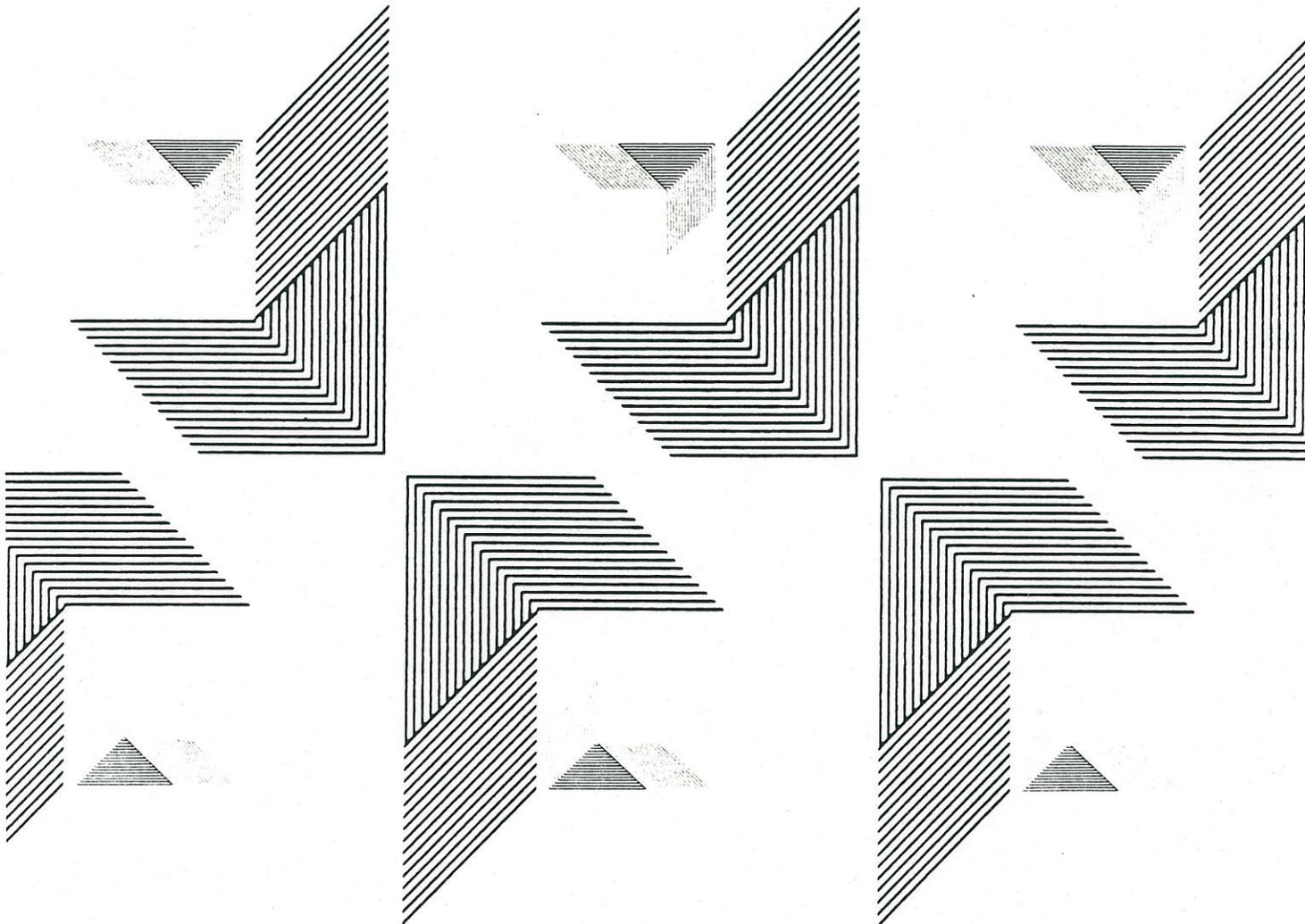


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FEBRUARY 1987

MANAGEMENT AND PROGRAM AUDIT OF THE
ENVIRONMENTAL PROTECTION AND HEALTH SERVICES DIVISION
OF THE DEPARTMENT OF HEALTH

A REPORT TO THE GOVERNOR AND THE LEGISLATURE OF THE STATE OF HAWAII



**MANAGEMENT AND PROGRAM AUDIT OF THE
ENVIRONMENTAL PROTECTION AND HEALTH SERVICES DIVISION
OF THE DEPARTMENT OF HEALTH**

A Report to the Governor and the Legislature of the State of Hawaii

**Submitted by the
Legislative Auditor of the State of Hawaii
Honolulu, Hawaii**

Report No. 87-16

February 1987

FOREWORD

House Concurrent Resolution No. 46 of the Thirteenth Legislature of the State of Hawaii, Regular Session of 1986, requested the Office of the Legislative Auditor to conduct a management and program audit of the Environmental Protection and Health Services Division of the Department of Health. The report included herewith constitutes the response to this request.

Due both to the fairly specific focus of the resolution itself and to the limited time and resources available to carry out the requested audit, the scope of our examination was kept relatively narrow. Environmental protection activities outside of the division were considered only to the extent that they were found to impinge directly on the division's environmental protection responsibilities. Even within the division, the emphasis was entirely upon environmental protection matters; community health activities were reviewed only where they became unavoidably intertwined with the environmental protection operations of the division.

We wish to acknowledge the cooperation and willing assistance extended to the audit staff by the Director of Health, the Deputy Director of Health for Environmental Programs, the Division Chief and other affected personnel of the Environmental Protection and Health Services Division, and all others inside and outside of the Department of Health who were contacted during the course of this audit.

Clinton T. Tanimura
Legislative Auditor
State of Hawaii

February 1987

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Chapter 1

INTRODUCTION

This is a report of our examination of the management and programs of the Environmental Protection and Health Services Division (EPHSD) of the Department of Health (DOH). The audit was conducted pursuant to House Concurrent Resolution No. 46, 1986 regular session.

Environmental protection has been high on Hawaii's public agenda for a number of years. However, interest in and concern about the subject has become even keener in recent years as a result of several incidents of pesticide contamination of some of Hawaii's food and water supplies. These experiences have generated an increasing emphasis on the need for effective regulation to assure adequate protection to the public against environmental dangers.

Objective of the Audit

As summarized by the House Committee on Planning, Energy and Environmental Protection in its report on House Concurrent Resolution No. 46 (House Standing Committee Report No. 647-86), the objectives of this management and program audit were to determine the following:

1. Whether the current programs are being implemented in accordance with state environmental policies and goals.
2. Whether current programs are effective in addressing environmental contamination problems.
3. Whether current programs are managed efficiently.

4. Whether the structural organization of the division promotes or hinders effective program implementation and management.

5. What additional resources are needed and where they can be most effectively used.

Scope of the Audit

Due both to the thrust of the request for this audit and to the limited time and resources to carry it out, the scope of this audit was kept fairly narrow. *First*, the focus of the audit was EPHSD; environmental programs and activities outside of this division were touched upon only to the extent that they might interact with and affect environmental protection programs and activities within EPHSD.

Second, within EPHSD, the focus was upon the division's environmental protection programs and activities; the division's programs and activities relating to community health services for environmental health were considered only to the extent that they might have a significant impact on environmental protection.

Third, within EPHSD's environmental protection programs and activities, priority attention was given to the overall management of the division and to those programs which appeared to be of primary concern with respect to environmental protection and pollution control. The affected program areas included air quality protection, water quality protection, and food and drug protection. Even within these areas, our examination had to be limited due to the magnitude and technical complexity of the subject matters involved.

In addition to the Deputy Director for Environmental Health and the division chief, the main divisional organizational units encompassed within the scope of the audit were the environmental permits branch, pollution investigation and

enforcement branch, drinking water section and food products section of the sanitation branch, and the staff services office. Outside of EPHSD, the units touched upon include the laboratories branch of the Medical Health Services Division, the district health offices on the neighbor islands, the Office of Environmental Quality Control, and the office of the Director of DOH.

Organization of the Report

This report consists of six chapters. Following this introductory chapter, Chapter 2 provides an overview of EPHSD and its various programs. Chapter 3 then presents an assessment of the general management of the division and its environmental protection responsibilities. Chapters 4, 5, and 6 assess performance in the broad areas of food and drug protection, air quality protection, and water quality protection, respectively.

As is customary, we submitted a draft of this report to the affected agency for its review and comments. The response of the Department of Health is also included as part of the report.

Chapter 2

OVERVIEW OF THE ENVIRONMENTAL PROTECTION AND HEALTH SERVICES DIVISION AND ITS PROGRAMS

The Environmental Protection and Health Services Division (EPHSD) of the Department of Health (DOH) is responsible for the State's pollution programs and community health services programs for environmental health. In this chapter, we present an overview of EPHSD and its programs.

Programs of the Division

The division administers a variety of programs which it groups into two categories: *pollution control*, which consists of programs for air, water, solid waste, hazardous waste, noise, and radiation pollution; and *community health services for environmental health*, which include public sanitation, vector control, food and drug, and ventilation programs. The state litter control program and the enforcement program for narcotics and dangerous drugs are also in EPHSD.

Pollution control programs. Beginning in 1970, Congress passed significant legislation affecting environmental quality. Many areas of environmental regulation previously under state and local jurisdiction were taken over by federal law. States could resume operational preeminence only after they passed laws and adopted regulations which were at least as stringent as the new federal controls. The major laws resulting which had direct implications for the State of Hawaii's pollution control programs were the Clean Air Act, Clean Water Act, Safe Drinking Water Act, and Resource Conservation and Recovery Act (for solid and hazardous wastes).

At that time, the Legislature also expressed its continued support of environmental quality and sought to improve the State's programs by passing Act 100 in 1972 which updated and made consistent existing environmental protection laws and consolidated them into a new chapter of the Hawaii Revised Statutes, *Chapter 342 Environmental Quality*. It is this law that presently provides the overall basis for the pollution control programs that are administered by the Department of Health through EPHSD. It empowers the Director of Health to adopt rules to control and prohibit air, water, noise, solid waste, and any other pollution in the State; issue permits and variances and charge for their costs; make inspections; take enforcement and emergency action; and impose administrative penalties. Also, the director may conduct investigations and hearings; conduct and supervise research programs; receive or initiate complaints and institute legal proceedings; and cooperate with and receive money from the federal government or other sources for pollution programs.

Air quality program. Regulatory authority for the air quality program is provided in two chapters of DOH's administrative rules (Title 11, Chapter 59, Ambient Air Quality Standards, and Chapter 60, Air Pollution Control). The basic framework of the program is provided by the federal Clean Air Act. Its main elements are regulation and rulemaking, setting of standards for ambient air, permitting of pollution sources, the monitoring of air quality, and the enforcement of laws and regulations. This program is responsible for administering three federal programs that have been delegated to the State: the Prevention of Significant Deterioration, the Federal New Source Performance Standards, and the National Emission Standards for Hazardous Air Pollutants programs.

Water quality program. The Department of Health's administrative rules (Title 11, Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control) provide rules and regulations for the water quality program. It is basically structured after the federal Clean Water Act and includes regulation and rulemaking, permitting of pollution sources, setting of standards for water quality, inspection, enforcement of laws and regulations, and awarding of grants to state or county agencies for wastewater treatment works. It consists primarily of three federal programs: the National Pollutant Discharge Elimination System, the Wastewater Treatment Works Construction Grants, and the Underground Inspection Control programs. Also included are a state zone of mixing program and inspections of individual wastewater systems and private wastewater treatment works.

Solid waste program. Regulatory authority for the solid waste program is found in DOH's administrative rules (Title 11, Chapter 58, Solid Waste Management Control). It was shaped to a large extent by the federal Resource Conservation and Recovery Act that sought to improve solid waste management capabilities of state and local governments through comprehensive planning. Program activities consist primarily of a permit system for the operation of solid waste disposal facilities and the enforcement of laws and regulations.

Hazardous waste management. The State has only a limited hazardous waste program at present. On January 6, 1985, DOH entered into a cooperative agreement with the Environmental Protection Agency (EPA) to permit the noise and radiation branch to inspect hazardous waste generators; transporters; and treatment, storage, and disposal facilities. The federal agency retains primary responsibility for enforcement under the Resource Conservation and Recovery Act.

This law requires EPA to identify hazardous wastes subject to regulation and to establish standards for controlling the generation, transport, treatment, storage, and disposal of these substances. In addition, a national permit system monitors the facilities which treat, store, and dispose of hazardous waste, and a national manifest system tracks wastes from generation to final disposal.

Noise program. Although Chapter 342, HRS, provides for statewide control of excessive noise, regulations and standards have been established for vehicular and community noise only for Oahu. This program consists essentially of permitting sources of excessive noise, monitoring noise levels, and investigating complaints.

Radiation program. The State's program for radiation control is limited to such functions as registration of radioactive materials used in the State, inspection of facilities to monitor public exposure, promulgation of rules and regulations, and servicing of public complaints. In addition, samples of air, drinking water, and milk are collected as required by federal law.

Drinking water program. Authority for this program is found in Chapter 340E, HRS, Safe Drinking Water, which authorizes the Director of Health to promulgate and enforce drinking water regulations. Rules and regulations for the program are found in DOH's administrative rules (Title 11, Chapter 19, Emergency Plan for Safe Drinking Water; Chapter 20, Potable Water Systems; and Chapter 21, Cross-Connection and Backflow Control). Federal drinking water standards established under the federal Safe Drinking Water Act have been adopted by the State. Program activities include regulation and rulemaking, inspection of water sources and distribution systems, laboratory analyses of water systems, review of construction plans for water system expansion and development, investigation of

contamination, inspection and certification of interstate water carriers, and enforcement of laws and regulations.

Community health services programs. The programs grouped under community health services for environmental health within EPHSD are described briefly below.

Sanitation program. Under Chapter 321, HRS, DOH is responsible for regulating sanitation in the State. Chapter 322, HRS, provides for the department to report specifically on unsanitary conditions of land, certify various buildings, make inspections, and enforce laws and regulations. Major activities of the program are inspecting of waste disposal, permitting of food establishments and tattoo shops, evaluating building and development plans, collecting drinking water and frozen dessert samples for testing, conducting educational programs, providing technical assistance, and investigating complaints.

Vector control program. This program is concerned with control of organisms which transmit diseases such as rodents and mosquitoes. Chapter 321 provides general authority for DOH to regulate sources of sickness and disease, and Chapter 322 gives specific duties and procedures regarding violations and sets forth administrative penalties that may be imposed. The program conducts education, research, surveillance, and control activities.

Food and drug program. The basic authority for this program is Chapter 328, HRS, which provides for regulation of food, drugs, cosmetics, and medical devices. The program is concerned primarily with preventing adulteration, contamination, and misbranding of these products. Its primary activities are inspection and monitoring, sampling of products for testing and analysis,

investigation of complaints, review of labeling, issuing permits for poisons and frozen desserts, and enforcing laws and regulations.

Ventilation. Section 321-11, HRS, provides DOH with broad powers to regulate the ventilation of various facilities. The program consists mainly of a permit review of air condition installations and other ventilating systems, establishing minimum requirements for such systems, and servicing of complaints.

There are two other programs that do not quite fit the above program categories, the litter control and narcotics enforcement programs. Although they are organizationally part of EPHSD, these programs operate independently utilizing the division context only for general administrative services.

Litter control program. Chapter 339, HRS, provides the statutory basis for this program. Unlike other programs within EPHSD, the litter program does not implement regulatory functions. Instead, current program services consist mainly of coordinating and supporting communitywide education activities and litter clean-up campaigns.

Narcotics enforcement program. The basic authority for this program is Chapter 329, HRS, Uniform Controlled Substances Act. Besides setting forth standards and schedules of controlled drugs, this law governs the manufacture, distribution, prescription, and dispensing of such drugs and establishes offenses, penalties, and enforcement actions. The program's basic activities are enforcement, involving investigation and prosecution of violators; and compliance, consisting of regular surveillance and monitoring. It is also responsible for enforcement of Chapter 712, Part IV, of the Penal Code of the Hawaii Revised Statutes relating to drugs, prescription drug duties of the food and drug program, and civil forfeiture investigations.

Organization and Activities of the Division

The EPHSD consists of six branches and four offices attached to the division. Covering mainly pollution control activities are the environmental permits branch, pollution investigation and enforcement branch, wastewater treatment works construction grants branch, and the noise and radiation branch. The sanitation branch and vector control branch administer the community health services programs. The staff services office serves the entire division. There is also a litter control office, office of narcotics enforcement, and an informally established planning office.

It is important to note that some programs are organized by function while others are organized by the medium regulated. For example, the three main pollution control programs of air quality, water quality, and solid waste management are administered by three branches organized by function. The environmental permits branch handles the technical review and permit issuing functions; the wastewater treatment works construction grants branch implements the grants section of the water quality program; and the pollution investigation and enforcement branch implements the enforcement, monitoring, and investigation functions of the three media.

By contrast, programs relating to drinking water, noise pollution, and radiation control are organized by medium with the branch (or, in some cases, section) performing all functions related to the particular medium.

It is also important to understand that many neighbor island functions are split between the district health offices and EPHSD. For example, in the case of air pollution matters, the environmental permits branch issues permits to neighbor island pollution sources, but the pollution investigation and enforcement sections of

the district health offices handle enforcement functions. The pollution investigation and enforcement branch provides technical support to the district health offices, but does not exert direct administrative control over these functions.

The division has 150 permanent and 5 temporary state-funded positions; 13 permanent and 24 temporary federal positions. Two permanent positions are funded by the Department of Transportation.

The following is a brief description of the organizational makeup of the division.

Office of the Deputy Director for Environmental Health. The office of the Deputy Director for Environmental Health is located within the office of the Director of Health. The deputy director has broad authority over EPHSD and its programs. Attached to the deputy director's office is a planning office responsible for liaison with the federal Environmental Protection Agency, pollution program planning, and coordinating public participation.

Division chief. The chief is responsible for administration of EPHSD and its programs.

Staff services office. This office does planning, coordinates and assists the division in budgeting and personnel activities, and also coordinates the division's responses on proposed projects requiring an analysis of pollution potential such as environmental impact statements. The office is also responsible for accounting and fiscal reporting, coordination of legislative activities and public hearings, and providing general information of the division to the public.

Litter control office. The litter control office administers the statewide litter control program. It is authorized one temporary and four permanent state positions.

Office of narcotics enforcement. The office of narcotics enforcement is responsible for enforcing the laws and rules relating to controlled substances and prescription drugs.

Environmental permits branch. The environmental permits branch administers the technical functions of the air, water, and solid waste programs. The branch consists of two sections. The air and solid waste permits section is responsible for implementing the engineering functions of the Clean Air Act and state laws and regulations. It manages the air and solid waste permit review functions, develops air standards and pollution control regulations, coordinates the solid waste permit review with other state and county agencies, and develops pollution control strategies. The wastewater permits section manages the wastewater permit functions. The section also regulates private sewage treatment plants and implements the State's underground injection control program. The branch is authorized 16 positions.

Wastewater treatment works and construction grants branch. The wastewater treatment works and construction grants branch manages the joint federal, state, and county grants program to construct and upgrade public wastewater treatment facilities. Under this program, the federal government pays 75 percent of all eligible costs; the counties, 15 percent; and the State, 10 percent.

Three sections carry out the branch's functions. The grants management section processes and approves the construction contracts. The planning and design section is responsible for the review and approval of construction plans and specifications. The construction and operations section oversees the operation and maintenance of public sewage treatment works and also coordinates the training and certification program for treatment works operators.

The branch is authorized six permanent positions, of which three are federally funded. There are also 13 temporary federal positions.

Pollution investigation and enforcement branch. This branch is responsible for the enforcement and monitoring functions of the air, solid waste, and water programs. In addition to administering and enforcing the laws and regulations in these program areas, the branch issues agricultural burning permits and administers a motor vehicle emissions inspection program. Environmental control sections 1 and 2 conduct monitoring and enforcement activities associated with air, water, and solid waste programs. Air and solid waste activities tend to be assumed by Section 1 while water program activities are assigned to Section 2. The compliance monitoring and enforcement section is responsible for enforcing the regulations and permit requirements of the National Pollutant Discharge Elimination System. The branch is authorized a total of 19 positions.

Noise and radiation branch. The noise and radiation branch administers the programs for noise control, radiation control, ventilation, and hazardous waste management and is thus responsible for both pollution control and community health services functions. The branch consists of two sections. The radiation and ventilation section regulates the use of X-ray units, radioactive materials, air conditioning and ventilation installations and also administers the licensing program for radiologic technologists. The noise control section regulates noise, conducts noise surveys, and investigates complaints. There are a total of 21 authorized positions.

