

**Water Pollution  
Control Programs  
in  
Connecticut**

**Connecticut  
General Assembly**



**LEGISLATIVE  
PROGRAM REVIEW  
AND  
INVESTIGATIONS  
COMMITTEE**

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CONNECTICUT GENERAL ASSEMBLY

LEGISLATIVE PROGRAM REVIEW AND INVESTIGATIONS COMMITTEE

The Legislative Program Review and Investigations Committee is a joint, bipartisan, statutory committee of the Connecticut General Assembly. It was established in 1972 as the Legislative Program Review Committee to evaluate the efficiency and effectiveness of selected state programs and to recommend improvements where indicated. In 1975 the General Assembly expanded the committee's function to include investigations and changed its name to the Legislative Program Review and Investigations Committee. During the 1977 session, the committee's mandate was again expanded by the Executive Reorganization Act to include "Sunset" performance reviews of nearly 100 agencies, boards, and commissions, commencing on January 1, 1979. Review of the original schedule of sunset entities was completed in 1984. Review of the list will begin again in 1988.

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WATER POLLUTION CONTROL PROGRAMS  
IN  
CONNECTICUT

PERFORMANCE AUDIT

LEGISLATIVE PROGRAM REVIEW AND  
INVESTIGATIONS COMMITTEE

JANUARY 1987



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TABLE OF CONTENTS

SUMMARY.....	i
RECOMMENDATIONS.....	ii
I. INTRODUCTION.....	1
II. LEGISLATIVE AND REGULATORY BACKGROUND.....	3
Federal Law.....	3
Connecticut Legislation.....	3
III. DESCRIPTION AND ANALYSIS.....	7
Organization.....	7
Program Description.....	7
Water Quality Standards.....	8
Planning.....	10
Operation of Programs.....	11
Administration of Regulatory Program.....	14
Resource Analysis.....	22
Water Pollution Control Programs in Other States.....	29
Effectiveness of Connecticut's Program.....	33
Analysis of Groundwater Investigations.....	36
Analysis of Regulatory Programs.....	40
IV. FINDINGS AND RECOMMENDATIONS.....	53
Program Management.....	53
Regulatory Program Operations.....	61
Groundwater Investigations.....	77
APPENDICES.....	79
A. Consent Agreement Between U.S. EPA and CT. DEP.....	81
B. Illustration of Interaction Between the Water Compliance Unit and Other Agencies and Units...	89
C. Questionnaire Distributed to Other States.....	90
D. Tabulated Survey of Connecticut Municipalities.	93
E. Calculations on Permits Staff Needs.....	98
F. Cost Analysis of Recommendations.....	100
G. Agency Response.....	101

## FIGURES AND TABLES

### Figures

Figure III-1.	Water Compliance Unit (WCU) Organization.....	8
Figure III-2.	Water Pollution Control Districts and Permits.....	17
Figure III-3.	WCU-Permitting Process.....	18
Figure III-4.	WCU-Budget Trends FY 81 to FY 87.....	25
Figure III-5.	WCU-Percentage Breakdown of WCU Funds--FY 81 to 87.....	25
Figure III-6.	WCU-Staff Composition.....	27
Figure III-7.	Connecticut's Progress: Water Quality.....	34
Figure III-8.	EPA Water Quality Regions.....	35
Figure III-9.	Major Sources of Pollution in CT.....	37
Figure III-10.	Contaminated Wells in Connecticut.....	38
Figure III-11.	Sources of Groundwater Pollution in Connecticut.....	39
Figure III-12.	Inspections By Year 1981 to 1986.....	45
Figure III-13.	Yearly Compliance With Orders.....	47
Figure IV-1.	Proposed Reorganization of Permits and Enforcement Section.....	65

### Tables

Table III-1.	Categories/Significant Features of the Regulatory Program.....	15
Table III-2.	WCU Resources FY 81 to FY 87.....	23
Table III-3.	WCU Resources: A Comparison.....	26
Table III-4.	WCU Staff FY 81 to FY 87.....	28
Table III-5.	WCU Staff: A Comparison.....	30
Table III-6.	States' Programs--Significant Features.....	31
Table III-7.	States' Resources to Water Pollution Control Programs.....	32
Table III-8.	Water Quality and Causes of Pollution by Region.....	37
Table III-9.	NPDES Staff/Permit Ratio--State Comparison....	42
Table III-10.	Inspection History--Major Dischargers.....	44
Table III-11.	Disposition of Cases--Atty. General's Office..	49
Table III-12.	Civil Penalties Collected by State.....	50
Table III-13.	Disposition of Cases--State's Attorney's Office.....	51
Table IV-1.	Number of Permits Issued--1982 to 1985.....	72

## SUMMARY

This 10-month performance audit of the Water Compliance Unit was authorized by the Legislative Program Review and Investigations Committee for two major reasons. First, since the committee's review of Connecticut's Solid Waste Management Program in 1979, no Department of Environmental Protection (DEP) program had been reviewed in depth. Second, the Water Compliance Unit's operations, especially those affecting its discharge permitting programs, were found deficient by the U.S. Environmental Protection Agency (EPA) in late 1985.

The program review committee found that the Water Compliance Unit has made great strides toward correcting the problems cited by EPA. For example, the department had new legislation introduced to correct questions of legal authority posed by EPA. The unit, in concert with outside groups, also developed regulations to operate its regulatory programs, and hired some of the additional staff EPA said was necessary to run those programs better.

However, the committee found that deficiencies still exist. First, the Water Compliance Unit does not develop an implementation strategy clearly outlining how the unit will achieve its planned goals and objectives. Nor does the unit regularly monitor its own performance on how well it is progressing toward those goals. Further hampering achievement of goals is the lack of performance standards established for employees and regular evaluations based on those standards.

The program review committee also found operational deficiencies in both the permitting and enforcement programs, including permit backlogs, slower average processing times than in other states, and poor compliance with orders. The committee believes the reasons for the deficiencies include a lack of resources, and poor unit organization to perform regulatory responsibilities. The unit has recognized the need for more staff and has requested additional positions in the past, but did not receive the full number requested until FY 86-87.

Productivity also suffers, according to unit staff, because of the location of its offices. The building is poorly maintained, lacks adequate space for personnel, files and equipment, and staff must walk two blocks to reach other department offices.

Operations are also affected by the inadequate information systems. Both the permit and enforcement computerized systems lack pertinent data to track the unit's work, and compliance data on the enforcement information system are not up-to-date. In addition, some functions are performed by hand, such as fee calculation, that could be more easily accomplished with automation.

## RECOMMENDATIONS

To address these deficiencies, the Legislative Program Review and Investigations Committee makes the following recommendations:

1. The Water Compliance Unit should develop an annual strategic plan, separate from the Water Quality Management plan that:

- establishes unit priorities that are tied to the water quality management plan and water quality priorities;
- outlines the resources (staff, support services, funding) that will be required to achieve each priority;
- defines the steps involved with achieving each objective; and
- states how long each objective should take to accomplish.

The unit management should develop the above information into a computerized system, and conduct quarterly evaluations of its progress in achieving its planned goals and objectives.

2. The Water Compliance Unit should establish performance standards for all employee classifications within the unit. The Water Compliance Unit should consult with the Department of Administrative Services' Personnel Division for assistance in establishing those standards. Further, each employee and supervisor should jointly develop annual job-specific goals, and each employee should be evaluated, and annual merit increases should be awarded, based on the achievement of those goals.

3. The Water Compliance Unit should establish an in-house training program consisting of 30 hours of training per year for all staff members. The training should be directly related to tasks performed by the unit. While attendance at training sessions should not be mandatory, attendance should be tied to annual performance appraisals and pay increases.

4. Every attempt should be made to relocate those employees currently housed at 122 Washington Street as soon as possible. The Department of Environmental Protection should undertake a study of its long-term office needs including:

- the need to locate all its units in the same building; and

- the need to be located in the Capitol District; and that it consult with the state's public records management office to ensure the best location is selected for file use, security, and storage.

5. Before relocating its offices, the Water Compliance Unit should consult with the state's records management office to obtain advice on: a) what files should be retained and moved to the new location; b) what files could be kept in storage; and c) what files could legally be destroyed.

Once the retained files have been moved to the new location, the Water Compliance Unit should ensure that the files are located in an area that has limited public access. Sign out sheets should be maintained and overseen by a clerical staff person. No paper files should be allowed to leave the file room. Finally, all files should be stored in fire-safe cabinets.

A long-term strategy for reducing the amount of paper files--for example, the use of microfiche for historical files--should be considered. The unit should also ensure that photocopiers available to the public are pay-only. Further, the department should establish a fee schedule for public requests for: certified copies of department documents; and for research conducted by department employees.

6. The Department of Environmental Protection, Water Compliance Unit should continue to administer both the National Pollutant Discharge Elimination System program and pretreatment programs.

7. The Water Compliance Unit's Permits and Enforcement Section should be organized into two subsections, one for permits and the other for enforcement. The new permits subsection should be staffed with 20 engineers and shall include those currently assigned to industrial, municipal, and subsurface sewage disposal permitting, as well as their support staff.

The permit subsection's responsibilities should include:

- consulting with personnel in water quality planning on how water quality and toxicity standards should be addressed in new or revised permits;
- reviewing all applications for permits;
- developing and writing all permits;
- dealing with applicants on revising treatment processes;

- preparing permit cases for public or administrative hearing if necessary; and
- consulting with enforcement personnel to develop administrative orders for revisions to permit treatment processes.

Within the permits subsection there should be a new position created for a permits manager. The person should be: at the principal sanitary engineer level; experienced in writing various types of permits; well-versed with current department and national water permitting information systems; and have supervisory experience. The permits manager should report directly to the assistant director for permits and enforcement, and should perform the following duties:

- serve as liaison with all applicants for water discharge permits;
- review each permit application and estimate the amount of time it will take to review the application, develop the permit, and write the permit;
- direct the permit to the engineer heading one of the geographic districts for permitting or to the subsurface sewage permitting area;
- oversee the permit workload with the supervisory engineers, as well as unit management; and
- utilize the permitting data base to assist management with decisions on staff allocation, permitting times, staff evaluations, and comprehensive unit planning.

The separate enforcement subsection should be headed by a principal sanitary engineer who reports to the assistant director for permits and enforcement. The enforcement subsection should be composed of:

- 20 field inspection personnel;
- 8 engineers;
- 2 attorneys, and
- 3 support staff.

The responsibilities of the enforcement subsection should include:

- inspecting all permitted facilities or potential discharge sites, taking samples, and writing inspection reports;

- reviewing results of discharge monitoring reports;
- writing and issuing administrative orders;
- overseeing compliance tracking on the enforcement information system;
- collecting administrative penalties; and
- preparing cases for the Attorney General's or State's Attorney's Office.

8. To identify all pretreatment facilities that need a permit, the Water Compliance Unit should take the following measures:

- survey all municipal water pollution control authorities to identify all known discharges into each of their sewage treatment plants;
- research its own industrial survey files to ensure that all identified businesses are currently permitted;
- check back issues--at least to 1980--of the state Department of Labor's quarterly reports on new manufacturers that have located in Connecticut to ensure that all potential discharges are inspected and permitted when necessary; and
- review all quarterly updates to the state Department of Labor's list of new manufacturers located in Connecticut to ensure all potential discharges are inspected and issue a permit when necessary.

In addition, the local zoning officials should be statutorily required to notify DEP's Water Compliance Unit when a business likely to need a water discharge permit locates within a town.

9. The Water Compliance Unit should investigate the possibility of purchasing a software package that would automatically perform permit calculations, write the permit, and develop the accompanying documents.

10. The Water Compliance Unit should develop an automated fee processing system that:

- automatically calculates permit fees due;
- includes accounting information such as fees due and fees paid for each permit, civil penalty, and automatically generates bills to be sent to permittees;

- generates reports on amounts due, amounts collected and amounts outstanding for permit fees, civil penalties and forfeitures; and
- includes information on staff activities and generates reports on the total staff time spent on discrete tasks.

11. The Water Compliance Unit should upgrade its permit information system to note when an approval of a permit is issued. Six months after an approval is issued, a notice should be generated to both the appropriate engineer and the facility that a final permit has still not been issued.

12. The Water Compliance Unit should seek to revise its administrative regulations to accurately reflect the number of inspections the unit is capable of conducting each year. However, the regulations should require that each permitted facility be inspected at least annually.

13. The Water Compliance Unit should ensure that its enforcement compliance system includes:

- accurate and up-to-date compliance information;
- all steps--both current and historical--necessary for tracking the location and progress of the case are noted; and
- the generation of daily reports to remind engineers and analysts of compliance due dates.

The Water Compliance Unit should ensure that administrative orders contain realistic compliance schedules, but that prompt enforcement action be taken when compliance is not forthcoming.

The Water Compliance Unit should use all the enforcement methods at its disposal to obtain compliance, including levying administrative civil penalties. If there are statutory or regulatory problems with this mechanism, then the Water Compliance Unit should seek to have them changed.

14. The Water Compliance Unit should:

- hold quarterly meetings with constituent groups;
- establish a publicized agenda for each meeting including a specified relevant topic, (e.g., implementation of toxics strategy) and a public input portion; and
- establish ad hoc task forces on specific programs or policy development, as the need arises.

CHAPTER I  
INTRODUCTION

In February 1986, the Legislative Program Review and Investigations Committee authorized a study of water pollution control programs in Connecticut. Those programs are largely operated by the Water Compliance Unit within the Department of Environmental Protection. The unit is located within the department's Environmental Quality Division, and is headed by a director who reports to the assistant deputy commissioner of that division. The Water Compliance Unit's functions include: the development of water quality standards; planning; operation of pollution abatement programs; and administration of regulatory programs to control water pollution.

In late 1985, Connecticut's water pollution control efforts, especially those in the regulatory area, were criticized by the U.S. Environmental Protection Agency. As a result of deficiencies found, EPA required that DEP sign a consent agreement to take corrective measures, or threatened to remove Connecticut's authority to administer the program. (For a copy of the agreement, see Appendix A.) This action, coupled with the fact that no DEP program had been examined in-depth since 1979, prompted the program review committee to conduct this audit.

Methods

In conducting the review of Connecticut's water quality programs, the following methods were used:

- interviews with Water Compliance Unit personnel, the EPA Region I Director of Water Management, representatives of environmental groups, the Connecticut Association of Metal Finishers, and engineering consultants;
- review of relevant files and documents within the agency;
- site visits with DEP personnel;
- a survey of all municipalities in Connecticut to gauge their satisfaction with various segments of the program;
- a survey of other states concerning their water quality program features;
- an examination of a sample of permits and enforcement orders issued by the Water Compliance Unit; and

- testimony obtained at two public hearings the committee held during the course of the study.

### Report Organization

This report contains four chapters. The introductory chapter explains why the committee undertook the audit, and outlines the methods used in conducting the study. Chapter II provides a synopsis of the program's legislative and regulatory background, including both federal and state requirements.

The third chapter provides a description of the program, including the unit's organization, and major functions. This chapter also analyzes the unit's resources and staffing patterns, and compares them with trends in the department and the Air Quality Unit. Chapter III also provides comparative program and resource data from other states. Finally, Chapter III analyzes the program both in terms of its overall effectiveness, as well as the unit's performance of its activities. The Legislative Program Review and Investigations Committee's findings and recommendations for this performance audit are contained in Chapter IV.

## CHAPTER II

### LEGISLATIVE AND REGULATORY BACKGROUND

#### Federal Law

The existence of a water pollution control program in Connecticut is required by both federal law and Connecticut statute. The federal Water Pollution Control Act (1948), its subsequent amendments (1972), and the federal Clean Water Act and its amendments (1977) require the states to implement a number of programs to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." To achieve this, several goals were established including:

- the elimination of pollutant discharge into navigable waters by 1985;
- the attainment of water quality, which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water by July 1, 1983; and
- the establishment of programs to prohibit discharge of toxic pollutants in toxic amounts.

The federal laws mandate that the states implement several programs in order to attain these goals. The laws require that each state develop water quality standards that must be approved by EPA. Each state must also submit water quality management plans to EPA and report to Congress on its water quality trends. The final major requirement of the federal clean water legislation is the establishment of the National Pollution Discharge Elimination System (NPDES), which requires permitting and regulating of facilities discharging waste to surface waters, such as rivers and streams. Before administering this program, a state must be delegated the authority from EPA after it has determined the state can adequately carry out the responsibility. Congress also set up a grant program whereby municipalities could receive funding for the design and construction of waste treatment plants.

The intent of the federal legislation is to delegate program implementation to the states while the federal government, through EPA, monitors state compliance with water quality standards, provides financial aid, and offers technical services.

#### Connecticut Legislation

In Connecticut, the legislature recognized the problem of water pollution as early as the 1870's when it passed laws prohibiting contamination of water used for water supply or fishing. For example, one early law stated:

Any person who puts anything [in the water] with the intent to injure the quality of [the] water, shall be fined not less than \$7.00 or more than \$500 or imprisoned not more than 6 months.

By 1915, the Connecticut legislature had designated the State Health Department as the regulatory agency responsible for investigating complaints of pollution and authorized the department to act in preventing river and stream contamination. The legislature, during the same year, also passed an act creating a sewage disposal program, and again authorized the State Health Department to regulate it, including the review and approval of sewage treatment plant designs.

The current state Water Pollution Control Act was initially passed as Public Act 57 in 1967. The act was largely the product of Connecticut's Clean Water Task Force, composed of 100 citizens, appointed in 1965 by Governor John Dempsey.

According to the task force chairman, who testified before a legislative committee in 1967, only one-half of municipal wastewater and one-quarter of industrial discharges were adequately treated. It was the hope of the task force that if its recommendations were enacted, the state's waters would "be virtually clear of pollution in seven years."

The legislature declared in the act that pollution of the waters of the state is harmful to the public health, safety, and welfare of the inhabitants of the state, and that the use of public funds and the granting of tax exemptions should be used for controlling and eliminating such pollution. The purpose of the law was to establish programs to clean up the state's waters and set forth restrictions and penalties in order to keep them clean.

Initially, the authority for implementing the state Water Pollution Control Act was vested in the state's Water Resources Commission. However, when the Department of Environmental Protection was created in 1971, it assumed responsibility for all environmental matters, including water quality. The major provisions of the act have not been modified, however, and form the basis of the current state Water Pollution Control Act, contained in Chapter 446 of the Connecticut General Statutes.

The current law gives specific duties to the Commissioner of Environmental Protection, including: the development of comprehensive programs for preventing, controlling, and abating new or existing water pollution; submitting plans and reports to the administrator of EPA and other relevant agencies; and the issuance, modification, or revocation of discharge permits and orders prohibiting or abating pollution.

The state law also requires that water quality standards be established, and that the state's water quality be monitored. Public Act 57 also established a permit program, an appeal process for persons aggrieved by permit decisions or abatement orders, and penalties for violations of the act. Finally, the act created a state grant program for construction of municipal sewage treatment facilities and also laid out how the combined state-federal grant program would operate.

A significant addition to the state's Water Pollution Control Act came in 1982 with passage of Public Act 82-240. The act supplemented DEP's existing authority to investigate groundwater contamination problems, by adding authority to order provision of drinking water where contamination is found, and obtain a long-term solution to the polluted drinking water.



## CHAPTER III

### DESCRIPTION AND ANALYSIS

#### Organization

The Water Compliance Unit is located within the Department of Environmental Protection's Division of Environmental Quality. The unit is headed by a director who reports to the assistant deputy commissioner of environmental quality.

As shown in Figure III-1, the unit is divided into three major sections--Planning, Permits and Enforcement, and Municipal--each managed by an assistant director. Each functional area below the assistant directors, as displayed by blocks in the figure is supervised by a chief or principal engineer or a principal environmental analyst. Each section has a number of major responsibilities which are summarized below.

The Planning Section develops water quality standards and conducts water quality monitoring. It also develops plans and reports as required. The section is also responsible for personnel and budgetary matters.

The Municipal Section reviews municipal waste treatment design plans, oversees the construction of the facilities, and audits the grant accounts. The section also issues permits, and monitors and enforces permit compliance for municipal waste treatment facilities.

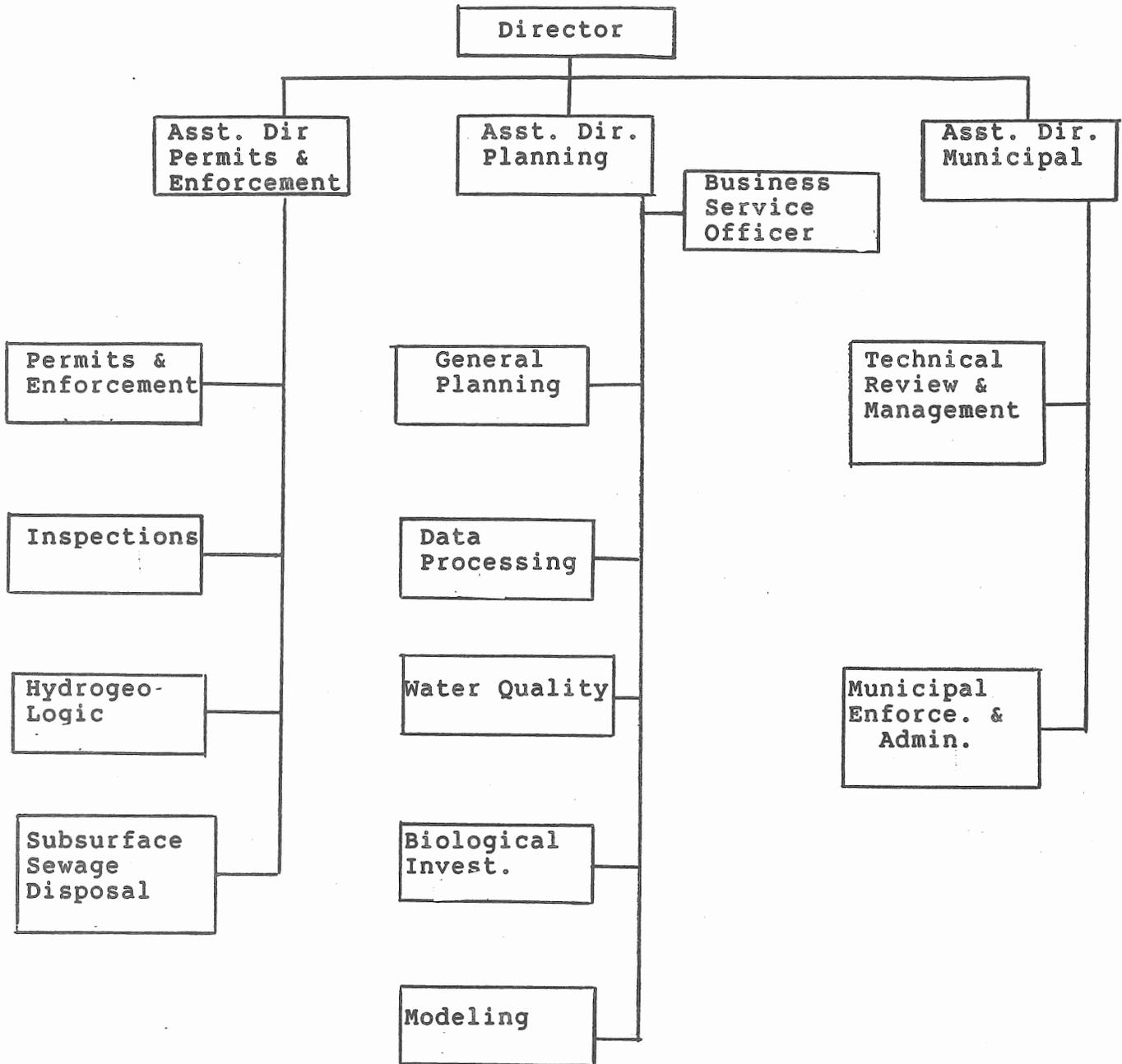
The Permits and Enforcement Section approves permit applications, develops permits, and monitors compliance with them. This section also issues enforcement orders to dischargers, investigates and monitors groundwater contamination, and regulates large subsurface sewage disposal sites.

In the course of fulfilling its functions, the Water Compliance Unit interacts with a variety of units and agencies at the local, state and federal levels. Appendix B shows some of the agencies the Water Compliance Unit interacts with, and some of the functions each performs.

#### Program Description

To protect Connecticut's waters from pollution, the Water Compliance Unit is charged with carrying out diverse duties. Those duties fall under four major categories: 1) development of water quality standards; 2) planning; 3) actual operation of programs; and 4) administration of a regulatory program for discharges.

Figure III-1. Organization of the Water Compliance Unit.



## Water Quality Standards

The adoption of water quality standards is required by both federal and state law. The standards are used by EPA to measure a state's progress in achieving water quality, and are the foundation of each state's water quality efforts. They form the basis for the awarding of grants, permitting of discharges, and a state's planning efforts.

The standards must be revised every three years, and are circulated for input at a public hearing. Connecticut law requires the development of standards for both surface water and groundwater, while federal requirements encompass only surface water. In Connecticut, classification of both surface and groundwater are published in the same document.

