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Toxic Substances

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# State Integrated Toxics Management: 20 Profiles

## Toxics Integration Information Series



EPA 560/TIIS-83-005

STATE INTEGRATED TOXICS MANAGEMENT: 20 PROFILES

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STATE INTEGRATED TOXICS MANAGEMENT: 20 PROFILES

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## PREFACE


During 1982, we examined the health and environmental programs of eighteen states to assess state capabilities and common needs with respect to identifying and solving cross-media toxic substances problems.

Discussions with a variety of state officials covered such areas as statutory and executive authorities, organizational structures, data management and toxics control efforts. In addition, problems and issues such as proprietary information, risk assessment, and resource cutbacks sometimes surfaced. Using this information, the State Profiles were prepared.

Drafts of the Profiles were reviewed by officials in the respective states, and their comments have been incorporated into this document. In addition, drafts were reviewed by selected EPA Regional and program office staff; EPA comments are incorporated also.

As requested, the Profiles are being provided to health and environmental agencies in all of the states to help facilitate information sharing among them. Further, we are in the process of evaluating mutual state needs in order to provide appropriate technical assistance where feasible. We hope this publication will serve to further both purposes.

Further information on the States Project can be obtained by contacting Marsha Ramsay at (202) 382-3405.



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## TABLE OF CONTENTS

	<u>Page</u>
Arkansas.....	1
California.....	7
Colorado.....	20
Connecticut.....	28
Illinois.....	37
Maryland.....	50
Massachusetts.....	60
Michigan.....	71
Montana.....	87
New Jersey.....	97
New Mexico.....	107
New York.....	115
North Carolina.....	131
Oklahoma.....	146
Pennsylvania.....	153
Utah.....	161
Virginia.....	171
Wisconsin.....	182
 Florida.....	 191
Washington.....	198

## Arkansas ITM Summary

### I. Toxics Authorities

#### A. Major Toxics Related Legislation

1. Water and Air Pollution Control Act (as amended).
2. Hazardous Material Transportation Act.
3. Hazardous Waste Management Act.
4. Resource Reclamation Act.

#### B. Major Agencies

1. Department of Pollution Control and Ecology (DPC&E).
2. Office of Emergency Services.
3. Department of Health (DOH).
4. Arkansas Transportation Commission.

#### C. Other Agencies

1. Department of Highways and Transportation.
2. Arkansas State Police.
3. Arkansas National Guard.

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate

1. Executive Order 78-2 creating the Toxic Substances and Hazardous Materials Strategy.

#### B. Major Cooperative Efforts

1. Memorandum of Understanding on Toxic Spills between DPC&E and DOH.
2. "One stop" permitting.
3. Emergency Operations Plan.

### III. Information Management

#### A. Means of Gathering Data

1. Consolidated laboratories
2. Monitors and investigation trained in all media (air, water, etc.)
3. Limited epidemiological studies.
4. Required reporting of amounts and kinds of all hazardous wastes.

B. Data Coordination

1. Consolidated data system within DPC&E.

IV. Toxics Control

A. Emergency Management

1. Emergency Operations Plan involving DPC&E, DOH, Office of Emergency Services, Department of Highways and Transportation.

B. Transportation - Related Problems

1. Cooperation between DPC&E and DOT in addressing problems.

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## Arkansas ITM

### I. Toxics Authorities

Arkansas' integrated toxics management was formally initiated in 1978 under Executive Order 782, which mandated the creation of the Toxic Substances and Hazardous Materials Strategy. This highly ambitious Strategy was designed by a Committee of Department Heads representing seven major State agencies (Department of Pollution Control and Ecology, Department of Health, Department of Commerce, Department of Transportation, Department of Public Safety, Department of Computer Services and Department of Game and Fish). The Strategy was completed during the fall of 1978.

The Strategy called for a highly visible and formal structure of interagency subcommittees to provide coordination of major activities such as emergency response, health studies, regulatory development, etc. Due to a series of State and federal funding reductions beginning in 1979, interagency coordination has been on an informal, ad hoc, basis rather than through the subcommittees.

Most of the needed legislation and regulation authorities which were identified in the Strategy were obtained in 1979. Major legislation included the Arkansas Hazardous Waste Management Act (Act 406 and Act 1979) and the Arkansas Resource Reclamation Act (Act 1098 of 1979). Act 406 and Act 1098 authorizes the Arkansas Department of Pollution Control and Ecology (DPC&E) to collect information and conduct studies regarding most aspects of toxics. Act 406 further requires the DPC&E to "integrate all provisions of this Act with the appropriate revision of other Acts." As will be explained below, much of the integration of toxics management is centered in DPC&E, due to the wide range of the Department's regulatory and investigative authorities.

### II. Organizational Coordination in Toxics Management

As previously mentioned, resource limitations have caused the formal interagency coordination which was envisioned in the Strategy to give way to a much less comprehensive approach. Instead of focusing resources through the various subcommittees envisioned in the 1978 Strategy, the State has focused its resources where there are immediate needs and where toxics management is considered within those needs. For example, DPC&E is currently developing a comprehensive groundwater management strategy which necessarily recognizes and provides for interagency efforts.

### III. Information Management

The largest steps toward integration within the sector of information management are being taken by DPC&E. The Department maintains a consolidated system of laboratories. Those responsible for inspection and monitoring are trained in all environmental media thus resulting in large economic savings. Furthermore, all collected data is housed in a consolidated data system.

Efforts at integration of information management at the State Department of Health have been somewhat less successful than those at DPC&E. Birth defects and cancer registries, proposed within the Strategy, were initiated but since have been ended. An analytical program with the State University Medical Center, correlating health and environmental data, was begun but was quickly eliminated due to funding problems. The Hazardous Materials Section within DOH has been cut from seven personnel to one. Finally, the epidemiology program within DOH is fairly limited in effectiveness largely due to a scarcity of resources.

#### IV. Toxics Control

The control of toxics in Arkansas has followed the basic thrust of the Strategy. However, federal initiatives, which were not envisioned during the Strategy development, have caused certain deviations, as have reductions in funds. Superfund, for example, has created a drain on already limited State resources, but it has provided means for developing information regarding waste disposal sites and for achieving needed corrective measures. Similarly, toxics control has become an increasingly important element in federal air and water pollution control programs. Perhaps the federal program which has given DPC&E the most direct opportunity to focus on the problem of toxics is the EPA hazardous waste (RCRA) program.

DPC&E has received delegation of essentially all of the delegable permit and enforcement authorities of the EPA and currently plans that all such programs will be delegated by July 1, 1983. As DPC&E assumes the operation of these programs, it is eliminating duplicative State efforts and is establishing a foundation for improved toxics control.

Toxics are currently subject to the Department's permit controls under the following programs: Air (PSD, NESHAPS, NSPS), Water (UIC, NPDES), Mining and the Hazardous Waste Program. Additionally, the Department's water quality planning program has established best management practices to control toxics from nonpoint sources. With respect to agricultural chemicals, the University of Arkansas has had a longstanding integrated pesticide management program which has resulted in a substantial reduction in the use of pesticides.

Arkansas' emergency response capabilities have been significantly upgraded since 1978. The Arkansas Transportation Commission has provided equipment and supplies for interagency responses to spills. The State Office of Emergency Services has fully integrated spill response procedures within the State's Emergency Operations Plan. Under that Plan, DOH and DPC&E have developed a Memorandum of Agreement which outlines the responsibilities of the respective agencies. Basically, the agreement specifies that the DOH has lead responsibility in providing medical service and other health related services whereas DPC&E's responsibilities are spill containment, cleanup and monitoring.

Several spills have occurred which required implementation of the Emergency Operations Plan and the assistance of numerous State and federal agencies. A major oil spill on the Arkansas River resulted in intensive involvement of DPC&E, the EPA, the U.S. Coast Guard, and the Corps of Engineers with assistance of the Arkansas National Guard.



Materials which were being transported on I-30 west of Little Rock became unstable in transit and resulted in the closing of the freeway for a substantial period of time. This incident required intensive involvement of the State Police, the Highway Department, DPC&E, DOH and numerous local fire and law enforcement agencies. The I-30 incident clearly demonstrated the success with which the Office of Emergency Services has been able to integrate local fire and law enforcement agencies within the State's Emergency Operations Plan and to provide essential coordination.

#### V. Current Status and Analysis

As previously mentioned, many of the more visible aspects of Arkansas' Strategy have not been implemented due to the impacts of funding reductions and the effects that subsequent federal initiatives have had on Arkansas' programs. Major emphasis has been given to emergency response, prevention, and remedial measures. To the extent possible, the State has attempted to capture spinoff benefits of federal programs.

Comprehensive health effects studies and consumer programs which were envisioned in the Strategy have not materialized. Health effects studies which have been conducted were associated with known environmental problems. None, except in the most preliminary fashion, have been designed to alert health authorities to emerging problems. The State has also lost the potential benefits which would have resulted from the continuation of the formal interagency subcommittee structure. However, considerable staff time is needed to make such a structure successful. For some agencies, that time was not available because of staff reductions and increased responsibilities in other areas.

Arkansas' Strategy is a well thought out and well drafted document which is currently too elaborate for the needs of the State. It has served the State by identifying specific program needs which must be addressed if comprehensive toxics management is to become a reality. Agency personnel are addressing these needs as resources permit. The plan would serve as an excellent model for other states that are striving toward greater toxics management integration. The State could also play a very important role by presenting to these interested parties the perceived weaknesses and strengths of the Strategy.

## California ITM Summary

### I. Toxics Authorities

#### A. Major Toxics-Related Legislation

1. The Hazardous Substances Information and Training Act of 1980 (Worker Right-to-Know).
2. The Hazardous Waste Control Law.
3. California Superfund.
4. The Emergency Response Act.
5. The California Occupational Safety and Health Act.
6. Safe Drinking Water Bond Act.
7. Section 4171 of the California Health and Safety Code (airborne toxics).
8. Porter-Cologne Act (water).
9. California Food and Agriculture Code (pesticides).
10. Occupational Carcinogen Control Act.
11. Birth Defects Monitoring Act.

#### B. Major Agencies

1. Health & Welfare: Department of Health Services.
2. Resources Agency:
  - ° Department of Fish and Game.
3. Department of Industrial Relations.
4. Office of Environmental Affairs:
  - ° Solid Waste Management Board.
  - ° Water Resources Board.
  - ° Air Resources Board.
5. Department of Food & Agriculture.
6. Business, Transportation and Housing Agency.

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate

1. No comprehensive ITM legislation exists in California; however, Executive Order creates Hazardous Substances Task Force (has major mandate to integrate).
2. Emergency Response Act mandates development of an inter-agency emergency response system.

#### B. Major Cooperative Efforts

1. Hazardous Substances Task Force.
2. Toxic Substances Control Division under Department of Health Services advises regulatory boards.

3. Community Right-to-Know Program.
4. Mechanism for providing assistance with permits  
-present status uncertain.
5. Hazardous Waste Assessments.

### III. Information Management

1. Information is gathered and stored by separate agencies with few mechanisms for data sharing.
2. HESIS.
3. CRIS.
4. Pesticide Registry.
5. Birth Defects Registry.
6. Library of Environmental Chemicals & Related Health Studies.
7. CHS.
8. RCE.
9. CAL OSHA's Carcinogen Registry.

### IV. Toxic Substances Control

#### A. Problem Identification and Ranking

1. Preparation of proposed California Carcinogen Policy and ensuing discussions enable different state agencies to rank carcinogens.
2. Department of Health Services and CAL OSHA conduct short-term and long-term epidemiology studies.

#### B. Risk Assessment Models

1. The Department of Health Services, in cooperation with other State agencies, is developing risk assessment methodologies for carcinogens.
2. Epidemiological Studies Section assesses potential health risk.

#### C. Emergency Management

1. Under the Emergency Response Act of 1981, California's Office of Emergency Services is developing an inter-agency toxics disaster contingency plan.

#### D. Current Character of Toxic Substances Control

1. Coordination mechanisms are being studied by the Secretary of Environmental Affairs. Report to Governor due in August 1983.

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## California ITM

### I. State Legislative Authorities Regulating Toxics

#### A. Legislation

In the last several years, major legislative initiatives have taken place which have strengthened toxics control among California's seven agencies regulating toxics. These legislative acts have been incorporated into the California State Code, primarily the Health and Safety Code and the Food and Agricultural Code. The chief legislative authorities regulating toxics are:

- o The Hazardous Substances Information and Training Act of 1980 (Worker Right-to-Know) (SB 1874)
- o The Hazardous Waste Control Law
- o California Superfund (SB 618)
- o The Emergency Response Act (SB 183)
- o The California Occupational Safety and Health Act
- o Safe Drinking Water Bond Act
- o Section 4171 of the California Health and Safety Code (airborne toxics)
- o The Porter-Cologne Act (water)
- o California Food and Agriculture Code (pesticides)
- o Birth Defects Monitoring Program Act (SB 834)
- o Occupational Carcinogen Control Act

The Hazardous Substances Information and Training Act of 1980 (SB 1874) is California's Worker Right-to-Know law. It requires companies to provide employees with information on the chemicals they produce. Material Safety Data Sheets are developed by the employer which provide detailed information including chemical name, hazardous ingredients, health hazards, special protection information and precautions, potential fire, explosion and emergency data, and physical properties. Companies are protected from revealing trade secrets by a confidential business information protection clause. Employers are also required to train workers about the acute and chronic health risks posed by chemicals to which they may be exposed during normal work operations or in reasonable foreseeable emergencies.

The Hazardous Waste Control Law has recently been amended by thirteen different actions to strengthen its public protection and

enforcement provisions. These include tightening procedures and reporting requirements for hazardous waste transportation, storage and spills. Penalties for violations were increased and more authority was given to both localities and the State for inspecting, regulating and enforcing hazardous waste provisions. In addition, four separate laws were passed to prevent future construction on or near contaminated sites.

California Superfund (S 618) increased assessments on companies to pay for health and property damages, epidemiological studies and clean-up. Companies were already required to report information on the manufacture, storage and transportation of hazardous materials and were assessed a fee under the Hazardous Waste Control Act. (The Department of Health Services conducts its hazardous waste program based on these fees.) Industry has already been assessed ten million dollars for California Superfund. The law allows industry to be assessed up to that amount each year for ten years.

The Emergency Response Act (SB 183), passed in 1981, mandates the establishment of a State toxic disaster contingency plan, calling for a central notification and reporting system for all toxic spills, training and increased coordination among numerous agencies by the Office of Emergency Services.

Under the California Occupational Safety and Health Act, physicians are required to report incidents of occupational disease. These data are computerized for CAL OSHA's use and for workmen's compensation claims. This system is separate from the Hazard Evaluation System Information Service which conducts health related searches for various agencies. CAL OSHA also develops 12-14 Hazard Alerts per year to notify employers and employees about new health hazards.

The Safe Drinking Water Bond Act sets up an integrated program for improving drinking water quality. Previously the Department of Health Services was responsible for small drinking water sources and the State Water Board managed large sources. Under this act the two are required to conduct a joint management program to improve drinking water quality.

Section 4171 of the California Health and Safety Code authorizes permitting and monitoring of industries releasing airborne toxics.

The Porter-Cologne Act created the Water Resources Board which has responsibility for both surface water and ground water quality. The Board conducts permitting and monitoring of toxic substances.

Numerous pesticides laws have been incorporated into the California Food and Agriculture Code and are carried out by the California Department of Food and Agriculture Pesticide Division.

Under the Birth Defects Monitoring Program Act (SB 834), passed in May 1982, The State Department of Health Services will expand its birth defects monitoring program from two counties to five. The additional counties were added in response to public concern about possible adverse health effects from the spraying of malathion during the fruit fly infestation.

California's Occupational Carcinogen Control Act requires reporting by employers on 22 carcinogens. The data is computerized by CAL OSHA into an occupational carcinogen registry.

#### B. Major Agencies

Regulation of toxic substances in California does not rest with any one agency. Authority for managing toxics is spread among six different agencies.

