with those on higher levels; at the same time, lower level agencies should be authorized to enact more stringent standards.

General governing bodies, which allocate a number of resources, should play the major role in the total governmental framework. At the same time, special agencies have an important role to play. The following proposals attempt to construct a framework encompassing both general governing bodies and special agencies.

### D.

#### COUNTY LEVEL ORGANIZATION

In the course of this study, it was concluded that counties should be enabled to take a more prominent role in the administration of water control programs. County weaknesses are well-known; despite these however, it is contended that they can effectively perform additional functions.

Suggestions pertaining to increasing county powers appear in chapter five. Among these additional functions are the following:

- (1) the formulation of plans and standards pertaining to water control, including flood control, drainage, and land use practices affecting water control;
- (2) the enforcement of these plans and standards (consistent with State powers);
- (3) the collection and development of data, including acting as a repository for maps;
- (4) the surveillance of water control facilities;
- (5) the undertaking of water control projects;
- (6) the creation of drainage taxing districts; and
- (7) the undertaking of public acquisition programs.

Some modification of the structure of county government appeared to be called for to perform these varied functions. The boards of chosen freeholders must assume the chief policy-making role. However, they are not adequately constituted, nor empowered to undertake the technical aspects of such functions, or to assume final decision-making authority in every instance. Consequently, it is contended that some government mechanism, with the necessary resources and skills, must be created, or some existing mechanism improved, to perform the above functions.

## 1. County Water Control Agencies

### a. The Role of the County Planning Boards: Planning Departments

As presently constituted, county planning boards have limited authority pertaining to water control and limited expertise in this area. In order for them to perform the functions designated above, planning boards would have to be authorized to formulate a variety of standards and to enforce them by regulating the activities of public agencies and private persons in the county. In addition, planning boards and departments usually do not possess expertise in the technical aspects of water control. Thus, officials or agencies with such expertise would have to participate in some fashion in such policy formation.

Planning boards and departments would have to be reconstituted if they are to play an effective role in water control. Such reconstitution would include at least the following elements:

- (1) The planning board could be authorized to formulate water control plans and standards, and to enforce them throughout the county on a comprehensive basis.
- (2) All planning boards should include, at least, the county engineer among its members. With respect to the formulation and enforcement of water control policies, a wide variety of officials and agencies could participate in a more or less formalized way.
- (3) Planning boards could be authorized to act as a clearinghouse and repository for a wide variety of water control and resource data. Their capacity to require information from public agencies could be enhanced.
- (4) The exercise of their powers would have to be within the framework of State laws and organization. The relationship between county planning boards and the proposed State Council, could be clearly spelled out as to areas of jurisdiction and allocation of functions.
- (5) Provision would have to be made for the exercise of these powers by some agency in counties where there are no planning boards.

b. A Proposed County Water Control Agency.

Instead of reconstituting planning boards, it is proposed that a separate agency (hereafter referred to as the County Agency) be created to perform the water control functions designated above in every county of the State. It is contended that such an administrative agency is required with diverse skills and resources pertinent to the formulation and enforcement of water control plans and standards.

Composition, Membership. Counties should be accorded some flexibility in establishing these agencies. It is suggested that each agency should consist of at least five and no more than seven members who would be appointed to each board of freeholders. It should be a small workable body. It is proposed that the County Agency be composed of at least the following ex officio members: the county engineer, the director of the county planning department, the director of the county mosquito extermination commission and the county attorney. Other agencies and officials might be considered for membership, or the Agency might be obligated to consult with them on a regular basis. These might include the county agricultural agent, the soil conservation district supervisors, and the chairmen of watershed district boards.

The ex officio members would serve on the County Agency by virtue of their official positions as long as they hold these positions. Other members of the County Agency should be appointed by the board of freeholders for specified terms.

Functions, Powers. The County Agency should be authorized to formulate designated plans and standards which would be subject to review and recommendations by the county planning board, and to the approval by a majority of the board of chosen freeholders.

The County Agency should be authorized to review the activities of private persons and public agencies within the county with reference to the enforcement of adopted plans and standards. County and municipal planning boards should be obligated to refer subdivision plats to the County Agency for review and final decision with respect to adopted water control standards.

Jurisdiction. The jurisdiction of the County Agency should include those areas not assumed by the proposed State Council and those matters delegated to it by the Council. The County Agency should be authorized to promulgate more restrictive standards than those delineated by the State agency. The relationship of the proposed County Agency to proposed watershed districts will be described below.

Legal Status. As conceived, the County Agency would be an administrative agency enforcing policies adopted by the legislative body of the county, the board of chosen freeholders. In this capacity, there would be no illegal delegation of legislative authority to an administrative agency. The functions and powers which should be assumed by such an Agency are elaborated in chapter five of this report.

## 2. Employment of a County Hydraulic Engineer

It is proposed that in order to undertake increased functions pertaining to water control, the technical agencies must be augmented on the county level.

It was concluded that the office of the county engineer is especially well situated to undertake various technical functions pertaining to water management. Such an office exists in every county. It can command technical competence, and already performs water management functions in connection with its work on county roads and county drainage and sanitary facilities. Yet, there appears to be a need for a staff person with special expertise in hydraulics on the county level, to equip counties to undertake a greater role.

(1) It is proposed that the office of the county engineer be enhanced by the employment of a hydraulic engineer.

It is recognized that this would represent increased costs on the county level. However, it is felt that such a position would greatly increase the effectiveness of the county in dealing with water control and related problems.

(2) It is suggested that the proposed State water resources agency or the Commissioner of Conservation and Economic Development should be authorized to certify the qualifications of such an engineer. In return the State should share in the payment of his salary with the county. Such a cooperative arrangement appears to be justified by the multilevel aspects of a comprehensive water policy. The proposed engineer would perform functions which would aid both county and State officials.

(3) It is proposed that such an engineer should serve as the chief technical agent of the proposed County Agency, the county planning board, and the board of freeholders in connection with water control matters.

- (a) He should assist in formulating a drainage master plan and a drainage policy for the county.
- (b) He should serve as the technical staff person of the proposed County Agency in processing plans, plats, and applications submitted for review.
- (c) The county engineer should undertake continual surveillance of the drainage channels within the county.

He should determine the need to undertake reclamation work.

He should determine whether there is compliance with State and county encroachment laws, and should institute proceedings to enforce such compliance.

He should report to the State and to the County Agency all existing and imminent encroachments and other drainage problems.

- (d) The county engineer should be authorized to enter upon any property to make such surveys.

(4) It is to be stressed that the proposed hydraulic engineer would be under the administrative control and supervision of the existing county engineer.

Thus, with an agency constituted in such a way as to effectively perform a policy-making function with respect to water control, and with an enhancement of the technical staff facilities in each county, county governments should be better equipped to undertake an important role in water management.

## E.

REGIONAL ORGANIZATION AND SPECIAL AGENCIES1. Criteria for the Use of Special Regional Agencies

It is well known that water problems do not respect existing municipal, county, or even State lines. It has been established that there exist numerous special agencies in this State created to deal with specialized problems. Their existence attests to the weaknesses of general-purpose governments as presently constituted, to the regional nature of water problems, and to the advantages of economies of scale. To an extent, the need for some special agencies would be obviated by improving general governing bodies to perform functions more effectively.

Nevertheless, it was one of the objectives of this study to develop a position on the use of special agencies with respect to water management functions. The adopted position conforms to the following principles:

a. When water problems can be handled by existing county and local general-purpose governments, these units should be strengthened to do the job. Recommendations have been made to strengthen general-purpose governments on all levels.

b. When water problems under consideration are inter-jurisdictional, and there are no adequate options in using regular governmental agencies, and agreements among private persons are difficult, then there is justification for the use of special agencies. The position taken in this report is that of all of the claims made for the use of special agencies, the most cogent one is that they can transcend illogical political boundaries to solve functional problems.

c. In cases in which the use of special governmental agencies is deemed to be appropriate, they should be multipurpose agencies. Since water problems are closely related, at least the following purposes should be included: flood control and drainage; the conservation and development of water supplies; water pollution control; soil erosion control; the conservation of open land; and the development of recreational potentials of water resources.

d. There should be adequate control of the formation and exercise of the powers of special agencies imposed by general-purpose agencies with wide territorial jurisdiction. The most logical levels of control are the State and, to a lesser extent, county governing bodies.

e. There should be a balancing of representation of the various constituencies of special agencies. There should be representation of the interests of the residents of the special districts and the users of district facilities, and not just of bondholders.

## 2. A Proposal to Enable the Creation of Watershed Districts

Having formulated a position on the use and control of special agencies, it was decided that there is need for the creation of some mechanism to undertake planning, operational, and regulatory activities within entire drainage basin areas. The granting of authority to establish watershed districts would provide private citizens and existing public agencies with an option to effect needed coordination when all other options have been exhausted.

### a. Enabling Legislation

It has been concluded that enabling legislation is preferable to enacting special legislation. In proposing the enabling legislation approach it was felt that convenient procedures would be provided citizens and public agencies to seek solutions to problems. Such procedures would be applicable to every drainage basin in the State and, at the same time, uniform controls could be imposed in the creation of watershed districts.

### b. Statement of Purposes

A statutory provision should declare that it is in the public interest and a matter of public concern:

- (1) to prevent and alleviate conditions which both cause and are caused by impeded drainage and flooding;
- (2) to prevent and relieve surface and ground water areas from pollution;
- (3) to conserve and develop water supplies for their many uses; and
- (4) to develop the recreational potentials of water.

c. Creation of Watershed Districts

It is proposed that provisions should be designed to control the number and size of proposed districts, to provide standards and procedures for their formation and to prevent recalcitrant persons and political units from wrecking district plans. The following provisions are designed to meet these criteria and to provide options for a number of persons and agencies to set in motion the creation of watershed districts. (See Appendix E-2 for elaboration.)

Initiation Stage. It should be made possible to initiate the formation of districts in a number of ways:

- (1) by a petition of citizens, signed by 10% of the registered voters in a proposed district;
- (2) by a petition of municipal governing bodies comprising 20% of all the municipalities or 20% of the total area of a proposed district;
- (3) by boards of chosen freeholders of counties comprising 20% of the land area of a proposed district;
- (4) by the proposed State Council or by the Commissioners of Health and/or Conservation and Economic Development, (hereafter referred to as the Commissioners) or by the State Soil Conservation Committee, under specified conditions.

The Creation Stage. Similarly, alternate procedures should be provided for the creation of districts.

- (1) All petitions should be submitted to the proposed State Council which, after public hearing, should approve or reject them.
- (2) In certain situations, the State Council should conduct a referendum in the area of the proposed district on the creation question. (See (3) below.)
- (3) If the persons petitioning comprise more than 50% of the population, or if petitioning local agencies comprise more than 50% of the local agencies or are representative of more than 50% of the land area of the proposed district, the district could be established without a referendum.

- (4) If the State Council or the Commissioners or the Soil Conservation Committee initiate proceedings, a district could be declared to be established without a referendum, under specified conditions, subject to the review of the Legislature. (See Appendix E-2)

Criteria for the Formation of Districts. Criteria should be adopted and specified by the State Council and should include, but not be confined to the following:

- (1) The districts must subserve the purposes of the enabling legislation.
- (2) No district may be smaller than one of the 49 secondary drainage basins indicated in Table 4-1, but a district may encompass two or more such basins.
- (3) The district must be considered to be economically and governmentally feasible.

Annexation and Consolidation. Specified procedures should be enacted to permit the annexation of territory to created districts, the consolidation of two or more districts, and the absorption of other single-purpose districts or authorities by watershed districts. (See Appendix E-2 for an elaboration.)

#### d. Selection of Boards of Governors

In connection with watershed districts, some provision should be made for State and local participation and representation, because of the need for coordination and because their functions should be fit into the context of a Statewide comprehensive water resources management program.

Consequently, the State should participate in the selection of district officials; the board of freeholders of each county with all or a significant part of its territory within a district area, should participate in the selection process; and district residents should also participate in the selection of board members.

With regard to the participation of district residents, it is proposed that the majority of the district board be elected by the residents of the district area; the elected members should outnumber the appointed members. It might be argued in this connection that by electing a group of officials with limited functions, the electorate may be confused and ill-informed and consequently might choose not to vote. These arguments have merit. However, the recommendation that a majority of the board be

elected was designed to grant each district greater flexibility in its actions by giving it the characteristics of a "political district." In the case of Van Cleve vs. Passaic Valley Sewerage Commission 71 N.J.L. 574 (1905) the court invalidated the power of the Sewerage Commission, appointed by the Governor, to impose taxes according to its discretion, to finance its activities. Such a grant of power was considered to be an illegal delegation of legislative power to an administrative body. Because it is contended in this report that watershed districts should be granted discretionary power to tax district residents, it was determined that by providing for the election of a majority of each district board, such boards would take on the characteristic of a political district. It may well be that certain of the board decisions can be made only by the vote of the elected members of the board and that for these decisions the appointed members would serve in a non-voting capacity. A further consideration would be to make provision for the elected members in such a way as to minimize political problems which might occur between counties in the district with unequal populations. (Such room for maneuver would be restricted by the one man - one vote decisions of the courts.)

It is proposed that the size of district boards should vary with the number of counties in each district. The size of boards should be small so as not to be unwieldy. In Table 4-1 the size of boards for each potential district, if they are selected by the proposed formula, is indicated.

Based upon the above considerations, the following provisions are recommended:

- (1) Members of each board should serve staggered terms of five years.
- (2) The Governor should appoint one member from each county with territory exceeding 5% of the total land area of the district. The member should be selected from lists of nominees submitted to him by the boards of chosen freeholders of each such county. Such nominees should be residents of the District.
- (3) One member should be chosen by the Governor, and should serve as chairman.
- (4) The remainder of the members, who should exceed the number of appointed members by one, should be elected at-large for staggered terms by the registered voters residing in the district at general elections.
- (5) Vacancies should be filled by appointment of the Governor until the next election.

Table 4-1Size of Governing Boards of Proposed  
Watershed Districts

<u>Major and Secondary Drainage Basins</u>	<u>No. of Counties</u>	<u>Size of Governing Boards</u>
<u>Hackensack</u>	2	7
<u>Passaic</u>		
(1) Ramapo River	1 /	5
(2) Wanaque	2	7
(3) Pequannock	3	9
(4) Rockaway	2	7
(5) Upper Passaic	3	9
<u>Raritan</u>		
(6) Lower Raritan Branches	3	9
(7) North Branch	3	9
(8) South Branch	3	9
(9) Millstone River	4 /	11
(10) Lawrence Brook	1 (Middlesex)	5
(11) South River	2	7
<u>Wallkill</u>		
(12) Pochuck	2	7
(13) Wallkill	1 (Sussex)	5
(14) Papakating	1 (Sussex)	5
<u>Delaware River Basin</u>		
(15) Flat Brook	1 (Sussex)	5
(16) Paulins Kill	2	7
(17) Pequest River	2	7
(18) Pohatcong Creek	1 (Warren)	5
(19) Musconetcong River	4	11
(20) Assanpink Creek	2	7
(21) Crosswicks Creek	4	11
(22) Blacks Creek	1 /	5
(23) Assiscunk Creek	1 (Burlington)	5
(24) Rancocas Creek	3	9
(25) Pennsauken Creek	2	7
(26) Coopers Creek	1 /	5
(27) Big Timber Creek	2	7
(28) Mantua Creek	1 (Gloucester)	5
(29) Raccoon Creek	1 (Gloucester)	5
(30) Oldmans Creek	2	7

Table 4-1 (continued)

<u>Major and Secondary Drainage Basins</u>	<u>No. of Counties</u>	<u>Size of Governing Boards</u>
<u>Delaware River Basin (continued)</u>		
(31) Salem Creek	1 (Salem)	5
(32) Alloways Creek	1 (Salem)	5
(33) Cohansey Creek	1	5
(34) Maurice River	4	11
(35) Newton Creek	1 (Camden)	5
<u>Atlantic Coast Basin</u>		
	<u>13**</u>	
(36) Elizabeth River	**	
(37) Rahway River	**	
(38) Navesink	**	
(39) Managquan	**	
(40) Meteconk	**	
(41) Toms River	**	
(42) Cedar Creek	1 (Ocean)	5
(43) Forked River	**	
(44) Mill Creek	**	
(45) Westecunk Creek	**	
(46) Tuckerton Creek	/	
(47) Mullica River	4	11
(48) Great Egg Harbor River	3	9
(49) Absecon Creek	1 (Atlantic)	5
(50) Patcong Creek	1 (Atlantic)	5
(51) Tuckahoe River	3	9

\* Major Drainage Basins underlined; Secondary Basins numbered.

\*\* Data not available or incomplete.

/ Insignificant portion of another county.

(Source: New Jersey Department of Conservation and Economic Development. Maps of Major and Secondary Drainage Basins of New Jersey. Trenton.)

- (6) Results of elections should be certified to the State Council, and to the Division of Local Government in the Department of Community Affairs.
- (7) Appointed members would be removable by the Governor, after hearing, for cause. The chairman appointed by the Governor should serve at the will of the Governor.

d. The Exercise and Control of Powers

It was concluded that the powers granted to districts must be comprehensive enough to apply to the solution of all types of water problems. At the same time, the exercise of such powers must be subject to controls.

Corporate Powers. Each district should be granted corporate powers.

Operational Powers. Among, but not limiting the powers that a district might exercise would be the power:

- (1) to construct, improve, reclaim, and maintain natural or artificial flood and drainage channels;
- (2) to design, construct, operate, and maintain dams;
- (3) to acquire, design, finance, construct, maintain, and operate works for soil and other natural resource conservation, drainage, flood control, flood damage reduction, and insect and other pest controls;
- (4) to do all acts, and to acquire, use, and hold all property by all means, including condemnation for the construction, acquisition, operation, and maintenance of sewage disposal and treatment facilities;
- (5) to contract with any persons and public agencies to undertake operations;
- (6) to engage or contract for services;
- (7) to formulate plans and standards to subserve the purposes of the district; and
- (8) to carry out and effect the purposes of the district.

Regulatory Powers. Among, but not limiting the powers that a district might exercise should be the following:

- (1) to incorporate delineated channels and drainage rights-of-way, their minimum widths, and slopes, into a master plan, after hearing and by majority vote of the board;
- (2) to review and regulate the building, the filling in, the alteration or the obstruction of any channel or drainage right-of-way incorporated into the master plan;
- (3) to review and regulate water control projects undertaken in the district;
- (4) to review and regulate land use practices and regulations affecting water control facilities and the water resources of the district, which would include the regulation of development sites and the enforcement of standards pertaining to drainage facilities;
- (5) to review and regulate the construction or improvement of sanitary facilities, and the construction and improvement of sewage disposal and treatment facilities, within the districts;
- (6) to regulate the use of streams;
- (7) to prohibit the discharge of polluting substances into streams within the district area and to formulate and promulgate regulations pertaining thereto; and
- (8) to formulate and enforce rules and regulations to accomplish its purpose and to protect its works, improvements, and properties.

Acquisition of Lands and Water. Districts should be authorized to acquire a full or partial interest in lands, lands lying underwater, and development rights by all means, including condemnation to subserve its stated purposes.

Limitations on the Exercise of Power by a District. It is essential that districts be brought within the framework of other plans, standards, and laws enacted by general-purpose governments. Thus, the following provisions are recommended.

- (1) The rules and regulations adopted by districts should not be inconsistent with the laws of the State of New Jersey, the rules, regulations, and requirements of the State Departments of Health and Conservation and Economic Development, or those of the proposed State Council.
- (2) Each district should be obligated to consider local, county, regional, and State master plans affecting the district area and to receive recommendations from the agencies or officials administering such plans, before final action is taken by the district board. As a rule the most restrictive standards should prevail. As a rule the standards of watershed districts should prevail over those of the County Agency in intercounty basins. In case of conflict, appeals should be made to the State Council for final decisions.
- (3) The undertaking of operations, the acquisition of property and the formulation and enforcement of regulations should be subject to review by State agencies pursuant to existing or future State law, and according to prescribed time limits.

Relationships with Soil Conservation Districts. Since functions and areas of proposed watershed districts and existing soil conservation districts overlap, provision has been made for resolving problems attending such overlap in section B of this chapter. (See pages 158 and 159.)