Sanitation branch. The sanitation branch administers the sanitation program on Oahu, the food and drug program, and the drinking water program. The branch has five sections. The central, Kapahulu, and Lanakila sections cover the activities

of the general sanitation program on Oahu. The central section is responsible for carrying out program activities in central Oahu, including inspection of dwellings, business establishments, schools, food facilities, and also for covering specialized programs for food, milk, and housing in Honolulu. The Kapahulu and Lanakila sections carry out general program activities in East and West Honolulu, respectively. The drinking water section is responsible for implementing the Hawaii drinking water program and the food products section implements the State's food and drug program.

The largest of the division's branches, the sanitation branch, has a total of 51 positions. Forty-four of these are permanent positions, of which 43 are state funded.

Vector control branch. The vector control branch administers the vector control program. The branch organization is unique among EPHSD branches in that it has a separate office for training, research, and development in addition to the sections responsible for program operations such as surveillance and control.

The branch has 36 permanent state-funded positions of which 2 are funded by the Department of Transportation for port-of-entry surveillance.

Budget and Funding

Total appropriations for EPHSD, including the deputy director, for FY 1986-87 amount to \$7,189,524. (See Table 2.1.) This total includes \$5,784,773 in general funds, \$1,366,924 in federal funds, and \$37,827 in other funding. According to the division, the actual amount now expected from the federal government for FY 1986-87 is almost twice as much, \$2,404,329.

Table 2.1

Environmental Protection and Health Services Division
Appropriations for FY 1986-87

Unit	Federal Funds	General Funds	Other Funds	Total Funds
Deputy director		\$ 94,052		\$ 94,052
Administration	\$ 147,919	491,310		639,229
Litter control office		171,803		171,803
Office of narcotics enforcement		327,180		327,180
Vector control branch		1,779,148	\$37,827	1,816,975
Sanitation branch*		1,506,540		1,506,540
Food products section		198,104		198,104
Drinking water section	282,000	79,779		361,779
Pollution investigation and enforcement branch	173,614	503,290		676,904
Environmental permits branch	223,245	305,818		529,063
Wastewater treatment works construction branch	540,146	78,641		618,787
Noise and radiation branch				
Noise control section		230,682		230,682
Radiation and ventilation section		121,172		121,172
Hazardous wastes program		180,000		180,000
TOTAL	\$1,366,924**	\$6,067,519	\$37,827	\$7,472,270

Source: Department of Budget and Finance, Budget Details, Act 345, 1986 Supplemental Appropriation Act, July 2, 1986; Act 255, SLH 1986; Act 220, SLH 1986; and communication from the Environmental Protection and Health Services Division.

*Excluding food products section and drinking water section.

**The Environmental Protection and Health Services Division estimates actual federal funding will be \$2,404,329.

The programs with the largest budgets are vector control with \$1,816,975 and sanitation with \$1,506,540. The smallest, consisting of radiation and ventilation together, is allocated only \$121,172. Funding for the food and drug program at \$198,104 is not too much greater than the litter control program which has \$171,803 for this fiscal year.

Chapter 3

GENERAL MANAGEMENT OF THE ENVIRONMENTAL PROTECTION AND HEALTH SERVICES DIVISION

The Environmental Protection and Health Services Division (EPHSD) of the Department of Health (DOH) is the administering agency for major environmental protection and environmental health services programs, and thus, has a large responsibility to the State of Hawaii. Its success depends to a great extent on the efficiency and effectiveness of its general management. In this chapter, we evaluate basic aspects of EPHSD's general management including its overall leadership, mission and role, planning, monitoring and evaluation, budgeting, and personnel.

Summary of Findings

With respect to the evaluation of general management, we find as follows:

1. The Environmental Protection and Health Services Division is sorely lacking in leadership and direction. This is primarily due to the Department of Health's failure to delineate clearly the functions and responsibilities of the deputy director and division chief and to provide a cohesive management framework for the division. The uncertainty in the division's administration stems also from a lack of clarity regarding its overall mission and role.

2. Divisional planning is insufficient to keep programs abreast of the concerns and issues in their fields or adequately responsive to the needs of the

State. This results from an organizational dispersion of planning within the division and a lack of direction for this activity.

3. The Environmental Protection and Health Services Division has not provided adequate oversight of its programs. It lacks an ongoing process of monitoring and evaluation and has neglected to address long-standing problems of the division.

4. Divisional budgeting and personnel administration have also been deficient. Budget decisions lack a clear basis and are often arbitrary. The division has neglected personnel matters and has no systematic process for tracking and pursuing personnel actions.

Lack of Leadership and Direction

The various problems within EPHSD today are largely a result of management's failure to provide leadership, direction, and decision for the division. These deficiencies stem in large part from a poor management framework and a lack of clear mission and role for EPHSD.

Overlapping functions and responsibilities. The structure of top-level management for EPHSD is poorly defined, and thus, provides a poor basis for strong division leadership. There are two divisionwide administrators for EPHSD, the division chief and the Deputy Director for Environmental Health, but the difference in their roles and responsibilities is unclear.

This results from the failure of DOH to incorporate the deputy director's position into the administrative framework of EPHSD. Initially, EPHSD was run solely by a division chief who reported to the Director of Health. Then, in 1971, the Legislature provided DOH with a deputy director specifically for its environmental

health programs in recognition of the large responsibilities held by the Director of Health and the growing importance of environmental protection to public health. However, establishing this deputy director position and placing it over EPHSD merely created another administrative layer between the division chief and the director without explanation of its implications for the role of the division chief.

In requesting the deputy director's position, DOH wrote that it was needed to "plan and direct this Department's efforts in pollution control and abatement on a long-term and day-to-day basis;" coordinate division activities with various state, federal, and county agencies; and handle enforcement hearings on behalf of the director.¹ However, most of these functions were already assigned to the division chief, and DOH did not say how functions and responsibilities would be reallocated between the two. This situation still exists after over 14 years. The department has yet to develop a position description for the deputy director or revise that of the division chief. Officially, the division chief's position is still described as the executive officer of the division and directly responsible to the Director of Health, without mention of the deputy director.

This has left EPHSD, and especially the division chief, in a very difficult situation. Since 1971, there have been four different incumbents in the appointive position of deputy director. Each has approached the job differently, assigning varying responsibilities and functions to the division chief. At times, the division chief has had significant control over division affairs; at other times, he has had

1. Hawaii, Department of Health, Office of the Director, "Request for Position Action," Honolulu, July 1, 1971.

only minimal involvement. Throughout, there have been areas for which responsibilities were unclear or seemed overlapping.

The situation existing during the time of this audit clearly demonstrated the problems caused by ill-defined management positions in EPHSD. The deputy director had only been appointed in October 1985, and was new to the job. After almost a year, he was still uncertain of his role and frustrated from trying to coordinate his efforts with the division chief. He had had no specific direction or definition from the Director of Health of his duties when given the job, but had expected to engage primarily in long-range planning, policy development, and interagency coordination, leaving the division chief to manage day-to-day operations. However, the deputy director found that operational problems were not being handled by the division chief. As a consequence, these matters regularly required the deputy director's attention and prevented him from working on larger concerns.

Although most division matters were being routed through the division chief, it appeared to be only a formality. He generally took no action and gave little input. The division chief explained that his position was unclear, but at the same time he considered his role to be fairly narrow. He involved himself in operational issues only upon direction from the deputy director. He was in many respects a bystander to much of the activity of the division.

The resulting confusion and lack of cohesion in division administration, and the reluctance of both the deputy director and division chief to accept full responsibility for daily affairs often made it difficult for program managers and other division staff to obtain decisions, policy guidance, assistance with problems, and other support such as planning, budgeting, and personnel assistance when needed.

Problems resulting from EPHSD's two-administrator structure have been evident for some years. The Milk Inquiry Committee, established by the Director of Health to investigate charges of DOH's mismanagement of the heptachlor contamination of milk situation, found in 1982 that "though there are 'two heads' of the division, lack of leadership and management has caused this organization to lose sight of its primary objective."² It warned that given this situation, "there is every indication that the program will again fail to respond effectively should another unprecedented incident occur."³

The committee recommended that one or the other position be eliminated and all responsibilities for the division be concentrated in either the division chief or the deputy director. Then, in 1985, the Legislative Reference Bureau cited EPHSD for lack of leadership noting that "the branches, and even some sections, operate quite independently of higher level direction, making decisions which are usually rubber stamped by the Deputy Director or Division Chief."⁴ Yet, at the time of this audit, the Director of Health had not addressed this matter or taken any decisive action to assist the division. He said that he had not made any examination of EPHSD's problems but had left them for the deputy director to resolve.

Need to define mission and goals. The division's difficulties in managing and directing its programs are due also to its uncertainty as to its basic mission and role. Examination of the division's records and documents shows that EPHSD has

2. Hawaii, Department of Health, "Report of the Milk Inquiry Committee," Honolulu, May 17, 1982, p. 18.

3. *Ibid.*, p. 19.

4. Hawaii, Legislative Reference Bureau, *The Feasibility of Environmental Reorganization for Hawaii*, Report No. 1, Honolulu, 1985, p. 57.

yet to articulate the purposes of the division or to delineate its goals. Moreover, the division's top administrators have no clear position in this matter.

More specifically, while both the deputy director and the division chief said that protection of public health is the division's main duty, they could offer little explanation to support this position in terms of divisional programs. At the same time, they appeared to be almost equally concerned with the economic interests of the State. Moreover, they did not see public health as the main issue for the environmental pollution programs.

Instead, the deputy director felt it is necessary for the State to retain delegation of authority and responsibility from the federal government in this area so as to "strike a balance" between development and the environmental protection position of the federal government.⁵ As for the division chief, he viewed EPHSD's role in these programs as being limited only to enforcement for the federal government. The absence of a firm commitment to the role of public health protector and to a state perspective in the administration of all of its programs has thus left EPHSD without direction and subject to pressures from varying outside interests. Some of the adverse results in terms of program actions and activities are discussed in more detail in subsequent chapters.

Need to Improve Planning

Planning in EPHSD has not been adequate to meet the needs of the division due to a lack of direction, organization, and management for the planning function.

5. Interview with James Ikeda, Deputy Director for Environmental Health, September 26, 1986.

Direction of planning. Planning in EPHSD has been mostly directed by parties outside of the division and has seldom been initiated by EPHSD itself. Some plans have been prepared for the State Legislature, but the primary instigator has been the federal government with its mandates for formal state planning and incentives of funding and shared administrative control.

While planning in this manner has produced plans of some substance, such as the state implementation plan for control of air pollution in Hawaii, it has not been enough. The overall result has been sporadic and piecemeal planning, dominated to a large extent by federal perspective and priorities. Thus, most of the planning has been for the federally-supported pollution programs. Yet, even for these there has not been regular, ongoing planning to maintain master plans as viable working documents. Other programs of the division, especially the environmental health programs such as sanitation, food and drug, and vector control, have had little, if any, planning in recent years. These problems are discussed more fully in the following chapters.

Besides program planning, EPHSD has also neglected some of the broader concerns of the division. For example, it needs additional laboratory support, but EPHSD began only last year to survey the extent of this problem. Although it has now decided to seek an expanded DOH laboratory, it still has not done the in-depth examination of its programs and planning needed to support its estimates of need for the division. Planning has also been vitally needed to direct and assist the development of the division's research and risk assessment capacity, but such planning has not even been started. Furthermore, EPHSD is requesting transfer of the environmental epidemiology function from the Communicable Disease Division

Monitoring. The division has no systematic means of monitoring its programs and operations to track their progress on an ongoing and regular basis. Hardly any reporting is made to the division administration on operations. Only one monthly report is required of branch and program chiefs. These reports, however, are inconsistent, brief, and of little substance. A division meeting is held monthly but it also yields only cursory and fragmentary information.

Yet, the problem is not so much a lack of data, but the failure to utilize information that is available in the division. Various types of information are collected and maintained at the branch level for internal operations or reporting to other authorities. For example, quarterly reports are prepared for the Environmental Protection Agency on air and water pollution, drinking water, and hazardous wastes, and statistical reports are made to the Department of Budget and Finance and the DOH research office.

However, it appears that much of this information is either not submitted to the division administration or is overlooked; division administration seems to be unaware of the extent of information available in the division. The deputy director noted only the monthly report and said that lack of information had made his work more difficult and had impeded his orientation in the division. He often felt poorly informed on major problems with little information at hand to assist in their resolution. At the time of this audit, he had not yet been able to improve the situation or even begin to define his needs. As for the division chief, he preferred to rely on informal oral communication.

Evaluation. There is also an overall lack of program evaluation throughout EPHSD. The division has no system to assess its programs and lacks even a basic framework. According to top administrators, EPHSD has not yet defined its goals

and objectives nor has it developed any meaningful measures of effectiveness for its programs.

Administrators said that they rely on federal evaluations of its environmental pollution programs and also on public opinion as overall indicators of divisional effectiveness. But EPA evaluations are concerned with federal priorities and interests, and their scopes are limited to programs and activities covered within a limited grant period, usually a year. They do not consider EPHSD's larger responsibility of determining whether divisional programs are fully meeting the needs of the State. Further, EPHSD has virtually ignored public criticism in recent years, making no effort to examine its operations in follow-up, to define its problems, or to seek improvements. For example, a report by the Legislative Reference Bureau (LRB) in January 1985, which pointed out serious deficiencies in EPHSD's general management, planning, and interagency coordination among other aspects, still has prompted no internal evaluation. Although EPA's evaluations are given more consideration, EPHSD generally made changes only to the extent necessary to obtain federal funding, without any thorough assessment of its own.

The division chief readily acknowledged EPHSD's lack of response to external criticism but refuted all charges. However, he did agree there is much need for program evaluation, especially for the environmental health programs, but felt unable himself to initiate any action in this area. The deputy director saw merit in the LRB report and in instituting internal evaluation, but it appeared unlikely that he would be able to address the division's problems in this area in the limited time he expected to remain in his position.

to EPHSD, yet it has no specific plans on how best to use this resource or what to do about its development.

Another large concern is the absence of planning for program administration on the neighbor islands. Staffing for the neighbor islands has remained constant for years. There are currently only four environmental health specialists to support the environmental pollution programs on the neighbor islands, two for the Big Island and one each for Maui and Kauai. All of these positions were established in 1970. Despite large increases in population and development on the neighbor islands since then, and the resulting emergence of numerous problems and issues, EPHSD has not even begun to assess the impact on workload or the sufficiency of staffing, much less to start planning for the further growth expected on the neighbor islands.

The division's failure to initiate its own planning and address its needs apparently stem from its lack of recognition of the importance of planning for its administration and of the need to develop a systematic approach to planning. Planning needs and priorities have not been identified nor has any formal planning process been developed. Planning is conducted on an ad hoc basis without defined procedures. The division lacks even the basic tools necessary for in-depth planning, such as statistical analysis, needs assessment, and program evaluation.

Organization. Part of EPHSD's problem is its fragmented organization for planning. There are two units assigned planning duties in the division: a planning office under the deputy director and the staff services office. This division of responsibilities resulted from a separation over ten years ago of federal liaison and planning work from the rest of the division and its assignment to the planning office. However, inasmuch as the planning office has never been formally established, EPHSD has never defined the allocation of responsibilities between the

two offices. To complicate matters further, there has been an additional division of responsibilities within the staff services office. The planner in that office is not really under the supervision of the administrative officer, and the two have worked on planning matters independently of each other.

While there has been some general division of responsibilities between the two offices, with the planning office primarily concerned with the federally-funded programs and the staff services office planner with state-funded programs, there has been no consistent delineation between the two entities. Both have been involved with divisionwide planning. In the meantime, the administrative officer has carried out reorganization and personnel plans which have overlapped with the work of the other two planners.

This organizational split of planning activities merely reflects the larger problem of a lack of understanding and attention to planning management on the part of the division. In organizing its planning, EPHSD has never clearly designated who in the division holds overall responsibility for planning, and neither the deputy director nor the division chief was actively managing the function. Thus, no one has set direction for or coordinated planning in the division, and the planners have functioned independently of each other without management oversight. As portrayed elsewhere in this report, this has resulted in less than effective planning for the division.

Lack of Oversight

The division's neglect of monitoring and evaluation has also contributed to its management problems.

Need to Improve Budgeting

The lack of direction found generally in EPHSD is also evident in its budgeting.

Structure for budgeting. Budgeting by EPHSD is especially inadequate in view of the complexity involved in budgeting for a large part of its programs. In addition to the State's budgeting system, EPHSD has to prepare annual budgets for its environmental pollution programs to obtain federal grant funding. These two processes differ in timing, content, procedure, and requirements. Due to its biennial cycle, state budgeting is at least a half year prior to the start of grant planning. In state budgeting, the focus is on state funds with little detail given for federal funding; while federal budgets are concerned with federal funds. This dual system makes it even more imperative that EPHSD have a clear structure and guidelines for budgeting, including plans, policy, and procedures; and a mechanism to coordinate all of its budget activities. However, it is lacking in all of these respects.

In addition to the general absence of program planning in EPHSD, the division also performs very little financial or resource planning. For its environmental pollution programs, budgets are developed annually in response to federal funding constraints and priorities. There are no overall division budget plans for these programs which establish the needs of the programs regardless of federal funding and by which EPHSD can measure the adequacy of federal support and seek state funding. For state-funded programs, budgeting is not according to any plan but is generally aimed merely at maintaining existing levels of support.

The division is also without delineated policy and procedures for its budgeting. It relies solely on direction from state and federal authorities, which leave undefined the division's approach to budgeting, its priorities, and the role it sees for federal and state funding to support its programs. There is little in writing on the

division's procedures for either state or federal budgeting, the relationship of both processes to each other, or how they were coordinated. Further, although much of the division's budget is prepared at the division level, this input is not explained nor is the role of program managers in budgeting made clear. While the burden is on program managers to request needed program changes, there is no instruction from the division explaining its data requirements.

As a result of these deficiencies, budgeting in EPHSD is not fully understood by those participating in the process. On one hand, the administrative officer (the division's budget officer) complained of poor budgeting by program managers and insufficient explanation and justification for their requests. On another hand, program managers expressed frustration and confusion with the division's policies and procedures and felt excluded from much of the budgeting process. Those with federally-funded programs were unsure of their access to state funds, and some were hesitant to request such support even when they saw a need. There is also a lack of communication and understanding at the division level regarding the preparation of federal budgets. Both the administrative officer and the "federal" planner who work on different aspects of allocating the federal funds did not know the methods and procedures of each other and worked separately for the most part.

Budget decisions. The lack of structure in budgeting is also evident in the decisions made by EPHSD in developing its 1987-89 biennium budget. It allowed its current services budgets to expand to inflation ceilings established by the Department of Budget and Finance with only perfunctory review and without regard to past expenditures. Also, its approval of program and budget changes was often inconsistent, arbitrary, and without solid basis.

For example, EPHSD considered three requests for major changes in programs and increases in staff and budgets. These were submitted by the drinking water section, the food products section, and the environmental permits branch. Although all were deficient in planning, analyses, and supporting data, EPHSD approved that of the environmental permits branch and not the others. The food products section's request to improve the food and drug program, including improved pesticide monitoring, was turned down for lack of data. The proposal of the drinking water section to expand its program in order to accommodate new federal requirements was also refused because of insufficient information and indecision by the division regarding whether to accept these federal changes. However, there were also problems with the environmental permits branch's request to establish a new permit program by adding a new section of five positions with a biennial budget of \$263,363. It, too, had a large measure of uncertainty surrounding its proposal inasmuch as rules and regulations were still under development and program parameters, much less workload, had not yet been established.

When questioned regarding the lack of detail evident in this request, the administrative officer explained that it was approved because that particular program was required by court order. He had, however, no explanation why the extent of staffing and funding asked by the environmental permits branch was accepted without adequate justification. In a last minute change, EPHSD subsequently approved the request from the drinking water section, but only after detailed information specified by the deputy director was obtained from the section supervisor. Yet, no such justification was required of the environmental permits branch nor was the food products section given the same opportunity to further support its request.

Prioritizing of the division's program change requests was also disorganized and arbitrarily done. Although the deputy director made the final decisions, they were based largely on the recommendations of the administrative officer. Yet, neither had specific criteria or a clear method by which they performed this task. Moreover, the division chief did not participate and disagreed with the resulting priorities, but did not explain his position.

Personnel

As with other aspects in its administration, there are also problems with EPHSD's overall management of personnel.