These agencies and their responsibilities are as follows:

- |  |   |
|--|---|
| 1. Secretary of Health & Welfare:<br>Department of Health Services | Lab work assists agencies in assessing exposures posing public health threats. Responsible for Hazardous Waste and Drinking Water, & Pesticides when health potentially or really affected. |
| 2. Secretary of Resources<br>Agency                                |   |
| ° Department of Fish<br>& Game                                     | Oil & Toxic Spill<br>Clean-up   |
| 3. Department of Industrial Relations                              | Occupational Health and Safety  |
| 4. Secretary of Environmental<br>Affairs                           | Administration of Resources<br>Agency Projects. Addresses<br>integration programs as<br>per Executive order D-10-83.  |
| ° Solid Waste Management<br>Board                                  | Solid Waste   |
| ° Water Resources Board  | Clean Water   |
| ° Air Resources Board  | Clean Air   |
| 5. Secretary of Department of Food<br>and Agriculture              | Pesticide Registration  |
| 6. Secretary of Business,<br>Transportation and Housing<br>Agency  | Hazardous Materials Transportation<br>and Spill Clean-up  |



## II. Organizational Coordination in Toxics Management

A. The Toxic Substances Coordinating Council, created by Executive Order in February '80, has been superceded by Executive Order D-10-83 (April 83) and the creation of the Hazardous Substances Task Force. This task force identifies and addresses issues relating to radioactive, toxic and other hazardous substances, and is comprised of directors of all departments in State government with statutory authority to regulate said materials. The task force is headed by the Secretary for Environmental Affairs, with a member of the Governor's office as vice-chair. The task force has overall responsibility to formulate and oversee a comprehensive, coordinated hazardous substances program. A report on the program is due to the Governor in August 1983.

B. Most State toxics-related functions are under the Toxic Substances Control Division of the Department of Health Services, although a reorganization is currently under consideration. The structure of this division is as follows:

### Toxic Substances Control Division

- 1) Hazardous Waste Management Branch
  - a) Alternative Technology and Policy Development Section
  - b) Procedures and Regulation Enforcement Management Section
  - c) Permit, Surveillance and Enforcement Section
  - d) Site Clean-up and Emergency Response Section
- 2) Laboratories and Epidemiology Studies Branch
  - a) Epidemiology Studies Section
  - b) Hazard Evaluation System and Information Service (HESIS)
  - c) Hazardous Materials Laboratory
  - d) Air and Industrial Hygiene Laboratory

A Community Right-to-Know program has been developed to increase knowledge about chemical production, use and disposal at the local level. A handbook has been produced containing a model community right-to-know ordinance, as well as the State Worker Right-to-Know Law and a list of the kinds of information available on chemicals from State agencies (with addresses and phone numbers). Five local communities have right-to-know ordinances in California.

### III. Information Management

Responsibility for information management lies within each of California's agencies. These agencies have extensive authority to gather information on toxic substances. However, no comprehensive system to coordinate data among agencies exists, short of Executive Order D-10-83. Most of the agencies with toxics management authorities have been computing their data separately. There is some limited coordination of data systems and plans for increased movement in that direction. There is also informal ad hoc sharing and coordination of data.

The Hazard Evaluation System Information Service (HESIS) was set up as a repository of information on occupational health effects. It is a comprehensive system with access to 130 different data bases. HESIS will develop comprehensive literature searches on occupational health of toxic chemicals for employees, employers, and local and State agencies, with evaluation by technical experts.

Another computerized system, the California Resource Inventory System (CRIS) will provide geographical analysis and mapping capabilities for siting to all agencies. This system was previously called the Environmental Data Center and has been moved from the Office of Appropriate Technology to the Department of Conservation (part of Resources Agency).

The chief coordination of data is in the Toxic Substances Control Division in the Department of Health Services.

California's Department of Health Services is developing a new Birth Defects Registry. Mandated under recent legislation to prevent birth defects, the Toxic Substances Control Division's Epidemiological Studies Section will gather data on birth defects, miscarriages, childhood cancer and various other serious infant problems from hospital medical records, birth certificates and social services agencies. Birth defects will be carefully monitored and categorized by county of residence and occupation to determine possible problems due to environmental or occupational exposure, or drug intake.

Most of the laboratories analyzing toxic substances are now under the same division in the Department of Health Services, although the hazardous materials laboratory remains separate from the air and occupational laboratories. An effort is being made to standardize testing procedures utilized by the separate laboratories.

Center for Health Statistics - (CHS). This program is concerned primarily with the recording of morbidity and mortality statistics.

Resource for Cancer Epidemiology (RCE - Health Bank) is part of the Department of Health Services which has a computerized cancer reporting system covering five Bay Area counties (fifty per cent of the state population), as well as most petro-chemical companies. The system does cluster analyses and matches cancer occurrences with State employment files (using social security numbers).

There is a contractual arrangement with with School of Public Health Library to provide literature searches to the Department of Health Services.

CAL OSHA's Occupational Carcinogen Registry under the Department of Industrial Relations requires companies to report use, production volume, chemical and trade names, number of employees and plant exposure information on 22 registered carcinogens. Information is computerized and utilized together with occupational disease reports in inspection determinations and workmen's compensation claims.

Although there is presently little information sharing between agencies, California does have several important informal and ad hoc information sharing capabilities. The State agencies traditionally provide information and technical assistance on toxics problems to local governments. For example, counties identify toxics problems to the State Epidemiological Studies Section, which then conducts studies (field investigations, literature searches) to distinguish between environmental exposures which pose a health hazard and those which do not, and provides technical assistance. The Governor's Community Right-to-Know Handbook lists information available on use, storage, transportation, discharge, disposal and health effects of toxic substances. It lists the kinds of information available and the name, address and telephone number of the agency where that information can be obtained. Finally, agencies are working together in sharing information in the permitting of hazardous waste sites; a Permit Assistance Desk had been helping to further coordinate among the different agencies, but its current status is uncertain.

#### IV. Toxic Substances Control

The California Department of Health Services has recently proposed a Carcinogen Identification Policy. The policy, based on CAL OSHA's Occupational Carcinogen Registry, was the result of an inter-agency effort. The proposed policy states that a chemical shall be considered a carcinogen upon evidence of one well-conducted positive laboratory animal test and outlines standard criteria for determining carcinogens. The State is presently developing risk assessment methodologies. A second phase of the State's carcinogen policy would be to develop regulatory control strategies for carcinogenic substances based on the risk they pose to the human population. Hearings are to be held during the Fall of 1983.

Environmental epidemiology studies are conducted by the Toxic Substances Control Division's Epidemiological Studies Section in the Department of Health Services. Occupationally related epidemiology studies are conducted by CAL OSHA in the Department of Industrial Relations.

The Office of Emergency Services is establishing a State toxic disaster contingency plan and developing a central notification and reporting system for all toxic spills. The Office is working with the California Highway Patrol, the State Fire Marshall and State agencies to establish a Statewide emergency system. The Office is developing an integrated training program of State and local agency personnel. An on-scene coordinator for all spills will be designated and a 24-hour emergency response technical assistance hotline will be established to provide localities with detailed medical and scientific information.

## V. Analysis

Among the chief toxics problems in California are hazardous waste facility siting, waste generation, and safe pesticides use. Problems are compounded by the lack of integration, due to different permitting requirements by the hazardous waste, air, and water programs; furthermore, local autonomy tends to make site designation and other such efforts difficult.

California's Carcinogen Policy presently under consideration would provide all State agencies with consistent scientific methods for assessing risks from carcinogens and assist in developing control strategies for the State.

In the last several years, California has implemented several new toxics programs and upgraded many others. Although the public and the legislature have been strong supporters of improved toxics management, there are few formal integrating mechanisms in the State. Executive Order D-10-83 could lead to some mechanisms for coordination among the various programs concerned with toxics management. Steps are being made towards a more integrated approach in information management, but a greater effort still needs to be made in data sharing among the separate programs. The diversity in both expertise and interests in California remains as another problem area. Agricultural interests promote continued use of pesticides (over 500 million pounds of pesticide are used annually in the State), while other agencies believe the Food and Agricultural Department is not strict enough with its regulation of pesticides. In addition, local governments, including 36 counties, districts, etc., are very influential and frequently autonomous.

There is an awareness among many State agency officials of the need for better integration. Many of the State's diverse toxic programs are in the Toxic Substances Control Division. Highly sophisticated work is being done in this Division in epidemiology and risk assessment. Moreover, several laboratory programs were brought together under the Division. The Division may possibly include a permit assistance program to coordinate permitting activities among several programs. In addition, the State's new toxics disaster contingency plan established by the Emergency Response Act mandates coordination among State agencies in emergency management.

Materials created for the Community Right-to-Know program delineate different agency responsibilities in managing toxics and outlines for local government officials and the public what toxics information is available. Some of these mechanisms, when tested by time, may prove as valuable models for other states.

## Colorado ITM Summary

### I. Toxics Authorities

#### A. Major Legislations

1. Colorado Air Quality Control Act of 1979.
2. Colorado Water Quality Control Act of 1981.
3. Colorado Solid and Hazardous Waste Acts.
4. Mine Land Reclamation Act.

#### B. Major Departments

1. Colorado Department of Health.
  - Board of Health.
  - Office of Health Protection.
  - Local Health Departments.
2. Department of Natural Resources.

#### C. Other Departments

1. Department of Agriculture.
2. Colorado Department of Highways, Division of Highway Safety.

### II. Organizational Coordination

#### A. Legislative Integration Mandate

1. No such mandate exists in the State of Colorado.
2. The mining reclamation statutes are multi-programatic.

#### B. Cooperative Efforts

1. Governor's multi-agency cabinet advisory on natural resources.
2. The Governor's coordinating role in several toxic substances issues.
3. The Hazardous Waste Management Advisory Council.
4. The Colorado Commission on Hazardous Materials Safety.
5. The establishment of the Colorado Training Institute.

### III. Data Management

#### A. Means of Gathering Data

1. Permitting and monitoring.
2. Cancer Registry.
3. Birth and Death Registries

B. Data Coordination

1. Currently, data is coordinated solely within the individual offices.
2. State did conduct an Environmental Data Management Program.

C. Data Accessibility

1. No legislation exists in the State of Colorado which deals with data accessibility such as "Right to Know".

IV. Toxic Substances Control

A. Problem Identification and Ranking

1. Problem identification results chiefly from State monitoring and citizen complaints.
2. The Colorado Department of Health has the lead in priority setting in consultation with the Governor's Office. Inter-agency problem ranking is conducted informally on an ad hoc basis by the Governor's office.
3. No formal structure guides either process.

B. Risk Assessment

1. No formal risk assessment models are used in the State, although epidemiology studies are conducted.

C. Emergency Management

1. Primarily the responsibility of the individual offices.

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## Colorado ITM

### I. Toxics Authorities

Toxic management in the State of Colorado is primarily the responsibility of the Colorado Department of Health (CDH), and the Department of Natural Resources (DNR). The Department of Health's Divisions of Air Pollution Control, Water Quality Control, Disease Control and Epidemiology, Waste Management, Consumer Protection, and Radiation Control, all under the Office of Health Protection, provide the basic media monitoring and permitting services. The Water Quality Control Commission and the Air Quality Control Commission, functionally autonomous regulatory bodies under the Office of Health Protection, are vested with power in their respective areas. Both Commissions are composed of gubernatorial appointees. The Board of Health and the Commissions have regulatory authority over all other Department of Health activities, while CDH has primarily administrative and policy responsibility. The Department of Natural Resources is involved chiefly with issues concerning oil development and mining; however, DNR's authority is substantial given the predominance of these activities in Colorado.

There is some control over toxics which is vested in offices outside of CDH and DNR. The Department of Agriculture is in charge of the State's pesticide program. Eight of the fourteen local health departments, which are essentially autonomous, manage their own air quality programs under contract with CDH. Finally, the Colorado Division of Highway Safety has assumed the management of a hazardous waste emergency training program, the Colorado Training Institute.

There are several State statutes which guide Colorado's toxic management. The main laws are the Colorado Air Quality Control Act, Colorado Water Quality Control Act, and the Colorado Solid Waste and Hazardous Waste Acts. All of these acts provide the basis for CDH's monitoring and regulatory programs. General mine land reclamation statutes outline DHR's role in groundwater and water quality management. Likewise, consumer protection legislation authorizes a formaldehyde regulatory program. A Colorado Occupational Health and Safety Act was ratified by the Colorado State Legislature, but was rescinded in 1980.

### II. Organizational Coordination

Colorado has not enacted any legislation which addressed the integration of toxic management. Although the mine land reclamation statutes do attempt to account for the various environmental media and deal with an array of media programs, no specific interactive mechanisms were made explicit.

Perhaps the largest inter-agency coordinating activity in Colorado is the on-going role that the Governor's Office plays in toxic substances policy. The Governor has established an inter-agency cabinet advisory group which deals specifically with natural resources. This committee has served as a medium for greater discussion among the agencies, primarily on specific issues, and has, in fact, increased the level of inter-agency cooperation in particular instances. For example, the groundwater contamination allegedly caused by the U.S. Army's Rocky Mountain Arsenal is a problem cited by State officials as one with a high degree of coordination, and a large role for the Governor. Other projects where such coordination has also developed is general State groundwater contamination, and in the State's preparation for the anticipated massive development of oil shale. In all of these examples, the Governor has taken the initial steps towards identifying a problem area, assembling the appropriate agencies, and appointing a lead agency, if necessary.

In addition, Colorado has attempted to solicit citizen and business cooperation within the State in the management of the environment. The Hazardous Waste Management Advisory Council consists of business, citizens, and government representatives that deal with a broad variety of pertinent issues. The Colorado Commission on Hazardous Materials Safety is a study group composed of Federal, State and local government representatives, as well private industry representatives.

A final interactive mechanism in the State is the Colorado Training Institute. The Institute, which is now operated by the Colorado Division of Highway Safety, was organized through the cooperation of a host of State agencies. The Governor issued an executive order directing all State agencies and departments to cooperate in this effort.

The Colorado Department of Health did attempt to formulate an inter and intragovernmental pilot program in Colorado Springs. The program's aim was to integrate environmental programs at the local level, and it involved representatives from all levels of government and a variety of State offices. The project was not completed, however, and only normal local coordinating activities are now being operated by Colorado Springs.

### III. Information Management

The chief means of data gathering in Colorado is through monitoring and permitting. The State has no chemical production or use reporting requirements. The State has a cancer registry, but it is just now being completed as a data source on a Statewide basis.

Data is generally not formally coordinated across media programs, or between departments. Data is shared among offices on purely ad hoc basis; although there is no organizational mechanism for transferring information, there is informal sharing within the Colorado Department of Health's Office Health Protection. Colorado recently conducted an Environmental Data Management Review Program of all data management activities in their air, water, radiation and hazardous waste programs.

In addition, the program was to conduct an overall data needs assessment of all media in the Department of Health. The Program's basic finding was that the State needed to upgrade each office's data and data management procedures before any attempt could be made at coordinating department or Statewide information. These attempts are now being initiated on a basis of program priority.

There is no legislation in Colorado which deals specifically with the accessibility of private or State toxic-related data.

#### IV. Toxic Substances Control

Problem identification is primarily the result of monitoring activities and citizen complaints. CDH has the lead in ranking of priorities in consultation with the Governor's Office and the cabinet level Advisory Board. Yet, there is no formal process by which problems are brought to the attention of State officials or judged on their level of importance. The Governor's Office does conduct inter-agency priority setting on an informal, ad hoc basis.

The State has sought to control a number of individual chemicals through separate statutes. Regulations which set emission and testing standards exist on asbestos, beryllium, mercury, vinyl chloride, lead, hydrogen sulfide and urea formaldehyde. However, there is no cross media control on any of these substances. Within CDH, however, program cross-contact on specific problems is high.