Financing. It is contended that proposed watershed districts should be accorded great flexibility in financing their activities.

First, districts should be authorized to issue bonds. A distinction should be made between financing revenue-producing and nonrevenue-producing facilities.

- (1) A provision should authorize the issuance of special obligation bonds to finance only revenue-producing facilities which shall be secured only by the property and revenues of the facilities for the purchase and construction of which they were issued. No restrictions should be imposed on their issuance.
- (2) A provision should authorize the issuance of general obligation bonds to finance nonrevenue-producing projects which are to be secured by all sources of revenue. A debt limitation of 1% of the true

valuation of real property, in those portions of municipalities within a district, should be imposed on their issuance.

Second, watershed districts should be authorized to levy taxes within the district area.

- (3) The governing board of each district or perhaps only the elected members of the board (see discussion in this section above) should annually submit their operating needs to the county board of taxation of each county in which all or a part of the district is located.
- (4) These county boards should determine the tax rates for the portions of those municipalities within each of the district's counties.

In the eventuality that legal opinion indicates that this is an illegal delegation of legislative power, alternatives should be considered. First, each board could be authorized to levy taxes according to a fixed percentage of the assessed valuation of property within the district, specifically designated in a statutory provision. Thus, the district board would no longer be exercising discretionary tax power. Second, if such a statutory provision is adopted, then watershed districts might continue to have elected board members or consideration could be given to having only appointed board members, an approach which would simplify the organization of watershed districts.

Other Controls Over District Activities. It is proposed that provisions should be incorporated into the enabling act to permit State control over some of the procedures of each district. The following would be included:

- (1) Procedures should enable the registering of citizen protest of the issuance of general obligation bonds.
- (2) Each district should be required to provide the proposed Division of Water Resources, the Commissioners, and the Division of Local Government in the Department of Community Affairs with information concerning the creation and organization of districts, with copies of annual reports embodying specified data, with copies of bond resolutions, and with annual budgets subject to State approval.
- (3) The accounts and reports of districts should be subject to State audit by the Division of Local Government.

### 3. A Position on Drainage Districts

In the course of this study, it was determined that legislation to supercede existing statutes providing for the formation of drainage districts, along the lines previously considered in this State, would not be appropriate. An analysis of existing drainage district legislation has been made previously in this report. The recommendations of a joint legislative committee in 1956 which resulted in Assembly Bill 287 and the veto message of Governor Meyner, appear in Appendix E-1.

The points made by the Governor in his veto message, some of which are cogent, were not the main reasons for the rejection of devising a substantially similar approach in this report. Recommendations could have been made to modify Assembly Bill 287 to meet his objections. However, in section C of chapter five of this report, it is contended that legislation enabling the formation of drainage districts would not have sufficient scope nor provide the flexibility needed in undertaking drainage work in an urban State.

### 4. The Proposed Formation of Regional Water Resources Advisory Boards

It is proposed that, whether or not watershed districts are established in one or more areas of the State, it would be desirable to create Regional Water Resources Advisory Boards to act as vehicles through which the proposed State Agency could formulate plans, to advise the State Council, to identify and propose means of accommodating conflicts of interests, and to act as liaisons between interests in the major drainage basin regions and the State. Such boards, as envisioned, would have a limited mission, but would perform very valuable functions.

#### a. Organization

Number of Boards. Five boards should be created, which would have jurisdiction over each of five designated drainage basins regions in the State.

These regions would be the following:

- (1) The Lower Delaware Basin
- (2) The Hackensack, Passaic and Hudson Basins
- (3) The Wallkill and Upper Delaware Basins
- (4) The Raritan Basin
- (5) The Atlantic Coastal Basin

Voting Members. The Governor should choose four members from those who reside in the basin area and who shall not represent any of the agencies operating in the area. It was not recommended that the Governor choose from among a list of nominees provided by the boards of freeholders of counties in the basin region, nor that the freeholders of such counties appoint all voting members of the Advisory Boards, other than the chairman, for the following reasons. It was felt that a small board was needed to give direction to advisory activities in each region. Some regions encompass a number of counties; some counties are in more than one basin region. In some instances, it would be impossible for the four members of the board in each region to represent each of the counties. Selection of board members by freeholders would be complicated. If the Governor were to choose board members from nominees of the freeholders, questions would arise concerning which county's nominees would be included and which excluded. Thus, it is recommended that the Governor choose board members. It is suggested that he should attempt to achieve the widest representation possible.

The chairman of each board should be the member of the proposed State Council from that basin area.

Participating Agencies, Persons. At least the following agencies and interests, functioning within the area, should participate in public meetings and hearings and be kept informed of the deliberations, and the preliminary and final decisions of the board.

- (1) Local Agencies: engineers, mosquito commissions, park commissions, agricultural agents, planning boards, health officers.
- (2) Special Agencies: sewerage districts and authorities, water districts, flood districts, drainage districts, soil conservation districts, sanitation commissions, watershed districts.
- (3) State Areal Representatives: health engineers, conservation officers, highway engineers.
- (4) Private Interests: watershed and conservation groups, public utilities companies, planning groups.

Functions. Among, but not limiting, the functions of these Boards would be the following:

- (1) The initiation of studies and surveys.

- (2) The preparation of recommended drainage basin plans, policies and standards pertaining to drainage and flood control; the development, conservation, and protection of water; long-range plans for sewerage systems and sewage treatment facilities; and soil conservation.

The adoption of major recommendations, plans, and standards could be accomplished after hearing and by a vote of the voting members.

The recommendations would be submitted to the State Council and to county and municipal agencies, which would be obligated to review and consider them.

- (3) The periodic revision of plans and standards.
- (4) The periodic review of State plans and programs. The State Council and other pertinent State agencies should be obligated to consult with the Regional Water Resources Advisory Boards and to submit plans to them for review.
- (5) The establishment of education programs and the dissemination of information to groups and persons within the basin area.

#### Finances

- (1) Boards should be authorized to prepare annual requests which could be incorporated into the budgetary requests of the State Division of Water Resources and/or other State agencies, if approved by them.
- (2) Boards should be authorized to receive loans and grants from public agencies on all levels, corporations, organizations, and private persons.

#### F.

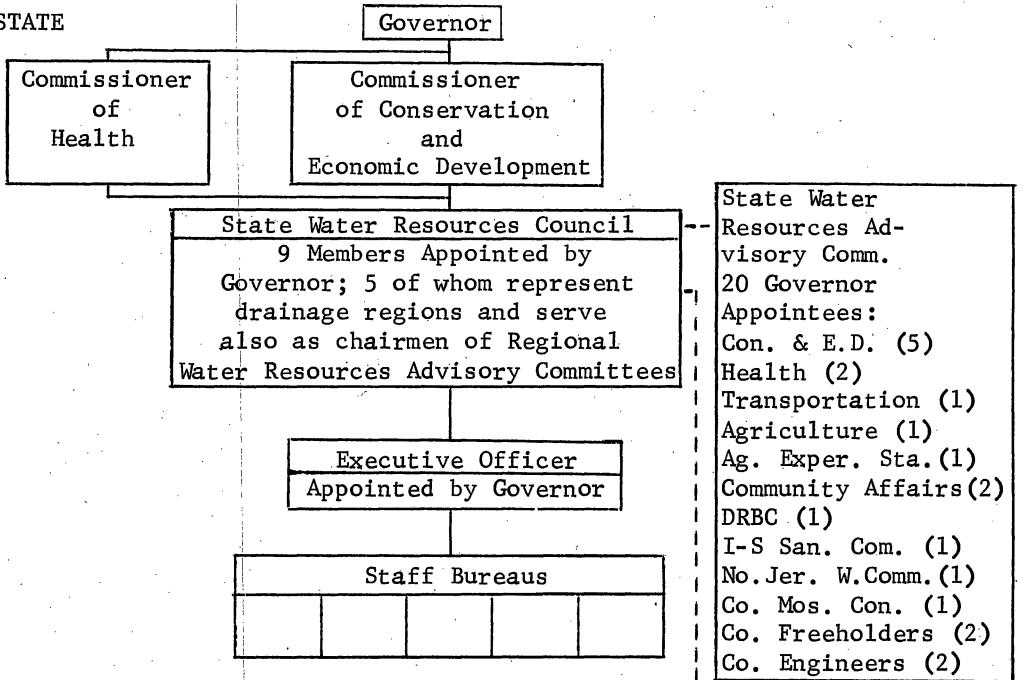
#### ORGANIZATION STRUCTURE: AN OVERVIEW

It is hoped in this series of proposals to establish a framework within which various functions and powers can be allocated. The next chapter includes proposals as to the allocation of functions or powers. In order to visualize what has been proposed in this chapter, the following chart will be useful.

Chart 4-4

Water Resources Organization Plan

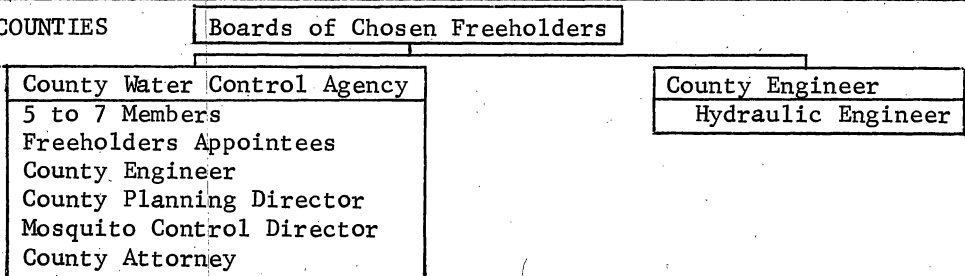
STATE



5 DRAINAGE BASIN REGIONS

Regional Water Resources Advisory Committees  
5 Members Appointed by Governor:  
Chm. is member of State Council

21 COUNTIES



49 SECONDARY DRAINAGE BASINS

Optional Watershed Districts  
Governor appoints one member from each county, plus a chairman.  
Voters elect members exceeding appointed members by one.

## Chapter V

# FINDINGS AND RECOMMENDATIONS PERTAINING TO SUBSTANTIVE PROGRAMS

### A.

#### OUTLINE OF FUNCTIONS AND POWERS

The basic mission of this report is: to identify the functions which must be performed to cope with water problems and the powers required for their performance; to analyze the allocation of these functions and powers and to assess the adequacy of such allocation in the State; and to propose remedies to deal with inadequacies. It was found that an overall organizational framework needed to be formulated within which to allocate functions and powers. Because aspects of managing water and land resources were adjudged to be so closely related, the organizational framework was constructed to encompass the widest range of functions and powers. Consequently, the focus of chapter four was broad.

In this chapter, the focus will be narrower. It was considered to be beyond the scope of this report to indicate a complete water resources or natural resources management program. In this section of the chapter, however, some of the concerns of a larger water resources management program are suggested in a summary fashion. In subsequent sections of this chapter, detailed recommendations primarily deal with the major problem areas of surface water drainage which gave rise to this report initially.

It was found that agencies on each government level have roles to perform with respect to managing water resources. The major purposes of the recommendations of this report were to enable agencies on all levels to perform appropriate functions effectively, and to posit an ultimate authority in the chain of decision-making, where basic policies are formulated where conflicts are resolved.

The following is an inventory of propositions concerning the performance and allocation of six basic functions.

## 1. Formulation of Plans and Standards

Plans and standards should be formulated on each of a number of government levels by those agencies which undertake action programs and which are responsible for their enforcement.

It is important that plans and standards formulated by lower level units be consistent with those formulated at each higher level. (The secondary drainage basin should be the basic unit for this purpose.) At the same time, provision should be made that each lower unit be authorized to enact more stringent standards than higher level units; if it so desires. Thus, no provision applicable to higher level units should be considered to preempt action by lower level units.

### a. State Level

It is proposed that comprehensive water resources plans and standards be formulated by a single resource agency at the State level, embodying the elements suggested in chapter four. (See page 150 of this report.)

### b. Below State Level

First, it is proposed that comprehensive water resources plans and standards be developed for the secondary drainage basins of the State. Some water control and conservation plans and standards can be formulated for basins, all or most of which are within single counties, by a single county agency. Watershed districts, wherever they are formed, can perform this function on a more comprehensive basis. Resource agencies, such as soil conservation districts and informal planning groups, should participate in the planning process.

Third, it is proposed that water control and conservation plans and standards be formulated in every county by a single county agency. (See chapter four.)

Fourth, it is suggested that water control plans be formulated at the municipal level.

## 2. Regulation of Land and Water

It has become essential, in the most urban of states, to manage water resources in the public interest, consistent with constitutional protections. In addition, the use of land areas which affect the management of water resources should be subject increasingly to public regulation.

The enforcement of such regulations should be accomplished by agencies on each level which have been granted authority to plan and to undertake action programs.

a. State Level

It was suggested in chapter four that, to the greatest extent possible, those regulatory provisions associated with the management of all aspects of water resources should be exercised and/or coordinated by a single State agency.

It is proposed that such a State agency be authorized to review and regulate all projects, activities and regulations which involve or affect the management of the water resources of the State, within the limits prescribed in chapter four and in subsequent sections of this chapter. Regulations pertaining to the following functions should be exercised by such an agency.

(1) The Development, Withdrawal, Diversion and Distribution of Water Supplies.

(2) The Maintenance and Protection of the Quality of Water Supplies and Other Water Areas.

(3) Stream Encroachments. It is proposed that the State agency be authorized to take the initiative in the delineation and establishment of floodways and the delineation of basic drainage channels and drainage rights-of-way. Such an agency should play the principal role in regulating new encroachments of such delineated facilities and in taking action to remove existing encroachments.

(4) Maintenance of Drainage Channels, Water Control Facilities. It is proposed that the agency be authorized to delineate basic drainage channels and designate water control facilities in order to assign responsibilities as to their continuous maintenance and to enforce such assigned responsibilities.

(5) Occupation and Use of Flood Plains and Land Areas. It is proposed that a single agency delineate flood plain areas and be allocated sufficient funds to do the job. It is proposed that such an agency formulate standards for the use and occupation of flood plain areas and land areas which affect the water resources of the State.

(6) Supervision of Intercounty Programs. It is proposed that a single agency be authorized to supervise and control activities or programs in drainage basins encompassing more than one county when, because of local conflict or lack of cooperation, this becomes necessary.

b. Below State Level

It is proposed that the governing body of each county, watershed district boards, wherever they are created, and the governing body of each municipality be authorized to exercise a number of regulatory powers. Each lower level unit (in ascending order - municipalities, counties, watershed districts), should be authorized to enact more stringent regulations than a higher unit. At the same time, the regulations of each higher level unit should prevail as minimum standards and should be binding within the area of jurisdiction of such a unit. If conflicts should develop between a watershed district and one or more counties, they should be resolved at the State level.

All Designated Agencies. At least the following regulations should be exercised by all such agencies.

(1) Reservation of Drainage Rights-of-Way. It is proposed that those channels, the responsibility for which has been delegated to lower level units by the State agency, as well as storm channels and other drainage channels, be delineated, incorporated into master plans, and, thereafter, subject to regulation.

(2) Installation of Storm Drainage Facilities. Plans and standards should be adopted pertaining to storm drainage. Then, an agency should review subdivision plats and individual site (larger than a designated minimum size) development plans. An agency should be authorized to allocate the assumption of financial burdens for the installation of on- and off-site drainage facilities in accordance with a statutory formula. (See Section D of this chapter for an elaboration.)

(3) Maintenance of Channels and Facilities. It is proposed that agencies below the State level be assigned responsibilities for the maintenance of designated drainage channels and water control facilities. (See Section C of this chapter for an elaboration.)

(4) Land Use Practices. It is proposed that in conjunction with the review of subdivision plats and individual site developments, land use practices, such as grading of land and the control of soil erosion, be regulated according to prescribed standards by the reviewing agency when such practices affect the control, protection, and conservation of the water resources within the jurisdiction of such agency.

Counties. In connection with the regulation of land and water, counties should exercise at least the following power, in addition to the above.

(5) It is proposed that counties be authorized to create drainage taxing districts, as financing mechanisms for the undertaking of drainage and reclamation work. (See Section C of this chapter.)

Watershed Districts. In addition to the above regulatory authority, it has been proposed that watershed districts be authorized to exercise the following powers:

(6) Regulation of sanitary facilities, sewers and sewage disposal and treatment facilities;

(7) Regulation of the use of streams;

(8) Regulation of the discharge of polluting substances into streams.

### 3. Undertaking of Projects and Operations, and Acquisition of Land, Waters and Facilities.

The principal resource agency on each governmental level should be authorized to undertake a full range of water management projects and operations, and to acquire lands, waters, and facilities, by all means, including condemnation, for such purposes.

#### a. State Level

Authority to Undertake. The State resources agency should be authorized to undertake the full range of projects and operations declared to involve the State interest, including water control and the development, conservation, protection, and distribution of water supplies.

Acquisition. It is proposed that such an agency be authorized to acquire lands, waters and facilities by all means, including condemnation, to accomplish the above purposes.

#### b. Below State Level

Authority to Undertake. It is proposed that general governing bodies on the county and municipal levels and watershed district boards be authorized to undertake projects and operations to control, conserve, and protect water.

Acquisition. It is proposed that such agencies be authorized to acquire lands, waters, and facilities for such purposes.

#### 4. Systematic Acquisition of Lands and Waters

Agencies granted the wide powers designated above should be enabled to undertake systematic acquisition programs to accomplish a number of purposes:

- (1) to bring a system of floodways and drainage rights-of-way under public control;
- (2) to restrict the development of flood plain areas, water infiltration areas, and potential surface water storage areas;
- (3) to preserve wetlands and to facilitate water-related recreation.

##### a. State Level

It is proposed that the State water resources agency be authorized to acquire lands and waters for all such purposes, by all means, including condemnation.

The agency should be authorized to acquire a full or partial interest in such lands and waters and to lease back property purchased in fee for restricted uses.

##### b. Below State Level

Similarly, it is proposed that county governing boards and watershed district boards be granted such powers.

#### 5. Collection and Development of Data

A first contention with regard to water resources data is that agencies and persons should have convenient access to a wide variety of information pertaining to all of the interrelated aspects of water resources management.

A second contention is that such data should be in useful form. By centralizing the collection and development of all water resources data, they may be put in useful form for a variety of decision makers and activists. A corollary contention is that such data will be useful if they are geared to action programs. Thus, the agency which is responsible for undertaking programs and enforcing regulations should have control over the collection and development of data.

a. State Level

It is proposed that the principal data collection and development role be performed by the State water resources agency because it is most capable of providing the most useful data for water resources management decision making. Thus, it is proposed that the State agency perform the following functions:

(1) Data Clearinghouse. It should act as a repository for all water resources data. It should be authorized to require information from all agencies and persons. It should conduct and coordinate pertinent research and investigative activities.

(2) Mapping. The State agency should act as a repository for resource maps. Furthermore, it should undertake and/or aid in undertaking the preparation of interpreted drainage maps of uniform quality for the State, according to uniform standards.

(3) Soils Surveys. The State agency should act as a repository for soils data. It should aid in accelerating existing soils survey programs.

(4) Surveillance. The State agency should be authorized and provided the funds to undertake continuous surveillance programs, especially to acquire up-to-date stream data.

b. Below State Level

It is proposed that counties should have enhanced authority and funds to act as a repository for more detailed data to aid decision making in the smaller drainage areas of the State.

Furthermore, it is proposed that official map legislation on the county and municipal levels and municipal tax map legislation be amended to provide additional detailed data.

6. Financing and Aid Programs

No simple proposition can be made about financing all of the aspects of water resources management. The following criteria have been formulated to guide the development of recommendations.

First, agencies assigned the principal roles in water resources management should have access to funds adequate for the timely performance of their functions.

Second, such agencies, on all levels, should be granted the greatest flexibility in financing different types of activities. They should be accorded the greatest number of options to finance by whatever means they deem appropriate to the occasion.

Third, financial burdens should be allocated equitably.

- (1) Among agencies according to:
  - (a) program responsibilities;
  - (b) fiscal capacities;
  - (c) benefits received from programs undertaken by other agencies or jointly with other agencies.
- (2) Among persons according to:
  - (a) the value of benefits received;
  - (b) their contribution to the problem requiring alleviation by public action.