Division-level support. Despite its responsibility to support the division in personnel as well as other administrative matters, the staff services office has done only minimal work in this regard. It has assisted mostly in the transmittal of routine paperwork for regular recruitment, interviewing, and hiring, but it has not given much assistance to the larger personnel management problems of the division. The office does not regularly monitor or follow up on outstanding actions.

According to the administrative officer who heads the staff services office and manages personnel matters, he was no longer pursuing changes needed by the division, such as reclassification of the division chief's position from a specialist to general administrator, and changes to the Environmental Health Specialist Class because of his discouragement with what he considers to be unnecessary paperwork requirements by the Department of Personnel Services. The latter has asked EPHSD for analyses of the jobs involved in these changes, and the staff services office has never responded. This reluctance to examine matters was apparently the general practice of the office.

Although the administrative officer is recommending that major personnel and organizational changes are needed within the division such as reclassifying food and drug inspectors into sanitarians, shifting of the environmental staffs of the district health offices to EPHSD, reorganizing EPHSD's environmental pollution programs along programmatic rather than functional lines, and creating a department of the environment, he has no data or studies to support any of his proposals. Additionally, the administrative officer has refused to assist in seeking relief for the division's long-standing problem in recruiting and retaining engineers and dismissed the matter without examination. In this case, his lack of support prompted two operational managers to bypass the division administration and to seek relief on their own from the Director of Health. This staffing problem is further discussed in the chapter on the air quality program.

Management systems. In addition to being uninformed on personnel issues, the administrative officer has only limited capacity to monitor and track personnel actions, and recordkeeping is poor. Generally, there are no copies in the staff services office of personnel actions, even those still pending, and no systematic filing system. Only brief logs and card files are kept of changes to staff positions, but these, too, are incomplete. Not all changes are recorded nor is recording done consistently. For instance, the administrative officer could not find any record of the division's request to upgrade the food products section supervisor's position and was unaware that it had not been acted upon by the Department of Personnel Services. The administrative officer said that lack of staff prevented better recordkeeping. This situation explains to a great extent why staff turnover and staff vacancy problems referred to elsewhere in this report are receiving so little attention.

Recommendations

With respect to general management of the Environmental Protection and Health Services Division, we recommend that:

1. The Department of Health should review the leadership and managerial needs of the Environmental Protection and Health Services Division and determine whether two top-level positions are required. It should delineate the particular responsibilities, functions, and authority of the one or two positions felt to be needed.

2. The Department of Health and the Environmental Protection and Health Services Division should define the division's mission and role and develop relevant policies to guide program administration and operations.

3. The Environmental Protection and Health Services Division should develop and establish a planning system within the division which will provide for regular program and administrative planning and be supported by ongoing data collection and analysis, needs assessments, and program evaluations. The division should also consolidate all planners and planning functions into one unit including program, operational, organizational, personnel, and budget planning.

4. The Environmental Protection and Health Services Division should develop and establish regular program evaluation within the division based on defined program goals, objectives, and measures of effectiveness. It should also develop and establish a management reporting system that will provide management with useful, regular, and timely operational and administrative data.

5. The Environmental Protection and Health Services Division should delineate its budgeting process in writing, clarify and integrate federal and state budgeting processes, and specify the division's budget policies and procedures. It

should also provide instruction and training in budget preparation to its managers as necessary to assist them in their budgeting.

6. The Environmental Protection and Health Services Division should establish policies and procedures which will actively support and assist the division's programs in personnel matters; it should develop a systematic method of examining and assessing personnel problems, needs, and resolutions; and it should establish systematic and comprehensive recordkeeping in the division to support monitoring, tracking, and follow-up of personnel actions.

3. At this point, the food and drug program is poorly developed. Its basic monitoring and surveillance of food, drugs, medical devices, and cosmetics is irregular and inconsistent; its pesticide monitoring is insufficient; and the program is barely established on the neighbor islands.

Overview of the Food and Drug Program

Hawaii's food and drug program began over 80 years ago when the Republic of Hawaii adopted a pure food and drug law in 1898. Subsequently, the Bureau of Pure Food and Drugs was established to enforce that law. In 1941, the Hawaii Food, Drug, and Cosmetic Act was passed which incorporated and expanded on the basic thrust of the initial food and drug law. The Bureau of Pure Food and Drugs was changed from division to branch status in 1943 and placed in the Division of Environmental Health, now EPHSD.

The statutes relating to the food and drug program are Chapter 328, HRS, Food, Drugs, and Cosmetics; Chapter 330, HRS, Sale of Poisons; Chapter 330C, HRS, Hawaii Poison Prevention Packaging Act; and Chapter 321, HRS, Department of Health. The department has also promulgated rules and regulations for the administration of these laws.

In recent years, public attention to the State's food and drug program has focused on food safety, particularly the contamination of foods by pesticides. However, the scope of the Hawaii Food, Drug, and Cosmetic Act, the basic law of the program, is far broader in terms of food concerns as well as in overall scope of products. The act provides for the safety, purity, quality, and labeling of foods, drugs, medical devices, and cosmetics, and also specifically addresses conditions of cold storage for food, frozen foods, and enrichment of bread and flour.

Chapter 4

FOOD AND DRUG PROTECTION

The State's food and drug program, administered by the Environmental Protection and Health Services Division (EPHSD) of the Department of Health (DOH), was established to protect the public's health and economic interests through regulation of food, drugs, medical devices, and cosmetics. In this chapter, we evaluate the food and drug program and its administration by EPHSD.

Summary of Findings

With respect to evaluation of the food and drug program and the Environmental Protection and Health Services Division's administration of it, we find as follows:

1. The division's administration of the food and drug program has been sorely deficient and lacking in direction. Without justification or plan, it reorganized the food and drug program in 1984 by abolishing the food and drug branch, placing the program under the sanitation branch, and withdrawing part of its drug responsibilities. These changes have not improved the program, but instead, have severely burdened the staff and set the program back in the process.

2. The food and drug program has floundered in recent years due to an absence of plans and planning. The Environmental Protection and Health Services Division has yet to recognize this deficiency and continues to pursue a course that is gradually dismantling the food and drug program.

Primary concerns are misbranding and adulteration of these products. Even when considering just foods, the complexity and breadth of these two aspects are apparent. Misbranding of foods involves such aspects as false or misleading labeling or packaging, misrepresentation of foods, and omissions in labeling.

Food adulteration involves the presence of poisonous or deleterious substances, such as pesticides and unsafe additives or colorings; filthy, diseased, or otherwise unwholesome and injurious food; omission or substitution of valuable constituents; or addition of substances to increase bulk or weight or to make the food appear better or of greater value than it is. False advertising of these products is also addressed in this law.

As the administrative agency for this act, DOH is empowered to adopt regulations for its enforcement; to establish food definitions and standards; to establish tolerances for poisonous or deleterious substances, additives, or pesticide chemicals; and to specify labeling, advertising, and requirements. Among others, its duties are to inspect establishments, obtain sample products for analysis and examination, and investigate complaints. In the event of contamination or adulteration, DOH can seize, embargo, condemn, and destroy products and impose up to \$10,000 in penalties. Prohibitions pertain to all aspects of commercial activity, including manufacture, production, processing, packaging, storage, sales, and distribution.

Status of the food and drug program. The food and drug program today is largely a result of its involvement in the heptachlor contamination of milk crisis which occurred in 1982. At that time and in response to extensive criticism of its management of that situation, DOH conducted an internal investigation and found the department had numerous management problems, some in the food and drug

program. There were indications also that the program itself was inadequate and needed strengthening. Subsequently, on September 20, 1982, EPHSD reassigned the food and drug branch chief out of the branch to special administrative duties; the chief retired at the end of that year. The division then decided to reorganize the food and drug program. Consequently, on February 21, 1984, the food and drug branch was abolished and the food and drug program was placed in the sanitation branch as the food products section.

Aside from this reorganization, EPHSD has not taken any other significant steps to improve the food and drug program. Resources devoted to the program have remained about the same as at the time of the heptachlor situation. The program's annual budget has increased only a little more than 5 percent in the past five years, from \$205,343 in general funds for fiscal year 1982 to \$215,934 for fiscal year 1987. Also, as in 1982, there are still only seven food and drug inspector positions for the program.

Need for the Food and Drug Program

The development of the food and drug program is important to consider in view of the continuing need for the program in Hawaii. Increased complexity and sophistication of production of food, drugs, cosmetics, and medical devices make it more difficult than ever for consumers to protect themselves from adulteration and misbranding of these products. Moreover, there are greater concerns now regarding food, especially pesticide contamination. Hawaii grows and consumes large amounts of raw agricultural produce and also imported foods which are not subject to United States regulation (often more stringent than that of other countries). Also, along with the growth in population and development in the State, Hawaii's food industry has expanded, notably in fast food and local food production.

Although the federal government conducts a food and drug program through its Food and Drug Administration (FDA), the State cannot rely on FDA's efforts to provide the protection needed. The local office has only three investigators to oversee the State of Hawaii and assist Guam and American Samoa. These few investigators are also responsible for meat, poultry, eggs, and animal feed which for the State are assigned to the Department of Agriculture. Consequently, FDA is able to do only minimal inspection and sample testing. According to reports, FDA is particularly limited in its monitoring of imported foods. Also, FDA regulates only interstate commerce and does not oversee items produced and distributed locally, such as much of Hawaii's vegetables and fruits.

Recent years have clearly demonstrated the value of the State's food and drug program. Heptachlor contamination of milk and milk products was first uncovered through the program's routine monitoring and sampling. It has also found other pesticide chemicals in local vegetable crops, such as lettuce, watercress, and bell peppers, and has had these products recalled and destroyed. The state administration concluded in its 1985 Program Memorandum for Health that "the food and drug program continued to encounter contaminated foods and drugs indicating a need to enhance the program's ability to protect the consumer from contaminated products. Surveillance of milk and other food products for pesticide residues and other environmental contaminants continue and must be expanded as necessary."¹

1. Hawaii, Department of Budget and Finance, *Program Memorandum 05 Health*, Honolulu, January 1985, p. 51.

Assessment of the Reorganization of the Food and Drug Program

Prior to reorganization in 1984, the food and drug program was administered by the food and drug section of the food and drug branch of EPHSD. Within that branch was another section, the investigations and narcotics control section, and the shellfish sanitation program. Reorganization abolished the food and drug branch, placed the investigations and narcotics control section under the division chief and renamed it office of narcotics enforcement, assigned the prescription drug duties to that office, and placed the food and drug section in the sanitation branch as the food products section. The shellfish sanitation program also became part of the food products section.

Poor reasons for reorganization. The reasons given by EPHSD for these changes were that they would: (1) strengthen the food and drug program within the State by reducing the program's responsibilities, (2) create a more effective and efficient organization, and (3) enable closer coordination and more efficient use of staff.² Examination shows that EPHSD had no real basis for expecting these improvements and that they did not justify reorganization.

According to EPHSD, its immediate goal in reorganizing was to strengthen the food and drug program. It explained that reassignment of prescription drug responsibilities would allow program staff to be used elsewhere. However, at that time, very little staff resources were involved in these activities because other

2. Memorandum to Honorable George R. Ariyoshi, Governor of Hawaii, from Director of Health, Subject: To Reorganize the Environmental Protection and Health Services Division, January 30, 1984.

duties took precedence. Further, the records show that EPHSD was fully aware of the minimal effort in this area when it put forth this reason. Thus, this shift of responsibility was clearly not a way of significantly reducing the program's workload so as to make more resources available to handle the remaining workload.

The division also said that the underlying purpose of reorganization was to improve efficiency and effectiveness by combining similar functions; specifically, prescription drug activities in the office of narcotics enforcement and food activities in the sanitation branch. However, EPHSD had not determined that there actually were greater similarities in these proposed combinations and thus could not show how improvements were to be derived.

The division further presented reorganization as a means to end long-standing disputes between the food and drug and sanitation programs, to coordinate better the food and milk activities of the two programs, and to use the two staffs more efficiently by combining sanitarians and food and drug inspectors and using them interchangeably. But again, it had nothing to support these expectations. The conflict itself had not been studied, and it was not demonstrated that the two programs and their related staffs could actually be joined together for improved coordination and efficiency. Instead, it was simply asserted that the success of sanitarians in performing food and drug work on the neighbor islands had proved the feasibility of this idea. Yet, the division administration knew full well at that time that very little food and drug activity was being conducted outside of Oahu.

The EPHSD program staff tried to warn the divisional administrators of the weakness of the rationale for this reorganization. The staffs of both the sanitation branch and the food and drug section expressed strong disagreement with the division administration's proposed changes. They said that such reorganization

would adversely affect both programs and even sought union assistance on the matter. The Department of Health was advised in July 1983, that "reorganization would increase the current workload, reduce program effectiveness, cause low morale, job dissatisfaction and motivation for all employees affected."³ The idea of combining sanitarians and food and drug inspectors was questioned particularly, and affected staff emphasized the "significant differences in program function, requirements, and objectives of both branches."⁴

When pressed for details on this situation, division administration said that it expected to convert food and drug inspectors to sanitarians, but it was uncertain on how this was to be accomplished and was, in fact, unable to settle the issues and problems that were raised. Greatly concerned, staff of both branches requested that the food and drug and sanitation branches both remain intact. Division administration, however, continued to pursue this reorganization, citing the responsibility of management to reorganize as it deemed "effective and efficient."⁵

Objections were also raised by the sanitation branch chief who saw no benefit for either program and considered it too great a burden to add responsibility for the food and drug program to his position. Division administration dismissed the chief's

3. Letter from Alvin K. Kushima, Pay and Classification Officer, Hawaii Government Employees Association, to Calvin Masaki, Chief, Administrative Services Office, Department of Health, July 28, 1985.

4. *Ibid.*

5. Letter from Melvin K. Koizumi, Deputy Director for Environmental Health, to Alvin K. Kushima, Pay and Classification Officer, Hawaii Government Employees Association, January 17, 1984.

concerns; yet, it too had said in its initial proposal that adding the food and drug program to the sanitation branch without removing other responsibilities (i.e., the drinking water program) would make these changes unworkable.

Failure of the reorganization. Now, almost three years later, anticipated program improvements have not materialized and staff of the food products section have since suffered the consequences of this reorganization.

Responsibilities of the food products section have increased. In abolishing the food and drug branch and its chief's position, EPHSD also eliminated the first and most important level of administration for the food and drug program. The resulting gap was not filled by the sanitation branch chief. He has not taken steps to fully incorporate the food products section into the sanitation branch but has left it to function mostly on its own.

Thus, responsibilities formerly held by the food and drug branch chief fell to the food products section supervisor, whose primary duty until then was to supervise the section's staff in their fieldwork on Oahu. Now, in addition to his own job, the supervisor had to assume the larger duties of planning, organizing, directing, and coordinating the State's food and drug program; budgeting and supervising expenditures; and preparing proposed legislation and regulations. When he expressed his difficulty with this larger workload, division management offered to seek to upgrade his position from an SR-24, Food and Drug Inspector V, to an SR-26, Food and Drug Inspector VI.

Although this upgrade would formalize and acknowledge his new duties and allow greater compensation, it did not address the problem of workload. In order to perform his enlarged responsibilities, the supervisor shifted much of his supervisory and operational—and even some of his administrative—work to the next level of

staff, an SR-21, Food and Drug Inspector IV, whose own fieldwork suffered in turn. This involvement of two key program staff in administrative duties formerly done at the branch level diminished the resources available in the food products section for operational work. While the eventual conversion of the food and drug branch chief's position gave the food products section another inspector, this addition was more than offset by the expanded administrative duties and an increased workload in pesticide monitoring. Moreover, as of December 1986, the supervisor's position upgrade still had not been finalized.

Continued problems between food and drug and sanitation programs.

Reorganization has also failed to bring about improved coordination between the food and drug and sanitation programs. These programs now function basically the same as before, including the operation of separate but concurrent food and milk programs. Disputes have continued to erupt between them over jurisdiction and enforcement policy, making enforcement by either program difficult at times and also confusing to the regulated public.

At the time of this audit, the problem had escalated over an enforcement action taken by the food products section that was inconsistent with the position of the food sanitation program. Subsequently, the sanitation branch chief directed the food products section to refer sanitation violations to the food sanitation program for disposition. While this action may prevent the two programs from again differing publicly in the future, it does not assure that there will be appropriate enforcement. It only prevents the food products section from addressing such violations directly but does not hold the sanitation program responsible for any specific course of follow-up action. Furthermore, the basic conflict remains.

No improvement in prescription drug work. The division said that reassignment of prescription drug duties of the food and drug program to the office of narcotics enforcement would make for more efficient and effective administration by combining these duties with other similar functions. So far, this change has been more costly than before with no better results.

Immediately following approval of this reorganization, division administration attempted to shift the prescription drug duties to the office of narcotics enforcement, but found that it could not even begin. There was no common understanding between the food products section and the office of narcotics enforcement as to which duties were involved in this change because such duties had never been defined at the time the proposal was developed. It was also clear that the office of narcotics enforcement did not view these duties as easily assimilable; it refused to accept anything without additional staff. When the transfer stalled and the food products section protested, division administration relieved the section of the most pressing task of issuing poison permits, assigned this task temporarily to a division planner, and allowed related activities to be set aside.

Division administration then pursued securing more staff for the office of narcotics enforcement. Where the food products section previously had less than one inspector allocated to these duties, EPHSD supported the request for three full-time permanent positions despite the lack of solid justification or basis for the ensuing shift in priorities. These new positions were filled in early 1986, but by the end of November 1986, the personnel were still not engaged in their intended work. They were, however, making inspections for controlled substances, part of the original work assigned to the office of narcotics enforcement. According to the supervisor of that office, procedures and training for the new duties still had to be

developed. But even upon their eventual incorporation, he has indicated he does not intend to use the new staff solely for that purpose.

Part of the problem in this situation apparently stems from the division administration's premise that it was combining functions which were more similar than before; i.e., that the prescription drug portion of the food and drug program was more related to the drug program of the office of narcotics enforcement than to the drug work that remained with the food and drug program. However, it is questionable whether food and prescription drug duties are really compatible with the main program of the office of narcotics enforcement. Before this change, the office's responsibilities had involved controlled substances, illegal drug traffic, and drug abuse; whereas, the food and drug program was responsible for drug purity, safety, and labeling of all drugs, both prescription and over-the-counter products.

Although the two programs regulated to some extent the same products, their responsibilities differed. The office of narcotics enforcement was concerned with the illegal use of dangerous drugs, and the food and drug program was concerned with the health dangers posed to the general public by poor drug products on the market and with consumer protection. This basic difference was evidenced by their respective staffs. The office of narcotics enforcement employed investigators with police experience and training for its inspections and investigations; the food and drug program utilized food and drug inspectors with scientific and public health backgrounds for its work.

Even if the narcotics enforcement office eventually carries out the food and drug program's prescription drug duties, it is unlikely that it will be more effective than the food products section could have been, given the same additional resources. The basic orientation of the office of narcotics enforcement remains

police-type work, and its new staff is without any food and drug expertise and will require training from the food products section.

Damage to morale. Reorganization further deteriorated the morale of an already seriously demoralized food products section staff. Since the heptachlor crisis in 1982, the staff had worked under exceptionally stressful conditions—sudden retirement of their branch chief and no replacement for years, much scrutiny and criticism from the Legislature and the public, involvement in heptachlor litigation, and increasing demand for pesticide monitoring. At the same time, extensive overtime was required throughout 1982 and 1983. Work schedules were still not back to normal even in 1984.

With reorganization, the section not only was given added responsibilities and was placed in the difficult position of being under the sanitation branch, but also its staff lost advancement opportunities that were available under a separate food and drug branch. When this concern was voiced by staff prior to reorganization, division management had said that higher level sanitation positions would be open to food and drug inspectors as well as sanitarians. However, the food products section staff have since found themselves ineligible for advancement outside of their section.

Moreover, reorganization also threatened the classification levels of the section's staff. Despite management's assurances that its changes would cause no adverse classification impact, the section's staff were required to rejustify their position classifications subsequent to reorganization. In some cases, staff members had to accept added responsibilities to avoid downgrading. Understandably, then, morale in the food products section has been very low in recent years.

Need for Planning in the Food and Drug Program

In other sections of this chapter, we report the failure of EPHSD to improve the food and drug program through reorganization. We also have noted the deficiencies of the present program. To a large extent, these problems are attributable to EPHSD's neglect to plan for this program.