Classification of standards. The standards give letter-grade classifications to the state's water, from AA through D, to designate what the water can be used for, and establish guidelines for meeting those standards. The higher the letter-grade given, the better the water quality, and the more restrictive the guidelines for discharging. For example, Class AA water means that it is very clean and is used for drinking water. No sewage or wastewater can be discharged to such waters, even if treated. If a water body is given a slashed letter-grade, such as B/A, it means that the current water quality--B--is acceptable for recreational use, but the aim is to meet A, cleaner water. Regulatory efforts are aimed at achieving the standard rather than protecting the current classification. Further, if the existing quality is better than the established standard, the current designation is maintained.

Development and revision of standards. To provide the basis for the revision of water quality standards, and to verify progress being made in water quality, the Planning Section employs a variety of monitoring programs. These monitoring efforts are not aimed at evaluating any one discharge, but are measuring the water quality of a segment of a river or stream.

Ambient or stationary monitoring of the water's physical/chemical characteristics is carried out at 39 locations, on 23 water bodies. Ambient monitoring of the water's affect on aquatic life (biological testing) occurs at 7 sites on 5 water bodies. This monitoring is conducted with sampling equipment left in the water for a period of a few months.

Water quality is also measured through intensive surveys, where staff collect samples over a period of a few days. These surveys are conducted at sites where water quality problems are known or suspected to exist. Water samples are tested, the data computerized, and the results analyzed. The findings form the basis of recommendations for future permitting, water quality revisions, construction grant decisions, and strategies to deal

with toxics. Since 1973, 115 surveys of lakes, rivers, and coastal waters have been conducted.

Staff developing water quality standards also examine pertinent documents that may have an effect on water quality. For example, permits are reviewed to identify changes in discharges since the previous standards were developed.

### Planning

Planning efforts are aimed at developing regional and state strategies to meet water quality standards and to report progress in attaining clean water. There are several planning functions carried out by the Water Compliance Unit, most of which are required by federal law. In some states, water quality planning functions are delegated to regional planning agencies; in Connecticut all planning is carried out by DEP's Water Compliance Unit, although input is sought from regional groups. The planning documents published by the Water Compliance Unit include the Water Quality Management Plan; Water Quality Standards (and Revisions); Report to Congress; basin plan guidelines and model ordinances on water quality issues. Each of these is described below.

Water Quality Management Plan. The most basic of the planning documents--the one that sets forth the unit's objectives--is the Water Quality Management Plan. This plan, a comprehensive document that must be updated yearly, prioritizes the state's water bodies according to most severe water quality problems, describes what those problems are, and the actions needed to upgrade the quality. The plan also fulfills the federal requirement that each state have a "continual planning process."

Report to Congress. Another planning document is the Report to Congress, which each state is required to submit biennially. This report examines the water quality trends in each state. Included in the report is information on each state's progress in achieving the water quality goal that all waters meet recreational uses, or the "fishable-swimmable" standard, set by Congress. The report must include an analysis of trend data. In Connecticut, the data are computerized by the U.S. Geological Survey and analyzed by DEP staff.

Basin planning. Regional planning is also a requirement of the federal Clean Water Act. In Connecticut, those plans are developed by the department's Water Compliance Unit with input from regional planning organizations. Natural drainage basins are used as planning areas in which to target water pollution control strategies. Priorities and specific recommendations on water quality for that basin area are included in the plans.

Environment 2000. In June 1986, the Department of Environmental Protection released a plan called "Environment 2000". In that report, which fulfilled a legislative mandate that DEP develop an environmental plan for the state, the department

outlined its long-term goals and management strategies for each of its environmental missions. Water quality program goals and strategies for Connecticut were included in that report.

Guidelines and model ordinances. The Water Compliance Unit also provides technical assistance to municipalities on protecting their water resources. For example, the unit published guidelines on protecting groundwater, and developed a model sewer ordinance that towns could use. Unit staff also meet with town officials on how best to implement these plans.

Computer modeling. One of the most valuable planning tools available to the Water Compliance Unit is computer modeling. Data collected from sampling efforts are merged with other information, such as a proposed pollutant discharge. The computer then simulates the conditions or creates a model giving planners an idea of the effect of proposed discharges on water quality. A document of the computer model is also produced.

### Operation of Programs

To meet the goals and objectives set forth in the Water Quality Unit's plans, and, in some cases, to fulfill federal requirements, the unit staff also operates or administers a number of programs. Some of those programs are described below.

Construction grant program. A significant feature of Connecticut's Clean Water Act passed in 1967 was the inclusion of a construction grant program. The program, which was to assist towns in building or upgrading sewage treatment plants, was initially funded with \$150 million of state money.

In 1972, a federal construction grant program was developed as part of the Federal Water Pollution Control Act in an effort to improve the nation's water quality. The grant program was operated at the federal level until 1979, when DEP received authority to administer the program in Connecticut. When the federal program began, the federal portion of the funding was set at between 75 and 85 percent, but was lowered to 55 percent in 1983. The federal funding, supplemented by state monies, meant that for most projects approximately 90 percent of the costs were absorbed by the federal and state grants, with the municipalities picking up the remainder.

Due to uncertainty about the continuation of federal funding in the construction grant program, however, the Connecticut legislature enacted P.A. 86-420 during the 1986 legislative session, which replaced the prior grant programs. The act creates a combination grant-revolving loan fund at a level of \$40 million per year, through the authorization of state bonds. Under the new law, funds would be made available to towns for building new sewage treatment plants, or upgrading their existing ones. Twenty percent of the project's costs would be allocated as a grant, while 80 percent would be a loan, made for a maximum of 20 years

at 2 percent interest. In the case of projects involving correction of combined sewer overflow problems (i.e., where storm water and sewage flow in the same system), the ratio would be 50 percent grant, 50 percent loan. Connecticut had also initiated a grant program in 1967 for smaller projects, such as sewer line extensions, whereby the state funded 30 percent of the endeavors, with the municipalities responsible for the larger share.

Since FY 80, Connecticut towns have received over \$240 million to upgrade or construct municipal sewage treatment plants. The federal grants have totaled \$164,376,709, while the state contribution to the federal grant program has been \$33,351,903. For the same period, the state-only grants have totalled \$42,275,956.

The municipal sewage treatment grants are not generated by applications, but by a priority listing based on the municipalities' needs. The EPA first developed the priority listing for federal grants, which use number ratings attached to each criterion. Those criteria include demographic data about the town and whether the project is necessary to: correct contaminated drinking water; to attain water quality; and/or to enhance recreational use. The DEP construction-grant staff rate towns based upon these factors which were adopted in regulation in August 1985.

Once the ratings for the projects have been established, the unit holds a public hearing on the results. The town rankings may be changed due to information brought out at the hearing. The annual hearing is typically held in May or June so the project listing is established by October, the beginning of the federal fiscal year. There is a "set-aside" provision in the regulation that if a project is not ready to begin, another project may be selected instead.

The Department of Environmental Protection is responsible for administering the construction grant program--from determining which towns will be awarded grant money to auditing the project once construction has been completed. The construction-grant staff also give the towns permission to advertise for design consultants, review and approve the design plans for the project, and inspect the project through the construction phase. For major construction projects, according to the department, an inspection should take place about every two to three weeks, and a progress meeting, where all parties involved are updated on the project's status, is held twice a month. For minor construction projects, an inspection occurs every two or three months.

Lakes Management. In 1980, 70 Connecticut lakes were inventoried and their water quality assessed through a study conducted jointly by the Department of Environmental Protection and the Connecticut Agricultural Experiment Station. The purpose of the study was to prioritize projects and distribute federal funding accordingly. Currently, there are seven lake projects

being funded, but no additional federal funding is being allotted for new projects. State monies have also been appropriated in most of the past few years for specific lake restoration projects. However, the funding amounts have been limited.

Administration of these projects is largely assumed by one senior environmental analyst. The analyst's responsibilities include: meeting with towns and/or lake associations concerning management and retention of a lake's water quality; sampling and analyzing results to determine a lake's water quality problem and recommending appropriate remedies; and overseeing the restoration project once the implementation phase is reached.

Groundwater investigations. As part of the state's Clean Water Act of 1967, DEP has the authority to issue pollution abatement orders where Connecticut's groundwater is being contaminated. This authority was significantly expanded in 1982 (P.A. 82-240) and further increased through Public Acts 84-81 and 85-407.

Currently, DEP's role in cases where drinking water is contaminated includes: determining the extent of the problem as well as the source; providing bottled water to those whose wells are contaminated until an enforcement order can be issued; enforcing and monitoring clean up efforts; and approving long-term solutions to the problem. Statutorily, the Department of Health Services (DOHS) has primary responsibility for public drinking water supplies, although DEP does assist in conducting investigations where those supplies are contaminated.

After the groundwater section of DEP receives a report of contamination, staff first determines if a problem exists, and if so, tries to locate the source of the contamination. The actual water samples are usually taken by a local health official, but are tested by the DOHS laboratory. Where drinking water is concerned, the results are examined by the DOHS Water Supply and Toxics Hazards Unit. The unit must declare that drinking the water will pose an unacceptable risk before enforcement actions can be taken to provide alternate potable water.

If contamination of drinking water exists, the state provides the potable water until a pollution abatement order is issued. The potable water is provided under contract with the Capitol Region Council of Governments and paid for through a special revolving fund known as the Emergency Spill Response Fund.

The Department of Environmental Protection then investigates how widespread the problem is and identifies the source. Once the source has been identified, an order is issued to the responsible party to provide potable water, to clean up the contamination, and to propose a long-term solution to provide drinkable water. The responsible party may contest the order, but he/she must provide the drinking water or face a court-ordered injunction.

If the source of the pollution cannot be found, or if the responsible person has no assets and cannot secure a loan at a reasonable rate, the commissioner may order the town to provide drinking water. Any long-term solution proposed by the responsible party must be approved by both the commissioners of environmental protection and health services.

Strategy to address toxics. Some water quality problems-- those due to toxic (lethal or cancer-causing) substances--persist and are not correctable with current technology making it impossible to fully achieve water quality standards. Substances are considered toxic if in certain concentrations that substance kills 50 percent of the exposed organisms in a specific observation period. Elimination of toxic pollutants in toxic doses is a congressional goal and states are required to establish a strategy to deal with those problems. In Connecticut, this required strategy was finalized and adopted in May 1986, and outlines procedures on how the department will deal with toxics.

#### Administration of Regulatory Programs

The regulation of discharges into Connecticut's waters is required under both federal law and Connecticut statutes. In Connecticut, state permits are required for all discharges to any waters except residential domestic sewage under a certain volume. Federal law requires that all discharges to surface (visible) waters be issued a National Pollutant Discharge Elimination System permit. As was noted earlier, DEP is delegated to operate this permitting program in Connecticut.

To avoid issuing both state and federal permits to establishments that would require both, Connecticut uses the NPDES permit to fulfill both state and federal requirements. All other regulated discharges (e.g., those going to a municipal sewage system) are issued a state permit. The type of permit depends on where the discharge goes. For example, if the discharge goes directly to a river or stream, the discharge needs a NPDES permit. All other discharges need only a state permit. Under both NPDES and state permits, there are designations of major and minor discharges, depending on type and volume of discharge. This is a significant distinction, since major dischargers are usually required to report to DEP more frequently on permit compliance, and are federally required to be inspected more often. (See Table III-1 for a listing of discharge types and significant regulatory requirements.)

Both federal and state permit applications contain information about the type of activity being proposed, the types and amounts of pollutants expected in the discharge, how the discharge will be treated, and where the discharge will go.

For permitting purposes, the state is divided into three districts for business and industry, while municipal permits are issued and administered on a statewide bases. The industrial

Table III-1. Connecticut's Regulatory Program: Categories and Significant Features.

<u>Discharge Categories</u>	<u>Designation</u>	<u>Number</u>	<u>Permit Required</u>	<u>Fed/State Inspection Required</u>	<u>Monitoring Reports Required</u>
Industrial surface water discharge (to river or stream)	Major - e.g. a large metal finishing shop with discharge to a river	126 majors	NPDES (federal) & state	Federal: Annually State: 2-4 times a yr.	Frequent <sup>1</sup>
	Minor - e.g. a small company with minor cooling water discharge	520 minors	NPDES (federal) & state	State: 2-4 times a yr.	Infrequent <sup>2</sup>
Municipal Waste Treatment Plant (treated sewage discharge to river or stream)		119	NPDES (federal) & state	Federal: Annually State: 2-4 times a yr.	Frequent
Industrial Pretreatment (industrial facilities that discharge to municipal sewage system)	Major - e.g. large metal finishing shop with a discharge to the sewage system	104 majors	Federal: Reg. of discharge, but no permit required	Federal: Annually	Frequent
Other	Minor - e.g. photofinishing establishment with discharge to sewage system	677	State: Permit required	State: 2-4 times a yr.	Infrequent

<sup>1</sup> Frequent: Approximately monthly.

<sup>2</sup> Infrequent: Quarterly or annually.

Source: Legislative Program Review and Investigations Committee staff analysis.

districts are shown in Figure III-2. The current number of permits for each of the industrial districts and the total statewide number of municipal permits are also given in that figure. The applications for industrial discharges are reviewed by engineers in the Permits and Enforcement Section, while applications from municipalities are reviewed by engineers in the Municipal Enforcement and Administration Section.

If the application is for a large septic system, the application is reviewed by engineers in the Subsurface Sewage Disposal section. These applications, usually for condominium development septic systems, require that a different set of factors (e.g., the nature of the soil) be examined and therefore are reviewed by engineers with expertise in that area.

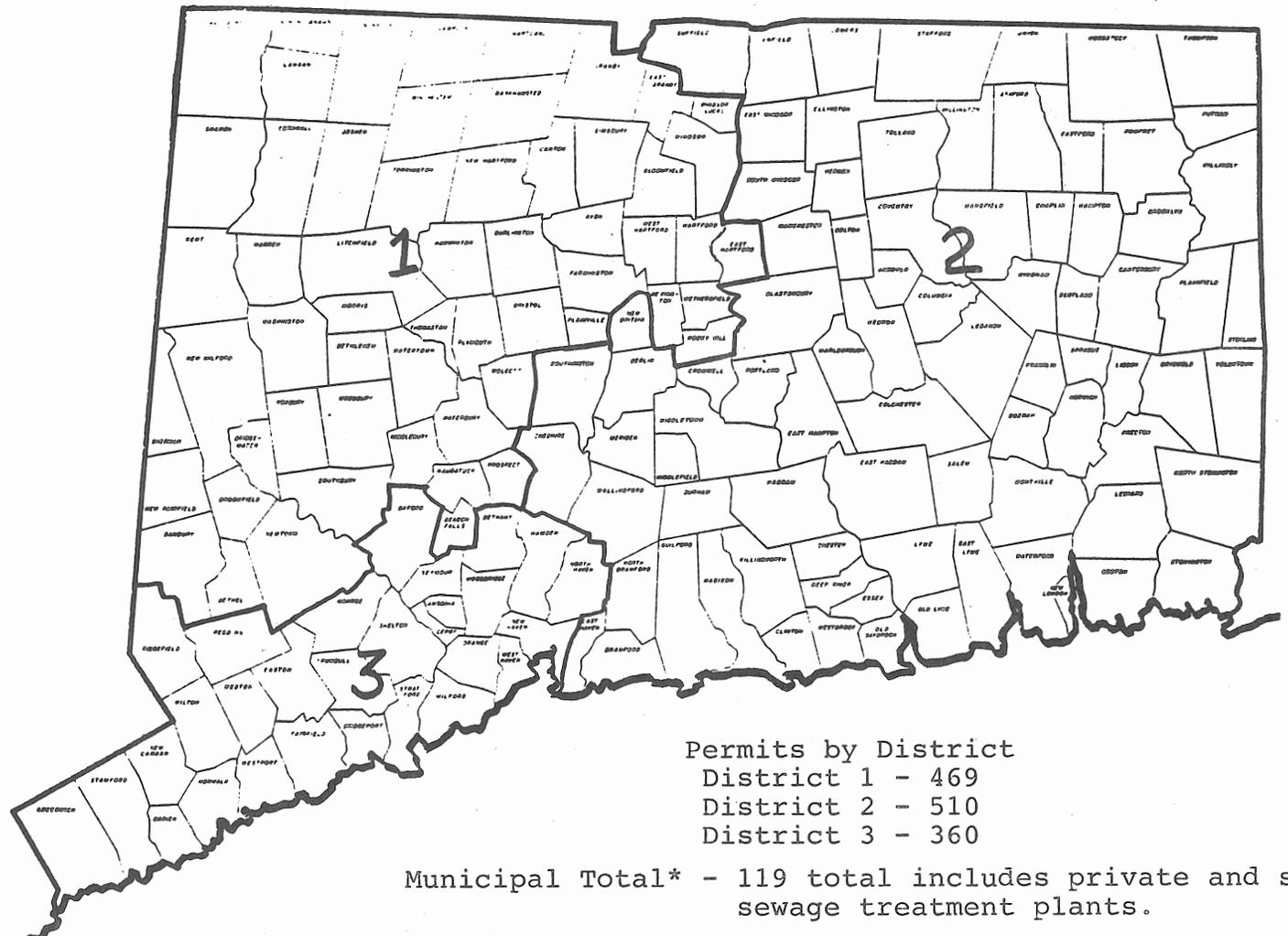
Application process. Permit renewal applications are statutorily required to be filed with the department 180 days before a permit expires; however, the statute specifies no time requirement for new permit applications. Once the department receives an application for a permit, it follows a pattern similar to the process diagrammed in Figure III-3. First, the application is given a number and logged on the computer. The application is then given to the principal sanitary engineer for that district, who in turn assigns it to one of the engineers designated to that district or reviews it himself.

The engineer reviews the application for thoroughness as well as to ensure that all permit fees have been paid. After the application is accepted as complete and all required fees have been remitted, the actual proposal of the treatment process is reviewed. For those purposes, the engineers must determine that the proposed treatment process will best reduce the discharge and that it is technically, economically, and institutionally feasible. New regulations, adopted in July 1986, clearly delineate treatment standards and establish specific reviewing procedures depending on the type of discharge and the receiving stream.

Once the application has been reviewed, it is given one of the three following determinations, which are outlined in statute:

- the application's proposed discharge is found not to contribute to pollution, and the application is tentatively approved;
- the treatment process outlined in the application is found to protect the waters of the state from pollution, and is tentatively approved; or
- the application's proposed discharge is determined to cause pollution, and the application is tentatively denied.

Figure III-2. General Water Pollution Control Districts.



Permits by District

District 1 - 469

District 2 - 510

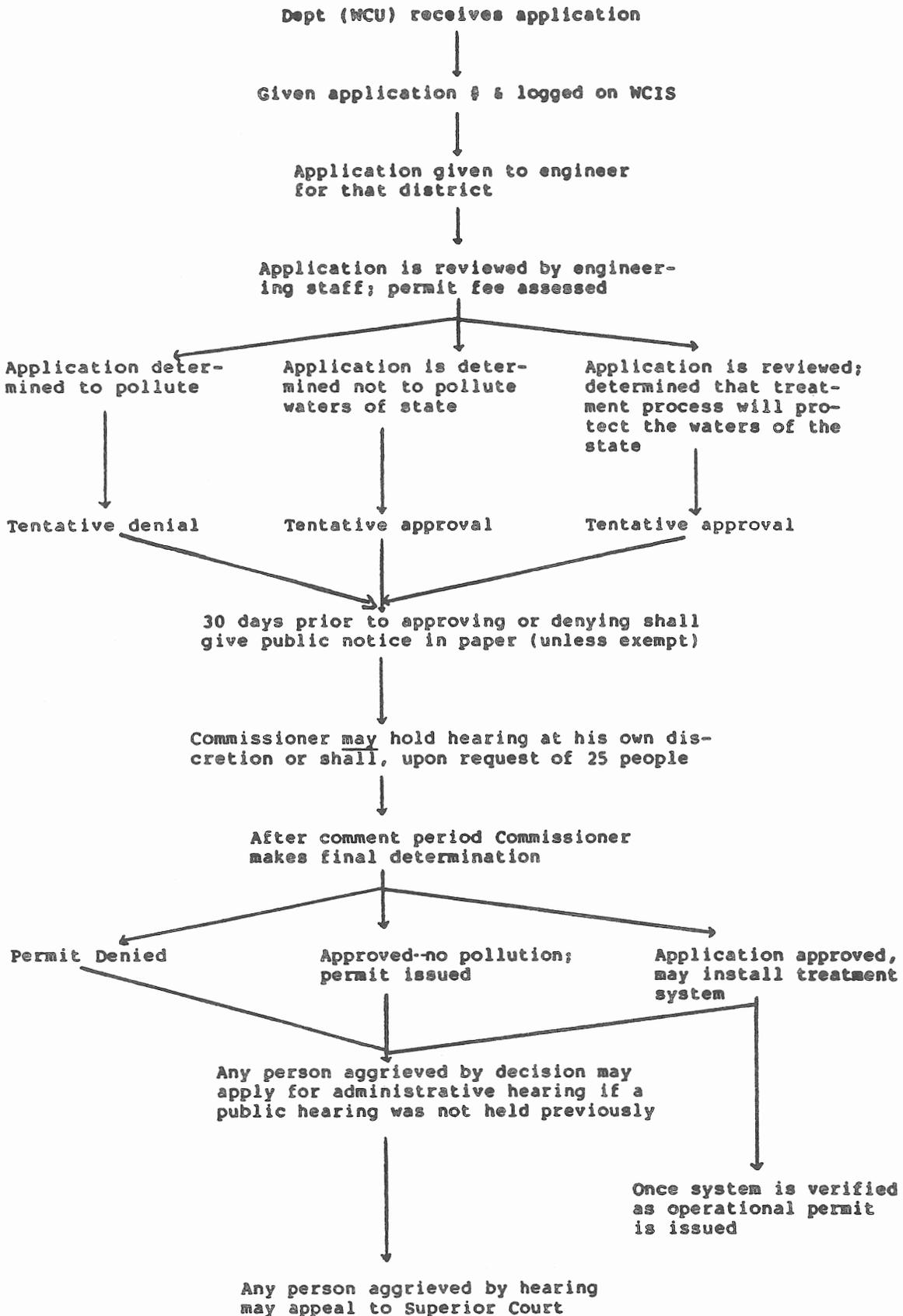
District 3 - 360

Municipal Total\* - 119 total includes private and state  
sewage treatment plants.

Permit Number as of May 1986

Source: DEP Water Quality Management Plan, 1985.

Figure III-3 - Water Compliance Unit--Permitting Process.



In practice, according to department engineers, this last option is seldom utilized; instead the engineer will usually work with the facility or municipality to change the treatment process so that the application can be approved.

Once the application has been tentatively approved or denied, public notice is made in a newspaper of the area in which the facility is located, at least 30 days prior to permit issuance. The public notice is required for most permit applications, except where exempt by regulation. Statutorily these exemptions include those cases where the type and size of discharge is not likely to cause substantial pollution. The commissioner of environmental protection has the discretion to hold a public hearing or not, but must hold one if requested by 25 people or more.

After the comment period, the department issues either an approval to install waste treatment equipment, or a permit to discharge if it is determined that no treatment is necessary. Any person or municipality aggrieved by the decision may request an administrative hearing within 30 days of the permit decision, if the application has not already been the subject of a hearing. If the person or municipality still feels aggrieved by the decision of the administrative hearing, the party may appeal to Superior Court.

After the department issues approval to install waste treatment equipment, it must verify that the equipment was actually installed and is operational. Once this is done, a permit is issued.

The permit. The permit, which is typically issued for a period of five years, follows a similar pattern, whether it is a state or NPDES permit. Specifically, the permit gives the name of the permittee, the location of the facility, the type of the operation, and the amount of discharge allowed. It also describes how the wastewater shall be treated.

The permit further sets limits on the concentration of the pollutants, and the discharge volume that will be allowed. It also establishes reporting requirements, whereby the facility must file a written verification to the commissioner that the conditions of the permit are being met.

A copy of the permit is sent to the facility, and one is kept on file at the Department of Environmental Protection offices. Depending on the type of permit, a copy may also be sent to EPA Region I office in Boston and/or to the appropriate municipal sewage treatment facility.

### Inspections

The inspection staff assigned to the permits and enforcement area conduct inspections of industrial facilities and municipal

sewage treatment plants, answer complaints, and collect samples at discharge sites. Most inspectors are assigned to one of the three industrial permitting regions, although those assigned to municipal facilities cover the whole state.

Types of inspections. There are primarily five types of inspections conducted: 1) EPA compliance inspections; 2) DEP compliance inspections; 3) the industrial survey inspections; 4) municipal treatment plant inspections; and 5) inspections to verify that a system is operational. In addition, inspections may be conducted as a follow-up to a complaint.

The federal EPA compliance inspection is done annually on all major facilities (approximately 250) whether they discharge to surface waters or into municipal sewage treatment plants. This inspection covers several areas, such as the facility's:

- record-keeping;
- waste treatment process;
- sampling procedures; and
- flow monitoring procedures.