With reference to the "benefits received" principle of allocating financial burdens, cost allocations made on the basis of some benefit formula should be limited only to those occasions when individual benefits can be identified easily. In an urban environment, increasingly wider areas benefit from water control projects. Thus, for theoretical as well as practical reasons, it is contended that direct assessments for work done, based on the benefit principle, should be minimized as a financing device.

With reference to the allocation of burdens among persons according to their contributions to problems to be alleviated, it is contended that the decisions in recent court cases have rightfully shifted the burden of financing the alleviation of downstream water control problems to upstream developers who cause them. It is proposed that upstream developers contribute to the costs of alleviating downstream problems, to the extent that they increase water runoff and create such problems, pursuant to some statutory formula applicable to all developers in each drainage area.

a. Federal Level

No proposals were made concerning federal financing of water resources management programs. However, it is recognized that many water management projects cannot be justified by a favorable cost-benefit ratio according to the present definition of "benefits received"; a requirement of some federal aid programs. Some liberalization of the definition has occurred. It must be recognized that the benefits of such programs cannot be confined to economic terms, nor to delimited geographic areas.

b. State Financing

Financial Needs. Almost every proposition made in this report points to the need for increased funds on the State level.

Recommendations pertaining to expansion of the performance of direct State functions will require more funds for expanded staff personnel and facilities, for an increased number of projects to be undertaken and services to be performed, for the expansion of data collection and development, for the undertaking of State acquisition programs, and for increased regulatory activities.

Recommendations pertaining to State aid programs will require more funds for local planning assistance, for financial aid to local undertaking of water resource management projects and operations, for grants and loans to aid local acquisition programs, and for financial assistance to offset local administrative expenses in formulating and enforcing local regulations.

Means of Finance. A number of propositions concerning financing on the State level can be made in a summary fashion.

First, it is apparent that the operating funds of State level agencies need to be increased. Throughout this report it has been made clear that it is not enough to reorganize agencies or to pass enabling legislation unless there are adequate funds to exercise effectively the powers granted. In many instances, statutory provisions are adequate, but cannot be enforced because of lack of funds. In this report recommendations have been made pertaining to the functions of resource agencies in the Department of Conservation and Economic Development and of the Department of Health. The operating budgets of these agencies will have to be increased so that they may perform additional functions. Otherwise, it is a fruitless activity to reallocate functions and reorganize administrative structures.

Second, a number of devices will have to be resorted to, if the State is to increase its role with respect to undertaking long-term programs and capital projects and aiding local communities. Consideration should be given to combining financing programs involving all aspects of water resources management. Thus, it has been suggested that a single fund be provided to aid local agencies in undertaking drainage, flood control, sewage disposal and treatment projects, and in undertaking a wide variety of water resource management operations. A single fund should be available to aid local communities in planning and in formulating and enforcing pertinent water and land use regulations. A single fund should be available for State acquisition programs and State assistance to local acquisition programs. It is not enough to consider separately "Green Acres" and "Blue Acres" programs. Consideration should be given to a "Blue-Green Acres" program

recognizing the relationship of water and land areas as a natural resource. Coordinating resource programs will be facilitated by consolidating financing sources, whether they be from taxes or from consolidated bond issues.

b. State-Local Financing

Local financing must be considered in terms of a State-local (and Federal) partnership. The principal proposition to be made is that multipurpose or general-purpose local agencies should be accorded the greatest flexibility in financing their activities. General governing bodies should be strengthened in their financing capabilities to perform an expanded number of functions. The proliferation of special agencies for financing purposes could be halted or greatly retarded if some of the shackles were removed from general-purpose agencies. Provisions pertaining to increased flexibility should take a number of forms.

State Role. It is recognized that local agencies, for a number of reasons, do not have access to sufficient local economic resources. It has been suggested that the State increase its aid programs to local agencies. It is suggested that through the issuance of orders of necessity and State financial aids, debt limit restrictions can be overcome to an extent. In sum, a variety of State programs and activities can increase the flexibility of local agency financing.

Local Role. General-purpose or multipurpose local governing bodies should be enabled to choose among several financing devices.

(1) Direct Assessments. The use of special assessments should be minimized and limited to occasions when benefits conferred are easily identifiable and are confined to delimited areas. Nevertheless, such a financing device should be available for use when deemed appropriate.

(2) General Taxation. Local governing bodies should be enabled to undertake drainage, flood control, and other water management programs as a public benefit, to be financed from general taxation.

(3) Issuance of Bonds. The use of bonds as a financing device should be limited on the local level (especially when utilized by special agencies) and subject to controls. Distinctions should be made between reimbursible and nonreimbursible projects or programs. Revenue or special obligation bonds would be issued to construct reimbursible projects and should be subject to little administrative control. Higher interest rates associated

with them should preclude their extensive use. General obligation bonds would be issued to finance nonreimbursible projects and should be subject to more strict limitations. State aid programs and powers could serve to make local debt limits more flexible. If bond financing is considered to be appropriate, then use of such a financing device by general governing bodies should be facilitated.

B.

REGULATING CHANNEL ENCROACHMENTS

1. Identification of Problem Areas

a. The Regulation of Watercourses

A variety of activities undertaken by persons or public agencies result in the obstruction of watercourses. Such obstruction impedes surface water drainage and the facilitation of storm and flood flows, and may affect the quantity and quality of water supplies available for use.

Common Law Responsibilities. "Watercourses" are defined in common law as channels with eroded banks and beds which facilitate continuous or periodic flows of water. The New Jersey courts have prohibited the active obstruction of watercourses to the detriment of riparian owners.

Statutory Regulation. Encroachment laws have been enacted to give effect to common law rulings. The State Encroachment Law, administered by the Water Policy and Supply Council, while generally effective, has some limitations:

- (1) the State takes only limited initiative in delineating encroachment lines; (Fill lines have been designated at some locations.)
- (2) regulation applies only to "watercourses" as defined;
- (3) as an administrative expedient, the Council has limited its jurisdiction to watercourses draining areas more than 1/2 square mile. (The Council has delegated responsibility for the regulation of small drainage areas to municipalities.)

At the same time, county encroachment laws are inadequate; and municipal encroachment laws are adequate, but usually unenforced.

b. Distinction Between Channel Flow and Sheet Flow

Common Law Distinction. The New Jersey courts have not imposed the same responsibilities upon persons controlling less defined drainageways without definite eroded banks which function to facilitate storm water runoff as they have upon persons controlling "watercourses." Even though they are concentrated therein, waters traversing these drainageways have been considered to be "sheet flow." Furthermore, such drainageways do not come under the statutory or common law definitions of "natural stream channels," "any stream," or "watercourses," and therefore are not subject to regulation.

Engineering Distinction. The distinction made by hydraulic engineers between channel and sheet flow differs from the legal distinction. Channel flow is usually defined by engineers as any flow which is concentrated in any type of channel regardless of whether it has definite banks or not. This definition applies to depressions, swales and the like which are not subject to legal regulation at present. Sheet flow is considered to be diffused surface water runoff which is not concentrated in any channel. The distinction is recognized to be one of time; the number of existing channels is a function of topography, ground slope, surface geology, intensity of rainfall, and intensity of development of land areas.

Program Goal. A goal of this study is to translate the engineering understanding of the drainage problem into legislation by extending the same controls over all channels which facilitate water flows.

2. Formulating a Legislative Program

To this end, a number of related steps should be considered together. Since they would require action on more than one governmental level, separate enactments are required.

a. Definitions

There is a need for uniform definitions. At least the following should be incorporated into legislative provisions.

- (1) Natural stream channel or watercourse shall mean the channel of any river, stream, brook, kill, rivulet,

or other natural course of running water, whether improved or unimproved, enclosed or realigned, which now or prior to improvement, enclosure, or realignment had cut, by erosion of running water, a channel with well-defined banks, and a bottom, and through which water flows ordinarily and frequently, but not necessarily continuously.

- (2) Drainage channel shall mean any ditch, drain, or other artificial watercourse, whether improved, unimproved, or enclosed, which is used and maintained for the primary purpose of draining specific local low, wet areas and tidal lands in time of dry weather.
- (3) Storm water drainage channel shall mean any ditch, gutter, storm sewer, or other artificial watercourse, whether unimproved, improved, or enclosed, which does not involve a natural stream channel, and which is used and maintained for the primary purpose of conducting collected surface runoff during storm periods to the natural stream or watercourse to which this surface runoff is naturally tributary.
- (4) Natural storm drainage channel shall mean any swale, ravine, or sloping contour of ground over which storm water will naturally flow.

Swale shall mean any natural non-eroded depression in the surface of the ground in which surface storm water is collected and conveyed to a natural stream or watercourse.

Ravine shall mean an eroded natural depression through the earth over which storm water will flow or where underground water breaks through the surface.

- (5) Waterway shall mean any ditch, canal, or other artificial channel which is used and maintained for the primary purpose of navigation or the diversion and conveyance of water supply.
- (6) Flood plain shall mean the relatively flat area adjoining the channel of a natural stream, which has been or may be covered by flood water.
- (7) Flood channel shall mean the stream channel and its flood plains as defined.
- (8) Floodway shall mean the stream channel and those portions of the plains adjoining the channel, which are reasonably required to carry and discharge the flood water or flood flow of any stream or river.

- (9) Approved floodway shall mean a floodway designated and approved by the State water resources agency of the Department of Conservation and Economic Development to provide for the safe passage of flood waters of reasonable magnitude and occurrence.
- (10) Encroachment lines shall mean the boundary lines established along streams to define the limits of approved floodways.

b. Delineation

There is a need for the delineation of the basic channels to which regulation is to be extended.

Drainage Maps. The first step in this process would be the location and designation of basic channels on interpreted drainage maps. Since this can only be done on a drainage basin basis and because substate agencies lack the size, sufficient funds, and uniform skills, it has been suggested that the preparation of interpreted drainage maps be undertaken by the State water resources agency on a priority basis, to provide for such delineation. (For legislation proposed to this end in 1956 see Appendix B.) These maps, to be applicable to the many small channels and to storm channels, would have to be supplemented by more detailed data furnished by county and municipal agencies.

c. Revision of Title 58

It is suggested that Title 58 be revised to enable initiatives to be taken on the State level to regulate and control encroachments on stream and flood channels and floodways.

- (1) The principal water resources agency should be authorized to establish floodways. (See definition above.) This could be done within each major drainage basin in cooperation with watershed boards, watershed districts, and county engineers.
- (2) Hearings concerning the establishment of floodways should be required before their final enactment.
- (3) The approval of the water resources agency should be required before floodways are established.
- (4) Notice should be required to be given to public agencies and private persons known to be affected.

- (5) The water resources agency should specify in writing, the degree to which it has accepted jurisdiction pursuant to this statute, and the delegation of responsibility to agencies below the State level.
- (6) Ultimate appeal could be made to the State courts.

The existing State Encroachment Law would then be modified as follows: (Underlining indicates changes in present statutory language.)

- (1) No structure within the established floodway shall be made by any public authority or private person without notice to the Council and in no case without complying with such conditions as the Council may prescribe for the preservation of the floodway and providing for the flow of water to safeguard the public against the danger from waters impounded or affected by such a structure, and this prohibition shall apply to any renewal of existing structures.
- (2) The Council may, whenever in its judgment public safety so requires, and after hearing, either on its own motion or upon complaint, make and serve an order directing any person, corporation, officer, or board constructing, maintaining or using any such structure on any of the floodways of the State, to remove or repair it within such reasonable time and in such manner as shall be specified in the order. (N.J.S.A. 58:1-26.)

Such a statute should specifically state that it will not affect N.J.S.A. 40:56-10, authorizing municipalities to define the location and establish the widths, grades, and elevations of any stream, creek, river, or other waterway and to prevent encroachments on the same, and will not affect the county authorization below, provided that the Council may alter any width, elevation, or condition however established, upon finding that such an alteration is necessary to effectuate the purposes of the Act.

Existing Encroachments. In connection with remedying existing encroachments, two additional approaches are suggested:

- (3) The Council should be authorized to declare existing structures to be nonconforming uses. If they are destroyed by more than a specified percentage, they cannot be rebuilt without a permit issued by the State Agency.

- (4) The Council should be authorized to take land where there are existing encroachments, by eminent domain, when it determines that such encroachments constitute a hazard to life and property in the event of flood.

Interim Enforcement. Until floodways are established, the State would operate under the existing Encroachment Law.

Technical and Financial Aid. The State agency should be authorized to extend technical aid, and financial aid to political subdivisions to offset expenses entailed in formulating and enforcing regulations which would give effect to standards developed at the State level.

d. Revision of Title 40

Fourth, it is suggested that Title 40 be amended to give the following powers to counties and to watershed district boards.

Statement of Purposes. There should be a statement declaring that it is a public purpose, in the interest of protecting human health, safety, and the protection of property in each county or district, to keep open a system of basic drainage rights-of-way.

Definitions Incorporated. The definitions cited above should be incorporated into the statute to indicate those channels to which regulation will be extended. The channels should include natural stream channels, storm drains, and natural flood channels (hereafter referred to as drainage rights-of-way).

Delineation of Drainage Rights-of-Way. The county water control agency proposed in chapter four and watershed district boards should be authorized to prepare and, after hearing, the county board of freeholders of any county and any watershed district board, by majority vote, should be authorized to adopt and from time to time amend, a water management master plan incorporating therein drainage rights-of-way. The following provisions might be incorporated in legislation:

- (1) Subject to the provisions of (Title 58) State law existing and hereafter enacted, the County Water Control Agency or watershed district boards shall delineate drainage rights-of-way in the county or district area including stream channels, storm channels, and flood channels, their minimum widths, grades, and elevations.

- (2) In so doing, the County Water Control Agency or watershed district board shall be obligated to consult with and receive the recommendations of the State Water Resources Council.
- (3) Upon approval by a majority vote of the county board of freeholders, or watershed district board, such delineated drainage rights-of-way shall be incorporated into the master plan and thereafter be deemed conclusive and binding upon all public agencies and private persons within the county or district area.
- (4) Thereafter, no public agency or private person may undertake acts in the county or district area which are not in conformity with the standards adopted.

Enforcement.

- (5) The filling in, the changing of grade or otherwise, the obstruction or alteration of any delineated drainage rights-of-way incorporated in the master plan shall be prohibited.
- (6) All plans or plats for the proposed filling in, closing, obstruction, or alteration of delineated drainage rights-of-way shall be submitted to the County Agency or watershed district board.
- (7) In all cases, such delineated drainage rights-of-way shall be shown on such plans or plats in locations and sites suitable to their intended uses.
- (8) The County Water Control Agency or watershed district board may withhold final approval of such plans or plats unless specified conditions are met to preserve the delineated drainage rights-of-way for their intended uses.
- (9) There should be a mechanism devised for tentative review between the time the law is enacted and the drainage rights-of-way are delineated and adopted into a master plan.
  - (a) Rejections or conditions imposed may be vacated or modified when master plans are adopted.
  - (b) If there is unreasonable delay in adopting a master plan, then counties or watershed district boards may be required to acquire the fee or a partial interest in the drainage rights-of-way in question within a specified time limit.

- (10) The County Water Control Agency and watershed district boards should be authorized to issue orders of remedial action against those acting in violation of the Act and the standards established in the master plan. If the order is not complied with after a specified time, the county agency and watershed district board should be authorized to undertake or contract to remove the violation at the expense of the violator.
- (11) The County Water Control Agency and watershed district board should be authorized to acquire drainage rights-of-way by all means, including condemnation, when it determines that encroachments constitute a hazard to health, safety and property in the event of flood or storm.
- (12) The County Water Control Agency and watershed district board should be authorized to declare existing encroachments as nonconforming uses. If a certain portion of existing encroachments is destroyed, building or alterations would be prohibited without a permit granted by the county agency or district board.

Exceptions Granted.

- (13) Whenever one or more parcels of land upon which is located a mapped drainage right-of-way is shown to have no reasonable use to the owner, unless a building permit is granted or unless development as originally proposed is undertaken, the County Water Control Agency, with the approval of a majority of the members of the board of chosen freeholders or the watershed district board, may, in a specific case, grant such a permit which will increase the cost of providing compensating drainage as little as possible and will minimize changes of the master plan, and the County Agency or the watershed district board shall impose such reasonable requirements as a condition of granting the permit so as to promote the health, safety, and general welfare of the public.

Legitimate Exercise of Delegated Police Power. It is contended that such regulatory authority is a legitimate delegation of the State's police power, and is not within the purview of the prohibition of county zoning in the State Constitution. To the extent that the use of private property is restricted only when certain uses constitute a danger to health, safety, and property in case of flood or storm, there is a legitimate exercise of police power. To the extent that the County Agency or watershed district board is authorized to take private property for legitimate public use, there is a legitimate exercise of the power of eminent domain.

e. The Role of Municipalities

Municipalities should be enabled to formulate and enforce standards pertaining to drainage rights-of-way which are more restrictive than those formulated by county and watershed district agencies. In cases in which they do enact more stringent standards, municipal governing bodies and planning boards should perform the roles assigned to county agencies and watershed district boards above, provided that such county and watershed district agencies review and comment upon each case before final decision is made by the municipal agency.

At the same time, pertinent municipal regulations must conform with minimum standards set at the State, watershed, and county levels. To accomplish this, the following statutory provision should be applied to municipalities:

Unless and until they are submitted to and reviewed by the State Water Resources Council, County Water Control Agency, or watershed district board, in connection with the encroachment of delineated floodways or drainage rights-of-way:

- (a) no municipal official to whom plans are submitted for the construction of any surface or subsurface structure on lands encompassing delineated drainage rights-of-way and/or floodways shall grant a permit;
- (b) no municipal plat-reviewing agency shall consider final action on any preliminary or final plat of subdivisions encompassing delineated floodways and/or drainage rights-of-way;
- (c) no zoning board of adjustment shall consider final action on any application for a variance or a use permit for any parcel of land which includes delineated floodways and/or drainage rights-of-way.

C.

MAINTENANCE OF BASIC CHANNELS

1. Identification of Problem Areas

a. Scope of Maintenance Problem

Riparian Owners. Riparian owners are entitled to the use of stream channels unobstructed by upstream or downstream owners. Responsibilities for alleviating active encroachments were dealt with in the last section. A problem remains concerning the

continual maintenance of "stream channels" which are not within the purview of encroachment laws.

Drainage Outlets. A critical problem exists for those who have no direct access to stream channels. There is a need to impose responsibilities for the maintenance of those drainage channels which function to facilitate the disposal of water from such land areas and carry it to major stream channels.

b. Legal Deficiencies

Common Law Responsibilities. In common law, no responsibility is imposed upon persons or agencies to keep watercourses under their control in good condition. Similarly, there is no responsibility to keep other drainage channels in good condition.

Counties and Municipalities. It was found that few municipalities have ordinances which require streams to be kept in satisfactory condition. Even if more did so a problem exists in maintaining those portions of streams outside the jurisdiction of an individual municipality, which when obstructed affect drainage within such municipality. Permissive legislation enables municipalities to undertake drainage work within their areas of jurisdiction as local or general improvements.

County governing bodies and mosquito commissions may undertake stream reclamation work. While the exercise of such authority can be effective, counties often lack consistent reclamation policies and there is only partial and uneven coverage within their areas of jurisdiction.

Nuisance Powers. Only in connection with health and mosquito nuisance powers are the statutory responsibilities imposed for the maintenance of streams on private property. Only in connection with health nuisance powers is there any responsibility for maintaining streams on public property.

At best, undertaking drainage work pursuant to nuisance powers is awkward. In connection with financing the reclamation of blocked channels, it is difficult to determine who bears the responsibility for causing or suffering such nuisances to exist.

Drainage Districts. Drainage district legislation providing recourse to persons and governing bodies to alleviate drainage problems was found to be inadequate in that uncooperative property owners might thwart drainage work and because provisions for financing drainage work are inflexible.

c. Program Goal

It is a goal of this study to provide some governmental or legal mechanism or recourse for the maintenance of a system of basic channels and to assign responsibilities pertaining thereto.