Lack of planning and evaluation. The food and drug program has floundered in recent years due to an absence of plans and planning for the program. The division has no master plan for the program, no planning documents, or even an overall framework that defines goals, objectives, activities, and general direction. This results directly from EPHSD's general neglect of planning. Despite many indications of problems in this program and increasing public concern over food and drug contamination, EPHSD has not yet examined this program in any depth nor evaluated its adequacy nor begun any long-range planning. The division has not even laid the groundwork for meaningful planning. It has not gathered the information necessary for program analysis and has made no attempt to assess need for the program.

Instead, EPHSD has given less resources to planning for this program and has left direction of the program to operations staff. The program lost its major planner with the elimination of the food and drug branch chief's position. Then the supervisor of the food products section was given planning duties but without any additional resources for this task. The supervisor and staff have since tried to develop some plans to direct their activities and strengthen the program. Their efforts have been understandably limited, short-range in nature, and mostly budget oriented. Division administration has not even supported these efforts. It has

ignored reports of program deficiencies and staffing and has quickly denied requests for more budget and staff to strengthen and expand the program. Division administration said that justification by the food products section was insufficient, but the division did not concern itself with the question of whether resources were indeed needed. Moreover, neither did it lend any assistance to the food products section. This disunity within EPHSD on the direction of the food and drug program will continue as long as there is no long-range plan to guide its development and to provide a sound basis for its budgeting and staffing.

Continued weakening of the food and drug program. The need for planning for the food and drug program is especially acute because of the gradual dismantling of the program that is occurring under EPHSD's administration. By abolishing the food and drug branch, EPHSD has already weakened the program, greatly diminished its stature, and muddled its identity. Moreover, according to division administration, it still intends to pursue merger of the food and drug program staff with the sanitarians as it originally proposed when reorganizing the food and drug program in 1984. This step, and the deletion of the food and drug inspector class of personnel that would logically follow, would completely erase the long-standing administrative framework established by the State to give focus and recognition to the regulation of food and drugs.

According to the administrative officer, he has been the key person behind reorganization of the food and drug program. He initiated EPHSD's proposal to place the food and drug program in the sanitation branch and is still committed to that thrust. The administrative officer explained that he would be again recommending to division administration the conversion of food and drug inspectors to sanitarians and further, the transfer of the food service sanitation program in the

food products section. This would be accomplished by revising the sanitarian position specifications to allow higher level sanitarian positions to be filled by those with "equivalent professional experience" instead of limiting them only to registered sanitarian experience as at present. It would then be possible for food and drug inspectors to qualify as sanitarians.

When queried, the administrative officer acknowledged that he still lacked data to justify these changes. He had not yet examined their implications for the programs, staffing, or jobs in question or even involved program staff in discussions on this matter. As with the reorganization of 1984, his recommendation to combine sanitarians and food and drug inspectors remain without any solid basis.

As discussed earlier, the reason why the food and drug program was placed in the sanitation branch was to allow it to be combined with the food sanitation program and thereby eliminate long-standing conflicts between the two programs. However, submergence of the food and drug program in the sanitation branch and conversion of its staff to sanitarians may not be the best course or the only way to effect the necessary coordination of the programs. In fact, examination shows that reinstatement of the food and drug branch, retention of food and drug inspectors, and incorporation of the food sanitation program into the food and drug program might be more appropriate.

In placing the food and drug program in the sanitation branch, EPHSD had reasoned that this would combine similar programs and thereby improve efficiency and effectiveness. Similarities, however, are limited to the food activities of the two programs and only those regarding sanitation. By focusing only on food sanitation, EPHSD neglected the larger picture. It did not consider whether the food and drug program in its entirety would fit into the scope of the sanitation

branch or if the sanitation branch was equipped to manage the food and drug program.

Prior to the reorganization, the sanitation branch was responsible for public sanitation; licensing of embalmers and tattoo artists; review of plans for buildings, private sewage disposal systems, and public swimming pools; and administration of the drinking water program. It sought to prevent unsanitary conditions through investigation of complaints, educational programs, technical assistance, permitting of establishments, and enforcement action. Specific areas of concern were the disposal of refuse, garbage, and household sewage; food service and food establishments; frozen dessert establishments; markets; tattoo shops; liquor dispensers; and drinking water. On the other hand, besides food, the food and drug program regulates over-the-counter drugs, cosmetics, and medical devices which are not a focus of the sanitation program. Its primary emphasis is on the prevention of adulteration and misbranding of these products. Sanitary conditions of establishments are also a concern of the food and drug program as they can cause or contribute to contamination and adulteration of foods. However, the program extends to other factors of food adulteration including qualifications of personnel, plant supervision, equipment and procedures, production and process controls, and food ingredients and to additional matters of public health and consumer protection such as misbranding or labeling situations, conformance with food standards, deceptive advertising, and health food quackery.

The reason for conflict between the food and drug and food sanitation programs is an overlap of their functions. Both are responsible for food sanitation by organizational assignment and by their respective laws, rules, and regulations; hence, both have authority over the same food establishments. Their basic concerns

and procedures are also similar as they both operate within a framework developed by the FDA although the sanitation program delves into greater sanitation detail. However, there are differing provisions for violations, and the food sanitation program is considered to have a more educational posture while the food and drug program seems to be more enforcement oriented.

Thus, it is clear that the food and drug program does not readily fit into the sanitation branch but that the two food programs are potentially combinable. The administrative officer's recommendation to join the programs within the food products section recognizes the larger scope of the food and drug program, but is contradicted by his suggestion to then staff the entire program with sanitarians. Further, the food and drug program is not adequately served by a branch chief who does not have food and drug training and expertise, and it does not receive adequate focus in the sanitation branch. It is further weakened by being placed at the section level which gives it little status to promote its development.

Deficiencies of the

Food and Drug Program

As a consequence of EPHSD's poor direction and lack of support for the State's food and drug program, the program today is inadequate. Its activities do not encompass all aspects of the program nor even sufficiently address those with which it is actively involved. Routine surveillance of food and drug establishments, the program's basic activity, is still infrequent and irregular; pesticide monitoring is insufficient; and there is hardly any program on the neighbor islands.

Need to increase basic surveillance. The laws regulating food, drugs, and cosmetics are enforced primarily by two types of activities: routine surveillance

and investigations. Routine surveillance consists of general inspections of regulated establishments and the taking and testing of sample products. This activity allows inspectors to monitor the extent of compliance within industries and of specific products with relevant laws and regulations; to discover violations and take enforcement action; to provide compliance information and education; and to deter potential violations. Thus, it is an important and fundamental part of the program. Investigations involve inspections and sampling made in response to complaints registered with the program or to problems found through routine inspections.

The records show that the food products section has generally satisfied complaints from the public and made investigations as necessary. However, since 1982 when the emphasis of the program shifted to pesticide monitoring, routine surveillance for all other areas of the program has been largely set aside. For example, even routine checks on food establishments which have priority over other product inspections have been irregular and infrequent; and health foods, drugs, cosmetics, and medical devices have received little attention. According to the food products section, it has been unable to make inspections regularly for the past four years. Prior to 1982, it inspected warehouses, manufacturers, processors, and dealers at least every two years, and supermarkets twice a year. Since then, inspections have been sporadic. For many—if not most—food establishments, two to four years have elapsed between inspections, and new ones have often gone unnoticed.

Routine surveillance declined in 1982 when all the staff were needed to assist in resolving the heptachlor crisis. As shown in Table 4.1, the number of annual routine inspections dropped drastically in 1982 and 1983 and still has not recovered. In 1985, 373 routine inspections were made, only 61 percent of the amount done in

1981; and the rate for 1986 appears slower than 1985, with only 210 inspections made by the end of September.

Table 4.1

Number of Inspections, Complaints Investigated,
and Other Activities of the Food Products Section
Calendar Years 1981-1986

	1981	1982	1983	1984	1985	1986*
Routine Inspections	614	154	65	138	373	210
Complaints Investigated	171	166	176	232	200	176
Other Activities**	292	468	441	304	203	178

Source: Hawaii, Department of Health, Environmental Protection and Health Services Division, sanitation branch, food products section.

*Through September 1986.

**Includes such activities as sampling, assistance to industry, recalls, and educational talks.

The taking of product samples for laboratory analysis, the other key element in routine surveillance, is also very inadequate. The State's primary constraint is the limitations of the DOH laboratory to service the food and drug program. During recent years when the need and demand for monitoring foods for contaminants has increased, the amount of laboratory testing available to the food and drug program has remained essentially the same, thus forcing the food products section to trade off one kind of testing for another. The result has been a decline in the State's sampling of foods for other than pesticide contaminants (except for bottled water), for compliance with product standards, and for verification of product claims.

Although it seems apparent that routine surveillance is inadequate, it is not clear what level of activity is necessary to protect the public and, therefore, how much resources are needed. State law and rules do not require any specific frequency for inspections or sampling, and EPHSD has not established performance guidelines for the program. While this problem requires division level support to resolve, our study shows that the food products section has been largely left alone in its struggle for improvements. Division administration has not responded to the section's reports of surveillance deficiencies, has refused its requests for more staff, and has not assisted in obtaining necessary laboratory services.

Insufficient pesticide monitoring. The discovery of heptachlor epoxide in Oahu's milk and pesticides in some of Hawaii's drinking water wells in recent years have caused increasing public concern. These situations have highlighted the possibilities of pesticide contamination of Hawaii's food and water supplies, and focused attention on the state agencies responsible for pesticide regulation, enforcement, and protection, including the food products section. Following its involvement in the heptachlor crisis and in response to criticism of its monitoring efforts in milk, the section made monitoring for pesticides in food the priority of the food and drug program.

As seen in Table 4.2, the sampling for pesticide analyses increased seven-fold, from 52 samples of vegetables in 1980 to 371 in 1985. Staff was reallocated to give more time to planning, management, and sampling for pesticide monitoring. In 1985, the food products section established informal coordination with the pesticides branch of the Department of Agriculture that allowed the section to do sampling on violators, and in 1986, it began the training of neighbor island sanitarians on sampling procedures.

Table 4.2

Number of Routine Samples Submitted
for Laboratory Analysis by the Food Products Section
1980-1985*

	1980	1982	1983	1984	1985
Milk and milk products	1162	1230	1258	1268	1370
Frozen desserts	1843	509	683	910	1100
Food product standard samples	1019**	65	31	136	25
Foods for pesticide analyses	52	112	345	342	371

Source: Department of Health, Annual Statistical Report for the years 1980-1985.

*No statistics were available for 1981 due to the food product section's involvement in the heptachlor crisis.

**Includes 216 filth samples.

Despite these efforts, the food products section's program for pesticide monitoring is still inadequate. Although there are many kinds of foods in which pesticides may be found and many sources of production, the section samples only locally grown raw vegetables. Raw fruits, nuts, and packaged commodities from Hawaii are not included nor are any foods originating outside of Hawaii. In its final draft of its report, *Monitoring For Pesticides Residues in Foods and Animal Feed*, dated October 1986, the Office of Environmental Quality Control (OEQC) cited the food products section for its lack of system in sampling and estimated that the 371 samples for monitoring local produce taken by the section in 1985 was insufficient by 40 to 60 percent. The section expected to sample about the same amount in 1986.

The Office of Environmental Quality Control attributed these deficiencies to a lack of resources within the food products section and in laboratory support for this program. In 1986, recognizing a need to expand pesticide monitoring, the food products section requested the laboratories branch of DOH to increase its testing capabilities to accommodate 1,000 food samples for pesticide and other contaminant analyses. This proposed expansion of pesticide sampling was projected to uncover many more pesticide violations and to necessitate an estimated 30 to 50 recalls a year.

Consequently, the food products section also asked for four more food and drug inspectors in its operating budget for the 1987-89 biennium to bolster its inspection, sample collection, and enforcement capabilities. While it appears that the laboratories branch's budget request has been increased to expand its pesticide monitoring capabilities, EPHSD's management has rejected the food products section's request for more staff and resources.

Failure to establish program statewide. The Department of Health has assigned responsibility for the statewide implementation of the food and drug program jointly to EPHSD and to the district health offices located on Maui, Kauai, and Hawaii. So far, the program has been established primarily on Oahu. There has been only sporadic food and drug activity on the neighbor islands, mainly when necessary to respond to complaints and suspected contamination situations or to assist in recalls of food or drug products. A regular program has never been instituted on the neighbor islands to monitor pesticides in foods and compliance among food, drug, medical device, or cosmetic establishments and to implement vigorous enforcement efforts.

Since the reorganization, the food products section has tried to extend the program statewide by giving more support and training to the district health offices, but it has made little progress. According to the district health offices, they lack sufficient staff to really implement the program. The food products section sought more resources for the district health offices, but found that disagreements concerning roles and responsibilities for budgeting and planning hampered the effort. Neither the chief sanitarians of the district health offices nor the sanitation branch chief of EPHSD saw budgeting for district staffs to perform food and drug work as their responsibility, and the food products section itself lacked authority. Thus, no one has taken the lead on this matter.

Examination of this situation shows that there is good reason for confusion and uncertainty. In assigning responsibility to the district health offices and EPHSD, the department had never clearly delineated roles and responsibilities or established policy and procedures for coordination between these units. Organizational and personnel documents were found to be inconsistent, vague, and sometimes contradictory.

Functional statements for the district health offices were especially unclear regarding the food and drug program. The districts were assigned broad responsibilities for "the total environmental health program" in their respective counties. But, where duties and responsibilities were listed, each county has differed. For the Hawaii district, there was no specific mention of the food and drug program. Maui was only to "assist" the food and drug branch on Oahu. Food and drug program responsibilities for Kauai were listed, but its duty to "cooperate" with the food and drug branch in administering its laws and regulations was never defined. The recent draft revision of functional statements by EPHSD for the

district health offices has made them all consistent regarding environmental protection and health services generally but has still left responsibilities to the food and drug program unclear.

Position descriptions of environmental programs staff in the districts do not clarify matters. For example, among chief sanitarians, who are directly responsible within districts for daily operations of environmental health programs, the scope of responsibility varies. The chief sanitarian for Kauai district is assigned major administrative responsibilities, such as planning, organizing, directing, coordinating, budgeting, and evaluating. On the other hand, the only administrative duties listed for the Maui and Hawaii districts' chief sanitarians are working with county officials, providing guidance to public and private parties, and attending public hearings. Also, where some reference is made to specific EPHSD programs and activities, there is none to food and drug work in the duties of the chief sanitarians. Yet, at the next staff level of supervising sanitarians, food and drug responsibilities are listed.

Documents for EPHSD only make the situation more confusing. Its functional statement makes a distinction between its programs, describing pollution programs as "statewide" and omitting this term for environmental health services. It also makes only a very narrow reference to food and drug activities, listing only "food and drug testing and certification."⁶ Further, in functional statements for the sanitation branch and the food products section, "statewide" responsibility is not specified.

6. Hawaii, Department of Health, Environmental Protection and Health Services Division, *Functional Statement*, Honolulu, June 30, 1985.

It appears that the department had initially intended to limit responsibility, authority, and activities of EPHSD for the food and drug program primarily to Oahu. This is seen in the duties delegated to the food and drug branch chief up to the time of the dismantling of that branch. He was only required to "advise, visit and communicate with each of the Deputy Food Commissioners and Health Officers in each of the Counties concerning fulfillment of program objectives especially as they relate to the Food and Drug Act and preparing guidelines and directions for their use."⁷

Then, after abolishing the food and drug branch and assigning the former branch chief duties to the food products section supervisor, EPHSD informally advised him that he was also responsible for planning, organizing, directing, and coordinating the food and drug program *statewide*. However, this change in the scope of the supervisor's duties was not coordinated with the district health offices nor were changes made to the functional statements and position descriptions of the districts. Thus, the supervisor's efforts to extend his role and the food and drug program were not fully understood or supported by the neighbor island district staffs.

At the time of our audit, the EPHSD administrative officer said that he planned to resolve the confusion himself by clarifying roles and responsibilities between the agencies in a "white paper." However, the complexity of the situation, need for involvement of both district and EPHSD staffs, and discussion between management and program levels indicate that such an approach would be inadvisable. Moreover, the previous deputy director had attempted to similarly

7. Hawaii, Department of Personnel Services, "Position Classification Form for Food and Drug Administrator," Honolulu, July 1, 1968.

delineate responsibilities in a memorandum to all district health administrators prompting at that time strong disagreement and resentment at his apparently unilateral action. According to the administrative officer, he authored that earlier memorandum.

Recommendations

1. *We recommend that the Environmental Protection and Health Services Division take steps to strengthen and improve the food and drug program, including the following:*

a. *Establish a framework for the food and drug program that clearly defines its scope of responsibilities, goals, functions, and activities.*

b. *Establish an evaluation process for the food and drug program that delineates measures of effectiveness and a management reporting system for monitoring the program ongoing.*

c. *Develop a statewide plan for the food and drug program that incorporates strategies to resolve present problems and deficiencies especially in basic surveillance, pesticide monitoring, and neighbor island programs. As part of this planning effort, the division should: (1) assess the need for the program and its adequacy, and (2) evaluate the ability of the present organizational framework of the food and drug program to provide an adequate focus on the food and drug program to give it appropriate stature for effective operations and to assure it of sufficient resources to carry out a comprehensive program. Further, the division should examine specifically the benefits of reestablishing the food and drug branch, rejoining the food and prescription drug responsibilities with the rest of the*

program, and incorporating the food service sanitation program into the food and drug program.

2. We also recommend that the Director of Health clarify the lines of responsibility between the district health offices and the Environmental Protection and Health Services Division in sufficient operational detail to enable them both to function effectively. Particular attention should be given to the food and drug program to define its responsibilities for planning, budgeting, staffing, training, and program operations and to the development of budgets to provide adequate resources for neighbor island food and drug programs.

Chapter 5

AIR QUALITY PROTECTION

In this chapter, we examine the air pollution control program and its administration by the Environmental Protection and Health Services Division (EPHSD) of the Department of Health (DOH). Six major program functions take prime attention and are all highly interrelated. They involve: development of standards and rules, permits for pollution sources, monitoring ambient air, planning for program growth, enforcement, and development of sufficient technical expertise to carry out program responsibilities.

Evaluation of these functions necessitate our reviewing underlying conditions and concerns about air quality and its relevance to public health, public welfare, and other public objectives. It requires, too, that we examine the organization, the bases in statute and rule, and the objectives sought.

Although Hawaii does not suffer from the severe air pollution problems that plague some mainland regions, our air quality continues to be affected by urbanization, industrial development, and the growing number of automobiles. While our overall air quality is good, under certain climatic conditions (such as when trade winds die or when agricultural burning and volcanic haze occur) we see the effects of growth and development. Localized pollution problems occur in certain industrial and agricultural locations as well as in highly urbanized areas. Air pollution is definitely a factor in public health. Moreover, with increasing development and population growth, problems are likely to increase rather than decrease.

Summary of Findings

We find that the Department of Health and its Environmental Protection and Health Services Division lack a sense of certainty about their responsibilities to protect public health from air pollution and hence, are less than adequately assertive in maintaining air quality in Hawaii. This situation becomes apparent in the following specific areas:

1. In the area of standard setting, which is extremely complex and where decisionmaking necessarily involves the use of both objective evidence and judgment, the department and division have been wavering and inconsistent in their actions, have shunned their roles as public health protectors, have abdicated decisionmaking to an advisory committee which is unbalanced in its representation of affected interests, and have failed to promote adequate scientific study of special conditions in Hawaii which is needed to provide a sound basis for changing Hawaii's air quality standards. As a consequence, these standards can shift in apparent response to pressures from affected interests.

2. The administration of permits to control air pollution suffers from weaknesses which, in effect, negate the extra safeguards built into a two-permit system. Due to inconsistent and uncoordinated rules and regulations relating to permits for stationary sources of pollution and to an apparent inability to make timely inspections, especially on the neighbor islands, pollution sources are able to operate before securing the necessary review and approval.

3. Despite its key importance for effective regulation, the air quality monitoring system has failed to keep pace with growth. Not only has the coverage originally deemed necessary for the system failed to be achieved, but in the face of rapid development in many areas, established coverage has actually been curtailed

or carried out on an uneven and sporadic basis. Meanwhile, the limited data gathered receive little attention or analysis.

4. The planning function remains undeveloped. Consequently, the department and division are not examining alternative strategies and commissioning basic research. Neither are they promoting adequate community involvement and awareness nor undertaking the degree of evaluation necessary for effective feedback and program modification.

5. Enforcement appears to be more vigorous since the enactment of legislation in 1986 which requires written notices to be issued beginning with the first violation. However, still lacking are a clear approach to problems which cross jurisdictional lines and a program to inspect periodically the many minor sources of pollution which have been issued permits.