The compliance inspection by the DEP replicates the EPA inspection. It could be conducted routinely or as a result of: a complaint; an industry request for assistance; or as a follow-up to another type of inspection.

In an industrial survey inspection, an industrial survey, a non-permitted facility is examined to determine whether a discharge is occurring and if so, what type. Inspectors may also conduct sanitary surveys where they walk through a town to visually ensure private septic systems are functioning properly.

The type of inspections conducted at municipal treatment plants are similar to industrial field inspections but require more thorough testing. In addition to the reviews in an industrial facility inspection, a municipal inspection includes measuring the quality and quantity of both the influent--the water coming in--and the effluent--the water going out.

The inspection process. For most types of inspections the procedures follow a similar pattern. All inspections made by DEP inspectors are unannounced. Sites are chosen by individual inspectors based on such factors as whether the facility is a major or a minor discharger, and the time elapsed since the last inspection. Upon arrival, the inspector usually collects the samples first and then continues with the remainder of the inspection. The inspections usually take about two to two and one-half hours.

After the day's inspections are completed, the inspectors usually deposit their samples at the Department of Health Services

laboratory. The lab analysis is attached to the inspection report and given to the engineer responsible for that permittee. If the results indicate a violation of permit conditions, enforcement action is usually begun. If the report deals with a major permittee--either NPDES or state--a copy of the report is sent to the EPA Region I office in Boston.

### Monitoring

In addition to inspections, permit compliance is also monitored through facility reporting procedures. Each permit requires the facility to analyze its effluent and report the results, in writing, periodically to DEP. Reporting frequency depends on volume and types of discharge. For the NPDES permittees, the results are registered on a computerized form. The engineers are supposed to review the results of these discharge monitoring reports and use the results for filing a quarterly noncompliance report with the Region I Office of EPA.

### Enforcement

If water pollution control laws are violated, or if permit conditions are not adhered to, there are progressive enforcement actions that can be taken. Initially, if either an inspection or a discharge monitoring report indicates a permit violation has occurred, the engineer writes a notice of violation to the facility, requiring a written response within 10 days.

Administrative orders. If permit violations are persistent, or if the waste treatment system no longer utilizes the best available technology in terms of protecting water quality, then an administrative order to correct the situation or install new equipment is issued. The decision to recommend that an order be issued is made at a monthly meeting of the unit's principal engineers, the assistant directors, and the director. The commissioner of DEP issues the orders based on staff recommendations.

An order usually requires the facility to:

- hire a consultant;
- submit an engineering report;
- submit plans and specifications; and
- start construction and install a treatment process.

Compliance with each step of the order must be approved or verified by DEP staff before a permit is issued and/or the order is closed.

Referral to attorney general. If the facility, according to the department, is not making a good faith effort to comply with the order, then the case is referred to the attorney general for litigation. Again, the decision to refer is also made at the monthly meeting of the upper level permit and enforcement staff.

After the case has been resolved in the Attorney General's Office--usually by stipulated agreement, or by a court order--the case is returned to the Water Compliance Unit to oversee compliance with the order. The attorney general may also institute a civil action to recover a forfeiture or fine of \$10,000 for each offense.

State's attorney. If a facility intentionally bypasses its treatment process or willfully violates any section of the water pollution control statutes, the case may be sent to the State's Attorney's Office for criminal prosecution. The statute allows a fine of up to \$25,000 per day for each day the violation occurs and/or imprisonment for not more than a year.

Outside enforcement. The Federal Clean Water Act allows a citizen to sue any person who is in violation of a permit or order issued by either the state or federal government. In Connecticut, the National Resources Defense Council (NRDC) and Connecticut Fund for the Environment (CFE) have jointly filed suit against a number of Connecticut companies where permit violations were found in their self-monitoring reports.

### Resource Analysis

Current budget. The Water Compliance Unit is funded through two sources--the Department of Environmental Protection's General Fund budget, and federal funds. The DEP's FY 87 budget for the Water Compliance Unit totals \$4,153,000--\$1,732,726 (42%) in General Funds and \$2,420,274 (58%) in federal funds. The expenses of the unit being paid from the General Fund are \$722,026 for personal services, and \$1,010,700 in other expenses. This latter category includes \$730,000 in laboratory fees for the entire Environmental Quality Division, with the Water Compliance Unit expending about \$300,000. These fees begin showing up as expenditures in the Water Compliance Unit's FY 86 budget; previously, they were borne by Department of Health Services, which operates the laboratory.

Budget trends. Budget information from FY 81 through FY 87 is illustrated in Table III-2. A large portion of the unit's expenses are paid with federal funds, and a delineation of how those are spent are not included in state budget information. Thus, only the total amounts of the actual expenditures--and not a breakdown of how those funds were spent--are included in the following analysis.

Table III-2. Water Compliance Unit--Resources FY 81 to FY 87.

	<u>Actual FY 81</u>	<u>Actual FY 82</u>	<u>% Inc.</u>	<u>Actual FY 83</u>	<u>% Inc</u>	<u>Actual FY 84</u>	<u>% Inc.</u>	<u>Actual FY 85</u>	<u>% Inc</u>
General Funds	\$646,250	\$655,364	1%	\$737,374	13%	\$807,788	10%	\$799,294	-1%
Federal Funds	\$1,526,598	\$1,710,388	12%	\$2,429,093	42%	\$2,494,692	3%	\$2,984,764	20%
<b>Total</b>	<b>\$2,172,848</b>	<b>\$2,365,752</b>	<b>9%</b>	<b>\$3,166,467</b>	<b>34%</b>	<b>\$3,302,480</b>	<b>4%</b>	<b>\$3,784,058</b>	<b>15%</b>

	<u>Est. FY 86</u>	<u>% Inc.</u>	<u>Requested FY 87</u>	<u>% Inc.</u>	<u>Total % Inc. 81-87</u>
General Funds	\$1,734,415	116%	\$1,732,726	-5%	168
Federal Funds	\$2,359,646	-21%	\$2,420,274	3%	59
<b>Total</b>	<b>\$4,094,061</b>	<b>8%</b>	<b>\$4,153,000</b>	<b>1%</b>	<b>91</b>

Source: Office of Policy and Management Budgets for Department of Environmental Protection.

Examination of the unit's budget over the 6-year period shows that the total dollars, including both federal and state funds, have increased by \$1,980,152 (a 91% increase). The federal appropriations have increased by \$893,676 (or 59%), while the unit's General Fund portion has increased by \$1,086,476 (168%) over the same period. However, if the total dollars allocated for laboratory expenses are subtracted, then the actual General Fund appropriation has grown by 56 percent. Figure III-4 illustrates the growth in dollars for both funding sources, as well as the total amount, with the laboratory expenses excluded..

When the General Fund appropriations--with the laboratory fees excluded--are considered as a percentage of the unit's total budget, the results show that the percentage of General Fund monies has actually dropped from 30 percent in FY 81 to 24 percent in FY 87. The results of this analysis are shown in Figure III-5.

To compare trends in the Water Compliance Unit's resources with trends within DEP, program review examined the department's total budget and the budget of the Air Quality Unit, another unit within the department's Environmental Quality Division. Budget figures for FY 81 through FY 85 only were compared, to exclude the sudden jump in FY 86 for water compliance laboratory fees. The comparison is outlined in Table III-3. As the table indicates, the 74 percent growth in the total funds allotted to the water compliance unit has been greater than in either the air compliance or the department as a whole. For example the Air Compliance Unit registered a 41 percent growth, while the department's total budget increased by 70 percent. On the other hand, both the department and the Air Compliance Unit have enjoyed a greater growth in General Fund monies than has the Water Compliance Unit. Those figures show that the department's General Funds have increased by 68 percent, compared to 38 percent in air compliance and 24 percent in water compliance.

Current Staffing. As of June 30, 1986, the DEP's personnel status report showed that the Water Compliance Unit had 87 full-time established positions, with 81 currently filled and 6 vacant. However, a departmental budget option request for increasing the Water Compliance Unit staff was approved during this past legislative session. The unit was given 16 new positions on July 1, 1986; most were assigned to permit issuance, field inspections, and groundwater investigations.

The majority of Water Compliance Unit staff perform technical functions such as reviewing engineering reports, examining design plans or analyzing water sample results. Figure III-6 depicts a breakdown of unit staff by functional area. The figures are based

Figure III-4. Water Compliance Unit: Budget Trends.

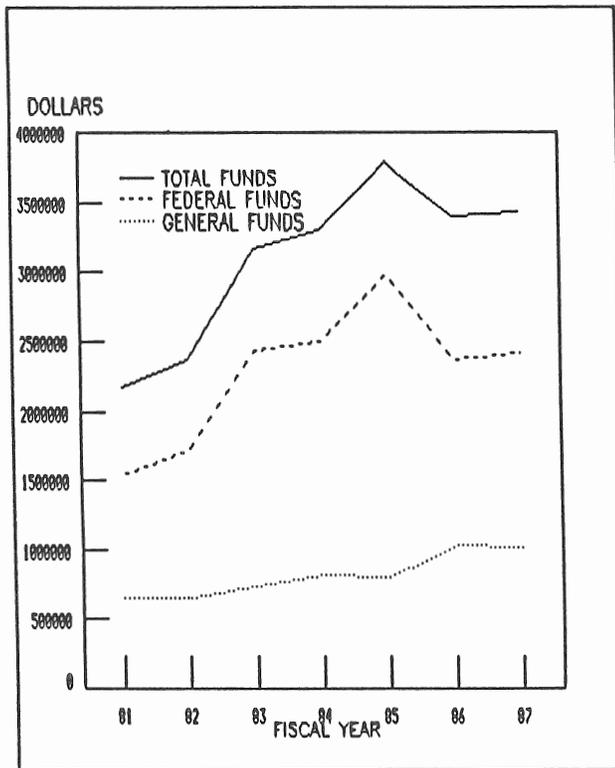


Figure III-5. Percentage Breakdown of Funding.

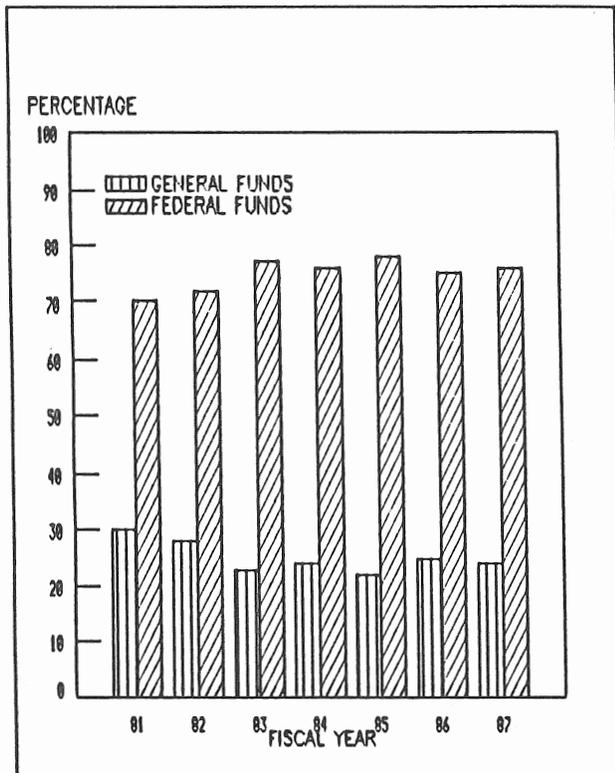


Table III-3. Water Compliance Unit Resources: A Comparison--FY 81 to FY 85.

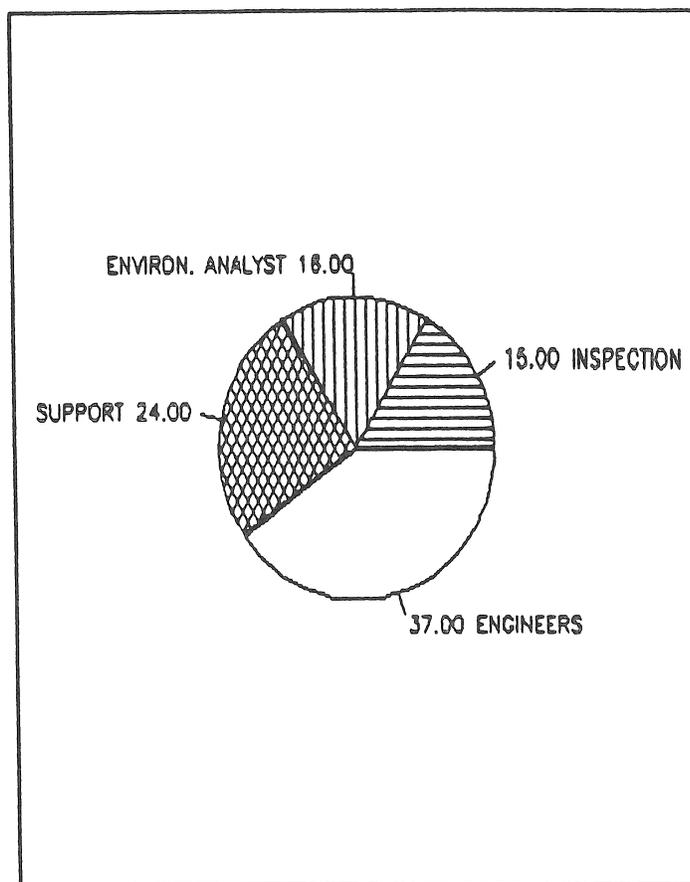
	Actual FY 81	Actual FY 82	% Inc.	Actual FY 83	% Inc.	Actual FY 84	% Inc.	Actual FY 85	% Inc.	Total %Inc.
<u>Air Compliance Unit</u>										
General funds	\$577,698	\$616,993	7	\$667,096	8	\$745,227	12	\$794,301	7	38
Federal funds	\$1,850,596	\$1,726,351	-7	\$1,734,492	.5	\$2,183,100	25	\$2,628,867	20	42
Total	\$2,428,294	\$2,343,344	-3	\$2,401,588	2	\$2,928,327	22	\$3,423,168	17	41
<u>Water Compliance Unit</u>										
General funds	\$646,250	\$655,364	1	\$737,374	13	\$807,788	10	\$799,294	-1	24
Federal funds	\$1,526,598	\$1,710,388	12	\$2,429,093	42	\$2,494,692	3	\$2,984,764	20	95
Totals	\$2,172,848	\$2,365,752	9	\$3,166,467	34	\$3,302,480	4	\$3,784,058	15	74
<u>DEP (less Water Compliance Unit funds)</u>										
General funds	\$13,280,599	\$15,432,300	16	\$18,814,165	22	\$20,655,069	10	\$22,336,140	8	68
Federal funds	\$4,593,561	\$5,710,677	24	\$8,013,029	40	\$7,784,171	-3	\$8,100,112	4	76
Totals	\$17,874,160	\$21,142,977	18	\$26,827,194	27	\$28,439,240	6	\$30,436,252	7	70

Source: Office of Policy and Management Budgets for Department of Environmental Protection.

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Figure III-6. DEP Water Compliance Unit: Staff Composition.

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on authorized positions as of July 1, 1986, and were obtained from department organizational charts. The graph shows that 37 of the 92 positions in the unit are engineering positions, while 16 of the staff are environmental analysts. These analyst positions require a background in biology, geology, or another environmental science. The unit also has 15 field inspectors, with the 24 remaining support staff composed of accountants, data entry or clerical personnel.

Staffing trends. The number of total full-time filled positions in the Water Compliance Unit has remained constant over the six-year period examined, as Table III-4 suggests. The unit's total number of filled full-time positions has increased from 83 in FY 81 to 87 in FY 87 (5%) with fluctuations up and down in the interim. The unit has increased its federally funded positions by the same percentage, going from 62 full-time filled positions in FY 81 to 66 in FY 87. The number of staff funded by General Funds

Table III-4. Water Compliance Unit Staff--FY 81 to FY 87.

	<u>FY 81</u>	<u>FY 82 % Inc.</u>		<u>FY 83 % Inc.</u>		<u>FY 84 % Inc.</u>		<u>FY 85 % Inc.</u>		<u>FY 86 % Inc.</u>	
GF Filled FT	21	21	0	21	0	18	-14	19	6	20	10
FF Filled FT	62	61	2	61	0	65	7	65	0	67	3
Total Filled FT	83	82	-1	82	0	83	-6	84	1	87	4
		<u>FY 87 % Inc.</u>		<u>Total % Inc.</u>							
GF Filled FT	21	5		0							
FF Filled FT	66	-2		5							
Total Filled FT	87	4		5							

GF FFT = General fund filled full-time positions.  
 FF FFT = Federal fund filled full time positions.  
 Total FFT = Total filled full-time positions.

Source: Office of Policy and Management Budgets for Department of Environmental Protection.

in FY 87 is exactly the same as it was in FY 81, after a slight decline in the intervening years. (The positions do not include the authorization for 16 additional staff for FY 87.)

A comparison of DEP's, as well as Air and Water Quality Units' staffing resources was made for FY 81 through FY 85 and the results appear in Table III-5. The comparison shows that while the total number of filled full-time DEP staff (less Water Compliance Unit staff) has grown by 68 positions (11%), those staff have not been assigned to either the Water or Air Compliance Units. The Water Compliance Unit staff grew by only one position while Air Compliance actually experienced a decrease of nine positions. Also, during the four-year period, both those units suffered declines in General Fund filled full-time positions.

#### Water Pollution Control Programs in Other States

It was noted earlier in this report that while Congress mandated the establishment of certain water quality programs, it is largely up to the states to determine how they will be implemented. To analyze how other water quality programs generally operate, the program review committee surveyed all other states. Thirty-five states responded and the major features of their programs are summarized in Table III-6. Included in this comparison are:

- the year the program was created;
- whether the state operates the federally required permitting program for establishments that discharge directly to rivers and streams (NPDES); and
- whether the state, the publicly owned treatment works (i.e., municipal sewage treatment plants), both entities, or neither operate the pretreatment program, for regulating establishments in certain industrial categories that discharge into municipal sewage systems.

As Table III-6 indicates, several configurations of state operations are possible. For example, a state may administer the NPDES program and not operate the pretreatment program, while other states choose to administer neither program. Twenty-eight of the 37 states, including Connecticut, have been delegated authority to operate the NPDES program, while only 6 states, including Connecticut, have sole responsibility for the pretreatment program.

Table III-5. Water Compliance Unit Staff--FY 81-85: Comparison with DEP and Air Compliance Unit.

		<u>FY 81</u>	<u>FY 82</u>	<u>% Inc.</u>	<u>FY 83</u>	<u>% Inc.</u>	<u>FY 84</u>	<u>% Inc.</u>	<u>FY 85</u>	<u>% Inc.</u>	<u>Total % Inc.</u>
Water Compliance Unit	GF Filled FT	21	21	0	21	0	18	-14	19	6	-10
	FF Filled FT	62	61	2	61	0	65	7	65	0	5
	Total Filled FT	83	82	-1	82	0	83	-6	84	1	1
Air Compliance Unit	GF Filled FT	23	21	-9	21	0	21	0	22	5	-4
	FF Filled FT	51	46	-10	44	4	43	2	43	0	-16
	Total Filled FT	74	67	-9	65	-3	64	-2	65	2	-12
DEP	GF Filled FT	505	502	-.6	525	5	536	2	557	4	11
Total	FF Filled FT	141	135	-4	152	13	154	1	157	2	12
Total	Filled FT	646	637	-1	677	6	690	2	714	4	11

Note: GF FFT = General fund filled full-time positions.  
 FF FFT = Federal fund filled full-time positions.  
 Total FFT = Total filled full-time positions.

Source: Office of Policy and Management Budgets for the Department of Environmental Protection.

Table III-6. States' Water Pollution Control Programs--  
Significant Features.

State	Year Created	State Admin. NPDES	Pretreat Admin.
Alabama	1949	Y	---
Arkansas	1949	N	State
California	---	Y	POTW
Colorado	1966	Y	Neither
Connecticut	1967	Y	State
Delaware	1972	Y	POTW[1]
Florida	1968	N	Neither
Georgia	1964	Y	Both
Hawaii	1974	Y	State
Idaho	1959	N	POTW
Iowa	1923	Y	---
Kansas	1907	Y	Both
Kentucky	1950	Y	POTW
Louisiana	1936	N	POTW
Maine	1950	N	POTW
Maryland	1914	Y	Both
Massachusetts	1972	N	Both
Mississippi	1966	Y	State
Montana	1968	Y	Neither
Nebraska	1974	Y	State
New Hampshire	1947	N	---
New Jersey	1971	Y	Both
New Mexico	1967	N	POTW
New York	1949	Y	POTW
North Carolina	1951	Y	POTW
North Dakota	1936	Y	POTW
Ohio	1974	Y	Both
Oregon	1933	Y	POTW
Rhode Island	1920	Y	Both
So. Carolina	1950	Y	Both
Tennessee	1950	Y	POTW
Virginia	1946	Y	POTW
Washington	1945	Y	Both
West Virginia	1930	Y	Both
Wisconsin	1925	Y	State
Wyoming	1973	Y	POTW

[1] Publicly Owned Treatment Works.

Source: LPR&IC Analysis of States' Survey.

Although the year the programs were created varies widely, Table III-6 indicates that majority of the states had programs in place prior to the establishment of the federal Water Pollution Control Program in 1972.

## Resource Comparison with Other States

Several questions in the program review committee survey of other states regarded staff and resources allocated to water pollution control programs. The results, including Connecticut's resources are summarized in Table III-7.

There is significant variation in both the amounts states spend on, and the number of staff employed in, water pollution control programs. For example, as the table shows, the amount of state spending ranges from a low of \$70,000 in Montana to almost \$11 million in New York. Similarly, the number of staff varies from a low of 9 full-time staff devoted only to water pollution programs to a high of 636 employees in Florida. Also included in the table is a per capita spending figure, along with the states' ranking from least to most in terms of each of the three resource categories.

As the table shows, Connecticut ranks in the middle in terms of state funding and full-time staff allocated to water pollution. When per capita spending is compared, however, Connecticut's ranking (13th) drops to the lower half.

Table III-7. State Resources Allocated to Water Pollution Control Programs.

State	Total Full-time Staff	Total Part-time Staff	FY 86 State Budget <sup>2</sup>	Per-Capita Spending-Water Pollution Control Programs <sup>1</sup>
Alabama	75 (12)	15	521 (6)	.12 (2)
Arkansas	42 (7)	-	864 (8)	.36 (8)
Connecticut	92 (16)	-	1,734 (15)	.54 (13)
Delaware	72 (11)	3	864 (8)	1.38 (26)
Florida	636 (27)	0	1,500 (14)	.13 (3)
Georgia	135 (18)	0	740 (7)	.12 (2)
Hawaii	26 (3)	8	1,408 (13)	1.33 (25)
Idaho	50 (8)	0	900 (9)	.89 (21)
Iowa	-	-	467 (8)	.16 (4)
Kansas	-	-	449 (4)	.18 (5)
Kentucky	67 (10)	0	2,703 (17)	.72 (19)
Louisiana	73 (12)	0	**2,000 (16)	.44 (11)
Maine	85 (14)	11	1,100 (10)	.94 (22)
Maryland	300 (23)	0	6,126 (26)	1.39 (27)
Massachusetts	180 (21)	12	2,465 (18)	.42 (10)

<u>State</u>	<u>Total Full-time Staff</u>	<u>Total Part-time Staff</u>	<u>FY 86 State Budget</u> <sup>2</sup>	<u>Per-Capita Spending-Water Pollution Control Programs</u> <sup>1</sup>
Mississippi	75 (13)	0	900 (9)	.34 (7)
Montana	11 (2)	0	68 (1)	.08 (1)
Nebraska	32 (4)	0	-	.34 (7)
New Hampshire	193 (22)	6	4,000 (23)	4.00 (27)
New Jersey	400 (26)	0	7,800 (27)	1.03 (23)
New Mexico	37 (6)	0	1,500 (14)	1.03 (23)
New York	305 (26)	0	10,960 (28)	.61 (15)
North Carolina	142 (19)	0	2,858 (19)	.46 (12)
North Dakota	35 (5)	0	234 (2)	.34 (7)
Ohio	315 (27)	0	-	.24 (6)
Oregon	86 (15)	0	1,500 (14)	.55 (14)
Rhode Island	9 (1)	60	356 (3)	.37 (9)
South Carolina	171 (20)	0	3,168 (21)	.94 (22)
Tennessee	300 (25)	0	3,700 (22)	.77 (20)
Virginia	201 (23)	0	4,080 (24)	.71 (18)
Washington	53 (9)	2	2,900 (20)	.65 (16)
West Virginia	120 (17)	0	1,320 (12)	.68 (17)
Wisconsin	257 (24)	0	5,339 (25)	1.10 (24)
Wyoming	48 (7)	0	1,250 (11)	2.45 (28)

<sup>1</sup> Based on FY 86 state appropriations and estimated 1985 population data.

<sup>2</sup> Budget figures are rounded to the nearest thousandth.

\*\* Appropriated but not expended due to severe state cutbacks.