2. Regulatory Aspects of a Maintenance Program: Preliminary Steps

There are two basic aspects of a program to maintain drainage channels on a continuous basis. The first involves the regulation of a number of activities affecting the capacity of channels to facilitate water flows. Related to this is the power to allocate and enforce responsibilities as to the undertaking of maintenance work. The second aspect involves the necessary authority and funds to undertake maintenance work.

There are a number of preliminary steps necessarily associated with the regulatory and allocative aspects of a maintenance program. Since it is proposed that the State Council, watershed district boards, and county and municipal governing bodies have roles to play in the maintenance of channels, titles 58 (State) and 40 (local) of the New Jersey Statutes would have to be amended to provide for the following procedural steps.

Statement of Purposes. A first step is the enactment of a provision declaring it to be in the public interest to keep a system of basic channels throughout the State open and in good condition in order to protect public health, safety, welfare, and property.

Definitions. A second step is the formulation of definitions indicating those channels which should be maintained and kept in good condition. Some of the definitions suggested in Section B of this chapter would be applicable.

Delineation. A third step is the delineation of such channels required to adequately drain land areas, now and in the future. This step would entail the preparation of detailed, interpreted drainage maps. To a large extent this task should be undertaken on the State level. More detailed information would have to be developed on the county and municipal levels. To this end, county and municipal official map legislation should be amended to provide for identification of basic drainage rights-of-way, and municipal tax map legislation should be improved and more strictly supervised to require the inclusion of detailed drainage data.

Incorporation in Master Plans. A fourth step would be the incorporation of such delineated channels into master plans on the State, watershed district, county, and municipal levels:

- (1) On the State level delineated channels should be incorporated into plans encompassing each of the drainage basins of the State accompanied by general data;
- (2) On the county, watershed district, and municipal levels, delineated channels should be incorporated into the master plans accompanied by detailed data defining their location, grades, and elevations.

Continual Channel Surveillance. A final, but vital preliminary step is continual channel surveillance to provide up-to-date channel data. It is suggested that this would be a principal function of the county engineer who would transmit data periodically to the State water resources agency and other appropriate agencies.

### 3. Review and Approval Authority

#### a. Drainage, Channel Work

In accordance with explicit administrative agreements, the State Council, watershed district boards, and county governing bodies should be enabled to review and approve a number of activities involving or affecting the maintenance of designated channels.

Drainage and Reclamation Work. Any plans involving the undertaking of drainage and stream and land reclamation work should be subject to the review and approval of either the State Council, watershed district boards, or county water control agencies, in accordance with explicit standards as to maintenance of drainage facilities.

Channel Improvements. It is proposed that the reviewing agencies be authorized to review and approve all plans for the enlargement and straightening of channels or other improvements and to supervise all work. As a condition of granting approval, such agencies should be authorized to require conformity with specified standards pertaining to techniques to control erosion and siltation.

Inspection of such work could be undertaken by the State water resources agency and/or the county engineer. Erosion and siltation resulting from the lack of conformity with such specified standards should be rectified at the expense of those causing the problems.

b. Land Use Practices

To the extent that water control problems are the result of improper grading of land or debris and erosion from development sites, they should be controlled within the framework of legislation existing and recommended.

Subdivision Review. Through the process of subdivision review, plat reviewing agencies on the county and municipal levels should be authorized:

- (1) to specify standards concerning adequate grading and to require conformity to these standards as a condition of approval of final plats;
- (2) to specify those techniques required to control erosion and the buildup of debris from development sites and to require conformity with these techniques as a condition of approval of final plats; and
- (3) to rectify violations at the expense of violators.

Recommended Encroachment Review. In reviewing all plans or plats involving the filling in, alteration, or any obstruction of delineated floodways or drainage rights-of-way, reviewing agencies should be authorized:

- (1) to require conformity with grading standards as a condition of approval;
- (2) to require adoption of specified techniques to control erosion and the buildup of debris from development sites as a condition of final approval; and
- (3) to rectify violations at the expense of the violators.

Other Land Use Regulations. In order to minimize water control problems emanating from land areas already developed or not yet developed, agencies on all governmental levels should encourage the use of erosion control practices by those in control of such areas.

State agencies should encourage certain practices with regard to flood plain development, the maintenance of roads, reclamation and land-fill activities.

Soil conservation districts' power to formulate and enforce land use regulations could be utilized to a greater extent than at present to control arbitrary grading and practices resulting in erosion and the blocking and siltation of channels. They should be accorded greater political support at the State level in such endeavors. Consideration should be given to granting proposed watershed district boards similar power, consistent with the Constitutional provision pertaining to local zoning.

Municipalities should utilize their authority to pass zoning ordinances for such purposes.

#### 4. The Allocation of Responsibilities

Some basis must be found for assigning responsibilities for the review and regulatory functions cited above and for the undertaking of continual maintenance of designated channels. Allocation schemes may vary depending upon which of the following categories are considered:

- (1) The ownership of channels involved:
  - (a) publicly controlled;
  - (b) privately controlled.
- (2) The type of problem or function involved:
  - (a) mosquito breeding and/or public health;
  - (b) the protection of public or private property or facilities;
  - (c) the facilitation of navigation and port development.
- (3) The type of channel to be maintained:
  - (a) waterway or navigable channel;
  - (b) flood channel;
  - (c) drainage channel;
  - (d) storm channel.
- (4) The geographical area involved:
  - (a) within a single county;
  - (b) within a single drainage area;
  - (c) in more than one county;
  - (d) interstate.

##### a. A Minimum Program

At the very least, agencies on the State, watershed district, and county levels should formulate policy statements as to

the allocation of responsibilities for the undertaking of maintenance programs within each of the major and secondary drainage basins of the State. Although such statements would not be considered binding, they would provide a framework within which various agencies could work.

Among the items which could be included in such policy statements are the following:

- (1) the division of labor in undertaking drainage work within the county;
- (2) actions expected of performing agencies;
- (3) provisions pertaining to contracting with operating agencies;
- (4) the pooling of skills and resources;
- (5) the allocation of financial burdens;
- (6) provisions pertaining to interjurisdictional agreements.

A policy statement, that could serve as a prototype, appears in Appendix A-2.

b. A Recommended Scheme

Basis for Assigning Responsibilities. It is proposed that binding responsibility for regulatory and operational functions should be assigned to a single agency on the State, county, or watershed district levels.

The State water resources agency (the proposed Council or the existing Water Policy and Supply Council) should be assigned principal responsibility for the following:

- (1) waterways and navigable channels;
- (2) flood channels over which it assumes jurisdiction;
- (3) channels encompassing more than one county;
- (4) channels involving the protection of State facilities;  
and
- (5) channels which have been improved or reclaimed by State agencies pursuant to Federal aid programs.

Local agencies (county governing bodies, watershed district boards) should be assigned principal responsibility for:

- (1) non-navigable channels;
- (2) other channels involving the protection of local public facilities;
- (3) other channels flowing within the jurisdiction area of the local agency;
- (4) other channels under local public control;
- (5) other channels which have been improved or reclaimed by the local agency pursuant to Federal or State aid programs.

Wherever watershed districts have been formed, they would assume principal local responsibility for channels within their areas of jurisdiction. Otherwise, county governing bodies should assume such responsibility.

Existing Responsibilities for Continual Maintenance. At least the following agencies are considered to be bound to undertake continued maintenance programs:

- (1) those agencies which control channels either in fee or by the acquisition of a permanent easement, including the waterways to which the State has title and channels on publicly owned lands;
- (2) those local agencies which are designated recipients of State or Federal aid funds and which are required to maintain projects undertaken pursuant thereto.

Means of Assigning Responsibility. It is proposed that the maintenance responsibilities be assigned and enforced pursuant to the State police power.

Legislative provisions enacted to this end, in addition to those preliminary steps cited in a preceding section, must include at least the following elements:

- (1) formal procedures for determining the existence and scope of drainage problems, defining the work which is to be undertaken; and

- (2) formal procedures whereby the costs of undertaking such work are determined and are allocated among public agencies and private persons.

Consequently, the State water resources agency should be authorized to undertake or delegate responsibility to local agencies (county governing bodies or watershed district boards), for the formulation of surveys and reports identifying the scope and type of drainage problems deemed to exist.

After hearing, the agency assigned principal responsibility should determine:

- (1) whether any or which public agencies would bear or be assigned the responsibility for the maintenance of specified portions of channels;
- (2) the extent to which public agencies should bear the the burden of the costs to protect public facilities;
- (3) the extent to which such costs should be borne by local financing.

#### Setting Procedures in Motion

Four possible methods of initiating action for channel maintenance should be available.

First, pursuant to his continual surveillance activities, the county engineer could bring to the attention of the county water control agency and to the State resources agency, situations of present or imminent adverse drainage conditions.

Second, one or more general governing bodies could petition to the agency with the principal responsibility pertaining to the accomplishment of the reclamation of portions of channels within and/or exterior to their jurisdictions.

Third, one or more public agencies, other than general governing bodies, could petition to the agency with the principal responsibility, in connection with the reclamation of channels not under their control, but affecting their facilities or projects.

Fourth, citizens owning one or more tracts of land affected by adverse drainage conditions could similarly petition to such agency in connection with the reclamation of obstructed channels which adversely affect the drainage of their properties.

### Enforcement

If the agency assigned principal responsibility determines that reclamation work will not be undertaken or cannot be expected from the agency or agencies assigned responsibility, the agency can so declare and can undertake or contract to undertake such work and collect such funds from the designated taxing area or the agency responsible for covering the expenditures entailed.

### Other Powers, Responsibility

The financing or contracting agency should bear the responsibility for any damages to property in undertaking such work.

The financing or contracting agency should be authorized to acquire rights-of-way outside of the designated area by all means, including condemnation, to alleviate the adverse drainage condition.

## 5. Performance of Maintenance Functions

Flexible methods for the undertaking and especially the financing of maintenance work should be provided agencies on each governmental level. To this end two basic proposals are set forth below.

### a. Reclamation Work as a Public Benefit

Authority to Undertake. It is proposed that the State water resources agency, county and municipal governing bodies, and proposed watershed districts be authorized to undertake channel maintenance work as a public benefit for the protection of health, safety, welfare, and property. Consequently, such work could be financed from general revenues.

It is believed that county governing bodies already have this authority. At a minimum then, Title 40 of the New Jersey Statutes should be amended to grant such powers to municipal governing bodies and to watershed district boards. The use of special assessments to finance the undertaking of such work should be minimized.

Acquisition Authority. Such bodies should be authorized to acquire a full or partial interest in lands required to accomplish such purposes by all means, including condemnation.

b. Drainage Taxing Districts

New Drainage District Legislation Rejected. It is contended that the solution to ordinary drainage problems in a complex urban environment should be flexible and not involve complicated procedures for the creation of special drainage districts involving petitions, studies, elections, and assessments. Therefore, no proposal has been made in this report to update drainage district laws or to amend proposed drainage district legislation vetoed by Governor Meyner some years ago. (The proposed legislation and the Governor's veto message is set forth in Appendix E-1.)

Taxing Districts. Instead of recommending enabling legislation to permit the creation of up-to-date drainage districts, it is proposed here that, subsequent to the procedures set forth in subsection 4, county boards of freeholders be authorized to create taxing districts (purely as a financing device) for drainage purposes once a drainage problem has been found and delineated.

County boards of chosen freeholders should be authorized by law:

- (1) to set off and create within their jurisdiction one or more districts which shall be known as drainage taxing districts;
- (2) to establish such districts upon declaration that it serves the public interest to reclaim delineated channels within the specified area, which area shall be of adequate size to alleviate adverse drainage conditions within entire drainage basins; and
- (3) to declare that the specified drainage work is practicable and feasible to alleviate adverse drainage conditions.

The County board of chosen freeholders should be empowered to raise, within the limits of established districts, sufficient money to pay for the cost of alleviating adverse drainage conditions. The sum so ordered would be levied and collected at the same time and in the same manner as other county taxes.

If the State water resources agency should determine that an adverse drainage condition exists or is imminent and involves more than one county, then the affected counties, by concurrent resolutions, should be enabled to establish one or more drainage taxing districts.

In the case that watershed districts are organized in the area where adverse drainage conditions occur, such districts should be authorized to determine the extent of the work to be undertaken and to pay for the undertaking of such work from general revenues.

## D.

REGULATING STORM DRAINAGE FACILITIES AND  
CONTROLLING DOWNSTREAM PROBLEMS

1. Identification of Problem Areas

Urbanization and attending high intensity development increases surface water runoff, creating physical and program needs.

a. Need for Adequate Storm Drainage Facilities

Needed Facilities. Artificial storm drains and sewers are required to facilitate the safe disposal of storm water runoff, to protect individual development sites and to protect any off-site, upstream developments within the same drainage basin.

Existing drainage channels are taxed by increased runoffs. One result may be the creation of supplementary channels by the erosion of swales and depressions. A means of controlling the proliferation of such channels is by the enlargement or alteration of existing channels and structures to facilitate increased flows.

Program Needs. One goal of public policy is to regulate the construction of artificial storm drainage facilities and the improvement of existing channels and structures and therefore insure the adequacy of their capacity to facilitate increased runoff.

A problem which exists is the degree to which those in control of individual sites should bear the expense of constructing facilities to handle increased flows attending present and future upstream developments within the same drainage basin.

b. Downstream Problems

Concentrating and Diverting Surface Water. Prior to 1956, possessors of land were legally permitted to concentrate surface water artificially and to change its natural course in order to protect their properties, provided that such diverted and

concentrated flows were discharged in approximately the same area to which they would have naturally flowed even if resulting increases in the velocity of such flows caused downstream damage. Today, the New Jersey courts have ruled that such artificial concentration and diversion must be reasonable and that liability for resulting downstream damage may ensue if such reasonably could have been anticipated. Financial burdens attending urbanization have shifted from downstream properties to upstream developers, both public and private.

Improving Channels and Structures. A means of facilitating increased runoff is the enlargement of channels and drainage structures. However, the New Jersey courts have ruled that channel improvements create wrongful concentrations of water and those agencies altering or improving such channels are liable for any resulting damage downstream.

Program Needs. Excessive costs, actual and potential, are involved in constructing facilities to deal with surface water runoff. One goal of public policy is to determine the extent of financial responsibility which must be assumed by urban developers in disposing of surface water. Another goal is to minimize potential liability for problems caused downstream attending such development. A final goal is to minimize costs entailed in the construction and improvement of artificial structures and channels required for the facilitation of increased surface water runoff.

## 2. Some Proposals Pertaining to the Control of Artificial Concentration and Diversion of Storm Water Runoff and Allocation of Financial Responsibilities

One means of assuring the adequacy of storm drainage constructed on development sites and the allocation of shares of the costs of increasing the capacity of existing facilities to handle increased flows is the review and regulation of development activities. Many problems are entailed in such regulation and will require authority on three governmental levels in the State.

### a. Drainage Basin: Area for Regulation

It is obvious that the drainage basin is the logical area within which regulation of storm drainage activities must be consistently applied. Agencies on each governmental level have roles to play in such regulation.

Roles of Municipalities. Municipalities are not large enough to play the principal role in such regulation. However, it is contended that their regulatory powers should be enhanced

so that they can promulgate standards more restrictive than those enforced by higher level agencies. At the same time, their regulatory activities must be within the framework of higher level regulation.

Role of Counties. The county is a logical level at which to regulate most storm drainage activities since counties encompass many drainage basins and since county facilities often are affected by the disposition of surface water. At the same time, when problems exist within drainage basins spilling over into other counties, it is contended that agencies with jurisdiction over all of such basins should play a principal regulatory role.

Role of Watershed Districts. In the event that proposed watershed districts are created, it is contended that their regulatory role should supercede that of counties within which these district areas are located. Such districts will have jurisdiction over one or more drainage basins.

Role of State Water Resources Agency. A single State water resources agency should be enabled to play a principal regulatory role when surface water problems involve intercounty basins and where intercounty watershed districts have not been created to deal with such problems.

b. Basic Elements for Regulation

In order to insure that regulatory actions conform with comprehensive plans and standards and that those affected by such regulation are accorded due process, it is contended that master plans must be enacted by legislative bodies on each governmental level, municipal, county, and watershed district.

At a minimum, such adopted master plans should:

- (1) incorporate delineated drainage rights-of-way, their widths and grades;
- (2) indicate those facilities for which the governing body is or may be responsible, their dimensions, slopes, and elevations;
- (3) specify standards for the drainage of land areas; and
- (4) include statistics of existing and probable future development of drainage basins within the jurisdiction as a basis for calculating storm water runoff within basins when fully developed.

c. Revisions of Municipal Review Authority

Adoption of Master Plans. It is urged that municipalities adopt drainage master plans that conform with higher level plans, standards, and procedures, but which may go beyond them, if a municipality so desires.

Enhanced Regulatory Authority. Municipalities should be authorized to extend their regulatory authority pertaining to the adequate provision of storm drainage to all parcels or tracts of land whether subdivided or not. This proposal would permit municipalities to regulate individual site developments which are not subject to regulation at the present time. Its basic objective is to subject to regulation commercial and industrial sites which create great problems. Consequently, a minimum size restriction on the regulation of development sites would have to be imposed so that every individual residential development would not be subject to all aspects of municipal regulatory authority.

The planning board or municipal governing body should be authorized to adopt standards pertaining to drainage, subject to approval at higher levels, when channels or facilities outside of their jurisdictions are involved, prior to promulgating regulations.

The planning or governing body should be authorized to stipulate that any proposal, plan, or plat submitted to the plat-reviewing agency, to the building inspector, to any municipal official to whom plans are submitted for the construction of any surface or subsurface structure, or to the zoning board of adjustment shall not be approved unless it is satisfied that:

- (a) the lands are adequately drained;
- (b) the lands are adaptable for the intended purposes without danger to health or peril from flood or erosion; and
- (c) delineated drainage rights-of-way are in locations and of sizes and grades suitable to the intended uses.

d. Role of County Governing Bodies and Watershed District Boards

A single agency in each county and each watershed district board should be authorized to control problems within drainage basins which are located within its area of jurisdiction.

A Minimum County Program. On the county level, it is contended that a minimum program would entail the enactment of the

recommendations of the New Jersey Planners Association adopted in 1963 for the revision of the County Planning Law which appears in the Appendix A-3. These proposals would extend regulation of drainage to those subdivisions which drain through or to any facility for which the county is responsible.

However, it should be recognized that such regulation will not extend to single site developments. In this and in other respects, the recommended legislation does not go far enough. While it is recognized that even such a modest proposal has met with opposition, it is strongly urged that regulation of storm drainage conform to the standards proposed below.

Proposed Regulatory Authority: Allocation of Financial Burdens

It is believed that counties should play the principal role in regulating storm drainage and allocating financial burdens within entire drainage basins because their areas of jurisdiction encompass all or most of many drainage basins and because they are ongoing units of government. At the same time, whenever proposed watershed districts are formed within one or more counties, it is contended that the regulatory powers of watershed district boards should supercede those of the counties within which they are located. Administrative agreements, therefore, would have to be worked out among counties, watershed districts, and in some instances, the State water resources agency, so that duplication and overlap can be avoided.

Review Authority. It is proposed that Title 40 of the New Jersey Statutes be amended. It has been recommended that both county governing bodies and watershed district boards be authorized to adopt drainage master plans and standards. Thereafter, they should be authorized to administer the following program.

- (1) The County Water Control Agency or the watershed district board is hereby authorized to require the referral to such agency or board of all plans or plats submitted to municipal plat-reviewing agencies, building inspectors, other permit granting officials who authorize the construction of surface or sub-surface structures, and zoning boards of adjustment.
- (2) The County Water Control Agency and the board may require that plats or plans involving lands which in the opinion of the county engineer or watershed district board will cause storm water to drain directly or indirectly to a county road, or through a drainageway, channel, structure, pipe, culvert, or facility for which the county is or may be

responsible for the construction, reconstruction, maintenance or proper functioning (in the case of the watershed district boards, any structure or facility for which they are responsible) shall be accompanied by or specifically show, but shall not be limited to the following:

- (a) contours for the entire area and adjacent areas which bear an essential relationship to the area;
- (b) plans of all proposed storm drains, showing profiles of grade, size and type of pipe to be installed; where proposed storm sewer systems are connected to existing pipes or culverts, the size of existing facilities shall be indicated;
- (c) the location and type of construction of all catch basins;
- (d) plans for all culverts to be constructed, accompanied by maps with the drainage area in acres above the culvert indicated;
- (e) maps showing all ditches, streams, brooks, or swales to be altered, improved, or relocated, accompanied by cross sections and grades or profiles, with an indication of the method of stabilizing the slopes and an explanation of measures to control erosion and siltation during construction;
- (f) the location of all easements; and
- (g) maps showing the location of all dry wells, with plans and specifications for their construction which are designed to accommodate surface water runoff.