6. Staffing remains a serious problem particularly with respect to technical functions. The program is plagued with high turnover, frequent and extended vacancies, and an absence of needed technical training. Program performance suffers commensurately.

Regulatory Context

Concern for air quality in Hawaii emerged as national environmental awareness increased during the 1960s. This concern resulted in state legislation in the early 1970s in concert with federal legislation. Indeed, federal programs to ensure air quality have exerted extensive influence in shaping efforts by state and local governments here.

Record of legislative actions. Basically, today's air quality program in Hawaii began with the Clean Air Act passed by Congress in 1970 which recognized

the serious adverse health effects of air pollution. It directed the federal Environmental Protection Agency (EPA) to publish a list of pollutants determined to have adverse effects on public health and then to establish standards for them. Those standards were intended to place limits on pollutant concentrations allowed in the ambient air. Thus far, EPA has developed standards for six pollutants: sulfur dioxide, nitrogen dioxide, ozone, particulate matter, carbon monoxide, and lead. The resultant national ambient air quality standards, though varying among these six, were set uniformly for the entire nation regardless of local conditions.

These standards are of two types. Primary standards protect the public health. They contain a margin of safety to safeguard the most susceptible members of society. The more stringent secondary standards protect the public welfare. They seek to prevent damage to crops, vegetation, and wildlife.

The key regulatory section of that federal act requires each state to submit an implementation plan to EPA detailing how it will attain, maintain, and enforce the national ambient air quality standards. If EPA considers a plan inadequate, it can assume priority over the state's program. A state implementation plan contains emission controls, compliance schedules, monitoring plans, and other provisions to control, abate, and prevent pollution. The most common type of state regulation is an "emission limitation" restricting the amount of pollution an individual source may emit.

In 1972, the Legislature created a new chapter in the Hawaii Revised Statutes specifically for environmental quality. Part II of Act 100 focused on air pollution and assigned wide responsibility for regulation of air quality to DOH. The director was authorized to adapt regulation to Hawaii's conditions, to control emissions through a system of permits, to monitor the records and operations of those

activities which emit pollutants, to conduct public information programs, set standards, and carry out inspections in the field of transportation. The director had powers to make rules, appoint hearings officers, establish fees, issue permits, grant variances, revoke permits, and levy fines.

Two chapters of Title 11, administrative rules, adopted in their present revised forms in November 1982, relate directly to the control of air pollution and provide the regulatory system for it. Chapter 59, Ambient Air Quality Standards, contains the numerical limits set by the State for the six major pollutants governed by the federal Clean Air Act. The state ambient air quality standards contained more stringent levels for carbon monoxide, sulfur dioxide, and particulate matter than set nationally. They remained in effect until April 1986 when the latter two were lowered to federal levels.

Chapter 60, Air Pollution Control, regulates pollution from specific sources such as motor vehicles, stationary industrial sources, and agricultural operations. It contains prohibitions and general requirements on open burning, agricultural burning, permits for stationary sources, and permit review to prevent deterioration of air quality.

Current state objectives. Because Hawaii, overall, enjoys comparatively good air quality, the State's program approach was intended to emphasize prevention rather than remediation. The central objective of the 1971 standards as set forth in the Hawaii implementation plan sought to "preserve and improve" the existing quality and to protect the health and welfare of the public.

This same objective is projected into the 1990s as reflected in the proceedings of the Governor's Conference on Health Promotion and Disease Prevention held on December 2 and 3, 1985, for the purpose of setting Hawaii's health objectives for

1990 and beyond. Representing a broad cross section of the community and basing its actions on recommendations developed over six months time by various study groups, this conference adopted high priority objectives in 15 areas of concern. With respect to air quality protection, the following high priority objective was adopted:

*"BY 1990, AIR QUALITY THROUGHOUT HAWAII WILL CONTINUE TO BE BETTER THAN THE NATIONAL AMBIENT AIR QUALITY STANDARDS, AND 98 PERCENT OF THE STATE WILL BE IN COMPLIANCE WITH HAWAII'S AIR QUALITY STANDARDS."*¹

The strategy outlined by the conference to carry out this objective includes maintaining air quality standards more stringent than the federal standards while developing plans for dealing with those few areas, primarily industrial, which have difficulty meeting the more stringent state standards. The Director of DOH told the conference that "we will do all we can to enhance the achievement of [the conference adopted] objectives."² He reaffirmed this position in his July 8, 1986, budget preparation instructions to the DOH staff by indicating it was his "commitment to carry out the intent and substance of the Governor's Conference and make health promotion and disease prevention a top priority of the department."³

1. Hawaii, Department of Health, *The Proceedings of the Governor's Conference on Health Promotion and Disease Prevention: Objectives for 1990 and Beyond*, Honolulu, February 1986, p. VI-4.

2. *Ibid.*, p. E-4.

3. Memorandum to All Deputies; Division and Branch Chiefs; Staff Officers and District Health Services Administrators from Director of Health, Subject: Budget Preparation for FY 1987-89 Biennium Budget, July 8, 1986.

Current structure and process. Air quality is affected by a variety of pollution sources. It is a complex field to regulate and has necessitated coverage through a diversity of agencies and processes. That situation, in turn, calls for great care and technical expertise in setting standards, monitoring, enforcing, and planning, as well as in coordination.

Air quality control at the state level, along with other similar forms of environmental regulation, comes under the Deputy Director for Environmental Health. Three DOH divisions conduct the required operations. They are:

1. The Medical Health Services Division with a laboratories branch responsible for the laboratory analysis of air samples, the design of a portion of the monitoring network, and the maintenance and repair of monitoring equipment.

2. Communicable Disease Division with its environmental epidemiology program.

3. Environmental Protection and Health Services Division with the bulk of operational responsibilities exercised through its environmental permits branch and pollution investigation and enforcement branch.

The DOH district health offices on Hawaii, Maui, and Kauai also become involved in handling regulatory activities for these divisions on the neighbor islands inasmuch as the divisions for the most part do not have their own separate environmental protection staffs outside of Oahu.

Physical conditions in Hawaii. Hawaii differs markedly from the other 49 states. Its small size, remote insular location, tropical climate, and high concentration of urban activities on one island both alleviate and complicate its existing and potential problems in the field of air quality. Unable to "import" electrical power, Hawaii must generate most of its power in close proximity to

where the majority of Hawaii residents live. Although quite limited in how far one can drive due to the size of the islands, Hawaii has a high ratio of automobiles to population (it is fast approaching one vehicle per person) with a corresponding potential for generating air pollution in urbanized areas, particularly during peak traffic periods.

For much of the year, strong trade winds blow Hawaii's air borne pollutants out to sea. But there are times (as high as 50 percent of the time in winter months versus about 10 percent in summer months) when those breezes die and a condition known on the mainland as smog can develop. Thus, the trade winds cannot be considered a solution to air pollution in Hawaii even though they may help alleviate the problem here.

Pollution sources. The sources that contribute the largest percentage of total emissions are motor vehicles, agricultural field burning, and electric power plants. Automobiles are the greatest emitters of carbon monoxide while electric power plants and oil refineries contribute the largest amounts of sulfur oxides. Agricultural and mineral products industries are the greatest emitters of particulate matter.⁴

Pollutants present in an area and their relative concentrations reflect the activities that occur. Sulfur dioxide, the pollutant released during the combustion of coal and oil, is closely associated with electric utilities and petroleum industries. It is present in greatest amounts in industrialized areas such as Campbell Industrial Park. By contrast, carbon monoxide, which is associated with automobiles and

4. Hawaii, Department of Health, *Annual SLAMS Network Review*, Honolulu, 1985.

agricultural burning, is emitted in greatest quantities in urban Honolulu and developing areas such as Pearl City and Waipahu.

Problems Facing Hawaii

Problems can affect a program at numerous points. For a program concerned with air quality, the first step involves setting appropriate standards and establishing the regulatory controls on individual sources to maintain those standards. Determining what such standards are or should be is seldom a clear cut matter. Research may provide some health-related basis for standards, but there remains uncertainty about many of the effects of individual pollutants. Final decisions about standards are influenced by political and economic considerations as well.

Once standards and related regulations of some sort exist, the program needs a mechanism for allowing private and public sector interests to function within those standards. Permits fill the role by requiring pollution sources to comply with emission limitations set by both federal and state governments. Permits, however, presume that monitoring and inspections are integral steps in the program. And these controls presume that those activities emitting pollution in excess of emission limits will be forced to rectify their practices or face prosecution and punishment.

In a rapidly growing and changing society, even the most effective enforcement process might prove inadequate to maintain the standards. Most programs—and this is true for air quality—also need a planning component to anticipate new problems and new areas of program development, as well as to evaluate existing means and practices and to alert, inform, and involve the public in coping with the threats our society imposes on air quality. The technological

complexities inherent in an air quality program also necessitate a concerted effort to enhance and update the technological competency of those employees responsible for carrying out this program.

Here, then, are the major facets to be evaluated: setting standards, granting permits, monitoring of ambient air quality, inspecting for compliance, enforcing compliance where violations occur, planning for a more effective program, and ensuring technical competence among those involved.

Standards. Setting standards is a process of arriving at decisions about the risks to public health and well being from various pollutants and the best means to control the sources of those substances. That process is invariably complex. Ideally, it first entails determining the nature of each pollutant and identifying what its effects might be at various levels of concentration. The factors involved include determining whether adverse effects will occur in the environment under consideration, identifying the degree to which a pollutant is present, and characterizing the nature of the risk to exposure. Once the risk has been assessed, it can be weighed against social, economic, and technical factors. At that point, regulatory options may be decided upon.

Two fundamental activities make up this process. They entail "risk assessment" and "risk management." Risk assessment involves determining the health risks from pollutants. Risk management is the process of deciding what the limits should be after weighing political, economic, and aesthetic considerations. Since the scientific evidence drawn on in risk assessment is not absolute, a political decision must be made. It concerns what margin of safety should be built into the standards to safeguard against risks not yet identified and to protect the most

vulnerable members of society, albeit without imposing too high a set of costs when the evidence remains challengeable.

Initially in 1971, Hawaii set more stringent air quality standards than those required federally. That such a position was justified is indicated by the fact that the Clean Air Scientific Advisory Committee of the National Commission on Air Quality found in 1980 that the federal standards on particulate matter to be inadequate to protect public welfare. This was because the effects of this pollutant relate to size and chemical composition of the particulates, neither of which was reflected in the federal standard. With respect to the ozone standard, further epidemiological research is needed on the chronic effects of ozone to determine whether the national standard should be made more stringent. The rationale at the time was that because Hawaii's air was already clean, it was important to set standards which would maintain that quality and also protect all members of the public from potentially adverse health effects.

While the threshold level of a standard is more or less supported by scientific information on adverse health effects of individual pollutants, the margin of safety is basically a judgment call in adding an extra layer of protection. State standards for sulfur dioxide and particulate matter formerly had wider margins of safety than did federal standards. A legislative resolution (House Resolution No. 295) adopted in 1982, ten years after the original standards were adopted, requested the Department of Health to establish and maintain more stringent state ambient air standards than the federal secondary standards.

Four years later, House Resolution No. 191 called on the DOH to formulate standards and rules to protect the public health and welfare and to maintain air quality better than those of national standards. This was during the same period

when the Governor's Conference on Health Promotion and Disease Prevention took a similar stance with regard to Hawaii's air quality standards, and the Director of Health went on record committing himself and the department to do all they could to achieve this objective along with the other high priority objectives adopted by the conference.

Therefore, the public could have expected that DOH and EPHSD would serve as strong public health advocates with regard to Hawaii's air quality and would agree to any lowering of Hawaii's air quality standards only after thorough examination and study and the presentation of clear and persuasive evidence that any such lowering was indeed in Hawaii's best public interest.

However, DOH and EPHSD played quite a different role. By early 1986, they were finalizing changes in the regulations which had the effect of dropping state standards to nationally stipulated levels for sulfur dioxide and particulate matter, although they abandoned the proposal to drop the carbon monoxide standard. In the process leading up to this decision, they wavered considerably on their position and were quite inconsistent in their actions, they sought to establish themselves as neutral arbiters and virtually abandoned any role of public health protector, they abdicated actual decisionmaking to an advisory committee which was unbalanced in its representation of affected interests, and they failed to seek additional scientific study of the special conditions existing in Hawaii or the direct involvement of health professionals to weigh the implications of relaxing Hawaii's standards. As a consequence, the standards (and some rules) appear to have shifted in response to pressures exerted by affected interests.

After having been in effect since 1971, the air quality standards came under review in 1981 when EPHSD initiated a proposal to revise the standards so as to

conform to the national standards for sulfur dioxide, carbon monoxide, and particulate matter rather than continue to maintain the wider margins of safety included in the original state standards. The rationale cited in support of this proposal was twofold in nature. *First*, it was indicated that the federal standards were backed by substantial research whereas the stricter state standards lacked such research support. *Second*, it was contended that new federal laws and regulations, such as those relating to the prevention of significant deterioration of air quality, called for a review of state regulations and presumably would render the more stringent local standards unnecessary. Nevertheless, the fact remains that with a few exceptions the state air quality was well within those stricter limits. The proposed changes, however, coincided with recorded exceedings of state standards at Kahului, Maui and at Kahe Point, Oahu.

In August 1981, the department convened an air advisory committee to review the department's proposal and to recommend other changes in existing regulations. This committee, with a slight enlargement of membership, continued to be utilized over the next several years while the proposed changes were under consideration. The committee played an influential role in the decisionmaking inasmuch as DOH and EPHSD were governed to a great extent by how this committee voted on issues presented to it.

In this regard, then, it should be noted that representation on the air advisory committee was drawn more heavily from affected industries than from citizen and environmental groups. Only 1 of the original 11 and only 1 of the subsequently expanded 13 members came from a health organization. Moreover, with educational backgrounds in engineering rather than in public health, EPHSD staff members

involved in determining appropriate standards and pollution limitations for Hawaii might not be considered the best authorities to reckon health impacts of air quality on the public.

Equally important, final copies of the draft rules were not submitted to health professionals within and outside DOH for comments and reactions to the proposals. Since decisions at air advisory committee meetings were determined by voting, the industry preferences for less stringent standards prevailed and were pursued by the department. However, they encountered strong opposition at public hearings in 1982 and again in 1984.

The failure of DOH and EPHSD to function as health protectors has left them open to pressure by affected interests. Seven months after the amended rules proposed by the air advisory committee had gone to public hearing, the Hawaiian Electric Company wrote a letter, dated December 3, 1984, to the Deputy Director for Environmental Health saying that proposed Section 11-60-9 would limit the value and use of coal as a fuel in Hawaii. Another letter arrived, this one dated December 4, 1984, from the Director of the Department of Planning and Economic Development (DPED) stating that the rule constituted a "severe impediment" to using coal and requesting that DOH hold back on implementing that section so as not to impose a hardship on Hawaii's sugar industry which was exploring the use of coal.

Initially, DOH declined to consider the two requests because the rules were about to be finalized and sent to the Governor for approval. However, after conferring with various members of the industry and a representative of DPED in February 1985, DOH apparently changed its position and agreed to review the

matter.⁵ In May 1985, the air advisory committee was reconvened and asked to review the rules it had previously recommended. In explaining why the committee was being asked to reconsider recommendations it made two years previously, the division staff stated that a section of the recommended rule was too stringent to make coal economical. Later, faced with the possibility that the whole recommended package might be further delayed, the committee voted to sever the offensive section so the remaining rules could proceed to implementation. This section was returned to its original language, and in this form was combined with the rest of the amendments which went into effect on April 14, 1986. The "coal rule" was subsequently revised by the committee and included with a new package of recommendations which also contains a geothermal rule. At the time of this writing, those amended and new sections are still with the department.

Permits. A major strategy for controlling air pollution is to limit emissions of various pollutants from stationary and mobile sources so as to maintain the standards set for ambient air quality. To this end, EPHSD administers a system of permits.

One area where permits are required is that of agricultural burning. All agricultural burning must conform to permits issued by DOH. The department may deny applications, limit the hours of burning, and declare "no burn" days when certain weather conditions prevail. The objective is to minimize the effects of agricultural burning on the public and on the environment. For the years of 1979

5. This is not the only instance of departmental wavering on this issue. In 1986 while embracing on one hand the priority goal of higher standards for Hawaii as recommended by the Governor's Conference on Health Promotion and Disease Prevention, the Department of Health on another hand testified against a legislative resolution aimed at the same objective.

through 1985, applications for such permits have gradually increased from 208 to 371 per year and permits issued have similarly grown from 201 to 358 per year.

Although motor vehicles are a major source of pollution, the State relies on federal requirements governing motor vehicle pollution control devices on new cars. The department does maintain a motor vehicle inspection program for vehicles cited by the police for smoke emissions. In its implementation plan, the State proposed a number of alternative strategies in this area to the federal government but has not taken any actions to implement such measures.

The department's major control activity involves the permitting and technical review of stationary sources of pollution. Here, a system involving two permits is in effect. The first permit grants authorization to construct a facility or pollution control device and encompasses modifications to existing facilities as well as the construction of new facilities. To be granted the second permit, a permit to operate, a completed facility must be inspected to determine if it actually does comply with permit conditions and emission standards as designed. Large sources are required to undergo a source test observed by a department engineer. A two-permit system provides two opportunities to regulate a source. The regulatory basis for the system is provided in Section 11-60-40 of the administrative rules which prohibits construction without an authority to construct permit and prohibits operation without a permit to operate.

Sources of pollution which have obtained an authority to construct permit, however, are in fact allowed to operate before obtaining a permit to operate. This has been a long-standing practice under the standard conditions of a construction permit. These sources are not monitored for compliance with their specific permit conditions. Thus, until a source is inspected after applying for an operating permit,

there is little chance of the State's knowing whether it is in violation unless complaints come in from the public. The environmental permits branch can refuse to issue an operating permit if the source fails to comply, but this apparently does not regularly occur.

For example, a neighbor island facility operating an incinerator in violation of its permit conditions was recently informed by letter of the violation and requested to comply before its construction permit expired. It was also asked to submit a compliance schedule describing the measures to be taken to correct the violations. That source, however, has continued to operate beyond the expiration date and is still in violation. According to interviews, the permits branch will not renew the construction permit nor issue an operating permit unless the facility does comply. At the same time, however, the department will not shut the facility down because it is run by the State.

We learned, too, that when a source is operating under an authority to construct permit and is violating the rules or permit conditions, it may be difficult to cite the source and bring it into compliance. According to staff, this is because under a construction permit, a source is theoretically operating under a test situation and any emission limitations placed on the facility are not enforceable until the source is officially operating under a permit to operate. A recent division policy even states that an operating permit should be issued even though a source is found upon inspection to be in violation.

Several factors contribute to this situation. One is a lack of consistency and coordination in the administrative rules relating to permits. Whereas one section prohibits operation of a pollution source without an operating permit, another section has been amended to allow conditioned operation under a construction

permit. Originally, the rules allowed operation under a construction permit only for testing purposes.

Adding to the problem is EPHSD's apparent inability to conduct timely inspections prior to issuing an operating permit, especially on the neighbor islands. As a consequence, the EPHSD staff feel it would be too great a burden on the operators to require them to delay their operations until appropriate operating permit inspections can be made. Accordingly, operations are allowed under the construction permits until the staff can get around to conducting their inspections and issuing the operating permits. In the meantime, unless a complaint is made, EPHSD staff have no means of knowing whether a source is in violation, and known noncompliance is allowed to continue. For reasons never made completely clear to us, EPHSD has had difficulty taking enforcement action against offenders unless the offenses occur under a permit to operate.

In summary, rule inconsistencies and EPHSD practices have negated this elaborate two-permit system designed to control excessive emissions.

Monitoring. The federal Clean Air Act and subsequent regulations require states to establish an air quality surveillance system, the principal data-gathering activity in this program. It is expected to provide timely data on ambient air quality in various locations throughout the State. Such data indicate levels and kinds of pollution at any particular place and moment as well as providing trends when collected over time. The primary purpose of this activity is to serve as a basis for program planning and decisionmaking.

In addition to the general ambient air monitoring, there can also be special purpose monitoring. This is conducted in the vicinity of a pollution source, and its purpose usually is to determine compliance with emission limitations imposed upon

the source by applicable regulations or permit conditions. According to interviews with division staff, this type of monitoring is rarely performed. When carried out, it is usually in response to a request from another part of DOH or some other governmental agency. Records of the laboratories branch indicate only 17 special purpose monitoring studies have been conducted since the beginning of 1983.

The record with regard to ambient air monitoring also has been less than satisfactory. Adequate overall coverage has not yet been achieved. Even where monitoring has been instituted, it has often been incomplete and inconsistent in coverage. To compound matters, very little use appears to be made of the data gathered.