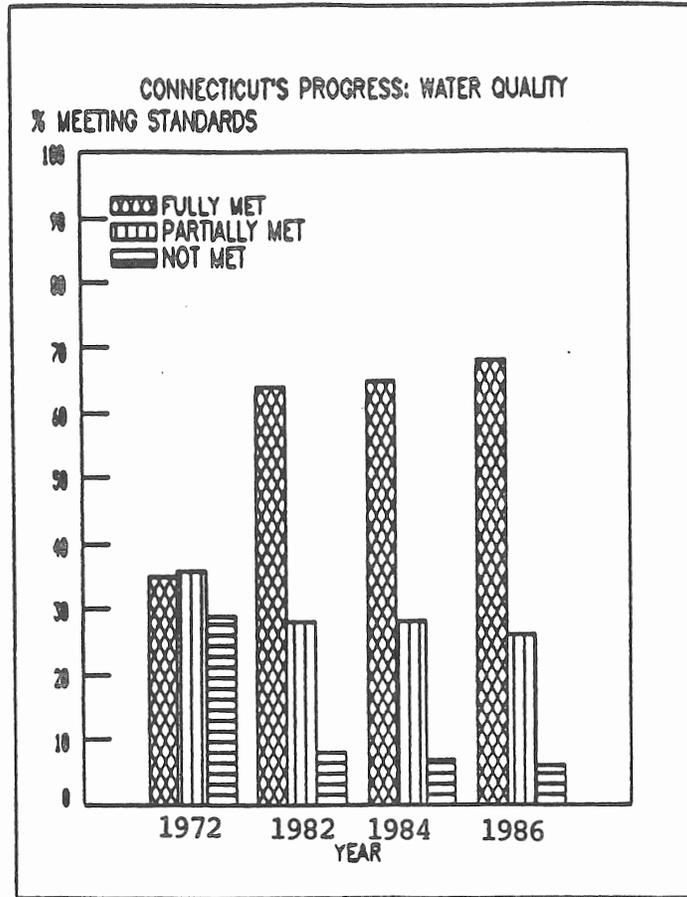
( ) Numbers in parenthesis are ranking of states from lowest to highest appropriations, staffing, and per-capita spending.

Source: LPR&IC Analysis of States' Survey.

### Effectiveness of Connecticut's Program

The implementation of water pollution control programs in this state has had a positive effect on Connecticut's water quality. In its 1986 Report to Congress, the Connecticut Department of Environmental Protection reported that of the 880 major river miles assessed in this state, 68 percent fully met the designated water quality classifications. This is a significant improvement over Connecticut's water quality in 1972, the first year such data were reported. Figure III-7 shows the progress Connecticut has made in improving its water quality since 1972--from 35 percent of the major rivers miles fully meeting water classifications to 68 percent meeting the standards in 1986.

Figure III-7. Water Quality -- Connecticut's Progress.



Source: Legislative Program Review and Investigations Committee.

While this is a significant improvement, Connecticut's attainment of clean water remains under the national average. In a 1984 report to Congress, EPA compared the water quality in 40 states including the state of Connecticut. According to the report, an average of 73 percent of the states' major river miles fully met state standards. During the same time period 65 percent of Connecticut's major river miles met Connecticut's standards for clean water. The EPA, in its summary report to Congress, also conducted a regional analysis of water quality attainment. For the purposes of this analysis the nation was divided into 8 regions, as shown in Figure III-8.

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Figure III-8. States in EPA Geographic Regions for Classifying Streams and Lakes.

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Source: Environmental Protection Agency, National Water Quality Inventory: 1984 Report to Congress (Washington, D.C.: 1985)

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The results of that regional analysis are contained in Table III-8. The table shows that the percentage of major rivers miles in the northeast fully meeting their water quality classifications is 72 percent, almost identical to the national average, and higher than Connecticut's average of 65 percent. In evaluating these statistics, it should be noted that there are variations in reporting from state to state. First, states may use different assessment techniques to develop water quality statistics. For example, the total percentage of the state's river miles assessed may vary from state to state. Second, some states may classify a greater percentage of river miles at more stringent standards than other states.

Table III-8 also shows the major sources of pollution that prevent regions from fully reaching clean water standards. Some of the causes listed for the northeast region are almost identical in type and proportion to Connecticut's pollution sources, as they were reported in Connecticut's 1986 Report to Congress. Those sources are shown in Figure III-9. For example the most significant pollution source of Connecticut's rivers and streams is poor treatment of municipal sewage. This is the same major problem cited by other states in the Northeast according to the table. In this state, and the Northeast region as a whole, municipal sewage was cited as causing 40 percent of the pollution of streams and rivers.

Toxics, mainly due to industrial discharges containing metals, is the second major pollutant source in Connecticut, causing 31 percent of river and stream water quality problems. This differs from the second major source cited by the majority of northeastern states. Those states attributed non-point source--agricultural runoff for example--as the second largest contributing factor to river and stream pollution. Combined sewer overflow was cited as a problem by both Connecticut and the Northeast region, while it was rarely cited by states in other regions.

#### Analysis of Groundwater Investigations

According to Connecticut's 1985 Water Quality Management Plan, approximately 32 percent of the state's population depends on groundwater for its potable water supply. In the past few years, some sources of that groundwater supply have been found to be contaminated from a variety of pollutants, including pesticides, gasoline, and leaking underground oil and gas tanks. Figure III-10 shows those towns in Connecticut where more than 15 wells are contaminated and where the residents were receiving state-provided bottled water, as of September 1986.

The sources of contamination vary, according to department information. Figure III-11 shows some of the major causes of groundwater pollution identified since 1984 and the number of cases where that contaminant has been the major contributing

Table III-8. Water Quality and Causes of Pollution by Region.

Geographic Summary of Designated Use Support for Streams

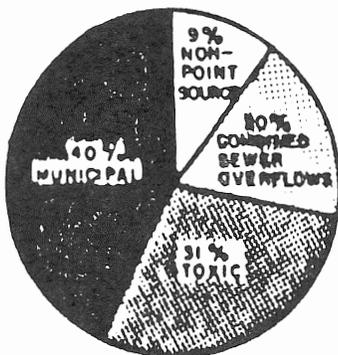
Geographic Area <sup>1</sup>	No. of States Reporting	Total Assessed Miles	Degree of Designated Use Support Classification (Miles/Percent)				No. of States Reporting	Causes of Nonsupport Causes (Percent)					
			Fully Supporting	Partly Supporting	Not Supporting	Unknown		Municipal	Industrial	CSOs	Non-point	Natural	Other
Northeast	9	45,167	32,687(72)	3,102(7)	4,377(10)	5,001(11)	7	40	17	11	21	6	5
Mid/South Atlantic	8	86,010	62,424(72)	14,800(17)	5,675(7)	3,111(4)	8	30	17	0	35	1	17
Great Lakes	4	33,427	25,664(77)	6,341(19)	1,422(4)	0(0)	3	63	9	1	10	1	7
Central/Gulf Coastal	5	63,031	52,436(83)	4,089(7)	3,228(5)	3,278(5)	3	47	24	0	29	0	0
Central Plains	6	49,699	23,914(48)	12,645(25)	1,562(3)	11,578(23)	5	29	2	0	34	2	13
Western Mountains	2	29,168	27,403(94)	1,105(4)	460(2)	200(1)	2	16	4	0	73	7	0
Southwest	2	5,079	4,298(85)	345(7)	431(8)	5(1)	1	34	0	0	21	0	45
Pacific Coast	2	11,809	8,147(69)	2,876(24)	786(7)	0(0)	2	19	8	0	60	10	3

<sup>1</sup>See Figure 2-2 for states located in each geographic area.

Source: U.S. Environmental Protection Agency, *National Water Quality Inventory: 1984 Report to Congress* (Washington, D.C.: 1985).

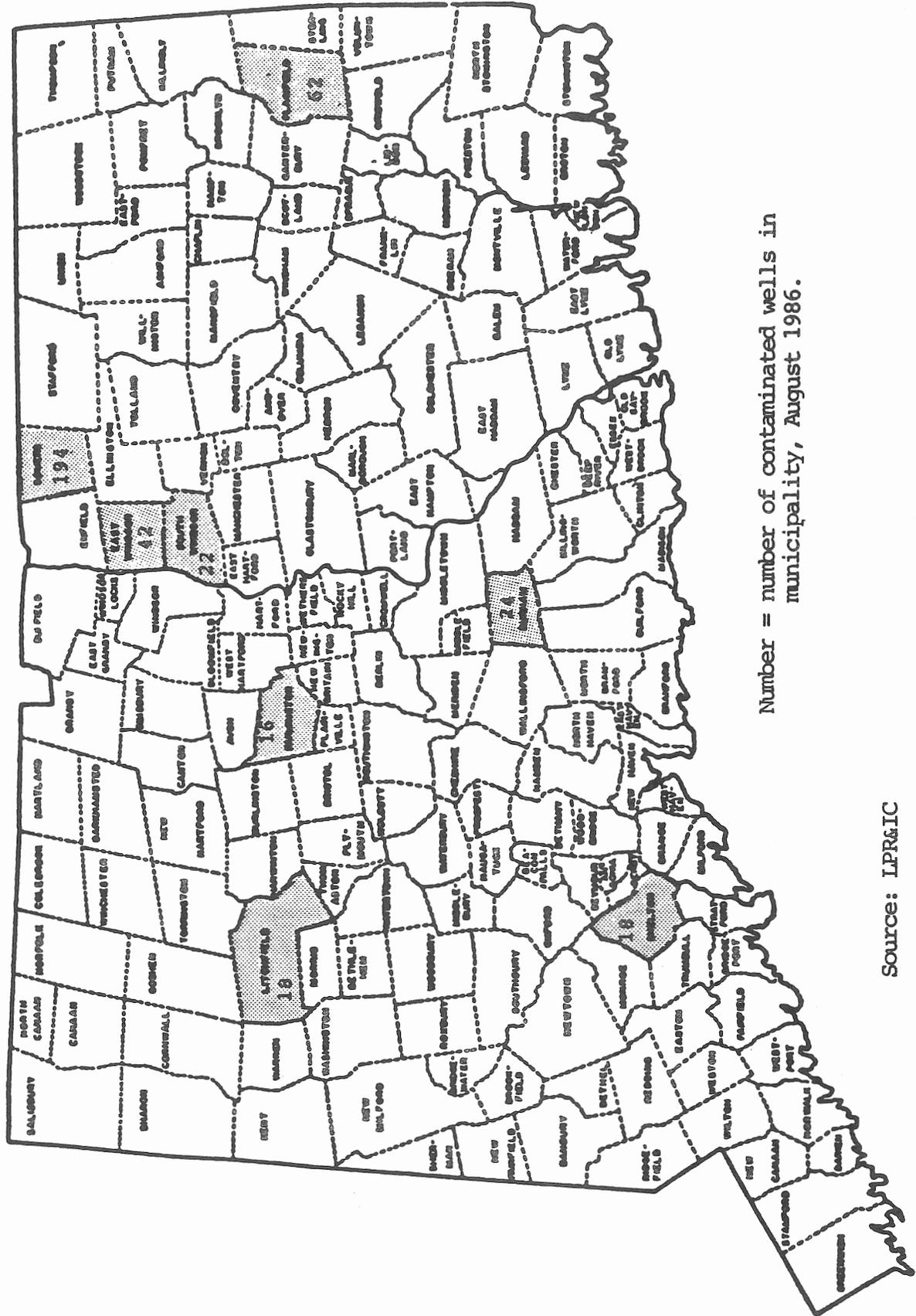
Figure III-9. Connecticut's Major Pollution Sources; Rivers and Streams (1986)

Major Streams and Rivers



Source: DEP's 1986 Report to Congress

Figure III-10. Connecticut Towns With More Than 15 Contaminated Wells.



Number = number of contaminated wells in municipality, August 1986.

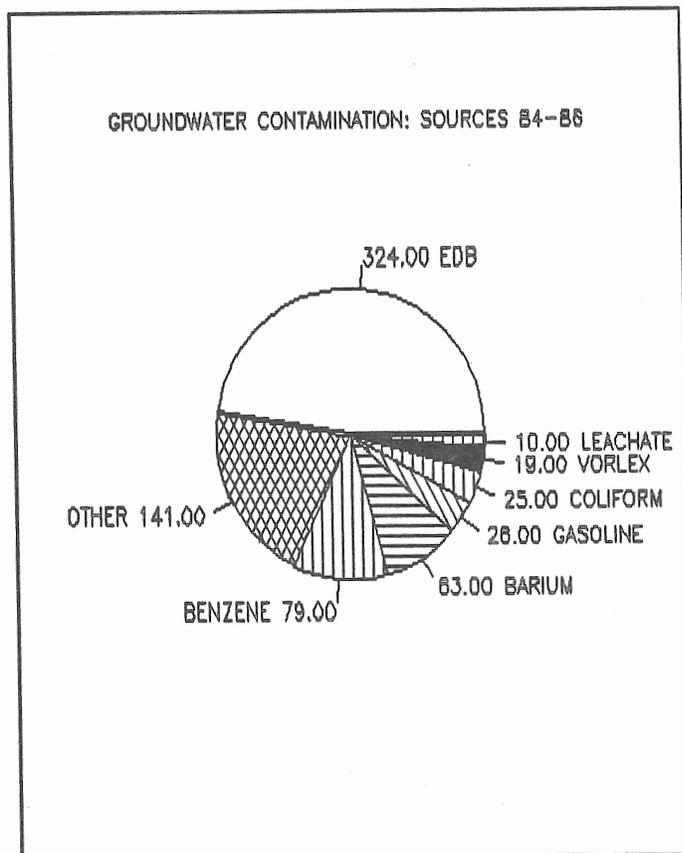
Source: LPR&IC

factor. According to DEP staff, other significant contributing factors such as landfills were identified earlier than 1984 and are, therefore, not noted here.

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Figure III-11. Groundwater: Sources of Pollution.

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Source: LPR&IC Analysis of DEP Data.

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Once contamination has been found, the hydrogeologic investigation, identification of the responsible party, and enforcement of providing long-term potable water can be difficult and time-consuming. As of September 1986, 1,285 Connecticut residents, including students and staff at two schools with

contaminated wells, were being provided bottled water by the state. This number does not include those people receiving bottled water from another source--either the party responsible for the contamination or the municipality.

The state's involvement in the provision of bottled water is intended to be short-term, until the responsible party, or failing that, the town, can be issued an order to provide it. However, the department's list of people on bottled water shows that a number of persons have been on the list two years or longer. In most of these cases a responsible party has been found; however, that party has filed an appeal, and negotiations for a solution are ongoing. The department states that in cases like these, it would rather negotiate a consent order, which staff estimates takes less time and resources, than prepare the case for an administrative hearing.

The number of appealed cases and the resulting negotiations are not the only factors hampering quick resolutions to groundwater contamination problems. The volume of outstanding orders and staff turnover also contribute to the difficulty in resolving contamination problems. According to the department's order information, there were 114 outstanding groundwater orders in May 1986, compared with 351 outstanding orders in the industrial, municipal, and landfill categories combined. Turnover in staff has been significant--two of the five environmental analysts in the groundwater section have resigned since the committee's study began and only one replacement has been recently hired.

#### Analysis of the Regulatory Programs

Connecticut was delegated authority by EPA to operate the National Pollutant Discharge Elimination System in 1973. It received additional authority to operate the program for pretreated discharges in 1981. As a function of this responsibility, Connecticut reviews the applications, writes the permits, and monitors and enforces permit compliance.

The EPA is responsible for overseeing the states' regulatory programs. As a result of 1980 congressional hearings into EPA's oversight of states' environmental program operations, Connecticut's and other states' permit programs began to come under close scrutiny. In 1983, EPA found problems including failures to identify facilities needing permits and to promulgate regulations. The DEP was directed to take actions in these areas. Two years later, the above problems remained, and a backlog of permits had also developed. The EPA required Connecticut to enter into a consent agreement requiring remedial action under the threat of taking back the authority for the program. The agreement was signed in late 1985. While some progress has been made in several areas, including the promulgation of regulations, deficiencies still exist.

Identification of dischargers. Under Connecticut law, the discharging facility (e.g., a municipal treatment plant or factory) is responsible for identifying itself to DEP by requesting a discharge permit. In the past, DEP has relied heavily on this self-identification process to locate dischargers and has never identified all facilities within Connecticut that should have permits to discharge into municipal sewage treatment facilities. While DEP did initial surveys of discharges in some towns when the pretreatment program was first implemented, no statewide inventory has ever been conducted.

As a result of the 1985 EPA/DEP consent agreement, EPA contracted with an outside party to initially identify potential dischargers; the Water Compliance Unit was then to have surveyed those facilities. However, the number and type of facilities which appeared on the consultant's list were disputed by DEP, and no survey has yet been conducted. Further, even after this survey is completed, there will be no ongoing process to identify new dischargers as they locate in Connecticut.

Backlog. Even if all facilities were identified, there is a backlog of permits that impedes dischargers from obtaining permits in a timely manner. The program review committee examined a list of all 1984 and 1985 applications received by the department and compared those with a listing of current permits to estimate the size of the backlog. As was described earlier, after an application is logged on the computer, it is given to an engineer for review. Unless the application requires a public notice, it would not be noted on the computerized system again until a permit is issued, making it impossible to know where the application is in the process.

The committee's examination of the 1,041 applications received during the 2-year period found that only 284 permits were actually issued, resulting in a backlog of 757 permit applications. As noted above, those applications might be fully processed and lacking only the final permit. However, even if half of the applications were in this category, the backlog is 378 applications for 1984 and 1985 alone.

One of the possible reasons for the backlog is the increase in numbers of applications being received by the Water Compliance Unit over the years--from 261 in 1981 to 609 in 1985. However, the number of engineers in the unit has actually declined over the same period--from 36 to 27--translating into a 300 percent increase in workload demand. (While not all unit engineers work on permits, the numbers are a reasonable proxy for actual staff assigned to permitting over time, which was not available.)

To compare Connecticut's permitting workload with other states, the program review committee examined the worker-to-permit ratio in each of the states where such information was available. The total number of NPDES permits issued in each state

was divided by the number of staff each state had assigned to operate the program. The ranking of each state is displayed in Table III-9. As was the case with earlier state comparisons, Connecticut ranked in the middle of the 22 states compared. Each staff person assigned to the NPDES permit program in Connecticut is responsible for 53 permits, compared to a low of 9 permits per worker in New Jersey and a high of 425 in Iowa.

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Table III-9. NPDES Staff/Permit Ratio[1] -- A State Comparison.

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Alabama	71	(12)	Nebraska*	167	(20)
Connecticut*	53	(10)	New Jersey	9	(1)
Colorado	57	(11)	New Mexico	23	(6)
Delaware	17	(4)	New York	30	(7)
Iowa	425	(21)	Rhode Island	12	(2)
Kansas	49	(9)	South Carolina	98	(17)
Kentucky	154	(19)	Tennessee	74	(14)
Maryland	18	(5)	Virginia	30	(7)
Mississippi*	40	(8)	West Virginia	14	(3)
Montana	125	(17)	Wisconsin	76	(14)
			Wyoming*	128	(18)

[1] Current NPDES permits administered by each full-time staff person.

() Number in parenthesis are states' ranking from lowest to highest ratio.

\* States solely operate pretreatment programs

Source: LPR&IC Analysis of States' Survey

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It should be noted that in Connecticut--as well as in Mississippi, Nebraska and Wyoming--this staff-to-permit ratio is understated due to the fact that these states also oversee the pretreatment programs. Thus, the total number of permits each staff person is responsible for would be added to significantly.

Processing time. In addition to the backlog, the time required to process a permit is somewhat lengthy. The program review committee examined all permit applications for 1984 and 1985 and found an average processing time of 10 months for 1984, and 6 months in 1985. Those times are longer than the 4-month average found among the 25 states responding to the Legislative Program Review and Investigations Committee's survey.

The department has never developed standards on how many permits an engineer should process, or how quickly they should be completed. It is therefore difficult to determine how many permits the unit should be issuing or the number of staff the

department should have to complete all the applications it receives.

The department has stated that the lengthy processing time could be due to several factors. First, if the permit was a reissuance it would not be reviewed as quickly as a request for a new permit, since the facility is already authorized to discharge. Second, permit applicants themselves may bear some of the responsibility for delays in the issuance of final waste treatment permits. According to the department, facilities that receive approval to install waste treatment systems do not always notify the department of the facility's completion in a timely manner. This delays department staff in inspecting constructed facilities, verifying that these facilities meet established standards, and issuing the final permit.

To offset the backlog and relatively lengthy processing times, the department recently sought statutory authority to delegate some permitting responsibilities to towns. The General Assembly in the 1986 legislative session granted this authority to the municipalities. Their authority is limited to those permit areas where little or no pollution would result from the discharge.

Further hampering the Water Compliance Unit's productivity and contributing to slow permit processing is the condition of the permit files. To find complete information on a facility it is necessary to go to at least three different locations--the permit files, the monitoring files and the correspondence files. While located in the same room, the three files are separate, which makes the gathering and management of information difficult. In addition, pertinent information on a facility is not always available. The program review committee conducted an inventory of 30 permit files and found that:

- 5 of the 30 files contained no permit document;
- 18 had no permit application; and
- 21 of the 30 did not contain the required discharge monitoring reports.

The absence of such information makes it difficult to reissue permits, monitor discharges, and develop orders and plans.

According to the department, the results of the discharge monitoring reports are being entered into its computer, and the actual reports have not been placed in the files yet. The department also attributes the file condition to public use. The files are accessible to anyone, with no established security system or measures to protect the files' contents and integrity. The department says that the public has little regard for returning documents to their proper files, if they return them at all.

Inspections. As mentioned earlier in the report, compliance inspections of major dischargers are required annually by EPA regulations. Connecticut regulations require that permittees be inspected at least two, three, or four times a year, depending on the volume and type of discharge.

The program review committee collected inspection information on 33 permit files and found that of the eight major dischargers in that sample, all had been inspected at least annually. In fact, the table below indicates that all eight had been inspected in the last six months.

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Table III-10. Inspection History--Major Dischargers (8).

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Inspected previous month	-- 3	(38%)
Inspected previous 2 months	-- 3	(38%)
Inspected previous 5 months	-- 1	(11%)
Inspected previous 6 months	-- 1	(11%)

Source: Legislative Program Review and Investigations Committee.

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However, the standards for state-required inspections are far from being met. Nine of the other 25 minor permit files examined by program review in May and June 1986 showed no indication that the permittees had ever been inspected. While the remainder showed inspections had been conducted, the period of time between inspections varied dramatically, ranging from 2 months to 6 years.

Department staff indicated they agreed to the number of inspections established in regulation because industry had demanded a specified number of inspections in return for paying the permit fees required of them in the 1984 regulations. The regulations allow facilities to withhold the payment of the annual fee if the number of required inspections are not completed; however, department staff say they can't recall any permittee exercising this option.

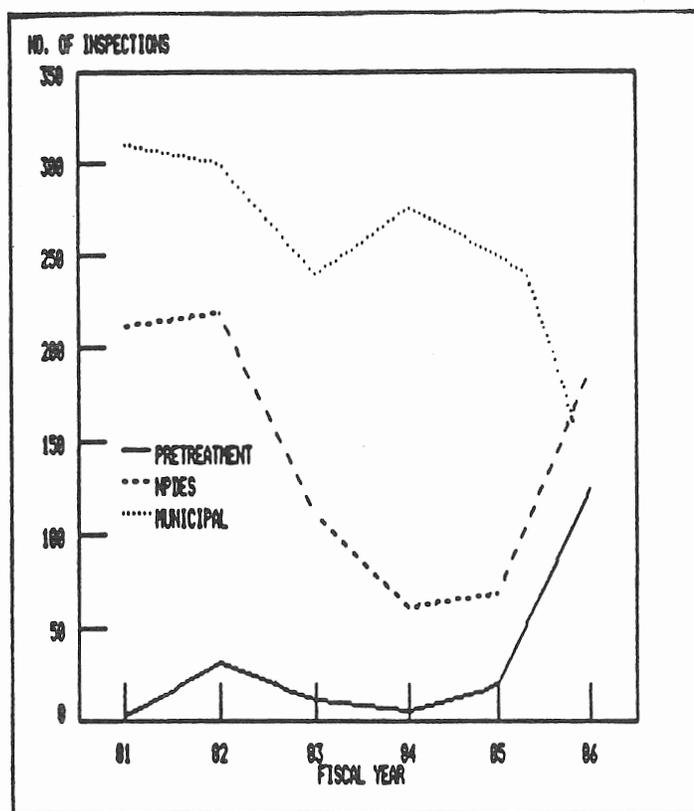
Up until this past fiscal year, the overall numbers of inspections being conducted by unit staff had also been declining. Figure III-12 shows the number of inspections in the three major categories--industrial surface dischargers, pretreatment dischargers, and municipalities--since FY 80. As the figure shows, except for a dramatic jump in FY 86, the total number of inspections has declined in two of the three categories over the five-year period.