In the area of risk assessment, no formal risk assessment models are used in Colorado. Epidemiology studies are conducted, although a State report characterized the service as being in need of upgrading.

Emergency management is primarily the responsibility of the individual environmental media divisions with coordination at the Office of Health Protection level. Coordination of emergency management was listed as a priority item in the 1982 SEA. The Colorado Training Institute has also been helpful in increasing the level of toxic hazard emergency preparedness in the State.

#### V. Current Status and Analysis

The existing environmental priorities in the State of Colorado are: 1) concerns over the anticipated oil shale development; 2) automobile pollution in Denver; 3) contamination of groundwater, such as the Rocky Mountain Arsenal (the State of Colorado has filed suit against the U.S. Army in an attempt to get assistance in the abatement of this problem); and 4) hazardous waste disposal, mentioned earlier. All of these problems constitute areas with direct involvement by the Governor.

There are currently no new formal initiatives in the field of integration, although a noteworthy undertaking has been proposed in the field of health data gathering. A program to monitor health effects on oil shale workers has been proposed for the Union oil shale project. Its significance lies in the fact that it would be the first health effects study to monitor all workers from their first day of employment. The study was proposed as a voluntary program, but did not meet with success because of Union's objections. The future of this effort is uncertain.

Recommended assistance for Colorado is chiefly the encouragement of their participation in future integration discussions among states.

## OCTOBER 1 1981



## Connecticut ITM Summary

### I. Toxics Authorities

#### A. Major Toxics Related Legislation

1. Clean Water Act.
2. Clean Air Regulation.
3. Title 333 of the General Statutes  
(Dept. of Health Services).
4. P.A. 80-257 (right-to-know)
5. Recently, passed H.B. 251 (right-to-know)

#### B. Major Agencies

1. Department of Environmental Protection. (DEP)
2. Department of Health Services. (DHS)

#### C. Other Agencies

1. Department of Labor.
2. Department of Transportation.

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate

1. No comprehensive ITM legislation exists in Connecticut.
2. Clean Water Act does mandate comprehensive programming and inter-agency consultation.

#### B. Major Cooperative Efforts

1. Memorandum of Understanding on Groundwater Contamination, signed May 1982.
2. A Memorandum of Understanding is currently being written between the DHS Toxic Hazards Section and the DEP Air Compliance Section.
3. Cooperative Use of DHS Laboratories by DEP, Agriculture, and Labor.

### III. Information Management

#### A. Means of Gathering Data

1. Reporting Requirements for handlers of carcinogenic substances. (chapter 340d Section 19-169q)
2. Tumor and death certificate registries operated by DHS.
3. Environmental monitoring and permitting conducted by DEP.

B. Data Coordination

1. Data is collected and computerized by each major agency.

C. Information Availability

1. P.A. 80-257 - Concerns carcinogenic substances.
2. H.B. 251 - Expands list to include 400 toxics substances.
3. Freedom of Information - Establishes a CBI principle.

IV. Toxics Control

A. Problem Identification and Ranking

1. Input received from monitoring data, industry surveys and citizen complaints.
2. No priority-setting process has been formalized.

B. Risk Assessment Models

1. Epidemiological studies are used, but no formalized model is used systematically.

C. Emergency Management

1. Majority of authority for toxics emergencies contained in the Oil and Chemicals division within DEP.

D. Current Character of Toxics Control

1. Some coordination is evident within the agencies; however, the control is generally fragmented.

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## Connecticut ITM

### I. Toxics Authorities

Under the auspices of the Department of Environmental Protection (DEP) and the Department of Health Services (DHS), the State of Connecticut administers a number of statutes related to toxic substances. In general, authority to administer environmental programs has largely been delegated to DEP through such Federal statutes as: TSCA (i.e. PCB enforcement) and CERCLA (superfund); and such state laws as the Clean Water Act and Clean Air regulations. However, significant authority is delegated to DHS in Title 333 of Connecticut's General Statutes, which instructs the Commissioner of Health Services to "employ the most efficient means for the prevention and suppression of disease." This mandate has not only been carried out by the State DHS, but has also been extended to the local health departments who are playing an increasingly important role in policy making and implementation. Minor authority has also been delegated to the Departments of Labor and Transportation.

Connecticut also has a number of statutes which deal specifically with various aspects of toxics management. In the area of information gathering, Chapter 340 d, Section 19-169 of the General Statutes establishes reporting requirements for handlers of carcinogenic substances. Information, dissemination is guided by Connecticut's Freedom of Information legislation, which establishes a CBI principle, and two Right-to-Know laws (P.A 80-257 and the recently enacted H.B. 251). Finally, chemical control initiatives are taking place within DEP's Hazardous Materials Management Unit (HMMU) through a PCB monitoring and inspection grant under TSCA Section 10. In addition the HMMU has primary responsibility for implementing state statutes 25-54 rr through xx pertaining specifically to PCB management and state statutes 25-54 hh regarding the transport, storage and treatment of certain toxic waste materials.

Although interaction among the agencies occurs, there is no legislation within Connecticut which mandates integration of toxics management. However, a loose directive is provided by the State's Clean Water Act which instructs the Commissioner of DEP to develop "comprehensive programs" and to "advise, consult and cooperate with other agencies of the state." In addition, a Memorandum of Understanding was signed in May of 1982 between the Department of Environmental Protection and the Department of Health Services concerning cooperative efforts to eliminate ground water contamination. The agreement is in effect through April 30, 1983. The DPH Toxic Hazards Section is also working with the DEP Air Compliance Section on a Memorandum of Understanding on Air Emission issues.

The above constitutes the extent of any formal cooperative arrangements that currently exist within the State of Connecticut. Presently, no new initiatives exist in the field.

## II. Organizational Coordination in Toxics Management

DEP and DOHS share lead agency responsibility in toxic waste management. Connecticut has assigned the Department of Environmental Protection with the primary responsibility for regulating and monitoring media pollution. Six units within the DEP carry out these functions; they are: Air, Water, Water Resources, Solid Waste, Hazardous Materials Management and Radiation.

The Department of Health Services, serves in defining, regulating and collecting data on toxics hazards, and human health effects. All of this is largely the responsibility of the Toxics Hazards Section, the Water Supply Section and Epidemiology section of DHS. In addition, the local health departments have become a valued partner.

With no mandate for integration, DEP, DHS and the specific divisions within each of these agencies operate independently. Yet, there are a few exceptions, particularly concerning water supply issues. Frequent interaction has developed between the Water Compliance Unit of DEP, and the Office of Water Supply in DHS. The new Memorandum of Understanding referred to earlier will only tend to increase such cooperation. The M.O.U. establishes joint efforts in the areas of goal setting, program development, monitoring, enforcement and information dissemination. The agreement, which was set out by the SEA, is seen as a major achievement and is characterized as a "working model" for future cooperation.

Interaction has also occurred on general environmental/health questions. This is due in large part to the shared use of the Department of Health Services Laboratories, which involves not only DHS and DEP, but the Departments of Agriculture and Labor as well. It is also in the environmental/health field where the local health departments are most active. Other cooperative efforts exist in Connecticut, such as shared laboratory services with the Ct. Agricultural Experiment Station, but they are more sporadic and ad hoc. It is this interaction which constitutes the bulk of the inter-agency relationships, and it is for this reason that Connecticut's toxics management in general must also be characterized as ad hoc. Connecticut is working towards altering this approach.

## III. Information Management

Information management has been an explicit concern in Connecticut over the past several years. Information gathering is addressed in Chapter 340d Section 19-169q which stipulates that any person or manufacturer who uses or produces any carcinogenic substances in the manufacture of any item must file a report stating: the method of disposal; the amount of carcinogenic substance used; the amount of each carcinogenic substances currently held in inventory; and the method of transportation. This report must be submitted annually to the DHS Commissioner. The law is silent on toxics substances not determined to be carcinogenic.

Other information gathering programs include a tumor registry arranged between DHS and various hospitals, and a registry of death certificates. DEP also collects data through its monitoring and permitting activities. A great majority of the environmental data that is collected is computerized and centralized within each agency. Currently, hazardous waste manifests are in the process of being computerized.

In the area of information dissemination, Connecticut is in varying stages of development. Between the agencies, no formalized process or program has yet been devised to fully utilize the available environmental and health data in establishing environmental priorities and programs. Therefore, although information is accessible and is shared among agencies, it is done sporadically, on a case by case basis. Such information is not integrated into overall state toxics management.

Connecticut's "Right-to-Know" legislation is more fully developed. P.A. 80-257 stipulates that any industry which is a user or producer of carcinogenic substances must: 1) Post a list of such substances in plain view for all employees; 2) Provide an education and training program for the workers; and 3) Insure that all containers for such substances are properly labelled. Most recently, H.B. 251 has passed, expanding the list of substances which must be made known to employees to include 400 toxics substances. However, the new law does not provide for employee training. Therefore, the only training programs in effect are those which were mandated under P.A. 80-257, which is concerned only with the handling of carcinogenic substances. In addition, information that is made available to the workers under H.B. 251, will be made available to the general public after January 1, 1984. After this time, Connecticut will have both State-wide worker and community right-to-know laws.

All information dissemination is complicated by the State's Freedom of Information Law. The main relevance that the statute has to toxics is that it establishes protection for trade secrets. However, access to such information is granted to State officials with purpose under Section 22A-6 of the General Statutes which stipulates: "in accordance with constitutional limitations (a designated state official) may enter at all reasonable times upon any public or private property." Therefore, confidential information policies do severely limit public access, but only slightly hamper the state's accessibility.

#### IV. Toxics Control

Toxics Control can generally be characterized as similar to Connecticut's information management; there is a solid foundation for control with a sizeable amount of activity taking place in the field, but with little emphasis on comprehensive, integrative programming.

Problem identification originates from a wide variety of sources: environmental monitoring, industry surveys and citizen complaints. Likewise, a number of programs have been initiated, specifically concerning PCB's, solvents and asbestos. However, there is no process by which State officials rank the problems in order of importance, and no "control strategy" has been developed to implement the programs that do exist.

Epidemiological studies are used quite frequently to assess health risks. Yet, it is not apparent that any innovative formal model has been developed, or put to systematic use.

There is one exception to all of this, and that is in the area of emergency management. The primary responsibility for emergency management lies with the Oil and Chemical Spills Division of the Hazardous Waste Unit within DEP. The Division has authority over all emergencies concerning oil or chemicals and serves as the coordinating body should they deem it necessary to bring in other agencies. The Office of Civil Preparedness also is involved in emergency management, but deals mainly with natural disasters. Their facilities, however, are made available to DEP when necessary. Therefore, emergency management represents one aspect of Connecticut's toxic control in which the authority and ability to coordinate activities is well established.

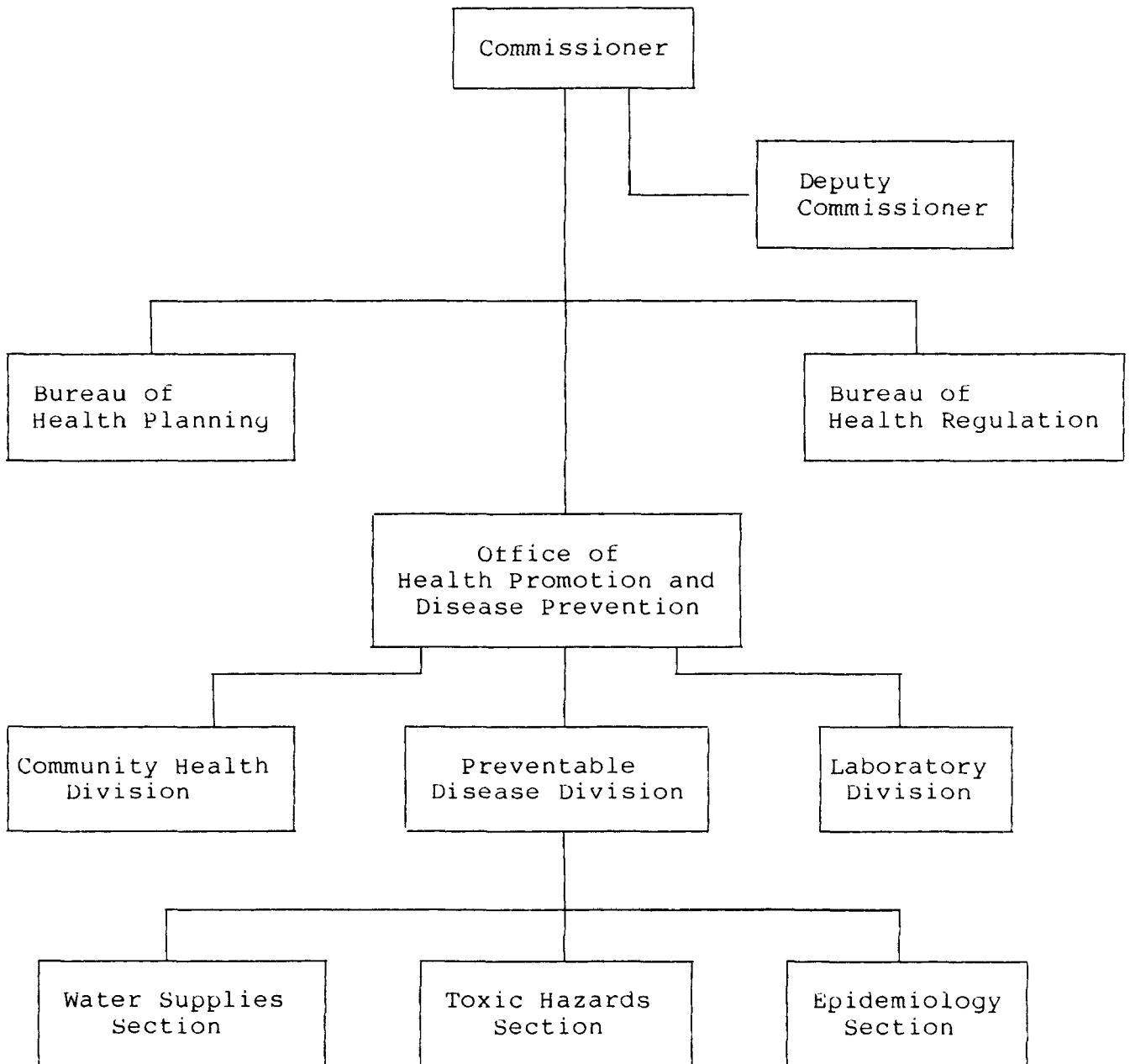
#### V. Current Status and Analysis

Connecticut's approach to toxic waste management remains a problem-oriented approach. Little effort has been made to develop a fully integrated management system. Connecticut does possess strong potential for future integration programs.

Connecticut's demonstrated desire to develop a broad and accessible toxics data base provides a very supportive environment for integrated toxics management. In addition, the views of State officials seem generally favorable for such an effort, as reflected in the 1981 SEA which stressed the need for close multi-media coordination.

Yet Connecticut faces a definite challenge should officials decide to integrate. The main obstacle to the development of coordinated management is the lack of legal authority or mandate in Connecticut for such a move. The system, as it exists now, is ad hoc.