The monitoring network has had a history of difficulties. The Sand Island station monitor for nitrogen dioxide has not operated since April 1981 although it continues to be listed as part of the network. Shutdowns for repairs and sampler relocations occurred regularly at both Kahului and Kihei, often following periods of high readings for sulfur dioxide and particulates. At a time when ambient air samples of carbon monoxide from the downtown station regularly exceeded standards, the station was moved to Kaimuki where it recorded very low readings for several years. Valuable information on carbon monoxide trends in downtown Honolulu was lost as a result. Little planning is evident to prepare for situations necessitating temporary relocations. For example, in 1981, the Honolulu station was shut down for five months while the roof of the building was being repaired.

The 1972 state implementation plan proposed to have in operation more samplers than required by federal regulations. The plan was amended in 1981 to reduce what was originally felt necessary. Departmental planning in 1972 called for 15 samplers for particulate matter. Seven actually exist as of June 1986. Similarly,

the 1972 plan recognized a need for nine samplers for sulfur dioxide, but in 1986, only three were in operation. Only one of the nine planned samplers for nitrogen oxide existed in 1986 (and that has been out of commission since 1981). Samplers for carbon monoxide alone met 1972 plans—for two samplers.

For lack of funding and with EPA concurrence, DOH closed three of its neighbor island stations in Kahului, Kihei, and Hilo in 1985. It did so despite negative public reaction and records of frequent excesses in pollution at those stations. Between 1976 and 1985, Kahului station recorded 77 violations of state sulfur dioxide standards and 57 violations for particulate standards. The Kihei station recorded 27 violations of particulate standards. Both stations had the highest annual averages statewide for particulates, roughly equivalent to the Barbers Point station in an industrial area. With funds appropriated in 1986, the Kihei sampler has been replaced, but as of the end of October 1986 it still was not gathering data.

The staff of EPHSD acknowledge the importance of continuous air quality monitoring but say the reduction of the network is due to lack of funds and the conversion to expensive and more sophisticated monitoring equipment. In the meantime, urban development and population continue to increase, adding to the need for better and more comprehensive data on air quality—not just overall but with respect to areas where potential problems occur. Various areas have been tentatively identified, but little, if any, continuous monitoring is being performed. Examples are the carbon monoxide "hot spots" within large multi-deck shopping centers and near heavily congested traffic arteries identified by recent air quality studies. As a consequence, it is difficult to pinpoint where present or future

problems might lie, to plan for prevention, or to justify the costs that control measures might entail.

Planning. The basis for effective planning lies in effective evaluation and feedback of present conditions. Unless evidence of an existing or potential problem emerges, there is little reason to plan. From what we could observe, Hawaii's air quality program lacks adequate and consistent monitoring to provide the information essential for program evaluation, adjustment, and growth. And even what data are available appear to receive less attention than they merit.

A planning function also serves well if it brings diverse interests (both public and private) together to explore other options than those extant in the program, to work out ways to complement each other's efforts and interests, and to achieve enhanced awareness of the impacts each has on the others. Effective planning exists when those diverse interests, whether representing industry, public health, or the environment, can all feel that they have a hand in decisions made about the quality of air we breathe.

Localized areas where pollutant concentrations are increasing pose especially difficult challenges to the program. They need concerted attention, not neglect. The state implementation plan requires continuing evaluation and adjustment to keep it vital and hence, to keep it useful. Yet, Hawaii's plan is in many respects outdated and outmoded. There is much for a planning function to accomplish for this program.

Contingency planning for emergency conditions is a specific field needing concerted planning. The Environmental Protection Agency required the 1972 implementation plan to lay out such procedures. We found, though, that it has not been updated since then. Responsibility for coordination had been assigned to the

air sanitation branch which no longer exists. And we could not find anyone who knew which unit is responsible for updating that plan.

There are other emerging issues which need to be identified, clarified, and addressed in terms of seeking suitable solutions. These include what to do about sugarcane burning as urban development encroaches more and more on agricultural areas and what to do about the increasing carbon monoxide levels in certain rapidly growing urban areas or along busy traffic corridors.

The planning function has a responsibility also to seek scientific data to provide direction in setting standards, monitoring, and enforcement. Since Hawaii's environmental conditions differ from mainland regions, the State needs to commission localized research projects.

Then, too, there is the matter of changing conditions, whether due to new products and processes with new kinds of pollution or to new life-styles. New data suggest that indoor air pollution might actually constitute a greater hazard to some people than that found outdoors. This is no less a matter for DOH attention, most appropriately under planning.

Enforcement. Enforcement of laws and regulations encompasses a variety of activities which contribute to the prevention and control of pollution. In addition to finding sources in violation and bringing them into compliance, the division through its pollution investigation and enforcement branch carries out an annual routine inspection of major sources, investigates complaints, and conducts surveillance activities.

The staff of EPHSD has acknowledged that the number of enforcement actions annually resolved appears low. In 1985, the pollution investigation and enforcement branch inspected approximately 90 major sources and investigated 365 complaints.

The branch is responsible for approximately 242 pollution sources with active operating permits and approximately 46 sources with construction permits. In addition, the branch issued 358 agricultural burning permits. In 1985, a total of 11 facilities were found to be in violation of the laws, regulations, or permit conditions. Of these, nine were brought into compliance. However, only one case resulted in a fine. Table 5.1 shows the number of violations recorded in the branch docket book from 1981 to 1985.

Table 5.1

Summary of Sources in Violation and
Brought into Compliance from 1981 to 1985

	1981	1982	1983	1984	1985
Violations	10	21	21	12	11
Fines	3	0	0	2	1
Compliance	10	19	21	11	9

Source: Hawaii, Department of Health.

Prior to 1986, the division policy on violations was to attempt to resolve problems by orally notifying a source of noncompliance. Thus, it was difficult to ascertain the total number of sources annually thought to be in violation. Branch records identified the number of sources receiving written notices of violation. However, legislation passed in 1986 now requires the department and the division to take a more vigorous enforcement approach. For all violations, the department is now required to issue a written notice specifying the violation. For initial violations, the department retains the discretion to specify a compliance timetable, impose penalties, or request the violator to appear at a hearing. For continuing violations, the department is required to order submission of a compliance schedule

and to issue a cease and desist order if the schedule is not submitted within 30 days. The imposition of penalties remains discretionary.

It is too early to see if this tougher policy will make a difference in the number of enforcement actions. However, early indications are that the number of notices of violation issued by the branch in 1986 has increased over previous years.

In the meantime, some deficiencies in the enforcement program are quite apparent. One involves the investigation and resolution of complaints and other reported incidences of pollution. The enforcement staff has acknowledged that some cases of pollution have been difficult to resolve satisfactorily or in a timely fashion. The problem centers on cases which involve more than one medium (e.g., air and solid waste) or which are not clearly under the jurisdiction of one branch or agency. One recent example of interagency conflict was the disagreement between the Occupational Safety and Health Administration (OSHA) of the Department of Labor and Industrial Relations and DOH over who had responsibility for reducing carbon monoxide levels at Ala Moana Center. A study had shown that state and federal air quality standards were being exceeded. However, although Ala Moana Center is a place where private employees and members of the public commingle, both agencies disclaimed responsibility.

The DOH claimed it could not monitor ambient levels on private property nor respond to concerns affecting private employees. On the other hand, OSHA claimed its own standards had not been violated and it could act only after an employee lodged a formal complaint. As a result of the disagreement, little was done to address the real issues raised by the study: that shoppers and employees were both unknowingly exposed to "unhealthy" levels of carbon monoxide. Complaints involving more than one medium also raise similar jurisdictional questions within the

division such as who has responsibility to resolve complaints made about small, unpermitted establishments.

Part of the problem is due to the division's failure to set clear policies in this area, even though most authorities recognize that pollution problems are more and more not clearly the province of one medium over another or one agency over another. As a result, agencies and their subunits are often left to settle the differences among themselves, which may mean leaving problems unattended.

Closely related is the problem affecting the routine inspection of permitted sources, which is the branch's primary method of validating a facility's compliance with the laws and regulations. The branch annually inspects major sources as required by EPA. However, it does not routinely inspect the many minor sources (i.e., those emitting less than 100 tons of pollution per year) permitted by the State. According to staff, it has been unable to incorporate this activity into its program because of other priorities.

Technical expertise. A recent EPA audit concluded that the difficulty of the environmental permits branch in attracting and retaining qualified engineers was the "key issue" confronting this program in Hawaii. Although this is a long-standing problem, DOH has made little, if any, progress toward resolving it. Consequently, the program suffers.

The permit process requires a high level of technical expertise and knowledge. Engineering tasks include research, analysis of plans and specifications, mathematical modeling, and the capacity to make judgments. Depending on the size of a facility, the type of process, and the pollutant emitted, an engineer has to decide on standards if no standards exist, determine the nature of the chemical and its impact on ambient air quality, review methodologies of control for that

particular source and chemical, and examine how each source proposes to limit pollution. The review process also involves inspection of facilities, their operations, and control equipment, and monitoring of stack tests. Since pollution controls affect plant efficiencies and profitability, staff must also know how to deal with industry resistance.

According to departmental records for this branch since July 1979, 13 employees have left for employment elsewhere. The most immediate consequence of high turnover is a lack of staff to carry out even minimal program functions. Monthly reports of the air permits section catalogue the difficulties of reviewing and processing permits in a timely manner throughout 1984 and 1985 when two engineer positions were vacant approximately five months and an additional one for seven months. Heavy workloads resulted in a total of approximately 358 hours of overtime by just one engineer during two periods covering about nine months.

For lack of staff, the department has had to turn down EPA funds to conduct a survey of state sources emitting toxic pollutants. At the same time, newly required EPA programs, such as the prevention of significant deterioration program, raise the workload because of the lengthy and complex permit review process they entail. Another consequence of shortages in technical expertise finds engineers handling areas they are unqualified to review. Because of the lack of state standards for toxic pollutants, engineers reviewing permits must establish an emission standard as best they can. The review requires time for research on the chemical, determining its nature, and how to best control it. Stack tests required of major pollution sources are supposed to be monitored by branch staff. However, there was concern among staff that engineers lack the necessary technical background in this area and on several occasions have monitored tests without knowing what to look for.

Although experience does come with work on the job, high rates of turnover nullify this option as a solution. Yet, formally organized staff training remains minimal. There is no training plan with objectives stated for both new and experienced staff and no guidelines on subject areas which engineers need to master. The smoke reading course, once given by the pollution investigation and enforcement branch, has not been given in ten years. In the face of staff shortages, training has become a luxury rather than a necessity. Consequently, the department is caught on a treadmill, unable to ever get ahead of its own problem.

Salaries for staff engineers do include a shortage differential. But that differential has been decreasing due to the way it is calculated even though program needs would justify its increase. A bill enacted by the Legislature in 1986 attempted to address this problem affecting shortage category positions in general but was vetoed as inconsistent with the "basic job value" of positions.

Despite the persistence of this problem, we found no evidence that the department had conducted work-output studies to underscore the technical needs of the air and solid waste permits section. Indeed, based on available evidence, the department's leadership has not yet fully recognized the nature and extent of the problem that exists.

Conclusions

Because Hawaii has faced no severe air pollution crisis nor even a persistent air pollution nuisance of the kind found in many mainland regions, it has been quite easy for DOH to accord air quality protection a low priority. Consequently, both DOH and EPHSD have been less than adequately assertive, willing instead to bend

with pressure without a clear and consistent direction. Indeed, the department and division at times give the impression of sacrificing their responsibilities in this field.

We recognize that air quality control is highly complicated and not something to be evaluated simplistically. But for that very reason, we believe it deserves far better treatment than the department has thus far accorded it. We believe that the central responsibility of DOH lies in protecting public health. Regrettably, we find that it has tended to lose sight of its mission.

Recommendations

With respect to the air pollution control program, we recommend that the Department of Health and its Environmental Protection and Health Services Division do the following:

- 1. Clearly and firmly assume their roles as protectors of public health in the area of air quality; reassert their authority and responsibility for standard setting while drawing upon all affected parties for advice, information, and other input; and promote a positive program of risk assessment that will provide a sounder basis for approaching changes in Hawaii's air quality standards.*

- 2. Clarify and integrate the rules and regulations relating to permits for stationary sources of pollution and develop effective machinery for administering these rules and regulations so as to circumscribe more carefully the conditions that allow operation under an authority to construct permit.*

- 3. Reassess Hawaii's air quality monitoring needs, both overall and with regard to "hot spot" problem areas as they may emerge, and then develop a plan for implementing the identified monitoring system. Such a plan should include performance objectives, resource requirements, and a definite timetable for action.*

4. *Commit themselves to the development of a meaningful planning function which will include the examination of alternative strategies, the commissioning of needed basic research, the promotion of community involvement in and awareness of air quality issues, and the maintenance of a continuing program of feedback and evaluation regarding all components of air pollution control.*

5. *Make sure that enforcement action is vigorous, including development of a clear approach to handling interjurisdictional problems and a program of periodic inspection of minor sources of pollution to go along with the regular monitoring of major sources.*

6. *Undertake, in cooperation with the Department of Personnel Services, a campaign to attract and retain qualified staff and to enhance the technical expertise of such staff through a strong program of in-service training. In this regard, particular attention should be given to classification and compensation of technical staff to assure that the program remains competitive with other employers in obtaining this type of staff.*

Chapter 6

WATER QUALITY PROTECTION

This chapter focuses on the water quality protection responsibilities of the Environmental Protection and Health Services Division (EPHSD) within the Department of Health (DOH). Inasmuch as those responsibilities so extensively intermingle with water-related activities by numerous federal, state, and local agencies, we reviewed how this DOH division fits into the total complex of governmental activities in the broad field of water management.

Due to the technological and administrative complexities involved in water quality protection in Hawaii and due to limitations on time and resources, we had to restrict the scope of our review and did not probe the subject as deeply as we would have liked. We have, though, highlighted some of the basic considerations involved in this area of concern, noted some of the more obvious problems affecting it, and set the stage for possible further assessment of this area.

Summary of Findings

1. Despite a growing recognition of the interrelatedness of various aspects of water management and a state constitutional mandate that a unified approach be taken to such matters, water management activities in Hawaii continue to be quite fragmented. Even in the area of water quality protection, the responsibilities of the Department of Health remain divided between drinking water protection and water pollution control and are administratively dispersed among several different

organizational units. Such fragmentation makes it difficult to give clear focus and to coordinate state actions in this important area of concern.

2. With respect to the drinking water program, we find that:

a. Monitoring of the very toxic chemicals, which produced a recent crisis of pesticide contamination in several water wells on Oahu, has terminated because federal funds are no longer available for that purpose. At the same time, the groundwater protection program to identify and monitor chemicals from other pesticides has yet to be developed.

b. Despite widespread public concern for water quality, the drinking water protection program still suffers from a low priority within the Department of Health. Reorganization, repeatedly recommended, would elevate this program to a more appropriate level, but departmental action has yet to occur.

c. The recent crisis over pesticide contamination revealed a lack of coordination in regulatory roles among affected federal, state, and county agencies. Yet this condition persists. In drafting a required plan for the Legislature, the department has limited participation solely to the planning office of the Environmental Protection and Health Services Division without involving other relevant staff within the division.

3. As for the water pollution control program, we find that:

a. Although an elaborate regulatory mechanism exists for preventing water pollution, weaknesses remain. This becomes particularly evident in terms of discharges on land and underground since they can potentially contaminate groundwater, the primary source of drinking water in Hawaii.

b. Flaws in any one sector of a program can affect other aspects. Achieving consistency in policy and practice for inspections, updating operational manuals, and enforcement actions is crucial but not a reality.

c. Enforcement—through prompt notification, orders for corrective action, and imposition of heavy fines—is basic to effectively combatting water pollution. Since delays allow continued violations, an accurate tracking system is necessary to prevent such delays. Much improvement remains as yet undone.

Water Management in Perspective:

A Fragmented Picture

Continuous growth in population and economic activity has brought increasing efforts by the community through government to protect and enhance our water resources. Because the interests concerned with water as a resource differ so widely in how they would enjoy and utilize it, each level of government and numerous public programs have become involved in planning for and regulating the uses of water. For these reasons, it is important to look at the overall management of water and to keep it in perspective.

Before discussing the management aspects of this resource, it is essential to be aware that water falls into several classifications. The system for classifying the various forms and locations of water is set forth below.

Water classification. All water is not the same, at least not in terms of what functions it can serve and how it should be protected. The first distinction is between inland waters and marine waters. The inland category covers both freshwater and brackish water. Freshwater may be found below ground, the source of over 90 percent of the water used by residents of Hawaii as against only about 50 percent for mainland residents. Streams, lakes, reservoirs, elevated wetlands, and low wetlands contain the rest of our freshwater. Brackish water, falling

between fresh and ocean water in salinity, occurs in coastal wetlands, estuaries, and anchialine pools.¹

We find marine saltwater in embayments (sand beaches and lava rock shorelines), in coastal areas, and of course, the open ocean. Each of these differs in degree of fragility and faces differing kinds and degrees of threat. Each has its own ecological systems present or dependent on it. Accordingly, each requires its own particular kind of treatment as well as serving a select set of users.

Definition of water quality protection. In environmental protection literature, water quality protection is often used synonymously with water pollution control. However, in this chapter, the term is used in a broader sense to refer to the various activities related to water contamination prevention, reduction, and removal. It is so used to distinguish such activities from other aspects of water management which are primarily concerned with water quantity or availability—such as the exploration for, development of, ownership of, transportation and storage of, and control over water. It is also used to denote and recognize that the water quality protection activities of DOH, as administered through EPHSD, are subdivided into two program areas: drinking water protection and water pollution control.

Distinctiveness and interrelatedness of two water program areas. Although these two program areas are quite distinct in some respects—one is concerned with keeping water potable while the other is aimed at the treatment of wastewaters so as to render them harmless—they are also interrelated. What is done with

1. A coined term used to describe landlocked ponds with special geologic features which are unique to the west coast of the Island of Hawaii.

wastewaters may ultimately affect the potability of available drinking water if contaminants from wastewater handling are allowed to infiltrate into drinking water sources. Similarly, the need for wastewater treatment is often determined by the availability of a sufficient supply of potable water to sustain the activity which creates the waste in the first place. In the long run, both programs are aimed at enhancing the quality and usability of water.

Interrelatedness of water management matters in general. This interrelatedness of drinking water and water pollution control simply reflects a growing recognition that almost all aspects of water management—those involved in water quality and those concerned with water quantity or availability—are inextricably related. The use of water is highly dependent upon its quality while that quality, in turn, is affected by how it is used.

However, this recognition of interrelatedness has evolved only gradually. It springs from a multitude of efforts to deal with particular problems of water management and then subsequent realization that these scattered activities impinge upon one another. Thus, when the federal Environmental Protection Agency (EPA) was created, much of its programs, activities, and workload simply represented a gathering together of functions which had previously been spread among numerous other federal agencies. As various federal environmental laws have been added or amended since then, the tendency has been to broaden the scope of each new piece of legislation.

At the same time, there has been no broad attempt to overhaul all of these activities and to integrate them into a single, comprehensive, and closely coordinated body of programs. As a consequence, there are many separate federal laws relating to water management, and many different federal agencies remain

involved in water connected programs. This is exemplified by the situation prevailing with respect to groundwater protection. According to a report by the U.S. Office of Technology Assessment, as of 1984 there were 16 federal laws aimed at groundwater protection, but none were focused exclusively or even primarily on the groundwater problem. Moreover, these laws were often duplicative of or even incompatible with one another. Under EPA policy issued in that same year, primary responsibility for groundwater protection has been placed with the states, and they are being encouraged to develop their own separate comprehensive groundwater programs.²

Recognition of relatedness of water management matters in the Hawaii State Constitution. As far as Hawaii is concerned, there has been a much clearer recognition of the interrelatedness of water management matters and of the need to take a coherent and unified approach to such matters as indicated by the 1978 amendments made to the Hawaii State Constitution.

As revised in 1978, Article XI deals with the conservation, control, and development of the State's natural resources. Section 1 of this article sets forth the broad general policy regarding the conservation and development of natural resources in general. It provides as follows:

"For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of the people."

2. "Maintaining the American Environment," *State Government News*, Vol. 29, No. 11, December 1986, p. 13.

Despite general agreement on the need for a water code, considerable discussion ensued over the state permit system specified in the recommended code. That public debate will likely continue before a code is enacted. If it is passed in any form resembling that recommended by the commission, water quality management will continue to be administratively separate from the other aspects of water management. Then will come the real test of whether such a separation can be reasonably and realistically maintained.