As in the case of municipalities, such regulation should extend to large industrial and commercial developments but might exempt small individual residential developments below a minimum size.

#### Approval Authority.

To the extent that storm channels that are constructed, altered, or covered function to facilitate storm water flows from upstream developments within drainage basins located in its jurisdiction, the County Agency or the board should be authorized to withhold approval of plans or plats unless it is satisfied that:

- (a) the lands are adequately drained;
- (b) the lands are adaptable for the intended purposes without danger to health or peril from flood or erosion; and
- (c) delineated drainage rights-of-way are in locations and of sizes and shapes suitable to the intended uses.

If the county water control agency or the watershed district board finds that drainage facilities are adequate and that necessary easements are acquired, that county or watershed district facilities will not be adversely affected and that the development area does not lie within a drainage basin in which drainage facilities have been previously installed or altered, notice of approval shall be given to the municipal governing body and plat approving agency.

If the County Agency or the board finds that a county or district facility would be adversely affected or that such development area lies within such drainage basin (indicated above), the plan or plat shall be returned to the municipal governing body, plat reviewing agency, or appropriate officials, indicating that all conditions must be fulfilled by the developer. Such conditions might include one or more of the following:

- (a) the installation or alteration of any required drainage facilities within or external to the proposed area of development;
- (b) the requirement of performance guarantees, maintenance bonds and agreements specifying minimum standards of construction;
- (c) the payment of monies toward the previous or future installations or alteration of drainage facilities;
- (d) the incorporation of any required storm drainage easements within the area of development; and
- (e) proof of ownership of any drainage easements external to the area of development or payment to the county to cover the cost or the proportionate share of securing an easement.

#### Allocating Financial Burdens

- (3) With respect to any drainage facility that either has been installed or is deemed necessary to be

installed or altered to remedy conditions adversely affecting county roads or facilities for which the county or watershed district does or may bear responsibility, the proportion of the cost of such facilities that will be required to be paid by a developer whose proposed development would drain to such facility should be equal to the proportion that the calculated storm runoff from the land area when fully developed bears to the calculated runoff of the entire drainage area when fully developed.

Such calculations should be based upon a reasonable assumption of the future density of the development of the basin by the county engineer or district staff with reference to existing plans and data.

- (4) The deposit in cash by the developer to the county or watershed district required in lieu of acquiring easements external to the platted area should be equal to the current fair market value of such drainage easement or easements.
- (5) Monies deposited with the county or district should be placed in a special fund and not be used for any other than designated purposes.
- (6) The county agency or watershed district board should by resolution establish a schedule of fees which can be used to defray the cost of reviewing such plans or plats.

#### Time Limit

- (7) If the county agency or the board does not take action on a plan or plat submitted to it within 30 days of its submittal, such plan or plat should be considered by the local approving authority to have been approved.

Upon agreement between the reviewing agency and the municipal approving authority the 30-day period may be extended up to an additional 30-day period.

Revision of Review Procedures. Provision might be made for a one-year trial period, after which adjustments in the previously mentioned procedures could be formulated and enacted.

#### e. The Role of the State

Scope of State Authority. When intercounty drainage basins or State facilities are involved in areas where there are no

watershed districts, county agencies should be required to submit tentative decisions and all necessary data to the State water resources agency.

Allocations of State aid to local agencies should be determined when projects undertaken by State agencies affect facilities for which local agencies are responsible.

Calculations of runoff within intercounty drainage basins should be made and sanctioned at the State level.

Contributions to a State fund should be considered to the extent that State facilities are affected by development of land areas and their capacities to facilitate increased runoff are decreased.

Contributions of money for the replacement of facilities in counties outside the one in which a given plan or plat is being reviewed should be deposited in the special funds of the county affected. Necessary determinations should be made and supervised at the State level, to which appeals by aggrieved parties could be made.

#### Time Limit on State Review

A time limit of 30 days should apply to the action of the State agency; if the State takes no action within that time, the decisions made on the county level should be deemed to have been approved.

Upon mutual agreement between a county and the State, the 30-day period might be extended up to an additional 30-day period.

### 3. Regulation of Channel Improvements

It is recognized that channel improvements are necessary to facilitate the increasing flows attending urban development. It has been suggested that they should be subject to review and regulation.

#### a. Encroachment Laws

To the extent that channel construction or alteration affects upstream drainage, work undertaken thereon is subject to the various encroachment laws recommended above.

b. Controlling Downstream Problems

To the extent that the alteration or improvement of channels increases the velocity and heights of downstream flows, means must be found for the allocation of financial burdens imposed by increasing the capacities of downstream structures to facilitate such increased flows.

It is suggested that in reviewing the undertaking of channel work, the State, county, and watershed district reviewing agencies should be authorized to determine the amount of financial responsibility to be assumed by those agencies authorizing the undertaking of work to increase the capacity of downstream facilities. However, it is recognized that such determinations would be difficult. It is contended that the next proposal would alleviate some of these downstream problems.

4. Public Acquisition of Drainage Rights-of-Way: A Complementary Proposal

a. Limits of Previous Proposals

The above proposals do not eliminate the need to undertake costly engineering works, nor do they eliminate the problem of incurring liability if downstream damages result from concentrating and diverting surface water and undertaking channel improvements.

b. Program Goal

To eliminate or minimize such problems, it is contended that the goal of public policy should be to get a complete system of drainage rights-of-way under public control. To an extent, such control can be imposed pursuant to encroachment laws existing and recommended in sections of this chapter. To an extent, such control can be attained by programs to acquire and to regulate the use and occupancy of flood plain areas.

It is suggested that, in addition to the above programs, a systematic program of public acquisition of drainage rights-of-way be undertaken.

Public control of such drainage rights-of-way will have at least two major consequences:

- (1) the costs involved in constructing engineering works to facilitate increased flows attending urban development will be greatly minimized; and
- (2) the potential liability which may be incurred by both private persons and public agencies in disposing

of surface water and in improving channels will be greatly minimized.

c. A Recommended Program

A number of sequential steps are entailed in a systematic acquisition program.

Inventory. First, there is a need for an inventory of all publicly acquired channels, flood plains, and drainage rights-of-way, including data to identify the extent of the interests acquired. These data should be collected and deposited on the State level.

Drainage Maps. Second, there is a need for the preparation of interpreted drainage maps for every drainage basin in the State. It has been suggested that this task be accomplished on the State level and supplemented by data acquired from amended official map and municipal tax map legislation.

Delineation of Drainage Rights-of-Way. Third, based upon existing and proposed data, there must be a delineation of drainage rights-of-way and their minimum widths.

To the extent that it has been proposed that the State delineate and establish floodways and delineate basic channels, especially those which drain areas encompassing more than one county, some of this task should be undertaken on the State level. For all other drainage rights-of-way the task should be undertaken on the county, watershed district and municipal levels.

Incorporated in Master Plans. Such delineated rights-of-way should then be incorporated in State, county, watershed district, and municipal master plans.

Acquisition Programs. Finally, policies should be formulated for the undertaking of systematic acquisition programs on all levels. Priorities should be established as to the programming of such acquisition.

Lands Subject to Review and Channels Where Work is to be Performed. Suggestions have been made concerning requiring the dedication of certain rights-of-way and acquiring a full or partial interest in channels when work is to be performed. It is contended that if systematic acquisition programs are undertaken and if private owners are apprised of the potential costs they

may incur without some public control, there will be more voluntary dedication of channels or drainage rights-of-way than is now the case.

Authority to Acquire. It is recommended that the State water resources agency, county, watershed districts, and municipal governing bodies be authorized to acquire land, lands lying under water, and development rights to control and conserve water for the protection of health, safety, welfare, and property by all means, including condemnation.

Extent of Interest Acquired. It is suggested, since agencies acquiring a permanent easement will be subject to continual maintenance of that easement, that drainage rights-of-way be acquired in fee title. Since acquisition programs will have to be undertaken over a period of time, and since acquisition of the fee title may be costly, a permanent partial interest may be acquired, as a first step. Eventually, such rights-of-way should be acquired in fee title.

State Aid. It has been suggested previously that the State water resources agency be appropriated the funds to financially assist local agencies in acquiring drainage rights-of-way and flood plain areas.

#### E.

### REGULATION OF THE USE AND OCCUPANCE OF FLOOD PLAINS

#### 1. Identification of Problem Areas

##### a. Need for Additional Land Use Regulation

The regulation of basic channels, floodways, and drainage rights-of-way recommended above, can neither prevent nor alleviate water damage completely. Furthermore, after years of experience, it is apparent that the construction of engineering works cannot provide full protection. Such work is costly and subject to physical and economic limits.

##### b. Program Goals to be Achieved

The need to develop programs to restrict the use and occupance of flood plain areas has been recognized. A number of goals can be attained by developing such programs:

- (1) High intensity development can be restricted from areas in which damage is likely to occur.
- (2) Open areas and wet lands which serve to absorb and thereby slow surface water runoff can be preserved.
- (3) The construction of facilities in flood plain areas can be controlled so as to afford the greatest protection from damage and the creation of unsanitary conditions.
- (4) Recreational areas can be provided and suitable fish and wildlife habitats preserved.

c. Deficiencies of Programs Within the State

There are a number of means to restrict the use and occupancy of flood plain areas. None of them have been sufficiently exploited in the State.

The State program to delineate and to conspicuously mark flood prone areas has been moribund until recently. In addition, the program of the Corps of Engineers to provide flood data has only limited application in the State.

Land use regulations to restrict the use of flood plains have not been adequate. Few municipalities have enacted flood plain zoning ordinances. There are few incentives and many immediate disadvantages in their doing so. They have received poor legal advice in enacting such ordinances; adequate technical and legal advice has not been forthcoming from State agencies. County governing bodies are constitutionally barred from enacting zoning resolutions. There is no evidence that the power of soil conservation districts to enact land use regulations has been exercised. Subdivision regulations and building codes have not been exploited in restricting the use of flood plain areas to prevent flood damage.

No systematic acquisition program is underway for bringing flood plain areas under public control. Only the "Green Acres" unit in the Department of Conservation and Economic Development and the Delaware River Basin Commission have been authorized to acquire development rights for water control and conservation purposes. No other agencies within the State have been similarly authorized.

2. Suggested Programs

What is immediately apparent is that there is no single best method for attacking the problem of controlling the use and occupancy of flood plain areas. Nor is it necessary that all

forms of action be undertaken simultaneously. Indeed, the expense of a maximum program would be prohibitive, although some programs can be undertaken over extended periods of time. At least, minimum programs can be suggested. If it is found by experience that these programs do not do the job, then shifts in emphasis should be considered. It is clear from the lack of accomplishment in controlling the use and occupancy of flood plain areas to date that there is a need for the State to take the initiative and, at the very least, to revitalize the exercise of those powers and programs which do exist. The situation in the State underscores the fact that enacting laws is not enough. They do not result in accomplishment unless there is a will to exercise them and unless there are public funds available for their exercise.

a. Applicability of Previous Recommendations

Proposals already have been made which apply to the control of the use and occupancy of flood plain areas.

First, the suggestion of providing a clearinghouse for the collection and development of water resources data on the State level and the preparation of interpreted drainage maps and concomitant soil surveys are important first steps in systematically designating flood plain areas, existing development, and other data pertaining to them.

Second, suggestions pertaining to the delineation and establishment of floodways, storm and other drainage channels, and drainage rights-of-way constitute minimal programs in controlling the use of designated portions of flood plain areas.

Third, the acquisition of certain floodways, drainage channels, and drainage rights-of-way also constitutes a means of effecting partial controls over portions of flood plain areas.

b. Flood Plain Regulations

Delineation and Marking Flood Hazard Areas. It is urged that State authority to delineate and mark flood hazard areas be drastically revitalized and extended. The proposal for the preparation of interpreted drainage maps could be a starting point for the delineation of flood plains as well as floodways. Furthermore, aid is available from the U.S. Corps of Engineers and the U.S. Geological Survey. Such delineation could be done on a priority basis.

Standards for the Use of Flood Plains. While the Division of Water Policy and Supply is authorized to identify various portions of flood hazard areas according to relative risk, the State should take the initiative in formulating standards for the use of

flood plain areas, after public hearings, which initially should serve as guidelines for local agencies. It is suggested that the State water resources agency be appropriated such funds as are necessary to exercise such powers effectively.

Local Zoning. Local agencies should be enabled to regulate flood plains under State supervision and control. In this connection, consideration could be given to permitting counties to enact and enforce limited zoning regulations by removing the constitutional bar to the exercise of such powers.

c. Aiding Local Agencies

The State water resources agency should be enabled to undertake such activities and extend such aid to local agencies as will provide incentives for them to formulate and enforce regulations of the use and occupancy of flood plain areas.

Conditional Aid Programs. Consideration should be given to the extension of financial aid to local agencies on the condition that they formulate and adopt certain standards:

- (1) Existing programs providing aid to local agencies might be revised to condition the granting of such aid, or at least to scale Federal or State contributions, according to whether standards have been formulated or plans adopted and promulgated or upon the assurance that steps have been undertaken to do so.

Among those programs applicable to such conditions are:

- (a) Section 701 of the Federal Housing Act of 1953 providing planning assistance;
  - (b) Section 702 of the Federal Housing Act of 1954, providing advancement for planning public works;
  - (c) Section 103-d of the Federal Housing Act of 1949, providing aid for renewal programs;
  - (d) Federal Housing Act of 1961, providing aid for the acquisition of open spaces;
  - (e) State 5-/40 Program, providing assistance for continued planning;
  - (f) The Green Acres Local Assistance Program.
- (2) Continued consideration should be given to the adoption of a flood insurance program to provide incentives in formulating and enforcing flood plain standards by:

- (a) adjusting the government subsidy upward in relation to the degree of self-regulation enacted by recipient local agencies; and
  - (b) reducing rates in those areas where adequate land use regulations have been enacted and are enforced.
- (3) The State water resources agency should be enabled and appropriated funds to grant conditional aid to local agencies in undertaking the construction, improvement, maintenance, and operation of engineering works.

Other Financial, Technical and Legal Aid. The State water resources agency should be authorized and appropriated sufficient funds:

- (1) to assist local agencies financially in the form of grants to offset administrative expenses in adopting and enforcing measures to give effect to standards formulated at the State level; and
- (2) to extend additional technical aid and legal assistance to local agencies in formulating and enforcing zoning regulations, restrictive building codes, subdivision regulations, and otherwise giving effect to standards developed at the State level.

d. Acquisition Programs.

Coordinating Acquisition Programs. Public acquisition programs should be coordinated and extended so that flood plain areas can be systematically acquired.

A first step would be the adoption of master plans for each drainage basin and the identification and delineation of flood plain areas.

The next step involves the compilation of a complete inventory of all flood plain areas presently under public control which must be kept up-to-date by the principal State water resources agency.

The third step is to coordinate existing programs to the greatest extent possible to achieve water policy objectives. Among those programs which might be coordinated are:

- (a) Federal open space acquisition and urban renewal programs;

- (b) programs to acquire land for fish and wildlife restoration and protection;
- (c) programs of the State Bureau of Parks and Recreation and county park commissions;
- (d) the Green Acres programs.

Authority to Acquire. It is suggested that the principal State water resources agency and local agencies be authorized to acquire full and partial interests in lands, lands lying underwater, development rights, and conservation easements for water control and conservation purposes.

Consideration must be given to policy positions on the feasibility of acquiring easements or of acquiring lands in fee with provisions to lease back for limited use.

Amendments to Titles 58 and 40 should include at least the following provisions:

- (1) It is in the public interests to conserve open spaces and to limit their future use to facilitate the protection of natural streams, flood control, soil conservation, the provision of public parks, forests, reservoirs, wildlife preserves, and the preservation of other amenities.
- (2) (The pertinent agencies) may acquire by purchase, gift, grant, bequest, devise, or condemnation, the fee or any lesser interest or right in real property, including a development right, easement, covenant, or other contractual right to achieve the purpose (of the respective statutes).
- (3) Any (pertinent agency) may also acquire the fee to any property for the purpose of conveying or leasing said property back to its original owner or other person under such covenants or other contractual arrangements as will limit the future use of the property in accordance with the purposes of (the respective statutes).
- (4) It shall be unlawful for any person to erect structures in the conservation areas so acquired or to perform any other act except in accordance with the rules and regulations promulgated by (the pertinent agency).

- (5) It shall be the intention of the Legislature that property covered by conservation easements be assessed on such a basis as to reflect the fact that such property is not available for tract housing or commercial or industrial development.

State Aid. Funds should be available on the State level to make grants to local agencies to aid them in flood plain acquisition programs.

e. Increased State Initiatives

These proposals are designed to give greater incentive to local agencies to formulate and enforce standards to restrict the use and occupancy of flood plain areas, and to subject them to State supervision. Accordingly, the State should assume many of the costs which are prohibitive to local agencies.

Concomitantly, the State must begin to take greater initiatives. Once it has delineated flood plain areas and formulated standards, it may be necessary for the State agency to enforce standards, at least on the reaches of the largest rivers. Furthermore, the State must accelerate its own acquisition programs for water control and water supply purposes before development outstrips its capacity to do so and costs become prohibitive.

## Appendix A

### County and Municipal Plans and Policies

#### A-1 Municipal Master Plan and Ordinance

1. AN ORDINANCE REGULATING THE CONSTRUCTION AND MAINTENANCE OF DRAINS, CULVERTS, PIPES, BRIDGES, DITCHES AND DRAINAGE STRUCTURES IN THE TOWNSHIP OF PEQUANNOCK, COUNTY OF MORRIS, STATE OF NEW JERSEY, AND PROVIDING PENALTIES FOR THE VIOLATION THEREOF.

WHEREAS the level terrain of certain areas of the Township presents peculiar problems with respect to the discharging of storm and ground waters, and

WHEREAS it is in the interest of the public health, safety and welfare that all drainage structures in the Township be adequately constructed to proper grade and then maintained in good working order;

NOW, THEREFORE, BE IT ORDAINED By the Township Committee of the Township of Pequannock in the County of Morris and State of New Jersey as follows:

#### SECTION 1.

A. It shall be unlawful for any person, firm, or corporation to hereafter erect or construct or install a drainage ditch, culvert, drainpipe, bridge or any other type of drainage structure or obstruction effecting the drainage of any premises in the Township of Pequannock without first obtaining permission thereof from the Township committee.

B. Applications for such permission shall be submitted in writing to the Township Committee and shall include the following:

1. Map or diagram of the property with the location of all present or proposed ditches, streams, brooks, pipes and/or drainage structures.
2. Elevations based on U.S. Geodetic datum of all such features shown.
3. The percent of grade of the flow line of the proposed drainage structure, pipe or other construction.

4. The disposition which will be made of the water being drained or channeled from the premises.

C. The application shall be immediately referred to the Township Engineer or other authority designated by the Township Committee. The application and site shall be examined by such engineer or authority for its compliance with the master drainage system of the Township, and a report or recommendation shall be made concerning the proposal to the Township Committee at its next subsequent meeting.

D. In passing upon such applications the Township Committee shall require that all drainage structures which drain water off the premises of the applicant shall be extended and tied into storm drains, ditches, or other existing public owned or controlled drainage for the area. It shall also require that the pipe or structure be of sufficient size, installed to the proper grade, taking into consideration the size of the area to be drained. If all standards are complied with and the drainage structure meets good construction and engineering practice, permission shall be granted by the Committee.

SECTION 2. All drainage ditches, culverts, drains, pipes, and drainage structures shall be kept open and free flowing at all times and it shall be unlawful for any person, firm or corporation to throw or place any debris or material of any manner whatsoever or to cause such to be thrown or placed into any drainage ditch or drainage structure under the control of the Township of Pequannock, or any Municipal, County, State or Federal governmental agency.