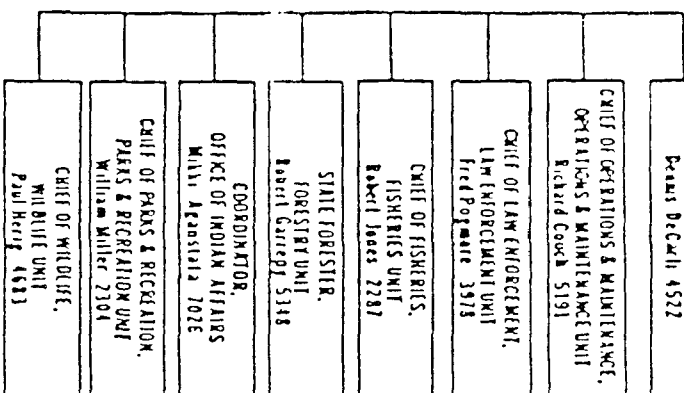
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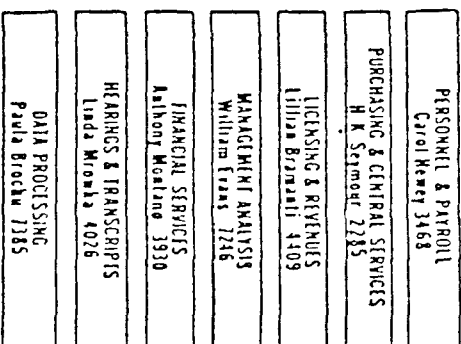
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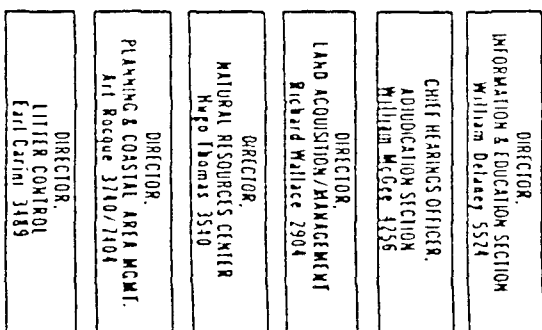
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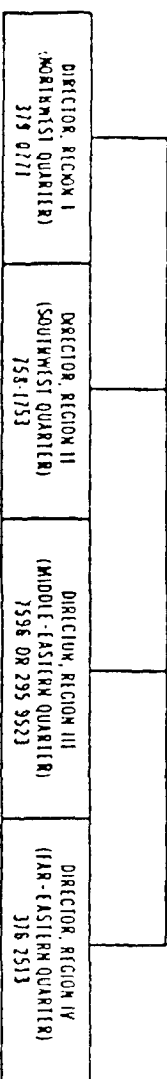
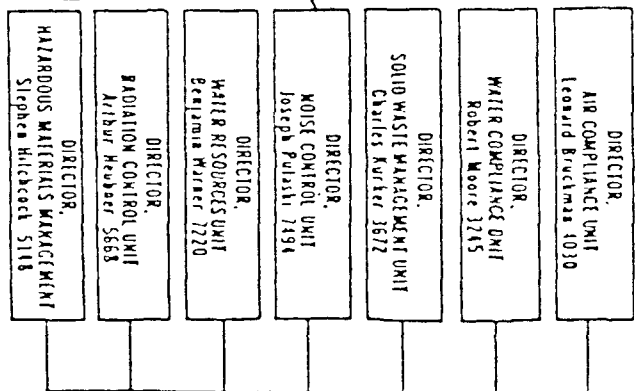
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## Illinois ITM Summary

### I. Toxics Authorities

#### A. Major Toxics Related Legislation

1. Illinois Environmental Protection Act of 1970.
2. Illinois Annotated Stat. Chapter 5.
3. Illinois Annotated Stat. Chapter 48 Safety, Inspection and Education.
4. Illinois Annotated Stat. Chapter 48 Health and Safety Act.
5. Illinois Annotated Stat. Chapter 127 Commission on Intergovernmental Cooperation.
6. Illinois Annotated Stat. Chapter 127 Intergovernmental Cooperation Act.
7. Illinois Annotated Stat. Chapter 48 Workers Occupational Diseases.
8. Illinois Annotated Stat. Chapter 111 Uniform Hazardous Substances Act of Illinois.
9. Illinois Annotated Stat. Chapter 127 The Department of Labor.
10. Illinois Annotated State. Chapter 127 The Department of Public Health.
11. Illinois Annotated Stat. Chapter 127 The Illinois Emergency Services and Disaster Agency Act.
12. Illinois Annotated Stat. Chapter 61 Wildlife Code.
13. Illinois Annotated Stat. Chapter 96.

#### B. Major Departments

1. Illinois Environmental Protection Agency (IEPA).
2. The Department of Public Health - Environmental Toxicology Program - (ETP).
3. The Department of Labor and Industrial Commission (DLIC).
4. The Illinois Emergency Services and Disaster Agency - (IEDS).
5. The Pollution Control Board (PCB).

#### C. Other Departments

1. The Department of Agriculture - (DOA).
2. The Department of Conservation - (DOC).
3. The Department of Transportation - (DOT).

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate

1. The Illinois Environmental Protection Agency Act and The Intergovernmental Cooperation Act both

emphasize the importance of inter-agency coordination.

B. Major Cooperative Efforts

1. Within IEPA cooperative efforts include the Coordinative Permit Review Committee, the Multi-media Toxics Coordination Committee and the Multi-media Laboratory Committee.
2. IEPA inter-agency coordination methods are the Toxics Advisory Committee cooperative agreement funding, joint agency investigations, and the 24 hour emergency hot-line.
3. Within DPH cooperative efforts include the Intra-departments Task Force.
4. DPH inter-agency coordination includes joint investigation and studies, and the ETP brochure and newsletter.

III. Information Management

A. Means of Gathering Data

1. IEPA/DPH field and regional staff investigation and monitoring.
2. Permit and licensing submittals.
3. Toxic exposure incidence reporting.
4. Morbidity and mortality data, birth defects monitoring data, and an experimental cancer surveillance program.

B. Data Coordination

1. Data is collected and stored by individual agencies.

C. Information Availability

1. IEPA and DPH data are not readily accessible to other agencies and must be specifically requested.

IV. Toxics Control

A. Problem identification and Ranking

1. Input is received from local health departments, citizen requests, local physicians, permit submittal applications, monitoring data.
2. No formal State priority setting process has been established.

B. Risk Assessment Models

1. The Department of Public Health (ETP) has informally taken responsibility for risk assessment taken responsibility for risk assessment work. The DPH is waiting for the Michigan Risk assessment study.
2. The IEPA Multi-media Toxics Coordination Committee will produce an issue paper on risk assessment.



C. Current Character of Toxic Control

1. IEPA has more regulatory authority for the actual control of toxic substances.

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## Illinois ITM

### I. State Legislative Authorities Directing Toxic Control

1. Illinois Environmental Protection Act 1970 The Act is a comprehensive/umbrella piece of legislation which states that the Illinois Environmental Protection Agency has primary responsibility for protecting the public from toxic and carcinogenic environmental pollutants. The Act recognizes the importance of a multi-media approach to solving environmental problems and mandates the coordination of all state environmental programs. The Act designates that:

- o The IEPA may require submission of information from applicants for permits.
- o The IEPA may investigate alleged violations.
- o All files are public except trade secrets, privileged information, internal agency communication and confidential data or information concerning secret manufacturing process.
- o The IEPA authorizes the Pollution Control Board to determine, define, and implement environmental control standards.

2. Illinois Annotated Stat. Chapter 5, "Illinois Pesticide Act of 1979," effective July 1, 1980

This Act is the Illinois version of the Federal Insecticide Fungicide and Rodenticide Act. The Act is administered by the Department of Agriculture.

3. Illinois Annotated Stat. Chapter 48, "Safety Inspection and Education," effective October 1, 1973

Under this chapter, the Department of Labor and Industrial Commission is required to "foster and promote safety practices" and to enforce the occupational health and safety standards and rules of the Health and Safety Act (mentioned below). Specifically, Chapter 48 states:

- o Information reported through an inspection or proceeding which might reveal a trade secret is confidential.
- o Employers are required to keep records of employee exposure to potential toxic substances and employees must have access to the records.
- o The Department of Labor is authorized to enter, and inspect workplaces.
- o Employers must notify employees of exposure to concentrations and levels of toxic substances.
- o Employees may request an investigation of a suspected imminent danger.

4. Illinois Annotated Stat. Chapter 48, "Health and Safety Act," effective January 1, 1980

Under the supervision of the Labor Department and Industrial Commission the Act states that it is the duty of employers to provide protection for the lives, health and safety of employees and to furnish a workplace "free from recognized hazards".

- o Employers are required to maintain records of work-related deaths, injuries and illnesses.
  - o Employers are required to monitor and measure employee toxic exposure.
  - o Labels are required so that employees know the hazards to which they are exposed, their symptoms and emergency treatment, and conditions for safe use and exposure.
  - o Emergency temporary standards may be imposed to protect employees exposed to grave danger from toxic substances.
5. Illinois Annotated Stat. Chapter 127, Commission on Intergovernmental Cooperation, Effective July 1, 1979

The Act creates the Commission for Intergovernmental Cooperation. The Commission facilitates informal cooperation between governmental offices and serves as an information and research clearinghouse.

6. Illinois Annotated Stat. Chapter 127, "Intergovernmental Cooperation Act," effective Oct. 1, 1973

The Act states that any powers and authorities exercised by any governmental unit or agency can be exercised jointly, as long as it is not prohibited by another law.

7. Illinois Annotated Stat. Chapter 48, "Workers Occupational Diseases", effective January 1, 1980

This Act requires that employers maintain records of work-related deaths, injuries and illnesses and report all occupational diseases to the Industrial Commission. Reports must satisfy the requirements of the Health and Safety Act and the Safety Inspections and Education Act.

8. Illinois Annotated Stat. Chapter 111, "Uniform Hazardous Substances Act of Illinois," effective September 26, 1978

The Act provides the Department of Public Health with the authority to administer the State's Hazardous Substances Act.

9. Illinois Annotated Stat. Chapter 127, The Department of Labor

The Department of Labor is authorized to improve working conditions, foster, develop and promote the welfare of employees. In addition,

the Labor Department may collect and report statistics about commercial conditions, labor production, conditions of employment, and prevention of accidents, etc.

10. Illinois Annotated Stat. Chapter 127, the Department of Public Health, effective October 1, 1977

The provision authorizes the Department of Public Health to supervise, preserve and improve the public health. The Department is responsible for "examining nuisances and other threats to the security of life and health, ... and promoting measures aimed at reducing death from cancer and other chronic diseases."

To fulfill this mandate, the Department of Public Health is directed to maintain laboratories to test, air, water, wastes, and equipment and conduct State-wide diagnostic testing. In addition, the Health Department is required to cooperate with other State agencies and Medical Associations in efforts to promote and improve health throughout the State. Under this provision, the Department of Labor is also required to distribute information concerning disease prevention and health and sanitary conditions of the State.

11. Illinois Annotated Stat. Chapter 127, "The Illinois Emergency Services and Disaster Agency Act of 1975"

The Emergency Service and Disaster Agency is directed to assure preparedness in case of disaster from natural or artificial causes.

12. Illinois Annotated Stat. Chapter 61, "Wildlife Code," effective January 1, 1980

The Department of Conservation is authorized to cooperate with the Illinois Environmental Protection Agency in developing pollution investigations and reports.

13. Illinois Annotated Stat. Chapter 96, effective July 14, 1978

The Illinois Institute of Natural Resources was established under this Chapter. The Institute was directed to study and investigate the technology and administration of environmental protection and water resources. The Institute conducts economic impact studies on regulations proposed by the Pollution Control Board.

The Illinois Environmental Protection Agency has delegated federal authority for the Clean Air and Clean Water Acts.

There are two significant toxics oriented bills pending in Illinois: SB1586 and HB1556. Illinois SB 1586 would require employers to label all containers possessing toxic substances listed on the NIOSH Registry. This law would pertain to containers of one gallon or more. The bill also would require employers to supply information to employees regarding toxic substances upon request. Furthermore, any retaliation against an employee for exercising his rights would be forbidden.

The bill, introduced in 1981, was not reported out of the Senate that year. Illinois law states that the second year of each session be reserved for appropriations and emergency bills. Since this was not deemed an emergency bill, it was not acted upon. The deadline for assignment of bills into the House was May 28, 1982; the bill did not make the deadline. According to the sponsor, the bill will be resubmitted in 1983.

Illinois HB 1556, like its counterpart in the Senate, would require the labeling of containers of a gallon or more holding toxic substances. The proposed bill is more extensive than the Senate bill in that it specifies a time period of 72 hours in which the employer must provide information to the employee after his request. The bill also requires the employer to post a notice informing employees of their right to request information. Also, it allows the Director of Public Health to conduct an outreach program, using television, radio, and leaflets in public areas, which would further inform employees of their right to know. HB 1556 also contains a CBI clause. The bill will be reintroduced in 1983.

The most significant toxics issues in the State are hazardous waste disposal and hazardous waste facility siting. Clean-up operations have been initiated on PCB's in the Waukegan harbor and, under court order, the Wilsonville landfill site will be excavated.

## II. Organizational Structure of Lead Agency/Office on Toxics Management

The State agencies which have the major roles in Illinois toxics management are the Illinois Environmental Protection Agency, the Department of Public Health, the Pollution Control Board, the Department of Labor and Industrial Commission and the Illinois Emergency Services and Disaster Agency. The Department of Agriculture, Department of Conservation and the Department of Transportation are also involved but to a lesser degree.

The Illinois Environmental Protection Agency (IEPA) mandate and authorities are similar to that of the U.S. EPA. The Agency is responsible for preserving and protecting the Illinois environment. The Agency possesses the resource management and enforcement authority to carry out the mandate. The Agency is organized by media under the management of the Director of Environmental Programs. There are five divisions including the Division of Water Pollution Control, Air Pollution Control, Land Pollution Control, Water Supplies and the Division of Laboratories. In addition, the IEPA has established a Data Processing Office for computer data management. The IEPA functions according to a matrix management style and although information is gathered and expertise is maintained in the individual programs, information is shared among the various program offices.

Under the manager of Environmental Programs, the IEPA has developed three basic intra-agency coordinative methods. These three methods include the Coordinative Permit Review Committee, the Multi-media Toxics

Coordination Committee, and the Multi-media Laboratory Committee. The Coordinative Permit Review Committee is composed of representatives from each of the divisions. The committee meets weekly to review permit applications and identify permits which require additional media inspection and/or permits. In this way, the permit application procedure is streamlined. The Multi-media Toxics Coordination Committee is an agency-wide committee including members from each division. The committee meets monthly and is responsible for insuring that toxics activities and plans among each division are coordinated and integrated. Each division prepares a "Toxic Pollutant Status and Prospects Report" which is then examined by the committee. The committee then reviews these reports for duplication of effort, major program gaps, areas for potential regulatory actions and opportunities for US EPA cooperative work. This committee is also working on a major toxics integration strategy document. A Toxics Advisory Committee has recently been assembled to assist the IEPA develop the Agency toxics strategy. The committee is composed of industry, citizens, academia and the Illinois Department of Health. The first meeting will be in September '82. The Multi-media Laboratory Committee is also composed of division representatives who act as liaison for the laboratory staff.

In the past, the IEPA has consciously focused attention on upgrading its internal toxics integration; however, the Agency is now redirecting its emphasis towards improving communication with other State agencies involved in toxic substances control. The IEPA works primarily with the Department of Public Health on a case by case basis. The Department of Public Health will work cooperatively with IEPA on specific chemical problems, epidemiology studies or permit applications. The DPH has also received cooperative agreement funds from the IEPA to conduct studies on heavy metals, groundwater and drinking water. The IEPA has also worked with the Corp of Engineers and the Department of Transportation on dredge and fill projects and the Department of Conservation on emergency situations having to do with fish kills. The IEPA has assigned one person in the Environmental Standards office to be responsible for working with the Department of Agriculture and the agricultural community on pesticide-related concerns.

In addition, the Emergency Response Unit located in the IEPA Environmental Standards Office operates a 24 hour hot-line, coordinates emergency response plans and emergency situations with a number of State agencies including DOT, DPH, DOL and the Illinois Emergency Services and Disaster Agency.

The Illinois Department of Public Health is divided into three major offices: Health Regulation, Health Services and Health Planning. Under these three offices the Department is sub-divided into Divisions and then Sections. The most active program having to do with toxics is the Environmental Toxicology Program (ETP). This Program is located within the Environmental Chemistry Section in the Division of Engineering and Sanitation. The Division is in the Office of Health Regulation.