Existing fragmentation of agencies and programs. In the meantime, a fairly broad array of agencies and programs are involved in water management activities in Hawaii. Some of these are amenable to change through the adoption of a state water code, but others—that is, the federal agencies—are not subject to direct state control and action. This array of federal, state, and county agencies and programs is summarized below.

Federal agencies. The federal agency most directly involved in seeking to ensure and enhance water quality is the Environmental Protection Agency. The Executive Reorganization Plan of 1970 transferred responsibility for air pollution, solid waste management, radiation, and drinking water to EPA from the Department of Health, Education, and Welfare. It also transferred water pollution control from the Department of the Interior and authority to register and regulate the use of pesticides from the Department of Agriculture to EPA.

The Geological Survey, under the Department of the Interior, appraises the quantity and quality of this nation's water resources and conducts resource investigations in conjunction with state and local agencies. The U.S. Army Corps of Engineers handles public projects which relate to wetlands, navigable streams, and harbors. It issues permits for construction projects where dredged or fill materials

Section 7 of Article XI then deals specifically with water resources and it provides as follows:

"The State has an obligation to protect, control and regulate the use of Hawaii's water resources for the benefit of its people.

"The legislature shall provide for a water resources agency which, as provided by law, shall set overall water conservation, quality and use policies; define beneficial and reasonable uses; protect ground and surface water resources, watersheds and natural stream environments; establish criteria for water use priorities while assuring appurtenant rights and existing correlative and riparian uses and establish procedures for regulating all uses of Hawaii's water resources."

Efforts to implement constitutional provisions on water. To implement this state and constitutional mandate on water, Act 107, SLH 1982, established an advisory study commission on water resources to conduct a comprehensive review of the various issues relating to water resources here and then to formulate a water code. In examining state statutes and the functions of state agencies, this commission recognized the problems as well as the possible advantages of establishing a single state agency to do all the things specified in that section of the constitution.

Consequently, commissioners recommended a water code that placed overall responsibility in the Department of Land and Natural Resources for water resource protection, conservation, and regulatory functions. At the same time, they recognized that considerable expertise in the field of water quality exists in the Department of Health, the state agency designated to work with federal agencies related to water quality. The commission report, then, once again split responsibility for water quantity and water quality between two state departments, contrary to its mandate that water use and water quality should be regulated by a single agency.

affect navigable waterways and shorelines. The Soil Conservation Service both works with nonurban land users, whose economic activities can pollute waters with silt, and undertakes projects to protect water resources and prevent siltation. The U.S. Coast Guard's role primarily involves regulating and controlling oil spills and pollution discharges from boats and ships.

State agencies. The Department of Land and Natural Resources administers Hawaii's program of water resource management, mineral resource assessment, flood prevention, water development, and irrigation services. Functions encompassed by its water resource management program include: appraising surface and groundwater resources, regulating water development and use, protecting instream uses, and regulating the creation of soil and water conservation districts. It also oversees the state water resources development functional plan, a guide for structuring water-related programs and projects with other state and county agencies.

The Department of Planning and Economic Development administers the coastal zone management program enacted by Congress in 1972. That program seeks to protect coastal waters for recreational opportunities, to restore historic resources, and to improve scenic, open spaces. In performing these functions, it especially affects resort development, agriculture, and energy generating facilities. It also seeks to minimize coastal hazards due to tsunamis, storm waves, stream flooding, and erosion.

The Environmental Protection and Health Services Division administers the drinking water and water pollution control programs, along with control of air quality and solid waste control which can also have significant impacts on water quality. (Dangerous chemicals from waste dumps leach into water supplies, and as

the acid rain problem existing on the mainland and Europe demonstrates, chemicals that constitute air pollution can eventually come down with rain to pollute water supplies.) This agency, consequently, attracts the bulk of our attention in this evaluation.

The Office of Environmental Quality Control (OEQC), attached to the Department of Health, advises the Governor on all environmental quality control needs. It also coordinates public efforts to protect the environment and monitor groundwater sources for suspected pesticides and chemical by-products, and it provides support services to the Environmental Council that reviews environmental impact statements and administers the environmental disclosure law.

The Water Resources Research Center at the University of Hawaii holds primary responsibility for conducting water resources research in Hawaii with its unique geographic and hydrologic conditions. The Department of Transportation, through its Harbors Division, is responsible for enforcing controls against littering and pollution in shore areas. It can also penalize shipowners from discharging pollution into shorewaters and ban vessels for using areas designated as sensitive, such as marine life conservation districts and natural area reserves.

Counties. Within each county, a water supply agency develops and distributes drinking water. Each county conducts its own water planning to deal with water conservation and anticipated water needs. The public works department in each county has responsibility for disposal of sewage wastewater and the operation of municipal treatment plants and garbage landfills. Where public sewage systems are nonexistent, either privately built and operated sewage facilities or cesspools serve this function. The Department of Health and the counties currently share responsibility for monitoring and regulating these private facilities.

Further fragmentation within the Department of Health. From the foregoing, it can be seen that many different agencies and programs are involved in matters affecting water quality protection in Hawaii. Even within DOH, however, there is further fragmentation of activities relating to this vitally important area of concern. As already noted, there is a programmatic separation between drinking water protection and water pollution control. A third and overlapping programmatic focus is also beginning to emerge. This pertains to the area of groundwater protection. In response to federal urgings and to increased local concern over the detection of pesticide contamination of some of Hawaii's water wells, DOH is engaged in the development of a groundwater protection and monitoring program. Despite the close interrelationship between groundwater and drinking water in Hawaii, these efforts are proceeding somewhat apart from work of the drinking water section which falls under the sanitation branch of EPHSD.

This separation of groundwater and drinking water activities illustrates a further fragmentation within DOH which affects the department's management of its water quality protection responsibilities. This is the organizational dispersion of these responsibilities among various units within DOH, including several which are outside of EPHSD.

For example, most matters relating to groundwater protection evaluation and planning have been handled by OEQC (which is attached to DOH but organizationally separate from EPHSD) and by the planning office which is placed under the Deputy Director for Environmental Health. As indicated above, other EPHSD personnel have not been very deeply involved in these evaluation and planning activities. Meanwhile, other planning for the division is handled primarily through the staff services office of EPHSD.

As for the water pollution control program, its activities are spread among the environmental permits branch, the wastewater treatment works construction grants branch, and the pollution investigation and enforcement branch of EPHSD. The drinking water protection program falls mostly under the drinking water section of the sanitation branch of EPHSD, but its responsibilities relating to underground injection wells are handled as part of the water pollution control program.

In subsequent sections of this chapter, we discuss more specifically some of the effects of this fragmentation of the water-related activities within DOH. The main point here, however, is that there is no single official or office within DOH which is in a position to take a broad view of all water-related matters and to give a clear focus and firm direction to water quality protection. Thus, to the extent a relatedness exists among various DOH activities involving water quality protection, the formal programmatic and organizational structures detract from, rather than contribute to, a comprehensive and integrated approach. As a consequence, either informal means will have to be relied upon to achieve cooperation and coordination or the risk will have to be taken of not actually attaining the desired degree of breadth and integration.

Some basic considerations. When looking at this situation in terms of possible changes that might be made, there are several basic considerations. One is that federal actions and activities in this field should not be allowed to overwhelm completely or to neglect Hawaii's particular needs, priorities, and special or unique conditions. While the federal government's preeminence in this field must be recognized and its authority to preempt regulation over various aspects of it must be acceded to, this does not mean that the State should passively accept whatever is

done by federal authorities or that it should not assert itself in areas of particular importance to Hawaii. It also means that we should not necessarily pattern our program and organizational structures after those of the federal government just because it is administratively convenient to do so.

Many conditions in Hawaii are unique, and the situation and problems we face are often quite different from those encountered elsewhere. This being the case, it is incumbent upon the responsible state agency—at present, DOH—to identify Hawaii's special conditions, particular needs, and priorities in water quality protection, and then to study and evaluate how best to deal with these special conditions, particular needs, and priorities. Based upon these steps, action plans can be formulated and efforts can be undertaken to mesh federal and state actions where possible and to seek modification of federal requirements where necessary or appropriate.

Another important consideration is that while all aspects of water quality protection in Hawaii are important, it appears that very high—if not first—priority should be given to the area of drinking water. This is because this use of water is probably the most direct and pervasive in its impact upon the community. Such a priority rating carries with it at least two important implications.

First, it indicates that drinking water protection should be a primary focal point, both programmatically and organizationally, for state actions and activities relating to water quality protection. *Second*, in light of Hawaii's very heavy dependence upon underground sources for its supplies of drinking water, it suggests that the area of overlap between drinking water and underground water should be clearly recognized and that very close coordination should be maintained between drinking water protection activities and groundwater protection activities. At

present, the organizational unit primarily concerned with drinking water protection is located far down in the overall organization of DOH and has had almost no involvement in the recent evaluation and planning in the division for groundwater protection.

Recommendations

1. *We recommend that policymakers in Hawaii continue to give careful consideration to the interrelatedness of the various aspects of water management and how best to implement the mandate of the Hawaii State Constitution to take a unified approach to such matters.*

2. *In the meantime, we recommend that the Department of Health take a comprehensive and integrated approach to its water quality protection responsibilities and develop a programmatic and organizational program of action which will enhance unified and coordinated efforts to provide safe and clean water throughout Hawaii. In so doing, it should make sure that Hawaii's interests and priorities, as well as those of the federal government, receive proper attention. Similarly, it should make sure that adequate recognition is given to the importance of drinking water protection and groundwater protection.*

Shortcomings of the

Drinking Water Program

Drinking water becomes contaminated in three general ways: (1) from natural pollutants such as saltwater encroachment into aquifers or from the carcasses and wastes of wild animals; (2) from human waste disposal practices such as industrial dumping, municipal and landfill operations, underground injection wells, and septic

EPA provides them with financial assistance. However, if a state does not comply, EPA must establish an enforcement program in that state.

For groundwater protection, EPA can designate a special area and its aquifer, then force changes or rejection of any projects in that area which might receive federal assistance if it poses a threat, such as through leaching of chemicals from landfills. Similarly, the Environmental Protection Agency establishes standards for waste injection into deep wells. States must prohibit underground injection unless authorized by permit on condition of posing no endangerment to drinking water sources. A state's program then must also require maintaining records, reporting, monitoring, and inspecting of such wells.

Each state is provided with financial assistance for planning and developing its program. States must prepare both a workplan defining those tasks to be performed and estimated costs of federal funds needed. Upon approving such plans, EPA's regional offices oversee the state programs and conduct annual evaluations of them.

Hawaii's program. Chapter 340E, HRS, Safe Drinking Water, and Chapter 20, Potable Water Systems, of DOH's administrative rules established drinking water standards and a supervision program here. The drinking water section of the sanitation branch conducts the planning and regulatory functions, along with seeing that rules are properly adopted. All plans and specifications for new drinking water systems and any extension of existing ones must be reviewed and approved prior to providing water to consumers. In authorizing new systems, this DOH section calls on such other agencies as the University of Hawaii's Water Resources Research Center, Department of Land and Natural Resources, and the U.S. Geological Survey. Except for that handled by the Honolulu Board of Water

tanks; and (3) other human activities including agricultural runoff, oil and gas operations, accidental spills of toxic materials and leakage from storage tanks, as well as fallout from airborne pollutants.

The attention of EPA first went to protecting surface sources of drinking water, a more acute problem on the mainland than in Hawaii. Groundwater protection proved even more difficult to deal with; once groundwater sources become contaminated, the process may be irreversible. Such groundwater sources may then require expensive filtration, aeration, or other treatment to become usable again. It has, consequently, become an increasingly important environmental issue elsewhere and is particularly critical in Hawaii with our heavy dependence on that source. This is reflected in the considerable public attention given to the discovery of pesticide and other chemical contamination of waters in some Oahu wells in the past several years.

Program Structure

Federal. The federal Safe Drinking Water Act of 1974, as amended in 1977, provides the Environmental Protection Agency with broad authority: (1) to establish standards for the quality of both ground and surface waters, (2) to protect valuable groundwater sources and aquifers, and (3) to protect drinking water from the contamination of underground waste injection. These three components essentially describe the State's, as well as the federal, drinking water program.

The Environmental Protection Agency promulgates regulations for maximum acceptable contaminant levels in public water sources under the drinking water program. The states hold primary responsibility for enforcing those standards, but

Supply, this section conducts all chemical analyses for water samples required from system operators.

Surveys of 20 percent of the 180 existing water systems each year test for turbidity and microbiological, radiological, and chemical contaminants. Included also is an engineering analysis of each drinking water system surveyed. The drinking water section also lends technical assistance to water suppliers to improve their systems, handle emergencies, and accomplish disease surveillance. It also must take enforcement action for noncompliance.

Aware of the limitations in federal groundwater protection, EPA did formulate an action strategy in 1984. But in the meantime that same year, pesticide contamination turned up in some Hawaiian aquifers. The Legislature then directed that OEQC establish an integrated pesticide policy and coordinate those public agencies responsible for overseeing the uses of pesticide in the interest of water quality.

The Water Resources Monitoring Committee of OEQC completed a survey of all efforts at groundwater monitoring in Hawaii. That information, along with data on subsurface water and soil quality from the Water Resources Research Center, provided a base for developing a systematic groundwater monitoring strategy. It should, by early 1987, formulate an ongoing water resources monitoring system for Hawaii. In addition, OEQC prepared a health risk assessment procedure for toxic chemicals as part of the pesticide policy.

To implement a concerted groundwater monitoring and health risk assessment program, the Legislature adopted Act 220 during its 1986 session. That act specifically directs DOH to establish a groundwater protection plan and initiate a baseline groundwater monitoring program.

The Environmental Protection and Health Services Division established an underground injection program in October 1985. Full delegation of responsibility to the State from EPA is expected during 1987. The underground injection control program, administered by the wastewater permits section, currently includes permitting underground injection only for Class V wells. Those involve sewage and industrial disposal wells, cooling water return flow wells, drainage wells, and aquaculture fluid disposal wells. Administrative rules prohibit all other kinds of wells in Hawaii.

Problem Areas in the Regulatory System

Deficiencies in how state agencies protect the public in vital matters relating to food and drinking water dramatically came to public attention first with the discovery of heptachlor contamination of milk supplies on Oahu in 1982. While corrective actions did occur for that case, other problems occurred which continue to call for concerted adjustments. These involve the area of drinking water.

Monitoring. In recent years, such chemicals as ethylene dibromide, known as EDB; dibromochloropropane, known as DBCP; and trichloropropane, known as TCP, have appeared in Hawaii's groundwater supplies. Due to their potentially harmful health effects, these toxic chemicals have generated deep concern here. Installation of purification plants to remove these contaminants have occurred on Oahu. However, the State has left monitoring for them to the Honolulu Board of Water Supply.

Safe drinking water regulations in Hawaii include all standards for contaminants identified in federal regulations. And EPA continues to establish

additional maximum contaminant levels for additional chemicals. The 1986 amendments to the federal Safe Drinking Water Act will require 82 new drinking water standards over the next three years.

When maximum contaminant levels are exceeded, few options exist: either to seek alternative drinking water sources or to close the source. Reducing contaminant levels, such as by installing granular activated carbon filtration systems, takes more time to complete. The latter was done on Oahu.

In April 1985, EPA questioned continued use of federal drinking water funds by DOH to sample and analyze for pesticide contaminants. Since groundwater monitoring is not part of the State's safe drinking water workplan, EPA recommended seeking other program funds for that purpose.

The drinking water section has since terminated its monitoring of pesticide contamination of groundwater sources since those chemicals do not appear on the list of current federal drinking water standards. That leaves such monitoring entirely to the Honolulu Board of Water Supply with its limited chemical analysis capability.

In developing a groundwater monitoring strategy plan, OEQC attempted to establish a coordinated working agreement between affected agencies. The roles and coordinative mechanism, however, have yet to be clearly defined and resolved. Because of this delay, EPA, in its 1986 midyear evaluation of this program, cited this deficiency as in need of early correction.

Inadequate focus. Because historically drinking water was viewed as a "food" requiring sanitary controls for the prevention of waterborne diseases, it was assigned to the sanitation branch of DOH. Passage of the federal Safe Drinking

Water Act, however, changed that. The larger concern now is to prevent chemical contaminants from entering drinking water sources.

Armed with a complex set of federal and state controls, this program uses entirely new technology and analysis, and it is expected to expand in breadth of coverage. Yet, despite this development, the responsible section remains subordinate to the sanitation branch even though administratively it functions much like other branches in the Environmental Protection and Health Services Division.

The section reviews the state drinking water program budget, executes the annual workplan, coordinates water sampling throughout the State, tests samples, and trains and certifies sanitarians for sampling. Since 1980, EPA has consistently recommended upgrading the program to branch status. In its January 1986 evaluation report, EPA stated:

"We remain concerned that the organizational location of the Drinking Water Program as a section in the Sanitation Branch does not provide the organizational strength and public visibility the program warrants. We believe that upgrading the organizational placement of the program would help respond to public concern regarding the State's ability to respond to contamination incidents, and enhance program management effectiveness with other governmental and private agencies."

To date, the division has not acted on this recommendation nor has it provided a reason for not proceeding in this direction. Instead, the October 1985 draft plan notes that the department will pursue a reorganization of the division that would establish a groundwater protection branch. It would include the existing drinking water and underground injection control programs. Considering the close interrelationships between drinking water and groundwater protection in Hawaii, this may well be the course to follow. However, the merits of such an option remain unrepresented.

Planning and coordination. The discovery of pesticides in underground water sources revealed the lack of coordination of responsibilities for groundwater monitoring among various county, state, and federal agencies. Consequently, Act 275, SLH 1984, designated OEQC to coordinate all affected agencies and make recommendations for an effective prevention effort. The Legislature went further in passing Act 220 in 1986. It requires DOH to develop a groundwater protection strategy and plan for submission by January 1987. That plan should: (1) identify the resources necessary to implement the program, and (2) set program goals and discuss what needs to be done to accomplish those goals.

Central to any effective planning effort is the practical need to involve all affected parties. They all need to feel a part of the process so that they can contribute their know-how, identify with the eventual plan, and then more readily fit their own programs into it on a coordinated basis. Anything less would be dysfunctional and possibly disruptive. Given the great number of agencies affected, a concerted involvement of them from the start appears essential.

Yet, EPHSD left the division's planning office to develop this plan alone, not even bringing in staff from other branches within the division much less from other divisions of DOH, other departments, and other levels of government. Implementation has also been incohesive. The planning office expects to administer part of the new program's operations itself for perhaps a couple of years separately from the drinking water program. Moreover, the planning office had already started to hire staff without completing an operational plan.

The effects of this lack of coordination show up strikingly in the groundwater monitoring activities. The water sampling to be performed by the new groundwater staff is the same as that conducted by drinking water section staff.

Recommendations

1. *The Department of Health should seek additional funding from the Legislature to reinstate and expand the monitoring effort of its drinking water section to include contaminants of greatest concern to Hawaii.*

2. *The Department of Health, drawing on recommendations from the federal Environmental Protection Agency and other interested parties, should proceed as quickly as possible to upgrade the safe drinking water protection program and give proper emphasis to it in relation to the whole area of groundwater protection.*

3. *The Department of Health should further examine how to achieve better overall coordination on water quality protection matters, both within the department and between the department and other state and county agencies. Based upon this examination, it should come up with a definite plan for more integrated planning and better communication among the various affected parties. It should also immediately include the drinking water program in division planning for groundwater protection.*

Federal and State Programs for Water Pollution Control

Federal level. Water pollution protection dates back to 1899 under the Rivers and Harbors Act. Only with passage of the federal Water Pollution Control Act in 1972 did the current framework emerge. Modified in 1977 and 1981 to deal with toxic water pollutants, that legislation is now known as the Clean Water Act. Its major objective is to "restore and maintain the chemical, physical and biological integrity of the nation's waters." It seeks to secure "water quality which provides

for the protection and propagation of fish, shellfish, and wildlife, and provides for recreation in and on the waters."

This program distinguishes point and nonpoint sources of pollution. An example of a point source is an outfall pipe from a sewage treatment plant or industrial facility. Sources for which the exact origin cannot be located are classified as nonpoint sources. These include runoff from city streets into storm drains, construction sites, or agricultural lands whose runoff eventually flows into rivers and on to the ocean. This difference readily complicates enforcement.