SECTION 3. In the event any section of this Ordinance shall be adjudged unconstitutional by any Court, such adjudication shall not affect any of the other sections but same shall remain in full force and effect.

SECTION 4. Any person, firm or corporation convicted of violating this ordinance shall be subject to a fine not to exceed \$200.00 or to 90 days imprisonment in the County Jail or to both such fine and imprisonment in the discretion of the Magistrate.

SECTION 5. This Ordinance shall take effect as provided by Law.

2. AN ORDINANCE TO PROVIDE FOR A COMPREHENSIVE DRAINAGE STUDY AND SURVEY IN THE TOWNSHIP OF PEQUANNOCK, COUNTY OF MORRIS, AND PROVIDING FOR THE FINANCING OF THE COSTS THEREOF.

WHEREAS it is deemed necessary for the public health, safety, and welfare to undertake a comprehensive drainage survey in the Township of Pequannock and to authorize the preparation of maps and engineering data showing the necessary ditches and drains to be constructed to provide adequate drainage in the Township;

NOW, THEREFORE, BE IT ORDAINED by the Township Committee of the Township of Pequannock, as follows:

SECTION 1. That a comprehensive study and survey of the Township be made and in connection therewith the services of an engineer or engineers be obtained by the Township.

SECTION 2. That for the purposes hereinabove expressed the sum of \$3,500.00 be and the same is hereby appropriated out of the Capital Improvement Fund for the Budget of 1952 and prior years.

SECTION 3. This Ordinance shall take effect as provided by Law.

A-2 County Policy on Stream Clearance

BERGEN COUNTY RESOLUTION

1. The County shall furnish to the Municipality, without cost or charge except as herein provided, the equipment designated on the attached schedule on a loan basis, and shall provide the personnel required to operate such equipment.
2. The Municipality, at its own cost and expense, shall:
  - (a) Before the commencement of the work, furnish a sketch or print in form approved by the County Engineer and showing the exact location and dimensions of the water course as it exists and as it is to be after the cleaning, straightening or widening has been completed and showing such other information as may be required by the County Engineers.
  - (b) Provide all easements necessary for access to the stream, and the completion of the work.
  - (c) Furnish such engineering and stream flow data, title information and such other information concerning the project as the County may require.
  - (d) Before the commencement of the work, remove all trees, stumps, brush and debris along the edges of the stream to permit access thereto and to provide sufficient open space for the performance of the work.

- (e) Provide the necessary gasoline and lubricating oil for such equipment.
- (f) Provide all engineering and supervisory services and all labor necessary for the completion of the work.
- (g) Remove or bulldoze the excavated material or make other disposition thereof as may be necessary.
- (h) After the completion of the work open all lateral ditches connected with the said brook.
- (i) Perform such work as may be necessary to prevent the banks of the stream from collapsing or eroding.
- (j) Indemnify and save the County harmless from any claim for damages or any other expenses which may arise in connection with said projects.

3. In the event that any piping, tiling or other construction is required in connection with such stream improvement for which neither the Municipality nor the County is specifically responsible, such work shall not be performed without prior authorization and approval of the Board of Chosen Freeholders and the governing body of the Municipality and an agreement reached concerning the type and extent of the work and the apportionment of the cost. This provision contemplates construction required as a public improvement and not work which constitutes a private benefit for the owners of the property adjacent to such streams.

4. It is understood and agreed by the Municipality that all obligation to perform the work herein provided does not rest on the County and that the furnishing of the equipment by the County pursuant to this agreement shall not be construed in any way as an assumption of liability by the County for the future maintenance of such stream or the performance of any further work in connection therewith.

In addition to the requirements already stated in Section (a), the Municipality should also show on the submitted sketch, the location and pertinent dimensions of all existing structures adjacent to, over, within, and under the stream. The pertinent dimensions should include the normal span of bridges and culverts, and the clear height from the underclearances to the streambed and to the top of the footings. Also, a profile should be submitted showing thereon the existing and proposed streambed, the tops of banks, and all existing structures over, within, and under the stream. In particular, the elevations of the top and bottom of the footings of all bridges and culverts over the stream and all buildings immediately adjacent to the stream should be shown on the submitted plans and profiles.

To assist in checking on the acquisition of easements or "right-of-access" along the stream, as required in Section (b), it is also suggested that the Municipality show on the submitted plan the property lines of all property adjacent to the stream with each property identified by either Block or Lot numbers or by the name of the owners. Those properties for which easements have been obtained, should be indicated on the plan by some symbol or by other means.

A-3 Proposed County Planning Law

PROPOSED REVISION BY THE COUNTY PLANNERS ASSOCIATION  
TITLE 40A. MUNICIPALITIES AND COUNTIES  
CHAPTER 14. COUNTY PLANNING LAW

40A:14-1 County planning board; members and term of office

Any board of chosen freeholders may create a county planning board of not less than 7 nor more than 9 members who shall serve without compensation.

The members of such planning board shall be:

- a. The Director of the board of chosen freeholders.
- b. One member of the board of chosen freeholders who shall be appointed by the director each year.
- c. The county engineer.\*
- d. Other citizens who are residents of the county and who shall not hold any other county office and who shall be appointed by the director of the board of chosen freeholders with the approval of that body.

40A:14-5 County general plan

The county planning board shall prepare and adopt and may from time to time amend, a county general plan for the physical development of the county....

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\* Underlining done to emphasize provisions applicable to propositions and recommendations made throughout this report.

40A:14-6 Scope of county general plan

The county general plan may cover proposals relating to land use, transportation, economic development, recreation, conservation, provision of utilities, drainage, public and semi-public facilities, food and water supply, provision of open space, natural resources, historical landmarks, and any other matters which may be important to the future physical development of the county.

40A:14-7 Comprehensive surveys by board

As a basis for the county planning program, the planning board shall cause to be made, careful and comprehensive surveys and studies of present conditions and prospects for the future of the county....

To such end, the board shall include the study of adequate provision for traffic and recreation, the promotion of safety from fire, flood and other dangers....

40A:14-10 Consultation with board of chosen freeholders

The county planning board shall confer with the board of chosen freeholders with respect to the formulation of development programs and budgets for capital improvements and with respect to the preparation and adoption of the county official map. The Board of chosen freeholders may by resolution provide for the reference of any other matter or class of matters to the county planning board before final action thereof by any county department, board or commission or county official having final authority thereon. Said reference may be provided for with the provision that final action shall not be taken until the county planning board has submitted its report or until a specified period of time has lapsed without such report having been made.

40A:14-11 Consultation and cooperation with municipal planning boards

The board shall receive and review all municipal master plans, subdivision ordinances, zoning ordinances and official maps prior to their adoption or amendment and, when deemed advisable, submit a written report to the municipal planning board.

The county planning board report shall be limited to those matters which affect facilities or functions for which the county is responsible or which transcend municipal or county boundaries,

such as...water pollution...sewerage or drainage, or which may affect major regional facilities.

Whenever a municipal planning board or governing body shall duly adopt or amend the said master plans, official maps, subdivision ordinances or zoning ordinances, they shall forward, within 30 days, a certified copy...to the planning board.

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40A:14-12 Consultation and cooperation with state and regional agencies

In the interest of securing the coordination of local, county, state, regional and federal planning development matters, it shall be the duty and the responsibility of the county planning board to serve as the repository for all current general plans, programs and projects for the development of public improvements within the county which may substantially alter the general pattern of development....

The county planning board shall review all such general plans, programs and projects and shall be in a position to advise and consult with the board of chosen freeholders and appropriate official agencies in regard to the resulting impact on the general development of the county.

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40A:14-13 Zoning review prior to passage or action

The county planning board shall be notified of any public hearing on any municipal zoning ordinance or amendment thereto, or of a public hearing for the purpose of recommending or granting of any use variance, conditional use or special permit....

A representative of the board may appear at such hearing to render any report, study, finding or recommendation which the board desires to bring to the attention of the agency conducting the public hearing.

The county planning board report shall be limited to those matters which affect facilities for functions for which the County is responsible, or which transcend municipal or county boundaries such as...water pollution...sewerage or drainage, or which may affect major regional facilities.

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40A:14-15 Subdivision review and approval

a. All subdivisions shall be submitted to the county planning board for review and approval prior

to approval by the local municipal approval authority. The local approving authority shall wait at least 30 days after submission of the subdivision to the county planning board before approving, conditionally approving or denying said subdivision. If the county planning board fails to report to the municipal approving authority within the 30-day period, said subdivision shall be deemed to have been approved by the county planning board. Upon mutual agreement between the county planning board and municipal approving authority, the 30-day period may be extended for an additional 30-day period.

b. The county planning board shall review each subdivision and, upon advice of the county engineer, withhold approval if said subdivision does not meet subdivision approval standards previously adopted by the board of chosen freeholders. These standards may include:

- (1) The requirement of adequate drainage facilities and easements when, in the opinion of the county engineer, the proposed subdivision will cause storm water to drain either directly or indirectly to a county road, or through any drainageway, structure, pipe, culvert, or facility for which the county is responsible for the construction, reconstruction, maintenance, or proper functioning.
- (2) ...
- (3) ...
- (4) The requirement of performance guarantees, maintenance bonds, and agreements specifying minimum standards of construction. The amount of any performance guarantee or maintenance bond shall be determined by the county engineer and shall not exceed the full cost of the facility and installation costs or the proportionate share thereof as related to the drainage basin involved plus ten percent contingencies. In lieu of providing any required drainage easement a cash contribution may be deposited with the county to cover the cost or the proportionate share thereof for securing said easement. In lieu of installing any such required facilities exterior to the proposed plat, a cash contribution may be deposited with the county to cover the cost or proportionate share thereof for the future installation of such facilities....

c. The board of chosen freeholders may, by resolution, establish a schedule of fees which the county planning board shall charge to defray, in full or part, the cost of reviewing subdivisions....

d. The authority to approve subdivisions shall cease one year from the date of passage of this act until such time or prior thereto as subdivision procedure and approval standards are adopted, by resolution, by the board of chosen freeholders.

e. The county planning board may, by resolution, vest the power to review and approve subdivisions, pursuant to the provision of this Act and subdivision approval standards adopted by the board of chosen freeholders, in the county planning director.

f. Any person aggrieved by the action of the county planning board may appeal in writing to the board of chosen freeholders within ten days after the date of the action and any person aggrieved by the action of the county planning director may similarly appeal to the county planning board. The board to which an appeal is taken shall consider such at a regular public meeting upon notice to all parties in interest. Said board may affirm or reverse the action taken by a recorded vote of the total members thereof.

g. The county clerk or registrar of deeds and mortgages shall not accept for filing any subdivision plat unless it bears the certification and signature of the appropriate county planning board officer or staff member indicating compliance with the provision of this Act and standards adopted pursuant thereto.

40A:14-15 Recommendations of adoption of capital improvements program

The county planning board may recommend to the board of chosen freeholders a capital improvements program setting forth the capital improvements project contemplated over a period of successive years in their order of priority....

40A:14-16 Scope of capital improvements program

The capital improvements program may contain such projects as highways, roads, parkways, parks, drainageways and other public works or buildings under county jurisdiction. It may also include projects in which the county may be called upon to participate in the acquisition, financing, or construction.

40A:14-17 County official map

The board of chosen freeholders, after receiving the recommendation of the county planning board, may adopt an official map, prepared under the direction of the county engineer, showing the highways, roadways, parks, and parkways and sites for public buildings or works under county jurisdiction or in the acquisition, financing or construction of which the county has participated or may be called upon to participate. Such official map may be adopted for portions of the county and/or show one or more of the above listed matters.

Prior to the adoption of an official map or any change or addition to such map, the board of chosen freeholders shall submit such change or addition to the county planning board for its consideration and advice. Pending the receipt and consideration of such report, the board shall defer action thereon, but if such report is not received within 30 days or within such further time as may be agreed upon by the board of chosen freeholders, such board may proceed to final action thereon. Similar facilities, buildings or works officially proposed by any official regional, state or federal agency may also be shown on the official map. All provision of this act shall apply to such regional, state or federal proposals.

40A:14-18 Official map binding

When approved in whole or part by the board of chosen freeholders, such county official map or part thereof shall be deemed to be binding upon the board of chosen freeholders of the county and the several county departments thereof and upon other county boards heretofore or hereafter created, and no expenditures of public funds by such county for construction work or for the acquisition of land for any purpose shall be made except in accordance with such official county map.

40A:14-19 Filing of maps and plans

Copies of adopted municipal official maps and all plans involving land acquisition or capital improvements within any county adopted by any regional, state or federal agency shall be filed with the county planning board within 30 days of enactment.

Copies of adopted county official maps shall be filed with each municipal planning board, municipal clerk and the municipal official charged with issuing building permits in every municipality affected by the proposals shown on such maps within 30 days of enactment.

40A:14-20 County building permit

No buildings shall be erected on any parcel of land on which any highway, roadway, park, parkway or site for a public building or work under county jurisdiction designated on the county official map is located unless a permit therefor is issued by the board of chosen freeholders....

Whenever one or more parcels of land upon which is located the bed of a mapped county street or drainage right-of-way, or other area under county jurisdiction designated on the county map has no reasonably feasible use to the owner unless a building permit is granted, the board of chosen freeholders may in a specific case grant a permit for a building in the bed of such mapped street, drainage right-of-way, or other area of county jurisdiction designated on the county official map which will, as little as practicable, increase the cost of opening such street or tend to cause a minimum change of such county official map.

The board of chosen freeholders shall refer all applications for such permits to the county planning board for an advisory report thereon....

If a permit is denied by the board of chosen freeholders, the county, regional, state or federal agency shall enter into an agreement to purchase or otherwise acquire the subject land within one year from the date of denial of said permit. Upon failure to move to purchase or acquire said lands within the one year period, said permit shall be deemed to have been issued.

40A:14-21 Violation: penalty

Whoever shall construct or begin the construction of a building without a permit required by this chapter may be fined not more than \$100.00 for each day that work on such structure continues. The county may bring an action to enjoin such construction and may also recover the penalty by a civil action in any court of competent jurisdiction.

## Appendix B

### Collection and Development of Data

#### B-1 Proposed Resolution for Preparing Drainage Maps in New Jersey

SENATE JOINT RESOLUTION NO. 14  
STATE OF NEW JERSEY

INTRODUCED APRIL 22, 1957  
BY SENATORS LYNCH AND STOUT

Referred to Committee on Agriculture, Conservation and Economic Development.

A Joint Resolution creating a commission to initiate and direct a project for the preparation of drainage maps of the entire State of New Jersey.

Be it resolved by the Senate and General Assembly of the State of New Jersey:

1. There is hereby created a commission to consist of 6 members, 2 to be appointed from the membership of the Senate by the President thereof, and 2 to be appointed from the membership of the General Assembly by the Speaker thereof, and 2 to be appointed by the Governor, all of whom shall be appointed without regard to political affiliation and all of whom shall serve without compensation. Vacancies in the membership of the commission shall be filled in the same manner as the original appointments were made.

2. The commission shall organize as soon as may be after the appointment of its members and shall select a chairman from among its members and a secretary who need not be a member of the commission.

3. It shall be the duty of said commission to initiate a project for, and direct, the preparation of drainage maps of the entire State of New Jersey, such maps to contain such information as the commission shall determine, that the maps may be of the greatest possible use to the State and its citizens in connection with matters related to hydraulics, location and construction of highways, water supply, flood control, soil and other conservation projects, wildlife, agriculture, forestry, mosquito control, civil defense and other projects.

4. There is also created a drainage map project advisory committee to assist and advise the commission in the determination

of policy, scope and execution of the map project and to perform such other work as the commission may request. The advisory committee shall be composed of 1 representative of each of the following State Departments to be designated by the Commissioners thereof: the State Department of Health, the State Highway Department and the Department of Conservation and Economic Development together with 1 representative of each of the following organizations and groups:

County Planners Association;  
County Engineers Association;  
County Agricultural Agents;  
New Jersey Mosquito Extermination Association;  
New Jersey Society of Professional Engineers; and  
College of Engineering, Rutgers University.

The advisory committee shall meet, at the call of the chairman of the commission, and shall organize by the selection from among its members of a chairman and secretary. The advisory committee may meet at such place or places as it shall designate and on call of the chairman of the commission meet with the commission.

5. The commission shall be entitled to call to its assistance and avail itself of the services of its advisory committee and of such employees of any State, county or municipal department, board, bureau, commission or agency as it may require and as may be available to it for said purpose and to employ such stenographic and clerical assistants and incur such traveling and other miscellaneous expenses as it may deem necessary in order to perform its duties, and as may be within the limits of funds appropriated or otherwise made available to it for said purposes.

6. The commission is authorized to contract with the College of Engineering of Rutgers, The State University, or such other agency as it shall select, for the execution of the actual preparation and execution of the drainage maps involved in the project.

7. The commission may meet and hold hearings at such place or places as it shall designate during the sessions or recesses of the Legislature and shall make a report of its work to the Governor and Legislature.

8. There is appropriated to the commission such funds as shall be included in an annual or supplemental appropriation acts.

9. This joint resolution shall take effect immediately.

## STATEMENT

## Purpose of Drainage Maps

There has been widespread interest in New Jersey from various official public agencies for detailed drainage maps to cover the entire State. This broad support has been expressed through official action by the following organizations:

1. Association of Boards of Freeholders
2. Through this organization the boards of freeholders of most counties in the State and their county planning boards
3. New Jersey Federation of Official Planning Boards
4. County Engineers Association
5. County Planners Association
6. Stony Brook-Millstone Watershed Association
7. New Jersey Mosquito Extermination Association

As New Jersey continues its rapid growth, detailed information on drainage becomes more important. These maps would supply information which at this time can only be gathered by costly field work. All of the above listed organizations and agencies are required by law to discharge duties in the public interest. These maps would provide a tool which could be used in the design of drainage structures, location of roads and highways, the preparation of master plans and official maps of municipalities and counties of the State, the location of structures to prevent and minimize flood damage and the pinpointing of problem areas for Mosquito Extermination Associations. The maps would also be of direct benefit to various state departments including the Departments of Health, Highway and Conservation and Economic Development. The supporters of this bill feel that the practical benefits to be derived from these maps far outweigh the cost of preparation. These maps would facilitate the efficient operation of all of the above named agencies in planning for public improvements of all types.