Although other offices within the Department have contributed to toxic control activities, the Environmental Toxicology Program is responsible for conducting toxic related public health investigations and coordinating the Department's toxic activities in general.

The Environmental Toxicology Program was formally created in 1978 as a response to the increasing number of requests from the public, local health departments, schools and other agencies. Citizens were asking the Department to investigate cases associated with chemical exposure. Cases include pesticide contamination of drinking water wells, exposure to formaldehyde in homes, and occupational exposure to toxics. The Environmental Toxicology Program is better equipped to handle requests now and has attempted to reshift its reactive approach to a preventive one. This is explained in Section III of the paper.

The Environmental Toxicology Program has relatively informal communication with other State agencies although there is a move to begin formalizing these relationships. The ETP interacts primarily with the Illinois Environmental Protection Agency and the Emergency Services and Disaster Agency. ETP has been working closely with the IEPA Emergency Response unit on the 24-hour hotline. ETP and IEPA will often perform joint investigations at hazardous waste sites and specific toxic air and water problems in the State. In addition, the Department of Health created the Intra-Departmental Task Force to coordinate toxics efforts of the State Agencies and increase the likelihood of receiving early warnings of health hazards. This Task Force does not meet regularly but only when a particular issue surfaces.

### III. Information Management

In Illinois there are currently no inventories or reporting requirements for industry (aside from worker Right-to-Know information). The IEPA gathers a majority of its environmental data from field and regional staff investigation and monitoring. IEPA monitoring efforts include compliance monitoring, ambient monitoring, toxic monitoring, biological monitoring and the on-going Great Lakes monitoring. The air monitoring program includes sampling for sulfur dioxide, nitrogen dioxide, ozone carbon monoxide, hydrocarbons, particulate matter and metals such as lead zinc, iron, copper, cadmium and arsenic.

IEPA has been delegated the National Pollution Discharge Elimination System authority (NPDES). The NPDES requires water permits for all point sources which discharge into waterways and insures that dischargers monitor wastes and report the amount and nature of all waste elements. The State does maintain a list of major dischargers which ranks dischargers according to size. According to the National Governors Association, the Illinois EPA has been actively studying trace organics in water dischargers. The State's work has resulted in the development of new sampling methodology. They use the mathematical theory of sampling in addition to equipment specifically designed to reduce errors involved in collecting samples containing large numbers of organic compounds present at trace levels. With the assistance of the University of Illinois and the SIU School of

Medicine, the State is also attempting to modify the Ames bacterial mutagenicity testing procedure. A majority of the Illinois EPA sampling and monitoring data is computerized on Storet and currently managed by the Data Processing Division. This data is not readily accessible to other State agencies and must be specifically requested. Information requests from citizens are handled by either the Agency's Public and Intergovernmental Affairs Office, the Public Participation Staff or the Public Affairs staff person assigned to each division.

The Department of Public Health, Environmental Toxicology Program has developed a three tiered program to study environmentally related disease and toxic exposure. The program, which is partially supported by TSCA Section 28 funds, includes the development of a State-wide communication network, improving the early-warning methods for identifying toxic hazards and the data management and evaluation system, and developing the Agencies' field investigative capabilities. The major activity of the communication network effort is a printed brochure describing the Department's Environmental Toxicology Program and a newsletter. The brochure has already been distributed to State and local health professionals. It is hoped that the brochure will generate data and disseminate information on toxic substances problems requiring investigation. In the past, the Department has noted that physicians in the State often notice a frequency of chemical-related problems and alert the Health Department. The brochure and newsletter are designed to encourage this activity as well as develop communication between relevant State and local offices.

The Environmental Toxicology Program has emphasized toxic data gathering and management and has developed a number of data systems. These systems include morbidity and mortality information, environmental sampling analyses conducted and maintained by the Department's Environmental laboratory, birth defects monitoring data, and a cancer surveillance program. The cancer surveillance program is on a pilot basis. Information will be obtained from sixteen counties with the ultimate goal of gathering hospital reports on diagnosed cases of cancer.

To increase the Department of Public Health's field investigation capabilities, the University of Illinois School of Public Health has designed a number of survey tools. One of the survey tools is a questionnaire. The questionnaire will gather information on medical history, exposure and occupational data, and demographic information.

The Illinois Department of Health has utilized the Chemical Substances Information Network (CSIN) with the assistance of the National Governors' Association. Because it was found very helpful, the Department has expressed interest in direct access to CSIN. DPH has access to the Health and Nutrition Examination Surveys (HANES) and the National Institute for Occupational Safety and Health Surveys.

#### IV. Toxics Control

The Department of Public Health and the Illinois Environmental Protection Agency learn of chemical problems through a variety of ways. The DPH receives a number of complaints and requests for investigations



from local citizens, health departments, physicians and veterinarians. Some requests come through the 24 hour ESDA emergency hot-line. The Department is in the process of gathering and computerizing morbidity and mortality data, birth defects information and exposure incidence data in the hope that potential chemical problems can be identified early. The Illinois EPA utilizes air and water monitoring data, permit submission data and IEPA regional monitoring information, as well.

The establishment of priority chemical problems is somewhat informal in Illinois. The IEPA Divisions determine priority problems. Division program decisions are then discussed in senior staff meetings and final decisions are made by department heads. The enforcement program in IEPA also plays a major role in directing the selection of Agency priorities. The Department of Health is responsible for producing two reports for the State legislature: the Human Services Plan and the State Health Plan. In writing these annual reports, the Health Department staff must focus on program goals and objectives, thus the exercise becomes in part a priority setting one.

Risk assessment models are not used with any regularity in the State. The Health Department is taking the lead on this issue now and are awaiting the results of the Michigan inter-governmental risk assessment study. The IEPA Task Force will also prepare a philosophical paper on the potential use of risk assessment.

In addition to the Waukegan Harbor and Wilsonville clean-up operations, Illinois responds to toxic incidents on a case by case basis. Control strategies are developed according to the toxic problem. For example, the Department of Health ETP was called in to investigate and solve apparent bromine poisoning at the Illinois National Guard Headquarters. ETP did a health survey of those people affected, traced the source of the problem to the ventilation system, requested the assistance of architects and engineers, and developed recommendations for solving the ventilation problem. A recommendation was selected and the bromine poisoning problem was solved. Another example involves a hog farmer in Illinois. Members of the farmer's family were becoming sick from arsenic poisoning. The source of the arsenic was unknown until ETP investigated and found a cross-connection between the farmer's pesticide supply container and the family's water wells. The problem was then easy to solve. Cases similar to these occur routinely in Illinois. The Department of Public Health responds to about 800 inquiries annually.

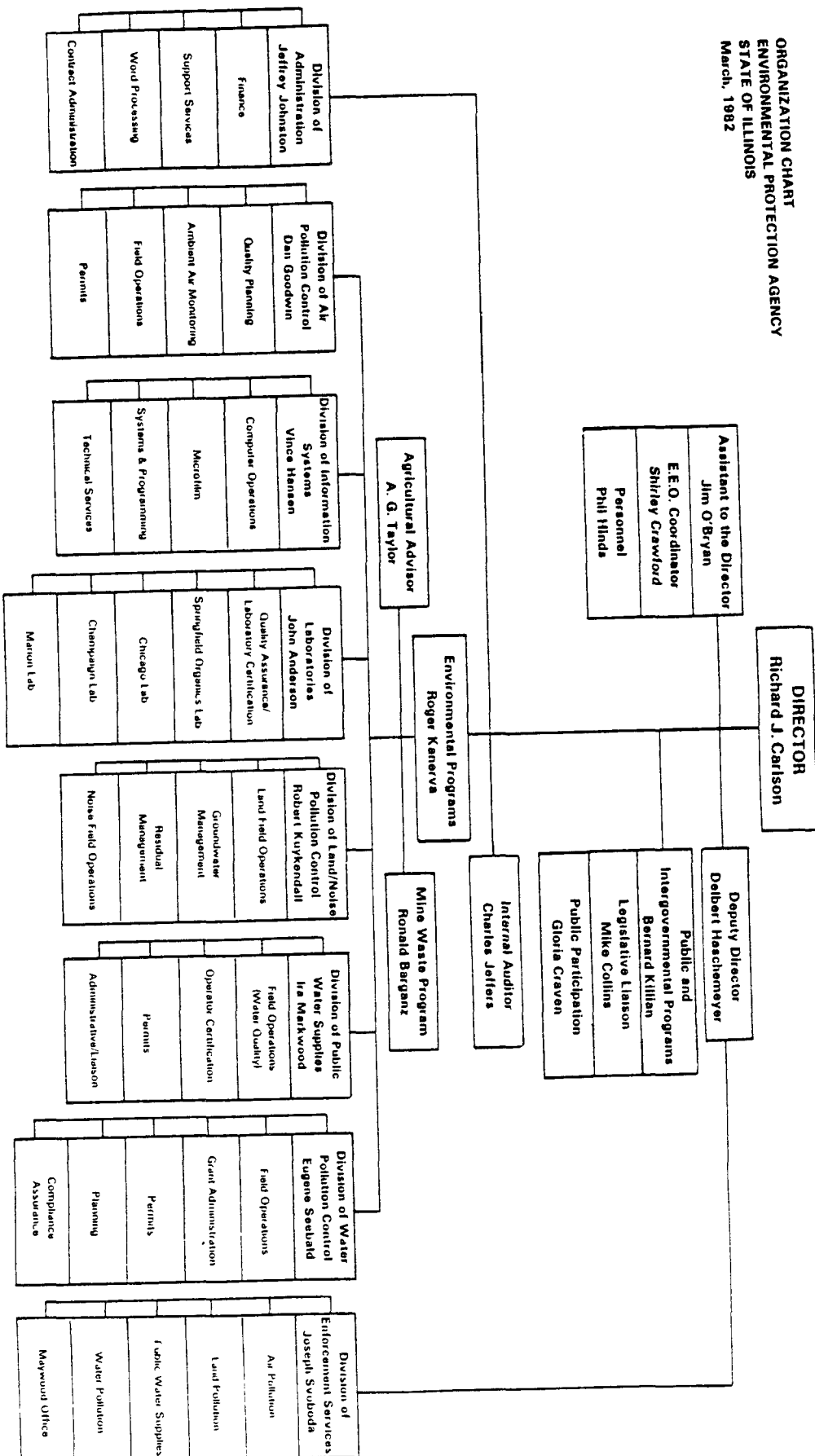
## V. Analysis

Illinois ranks seventh among the States in number of manufacturers and importers reporting for the TSCA inventory of chemicals in commerce, and fifth in the number of different substances reported. As a result, the State has become more active in toxics management in the last five years. The IEPA has managed to improve its technical expertise and information base in each environmental medium and strengthen the Agency's internal toxics coordination. Three major multi-media committees have

been created which continue to streamline agency procedures and open communication channels. The IEPA is in the process of developing an intra-agency toxics strategy and this document should be completed within the year. The Department of Public Health's Environmental Toxicology Program responds to toxic incidences and is trying to develop and computerize its public health data bases.

Although there are no industry reporting requirements (other than permits) and State-wide inventories are lacking, the State is developing a toxics management program which fits the needs and resources of the State.

ORGANIZATION CHART  
ENVIRONMENTAL PROTECTION AGENCY  
STATE OF ILLINOIS  
March, 1982



## Maryland ITM Summary

### I. Toxic Substances Authorities

#### A. Major Toxics Related Legislation

1. Hazardous Substances Act.
2. Council on Toxic Substances Act.
3. Water Pollution Control and Abatement Act.
4. Safe Drinking Water Act.
5. Maryland Environmental Service Act of 1970.
6. Air Quality Control Act.
7. Maryland Pesticide Regulation and Labeling Law.
8. Pesticide Applicator's Law.

#### B. Major Agencies

1. Department of Health and Mental Hygiene.

#### C. Other Agencies

1. Department of Agriculture.
2. Department of Licensing and Regulation (Division of Labor Industry)
3. Department of Natural Resources.
4. Department of Transportation.
5. Department of State Planning.
6. Department of Economic and Community Development.
7. State Fire Marshall's Office.
8. State Police.
9. Civil Defense and Disaster Preparedness Agency.

### II. Organizational Coordination in Toxic Substances Management

#### A. Legislative and Executive Mandates

1. An Executive Order in 1980 created a centralized integrated management structure for environmental programs in the State Department of Health and Mental Hygiene.
2. Governor's Council on Toxic Substances.
3. Hazardous Waste Siting Board.
4. Hazardous Substances Advisory Council.

#### B. Major Cooperative Efforts

1. Toxic Substances Registry.
2. Air Toxics Coordinator.
3. Consolidated Laboratories.
4. Aquatic Toxics Program.

### III. Information Management

#### A. Means of Gathering Data

1. Industrial Survey.

2. Health Hazard Alerts
3. Cancer Registry
4. Occupational Disease Registry
5. Birth Defects Registry

B. Data Coordination

All toxics-related data is computerized into a centralized system, the Toxic Substances Registry.

IV. Toxic Substances Control

A. Problem Identification and Ranking

1. Environmental programs use a number of risk assessment criteria in a problem solving approach.
2. The Science and Health Advisory Group provides assistance to individual programs and helps coordinate joint priorities within DHMH.
3. The Governor's Council on Toxic Substances coordinates efforts across programs and agencies.

B. Risk Assessment Models

The State uses a number of criteria to assess risks.

C. Emergency Management

A number of agencies respond to toxics emergencies. An alert system was established by the Governor's Council on Toxic Substances.

V. Current Status and Analysis

A. Existing Priorities

Hazardous Waste Disposal

B. Integration Activities

1. Centralized Environmental Program Office in Department of Health and Mental Hygiene provides excellent structure for cross-media coordination.
2. Additional coordination provided
  - a. Governor's Council on Toxic Substances
  - b. Sciences and Health Advisory Group
  - c. Toxic Substances Registry
  - d. Hazardous Waste Siting Board
  - e. Hazardous Substances Advisory Council

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## Maryland ITM

### I. State Authorities Regulating Toxic Substances

Major legislative authorities for the regulation of toxic substances are contained in the Council on Toxic Substances Act, the Hazardous Substances Act, the Water Pollution Control and Abatement Act, the Safe Drinking Water Act, the Air Quality Control Act, the Maryland Environmental Services Act and several pesticides acts. Most of these acts are now incorporated into Article 43 of the Maryland Annotated Health Code.

In many cases broad authority, rather than specific requirements, is given to the Secretary of Health and Mental Hygiene to conduct environmental programs. Article 43, Sections 690-706 of the Health Code enables the Secretary to monitor emissions and issue regulations in order to protect community health. Under this section, the air program carries out monitoring activities, and the State conducted a survey of industries producing toxic substances. Section 33 gives authority to the Secretary to secure information on the incidents and causes of disease. Under this section, the State has set up a Cancer Registry to require physicians and hospitals to report tumor incidents and related data. Section 18 does make specific requirements of physicians to report incidents of occupational disease.

In January 1980, a major reorganization of Maryland's State agencies regulating toxic substances was initiated by an Executive Order and approved by the Legislature. A number of environmental programs, chiefly water and hazardous waste, were transferred from the Department of Natural Resources in Annapolis to the Department of Health and Mental Hygiene in Baltimore, to maximize sharing of information and expertise in a problem solving approach to protect public health. An Office of Environmental Programs was established under the Department of Health and Mental Hygiene, and the air, water, waste and community health programs were reordered under a new Assistant Secretary for Environmental Programs. State laboratories for toxic substances testing were consolidated into the Laboratories Administration under the Department of Health and Mental Hygiene. Primary authority for the regulation of toxic substances under the Maryland Annotated Code was shifted from the Natural Resources Code to Article 43 of the Health Code.

A chief integrating mechanism for toxic substances control in Maryland was created by the Council on Toxic Substances Act. The Act created the Governor's Council on Toxic Substances\* with broad inter-agency, university and public representation to provide advice on all matters relating to toxic and carcinogenic substances. The Act is now contained in Section 813A-813C of Article 43 of the Health Code.