The department cited several possible explanations for the basic decline in inspections being completed. First, DEP feels that the EPA compliance form is more complex now, requiring more time to conduct this type of inspection. Second, the number of complaints the inspectors must investigate has increased. The department also cited at a committee public hearing that, in 1984, when the number of industrial inspections was at its lowest point, inspectors were concentrating efforts on investigating EDB pollution cases and a landfill situation that was under litigation. The inspectors were also being used to input permit data on the computer for compliance monitoring.

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Figure III-12. Inspections by Year -- 1981 to 1986.

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\* Inspections for FY 86 are estimated based on three-quarters of FY 86 activity.

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To evaluate other aspects of the inspection process, the Legislative Program Review and Investigations Committee surveyed all Connecticut towns on their satisfaction with various areas of DEP's water quality programs, including the inspection program. (See Appendix D for tabulated questionnaire responses.) Two survey questions asked towns to evaluate DEP on the thoroughness and knowledge of inspectors.

Of the 49 towns responding to these questions, 89 percent thought the inspectors were thorough, and 79 percent said they were knowledgeable. The inspectors did not fare quite as well when it came to assisting towns with plant operations or industry discharges causing plant problems. While a majority of towns were satisfied, the satisfaction rate (68 percent) was lower concerning the Water Compliance Unit's assistance in those areas.

Monitoring. The department's efforts to monitor compliance with facility reporting requirements have also come under criticism. One of the major criticisms lodged by EPA against DEP's permitting and enforcement program was the department's failure to examine permittees' self-monitoring (i.e., discharge monitoring) reports and inform EPA on permit noncompliance. According to DEP, the department did not review the discharge monitoring reports because each report had to be checked by sight against the permit's allowed discharge--a process that DEP felt was too time-consuming to complete with current staffing levels.

However, under pressure from EPA, the Water Compliance Unit has over the past few months been inputting all the permit discharge parameters on a computerized system. The results of the discharge monitoring reports will be entered and any noncompliance will be detected more easily. Efforts are now being made, again at EPA insistence, to transfer this permit information to a national on-line permit data base known as the Permit Compliance System. EPA has provided additional grant money to DEP to accomplish this quickly. As of early December 1986, DEP had connected to the on-line system, but was experiencing data transfer problems.

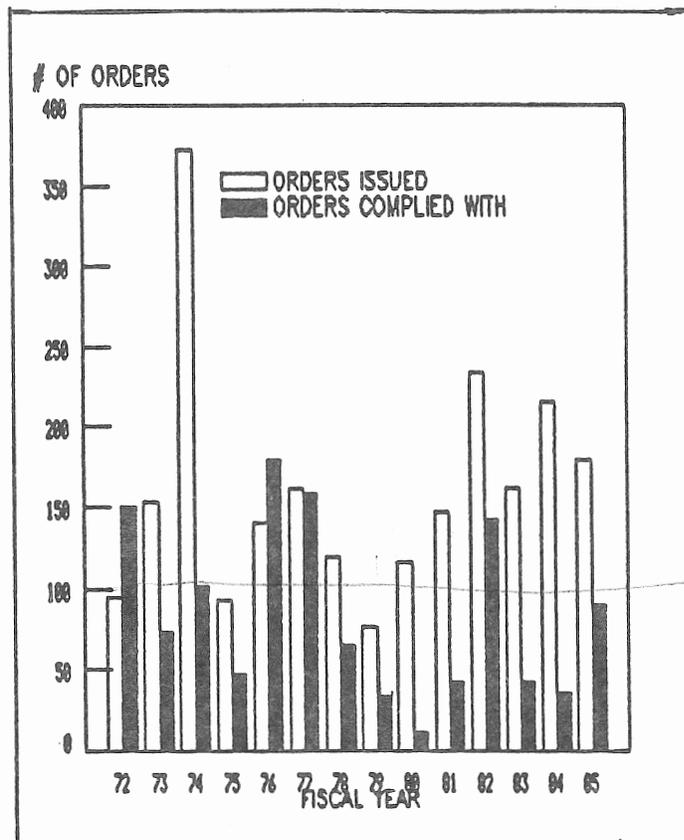
### Enforcement

The program review committee examined enforcement activities in several different areas. Those include: 1) compliance with administrative orders the department issues for corrective action on a discharge; 2) the record-keeping and tracking system for orders issued; 3) disposition of cases referred to the Attorney General's Office; and 4) disposition of cases where judicial action had been pursued by the State's Attorney's Office or by environmental organizations.

Figure III-13 shows the total number of administrative orders issued by the Water Compliance Unit and the number of orders complied with annually from 1972 to 1985. The graph indicates that there is an average overall yearly compliance rate of 57 percent. The figure also shows that compliance is uneven from year to year, with excellent compliance in some years and poor compliance in others.

The program review committee also examined orders in the industrial and municipal categories that were listed as outstanding in the computerized enforcement order book. When the study began, the committee was informed by data processing personnel that there had been problems with the system in the past, but that the current computerized orders were up-to-date.

Figure III-13. Yearly Compliance with Orders.



Source: Legislative Program Review and Investigations Committee.

However, because of the age of some outstanding orders--19 years in some cases--the committee verified the information contained in the computerized system by examining the paper files on these facilities. The committee's review of a random sample of 76 order files in the same categories (municipal and industrial) found that the information contained in the paper files rarely matched the data indicated on the computerized order system, making the tracking information unreliable. Steps that were noted as complied with in the paper files often were not updated on the computer file; some had differences of several years. For example, the paper file may indicate that plans and specifications had been filed with the department while no notation of that was shown on the computerized system. The average difference in time between steps noted in the file and the computerized system was over a year.

In addition to the differences in recorded compliance steps, important information for tracking is rarely noted on the computerized system. For example, an order may be tabled (i.e., compliance postponed) by the department and that would often be noted on the system. However, the date when the order is removed from the table is not recorded. Likewise, when an order is sent to the Attorney General's Office, that is included in the computerized file, but the date the order is returned from the Attorney General's Office is not.

The examination of paper files also showed that compliance is rarely achieved by the date specified in the order. In the 57 of the 76 enforcement sample cases where the information was available, only 6 cases fully complied with orders by the date required. This could be due to several couple of factors. One appears to be the short time given towns and facilities to comply with an order. In the order sample, the average time given for full compliance--where no modifications or allowed delays were issued--was 10 months. As noted earlier, an order usually contains several steps, including filing an engineer's report, and developing plans and specifications. Each step must be approved by DEP before the facility can proceed to the next step in the order. While the organization may complete the first one or two steps on time, the facility is put behind in its compliance schedule if the submitted plans and reports cannot be reviewed and approved by DEP on time.

Second, the examination of files showed that compliance dates come and go with no check (in the file at least) on progress being made. A possible reason for this is that other than checking the order itself, there is no prompt or tickler system to remind the engineer that a compliance step is due. Given the number of orders an engineer or analyst must keep track of, this process becomes unwieldy and unmanageable.

The committee also reviewed other efforts that are used to ensure that dischargers comply with water pollution control laws, permits, and administrative orders. As was noted earlier, the department may refer a case to the Attorney General's Office if the facility is not complying with an order in a timely fashion, or if permit violations are persistent. The program review committee examined all 54 cases that were still noted as outstanding (i.e. not yet in full compliance) on the department's computerized enforcement system and that had been referred to the Attorney General's Office at some point since the enforcement program began in 1967. The results of the disposition of those cases is shown in Table III-11.

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Table III-11. Disposition of Cases - Attorney General's Office.

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Withdrawn	12	(25%)*
Forfeiture (fine)	4	(8%)
Consent/order	2	(4%)
Stipulated Judgment	17	(35%)
Court Order	6	(12%)
Held/Dismissed	6	(12%)
Not located	7	--

\* Percentage of files located.

Source: Legislative Program Review and Investigations Committee.

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As the table suggests, the most common disposition is a stipulated judgment where a resolution is worked out by both parties prior to going to court. The second most common disposition is to have the case withdrawn. According to department and attorney general officials, the referral to the attorney general's office often provides the impetus for a town or facility to move toward compliance. In these cases, the recipient under order agrees to comply with the order and the case is withdrawn by DEP.

Less than ten percent of the cases resulted in a forfeiture (or fine). However, the department and the Attorney General's Office state that compliance is the major goal rather than seeking monetary penalties. The department estimates the total dollar amount collected in civil penalties during FY 85 was \$50,000, though no actual accounting of such figures is kept.

The program review committee compared this amount with the total collected in civil penalties obtained in other states and the results are depicted in Table III-12. As the table indicates, Connecticut ranks in the bottom third of the 22 states in terms of penalties collected.

One problem noted by the EPA in its 1985 review of the Water Compliance Unit was that there was no way to track enforcement action once a case was referred to the Attorney General. In December 1985, representatives of the Environmental Quality Division of DEP and the Office of the Attorney General signed an agreement outlining coordination of cases that were referred to the Attorney General's Office. One measure noted in the agreement was scheduling periodic status meetings to review the progress of active cases.

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Table III-12. Civil Penalties Collected--State Comparison

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<u>State</u>	<u>Civil Penalties FY 85 (in dollars)</u>	
Colorado	\$63,000	(9)
Connecticut	50,000	(7)
Delaware	20,000	(3)
Florida	1,048,000	(23)
Georgia	170,000	(16)
Hawaii	6,000	(2)
Iowa	63,000	(9)
Kentucky	268,000	(19)
Louisiana	565,000	(22)
Maine	128,000	(11)
Massachusetts	154,000	(15)
Maryland	21,000	(4)
Mississippi	138,000	(13)
Montana	51,000	(8)
New Hampshire	1,000	(1)
North Carolina	216,000	(17)
North Dakota	227,000	(18)
Ohio	337,000	(21)
Oregon	24,000	(5)
Rhode Island	75,000	(10)
South Carolina	150,000	(14)
Tennessee	331,000	(20)
Virginia	44,000	(6)
Washington	135,000	(12)

( ) Numbers in parenthesis are rankings from lowest to highest amounts collected.

Source: LPR&IC analysis of survey of other states.

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A final area of state enforcement is prosecution by the State's Attorney's Office, of cases where a facility intentionally bypasses its treatment process or where a wilfull violation of water pollution control laws occurs. The Connecticut Judicial

Department provided data concerning the total number of offenses, the disposition type, and fines collected for violations of water pollution control statutes. That information is shown in Table III-13.

Table III-13. Disposition of Cases -- State's Attorney Office.

Time Period	Total Offenses	Disposition Type	Total Fines Collected
7/1/81-6/30/82	N/A	N/A	N/A
7/1/82-6/30/83	1	Non Jury-Guilty	\$20,000
	1	Non Jury-Guilty	30,000
7/1/83-6/30/84	1	Non Jury-Guilty Plea	20,000
	1	Non Jury-Guilty Plea	0
	1	Non Jury-Guilty	5,000
7/1/84-6/30/85	8	7=Non Jury Guilty Plea	54,000
		1=Nolle/Dismissal	N/A
	1	Non Jury Conviction	5,000
7/1/85-3/31/85	4	3=Non Jury Not Guilty	N/A
		1=Non Jury Guilty	4,000
	2	Non Jury Guilty Plea	25,000
	1	Non Jury Guilty Plea	1,350
Total	21		----- \$164,350

Source: Connecticut Judicial Department.

While no definitive list of criminal cases concerning water pollution exists, the program review committee examined 14 cases that had been prosecuted by the State's Attorney's Office since 1982 and could be readily located. The examination focused primarily on the type of case the office prosecuted and the disposition of the case. The results of the review showed that the most common violation was "discharging without a permit", and that fines for a single violation ranged from \$5,000 to \$20,000.

In addition to the state's enforcement efforts, judicial action has also been pursued against 32 discharge permit violators by the Connecticut Fund for the Environment (CFE) and the Natural Resources Defense Council (NRDC). Federal law allows such suits, provided that proper notice is given and that the state has failed to prosecute those violators diligently. The two groups have been successful in the majority of suits brought, winning a total of \$1.4 million in penalties and legal fees from 27 Connecticut

companies. One other case was successfully settled, but the terms were not publicly disclosed, while 3 cases are still unresolved and one case was dismissed.

## CHAPTER IV

### FINDINGS AND RECOMMENDATIONS

The Legislative Program Review and Investigations Committee's recommendations focused on two major areas, the management of the Water Compliance Unit and the administration of its regulatory programs. The committee's proposals focus on improving unit operations by having management:

- develop a clear implementation strategy for meeting planned goals and objectives;
- upgrading the unit's training and staff evaluations;
- developing performance standards for staff; and
- instituting a better file management system.

The committee also found that the administration of the regulatory programs was deficient in several areas and made a number of recommendations to improve permit processing, fee processing and compliance enforcement. The major recommendations addressing the regulatory program include:

- retaining DEP administration of the permitting programs;
- reorganizing and adding staff to the Permits and Enforcement Section;
- upgrading automation and information systems; and
- improving communication between the Water Compliance Unit and its constituent groups.

One additional area discussed in the following section is the Water Compliance Unit's groundwater investigations program.

### PROGRAM MANAGEMENT

#### Implementation and Monitoring

The Water Compliance Unit within the Department of Environmental Protection performs planning functions, including developing water quality standards that establish use classifications for the state's rivers, streams, lakes, and groundwater. As noted earlier, the unit also develops an annual water quality management plan, which is required by federal law. The plan is a comprehensive document that establishes priority water bodies, describes their water quality problems, and outlines actions needed to improve the quality. In addition, some sections

water bodies, describes their water quality problems, and outlines actions needed to improve the quality. In addition, some sections of the water quality unit also set activity goals and establish priorities for what is to be accomplished for the upcoming year.

However, the Legislative Program Review and Investigations Committee found the Water Compliance Unit has not developed an implementation strategy that establishes how its goals and objectives will be carried out. Moreover, there is no direct link to the activities planned in the water quality management plan and the priorities listed by sections within the unit. The unit does not develop an overall design that takes the water quality management plan and clearly states how its clean water goals will be achieved. The result is that the unit performs its day-to-day activities without a strategy to determine the most efficient and effective way to achieve program objectives.

Without such a strategy, necessary steps to perform a function well are often overlooked or implemented inadequately, requiring the step to be repeated or revised. For example, the Water Compliance Unit received federal delegation for regulating pretreated facilities in 1981. A logical first step would have been to identify all those needing a permit. However, in late 1985--four years into the program--EPA again cited Connecticut's program for not identifying all likely dischargers.

The program review committee also found no system in place for the unit to monitor its own performance, nor any easily accessible management information that would aid in conducting such evaluations. Unit management do meet regularly with upper-level staff to discuss operations, but the focus is on individual cases (e.g., permits, orders) and not the unit's overall performance.

The lack of a clear implementation strategy and regular self-monitoring has led to such administrative problems as permitting backlogs, marked differences in compliance rates from year to year, and disparity in the number of annual inspections conducted. In the absence of strategic planning and self-evaluation, the unit's management responds to internal crisis situations or external pressure--usually from U.S. EPA--to reallocate staff and resources to accomplish the job.

To correct the lack of a clear implementation strategy and regular self-monitoring, Legislative Program Review and Investigations Committee recommends that the Water Compliance Unit develop an annual strategic plan, separate from the Water Quality Management plan that:

- establishes unit priorities that are tied to the water quality management plan and water quality priorities;

- outlines the resources (staff, support services, funding) that will be required to achieve each priority;
- defines the steps involved with achieving each objective; and
- states how long each objective should take to accomplish.

The program review committee also recommends that the unit management develop the above information into a computerized system, and that the unit management conduct quarterly evaluations of its progress in achieving its planned goals and objectives.

The annual strategic plan should be submitted to both the General Assembly's Environment Committee, and the Appropriations Subcommittee for the Environment. Since both committees exercise oversight of DEP functions, they should have input on the unit's priorities and strategy for implementation.

If the above implementation and monitoring scheme is effected, the unit will then be able to approach its duties in systematic fashion, based on management consensus. This recommendation should also provide unit management with easily accessible information to analyze its performance, and form the basis for prospective planning and management decisions. In addition, such a system will inform employees and other interested parties of the entire unit's agenda and how that program will be attained.

#### Performance Standards & Staff Evaluations

The Legislative Program Review and Investigations Committee found that the Water Compliance Unit has not established work standards for the majority of its staff persons. As cited previously, no standards exist for the number of permits an engineer should write in a given period, nor for the number of enforcement orders he/she should monitor. Thus, no mechanism currently exists for anticipating how well a given unit will be able to meet its current or projected workload. Without such standards, it is difficult to identify and quantify those factors that contribute to permit backlogs or slow processing times. The unit needs such measures if it is to accurately gauge the impact additional staff resources will have on permit processing and other workload areas.

The program review committee also found that only the unit's director and three assistant directors are evaluated on any job-specific measures; the remainder of the approximately 90-person staff are not. The four top managers participate in the state's management incentive plan, which allots manager's pay increases according to achievement of pre-established goals and

objectives. However, the rest of the unit's staff are not evaluated in similar fashion.

The committee determined that most unit staff are evaluated annually. Of the 77 personnel files committee staff examined, 55 (71 percent) showed that the persons had been evaluated during the previous year. However, those evaluations bear little relationship to the work performed. Instead, they take into account general work measures such as a rating of the employee's work, his/her ability to deal with people and such factors as attendance.

Because there are no specific job-related goals set by the employee and his/her supervisor, there is no objective measure with which to judge an employee's output. Further, efforts to anticipate unit workload based on performance standards, or to estimate the number of staff needed to perform unit tasks, are suppositions at best. In addition, efforts to monitor the productivity of any given section would also be compromised as long as standards do not exist.

Therefore, the program review committee recommends that the Water Compliance Unit establish performance standards for all employee classifications within the unit. The Water Compliance Unit should consult with the Department of Administrative Services' Personnel Division for assistance in establishing those standards. Further, each employee and supervisor should jointly develop annual job-specific goals and each employee should be evaluated, and annual merit increases should be awarded based on the achievement of those goals.

The development of such a performance monitoring scheme would provide benefits in a number of areas. First, it would tell each employee what is expected of him/her and recognize those employees who achieve those expectations. Second, it would provide the basis for the unit's comprehensive priority list and strategic plan.

Third, if standards are not being achieved, such monitoring would point out where operational problems exist in the unit. Those problems could be then examined to determine whether the standards set are unrealistic, whether further staff training is required or whether disciplinary action is needed with certain personnel. Lastly, it would provide the unit with accurate data on which to base budget requests for additional staff and resources if needed.

The committee recognizes that the Water Compliance Unit may experience difficulties in establishing performance standards. The unit does not have experience in personnel matters, including development of work standards and evaluation forms. To overcome this, the committee proposed that the unit seek assistance in this area from the state's personnel division within the Department of Administrative Services.

Further, the program review committee realizes that the collective bargaining units affected may oppose the development of such standards. However, the committee is aware that there is precedence for such standards for other state bargaining units. The committee also feels that the time is opportune for setting productivity standards for state employees, and that the benefits outweigh the disadvantages or likely obstacles.

### Training

The Legislative Program Review and Investigations Committee found that there is no systematic training of unit employees. While it appears, through examination of personnel files, that some staff voluntarily take advantage of training offered by the Department of Administrative Services' Personnel Division, this training is sporadic and often bears little relation to the tasks performed by water compliance unit personnel. Training for new employees is primarily arbitrary, depending largely on the individual supervisors' time and personal knowledge.

An established training program is necessary to instruct new employees and to cultivate and improve the knowledge and skills of experienced staff persons. Water quality management is a highly technical field, heavily influenced by new federal and state regulations, EPA guidelines, and changes in water quality standards and technology. In addition, engineers must keep pace with new advances in waste treatment technology.

Moreover, employee turnover rates in the Water Compliance Unit are high (nine staff members have left since the committee study began). Thus, new replacements need to be trained on how the unit conducts its business. Finally, as automation and the use of computerized information becomes more prevalent in the unit, staff will need to be trained to keep current with data management techniques.

Therefore, the Legislative Program Review and Investigations Committee recommends that the Water Compliance Unit establish an in-house training program consisting of 30 hours of training per year for all staff members. The training should be directly related to tasks performed by the unit. While attendance at training sessions should not be mandatory, attendance should be tied to annual performance appraisals and pay increases.

### Building Condition and Site Selection

The Legislative Program Review and Investigations Committee found that the Water Compliance Unit works in poor conditions. In addition to the general deterioration and poor maintenance of the building itself, the location and layout is not conducive to the unit's needs.

The Water Compliance Unit is located at 122 Washington Street in Hartford while most departmental offices are in the state office building. Therefore, to accomplish even the most routine tasks, such as attending department meetings or having the commissioner sign correspondence, staff from water compliance must walk two blocks to reach the rest of the department.

Another drawback of this separation of offices appears to be that the centralized support services such as management analysis, information and education (public relations), and personnel are not well utilized by the Water Compliance Unit. In fact, the Water Compliance Unit has duplicated some of those departmental functions, such as maintaining personnel files for unit staff.

Due to the lack of space and poor office layout, files, copiers and printers are located in hallways. This hampers the security of files and printed documents as well as the equipment itself. The current logistics also provides the general public free access to department copiers. In addition, no adequate conference room space exists for staff to meet with outside personnel on water compliance matters. Such meetings are routine in developing permits, in resolving differences in treatment process plans, and in negotiating agreements on enforcement actions.

According to department staff, the present location was supposed to be temporary when they moved there in 1975. However, 11 years later the department is still there. The program review committee, based on committee staff interviews with unit personnel, found that the building conditions seem to affect productivity and morale.

For the past several years, DEP has proposed and the Office of Policy and Management has recommended, as part of the Facility and Capital Plan, that leased space be acquired to house all DEP units at one location. However, while those plans indicated that DAS was evaluating various alternatives to implement the recommendation, no space has been found to date.

The Department of Administrative Services is apparently in the final stages of selecting another building site for those DEP units located at 122 Washington St. The Legislative Program Review and Investigations Committee recommends that every attempt be made to relocate those employees currently housed at 122 Washington Street as soon as possible. The committee also recommends that DEP undertake a study of its long-term office needs including:

- the need to locate all its units in the same building;

- the need to be located in the Capitol Center District; and that it consult with the state's public records management office to ensure the best location is selected for file use, security, and storage.

The committee believes that immediate relocation should be a primary objective, even if the new location is only temporary. The long-term office requirements of the department do need to be addressed. For instance, if all DEP units were under one roof, they could more readily avail themselves of management, budgetary, and other technical assistance the department has to offer. Any duplicative functions that have developed due to logistics could be terminated and resources put to better use. Also, needless time and energy spent travelling between offices would be eliminated. Finally, if the department consults with state personnel who have expertise in records management, DEP could be assured that the site selected to house the department has adequate space and that the layout is conducive to public access yet ensures security measures can be adopted.

The benefits of a single department location appears to have been considered by DEP in the past. However, it would be in the department's best interests to document those factors to make its case for a single location stronger. In addition, an examination of the need to be located in the Capitol Center District should be undertaken. If it were determined that the department's offices could be located outside of the district, the opportunities for obtaining the necessary space would likely increase dramatically.

#### File Condition and Information Requests

The program review committee also found that the Water Compliance Unit's files were poorly maintained. The unit is hampered by limited space for files and their current location prevents any comprehensive security measures from being taken. As of October 1986 the unit had instituted a sign-out sheet for files; however, a plan for how files should be maintained over the long-term needs to be developed.

The Water Compliance Unit's regulatory program hinges significantly on filed information such as permits, compliance orders, monitoring and inspection reports. However, as noted earlier, more than two-thirds of the 30 files committee staff examined were missing some pertinent information. While the program review committee realizes that the Water Compliance Unit is basically a regulatory entity and not an information repository, if material is misfiled, temporarily removed, or missing altogether, it severely impairs the regulatory program. For example, if an administrative order is missing, unit staff would be unable to check the steps outlined in the order or monitor the schedule for compliance. Further, any enforcement or legal action would be severely undermined without written documentation.

The committee also found that department staff are responding to outside requests for research without charge. Environmental matters are increasingly becoming part of legal proceedings, such as real estate closings. Thus, requests from attorneys, banks, and others on any environmental actions affecting a particular property are becoming more common. The Department of Environmental Protection had 20 such requests in 1982, but it registered 311 such requests for the first 6 months of 1986. While this research may not often be time-consuming, it keeps staff from primary responsibilities. Therefore, some fee schedule should be established to compensate for the additional burden.

To set up and maintain an efficient and complete file system, the program review committee recommends that the Water Compliance Unit take the following measures:

Before relocating its offices, the water compliance unit should consult with the state's records management office to obtain advice on: a) what files should be retained and moved to the new location; b) what files could be kept in storage; and c) what files could legally be destroyed.

Once the retained files have been moved to the new location, the water compliance unit should ensure that the files are located in an area that has limited public access. Sign-out sheets should be maintained and overseen by a clerical staff person. No paper files should be allowed to leave the file room. Finally, all files should be stored in fire-safe cabinets.

A long-term strategy for reducing the amount of paper files--for example, the use of microfiche for historical files--should be considered. The unit should also ensure that photo copiers available to the public are pay-only. Further, the department should establish a fee schedule for public requests for certified copies of department documents and for research conducted by department employees.