Federal legislation establishes five programs which happen to emphasize point sources, especially discharges of wastewaters from industrial and municipal facilities. The five are:

1. Permit program: Under the National Pollutant Discharge Elimination System, sewage facilities which dump into existing waters must obtain a permit. They must then disclose volume and nature of discharges, monitor and report compliance or noncompliance with limitations imposed, and authorize EPA or citizen enforcement in the event of noncompliance.

2. Effluent treatment: All publicly-owned sewage treatment systems must provide both primary (physical) and secondary (biological) treatment. All industries discharging toxic pollutants into publicly-owned sewage systems must have pretreatment to ensure that those toxic materials neither pass through nor detrimentally affect the public secondary treatment process.

3. Water quality standards: Each state must establish water quality standards for all surface waters within its borders. Those standards must relate to specified bodies of water.

4. Toxic and other pollutants: Specific provisions are established to deal with oil spills, discharge of toxic chemicals, and commercial chemical plant runoff.

5. Construction grants: States which provide funds to local communities to finance new or improve existing sewage systems and treatment facilities receive federal financial assistance.

State and local governments are required to establish plans specifying the phases and procedures to bring water quality up to acceptable levels for both point and nonpoint source pollution. Federal funding underwrites state planning and then the subsequent tasks specified in annual workplans. The act also provides for states to conduct biological tests on fish and shellfish for toxic pollutants in receiving waters and to conduct intensive surveys of ambient water quality.

A state may administer its own program with federal assistance through the Environmental Protection Agency, which delegates that authority to a state when its program plans meet all federal regulations. However, EPA retains authority for oversight by conducting mid-year and annual evaluations, and can perform special surveys and investigations through its own efforts if it deems them appropriate.

Hawaii's program. Chapter 342, HRS, and the Department of Health's administrative rules (Title 11, Chapter 54, Water Quality Standards and Chapter 55, Water Pollution Control) govern Hawaii's water quality program. These statutes and administrative rules provide broad powers to the department to establish standards, issue permits, monitor, inspect, and enforce violations.

In 1974, EPA delegated to Hawaii the operation of this program. The scope of Hawaii's water pollution control program actually exceeds the federal program. For instance, the State is supposed to inspect individual wastewater systems and private wastewater treatment works which discharge on land or into underground injection

wells, a regulatory area also covered in the federal Safe Drinking Water Act but administered as part of the water pollution control program in Hawaii. Further, the State also sets zone of mixing standards for areas around outfall pipes which cannot meet ambient water quality standards.

The federal water pollution program is complex enough in itself with detailed technical standards. In Hawaii, it is further complicated by the organizational structure within the lead agency, DOH's Environmental Protection and Health Services Division. The three principal functions are administered by several branches and sections within branches:

1. Permits, under the wastewater permits section of the environmental permits branch, involve application review, engineering plan analysis, public hearings, and permit issuance. This encompasses responsibility for the National Pollutant Discharge Elimination System, zone of mixing, and underground injection control permits. Slated soon for this section is engineering analysis for near-shore fill and dredging permits.

2. Monitoring, inspection, and enforcement of the National Pollutant Discharge Elimination System are conducted by the compliance monitoring and enforcement section of the pollution investigation and enforcement branch. This section takes responsibility for monitoring compliance by industrial, municipal, state, and federal treatment facilities discharging into the ocean; also by commercial pretreatment systems. It inspects major dischargers (more than one million gallons per day) annually and minor dischargers once every two or three years. Environmental control section No. 2, which is also under the pollution investigation and enforcement branch, is responsible for: (a) sewage wastewater spill violation inspections and enforcement involving line breaks, substation pump

failures, and complaints; (b) zone of mixing report monitoring of effluent limits; (c) private wastewater treatment compliance inspections; (d) ambient water quality monitoring of shorelines and beaches; (e) intensive surveys of water quality segments and coastal water areas which do not meet standards despite application of requirements; (f) aquatic wildlife kill investigations; and (g) oil spill investigations for the U.S. Coast Guard involving storm drain systems.

3. Inspection of operations and maintenance for all National Pollutant Discharge Elimination System and municipal treatment plants which received federal construction grants is one responsibility of the wastewater treatment works construction grants branch. It also intends to inspect private treatment plants that dispose wastewaters into fields for leaching or agricultural fields and wells.

Weaknesses in Administrative

Rules and Permit Conditions

Weaknesses appear in several facets of this program, most notably in the regulation of private and public treatment plants and in the control of underground injection.

Private wastewater treatment works. Some 170 privately owned and operated wastewater treatment systems around the State dispose of effluent on land, either onto fields for leaching or agricultural fields and/or into injection wells. Those providing secondary treatment do not require permits nor need they maintain effluent monitoring data to report to DOH. In contrast, all wastewater discharge systems under the National Pollutant Discharge Elimination System are monitored and must report data.

Chapter 38 of the department's rules did require permits and reporting for private treatment operations until 1983. In anticipation of the State delegating this entire regulatory function to the counties (which regulate land utilization and infrastructures for future development), the department eliminated permits, stipulating only data reporting.

Act 282, SLH 1985, established an interim administrative rule until each county assumed complete administration. That interim measure not only left a permit requirement out; it eliminated any need for reporting effluent discharge data as well. Consequently, while inspections do follow complaints about odors and spills, no preventive monitoring mechanism exists.

Although Act 282 provided an interim measure until the counties can take over this program, the counties are reluctant to accept administration unless state funds accompany the added responsibility. That brought on Act 302, SLH 1986, which directed DOH to adopt new rules to regulate private wastewater treatment. The Deputy Director for Environmental Health has assigned a task force to review the program and revise the rules. However, that task will take time—well into 1987. In the meantime, a regulatory vacuum continues to exist.

Public wastewater treatment. Nine federal and three state-operated treatment facilities operate in Hawaii under National Pollutant Discharge Elimination System requirements. They are greatly outnumbered by the 31 municipal facilities, 19 of which discharge sewage wastewater into the ocean and so fall under National Pollutant Discharge Elimination System stipulations. Of the remaining 12 facilities, 9 have received federal construction grants.

One federal construction grant provision calls for operational and maintenance inspections of plant processing and mechanical performance. Having received

federal funds, these nine county facilities are subject to such inspections by DOH. Facilities not constructed with federal funds also receive inspections through a mutual understanding with each county. However, the State need not inspect or enforce rules for those treatment facilities discharging sewage on land.

Underground injection control. Federal law regulates five classes of injection wells. The first four classes—those injecting hazardous waste, fluids linked to oil or gas production, fluids for mining, and radioactive wastes—are prohibited in Hawaii. Only Class V wells—those for storm water, industrial, and sewage wastewaters—are permitted, and they number between 300 and 400 according to U.S. Geological Survey information. Initiated in October 1985, this program has issued some 160 permits thus far.

Section 340E-2e, HRS, authorizes the Director of Health to promulgate rules for underground injection control requiring "inspection, monitoring, record keeping, and reporting." The department's rules, to the contrary, only require operators to keep records of effluent disposed, albeit without requiring that they report the data. Moreover, there is no administrative provision for the division to inspect the wells or conduct sampling.

Section 401 certification. Section 401 of the federal Clean Water Act requires EPA to certify that dredge and fill operations, as permitted by the U.S. Corps of Engineers, do not endanger basic water quality standards unless variance requirements are met. In this vein, the Legislature passed Act 30, SLH 1986, authorizing DOH to act as a certifying agency to ensure that dredge and fill activities are consistent with water pollution control measures of the State. While the division's planning office is developing administrative rules for certification,

provisions for inspection and enforcement remain uncertain. Indeed, lines of responsibility between the U.S. Corps of Engineers and DOH await clarification.

Need to Define Policy and Procedures

Operating manuals can provide useful guidelines on policies and procedures for staff. Manuals can also serve as a program planning tool to evaluate organizational accomplishments and identify problems. We found in our assessment of the water pollution control program by the pollution investigation and enforcement branch a lack of specification on operating policy and procedures in the manuals being used and, in effect, an absence of such a manual for one of the units.

The recent case of sewage spills and related problems at East Honolulu Community Services, Inc., sewage treatment plant illustrates the need for timely inspections and vigorous follow-up action when significant instances of noncompliance occur. Examination of monitoring reports, inspection schedules, and notices of violation relative to this facility show that its effluent in December 1985 exceeded acceptable contaminant levels and that operational problems existed. A special inspection in February 1986 identified major weaknesses in the plant and its operations. A special sampling inspection in March confirmed the December findings. At a subsequent public hearing requested by the owner, an agreement for corrective measures and compliance was accepted.

However, such follow-up action appears to be the exception rather than the normal practice. According to EPA and state guidelines, a "significant noncompliance" occurs when limits are exceeded twice during a six-month period. However, inspection schedules are set a year in advance and occur only once a year

for major dischargers. Determining operational adequacy normally rests on review of monitoring reports rather than conducting special inspections such as the one done for East Honolulu Community Services, Inc. Additional funds for special inspections are not available even though enforcement action criteria dictate the need for follow-up inspections where contaminants exceed maximum levels.

Environmental control section No. 2 is the unit responsible to conduct inspections and enforcement of violations for all water pollution programs except the National Pollutant Discharge Elimination System. Other than providing an inspection checklist for private wastewater treatment systems and wastewater spills, bypasses, and unauthorized discharges, the manual's operating procedures to conduct inspections and enforcement are less than clearly defined. Yet, this manual provides guidance on groundwater monitoring and water quality sampling for zone of mixing which are not performed by this section.

Need to Improve

Enforcement Process

In its annual evaluation report of 1984 for the National Pollutant Discharge Elimination System program, EPA noted delays in filing enforcement notices for violations by DOH. Those delays were attributed to inadequate staff assignments by the Attorney General to this program. From what documents we could locate, we could not verify when enforcement documents were drafted and submitted to the Attorney General's office for legal review because route slips are routinely discarded.

A review of the logbook containing a record of legal docket numbers by calendar year did throw light on the time involved. In 1984 it was, apparently,

taking between four and eight months to process enforcement notices. While that time has decreased to between one and two months, we still find a lack of justification for even that length of time, given the potential seriousness of some violations. Moreover, not all notices follow the same format, depending on which deputy attorney general handles a case. Some are simply letters whereas other are more formal documents. This situation can inject needless confusion.

Recommendations

1. *The Department of Health should establish rules for uniformly regulating all wastewater treatment systems—whether private or public in ownership and operation—for monitoring and sampling effluent discharged into wells. It should clearly specify responsibility for inspections and enforcement of Section 401 certification.*

2. *The Department of Health should establish operational policies and procedures to provide for prompt follow-up inspections where maximum contaminant levels have occurred. Efforts in this area should include making provision for adequate resources to carry out enforcement actions.*

3. *The Department of Health should initiate an effective tracking system to identify delays in reviewing and routing documents, evaluating problems, and issuing legal notices. Cooperation from the Department of the Attorney General will be necessary to standardize the format on written notices of violation.*

APPENDIX

RESPONSE OF THE AFFECTED AGENCY

COMMENTS ON AGENCY RESPONSE

As is customary, copies of a preliminary draft of this report were sent to the Director of Health as well as to the Governor and the presiding officers of the two houses of the Legislature. The Director of Health was requested to provide us with the comments of his department on the recommendations contained in the audit report.

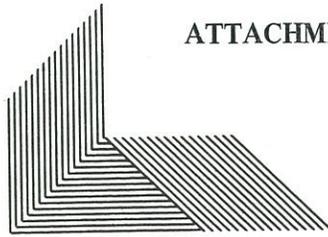
A copy of the transmittal letter to the Director of Health is included herewith as Attachment 1. Similar letters were sent to the other affected parties. The Director of Health submitted a response dated February 13, 1987, which is included here as Attachment 2.

In his response, the Director of Health said he found the audit report "a bit disappointing in that it does not seem to encompass the entire subject and is quite shallow." However, as clearly indicated in the audit report itself, the scope of the audit was necessarily confined by two important considerations: (1) the fairly specific focus of the legislative request for the audit, and (2) the limited time and resources available to carry out the audit.

The most significant point with regard to the response to this audit is that the Department of Health agrees with most of the recommendations contained in the audit report. Where disagreement is expressed, it is on the basis either that the recommended actions are already claimed to be underway or that some obstacles stand in the way of implementing the recommendations.

ATTACHMENT 1

THE OFFICE OF THE AUDITOR
STATE OF HAWAII
465 S. KING STREET, RM. 500
HONOLULU, HAWAII 96813



CLINTON T. TANIMURA
AUDITOR

February 2, 1987

COPY

John C. Lewin, M.D., Director
Department of Health
1250 Punchbowl Street
Honolulu, Hawaii 96813

Dear Dr. Lewin:

Enclosed are two copies, numbered 4 and 5, of our preliminary report on the *Management and Program Audit of the Environmental Protection and Health Services Division of the Department of Health*. We call your attention to the recommendations affecting your department which are made in Chapters 3, 4, 5, and 6 of the report. If you have any comments on the recommendations, we ask that you submit them in writing to our office by February 13, 1987, for inclusion in the final report.

The Governor and the presiding officers of the two houses of the Legislature have been provided copies of this preliminary report.

Since the report is not in final form and there may be changes to it, access to this report should be restricted to those officials whom you might wish to call upon to assist you in the review of the report. Public release of the report will be made solely by our office and only after the report is published in its final form and submitted to the Legislature.

We appreciate the assistance and cooperation extended to us by officials and staff members of your department.

Sincerely,

Clinton T. Tanimura
Legislative Auditor

Enclosures

ATTACHMENT 2

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



LESLIE S. MATSUBARA
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH

P. O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:
File:

February 13, 1987

Mr. Clinton T. Tanimura
Legislative Auditor
465 South King Street
Honolulu, Hawaii 96813

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OFF. OF THE AUDITOR
STATE OF HAWAII

Dear Mr. Tanimura:

Thank you for the opportunity to comment on the MANAGEMENT AND PROGRAM AUDIT OF THE ENVIRONMENTAL PROTECTION AND HEALTH SERVICES DIVISION OF THE DEPARTMENT OF HEALTH. The Audit Report is a bit disappointing in that it does not seem to encompass the entire subject and is quite shallow.

I have enclosed two sets of documents, one is a response to the recommendations of Chapters 3, 4, 5 and 6, and the other is the comments of the Division regarding each Chapter.

Sincerely,

JOHN C. LEWIN, M.D.
Director of Health

Enclosures

EPHSD RESPONSES TO LEGISLATIVE AUDIT

CHAPTER 3

RECOMMENDATIONS

1. We accept this recommendation, the suggested activity has been initiated.
2. We accept this recommendation but feel that the requested documents are all in existence but not compiled into a single document. We will investigate the internal need for establishing more definitive policies.
3. We will consider this recommendation but must approach it with reservations since the pure theoretical approach is not always applicable in Division operations. We also feel that planning, personnel and budgeting are all different functions but we will document the relationships.
4. This is all in place at a high level in various documents, i.e. Variance Reports, the Executive Budget, etc. We will investigate expansion of this into lower levels of activity.
5. This recommendation is not workable since we must use DOH and B&F policies and procedures. Furthermore, instructions are prepared for each budget period based upon current guidelines. Instruction and informal training on the budgeting process are offered to all Budget Managers, formal training has not proved adequate in the past.
6. This recommendation is not practical. EPHSD must utilize DOH and DPS personnel procedures. We cannot control organizational units outside the Division. The current system utilized is adequate to the Divisions needs since all actions are logged at either DOH Personnel or ASO and any follow-up can be done utilizing their logs without expending additional funds for copying, filing, etc.

CHAPTER 4

RECOMMENDATIONS

1. a. Goals exist but at a relatively high level. The Division will examine defining goals at a more detailed level as the new Information System is implemented.
- b. This activity is also a part of the new Information System and will be implemented soon. The main deterrent is planning the emergency response so that these emergencies do not detract from the overall performance of the unit.
- c. This activity is in process at the Department level with input from the Division.
2. This is recognized as a very important issue, not only on the F & D Program but throughout the Division's programs. The Department is also addressing this problem with input from the Division.

CHAPTER 5

RECOMMENDATIONS

1. The Federal Standards are based upon Public Health protection and Risk Assesments. Although some State Standards are more stringent than the Federal Standards, the State Standards are not based upon scientific data. There is no compromise to public health protection by going to Federal Standards as we develop data that indicates the State Standards are too stringent and too costly and meaningless to enforce.
2. We recognize this problem and will clarify this situation after considering all alternatives including the maximum protection of public health.

3. The major Air Pollution measuring stations are in a joint EPA/State system and are a part of the national monitoring and data collection program. The State maintains a smaller system to perform certain monitoring but it is quite costly. The Division will plan for expansion of this system identifying cost, data utilization, contaminants to be measured, preferred sites, etc., and present the findings to the Legislature for funding at the 1988 Session.
4. We must disagree with this recommendation, all of these components are in place either in the State or EPA and are assessed every six months.
5. Recent changes in Enforcement actions satisfies this recommendation in respect to the first part of this recommendation. Minor sources will be examined to determine the effectiveness of additional monitoring and enforcement and additional resources will be identified and presented during the next Legislative session.
6. The Division has no control over requested Personnel actions after they are processed through DOH Personnel.

CHAPTER 6

RECOMMENDATIONS

Page 108

1. The Division and the Department are dedicated to the protection of Drinking Water Quality but are not responsible for the implementation of the State Water Code. We are willing to support the Legislature in this activity as they request.

2. This recommendation is already in process through the activities as a response to Act 220-86 of the Hawaii State Legislature.

Page 116

1. The support of the June 1986 Amendments of the Safe Drinking Water Act has been requested from the Legislature in the Supplemental Budget.
2. The planning for a reorganization of the EPHSD is in progress and the Director is on record that this activity is one of his high priorities.
3. This recommendation is also directed at the State Water Code which must be initiated by Legislative action. It is not under control of the Division. With respect to the recommendation on integrating of the planning activities of Safe Drinking Water and Ground Water Protection, it must be reported that these programs are inseparable and the planning must be and is integrated.

Page 125

1. The resolution of this recommendation is in process with the new proposed Chapter 57 of the Administrative Rules. The 401 Certification Program is being developed and is part of the Executive Budget request.
2. All policies for Enforcement are in place and are current.
3. The Division has no control over the Office of the Attorney General. We can track documents within our shop until they leave and when they return but cannot influence the A.G.'s record system.

EPHSD COMMENTS TO LEGISLATIVE AUDIT

CHAPTER 2

The Division finds that Chapter 2 is illogically constructed. Personnel are listed for Oahu only and the listed numbers are often erroneous. The included funding chart (table2.1) is not complete and omits over \$300,000 in Division budgets. The Division is concerned that a comparison of Oahu personnel and Statewide budgets will lead to some false conclusions by the reader.

CHAPTER 3

The Division Administration is concerned with the misrepresentation of facts throughout this Chapter. Additionally, it is hard to understand why the audit of the Division management didn't include the constraints placed upon the Division by the Department, other Departments and the Legislature. To claim, as this report strongly does, that the Division has been non-responsive without examining and documenting the causes seems to be a questionable audit procedure. To indict an operation without discussing the facts that were made available to the Auditor is another questionable tactic.

CHAPTER 4

The writing technique that is utilized in this Chapter makes it very difficult to differentiate between fact and opinions of the Auditor since they are interwoven during the narrative. The discussions of how things should be done is quite theoretical and seems to indicate the Auditor does not truly understand the program. One also gets the impression that the Auditor doesn't understand the Budgeting and Legislative process with respect to receiving additional personnel and funds.

CHAPTER 5

The Division is concerned that there is a misunderstanding regarding the intent of Environmental Programs in general. Certainly a primary intent of these programs is the impact of pollution upon Public Health, but nonetheless they are primarily to protect the environment. The federal and State statutes define the limits of the Divisions' authority. To accomplish many of the tasks referred to in this Chapter would require a substantial increase in manpower and other costs as well as significant revisions to several statutes. A criticism of the Division for things that are outside the defined scope of responsibility for that Division seems to be of questional value in an audit report.

CHAPTER 6

The premis of this Chapter indicates the Auditor did not take the time to understand the difference between a Drinking Water and a Water Pollution program. While we can respond to the Recommendations we find the inferred sameness of the two programs to be of questionable logic. One must understand that the Water Pollution program deals primarily with the environmental pollution as defined by the Clean Water Act which is not a part of, nor will it become a part of, the activities related to the drinking water supply except for very rare occasions. The Water Pollution Program therefore is not the same nor are the same approaches possible as in the Drinking Water Program. The Drinking Water Program is a program to assure the quality of the States' drinking water and is primarily a Health program. This lack of understanding permeates throughout the Chapter and results in some questionable logic.