The Hazardous Substances Act was recently amended to strengthen penalties for illegal hazardous waste activity. It sharply increased fines and stiffened sentences for violations. The Act was also amended to create a Hazardous Waste Facility Siting Board\* representing local communities, the scientific community and the public to recommend certification

\* See Section II

of hazardous waste sites. During the last session of the legislature a bill was passed closing one of the two remaining facilities in the State. Presently, fourteen sites are under consideration. The Act also contains a requirement to establish an inter-agency Hazardous Substances Advisory Council\* to assist the State in developing policy and regulations concerning hazardous waste disposal.

The 1982 legislative session passed a number of toxics related bills. Chief among these was the Sentinel Birth Defects Information Act. The law requires physicians to report incidents of children born with birth defects and are specifically required to report any knowledge of environmentally related incidents. The reporting form requires information on the parents including residence, occupation, smoking habits, and origin. The data is physician/hospital reported, not based on residence.

Other bills passed by the last legislative session are:

- 1) The Transportation of Hazardous Materials Act enabling the State to designate routes, procedures and equipment for the transportation of hazardous waste;
- 2) The Hazardous Waste Facilities Health and Safety Standards Act requiring the State to issue health and safety standards for the safe operation of hazardous waste disposal sites;
- 3) The Drivers Certification Act giving the State the ability to require licensing of drivers transporting hazardous waste; and
- 4) The Asbestos Licensing Act requiring licensing of any business involved in the containment or removal of asbestos.

## II. Organizational Coordination in Toxic Substances Management

Maryland's Office of Environmental Programs in the Department of Health and Mental Hygiene now manages most of the State's toxic substances control programs. Several of the State's environmental programs were transferred from the Department of Natural Resources to the Department of Health and Mental Hygiene in 1980. The State's environmental programs are now centralized to maximize coordination and sharing of information. Four divisions within the Office of Environmental Programs carry out programs in air, water, waste and community health (food, drug, product safety, noise, and radiation). Water resources responsibilities are in DNR; pesticides, in Agriculture.

Environmental health coordination, both inside the Department of Health and Mental Hygiene and with other agencies, is provided by the Office of Environmental Programs' Science and Health Advisory Group. It is responsible for information gathering, epidemiological studies, problem identification, development of scientific criteria for toxic pollutants in discharge permit limitations, conducting special projects, providing assistance to local health departments, and providing a scientific and medical advisory service to other programs and other

\*See Section II



agencies. It has two divisions. The Division of Environmental Science and Technology provides advice and assistance to other programs and agencies and conducts special projects. Its special projects relating to toxics include a TSCA Section 28 grant project to develop a Toxic Substances Registry, a centralized computer system of toxics information from local, State and Federal sources; a special project to educate and train State Police to enforce State regulations on the transportation of hazardous substances; a project funded under a TSCA Section 28 grant to develop safe containment procedures and engineering technology for hazardous materials; and a TSCA PCB enforcement grant to ensure safe PCB storage and disposal practices. The Division of Environmental Disease Control oversees and evaluates physician reporting of disease relating to toxic substances, including incidents of tumors, birth defects and occupational diseases.

The Office of Environmental Programs also has a Planning and Analysis Group which provides assistance and advice on program and regulation development to the different media programs. An Administration Services Group gives administrative support to the different programs and includes a consolidated laboratories program.

There are also the basic media programs. The State air program is given broad based authority to monitor emissions and to protect public health. It cooperated with the Science and Health Advisory Group to provide information to toxic substances for the Industrial Survey and Toxic Substances Registry. It is now setting up a special airborne toxic substances program and has just recently designated a Toxic Substances Coordinator.

The State water program has monitored toxics since 1974 when it issued a regulation to prohibit the discharge of toxic materials into State waters without a permit. The regulation requires reporting of information on the nature of toxic materials, safeguards and clean-up procedures. The State also conducts testing of inorganic and organic toxic pollutants in drinking water supplies. It coordinates with the waste program in identifying existing and potential problems from landfills and other waste sites.

Authority for the regulatory management of hazardous waste rests with the Department of Health and Mental Hygiene's Environmental Programs' Waste Management Administration. The Waste Management Administration develops and administers rules and regulations on hazardous waste. It issues numerous permits for hazardous waste disposal and conducts a strong inspection and enforcement effort.

An alternative to local zoning of hazardous waste disposal sites rests with a special Hazardous Waste Siting Board. The Board consists of scientists, geologists, environmentalists, citizens, county and chamber of commerce representatives. This is an autonomous board appointed by the Governor. It must conduct hearings and consult with the Council on Toxic Substances, the Hazardous Substances Advisory Council and the secretaries of Health and Mental Hygiene, Economic and Community Development,

State Planning, and Agriculture. Final permitting authority rests with the Health Department's Waste Management Administration. Staff support for the Board is provided by Maryland Environmental Service in the Department of Natural Resources.

The State also has a Hazardous Substances Advisory Council which reports to the Governor. The Council assists the Department of Health and Mental Hygiene in designating hazardous substances and developing rules and regulations for the management and disposal of hazardous waste. The Council has representation from the Department of Agriculture, the Department of Licensing and Regulation's Division of Labor and Industry, and the Department of Health and Mental Hygiene. In addition, representatives serve from the University of Maryland, the hazardous waste disposal industry, a hazardous waste generator, and the public at large.

The Maryland Hazardous Substances Control Fund provides money to assist with clean-up activities and emergency response to hazardous waste spills and contamination. Funds are provided from permit fees. Although the fund is sometimes as large as half a million dollars, it not represent the extent of the "Superfund" assessment found in other states.

The State's primary inter-agency cooperative effort in toxic substances management and long-range planning is conducted by the Governor's Council on Toxic Substances. The Council is comprised of representatives from State agencies, as well as from the private sector. It includes representatives from the Departments of Natural Resources, Agriculture, Licensing and Regulation, Transportation, State Planning, and Economic and Community Development, as well as from the States Fire Marshall's Office, State Police, Civil Defense and Disaster Preparedness Agency, University of Maryland, Johns Hopkins University, the AFL-CIO, Chamber of Commerce, and one member each from the Senate and House of Delegates. The Council develops plans for common action between agencies; shares resources, facilities and data; increases cooperation in compliance and enforcement activities; and has established an alert system for handling toxic emergency situations. It recently held a symposium on the effects of low-level radiation and also one on risk assessment and health effects of toxic substances. The Council is also reviewing regulations in response to the recently passed asbestos containment and removal legislation.

The Governor's Council on Toxic Substances, the Hazardous Waste Siting Board and the Hazardous Substances Advisory Council are all required by law and members serve two to six year terms. This structure insures continuity of the State's integrated toxic management program and enhances the State's ability to maintain a long-term commitment.

### III. Information Management

Maryland has an extensive system of data collection and coordination centralized into the Toxic Substances Registry. In 1978, Maryland selected an initial list of 178 chemicals determined by an examination

of Federal, State, and local information on chemical production, health effects, imminent hazards, and other toxic substances data. Three hundred industries, producing the greatest volume of these priority chemicals, were selected for the State's initial Industrial Survey. Information was gathered on the number of employees, disposal, manufacturing, production volume and use. Supplementary information on selected toxic substances were gathered from Health Hazard Alerts. In addition, the State has developed Chemical Fact Sheets to alert industries, workers and the general public of the possible carcinogenic and toxic effects of certain substances.

A TSCA Section 28 grant has enabled the State to expand its initial survey and to systematize other related toxic substances information into a common data base. The Toxic Substances Registry compiles health and related data from local, State and Federal sources, including other agencies, universities, public health schools and cancer centers, into one centralized data base. Information is searchable by location, chemical name, CAS and RTECH numbers, occupational and environmental standards, biological and chemical factors, volume of substance, and incidents (including spills, occupation disease reports, air quality alerts, etc.). Data on the Toxic Substances Registry is available to the environmental programs in the Department of Health and Mental Hygiene, as well as to other agencies. For example, information on toxic substances, industrial production volumes and emission data can be utilized by media programs conducting permitting actions and monitoring activities or by other agencies carrying out inspections or developing standards.

Also contained in the Toxic Substances Registry are the Occupational Disease Registry and the Birth Defects Registry. The Cancer Registry System is separate from the other system, but related. Maryland's tumor registry program has been redesigned and expanded to help the State determine possible cause-effect relationships. Reporting is now mandatory, not only by hospitals and laboratories, but by physicians. A new reporting form is being developed to include information on patients including residence, occupation, smoking habits, and origin. A similar reporting form is being developed for the Birth Defects Registry. In addition, the State is working with several hospitals in the Baltimore area in a pilot project to link any clusters of disease with possible toxic exposures. The two reporting systems, the Toxic Substances Registry and the Cancer Registry System, will use similar parameters for data description.

#### IV. Toxic Substances Control

Maryland's integrated management structure and centralized data system greatly assist the State in providing the various toxic programs with information necessary to identify problems and set priorities for remedial action. The Sciences and Health Advisory Group assists in setting priorities between programs and the Governor's Council on Toxic Substances helps coordinate priority setting between agencies. Chief among the Council's goals is long-range planning geared towards preventing future hazards.

The Sciences and Health Advisory Group conducts several epidemiological studies to assess possible links between disease and chemical exposure. The studies are largely in response to problems identified at the local

level. A combination of risk assessment criteria is utilized in evaluating risks by the Advisory Group, which also uses its extensive toxic data system in order to identify clusters of alleged problems and to predict potential effects.

Emergency Management in the State is divided among several agencies: the Department of Health and Mental Hygiene's Science and Health Advisory Group and Waste Management Administration; the State Fire Marshall; the Maryland State Police; and the Maryland Civil Defense and Emergency Preparedness Agency. The Governor's Council on Toxic Substances recently established an alert system to more effectively coordinate responses to toxics emergencies. The State has developed an emergency response brochure to aide local authorities in responding to toxics emergencies and has conducted training to step up enforcement of regulations on transportation of toxic materials.

#### V. Current Status and Analysis

The single, most significant toxic substances problem in Maryland is the disposal of hazardous waste. Despite a well-established program for certifying hazardous waste disposal sites and a review of fourteen proposed areas, only one controversial site remains operative for the entire State.

Maryland seems to have a well-integrated structure for toxic substances management. Its centralized Environmental Programs Office in the Department of Health and Mental Hygiene, its computerized Toxic Substances Registry, and its science and technology advisory capabilities greatly enhance cross-media information sharing and coordinated program efforts. The Governor's Council on Toxic Substances further improves cooperation between agencies for coordinated problem-solving, priority-setting and long-range planning. Maryland uses a combination of specific authorities (as in the case of the occupation disease and birth defects reporting requirements) and broad-based authorities (such as that given to the Secretary of Health and Mental Hygiene to secure data) in a problem solving approach to protect public health.

DEPARTMENT OF HEALTH AND MEDICAL WELFARE

SECRETARY

OFFICE OF ENVIRONMENTAL PROGRAMS  
Assistant Secretary

Administrative Services Group  
Chief

Planning and Analysis Group  
Chief

Sciences and Health Advisory Group  
Chief

Air Management  
Administration  
Director

Water Management  
Administration  
Director

Haste Management  
Administration  
Director

Community Health  
Management Program,  
Food + Drug  
Administration

Technical  
Services  
Program,  
Administration  
Administrator

Engineering  
Program,  
Administration  
Administrator

Planning &  
Evaluation  
Program,  
Administration  
Administrator

Inspection &  
Compliance  
Program,  
Administration  
Administrator

Municipal  
Construction  
Grants and  
Permits  
Program,  
Administration  
Administrator

Technical Services  
Program,  
Administration  
Administrator

Enforcement  
Program,  
Administration  
Administrator

*Charles R. Buck Jr.*  
Charles R. Buck, Jr., Sc.D., Secretary

*Harry Hughes*  
Harry Hughes, Governor 12/15/80

## Massachusetts ITM Summary

### I. Toxics Authorities

#### A. Major Toxics Related Legislation

1. 1975 State Reorganization Legislation.
2. Massachusetts Clean Water Act.
3. Hazardous Waste Siting Act.

#### B. Major Departments

1. Department of Environmental Quality Engineering.
2. Department of Public Health.
3. Executive Office of Environmental Affairs.

#### C. Other Departments

1. Department of Food and Agriculture.
2. Department of Environmental Management.
3. Department of Labor and Industries - Division of Occupational Hygiene.

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate

1. No mandate for inter-agency integration exists in Massachusetts.

#### B. Major Cooperative Efforts

1. Frequent meeting among top DEQE and DPH officials.
2. Cooperative use of DEQE laboratories.
3. Power of review held by DPH on other agencies' proposed regulations which may impact on public health.
4. Department of Public Health/Department of Environmental Quality Engineering, Ad Hoc Advisory Committee.
5. Pesticide Board and Subcommittee.

### III. Information Management

#### A. Means of Gathering Data

1. Water pollution and air emissions inventories operated by DEQE.
2. Hazardous waste inventory (to be implemented by DEQE).
3. Environmental monitoring by DEQE.

4. Tumor registry operated by DPH.
5. Vital Statistics records computerized by DPH.
6. Voluntary birth defects registry.

B. Data Coordination

1. Data are collected and stored by the individual agencies. There is no centralized storage system.

C. Information Availability

1. Confidentiality of Business Information is currently protected by State Statute.
2. Health data and certain sections of the birth certificate are confidential.

IV. Toxics Control

A. Problem Identification and Ranking

1. Input received from monitoring data, industry surveys and citizens complaints.
2. Priorities are set according to the seriousness of the problem.

B. Risk Assessment Models

1. Numerous environmental epidemiology studies including biological monitoring have been conducted by DPH. Assessments of human health risks from environmental exposures are also routinely done; however, DPH has not formalized any single risk assessment model.

C. Emergency Management

1. DEQE has the primary responsibility for emergency response for toxic chemical or oil spills, all monitoring, on-site evaluation and coordination of clean-up activities.
2. DPH has the primary responsibility for making recommendations in regard to health risks, medical treatment or biological monitoring and whether to evacuate the area.
3. DPH has the primary responsibility for responding to and managing all emergency incidents for radiation. Formal plans exist for these to fulfill requirements of the Nuclear Regulatory Commission.
4. Department of Labor and Industries is currently developing an emergency response capability including monitoring for responding to workplace emergencies.

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## Massachusetts ITM

### I. Toxics Authorities

The legislative authority over toxics management in the State of Massachusetts can be divided into two levels. The first level of authority is defined by the 1975 reorganization legislation which transferred much of the Department of Public Health's (DPH) control in environmental matters to the Executive Office of Environmental Affairs (EOEA). Under the plan, the Secretary of Environmental Affairs acts as the chief administrator to all environmental policies, including toxics. In addition, three branches of the EOEA are designed to deal with specific aspects of environmental management which are pertinent to toxics control. The Department of Environmental Quality Engineering (DEQE) was established to regulate pollution through its Divisions of: Water Supply, Water Pollution Control, Air Quality Control, Hazardous Waste Management, Laboratories, Water Ways, and Wetlands. The Department of Environmental Management (DEM) was formed as the State's environmental policy organ, and the Department of Food and Agriculture (DFA) has assumed control of the pesticides program through its Pesticide Office. This forms the basis of Massachusetts's environmental management.

The second level of authority is the delegation of control which results from various State statutes such as: The Clean Water Act, the Massachusetts Environmental Policy Act and the Hazardous Waste Siting Act, in addition to the authority delegated under the Federal Clean Air Act. As a result of these statutes, control over toxics substances is distributed somewhat differently than is implied by the reorganization legislation. DEQE is the dominant body in the field of toxics management by assuming all monitoring functions, and most enforcement. Through the Hazardous Waste Siting Act, DEM has assumed a significant role in hazardous waste facility siting.