Well-maintained files will ensure that material can be located more easily, improving efficiency of the water compliance unit's staff. This will also more adequately safeguard against the loss, theft, or destruction of valuable paper files. These recommendations should ensure that the public has access to information, but that protective measures are in place. Finally, the committee's recommendation will result in the state being properly reimbursed for both time spent on information requests and for document reproduction.

## REGULATORY PROGRAM OPERATIONS

### Administration of the Regulatory Programs

In Connecticut, DEP currently operates two federally required regulatory programs for wastewater discharges. The department administers the National Pollutant Discharge Elimination System (NPDES) that regulates discharges into rivers and streams and the pretreatment program that regulates discharges that are directed to municipal sewage systems. There are a number of problems in the management and administration of these programs. To correct these deficiencies, the program review committee considered transferring those operations from DEP to other organizations. However, as discussed in the following analysis, the committee rejected this option.

National Pollutant Discharge Elimination System (NPDES). As noted earlier, the U.S. Environmental of Protection Agency found Connecticut's administration of the NPDES program to be deficient in a number of areas. These included a failure to promulgate regulations, unclear legal authority, and a backlog in major permits. As a result, in November 1985 the federal agency required DEP to sign a consent agreement to correct the deficiencies or lose authority for the program.

Because of the deficiencies cited, the committee did consider proposing that EPA administer the program. The program review committee noted that EPA runs the program in states that have never been delegated federal authority to administer it. Further, Connecticut would not suffer any federal financial penalties if the state did not administer the permitting programs. However, the proposal that EPA take over the NPDES program was rejected for several reasons.

First, retention of the program by Connecticut ensures that the state, and not a federal agency, would have the authority to review the permit applications, negotiate with facilities on treatment process proposals, and actually write the permits. Moreover, if EPA were to take over the program, Connecticut would no longer act as the enforcement authority to monitor compliance of those facilities having NPDES permits or impose sanctions when necessary.

In addition, Connecticut could not be sure that the permitting program would be managed any better if EPA were to administer it. In Rhode Island, for example, where the state took over the program from EPA in 1984, state officials told program review committee staff that the program was in disarray when the state assumed responsibility for it.

Finally, if EPA were to administer the federally required permit program, it would possibly duplicate certain aspects of

Connecticut's own state permitting program. Under current Connecticut statutes, it appears that EPA-permitted facilities would also have to receive a state permit. Presently, Connecticut issues the NPDES permit which also serves as the state-required permit for certain discharges. However, if the federal permits were issued by an agency other than DEP, it is unlikely they would meet the intent of Connecticut law.

Pretreatment. Federal law also requires treatment of discharges directed into sewage systems ("pretreated" discharges), although federal statutes do not mandate that this be done through a permit program. In Connecticut, DEP administers the program by issuing a permit to each facility that pretreats its waste. In most states, municipal sewage treatment plants regulate those businesses whose discharges are received by the plant. Results of a program review committee survey of all states showed that only 6 of the 33 states responding (including Connecticut) have sole responsibility for the pretreatment program.

The U.S. EPA found Connecticut's operation of the pretreatment program to also be deficient. In addition, the program review committee found numerous problems that cut across both the NPDES and the pretreatment program. For example, Connecticut has no systematic method to identify new discharges, has a backlog in both permit areas, and has a longer average permit processing time than other states.

However, despite the problems, the program review committee believes that the state should continue to administer the pretreatment program, rather than turning it over to the municipal water pollution control authorities. Connecticut is a geographically small state; thus regulating and enforcing facilities from a centralized office should pose no logistical problems. Second, the majority of towns in Connecticut would prefer the state to continue regulating pretreatment facilities. Fully 90 percent (65) of the towns responding to a committee survey favored continued state regulation. If towns were to assume responsibility for the pretreatment program, additional staff would undoubtedly be necessary at the local level to administer it.

Finally, state officials and some regulated businesses have expressed apprehension that municipalities--especially small towns with only a few large industries--will not vigorously enforce the regulatory standards for fear of having industry relocate.

Therefore, the Legislative Program Review and Investigations Committee recommends that the Department of Environmental Protection, Water Compliance Unit continue to administer both the National Pollutant Discharge Elimination System and pretreatment programs.

## Staff Resources and Program Reorganization

In the program review committee's judgment, the Water Compliance Unit's Permits and Enforcement Section is understaffed and not organized in the best way to carry out its regulatory responsibilities. For example, in its analysis of staffing trends, the committee found that while the Water Control Unit's total filled positions grew by only 1 percent from FY 81 to FY 85, the department's had grown by 11 percent.

One of the most significant deficiencies the U.S. EPA found with Connecticut's program was the small number of staff assigned to both the NPDES and pretreatment programs. In an October 1985 statement of findings, EPA cited the lack of resources as the major contributing factor for Connecticut's "excessive permit backlog and inadequate reporting and data transfer activities."

The Water Compliance Unit's enforcement efforts have also suffered due to resource and organizational factors. For example, the committee found that the overall compliance rate with the unit's administrative orders issued since 1972 is only 57 percent. As a result, environmental groups have begun to take enforcement action where they claim the state has not done so. The Connecticut Fund for the Environment and the Natural Resources Defense Council have brought suit against 32 water discharge violators in the last three years.

The Water Compliance Unit recognizes the need for more staff. In past years, the unit has submitted requests for additional staff in the permitting and enforcement area through the budget option process, but not until FY 87 did the unit receive the full number requested. In fact, for FY 87 the legislature appropriated 3 more positions than the 13 the unit had requested. Thus, the Water Compliance Unit has never operated at the staffing levels originally anticipated when it received authority from EPA to operate the programs.

However, even if the Water Compliance Unit were operating at optimal staffing levels, the program review committee believes there would still be deficiencies due to the way the unit is organized. The current Permits and Enforcement Section's engineering staff are expected to carry out functions too numerous and too varied to perform all of them well. They must develop and write permits, track permit compliance, and review treatment process plans, as well as issue corrective orders, keep track of order compliance, and recommend enforcement action when necessary. In addition, they must familiarize themselves with all the information systems and files that support such functions.

The current allocation of personnel and functions impedes smooth program operations resulting in: permit backlogs; slow processing times; and an inability to promptly apply all new water quality and toxics standards to relevant permits. It also hampers

effective enforcement. The committee surveyed engineers in the permits and enforcements section on the percentages of time devoted to various activities. While the response was low, of the six engineers who responded, results showed that less than one-quarter of their time is spent on enforcement functions. In comparison, Rhode Island water pollution control officials estimate that in order to assume an effective enforcement role, one-third of the total water pollution program staff should be allocated to enforcement.

Having permits and enforcement functions separate is not a novel proposal. The program review committee reviewed a number of different states' water pollution control programs including their regulatory organizations. Of the 11 states that supplied organizational charts, 7 showed that the permitting and enforcement functions were performed by separate sections.

To improve efficiency and effectiveness in Connecticut's regulatory program, the Legislative Program Review and Investigations Committee recommends that:

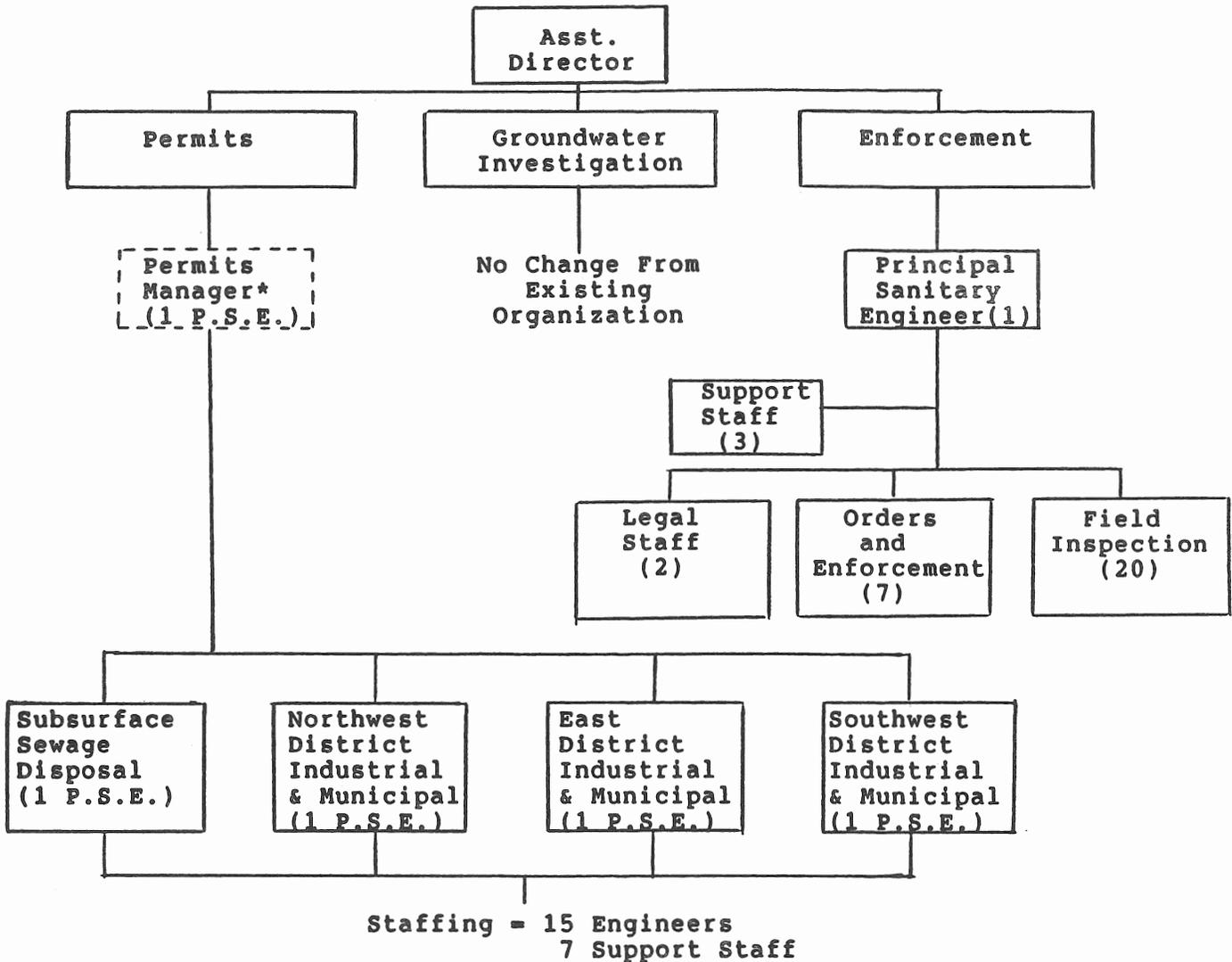
The Water Compliance Unit's Permits and Enforcement Section be organized into two subsections, one for permits and the other for enforcement. (See Figure IV-1.) The new permits subsection should be staffed with 20 engineers. Calculations on how program review committee staff arrived at that number are provided in Appendix E.

The 20 engineers shall include those currently assigned to industrial, municipal, and subsurface sewage disposal permitting as well as their support staff.

The permit subsection's responsibilities should include:

- consulting with personnel in water quality planning on how water quality and toxicity standards should be addressed in new or revised permits;
- reviewing all applications for permits;
- developing and writing all permits;
- dealing with applicants on revising treatment processes;
- preparing permit cases for public or administrative hearing if necessary; and
- consulting with enforcement personnel to develop administrative orders for revisions to permit treatment processes.

Figure IV-1. Proposed Organization: Permits and Enforcement Section.



\* Responsible for permit management but not personnel supervision

Note: Numbers in ( ) = number staff positions; P.S.E. = Principal Sanitary Engineer

Within the permits subsection there should be a new position created for a permits manager. The person should be: at the principal sanitary engineer level; experienced in writing various types of permits; well-versed with current department and national water permitting information systems; and have supervisory experience. The permits manager should report directly to the assistant director for permits and enforcement, and should perform the following duties:

- serve as liaison with all applicants for water discharge permits;
- review each permit application and estimate the amount of time it will take to review the application, develop the permit, and write the permit;
- direct the permit to the engineer heading one of the geographic districts for permitting or to the subsurface sewage permitting area;
- oversee the permit workload with the supervisory engineers, as well as unit management; and
- utilize the permitting data base to assist management with decisions on staff allocation, permitting times, staff evaluations and comprehensive unit planning.

The separate enforcement subsection should be headed by a principal sanitary engineer who reports to the assistant director for permits and enforcement. The enforcement subsection should be composed of:

- 20 field inspection personnel;
- 8 engineers;
- 2 attorneys, and
- 3 support staff;

The responsibilities of the enforcement subsection should include:

- inspecting all permitted facilities or potential discharge sites, taking samples, and writing inspection reports;
- reviewing results of discharge monitoring reports;
- writing and issuing administrative orders;

- overseeing compliance tracking on the enforcement information system;
- collecting administrative penalties; and
- preparing cases for the Attorney General's or State's Attorney's Office.

The program review committee ratified the recommended reorganization with the additional staff members. However, the committee did express concern about the use of attorneys at the unit level and proposed that the department examine its agency-wide legal needs. Such examination should include the appropriateness of centralizing all departmental legal services within one office.

The Water Compliance Unit's subsection dealing with hydrogeologic (groundwater) investigations should remain separate from the permitting and enforcement subsections. The committee estimates that once the vacancies and newly appropriated positions in this subsection are filled, the groundwater investigations unit will be adequately staffed, and thus makes no recommendation for increased staff for this subsection.

This reorganization will benefit permit applicants, DEP staff, and the public in general. There will now be one person within the unit that permit applicants can contact with questions on applications before filing. The permits manager would inform the applicant of the engineer responsible for the permit application, and would intervene on behalf of the applicant if unexplained delays in processing the permit arise. The recommended increase in staff--a net increase of eight engineers, six field inspectors, one attorney, and three support staff--and making some staff responsible for permitting only, should ensure that applications are processed in a timely fashion, and that new requirements on water quality standards and toxics are met.

8  
6  
later  
3 support

The reorganization and the increased staff also will place more realistic expectations on the staff. By dividing permitting and enforcement into two separate areas, and having staff responsible for only one of the two regulatory functions, each function should receive greater attention. It will also relieve any potential conflicts that might exist due to the same engineer writing and developing the permit for a facility and then monitoring that facility's compliance with it. Finally, if permits are issued promptly, and if water pollution control laws and permit conditions are adequately enforced, resulting in better treatment systems and cleaner water, then all Connecticut citizens will benefit.

## Permitting Operations

Identification of pretreated discharges. As noted earlier in this report, the water compliance unit employs no systematic means to identify facilities that might require a discharge permit. Currently, the department relies heavily on the statutory requirement that dischargers notify DEP through a permit application. However, according to EPA, there is a large pool of existing discharges that have not been identified and permitted. This observation is likely correct. Program review committee staff spoke with Rhode Island officials who indicate there are approximately 6,000 pretreated discharges in that state. Connecticut has permitted approximately 350 such discharges, although its population is three times that of Rhode Island's.

There are several reasons why DEP must ensure that the regulatory standards are being applied to all requisite facilities. To effectively control water pollution, the regulatory agency must know who the possible polluters are and whether they are actually polluting. While unpermitted facilities may well be discharging within the legal limits, there is nothing to require that without a permit. Regular monitoring of permitted facilities, with self-reporting on its wastewater required by the permit, is much easier to oversee than investigating facilities after a problem or complaint arises. In addition, any successful regulatory program must be viewed as fair. Businesses that are already permitted and in compliance must have assurances that all similar facilities are meeting the same requirements.

In an attempt to identify all potential discharges, EPA earlier this year contracted with a consultant to establish an inventory of discharging facilities. However, DEP disputed the number and type of facilities on the consultant's list, and follow-up on those facilities has not taken place.

In the program review committee's judgment, if DEP disagrees with the results of the EPA contracted inventory, then it should conduct its own study. Therefore, to identify all pretreatment facilities that need a permit, the program review committee recommends that the Water Compliance Unit take the following measures:

- survey all municipal water pollution control authorities to identify all known discharges into each of their sewage treatment plants;
- research its own industrial survey files to ensure that all identified businesses are currently permitted;
- check back issues--at least to 1980--of the state Department of Labor's quarterly reports on new

manufacturers that have located in Connecticut to ensure that all potential discharges are inspected, and permitted when necessary; and

- review all quarterly updates to the state Department of Labor's list of new manufacturers located in Connecticut, ensure all potential discharges are inspected, and issue a permit when necessary.

In addition, the Legislative Program Review and Investigations Committee recommends that local zoning officials be statutorily required to notify DEP's Water Compliance Unit when a business likely to need a water discharge permit locates within a town.

#### Automation and Information Systems

Permit development. As previously discussed in this report, the Water Compliance Unit has a backlog of several hundred permit applications, and has a longer average processing time than other states. Part of the prolonged processing time is due to the lack of automation in the issuance of a permit.

Water discharge permits can be time-consuming to develop due to the involved calculations necessary to ensure that a proposed treatment process will meet the regulatory effluent standards. Additionally, regulatory provisions such as the public notice requirement, can also slow down the development of permits.

The program review committee believes that permits could be processed more quickly and efficiently through the use of a computerized processing system. During the course of this study, program review staff spoke with a firm under contract with the U.S. EPA to develop a software package for water discharge permits. According to officials with the firm, and an EPA staff person who had previewed the software, use of the product can dramatically shorten the water permitting process. For example, once the application has been reviewed by the engineer for completeness, the remainder of the computerized permit processing--developing the calculations, writing the permit, and processing the required public notice documents--reportedly takes 45 minutes.

The software currently being marketed utilizes only the federal regulatory permitting standards. Connecticut's standards are stricter than those federal provisions. However, the software can be "customized" to suit a particular state's standards. In addition, DEP already owns the hardware to run this software package. Also, the package--depending on the number of parties who buy it--could be purchased for a nominal fee.

In light of the potential benefits--much faster permit processing, the labor saved by developing the permit calculations by computer and not by hand, and the relatively low expense of

this software package--the program review committee recommends that the Water Compliance Unit investigate the possibility of purchasing a software package that would automatically perform permit calculations, write the permit, and develop the accompanying documents.

Permit fee processing. Regulations promulgated in 1984 require the Water Compliance Unit to levy fees for individual permits that are based on volume and type of discharge. Most of the fees are due when the permit is issued or reissued.

The program review committee found that the existing fee processing system is inefficient and provides inadequate accounting and reporting. Currently, the fees are calculated manually by engineers in the Permits and Enforcement Section. According to the unit staff, this process is time-consuming and can be quite complicated, depending on the type of application. While some permit fee information is included on the permit data base, the system is not designed to automatically bill facilities when fees are due. The committee also had difficulty in obtaining definite figures on total civil penalties collected, since no actual accounting of such figures is kept.

Program review committee staff spoke with officials in the New York Department of Environmental Conservation, which instituted a permit fee system similar to Connecticut's in 1983. The New York department has developed a computerized permit fee system that: 1) automatically calculates the fee due for the permit; 2) issues a monthly report indicating the total payments due that month, the organizations to be billed, and the individual amounts; 3) generates reports on revenues collected from regulatory fees, penalties and fines; and 4) generates information on the department's regulatory management costs by permit category.

The last type of information is obtained by having all department employees complete and submit to their supervisors time and activity forms each month. These forms require each employee to indicate the number of hours spent on projects, programs and other tasks.

The Legislative Program Review and Investigations Committee believes that a system with similar capabilities should be implemented in the Water Compliance Unit. Therefore, the committee recommends that the Water Compliance Unit develop an automated fee processing system that:

- automatically calculates permit fees due;
- includes accounting information such as fees due and fees paid for each permit, civil penalty, and automatically generates bills to be sent to permittees;

- generates reports for amounts due, amounts collected and amounts outstanding for permit fees, civil penalties and forfeitures; and
- includes information on staff activities and generates reports on the total staff time spent on discrete tasks.

If such a system were installed, it would benefit the unit in several ways. First, it will greatly simplify the calculation of fees due when a permit is issued. Second, it would provide an accurate accounting system for fees, and penalties. Third, the system will provide an excellent information tool that will help unit management develop its implementation strategy, monitor its performance, and evaluate personnel. Fourth, a computerized permitting fee system, in combination with the automated permit development package recommended earlier, should greatly reduce permit processing time.

Permit data base. The program review committee found that the information kept on the unit's permit data base does not provide a precise permit tracking mechanism, nor does it accurately reflect the permitting work performed by the unit.

For example, as described earlier in this report, a facility may receive an approval to install a treatment system, but would not receive a permit until the department could verify the system was fully operational. Many facilities fail to notify the department when the system is complete. Consequently, the application would not be noted as a permit issued. Thus, this data base does not adequately serve the unit as a tracking tool in overseeing its regulatory responsibilities. For instance, there is no easy way to determine how many applicants have received approvals and are just awaiting a final permit. Hence, the department has difficulty in following up on those facilities to determine: if they have abandoned the project altogether; if there are delays in constructing the system; or if the equipment is operational and the facility is discharging without a permit.

Because such approvals are not noted on the permit data base, it is not an accurate indicator of the permitting work performed by the unit. Even though all aspects of the permit application are completed, including the approval to install the required pollution control equipment, because the applicant failed to notify the department upon its completion the permit is not considered to be issued.

Program review examined the numbers of permit issuances for the past four years. These data are presented in Table IV-1.

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Table IV-1. Numbers of Permits Issued--1982--1985.

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<u>Year (Calendar)</u>	<u>No. of Permits Issued</u>
1982	180
1983	136
1984	163
1985	230

Source: Water Compliance Current Permits List--February 1986.

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If the number of permits issued were considered in isolation, one would assume that the unit's productivity is dramatically uneven. However, the significant unknown factor is the number of permit applications processed where the final permit was not issued.

In the past few months, the unit has also begun to keep a computerized list of all correspondence--including approvals for installation of pollution abatement equipment--that it mails out. However, to maximize its permit tracking ability, program review believes that the water compliance unit should make the "approvals to install" part of its permit data base.

To improve the permit information system so that it provides both an effective management tool and regulatory oversight mechanism, the Legislative Program Review and Investigations Committee recommends the following: the Water Compliance Unit should upgrade its permit information system to note when an approval of a permit is issued. Six months after an approval is issued, a notice should be generated to both the appropriate engineer and the facility that a final permit has still not been issued.

#### Inspections, Compliance and Enforcement

Inspection requirements. The Department of Environmental Protection must perform compliance inspections of permitted facilities under both federal and state regulations. The federal regulations require that major discharges be inspected annually, while Connecticut regulations require that all permittees be inspected two, three, or four times a year, depending on volume and type of discharge.

The program review committee found that the Water Compliance Unit has been meeting its federally required annual inspections of major permittees. However, the committee determined that the unit was far from meeting the standards set for state-required inspections. In fact, one-third of the random sample of 25 minor permit files examined by program review showed no indication that the permittees had ever been inspected, while others had not been inspected in five or six years.

Program review committee staff accompanied unit field personnel on several inspections. From observation, a typical inspection appears to take about 2 to 2 and 1/2 hours. Based on this, with the current filled inspection positions, the Water Compliance Unit should be able to conduct 2,538 inspections a year [(2 inspections per day x 3 days a week x 47 weeks) x 9 inspectors.] The chief inspector and the field inspector assigned full-time to groundwater investigations are excluded from these calculations. The committee also based its calculation on 3 days a week, noting that the other two days are typically spent answering complaints, writing reports, or researching files.

Given these performance expectations, and the current number of permittees in Connecticut (about 1,500), the inspection personnel should be able to inspect each permitted facility at least once annually, and about half of those twice a year. The Water Compliance Unit is authorized to fill three additional field inspector positions. When all are filled it will expand the unit's inspection capabilities so that all current facilities can be inspected at least twice a year. Thus, even with the additional staff, it is highly unlikely that the current state regulatory standards will be met.

Therefore, The Legislative Program Review and Investigation Committee recommends that the Water Compliance Unit seek to revise the regulations to accurately reflect the number of inspections the unit is capable of conducting each year. However, the regulations should require that each permitted facility be inspected at least annually.

Compliance and enforcement. There are several progressively harsh enforcement actions that the Water Compliance Unit can take against polluters, or permittees that are in noncompliance with their permits. The unit can issue permit violation notices, administrative orders, or refer cases to the attorney general or state's attorney if noncompliance is persistent or if wilfull violations occur. However, despite the enforcement methods in place, the program review committee found that overall compliance with orders was lacking.

The committee believes there are a number of reasons that contribute to poor compliance. The department's current system for tracking compliance is inadequate. Little effort is made to ensure that data entered in the computerized system are up-to-date. The committee found, in its survey of 76 randomly selected order files, that the information in the paper files rarely matched the compliance data on the computerized system, rendering the tracking information unreliable. In addition, important tracking information is rarely noted in the system. As noted earlier, when an order becomes active again, after having been put aside, or when a case is returned to water compliance from the Attorney General's Office, that action should be noted, but seldom is. Important historical information is not kept on

the system. The system cannot provide a listing of all cases sent to the State's Attorney's Office for any given time period, for example.