B-2 Drainage Mapping Project, Cost Estimates

Estimated Cost on Yearly Basis for Three Years

(Estimate to apply only after staff is recruited and project organized)

Anticipated results: Two or three bulletins, maps, as follows:

- 1st key bulletin explaining methods, techniques, mapping symbols and drain-stream criteria, copiously illustrated photographically and schematically

2nd bulletin containing description of drainage systems and patterns, as well as maps to correspond exactly to engineering soil maps for overlay and comparison purposes

3rd bulletin containing description of drainage basins and drainage basin maps on reduced scale

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ESTIMATE OF FIRST YEAR COSTS

A. Salaries and Wages		
Project Director (part-time)	\$4,800.00	
*Assistant Research Specialist (full-time)	6,270.00	
*Research Associate (full-time)	5,016.00	
*Research Assistant (full-time)	4,224.00	
*Draftsman-Technician (full-time)	4,200.00	
Draftsman (full-time)	3,660.00	
Helper (full-time)	3,000.00	
**Four student helpers (part-time)	7,200.00	
Technical Secretary-Editor (full-time)	3,600.00	\$41,970.00
B. Overhead (25% of Salaries and Wages)		<u>10,492.00</u>
		\$52,462.00
C. Equipment and Operation		
1. Equipment		
Station Wagon	3,200.00	
Aerial photographs, including index maps	12,450.00	
Base maps (first set)	800.00	
Topographical maps	150.00	
2 Sketchmasters	400.00	
1 Light Table	150.00	
Mimeograph Machine	600.00	
1 Large Stereoscope	400.00	
4 Folding-type Stereoscopes	80.00	
2 Drafting Sets	240.00	
2 Lettering Sets	240.00	
Photographic Equipment, Accessories	500.00	
Typewriter, Long Carriage Special Keyboard; Copy-holder, etc.	500.00	
4 Lamps	80.00	
5 Office Chairs	200.00	
Miscellaneous	<u>590.00</u>	\$20,580.00
2. Equipment Maintenance and Repairs		1,200.00

\*On a graduate study basis

\*\*No time limit as to hours per week

3. Operation		
Postage	\$ 250.00	
Stationary, ozalid prints	2,000.00	
Supplies (office, drafting, laboratory)	2,175.00	
Telephone and Telegraph	300.00	
Travel (mostly within the state)	<u>1,200.00</u>	
	\$5,925.00	<u>\$28,705.00</u>
 Total Estimated First Year Costs		 \$81,167.00

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ESTIMATE OF SECOND YEAR COSTS

A. Salaries and Wages		
Project Director (part-time)	\$5,200.00	
Associate Research Specialist (full-time)	7,062.00	
Research Associate (full-time)	5,214.00	
Research Assistant (full-time)	4,422.00	
Laboratory Technician (draftsman) (full-time)	4,380.00	
Draftsman (full-time)	3,840.00	
Helper (full-time)	3,200.00	
Student-Help	7,200.00	
Technical Secretary-Editor (full-time)	<u>3,800.00</u>	44,318.00
B. Overhead (25% of Salaries and Wages)		<u>11,080.00</u>
		\$55,398.00
C. Equipment and Operation		
1. Equipment		
Base Maps (second set)	800.00	
Salzman Optical Scale Changer	4,000.00	
Large Table	500.00	
Miscellaneous	<u>200.00</u>	5,500.00
2. Equipment Maintenance and Repairs		1,600.00
3. Operation		
Postage	250.00	
Stationery, prints	2,500.00	
Publication: Key Bulletin and Stream Criteria (many illustrations)	9,000.00	
Supplies	2,262.00	
Telephone, Telegraph	300.00	
Travel	<u>1,200.00</u>	
	\$15,512.00	<u>22,612.00</u>
 <u>Total Estimated Second Year Costs</u>		 \$78,010.00

ESTIMATE OF THIRD YEAR COSTS

A. Salaries and Wages		
Project Director (part-time)	\$ 5,550.00	
Associate Research Specialist (full-time)	7,326.00	
Research Associate (full-time)	6,412.00	
Research Assistant (full-time)	5,016.00	
Draftsman, Lab. Technician (full-time)	4,560.00	
Draftsman (full-time)	4,020.00	
Helper (full-time)	3,400.00	
Student-Help	6,000.00	
Technical Secretary-Editor	<u>4,000.00</u>	
	\$46,284.00	
B. Overhead (25% of Salaries and Wages) 11,571.00 \$57,855.00		
C. Equipment and Operation		
1. Equipment		
Miscellaneous	500.00	
2. Equipment Maintenance and Repairs <u>1,200.00</u>		
	\$ 1,700.00	
3. Operation		
Postage	250.00	
Stationery, prints (mostly large- scale maps by drainage basins)	6,000.00	
Publications: probably 2 bulletins	8,000.00	
Telephone and Telegraph	300.00	
Supplies	2,200.00	
Travel	800.00	
Liquidation	<u>1,000.00</u>	
	\$18,550.00	<u>\$20,250.00</u>
Total Estimated Third Year Cost		\$78,105.00

SUMMARY OF TOTALS

	<u>Salaries, Wages, Overhead</u>	<u>Equipment, Repair, Operation</u>	<u>Total</u>
First Year	\$ 52,462.00	\$28,705.00	\$ 81,167.00
Second Year	55,398.00	22,612.00	78,010.00
Third Year	<u>57,855.00</u>	<u>20,250.00</u>	<u>78,105.00</u>
<u>Totals</u>	\$165,715.00	\$71,567.00	\$237,282.00
	Estimated Total	\$237,282.00	
Allowance for Contingencies (equipment insurance, salary increase, price rises, rise in printing costs)		<u>12,758.00</u>	
	<u>GRAND TOTAL</u>	\$250,000.00	

Rutgers, The State University  
New Brunswick, New Jersey  
March 8, 1957

## Appendix C

### Conservation Easements

#### C-1 California Conservation Easements

Purchase of Interests and Rights in Real Property -  
Chapter 1658, Statutes 1959

An Act to add Chapter 12 (commencing at Section 6950) to Division 7 of Title 1 of the Government Code, relating to the purchase of interest in real property by counties and cities and to the preservation of open spaces and areas for public use and enjoyment.

The people of the State of California do enact as follows:

Section 1. Chapter 12 (commencing at Section 6950) is added to Division 7 of Title 1 of the Government Code, to read:

Chapter 12. Purchase of Interests and Rights in  
Real Property.

6950. It is the intent of the Legislature in enacting this chapter to provide a means whereby any county or city may acquire, by purchase, gift, grant, bequest, devise, lease or otherwise, and through the expenditure of public funds the fee or any lesser interest or right in real property in order to preserve, through limitation of their future use, open spaces and areas for public use and enjoyment.

6951. The Legislature finds that the rapid growth and spread of urban development is encroaching upon or eliminating many open areas and spaces of varied size and character, including many having significant scenic or esthetic values, which areas and spaces if preserved and maintained in their present open state would constitute important physical, social, esthetic or economic assets to existing or impending urban and metropolitan development.

6952. The Legislature hereby declares that it is necessary for sound and proper urban and metropolitan development, and in the public interest of the people of this State for any county or city to expand or advance public funds for, or to accept by, purchase, gift, grant, bequest, devise, lease or otherwise, the fee or any lesser interest or right in real property to acquire, maintain, improve, protect, or limit the future use of or otherwise conserve open spaces and areas within their respective jurisdictions.

6953. The Legislature further declares that the acquisition of interests or rights in real property for the preservation of open spaces and areas constitutes a public purpose for which public funds may be expended or advanced, and that any county or city may acquire, by purchase, gift, grant, bequest, devise, development right, easement, covenant or other contractual right necessary to achieve the purposes of this chapter. Any county or city may also acquire the fee to any property for the purpose of conveying or leasing said property back to its original owner or other person under such covenants or other contractual arrangements as will limit the future use of the property in accordance with the purposes of this chapter.

6954. For the purposes of this chapter an "open space" or "open area" is any space or area characterized by (1) great natural scenic beauty or (2) whose existing openness, natural condition, or present state of use, if retained, would enhance the present or potential value of abutting or surrounding urban development, or would maintain or enhance the conservation of natural or scenic resources.

G-2 A Proposed Bill on Conservation Easements, Commonwealth of Pennsylvania

An ACT to enable the Department of Forests and Waters (Pennsylvania) to acquire easements for the conservation of open spaces; and for other purposes.

Section 1 - Statement of Legislative Purpose: The Legislature hereby finds, determines, and declares that it is in the public interest to conserve key tracts of open countryside in its natural state to facilitate the protection of natural streams, flood control, soil conservation, and conservation of amenities generally. It could also supplement, in the public interest, programs involving public parks, forests, reservoirs, wild preserves, and other public properties and reservations. This Act is declared to be necessary for the preservation of the public peace, health, and safety, and for the promotion of the general welfare.

Section 2 - Definition of Conservation Easements: For purposes of this Act, conservation easements are defined as an aggregation of easements in perpetuity designed to preserve in their natural state lands of cultural, scenic, historic, or other public significance. Such easements could include restrictions against erecting buildings or other structures; constructing or altering private roads or drives; removal or destruction of trees, shrubs or other greenery; changing existing uses; altering public utility facilities; displaying of any form of outdoor advertising;

dumping of trash, wastes, or unsightly or offensive materials; changing any features of the natural landscape; (and any changes detrimental to existing drainage, flood control, erosion control, and soil conservation); any other activities inconsistent with the conservation of open spaces in the public interest. Conservation easements will permit all present normal and reasonable uses, not conflicting with the purposes indicated above, to be engaged in by the landowners, their heirs, successors and assigns.

Section 3 - Authority to Designate and Acquire Conservation Easements: The Secretary of Forests and Waters, acting alone or in cooperation with any Federal, State, or local agency, is hereby authorized to plan, designate, acquire, and maintain conservation easements in appropriate areas wherever and to the extent that the Secretary is of the opinion that the same will be in the public interest, by serving the objectives of this Act, indicated in Section 1 of this Act. The Secretary is authorized to issue appropriate rules and regulations governing the care, use and management of areas where conservation easements have been acquired.

Section 4 - Acquisition of Conservation Easements: The Secretary of Forests and Waters may acquire, in the name of the Commonwealth, conservation easements in private or public property, by gift, devise, purchase, or condemnation in the same manner as the State and its agencies are now or hereafter may be authorized, by law, to acquire property or interests in property for conservation, recreation, dam, or flood control purposes. All property rights acquired under the provisions of this Act shall be deemed to be in the nature of easements that "run with the land."

Section 5 - Tax Policy: It is the intention of the Legislature that property covered by conservation easements be assessed on the basis of fair market value. For purposes of local taxation, accordingly, assessments made on such property should reflect the fact the property is not available for tract housing or commercial development. Conservation easement rights, as such, shall no longer be the object of local property taxation, any more than other property which has been publicly acquired.

Section 6 - Unlawful Use of Conservation Easement Areas: It is unlawful for any person to exercise any of the conservation easement rights in conservation easement areas after the Department of Forests and Waters has duly acquired such rights, as indicated in Section 4 of this Act. Any person who violates any of the provisions of this Act by the erection of structures in the conservation easement areas or by performing any other act contrary to this Act or the rules and regulations promulgated by the Department of Forests and Waters, shall be deemed to have created a nuisance, subject to public abatement without any compensation whatsoever. Any other enforcement powers now lodged with the Department of Forests and Waters with respect to any kind of facility or activity under its jurisdiction shall be available to

the Department in conservation easement areas for purposes of this Act.

Section 7 - Severability: If any section, provision, or claims of this Act shall be declared invalid or inapplicable to any persons or circumstance, such invalidity or inapplicability shall not apply to any circumstances not so affected. All laws or portions of laws inconsistent with the policy and provisions of this Act are hereby repealed to the extent of such inconsistency in its application to conservation easements provided for in this Act.

## Appendix D

### Encroachment Regulations

#### D-1 Legislation Proposed for the State of New Jersey, April, 1962.

AN ACT concerning the delineation of flood plains, the establishment of floodways, and the regulation of use; and prescribing the functions, powers and duties of the Division of Water Policy and Supply of the Department of Conservation and Economic Development and of the municipalities of this State in connection therewith.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. The Legislature hereby finds and determines that:

(a) The reasonable and proper use of the flood plains of the natural streams of the State and the reasonable and proper protection of those portions of the flood plains which are necessary and vital to the passage of flood waters is essential to the safety, health, and general welfare of the people of the State.

(b) Increasing population and urbanization are producing pressures which result in more intensive and widespread development of flood hazard areas for commercial, industrial and residential uses. In many parts of the State such development in recent years has added significantly to the damage which will result from a major flood.

(c) Flood plain regulation to encourage reasonable and proper development of the flood plain, consistent with the risk involved, by means of the police power to prevent the creation of additional new flood problems, was recognized by the Congress of the United States in the Flood Control Act of 1960 as an important supplement to the construction of flood losses. Section 206 of the Flood Control Act of 1960 authorizes the Corps of Engineers on a nationwide basis to compile and disseminate information on floods and flood damages, including identification of areas subject to inundation by floods of various magnitudes and frequencies and general criteria for guidance in the use of flood plain areas; and to provide engineering advice to local interests for their use in planning to ameliorate the flood hazard.

(d) It is therefore in the interest of the safety, health and general welfare of the people of the State, that immediate legislative action be taken not only to coordinate more effectively the development, dissemination and use of information on floods

and flood damages that may be made available under the provisions of the Flood Control Act of 1960, but more importantly that the State assume the initiative and leadership necessary to encourage the most appropriate use of the flood plains of the State, and at the same time prevent the creation of additional new flood problems.

2. As used in this Act, unless the context indicates another or different meaning or intent:

(a) "Department" means the Department of Conservation and Economic Development, or its successor.

(b) "Division" means the Division of Water Policy and Supply in the Department of Conservation and Economic Development.

(c) "Council" means the Water Policy and Supply Council in the Division of Water Policy and Supply.

(d) "Flood plain" means the relatively flat area adjoining the channel or natural stream, which has been or may be hereafter covered by flood water.

(e) "Floodway" means the channel of a natural stream and portions of the flood plain adjoining the channel which are reasonably required to carry and discharge the flood water or flood flow of any natural stream.

(f) "Relative risk" means the varying degrees of hazard to life and property on the flood plain which are occasioned by differences in depth and velocity of flood waters covering and flowing over the flood plain.

3. The Department shall, through the Division, study the nature and extent of the flood plains of the State, and identify as may be practicable the various portions thereof according to relative risk; and develop standards which will specify those uses which (1) are reasonably and properly suited to the risk in the various portions of the flood plain and (2) which are necessary for preserving the flood carrying capacity of natural streams; and, by order of the Council and after public hearing, delineate the flood plains of the State and establish floodways in accordance with sound and accepted engineering principles. In the order establishing a floodway, the Council shall specify, in accordance with standards hereinabove set forth, the uses which may be reasonably and properly made of the floodway.

4. The order delineating any flood plain or establishing any floodway may be publicized by the Council for the public record in any manner and in such places as it may deem proper and at such intervals as it may deem necessary, including but not limited to the public press, places of assembly, and financial institutions.

5. The Division may conspicuously mark in the field with historic and/or other appropriate flood elevations or designations (1) any flood plain delineated by the Council or any floodway established by it after public hearing and (2) other areas as the Council may deem necessary to effectuate the purposes of this Act. In carrying out these provisions, the Division may erect suitable markers on any property belonging to the State, on any county or municipal road, or on any county, municipal or private property, provided that the Division shall first have obtained authorization from the proper county or municipal officials, or from owners of the private property in question.

6. Upon finding that natural conditions in any flood plain which has been delineated or in any floodway which has been established or marked as hereinbefore provided have been altered through the construction of flood control structures of acceptable design in a manner which renders the flood hazard no longer, in the judgment of the Council, a threat to the safety, health, and general welfare, the Council shall revoke, alter, or modify as may be appropriate (1) the order delineating the flood plain or establishing a floodway or (2) the field markings.

7. The Council may on its own motion or on application by any interested person alter, amend, revoke, or terminate any order establishing a floodway. Any use of the floodway contrary to the provisions of the Council's order shall be a violation of this Act.

8. Whenever the Council finds that existing encroachments within a floodway established or to be established constitute a hazard to the safety, health, and general welfare in the event of flood, the Department is empowered to take property by exercising the power of eminent domain.

9. The provisions of this Act shall not affect the provisions of Chapter 229, Laws of 1938, amendment R.S. 40:56-1 authorizing any municipality to define the location and establish widths, grades, and elevations of any stream, creek, river or other waterway, and preventing encroachments upon the same, nor the provisions of R.S. 58:1-26 which provides that no structure within the natural and ordinary high-water mark of any stream shall be made by any public authority or private person or corporation without notice to the commission, and in no case without complying with such conditions as the commission may prescribe for preserving the channel and providing for the flow of water therein to safeguard the public, provided the Council may alter any width, elevation, or condition, however established upon finding such alterations necessary to effectuate the purpose of this Act.

10. The municipalities of the State are hereby specifically authorized, whenever the safety, health, or general welfare required, to delineate flood plains and establish floodways.

Municipalities are further empowered to regulate the use within all duly delineated flood plains and established floodways except those floodways established by order of the Council. Municipalities may also erect appropriate flood elevation markers in the field or otherwise identify flood hazard areas for the public record.

The Division may assist to the fullest extent practicable any municipality desiring to exercise the authority granted to it in this section.

In carrying out the provisions of this section, municipalities may erect appropriate markers on any State, county, or private property provided authorization shall first have been obtained from the proper State or county officials, or from the owner of the property in question.

11. The Division shall cause a notice of every public hearing required to be held pursuant to this Act to be given, as hereinafter provided, for the purpose of hearing all persons and municipal corporations or other civil divisions of the State that may be affected thereby. The notice shall specify the time, date, and place of the hearing, the time within which objections shall be published in such newspaper and for such length of time, not exceeding four weeks, as the Division shall determine.

12. For the purpose of this Act, the Division shall have the power to enter on any lands, waters or premises for the purposes of making surveys and other examinations or investigations.

13. The Council may, whenever in its judgment public safety so requires, and after a hearing either on its own motion or upon complaint, make and serve an order directing any person, corporation, municipality, or other public authority to correct or remedy any violation of this Act within such reasonable time and in such manner as shall be specified in the order, and every person, corporation, municipality, or other public authority shall obey, observe, and comply with the order and with the conditions prescribed by the Council for preserving the flood carrying capacity of any floodway, or for otherwise complying with the provision of this Act.

Every person, corporation, municipality, or other public authority, failing, omitting or neglecting to do so shall be subject to a penalty not to exceed five hundred dollars for each and every offense. In the case of a continuing violation, every day's continuance thereof shall be and be deemed a separate and distinct offense.

14. Action to recover a penalty under Section 13 of this Act may be brought by and in name of the State of New Jersey on order of the Council in any court of competent jurisdiction in a summary

manner without a jury, in accordance with the procedure prescribed in the penalty enforcement law (N.J.S.A. 58:1-1 et seq.) and the rules of the Supreme Court governing the procedure for collection of statutory penalties. In any such action all penalties incurred up to the time of commencing the same may be sued for and recovered therein and the commencement of an action to recover such penalty shall not be, or be held to be, a waiver of the right to recover any other penalty. All moneys recovered in any such action, together with the costs recovered therein, shall be paid into the State treasury by the Council to the credit of the general fund.

15. The sum of \$25,000.00 is hereby appropriated to the Division to provide the means for implementation of this Act.

16. If any provision of this Act or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the Act which can be given effect without the invalid provisions or applications, and to this end the provisions of this Act are declared to be severable.

17. This Act shall be known and may be cited as the "New Jersey Flood Regulation Law of 1961".

18. This Act shall take effect immediately.

#### STATEMENT

The purpose of this bill is to encourage the most appropriate use, consistent with risk, of the flood plains of the State, and thus prevent the creation of additional new flood problems.

#### D-2 Ordinance, City of Rahway

AN ORDINANCE REQUIRING THAT CITY OFFICIALS, BOARDS AND AGENCIES WITHHOLD FINAL ACTION ON AN APPLICATION FOR CONSTRUCTION, SUBDIVISION OR VARIANCE APPROVAL UNTIL APPLICANT HAS COMPLIED WITH THE PROVISIONS OF CHAPTER ONE OF TITLE 58 OF THE REVISED STATUTES OF NEW JERSEY, CITY OF RAHWAY.

WHEREAS, the Municipal Council desires to provide for adequate waterways and to maintain and protect such provision along the numerous rivers and streams which traverse the City,  
AND

WHEREAS, Chapter One of Title 58 of the Revised Statutes of New Jersey empowers the Water Policy and Supply Council to establish encroachment lines along rivers and streams in the State  
AND

WHEREAS, the encroachment lines when established will provide for adequate waterways and will maintain and protect such provision,

NOW THEREFORE BE IT ORDAINED by the Municipal Council of the City of Rahway:

SECTION 1. That any lot, block or parcel of land which abuts or is traversed by a stream as defined in Section 2 hereafter shall be subject to the provisions of this ordinance.

SECTION 2. That the word "stream" shall include but not be limited to rivers, streams, creeks, watercourses, brooks, or any other natural drainage facility which has defined banks and was created by erosion.

SECTION 3. That the Building Inspector shall not issue a building permit authorizing construction on any lot, block or parcel of land subject to the provisions of this ordinance unless the encroachment lines have been established along the stream by the Water Policy and Supply Council.

SECTION 4. That any City official to whom plans are submitted for the construction of any surface or subsurface structure in, on, or through any lot, block, or parcel of land affected by this ordinance, shall withhold final action on the said plans until the encroachment lines have been established along the stream by the Water Policy and Supply Council.

SECTION 5. That the Planning Board shall not consider final action on any preliminary plat or any final plat of any subdivision until the encroachment lines have been established, or the proposed subdivision construction has been approved, by the State Water Policy and Supply Council.