In addition, the Department of Public Health has maintained a great deal of authority in toxics management through its involvement in matters which present a "significant threat to public health." Under the Assistant Commissioner for Environmental Health Programs and the Director of Health Assessment, toxics programs are carried out in the Offices of: Environmental Epidemiology, Environmental Toxicology and Environmental Hygiene. Moreover, a representative of DPH, as mandated by the Massachusetts Pesticide Control Act, chairs a multi-agency pesticide review board. The Department of Public Health is also assisted by the autonomous local health departments.

No legislation exists which deals with integration of all of the various agencies and offices just mentioned, and currently no such legislation is pending. Several joint DEQE-DPH programs are carried out according to formal memoranda of understanding.

### II. Organizational Coordination in Toxics Management

As previously stated, the statutes which are pertinent to toxics delegate basic line functions to specific environmental departments and media divisions, with no explicit concern for integration. Theoretically,

the 1976 reorganization legislation addresses a major part of this question by vesting the Secretary of Environmental Affairs with ultimate control over DEQE, DEM and DFA. However, in practice, this only applies to the EOEa.

There are several cooperative efforts, both within and outside of the agencies which were not mandated by legislation but prove to be significant. Within DEQE, two Deputy Commissioners, one for environmental media programs and one for water resources, meet quite frequently to discuss problems and programs under their jurisdictions. In addition, coordination of Statewide programs are aided both in planning and in implementation by monthly meetings of the four regional engineers (who have major local implementation responsibilities), and the various directors within DEQE. Informal meetings between these officials occur even more frequently. Partly as a result of this, hazardous waste enforcement has been singled out as a program which is particularly well coordinated Statewide. A final cooperative effort within DEQE is the shared use of laboratories.

The DPH also has a number of cooperative efforts. Within the Environmental Health Services section of the department, the Assistant Commissioner, division directors and senior staff all meet on a monthly basis. There is a significant amount of sharing of services between the five divisions (Division of Environmental Health Assessment; Division of Food and Drug; Childhood Lead Poisoning Prevention; Division of Radiation Control; Division of Community Sanitation), as the need arises. The Environmental Health Assessment program has worked cooperatively with the lead program to assess human exposures to lead from environmental contamination by various media (hazardous waste, ambient air, etc.). Likewise the environmental health assessment program and the food and drug programs have cooperated very closely on pesticide registration issues and contamination of the food supply by hazardous waste or industrial effluents. The food and drug program has, at the request of the environmental health assessment program, assigned staff to collect food samples both in the marketplace and in contaminated estuaries. The environmental health assessment program provides the technical reviews, risk assessment and recommendations to the food and drug program for the pesticide registration process and food contamination incidents.

DPH also works cooperatively with other Departments. Department of Fisheries and Wildlife has used its staff and boats at DPH's request to collect fish samples from contaminated waters. DPH has assigned staff to the DF and A to assist in the pesticide registration process and evaluation.

The Department of Public Health and the Department of Environmental Quality Engineering have a cooperative effort embodied in the Ad Hoc Advisory Committee. This committee includes representatives from industry and the academic community among others and meets every two months to discuss a wide range of issues with environmental health significance. Work within DPH is coordinated by the Assistant Commissioner for Environmental Health Services.

The main instances of cooperation among the Departments are centered around specific toxics issues. The ad hoc Advisory Committee has considered such issues as 2,4-D, TCE, and PCB's in New Bedford Harbor. In addition to issue-oriented coordination, there is the power of review that DPH has over other departments (DEQE, DF&A, DEM, etc.) in the state which write regulations having impact on the public health, and the approval of the registration of pesticides by the Subcommittee on Pesticides, which is chaired by the Food and Drug Director of DPH.

### III. Information Management

Data collection with the State of Massachusetts is relatively well developed. An inventory exists on water, a new air emissions inventory is being initiated, and one will soon be implemented on hazardous wastes. Data is also collected and stored from the various media monitoring efforts across the State. However, there is no formal industry inventory, and the only mandatory reporting is in the water program.

The Department of Public Health operates a tumor registry in addition to collecting vital statistics (birth and death certificates). The death certificate record is potentially useful because the certificates list underlying and secondary causes of death and the usual occupation of the individual; however, the limitation is that it does not provide an historical record of the individual's occupation or residence. In addition, information is provided by a partial source, e.g. next of kin. A voluntary birth defects register is in existence.

Data coordination is not extensive. The majority of the information that is collected is done so by the individual agency or division, and currently there is no formal means for transferring the information between offices; although informally, health information has been disseminated to DEQE from DPH and DEQE has provided much environmental data to DPH.

### IV. Toxics Control

Problem identification comes from several sources. Monitoring data, industry surveys and permits, and citizen complaints are all used as very instrumental in illuminating various problem areas. The primary responsibility for toxics emergency management lies with DEQE. DEQE has authority over all emergencies concerning oil or chemicals and serves as the coordinating body for other agencies. Additionally, DPH staffs are responsible for providing information and guidance concerning health effects, medical treatment and necessity for evaluation during emergency incidents. The Radiation Control Program is located in DPH. A nuclear incident advisory team to respond to emergency incidents involving radiation releases is located in this program.

### V. Current Status and Analysis

Massachusetts's first priority in the toxics field is hazardous waste. However, significant problems are recognized concerning PCB's, arsenic and herbicides. Such concern has also led to initiatives in

waterways pollution control. There is a great deal of public concern over toxics problems, and support for toxics programs exist in the legislature and local government.

Massachusetts does, however, have some pending legislation dealing with toxics management in general which is noteworthy. Currently, the Department of Health is seeking legislative approval to establish a separate budget for the Environmental Health Assessment Division. This could significantly strengthen the programs under this division's auspices. Other legislation, most notably HB 2463 deals with worker and community right to know. The bill requires employees who use, transport, handle, dispose, discharge or process toxic, hazardous, radioactive, infectious or flammable substances to produce a list of such substances to which workers, residents or fire personnel could be exposed. The bill also requires employers to disclose any information on toxics requested by workers, State officials or the community. In addition, the bill establishes education and training programs for employees. Confidentiality of Business Information principles are flatly rejected by language which basically states, as a summary discloses that "the avoidance of toxic or hazardous working and living conditions outweighs companies' concerns for trade secrets". Finally, a State Superfund bill is also pending.

Due to the distinct functions and managerial styles of the two most important departments, DEQE and DPH, integration of toxic management presents some definite challenges. However, there are several aspects of Massachusetts toxic management which provide a firm basis for integration. Information on the location of toxic substances, and the study of possible resulting health effects, are generally quite good. The wide use of epidemiological studies is also helpful, although no direct cause-effect relationships have been established. This combined with the level of public interest in the field of toxics creates a favorable environment for integration work to begin.

MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

COASTAL ZONE MANAGEMENT	CONSERVATION SERVICES	ENVIRONMENTAL IMPACT REVIEW	LAW ENFORCEMENT
DEPT. of ENVIRON'AL QUALITY ENGINEERING	DEPT. of ENVIRONMENTAL MANAGEMENT	DEPT. of METROPOLITAN DISTRICT COMMISSION	DEPT. of FOOD & AGRI- CULTURE
DIVISION OF WATERWAYS	ACQUISITION & CONSTR.	ENGINEERING DIVISION	ANIMAL HEALTH
WATER POLLUTION CENTER	FORESTS & PARKS	PARKS & RECREATION DIVISION	DAIRYING & ANIMAL HUSBANDRY
AIR & HAZARDOUS MATERIALS	SOLID WASTE DISPOSAL	POLICE DIVISION	FAIRS
WATER SUPPLY	WATER RESOURCES	SEWERAGE DIVISION	DIV. of AGRICULTURE & LAND USE
LABORATORIES	WETLANDS RESTRICTIONS PROGRAM	WATER DIVISION	MARKETS
DIVISIONS OF WETLANDS	INSECT PEST CONTROL	ENVIRONMENTAL PLANNING	MILK CONTROL COMMISSION
DIV. of OUTDOOR ADVERTISING		ENVIRONMENTAL QUALITY DIVISION	PLANT PEST CONTROL
WATER RESOURCES COMMISSION			RECLAMATION BOARD
			PESTICIDES BOARD

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

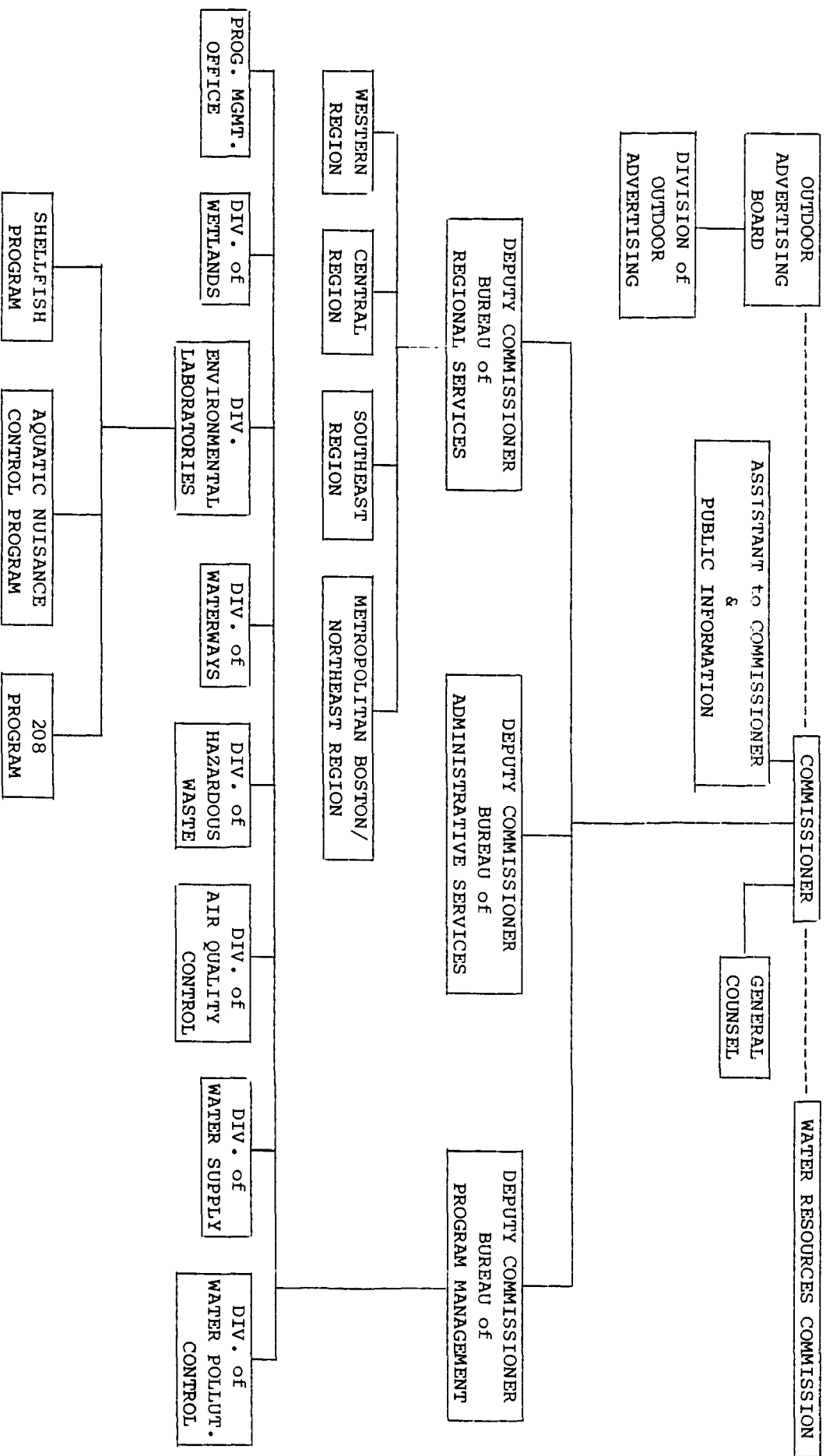
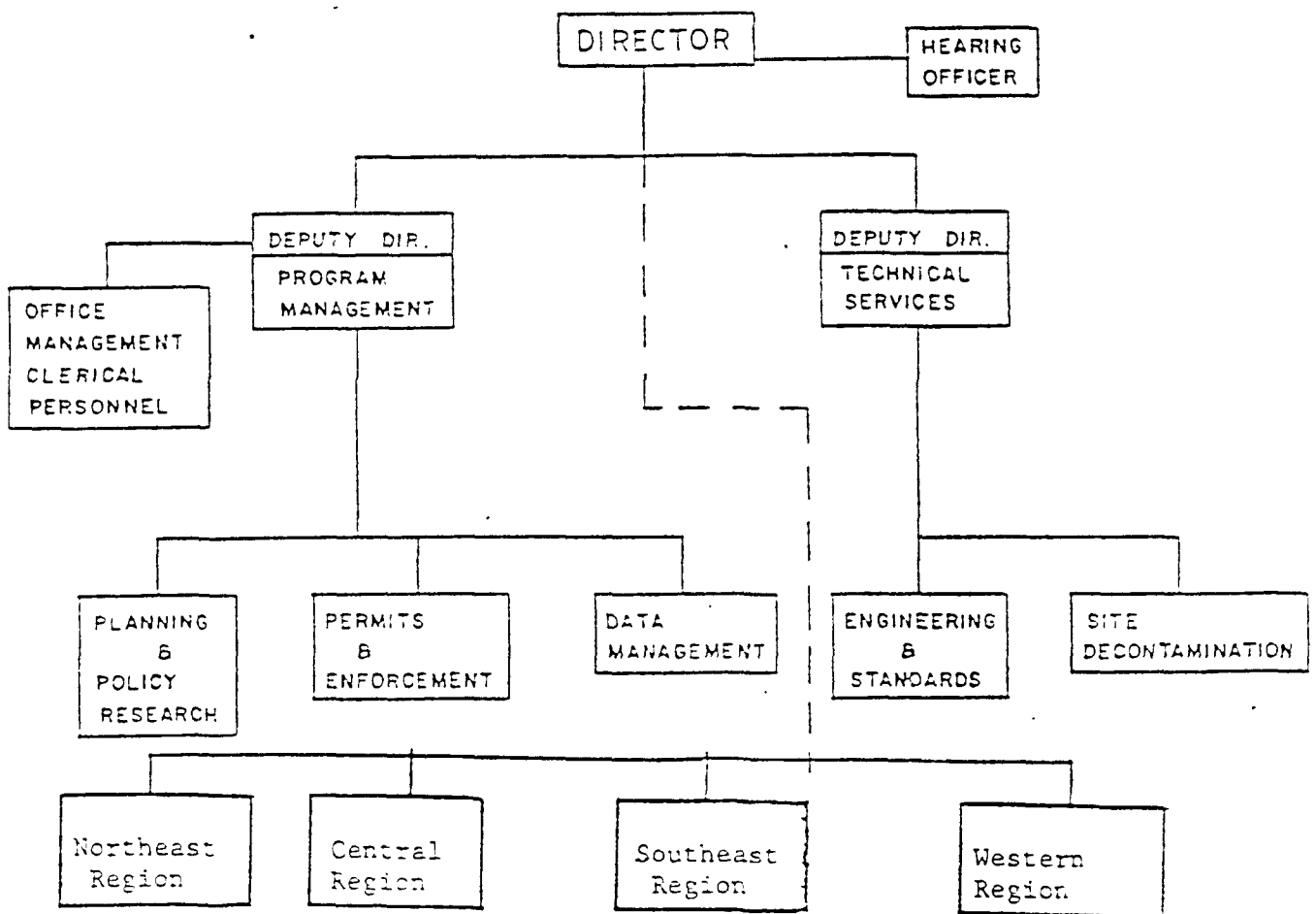


FIGURE 2

Division of Hazardous Waste Organization Chart



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CHILDHOOD LEAD  
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Director  
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Director  
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Environmental Epidemiology  
John L. Cutler, M.D., Ph.D

Environmental Toxicology  
Elaine Krueger, M.P.H.