Moreover, scheduled compliance dates lapse without any check by the Water Compliance Unit on the progress being made toward conformance. One reason is that the unit does not have a system to remind the engineer or analyst that a compliance step is due. Given the number of orders an engineer or analyst must oversee, the monitoring task is unwieldy and unmanageable.

In the program review committee's judgement the compliance schedules included in the orders are unrealistic, thereby increasing the likelihood for noncompliance. The committee found that the average time for order compliance, without modifications or postponements, is 10 months. In addition, 45 percent of all current orders written by the Water Compliance Unit are either held in abeyance or modified with the dates extended, further indicating that the original schedules do not allow enough time for full compliance.

Finally, program review finds that enforcement efforts are weak. The department, for example, does not use all of its available enforcement tools to obtain compliance with its orders. In the early 1970's, the department received statutory authority to impose civil penalties for violations of state environmental laws. However, the unit staff state that since about 1980 they have not used the administratively levied penalty as an enforcement method for water discharge violations. Department staff state their reluctance to employ this tool for permitting violations is due to complicated regulatory requirements for calculating the penalties.

The total amount of civil penalties for water pollution violations is also low compared to other states. As noted earlier, Connecticut ranked in the bottom third of 24 states that provided the committee with civil penalty information. During FY 85, Connecticut collected approximately \$50,000, compared to a low of \$1,000 in New Hampshire and over a \$1 million in Florida.

Under the current system, there is little to deter permittees from being slow in complying with directives. Both water compliance and attorney general staff state that compliance with orders, and not collection of monetary penalties, is the major goal. The department indicates, as further justification for the small amounts collected, that state court-awarded penalties are low due to the fact that, when assessing penalties, judges also take into account the money alleged violators must spend on upgrading treatment systems or cleaning up pollution.

Another factor in not seeking harsh penalties may be the lack of staff to adequately prepare the cases for court. The program review committee believes that staff shortages and insufficient staff allocated solely to enforcement functions result in weak

enforcement actions. The staff time necessary to document historical violations, previous compliance and other similar data needed to establish a case is just not available. Thus, civil cases are more likely to be settled out of court without punitive measures being sought.

The program review committee believes that the total fines collected in criminal cases is also low. Between 1982 and March 1986, only \$164,360 was collected for water pollution violations according to Judicial Department data. Further evidence of weak enforcement is the fact that outside groups have begun taking court action where they say the state has not. As mentioned earlier in this report, since 1983 the Connecticut Fund for the Environment (CFE) and the Natural Resources Defense Council (NRDC) have filed joint suits in federal court against 32 violators.

In addition to the reorganization and staff increases recommended earlier, the program review committee makes the following recommendations to bolster the Water Compliance Unit's enforcement efforts.

The Water Compliance Unit should ensure that its enforcement compliance system includes:

- accurate and up-to-date compliance information;
- all steps--both current and historical--necessary for tracking the location and progress of the case are noted; and
- generation of daily reports to remind engineers and analysts of compliance dates due.

The Water Compliance Unit should ensure that administrative orders contain realistic compliance schedules, but that prompt enforcement action is taken when compliance is not forthcoming.

The Water Compliance Unit should use all the enforcement methods at its disposal to obtain compliance, including levying administrative civil penalties. If there are statutory or regulatory problems with this mechanism, then the Water Compliance Unit should seek to have them changed.

These recommendations in combination with staff increases and program reorganization will improve the Water Compliance Unit's capabilities to pursue prompt and firm enforcement measures in-house. The additional staff should be able to better prepare cases referred for judicial action, thereby increasing the likelihood that fines and penalties could be imposed. This would create a strong incentive for facilities to comply with DEP orders in a timely fashion.

## Communication with Constituent Groups

The Water Compliance Unit is legislatively mandated to seek public input on a number of its activities. The unit is required by federal and state statute to hold a public hearing before water quality standards are developed or revised. In addition, federal law requires that the Water Compliance Unit obtain public input on the state's water quality management plan before it becomes final.

Responses to the program review committee's questionnaire as well as staff interviews with constituent groups--environmental groups, regulated industry, municipalities--indicate this process does not completely satisfy those groups' desire to be kept informed of Water Compliance Unit activities.

For example, municipalities were asked in a program review committee survey if there were any recommendations they would make to improve any aspect of the Water Compliance Unit's program. The second most frequent suggestion--the most frequent was to add more staff--was that DEP should better communicate its policies to the towns. In addition, representatives of the regulated industry stated in interviews to program review staff that they needed to be kept better informed of changes in laws, regulations, and department policy.

The Water Compliance Unit did establish an ad hoc advisory group to assist in the development of regulations for the water permitting programs, promulgated in July 1986. Of those participants that the committee heard from, all felt it had been a beneficial process. Further, the water compliance managers are aware that the unit needs to do more in communicating with relevant groups. To that end, the Water Compliance Unit director lists the establishment of an advisory group to the Water Compliance Unit as one of his objectives in the management incentive plan.

While the program review committee commends the Water Compliance Unit management for recognizing the need for greater communication, the committee suggests a different approach for meeting it. The Legislative Program Review and Investigations Committee recommends that the Water Compliance Unit:

- hold quarterly meetings with constituent groups;
- establish a publicized agenda for each meeting including a specified relevant topic, (e.g. implementation of toxics strategy) and a public input portion; and
- establish ad hoc task forces on specific programs or policy development, as the need arises.

The Water Compliance Unit could use several methods to publicize these meetings such as: mailing lists the unit already has on file; the Citizens' Bulletin--the DEP newsletter that is published 11 times a year; trade magazines or newsletters published by constituent groups like Connecticut Fund for the Environment, or the Connecticut Association of Metal Finishers.

Implementation of this recommendation will ensure a broad participation in Water Compliance Unit activities. Furthermore, it will improve public awareness of new or revised policies or guidelines that the unit will be effecting, and will allow the public an opportunity to voice its questions, concerns, suggestions or criticisms, regarding those policies.

#### GROUNDWATER INVESTIGATIONS

The Department of Environmental Protection is legislatively authorized to investigate cases of possible drinking water contamination. The department's responsibilities in this area include determining the extent of a problem, providing bottled water to people whose wells are contaminated, enforcing and monitoring clean up efforts, and approving long-term solutions to the problem.

Since 1977, there have been 1,034 contaminated wells identified in Connecticut. As of September, 1986 the state was supplying bottled water to 1,285 Connecticut residents; other residents were being provided bottled water from another source--either the responsible party or the municipality.

The state's provision of bottled water is intended to be short-term, until the responsible party is identified; failing that the town can be issued an order to provide it. However, as was indicated earlier in this report, many people have been receiving state-provided bottled water for more than two years.

A number of reasons hamper quick solutions to the contaminated groundwater problem. These problems include the time it takes the department to find a responsible party, the number of appeals filed by responsible parties, and the delays in filling the vacancies that exist in DEP's Groundwater Section.

During the course of the study, the Legislative Program Review and Investigations Committee heard concerns expressed that there was an inherent unfairness in the law pertaining to groundwater investigations. The assertion is that the promptness with which people receive a long-term solution depends greatly on whether a responsible party is found or not. If a responsible party is found, the order to the party is often appealed, typically prompting negotiations between the department and the

responsible party. Those negotiations are time-consuming and delay the attainment of a long-term solution.

On the other hand, if no responsible party is found, or if that party has no assets, DEP issues the order to the municipality in which the contamination exists to provide bottled water and find a long-term solution. Those measures are substantially subsidized through the state's Emergency Spill Response Fund. Because of the state grants provided to towns, orders issued to municipalities where no responsible party is found are less likely to be appealed than where a party is ordered to pay for the solution. Thus, logic implies that attainment of a long-term solution is likely to be quicker in cases where a responsible party is not found.

The program review committee did consider the option of changing the statutory provisions to eliminate the differences between the process where a responsibility exists and where one doesn't. However, the committee chose not to change the law at this time. The current law has only been in existence since 1985. Thus, the data to make a fair comparison of time required to reach a long-term solution in responsible-party versus no responsible-party cases are not conclusive.

Second, the department has not exercised all its statutory authority to bring about quick solutions. As was indicated earlier, the department can seek to have a court-ordered injunction imposed to force compliance in cases where the responsible party appeals the department's order. However, the department has not used this power, preferring instead to negotiate with the alleged responsible party. Department staff state they aren't sure if this injunction authority is workable; hence their reluctance to use it. The program review committee opposed changing the statute without clear evidence that it is ineffectual. Instead, if the current law does prove unworkable and unfair, then the DEP should establish a task force, comprised of representatives of relevant groups--municipalities, staff of Connecticut's congressional delegation, other DEP units and state agencies--to recommend a more workable solution.

APPENDICES



APPENDIX A

AGREEMENT BETWEEN  
THE U.S. ENVIRONMENTAL PROTECTION AGENCY  
AND THE STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

The U.S. Environmental Protection Agency ("EPA") and the Connecticut Department of Environmental Protection ("DEP") agree that, since being approved in 1973, Connecticut has administered the National Pollutant Discharge Elimination System (NPDES) permit program to regulate discharges within the State. The EPA and DEP recognize the need to make changes to the program to be consistent with the Clean Water Act and implementing regulations. Areas needing to be addressed cut across various aspects of the program, including enforcement, pretreatment, permit issuance, development and implementation of a strategy to control toxic pollutants, legal authorities, and resources. These problems are set out in more detail in EPA's Statement of Findings on the Connecticut NPDES program.

Accordingly, the Connecticut DEP and EPA hereby agree that the following steps will be taken to eliminate actual or potential deficiencies in the State's NPDES program and ensure that the State program is consistent with the requirements mandated by the Clean Water Act (33 U.S.C. §1251 et. seq.). If Connecticut does not carry out the required activities in accordance with the schedules specified below, EPA and DEP agree that EPA will take further action as set forth in Part VII below to remedy the problems.

I. LEGAL AUTHORITIES

A. Statutory Issues

EPA has conducted a legal review of the Connecticut State NPDES program. As a part of the legal review and in response to concerns that have been raised regarding the adequacy of Connecticut's legal authorities, EPA has identified several apparent deficiencies in Connecticut's Clean Water Act (CGS Title 22a-422 et. seq.).

EPA has completed its review of the Connecticut statute. A Memorandum incorporating comments of EPA Headquarters and Region I was sent to the Region on July 25, 1985. This Memorandum represents EPA's evaluation of the State's statutory authority. EPA has sent a copy of the Memorandum to Connecticut DEP.

The DEP after consultation with the Connecticut Attorney General has responded to EPA's statutory comments of July 25, 1985, and indicated which of the issues raised can be addressed through an Attorney General's statement, and which will require amendments to the Connecticut statutes.

## Corrective Action Measures

1. By October 31, 1985, the Connecticut Attorney General's Office will submit an Attorney General's statement to EPA which will address all outstanding statutory issues that are not addressed in the bill to be submitted to the legislature.
2. The State has submitted proposed legislative amendments to the Governor. By December 1, 1985 (or any earlier date necessary to meet State legislative procedures for submission of statutory amendments), the DEP will have drafted the necessary legislation for the Connecticut legislature addressing those statutory deficiencies which EPA determines have not been adequately addressed by the Attorney General's Statement or which the State identified as needing a statutory revision. EPA will review the bill to determine whether it adequately resolves the statutory deficiencies. If EPA determines that further changes are needed, the State will revise the bill to address those concerns. Connecticut DEP will submit the bill in time for consideration during the 1986 legislative session. If EPA and DEP cannot agree on the need or scope of the legislative changes, EPA will take appropriate action.
3. DEP will use its best efforts to ensure that the bill will be enacted into law by the end of the 1986 State legislative session. This will include meetings between the Regional Administrator, Region I and Headquarters officials and the Commissioner of the DEP and the Governor as appropriate. If the statutory amendments submitted under paragraph 2, above are not enacted by the end of the 1986 legislative session, EPA will take appropriate action.

## B. Regulatory Issues

EPA and DEP agree that DEP must adopt regulations to meet Clean Water Act requirements. DEP is in the process of drafting regulations to support its NPDES, pretreatment, UIC, and State permit programs.

EPA has reviewed Connecticut's draft regulations and provided formal comments to the State on September 10, 1985.

Connecticut responded to EPA's comments on October 2, 1985, and submitted the revised NPDES and pretreatment regulations to EPA. The State also submitted cross references to the federal requirements, and indicated where subsequent changes have been made in the draft regulations.

## Corrective Action Measures

1. EPA will review Connecticut response to determine whether it adequately resolves all of EPA's concern by November 8, 1985. If EPA determines that further changes are needed the State will revise the regulations to address those concerns. If EPA and the DEP cannot agree on the need or scope of the regulatory changes EPA will take appropriate action.
2. The State will issue a Public Notice of intent to adopt its NPDES and pretreatment regulations November 30, 1985.

3. The State will hold a public hearing on the draft regulations by January 15, 1985.
4. The regulations will be approved by the DEP Commissioner who will request expedited review of the regulations by the Attorney General and the Regulatory Review Committee.
5. The regulations will be submitted to the Regulatory Review Committee by April 8, 1986 unless the Regulatory Review Committee denies the State's request for expedited review, in which case the regulations will be submitted by April 22, 1986.
6. The regulations will be filed with the Secretary of State May 30, 1986. EPA recognizes that DEP cannot control the amount of time the Regulatory Review Committee will take to complete its review. If DEP has complied fully with the terms of this agreement, but is forced to delay implementation of the regulations because it is necessary to revise the regulations due to significant substantive comments received from the Regulatory Review Committee, EPA will allow the State 60 additional days in which to implement the regulations. DEP and EPA agree, however, that if the regulations are not filed with the Secretary of State by the specified date for any other reason, EPA will take appropriate action.
7. The regulations will be effective by May 31, 1986, unless otherwise changed by paragraph 6, above.

## II. NPDES PERMITTING

DEP and EPA recognize that serious backlogs in the permit reissuance process have existed. DEP also recognizes the requirement in the federal Clean Water Act to incorporate more stringent permit requirements where necessary to protect water quality and ensure compliance with water quality standards.

### Corrective Action Measures:

1. In order to resolve its backlog of expired permits, by March 31, 1986, Connecticut will issue all major NPDES permits (municipal and industrial) which will have expired on or before September 30, 1985.
2. Connecticut will finalize a strategy for the control of toxic pollutants by January 31, 1986.
3. The State has begun an evaluation of water quality limited stream segments within the State to determine priorities for implementation of the toxics control strategy. The State will complete the evaluation using "White Book" criteria by March 31, 1986.

4. Connecticut will begin reopening permits consistent with the strategy and stream segment evaluation process by June 30, 1986.
5. Connecticut will complete the modification/reissuance of municipal permits by June 30, 1987 to include biomonitoring requirements. Connecticut will complete modification/reissuance of Industrial Permits by June 30, 1988.

### III. PRETREATMENT

EPA and DEP recognize the need to more accurately identify the number of facilities in industries covered by categorical pretreatment standards that must be issued permits and other indirect dischargers that should be covered by permits. Further EPA and DEP recognize the need to issue those permits.

#### Corrective Action Measures:

1. The State will issue all required pretreatment permits within three years. The State will issue 100 permits to categorical industries by Oct. 1, 1986 by conversion of Administrative Order to permits. The State will also survey its remaining needs and make a resource assessment by August 1986.
2. EPA will complete its draft audit report and send it to the State by October 15, 1985.
3. Connecticut needs to develop complete and accurate information on all indirect dischargers. The State will conduct a detailed industrial user survey to determine the number of indirect dischargers in the State and the number which may be subject to categorical pretreatment standards. The industrial user survey will commence by December 1, 1985. The State will complete the survey within 6 months. EPA agrees to supply DEP contractual assistance from JRB Associates in order to assist in the identification of industrial users. The DEP in consultation with EPA & JRB will establish survey criteria. EPA will not hold the State responsible for delay in carrying out the industrial user survey which is the fault of the contractor.
4. The State will provide legal notice in the CT Law Journal to all indirect dischargers of pretreatment requirements by November 30, 1985. The legal notice will identify DEP as the Agency administering the pretreatment program within the State of Connecticut, and notify all indirect dischargers of applicable Federal and State pretreatment regulations.
5. The State will conduct local limit evaluations at all POTWs requiring pretreatment programs. Connecticut will develop local limits at those POTWs which do not have such limits, despite limits being needed and will update existing limits at POTWs at which existing limits are out of date or otherwise

inadequate or inconsistent with federal requirements. The State will develop local limits by June 1987. These limits will be incorporated into all pretreatment permits issued to industrial users of POTWs for which such limits are developed.

6. During the next 12 months, the State will inspect all major indirect dischargers (130) subject to categorical pretreatment standards. All categorical dischargers will be inspected by September 30, 1987. These inspections will occur while continuing to inspect all major NPDES dischargers once/year.
7. The DEP will evaluate increasing POTW involvement in the pretreatment program in its resource assessment analysis to be completed in August 1986.
8. EPA and Connecticut DEP agree to incorporate into this agreement additional State activities based upon the results of EPA's audit. By October 1, 1986 the State will submit to EPA an acceptable plan for addressing the pretreatment audit recommendations and resource assessment. EPA and Connecticut agree to modify this agreement to incorporate elements of the pretreatment remedial plan by November 1, 1986.

#### IV. ENFORCEMENT

DEP and EPA agree that the DEP has been deficient in certain non-compliance reporting requirements.

##### Corrective Action Measures:

1. Connecticut will improve the quality, content, and timeliness of all reports on noncompliance and corrective action which are required to be submitted to EPA. Connecticut will follow all federal requirements for the submission of this data to EPA.
2. Connecticut will submit DMR data to EPA in a PCS-compatible format starting no later than October 31, 1985.
3. Connecticut will develop by November 1, 1985 a system for tracking of enforcement activities following the referral of cases to the State Attorney General.
4. The State will complete an inventory of minor municipals and will update its State strategy for developing municipal compliance plans for minor municipal dischargers by November 1, 1985.
5. Connecticut will comply with the National Municipal Policy.

## V. RESOURCES

DEP recognizes that most of the problems discussed above are due to the shortage of resources and agrees to make every reasonable effort to hire additional personnel as soon as possible, including field, technical, and clerical staff.

EPA has conducted a resource analysis of the Connecticut program which indicated that a significant increase in personnel is necessary for the State to operate the NPDES and pretreatment programs under the Clean Water Act.

### Corrective Action Measures:

1. DEP agrees that by December 31, 1986, the State will have a staff of 39 employees working exclusively on the NPDES and pretreatment programs and that the State will thereafter maintain this staff level. To achieve this staffing level, DEP will request additional positions and will meet the interim steps set out below. By February 15, 1986, the State will achieve an interim staffing level of 30 employees committed exclusively to the NPDES and pretreatment programs.
2. DEP will make use of overtime for existing staff to increase output.
3. DEP will hire one additional Sanitary Engineer and one additional Environmental Analyst for the General Water Pollution Control Section by October 30, 1985. One of the positions will be a permanent State-funded position committed to the NPDES program.
4. DEP will transfer the Assistant Director of Water Compliance (Planning and Water Quality Standards) from Federal Funds to State Funds by December 31, 1985. With the Freed-up federal funds, DEP will hire a new clerical position and extend to full time an existing part time clerical position in the Permits and Enforcement Section. The additional clerical staff will be hired by January 31, 1986, and will assist in permit and enforcement activities.
5. Utilizing \$175,000 of supplemental FY 86 money to be provided by EPA, the DEP will hire three additional people (one engineer, one data entry operator, one field inspector) for two years. The primary functions of these people would be, respectively, implementation of toxics control in NPDES permits, increasing the use of the automated permit tracking and DMR system, and increased compliance inspection and sampling of NPDES facilities. EPA will make this money available as soon as possible. The State will fill these positions within 90 days of receipt of the funds. After the two years, the State will attempt to convert these employees to State funds.
6. By February 15, 1986, DEP will hire any other additional personnel necessary to attain the interim staffing level of 30 persons.

7. DEP will request 13 new positions, 9 dedicated to NPDES in its FY 87 budget to increase the total staffing level to 39 employees exclusively dedicated NPDES program. The FY 87 budget will not be final until July 1, 1986, at which time DEP will begin hiring additional staff.
  - a. The DEP has submitted a copy of the FY 87 OPM budget request to EPA. DEP understands that if the budget request does not contain the 9 positions, EPA will take action under Part VII.
  - b. The State will have 9 additional staff in place by December 31, 1986.
  - c. The State will request additional personnel for FY 88 if needed in order to carry out the commitments in this agreement and run an adequate program. The additional personnel may be necessary to carry out increased activities including pretreatment permitting and inspections and reopening permits in accordance with the State's toxics strategy. EPA and the State will negotiate the numbers of additional personnel prior to the submission of the State's FY 88 budget. The State's budget request containing the additional positions will be submitted by November 30, 1986.

#### VI. OTHER PROGRAM ACTIVITIES

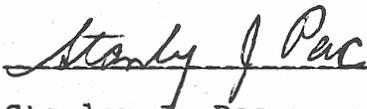
To be maintained at current resource levels.

#### VII. ACTIONS IF STATE DOES NOT COMPLY WITH THIS AGREEMENTS

1. EPA will evaluate the State's performance as a minimum at the end of each quarter.
2. If the State has not met any of the above commitments or missed any of the dates specified, the State shall return to compliance with the terms of this agreement and achieve any missed commitments within thirty days of such noncompliance.
3. If during the quarterly evaluation, EPA determines that the State is in noncompliance with this agreement and that such noncompliance has extended more than 30 days, EPA will hold a public hearing on the Connecticut program and its deficiencies. This hearing will form the basis for determining whether EPA should initiate formal proceedings to withdraw Connecticut's NPDES authority.

II. CONCLUSION

1. The State of Connecticut will use all reasonable efforts to carry out the terms of this agreement and to ensure that the Connecticut NPDES program is at all times administered in accordance with the requirements of the Clean Water Act.
2. EPA will use all reasonable efforts to carry out its responsibilities under the terms of this agreement, and to provide assistance to the State in carrying out its duties under this agreement.



Stanley J. Pac  
Commissioner  
Department of Environmental Protection  
State of Connecticut  
Hartford, Connecticut



Date

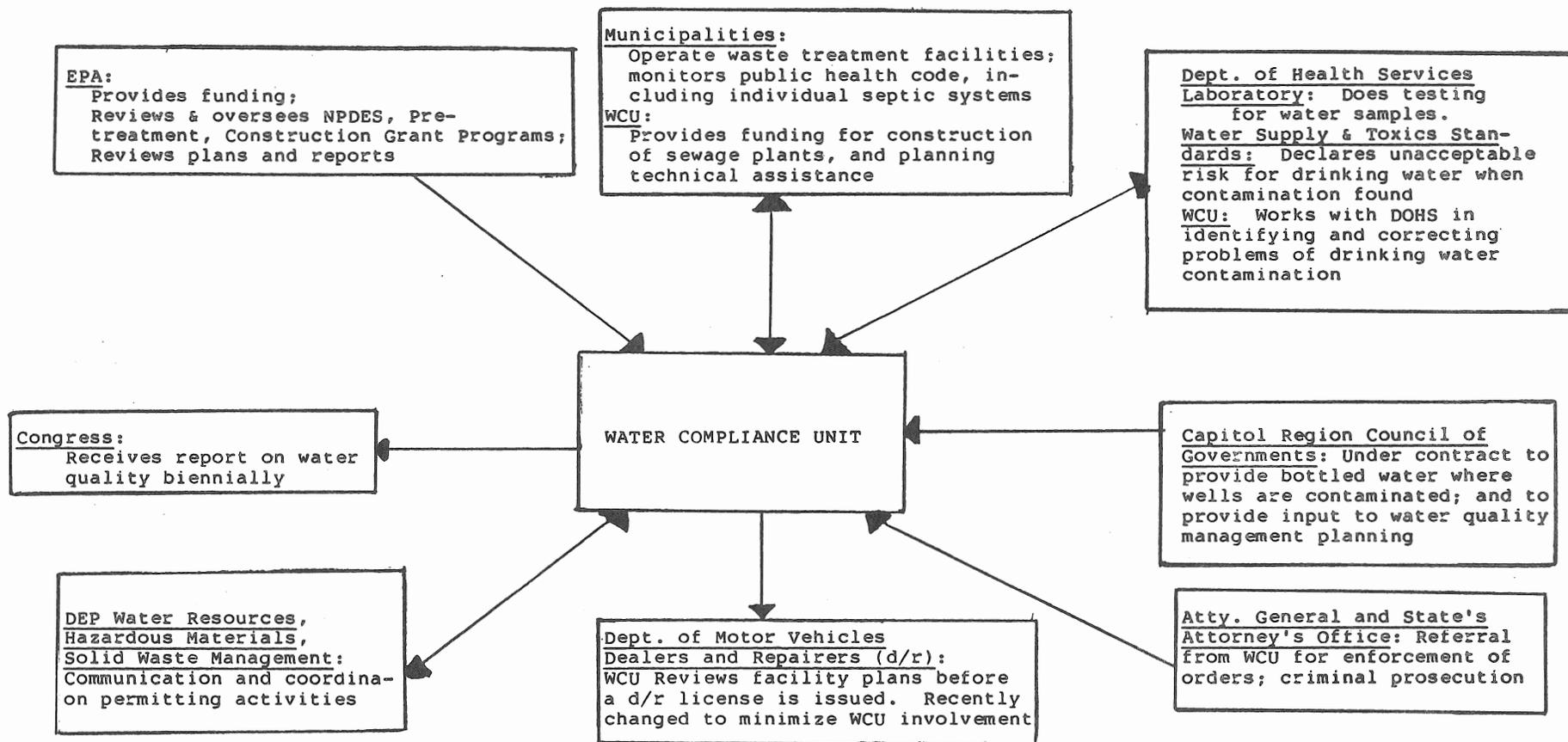


Michael R. Deland  
Regional Administrator, Region I  
U.S. EPA  
Boston, Massachusetts



Date

Appendix B. Water Compliance Unit: Interaction With Other Governmental Agencies.