SECTION 6. That the Zoning Board of Adjustment shall not consider final action on any application for variance for any lot, block or parcel of land affected by this ordinance until the encroachment lines have been established by the Water Policy and Supply Council.

SECTION 7. That the words "final action" shall mean the approval, disapproval, or referral to the Municipal Council for its approval or disapproval.

SECTION 8. That the Building Inspector and/or the City Engineer are herewith authorized to issue stop orders on any construction in violation of this ordinance or in violation of the encroachment lines established by the Water Policy and Supply Council.

## Appendix E

### Districts and Commissions

#### E-1 Report and Recommendations of the Joint Commission on Drainage and Stream Clearance, January 1956

##### I. FINDINGS OF THE COMMISSION

The ability of the individual property owner to maintain a stream in a satisfactory condition is difficult, if not impossible, in some cases. Riparian owners, both rural and urban, can do little by themselves and occasionally attempt to accomplish something by working collectively. However, this cooperative attempt can often be thwarted by a riparian owner who for personal, financial, or other reasons, refuses to participate in the project. Likewise, lands owned by absent owners or in which ownership is in an estate or other representative body may thwart action.

In order to overcome such difficulties, stream rectification and drainage projects have been authorized in New Jersey since colonial days.

The early legislation provided for the formation of what were formerly known as "Meadow Companies" to drain salt meadows bordering on the ocean and its estuaries and also to drain inland marshes and rectify the course of streams to accomplish this purpose. The method provided for financing such undertakings was the levying of assessments on the owners of the lands included within the areas abutting upon the stream for the improvement of which the association was formed. The New Jersey Courts have long recognized the principle that the formation of such associations and the assessment of the cost of the project against the owners of lands included in the project form an exception to the common law principle that an owner of land cannot be compelled to take action on his own property for the benefit of an adjoining property.

In authorizing such activities however, the courts have refused to go further than to permit assessments of benefits for work already done and they have refused to permit similar impositions for the estimated cost of work to be performed. The principal cases on the subject are: *Coster v. Tidewater Co.*, 18 N.J. Eq. 54; *In re Lower Chatham and Little Falls*, 35 N.J.L. 497; *In re Pequest River*, 39 N.J.L. 433; 41 N.J.L. 175; 42 N.J.L. 553; *Kean v. Driggs Drainage Company*, 45 N.J.L. 91; *Benjamin v. Bog and Fly Meadow Company*, 68 N.J.L. 197.

## II. RECOMMENDATIONS OF THE COMMISSION

1. Legislation enables owners of tracts of land adjoining a stream to form a drainage and stream clearance district, as a private corporation, for the improvement of lands adjoining the stream.
2. Preliminary application must be made to the Department of Conservation and Economic Development for authority to undertake the project.
3. Upon approval, a drainage district can be organized as a nonprofit organization, and all of the owners of land within the district will become members of it.
4. Provision is made for:
  - (1) A meeting of the members, after due notice.
  - (2) The election of managers.
  - (3) The making of surveys, the employment of engineers, and the adoption of an engineering plan for the improvement of the district, all of which must be submitted to the members at a meeting and to the Department for final approval.
  - (4) The levying of assessments upon the members to defray the cost of the project when completed and for temporary financing by the borrowing of funds to carry on the work:
    - (a) assessments by the managers are submitted to the Superior Court for confirmation, after hearing before the court;
    - (b) when confirmed, the assessments are made liens upon the lands included within the district.

## III. MEMBERS OF THE COMMISSION

Albert McCay  
C. William Haines  
Malcom S. Forbes  
W. Howard Sharp  
Edwin J. Snediker  
John Junda  
John V. Bishop  
Tunis DeNise  
Chester A. Smeltzer  
Robert L. Vannote

IV. GOVERNOR'S VETO MESSAGE

## ASSEMBLY BILL NO. 287

To the General Assembly:

I am returning herewith, without my approval, Assembly Bill No. 287 for the following reasons:

This bill provides for the establishment and incorporation of stream clearance and drainage districts. Any five or more owners of separate lots of land included in any tract of land in this State, on or adjacent to the same stream, may apply to the Department of Conservation and Economic Development for permission to organize such a district. If the Department grants the permission, the applicants, who must number not less than five but need not include all owners of land within the tract, may incorporate as a stream clearance and drainage district.

The purpose of this incorporated district is to re-establish and maintain the natural flow of the stream in question; to alleviate inundation of lands lying within the tract composing the district; to provide means to establish and maintain stream clearance in the district and to drain lands lying along or adjacent to the stream. Such an undertaking is to be accomplished by a board of managers who have been elected by the members of the incorporated district. The cost of this undertaking is to be paid after completion by means of an assessment levied upon the lands contained within the tract. This assessment is levied in proportion to the benefit received by such lands.

This bill, as drawn, fails to adequately safeguard the interest of all landowners in the district and raises certain serious constitutional questions. For example, landowners who have not jointed with those applying to the Department for permission to incorporate as a district receive no notification of any proceeding until after the district has been incorporated. This may well work to deprive owners of substantial areas of land of an opportunity to present certain information before the Department and to influence the thoughts of neighboring landowners until it is too late.

Moreover, the provision for assessment upon the land is placed in the hands of a private group of individuals. While there is language in the cases that might tend to support such a procedure, in the matter of Drainage Along Pequest River, 41 N.J.L. 175, 180 (E. & A. 1879), it is questionable whether private commissioners have the constitutional authority to levy assessments such as those herein contained.

The bill further provides that such assessments are to be a "first and paramount" lien upon the lands in the district. Here, again, there is a question whether an assessment by a private

group can take such precedence. Even if such an assessment can be given such a priority, it is doubtful whether the words "first and paramount" are sufficiently clear so as to resolve all possible doubts. As presently phrased, this provision is an invitation to litigation.

This bill also fails to make clear the precise role the Superior Court is to play in determining the validity of the assessments. It is unclear whether the Superior Court has the power to change assessments filed with them where there is no objection made. This ambiguity should be resolved.

In returning this bill I wish to point out that I am in sympathy with the objective sought to be accomplished by the Joint Commission on Drainage and Stream Clearance. Conservation and reclamation of our State's natural resources is an end that I am sure is desired by all.

However, in light of the obvious defects of this bill, in its present form, I feel that I have no alternative but to return it. The questions raised are serious in nature and deserving of thorough investigation. Regrettably, the period within which I must act on this bill does not leave adequate time for the consideration of these important questions and for more detailed study of the bill.

Accordingly, I am constrained to return Assembly Bill No. 287 herewith without by approval.

Respectfully,

ROBERT B. MEYNER,  
Governor.

E-2 Some Proposed Statutory Provisions Pertaining to Watershed Districts

In addition to those provisions recommended in the body of this report, the following are more explicit provisions which could be a basis for legislation pertaining to the formation, annexation and consolidation of Watershed Districts and the selection of their boards of governors.

## I. Creation, Annexation, Consolidation

### A. Creation of Districts

#### 1. Initiation Stage

##### (a) By citizen petitions:

- (1) Petitions which shall be signed by 10 percent of the registered voters who reside in the proposed district.
- (2) Petitions which shall describe the exterior boundaries of the proposed district.

##### (b) By municipal and county governing bodies:

- (1) The governing bodies of at least 20 per cent of all the municipalities within a proposed district, or which in area comprise 20 per cent of the total area of a proposed district may by parallel ordinances, petition for the formation of a district.
- (2) Board(s) of chosen freeholders of one or more counties which in area comprise at least 20 per cent of the total area of a proposed district, may by a resolution or by parallel resolutions, approved by a majority of freeholders in each county, petition for the formation of a district.

##### (c) By the State Agency:

- (1) The State Agency may undertake studies and investigations of the drainage basins of the State pertaining to water pollution and flood control.
- (2) If it is found that critical problems exist in one or more drainage basins in the State and that the formation of watershed districts for these areas would subserve the purposes of the Act, the State Agency may so declare.

#### 2. The Creation Stage

##### (a) Creation of Districts Initiated by Citizen Petitions:

- (1) All citizen petitions for the creation of watershed districts shall be submitted to the State Agency.

- (2) The Agency shall hold hearings pertaining to the formation of proposed districts. Thereafter it shall approve or reject petitions; if a petition is approved it shall designate the areas of proposed watershed districts.
- (3) After approving a petition, the State Agency shall conduct referenda in the area of each proposed watershed district as established in the final hearings and in accordance with N.J.S.A. 19:1-1 to 19:11, 19:14-27 to 33.

If the majority of registered voters residing in the proposed district who shall vote shall approve the proposition pertaining to the creation of such a district, as designated by the State Agency, the district shall be declared to be incorporated.

If such a proposition shall fail, no similar proceeding may be instituted within one year of the date of the referendum at which the proposition was rejected.

(b) Creation of Districts Initiated by County or Municipal Governing Bodies

- (1) Petitions for the creation of watershed districts shall be submitted to the State Agency.
- (2) The Agency shall hold hearings pertaining to the formation of proposed districts prior to the approval or rejection of such petitions. If such petitions are approved, the Agency shall designate the jurisdictional areas of the watershed districts.
- (3) If the number of governing bodies of municipalities which enacted ordinances petitioning for the creation of a watershed district shall be less than 50 per cent of all the municipalities within the district designated by the State Agency or if the area encompassed by these municipalities shall be less than 50 per cent of the total land area of the district so designated, then a referendum shall be conducted by the State Agency as determined in the preliminary hearings.

If the county or counties enacting resolutions petitioning for the creation of a watershed district, encompass an area which shall be less than 50 per cent of the total land area of the

district designated by the State Agency, then a referendum shall be conducted by the State Agency, as determined in the preliminary hearings.

If a majority of the registered voters residing therein who shall vote on the proposition shall approve the formation of a designated district, it shall be declared to be incorporated.

If such a proposition shall fail, no similar proceeding may be instituted within one year of the date of such a referendum.

- (4) If the governing bodies of the municipalities enacting ordinances petitioning the formation of a watershed district exceed in number 50 per cent of those municipalities within a district designated by the State Agency, or if the area encompassed by these municipalities exceeds 50 per cent of the total land area of the district so designated, the State Agency shall declare a watershed district to be incorporated.

If the area encompassed by the counties which have enacted resolutions petitioning for the formation of a watershed district shall exceed 50 per cent of the total land area of a district designated by the State Agency, it shall be declared to be incorporated.

Such a declaration shall take effect unless, within 30 days of such declaration, a petition signed by at least 20 per cent of the registered voters who are residents of the declared district, is filed protesting the formation of such a district.

If such a protest petition bears the required number of signatures, the State Agency shall conduct a referendum on the question of the formation of a watershed district in the areas affected.

(c) Creation of Districts Initiated by the State Agency

- (1) The State Agency shall make a preliminary declaration of the formation of a watershed district.

- (2) Thereafter, the State Agency shall conduct hearings pertaining to the formation of such a district. Upon conclusion of such hearings, the State Agency shall either confirm or vacate the original declaration.
- (3) Each final declaration pertaining to the creation of a watershed district shall be submitted to the pertinent committees of both Houses of the State Legislature. If within ninety days (or a time specified by the Legislature), there are no revisions made in a resolution of the Legislature or there is no resolution vetoing the formation of such a watershed district, then it shall be considered to have been approved and such a district shall be declared to be incorporated by the State Agency.

### 3. Duties of the State Agency

- (1) The State Agency shall receive all petitions for the creation of watershed districts.
- (2) It shall approve or reject petitions for the formation of watershed districts or modify the proposed areas of such districts according to specified criteria:
  - (a) The formation of such districts shall subserve the purposes declared in sections of this Act.
  - (b) No district shall be smaller than one of the forty-nine secondary drainage basins but a district may encompass two or more such secondary drainage basins within each major drainage basin in the State.
  - (c) Determinations as to the feasibility of the creation of districts shall be based upon criteria developed by the State Agency and may include: the size and distribution of the population within proposed districts; the economic resources of the proposed district; the existing facilities of the proposed district.

B. Annexation and Consolidation

1. Initiation Stage

(a) By petition of citizens in the area to be annexed:

- (1) Citizen petitions shall be signed by at least 10 per cent of the registered voters who are residents of the area proposed for annexation.

(b) By governing bodies in the area to be annexed:

- (2) The governing bodies of counties or municipalities, which in number shall comprise 20 per cent of all the governing bodies in an area proposed for annexation, or which in area shall comprise 20 per cent of the total land area to be annexed, may by parallel ordinances or resolutions, petition for annexation of a designated territory to an existing watershed district.

(c) By existing watershed districts:

- (3) The governing board of a watershed district created pursuant to this Act may by resolution, petition for the annexation of territory to such a district.
- (4) The governing boards of one or more watershed districts created pursuant to this Act may by resolution or by parallel resolutions petition for the consolidation of two or more such districts.

(d) By the State Agency:

- (5) The State Agency may declare that a designated territory is to be annexed to an existing watershed district or that two or more watershed districts are to be consolidated.

2. Approval or Rejection of Annexation and Consolidation Proposals

(a) Petitions Initiated by Citizens:

- (1) If residents of an area designated to be annexed, petitioning for such annexation to an existing watershed district, as approved by the State Agency, shall be less than 50 per cent of the total number of residents in

in the area proposed for annexation and the proposed annexing watershed district shall approve, the State Agency shall conduct a referendum in the area to be annexed.

If the majority of the registered voters in the area to be annexed who vote shall approve the annexation proposition, it shall be declared by the State Agency to be annexed to the watershed district.

If the annexing watershed district by a resolution of its governing board shall not approve of an annexation proposal, as approved by the State Agency, the State departments shall conduct a referendum in the proposed combined territory.

If the majority of registered voters of such a combined territory who vote shall approve the annexation proposition, it shall be declared to be in effect by the State Agency.

(b) Petitions Initiated by Governing Bodies:

- (2) If governing bodies of counties or municipalities petitioning for annexation of a designated area to an existing watershed district, as approved by the State Agency, shall in number exceed 50 per cent of all the governing bodies in the area to be annexed, or shall comprise in area more than 50 per cent of the total area to be annexed, and the governing board of the annexing district shall approve such annexation, the State Agency shall declare such annexation to be in effect unless within 30 days of such declaration a petition signed by at least 20 per cent of the registered voters who are residents of the declared annexed area is filed with the State Agency protesting such annexation.

If such a protest petition bears the required number of signatures, the State Agency shall conduct a referendum on the proposition in the area to be annexed.

If governing bodies so petitioning shall be in number less than 50 per cent of all governing bodies of the area to be annexed or shall comprise in area less than 50 per cent of the total area to be annexed, and the governing board of such annexing district shall so

approve of the annexation, the State Agency shall conduct a referendum on the proposition of annexation in the area to be annexed.

If a majority of the registered voters in the area to be annexed who vote shall approve of the annexation proposition, it shall be declared to be in effect by the State Agency.

If the governing bodies so petitioning for annexation, as approved by the State Agency, shall be in number less than 50 per cent of all governing bodies in the area to be annexed or shall comprise in area less than 50 per cent of the total area to be annexed and the governing board of such annexing district shall by resolution disapprove of the annexation, the State Agency shall conduct a referendum on the annexation proposition in the proposed combined territory.

If a majority of the registered voters in the combined territory who vote shall approve the annexation proposition, it shall be declared to be in effect by the State Agency.

(c) Existing Watershed Districts - Petitions for Annexation:

- (3) If a petition for annexation of territory to an existing watershed district, approved by the State Agency, shall be initiated by the resolution of the governing board of an existing watershed district, the State Agency shall conduct a referendum on the proposition of annexation in the proposed combined territory.

If such a proposition is approved by the majority of the registered voters in such a combined territory who shall vote on the proposition, then the annexation shall be declared to be in effect by the State Agency.

(d) Existing Watershed Districts - Petitions for Consolidation:

- (4) If by parallel resolutions two or more existing watershed districts petition for the consolidation of the districts, and the State Agency shall approve, then the consolidation shall be declared to be in effect, unless within 30 days of such a declaration a petition signed by at least 20 per cent of the

registered voters who are residents of the declared consolidated district is filed with the State Agency protesting such a consolidation.

If such a protest petition bears the required number of signatures, the State Agency shall conduct a referendum on the proposition of consolidating the districts.

- (5) If a governing board of an existing watershed district shall petition for the consolidation of that district with one or more other watershed districts and such petition is approved by the State Agency, the State Agency shall conduct a referendum in the proposed combined territory on the proposition of consolidation.

If the majority of the registered voters of such combined territory who vote shall approve the consolidation proposition, then the consolidation shall be declared to be in effect.

(e) State Agency - Initiation for Annexation or Consolidation:

- (6) If the State Agency shall initiate a declaration that a designated territory is to be annexed to an existing watershed district or that two or more watershed districts are to be consolidated, it shall hold hearings pertaining to such a declaration. Thereafter, the State Agency shall either confirm or vacate the original declaration.

Each final declaration pertaining to annexation or consolidation shall be submitted to the pertinent committee of both Houses of the State Legislature. If within ninety days (or a time specified by the Legislature) there are no revisions made by a resolution of the Legislature or there is no resolution vetoing the annexation or consolidation proposition, then such a proposition shall be considered to have been approved and the annexation or consolidation shall take effect.

3. Duties of the State Agency

- (1) All petitions for annexation to existing watershed districts or consolidation of two or more watershed districts shall be submitted to the State Agency.

- (2) The State Agency shall hold hearings pertaining to the propositions of annexation or consolidation. They shall be obliged to consider the recommendations of the proposed absorbing district, or districts to be consolidated.
- (3) The State Agency may approve or reject petitions for annexation or consolidation, after hearings, in accordance with the explicit criteria established (on page 220 of this report). It may amend petitions for annexation by reducing or extending the areas designated in such petitions. It shall designate the areas to be annexed or the watershed districts to be consolidated.
- (4) If referenda, provided for in this section on the proposition of consolidation or annexation shall fail, no similar proceedings may be initiated within one year of such referenda.
- (5) If an annexation shall take effect, then the State Agency shall adjust the size of the governing boards of such districts and provide for the selection of officials according to the procedures established in the next section.
- (6) If consolidation shall take effect, then the old governing board shall be dissolved by the State Agency and they shall adjust the size of a new governing board of such consolidated district and shall provide for the selection of members of such a new governing board according to procedures established in the applicable section.

## II. Selection of the Boards of Governors

- (1) Members of the Board which shall govern and direct each district shall serve staggered terms of five years and until their respective successors have been selected and qualified.
- (2) The size of each Board shall vary according to the number of counties within or comprising the watershed district. After the designation of a watershed district, one Board member shall be appointed by the Governor, from each county with territory within the designated district which shall exceed 5 per cent of the total land area of such a district, from lists of three nominees submitted to him by the board of chosen freeholders of such a county which members shall be residents of the designated district.

- (3) One member of the Board shall be chosen from among the residents of the State, by the Governor, which member shall serve as chairman of the Board.
- (4) The remainder of the members of the Board, who shall exceed in number the appointed members by one, shall be elected at-large for staggered terms by the registered voters residing in the designated watershed district, which district elections shall be held and conducted between the same hours, at the same place, by the same officers and according to the same procedures, as the annual general elections provided in N.J.S.A. 19:12-1 to 19:22-8.

Any vacancy on any such Board, occurring otherwise than by expiration of term of office shall be filled by the appointment of the Governor, if he shall deem it necessary to fill such vacancy; the appointee to serve until his successor is elected at the next annual general election.

For the purpose of these elections, the county board of elections in counties of the first class and the elective governing body of the municipalities in counties other than counties of the first class, shall adjust election districts so that they conform to the boundaries of each watershed district as designated by the State Agency. Registry books shall be transmitted to the county board of elections or governing body and the adjusted districts shall be recorded pursuant to N.J.S.A. 19:4-8,9.

Results of district elections, in addition to those requirements pertaining to general elections, shall be certified to the State Agency.

- (5) Members of a Board appointed by the Governor from among nominees submitted by the boards of chosen freeholders may be removed for cause, by the Governor, after notice and hearing. Neglect of duty, including absence from any three consecutive regular meetings of the Board, shall be a cause for removal. The member of a Board who is appointed by the Governor from among the residents of the State shall serve at the will of the Governor.