Key: Water Compliance performs function for other unit, or agency.

Outside agency performs function for Water Compliance

Source: Legislative Program Review and Investigations Committee staff analysis.

APPENDIX C  
SURVEY OF STATES' WATER POLLUTION CONTROL PROGRAMS

PROGRAM

1. How long has your state had a water pollution control program?  
\_\_\_\_\_ Year
2. Does your state administer the NPDES program?  
\_\_\_\_\_ Yes \_\_\_\_\_ No
3. How many NPDES permits are currently active in your state?  
\_\_\_\_\_ No. of permits
4. Does your state administer the pretreatment program or is it administered by the POTWs?  
\_\_\_\_\_ State-Administered \_\_\_\_\_ POTW-Administered
5. How many pretreatment permits (or agreements) are currently active in your state? \_\_\_\_\_ No. of permits
6. Does your state administer a groundwater permit program?  
\_\_\_\_\_ Yes \_\_\_\_\_ No
7. If yes, how many groundwater permits are currently issued in your state?  
\_\_\_\_\_ No. of permits
8. Does your state have a planning section for its water pollution control program?  
\_\_\_\_\_ Yes \_\_\_\_\_ No
9. How many basin plans has your state developed in the past two years? Number \_\_\_\_\_
10. Are there any other programs under your state's Water Pollution Control operations? (Please specify)  
\_\_\_\_\_  
\_\_\_\_\_

- 11a. What is the average length of time to issue a permit under the NPDES program? \_\_\_\_\_ months
- 11b. What is the average length of time to issue a permit under other programs. \_\_\_\_\_ months

RESOURCES

12. How many people are assigned to the NPDES program in your state?  
\_\_\_\_\_ Full-time \_\_\_\_\_ Part-time
- 13a. How many people are assigned to the Pretreatment program in your state?  
\_\_\_\_\_ Full-time \_\_\_\_\_ Part-time
- 13b. If your state's pretreatment program is administered by the POTWs, could you estimate how many people that involves?  
\_\_\_\_\_ Full-time \_\_\_\_\_ Part-time
14. How many people are currently assigned to the groundwater permit program?  
\_\_\_\_\_ Full-time \_\_\_\_\_ Part-time
15. How many people are currently assigned to the municipal sewage treatment plant construction grant program?  
\_\_\_\_\_ Full-time \_\_\_\_\_ Part-time
16. How many people are assigned to the planning section?  
\_\_\_\_\_ Full-time \_\_\_\_\_ Part-time
17. What is the total number of people assigned to your state-operated Water Pollution Control Program?  
\_\_\_\_\_ Full-time \_\_\_\_\_ Part-time
18. What was the total dollar amount appropriated from the State FY 86 budget for the water pollution control program?

\$ \_\_\_\_\_

ENFORCEMENT

19. Please describe how enforcement is administered in your state (e.g., administrative orders, judicial proceedings, internal legal counsel or attorney general's office, etc.)?

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20. Please summarize your enforcement activity for the last fiscal year? (FY 84-85)

Number of administrative orders \_\_\_\_\_  
Number of judicial actions \_\_\_\_\_  
Number of civil penalties \_\_\_\_\_  
Total dollar amount of penalties \_\_\_\_\_

21. What percentage of the permittees in your state are in compliance with their permits?

\_\_\_\_\_ % industries  
\_\_\_\_\_ % municipalities

22. Does your state have enforcement authority over only those facilities that have permits, or can it issue pollution abatement orders to any known or suspected polluters?

\_\_\_\_\_ Permittees only  
\_\_\_\_\_ Any Known/Suspected Source

23a. Has your state established standards for the number of inspections to be conducted on permitted facilities?

\_\_\_\_\_ Yes \_\_\_\_\_ No

23b. If yes, what is the standard number of inspections per year for the following categories?

\_\_\_\_\_ NPDES (majors)  
\_\_\_\_\_ NPDES (minors)  
\_\_\_\_\_ Municipals  
\_\_\_\_\_ Pretreatment  
\_\_\_\_\_ Groundwater  
\_\_\_\_\_ Other (please specify) \_\_\_\_\_

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APPENDIX D

SURVEY OF MUNICIPALITIES ON  
CONNECTICUT'S WATER POLLUTION CONTROL PROGRAM

Permits & Enforcement

102 responses - Numbers in  
parentheses are numbers of responses

1. In the last 12 months, has your municipal sewage treatment facility been inspected by DEP's Water Compliance Unit?

(35) 81% Yes      15% No      5% Don't recall/Don't know

2. If yes, how would you rate the thoroughness of the inspection?

(49) 36% Very thorough  
51% Thorough  
9% Not very thorough  
4% Not at all thorough

3. How would you rate the knowledge of the inspector who conducted the last inspection?

(49) 34% Very knowledgeable  
45% Knowledgeable  
17% Not very knowledgeable  
4% Not at all knowledgeable

4. Have you ever requested the Water Compliance Unit to assist you in tracking down a problem, either with industries discharging, or with a problem in your plant's operation?

(33) 78% Yes      22% No      0 Don't know

4a. If yes, how responsive was the unit in assisting you with your problem?

(49) 42% Very responsive  
26% Responsive  
25% Somewhat responsive  
8% Not responsive at all

5. Has your town ever conducted a survey of businesses to assess whether their processes could entail any discharging?

(26) 43% Yes      49% No      8% Don't know

5a. If yes, have you shared the results with the DEP's Water Compliance Unit?

(39) 59% Yes      28% No      13% Don't know

5b. If yes to 5a, what was the response from DEP's Water Compliance Unit? (please specify)

(21) Used power and professional help to get dischargers into acceptable compliance. (4)

Town set up survey, but never conducted it. (1)

Helped to confirm our information. (6)

No response from DEP. (1)

Slow in responding, mixed, or a still pending. (5)

6. Overall, how would you rate DEP's efforts in permitting and regulating those municipalities and industries who discharge wastewater, either directly to surface waters or to sewage systems.

(69) 16% Excellent  
49% Good  
19% Fair  
16% Poor

7. Do you think that the DEP Water Compliance Unit should continue to regulate those industries that discharge into the sewage system or should the regulation be turned over to the municipalities?

(72) 90% State should continue to regulate  
10% Regulation should be turned over to municipalities

8. If you think regulation should be turned over to municipalities, why do you think so? (Please check as many as appropriate.)

(10) (3) State is not permitting all dischargers  
(5) State does not regulate permitted facilities adequately  
(8) Towns would have a better idea of which facilities are discharging and be better able to enforce permit requirements  
(1) State is only interested in the large dischargers  
(6) There is a lack of follow-through on enforcement at the state level  
(7) Other (please specify) \_\_\_\_\_

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Construction Grants/Training

9. Has your town had a construction grant--either a combined federal-state grant or state-only-grants--in the last five years?

(85)      62% Yes              35% No              2% Don't know

9a. If yes, how helpful was the construction grant section in overseeing the project through to completion (or to its current phase, if not yet completed)?

(50)      44% Very helpful  
         40% Helpful  
         12% Not very helpful  
         4% Not at all helpful

10. Have any of your treatment plant operators attended training provided by the DEP?

(63)      79% Yes              18% No              3% Don't know

10a. If yes to 10, how would you rate the training they received?

(50)      38% Excellent  
         58% Good  
         4% Fair  
         0% Poor

Groundwater Management

11. Has your town asked for assistance from DEP's groundwater protection (Land Disposal) section?

(85)      44% Yes              39% No              18% Don't know

12. What was the reason for requesting assistance?

(44)      6% To provide potable water to residents with contaminated wells  
         21% To help investigate a source of groundwater pollution  
         8% Both of the above  
         5% Issue pollution abatement order to polluter  
         3% Other (please specify) \_\_\_\_\_

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13. How would you rate the assistance you were given by this section?

(36)      28% Excellent  
         44% Good  
         19% Fair  
         8% Poor

14. Has your town worked with, or asked assistance from, the section that permits and regulates subsurface sewage systems totalling over 5,000 gallons per day?

(79)      38% Yes                      42% No                      20% Don't know

15. If yes, how would you rate the section's efforts in this area?

(31)      38% Excellent  
         41% Good  
         17% Fair  
         3% Poor

### Planning

16. Has your town worked with DEP on basin planning?

(84)      16% Yes                      57% No                      27% Don't know

17. If yes, how would you rate the unit's efforts in the basin planning area?

(13)      23% Excellent  
         54% Good  
         15% Fair  
         8% Poor

18. Have you requested technical assistance from DEP in helping your town with planning for protection of groundwater?

(70)      26% Yes                      49% No                      26% Don't know

19. If yes, how would rate the assistance you were given in this area?

(8)      33% Excellent  
         61% Good  
         6% Fair  
         0% Poor

General

20. Overall, how would you rate Connecticut's Water Pollution Control Program?

(79)

<u>15%</u>	Excellent
<u>60%</u>	Good
<u>19%</u>	Fair
<u>6%</u>	Poor

21. Do any of the following factors have a negative impact on the way the Water Compliance Unit carries out its functions. (Please check as many as appropriate.)

<u>(40)</u>	Lack of staff to carry out duties adequately
<u>(28)</u>	Lack of funding to carry out duties adequately
<u>(14)</u>	Confusion about unit and department responsibilities
<u>(1)</u>	Staff seem inadequately trained
<u>(18)</u>	The unit does not seem to establish priorities on how it will accomplish its objectives
<u>(18)</u>	Other (please specify) _____

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22. Are there any recommendations you would make to improve any aspect of the program?

(44)

More staff for follow up and monitoring of permits and routine work--not just putting out fires, etc. (12)

Motivate staff--they have poor attitudes; should be more cooperative may be better working conditions would help. (4)

DEP should better communicate its policies to the towns. (6)

Would like more checks on industries (NPDES & pretreatment) and results should be shared with the towns. (3)

DEP is too lenient with polluters, especially municipalities; this may be understandable considering the legal and financial conditions placed on DEP, but still frustrating. (2)

Heard recently at hearing about Connecticut having tougher water quality standards; given the pollution in other surrounding states, should consider that a compliment. (1)

## APPENDIX E

### LPR&IC STAFF CALCULATIONS ON PERMIT STAFFING NEEDS

No firm data exists on the amount of time an engineer should take to write a permit, or the total staff time devoted to permit writing in relation to other duties performed. Program review staff distributed a questionnaire to the engineers in the Permits and Enforcement Section area in an attempt to determine percentages of time devoted to particular activities and to provide data needed to make staffing assessments. However, the response was poor and the information could not be used.

The department did conduct some workload analysis when the regulations establishing a permit fee system were promulgated in 1984. The following are the estimates contained in that analysis, and are the ones program review staff used in these calculations.

- 115 hours to issue new major permits;
- 14 hours to issue new minor permits;
- 33 hours to reissue major permits; and
- 9 hours to reissue a minor permit.

Program review staff assumed that the unit will receive approximately 520 permit applications per year (average of the last two years: 438 in 1984 and 604 in 1985 = 1,042 / by 2 = 521). Based on the current permit makeup, program review assumes that 20 percent of those applications would be considered major. Therefore, 104 major permit applications x 115 hours per permit = 11,960 hours. Program review staff also assumed that an employee works 1,443 hours per year. Thus, 11,960 / by 1,443 = 8.2 person-years to work on new major permits.

The remainder of the new permit applications then will be considered minor permits. Again using the department data, program review staff applied the following calculations: 406 permits x 14 hours per permit = 5,684 work hours / by 1,443 = 3.9 person-years.

Currently, there are approximately 1,546 permits in existence. If that universe were to grow by another 2,000 permits, given the number of new applications and pretreatment establishments yet to be identified and permitted, program review assumed there will be a total of 3,546 permits. If those were to be reissued evenly over a five-year period (the typical life of the permit), it would mean that approximately 700 would need to be reissued each year.

Using department estimates on time for permit reissuance and assuming that 20 percent of the 700 reissued permits will be major, program review staff used the following calculations: 140 major permits reissued x 33 hours = 4,620 / by 1,443 = 3.2 person-years needed to reissue major permits.

The remainder of the reissuances, 560 permits, will be considered minor and each will take 9 hours to develop:  $560 \times 9 = 5,040$  hours /  $1,443 = 3.4$  person-years.

Therefore, program review staff estimates that a total of 18.7 engineers will be needed for permit issuance and reissuance. (Program review staff rounded this to 19.) An additional engineer is also recommended to act as a permit manager, bringing the total to 20 engineers in the permits area.

APPENDIX F

LPR&IC Staff Analysis  
 Cost of Recommendations

Additional Staff

1 Attorney	\$ 30,000
8 Engineers:	
1 Principal Sanitary Engineer	34,000
2 Senior Sanitary Engineers - \$30,000 x 2	60,000
5 Sanitary Engineers - \$27,000 x 5	135,000
6 Field Inspectors - \$19,000 x 6	114,000
3 Support Staff	
Automated Data Systems Typists - \$16,000 x 3	48,000
	<hr/>
	\$421,000

Automated Permit Development

Cost of Software Package (one-time) \$ 10,000

Automated Fee Processing and Information System

Development of System (one-time) \$ 70,000

TOTAL 

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 \$501,000

## APPENDIX G

### AGENCY RESPONSE

It is the policy of the Legislative Program Review and Investigations Committee to submit a final copy of a report to the affected state agency(ies) for review and comment prior to publication. A formal agency response, if provided, is then included in the published document. The response received from the Department of Environmental Protection concerning this report on the state's water pollution control program follows.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



January 14, 1987

Legislative Program Review and Investigations Committee  
State Capitol  
Room E7  
Hartford, CT 06106

Attention: Senator John Atkin  
Representative Christopher Shays

Gentlemen:

Thank you for the opportunity to review and comment on the final copy of the Performance Audit of our water pollution control program. This report contains a great deal of information concerning the program. I have chosen not to respond to each detail on the complete report even though some of the information should be clarified or corrected. Rather, I will comment on the overall recommendations presented at the beginning of the report. If you or your staff have any questions on my responses listed below or on some of the details of the report that I do not specifically mention, please contact Richard Barlow, Director, or Michael Harder, Assistant Director, of the Water Compliance Unit.

1. Develop an Annual Strategic Plan

The Water Compliance Unit prepares the Water Quality Management plan annually which presents a broad view of Connecticut's approach to all water quality management issues. It also outlines individual output goals for the year and is the support document for the annual EPA grant application. The plan has been used by EPA as a model for state plans. A problem we are constantly faced with is that EPA provides a majority of the funding for the program and we must therefore assure that activities prioritized by EPA are accomplished to retain federal funding. However, the WQM plan does address Connecticut's top priorities and these issues are addressed as quickly and thoroughly as the resources allow. Nevertheless, the recommendation to develop an overall annual strategy plan with regular progress evaluations is reasonable and we have begun working in this direction.

We do question the need and appropriateness of computerizing such an effort, however, aside from keeping a permanent copy of such a document on the computer. Routine word processing capabilities are already in place and being used for all such documents produced by the Water Compliance Unit, and this system would also be used to prepare and update the strategic plan.

Phone:

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## 2. Develop Performance Standards

We strongly disagree with this recommendation for two reasons. First, this is obviously a labor issue that would have to be subject to the normal union contract negotiation process. Second, establishing standards for the number of hours or days it should take each person to issue a permit, inspect a facility, etc., would be difficult if not impossible to do for the extremely diverse types of situations that we deal with. The Water Compliance Unit, in preparing budget options each year, does estimate the time necessary to accomplish the various tasks, and updates its estimates each year. Imposing these estimates as standards, and then further basing the employees' annual increment on their attaining them, however, would be a serious mistake in our opinion. The most effective method to evaluate employee performance is for the supervisors to have a thorough knowledge of the projects on which their employees are working.

## 3. Establish Training for all Employees

We agree that there is a need to further emphasize and formalize training needs. In fact, we had already taken two steps before receiving your report which are consistent with this recommendation. First, the Permits and Enforcement Section developed an Operating Manual this past summer which has been distributed to new and existing employees to be used as both an introductory training document and a permanent reference document. Second, several work groups were formed last spring to evaluate all aspects of our operation, including our training needs. These groups have made draft reports to the Director of Water Compliance, and final recommendations are about to be distributed to the supervisory staff for review and comment.

Our plan is to make the training mandatory, however, not optional as the report recommends. Further, a flat recommendation of 30 hours per employee is probably not appropriate, since we have a mixture of clerical, technical and paraprofessional, and professional staff. Finally, although we intend to internally improve our training programs we feel that it is the responsibility of the State Personnel Division to improve training for the Department as a whole. To this end we will also be actively seeking their involvement in this regard.

## 4. & 5. Relocate Offices

We fully agree that the facilities at 122 Washington Street are deplorable and unsuited for professional offices. We have been working with the Department of Administrative Services to secure suitable space to replace this building, and understand that they are in the final stages of negotiation with the agent for a new facility. We have been given a target date of July 1, 1987 for moving into a new facility. There is, however, the need to maintain the goal to consolidate all Department functions as expeditiously as possible.

In connection with this move, a records management committee made up of representatives of all units from 122 Washington Street has already been formed and is dealing with the State Records Management Office. We recognize the need for better file security in the new location and have already planned to limit access to all files in a manner that will ensure their integrity. In the interim, we are taking steps to lock all files to preclude unauthorized access.

#### 6. Keep Delegated Programs

We strongly agree that we should retain the delegated NPDES and Pretreatment programs. A combination of our state mandated program and delegated Federal authority provides the best protection of our state waters.

#### 7. Separate Permits and Enforcement Sections

We feel that the suggestion to have separate permits and enforcement functions has some merit. This will allow for a stronger oversight role for those functions. However, we do not agree that those people should have separate staffs devoted solely to those activities, for the following reasons.

The text of your report states that the permits and enforcement staff is now expected to perform tasks so numerous and complex that they are not able to perform them well. We should point out that the engineering staff in these areas is made up of primarily people with masters degrees in fields related to sanitary or environmental engineering, and we do not feel that the tasks they are expected to perform are unreasonably complex or varied.

The report also implies that conflicts have existed when the same person is involved in both the permitting and enforcement actions on a particular facility. We feel that not only is this not the case, but that having the same person responsible for both functions ensures maximum familiarity with the system and minimum duplication of effort.

Finally, we do not want to so specialize the staff we have that they become unable to adjust reasonably to new duties as the need arises or so limited in their duties that they become bored with their jobs. This is an often heard complaint from our EPA counterparts who operate under such a system. This would be a major concern if we were to split the staff as your report recommends.

Your report recommends a total of 60 staff for both the permits and enforcement functions. Staff increases provided in our FY87 budget together with the budget option requested for FY88 (copy attached) will bring the total to 65. We feel that this is the minimum staff needed to carry out these activities.

## 8. Pretreatment Survey

Previous correspondence from EPA, including the November 1985 Consent Agreement, may have lead you to conclude that we have not conducted any surveys of pretreatment facilities since receiving federal delegation in 1981. This is definitely not the case. From 1980 through 1986, the Water Compliance Unit performed over 900 surveys in municipalities with sewer systems, and permits have been issued to facilities as needed and as resource constraints would allow. We now have approximately 400 pretreatment permits issued.

Further, we had specifically agreed with EPA through the Consent Agreement that they would hire a contractor to perform a new survey, from which we would issue any additional permits as required. They have not completed the survey, and had even refused to respond to our inquiries on the status of their efforts. They now claim that they have notified us that they feel that they have fulfilled their responsibilities under the Agreement, but we have received no such notification, either verbal or written.

In any event, the Water Compliance Unit has decided that the most expeditious course of action is to perform its own survey. To date, we have visited approximately 300 facilities of approximately 3000 listed in a State Department of Labor Manufacturing Directory which are in categories which could be of concern. We have found less than ten that have any industrial discharge at all, and even these were minor. We feel that this is continuing evidence that the pretreatment program which we have been running has not allowed any major discharges of toxics or industrial wastewater to exist without our knowledge and control.

Lastly, we have been and will continue to review the quarterly updates from the State Labor Department regarding newly located manufacturing facilities. The permits we presently issue to the municipalities for the discharges from their sewage treatment plants require them to verify that all new industrial discharges are permitted by the DEP before they can accept them into their system. We feel that this already provides the assurance that is needed in permitting new pretreatment facilities and do not recommend any need for statutory changes to require local zoning officers to notify the Department of new industrial facilities.

## 9. Permit Writing Software

The Water Compliance Unit is investigating the use of a software package at the suggestion of EPA, but the system they have does not appear to offer any major advantages over the word processing system that we already have in place. We are nevertheless evaluating the package to determine if it offers any enhancements over our system.

In an effort to make similar improvements, Water Compliance has formed a multi-level staff committee to review all office procedures.

#### 10. Automated Fee Processing System

We have already contracted with an outside vendor to design a system to keep track of permit fees, including a billing system. We anticipate this system will be available in approximately two months.

Civil penalties and forfeitures will not be tracked on this system, however, as civil penalties are tracked on a separate existing system and forfeitures are handled by the Superior Court, although we keep track of basic information on our computer.

The Department presently uses a bi-weekly time and activity reporting system. This system is already used to differentiate activities such as permitting and enforcement. It would appear to be overly time consuming and offer limited benefits to further define time spent on activities related to specific dischargers.

#### 11. Permit Information System

The suggestion to generate a notice to the staff when more than a certain time has elapsed after an approval with no permit being issued is a good one and will be implemented as soon as possible.

We agree that the permit fee regulations should be revised to more accurately reflect the agency's both ability and need to inspect permitted facilities. Requiring that every facility be inspected at least annually may not be necessary as some of them generate very minor discharges which have minimal impact on water quality.

#### 12. Compliance Information and Tracking

We of course agree that the compliance tracking system should contain accurate and up to date information concerning actions taken and their status. The computerized system for doing this is now back on line and operating, and we are developing improved procedures for ensuring that it stays up to date. It is not necessary to generate daily reports of due dates on orders, however, as all steps in orders have end of the month due dates. Monthly reports should therefore suffice. In addition, in order to avoid schedule violations where possible, the staff has been advised that compliance schedules should be realistic and not unnecessarily tight.

In addition, we are presently evaluating our enforcement policies and procedures to determine if any changes can be made, including regulatory changes, in order to provide a more effective and meaningful program.

### 13. Public Participation

We have always prided ourselves on our willingness to involve the public in our programs, from development through implementation. From adoption of such documents as the State Water Quality Standards, Water Quality Management Plan to individual permit applications, we have always sought public input, including the use of advisory groups and task forces. We are also planning to establish a permanent Water Quality Advisory Group to work with the DEP on issues related to water.

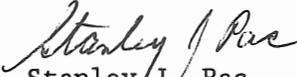
Again, I would like to thank you for the opportunity to comment on this report. Please feel free to contact the Water Compliance Unit at any time in the future for information on any aspect of the water pollution control program.

In closing I would like to offer some comments about the performance audit process. It was the position of our Department to be fully cooperative with the legislative staff during the audit process. Unfortunately the formal process does not in the Department's view provide an adequate opportunity to correct erroneous or misleading information in the briefing package which ultimately is used to develop the findings and recommendations.

We were provided the briefing package prior to a public hearing on its content. We testified at the hearing and offered written comments on errors and emissions in the package. However, a public hearing is hardly the format to conduct a page-by-page review of the briefing package. In fact, the final audit does not even contain any mention of the hearing or the Department's written comments. We would offer that a working review meeting between your staff and the Department to only correct any erroneous or misleading information prior to the public hearing on the briefing package would better serve your interests, and the public who wanted to testify on its contents.

Secondly, I think it may in retrospect have been a poor time to evaluate our Water Compliance program. It had been acknowledged that problems with the NPDES delegation existed and a memorandum of agreement to correct those deficiencies had been executed with EPA. The end result is that your audit shows a program in transit. We are committed to making the necessary changes (a copy of the agreement and summary of its present status are appended) to the program. It might have been far better to audit the process after the agreed resource, statutory and regulatory changes have been implemented in order to evaluate the effectiveness of our actions.

Very truly yours,

  
Stanley J. Pac  
Commissioner

SJP:zg