Environmental Hygiene  
Elise M. Comproni



## Michigan ITM Summary

### I. Toxics Authorities

#### A. Major Toxics Related Legislation

1. The John C. Hertel Toxic Substance Control Commission Act.
2. The Michigan Water Resources Commission Act.
3. The Michigan Municipal Wastewater Treatment Control Act.
4. The Michigan Safe Drinking Water Act.
5. The Michigan Solid Waste Management Act.
6. The Michigan Hazardous Waste Management Act.
7. The Liquid Industrial Waste Haulers Act.
8. The Michigan Air Pollution Control Act.
9. The Michigan Public Health Code.
10. The Michigan Food Act.
11. The Michigan Resource Recovery Act.
12. The Michigan Occupational Safety and Health Act.
13. The Michigan Environmental Protection Act.
14. The Pesticides Control Act.
15. The Emergency Preparedness Act.

#### B. Major Departments

1. The Department of Natural Resources (MDNR).
2. Michigan Department of Public Health (MDPH).
3. The Department of Agriculture (MDA).

#### C. Other Departments

1. Department of Transportation.
2. Department of Commerce.
3. Department of State Police.
4. The Toxic Substances Control Commission (TSCC).

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate

1. Several of the above toxics legislative authorities promote interdisciplinary coordination through requirements such as commissions with interagency appointments. The Public Health Code provides a strong mandate for toxics integration by designating the Department of Public Health as the environmental health agency for the State with the charge "to facilitate a uniform approach to environmental health by the various public and private entities involved in the field."

B. Major Cooperative Efforts

1. Monthly meetings and annual retreats among senior staff members of major regulatory agencies.
2. Interchange of chemical inventory, exposure, toxicological and epidemiological data.
3. Ten Memoranda of Understanding (MOU's) produced clarifying respective agency roles.
4. Cooperative use of CMR and state inventories.

III. Information Management

A. Means of Gathering Data

1. The Critical Materials Registry, air discharge priority list, toxic and hazardous waste survey, and chemical evaluation files.
2. DPH epidemiology, toxicology and occupational health.
3. DNR environmental monitoring of industrial and municipal point sources, water sediment, soil, air, and hazardous waste sites, as well as fish studies.
4. MDA data on food, feed and animal health.

B. Data Coordination

1. Data is collected and stored by the individual agencies. There is no centralized storage yet.
2. Data coordinating mechanisms are being developed under a TSCA cooperative agreement.

IV. Toxics Control

A. Problem Identification and Ranking

1. Input received through annual water and air discharge report files by industry, monitoring data, citizen complaints.
2. CMR ranking system, surveys, inventories and permit application combine to identify State problems.
3. Site Assessment System (SAS) is being developed to rank contamination sites for future attention.

B. Risk Assessment Models

1. A TSCA Section 28 grant funded development of an interdepartmental risk assessment process.
2. Risk assessment being used in regulation
  - a. environmental permitting
  - b. SAS
  - c. problem evaluation
  - d. site cleanups

C. Emergency Management

1. The Governor's Office contracted the development of a comprehensive Emergency Management evaluation for the State.

2. The DNR manages a 24-hour Pollution Emergency Alerting System and requires Pollution Incident Prevention Plans from industries.
3. The Department of State Police has overall emergency response authority for major disasters under authority of the Emergency Preparedness Act.

D. Current Character of Toxics Control

1. Responsibility is shared between DNR, DPH and MDA. TSCC is considered an oversight agency.

Key State Officials

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## Michigan ITM

### I. State Legislative Authorities

1. The John C. Hertel Toxic Substance Control Commission Act - Act 116, P.A. of 1978, took effect on January 1, 1979. This Act created a State Toxic Substance Control Commission as an autonomous entity within the Department of Management and Budget. The Commission consists of the Directors of the Departments of Agriculture, Natural Resources, and Public Health as ex-officio members and seven citizens appointed by the Governor. This Commission has the authority to declare a toxic substances emergency. The Commission also has discretionary authority to receive Federal funds, inspect relevant records, petition for court enforcement of a Commission order, and direct a State agency to exercise its authority or conduct tests. The Act creates a toxic substance emergency fund in an amount to be determined annually by the legislature to be available to meet expenses incurred by the State in responding to a toxic substances emergency.
2. Michigan Water Resources Commission Act - Act 245, P.A. of 1928, as amended, is the basic law creating the Water Resources Commission and establishing its powers to protect and conserve the water resources of the State and the Great Lakes. The Commission is comprised of the directors (or their representatives) of the Departments of Natural Resources, Public Health, State Highways, Agriculture, and three citizens of the State one from groups representative of industrial management, one from groups representative of municipalities, and one from groups representative of conservation associations or interests. The Commission is authorized to regulate the discharge of pollutants to all surface and groundwaters of the State and the Great Lakes. They levy fees for wastewater surveillance. They are also empowered to require permits to regulate water discharge or storage of any substance which may affect the quality of the waters of the State and to establish restrictions to assure compliance with applicable State standards and Federal laws and regulations.

Act 245 requires the reporting of wastewater and critical materials use data to the State. The data required is based on the Critical Materials Register including three main groups: inorganic materials, organic materials and pesticides. Reporting data is required for materials used and materials discharged in wastewater effluent.

3. Michigan Municipal Wastewater Treatment Control Act - Act 8, of the Public Acts of 1913, as amended, is a broadly worded act which provides the State Department of Public Health with the responsibility and authority for control of both water and wastewater facilities. The authority for control of waste

water facilities was transferred to the Michigan Department of Natural Resources in 1973.

4. Michigan Safe Drinking Water Act - Act 399, P.A. of regulates public drinking water supplies.
5. Michigan Solid Waste Management Act - Act 641, P.A. provides for the licensing and regulation of solid waste disposal sites.
6. Hazardous Waste Management Act - Act 84, P.A. 1979. This Act is similiar to RCRA sub title C. The Act provides the MDNR with the authority to regulate the generation, storage, transportation and disposal of hazardous wastes. The legislation also requires the use of a manifest system.
7. The Liquid Industrial Waste Haulers Act - Act 136, P.A. of 1969, administered by the Oil and Hazardous Materials Control Section of the Water Quality Division, Department of Natural Resources requires that people involved in removing liquid industrial waste be licensed. The Act also provides for the inspection and licensing of vehicles and the control over disposal of wastes and provides penalties for violations of the disposal of wastes and the Act.
8. Michigan Air Pollution Control Act - Act 348, P.A. of 1965, as amended, establishes the Michigan Air Pollution Control Commission and creates the program for control of atmospheric discharges administered by the Air Quality Division of the Michigan Department of Natural Resources. The Commission is comprised of the Directors of the Departments of Public Health, Natural Resources, and Agriculture; and eight citizens appointed by the governor: two representatives of industrial management, two representatives of local governing bodies, one full-time air pollution control officer, one licensed doctor of medicine, experienced and competent in the toxicology of air contaminants; one member of organized labor and two representatives of the general public. Under the Act, the Commission requires all new and modified potential sources of air pollution to apply for and receive an air use permit before installation.
9. Michigan Public Health Code - Act 368, P.A. of 1978, provides the state and local health departments with the authority for protecting the public health. The Director has broad authority for declaring emergenices or issuing orders to eliminate exposure to toxic chemicals. The code designates the MDPH as the environmental health agency for the state.
10. Local and District Health Department Authority - Act 306, P.O. of 1927 as amended, is a broadly worded act which establishes the authority for the formation of county and district health departments. Local departments are under the supervisory control of the Michigan Department of Public Health.

The act authorizes the county or district board of health to adopt necessary for the protection and promotion of public health and safety. Consequently, local requirements may vary somewhat from one location to another.

11. The Michigan Food Act - Act 39, PA. of 1968, provides for the inspection of all food production warehousing, manufacturing, labeling and selling establishments and permits codemination and destruction of food which is poisonous.
12. The Michigan Resource Recovery Act - Act 366, P.A. of 1974, was developed to promote the conservation of natural resources through waste recovery to establish the Resource Recovery Commission and to provide a coordinated Statewide waste management and resource recovery program. The statute provides for the development of financial assistance and contracts between the State and others for services. It includes the power of the Commission to issue orders against local operations or governmental units that have not implemented their solid waste plan especially if existing operations are causing environmental damage.
13. Michigan Occupational Safety and Health Act - Act .54, P.A. of 1974, as amended, provides authority to regulate exposure to toxic substances in the work place and requires chemical manufactures to make available to employees safety data sheets regarding potentially dangerous chemicals.
14. Michigan Environmental Protection Act - Act 127, P.A. of 1970, the "Thomas J. Anderson, Gordon Rockwell Environmental Protection Act of 1970" establishes the right of any person or organization to bring suit in the circuit courts of the state against any other citizen or organization"... for the protection of the air, water, or other natural resources and the public trust therein from pollution, impairment, or destruction". The very broad language of this act has the potential to bring the actions of any individual, municipality, corporation, or reviewing agency under judicial review. With respect to any waste control activity, environmentally sound and technically feasible actions must be used. Failure to do so could result in court established programs for environmental protection.
15. Pesticides Control Act - Act No. 171, P.A. of 1976, authorizes regulation over pesticide distribution, labeling and application. The act includes the licensing of dealers, certification of applicators and record keeping requirements. Rules to carry out the act include provisions for the safe handling, transportation, storage, display, distribution and disposal of pesticides and their containers. The act is administered by the Department of Agriculture, Bureau of Consumer Protection, Plant Industry Division, effective June 25, 1976.
16. Emergency Preparedness Act - Act No. 390, P.A. of 1976, the Act establishes a system for emergency disaster planning and

implementation. The Governor maintains the oversight authority and responsibility to declare State disaster areas. The Director of the Department of State Police is designated the State Director of Emergency Services. The act provides the Director with coordination duties such as preparing the Michigan Emergency Disaster Plan, managing the department's Emergency Management Pre-Disaster Division, and directing disaster relief forces. Each State agency and county is also required to designate Emergency Services Coordinators.

## II. Organizational Structure of Lead Agency/Office on Toxics Management

Michigan has three Agencies which are primarily responsible for the regulation of toxic substances: the Department of Natural Resources (DNR), the Department of Public Health (DPH), and the Department of Agriculture. The mission of the Department of Natural Resources' toxic and hazardous waste program is "to control and reduce the hazards resulting from the use, discharge, transport, disposal or spillage of toxic materials". To carry out this mission, the Department is authorized to conduct toxics research in all media, review and decide upon discharge permits, establish contamination levels, and utilize regulatory and enforcement powers. DNR has five Bureaus and it is within the Bureau of Environmental Protection that the toxic and hazardous waste program is administered. The divisions within this bureau are currently organized by media (water quality, air quality and resource recovery).

The Department of Natural Resources is implementing a major reorganization of its EPB program designed to clarify areas of responsibility and stream line the organization. Hazardous waste management activities, now carried out in four separate divisions, will be consolidated into a new Hazardous Waste Management Division. Groundwater activities, now spread among three divisions will be consolidated into a new Groundwater Quality Division. Further, the environmental protection service activities such as construction grants for municipal sewage treatment facilities, local planning assistance, permit coordination and resource recovery will be consolidated into a new division. The present Resources Recovery Division will be eliminated. The Water Quality, Air Quality and Environmental Services Divisions would constitute the remainder of the Environmental Protection Bureau.

The facilitator and Agency focal point for toxics coordination is the Office of Toxic Materials Control which is located within the Environmental Services Division (see attached organizational chart). This office works on problem prevention, NPDES permit reviews for toxics, provides technical support on toxicology and environmental fate and maintains the CMR. The office is also responsible for inter and intra departmental communications and coordination on toxic substances issues. The Office of Toxic Materials Control is divided into two units.

1. The Discharge Evaluation Unit is responsible for review of environmental permits and development of monitoring and discharge limitation recommendations for toxics. The unit is responsible for the Critical Materials Register (CMR) data evaluation analysis and follow-up, including compliance with CMR reporting requirements. Municipal pretreatment industrial user surveys are also being reviewed. This unit is responsible for aquatic toxicity evaluations.



2. The Hazard Assessment unit is responsible for conducting chemical evaluations and providing technical assistance on the general toxicity and environmental fate of toxic substances. The units other tasks include CMR and CSARS data base management and the development of the Hazardous Waste Criteria.

The Department of Public Health addresses toxics substances as a part of its goal to protect and promote public health. Local health departments, serving all eighty-three counties, and the State's Department of Public Health have established programs that include communicable and non-communicable diseases, hospital licensing and standards, radiation source regulation, and environmental epidemiology and occupational health hazards. In the toxics area, the Department has toxicological and epidemiological information and expertise, and investigates health related aspects of hazardous waste sites, water supplies, and studies reporting cluster areas. In the Department of Health, the major task for inter-intra agency relationships lies within the Center for Environmental Health Sciences. The Center coordinates toxics activities within the Department, with local health departments and with other agencies. The Center staff is chiefly responsible for health related data coordination within the State. The Center also assists to organize the monthly meetings and yearly 3-day retreats for top management staff of the Departments of Natural Resources, Public Health and Agriculture. The meetings are one of the State's most innovative methods for improving inter-agency toxics coordination. The purpose of the meetings and retreats is to maintain close coordination on issues of an inter-disciplinary nature. Out of these meetings, ten Memoranda of Understandings have been prepared and signed while, others are still under development. The agreements between the three agencies outline policies and procedures on key environmental problems. The topics have included: agency focal points, legislative proposals, budget review, hazard assessment, agency communication, joint enforcement procedures, confidentiality procedures, and an information data sharing system.

The Department of Agriculture is responsible for the implementation of laws pertaining to the environmentally safe production, handling and distribution of agricultural products. These activities include veterinary science, animal and plant disease control, pesticide use regulation, and special substances control. The Department's two toxics related programs are the Bureau of Agricultural Product Assurances and the Office of Toxic Substances and Emergency Services. MDA monitors the wholesomeness and purity of Michigan's food supplies and regulates the guideline levels of chemicals and other additives in food being sold commercially. The Department also regulates the use of certain restricted pesticides and their application. The Office of Toxic Substances and Emergency Services coordinates activities related to toxic substances within MDA.

The Toxic Substances Control Commission was established by the John C. Hertel Toxic Substances Control Commission Act of 1979. The Commission serves an oversight function. The Commission has the authority to declare a toxic substances emergency and coordinate and direct State agencies in response to the problem. If funds are needed, the Commission may use money set aside by the State legislature in a special toxic substances emergency fund or request special appropriations.

The State of Michigan is very conscious of the need for toxics integration and has taken steps to insure that intra-agency coordination occurs. In addition to senior staff meetings and annual retreats, Michigan has been working on developing criteria for data management and information sharing between the State agencies. These criteria outline procedures for information exchange using common terminology for toxic and environmental effects, geographic locations, industry and chemical identification. The MDPH and MDNR are planning to develop joint laboratory facilities. Each department has designated a "focal point" for coordinating activities with other departments and offices. The Department of Health, Department of Agriculture and Department of Natural Resources are also designing one risk assessment process to be used by all three agencies. This project will be discussed in detail later in this paper. MDPH has installed specimen bank facilities for use by each of the agencies, but funds have been unavailable for making it operational.

### III. Information Management

Michigan has developed five major toxic chemical inventory tools: the Critical Materials Registry, the air priority chemicals list, toxic and hazardous waste survey, and the chemical evaluation file. The Critical Materials Registry is an extensive computerized information system operated by DNR's Toxic Materials Control Office. As authorized under a 1972 amendment to the Michigan Water Pollution Control Act, the purpose of the data base is to help the state decide on those chemicals and industrial situations of greatest concern and potential for environmental damage and modify monitoring and permit issuance programs accordingly. To assemble such a priority list, an advisory committee first reviewed chemicals which are generally recognized nationally as highly toxic (PCBs, mercury etc.), as well as chemicals specifically of concern to Michigan. After initial selection, each chemical undergoes an evaluation, beginning with literature searches on the physical, chemical and toxicological properties.

The next step involves a hazard assessment process - a priority ranking system based on the assignment of points to each chemical/mixture according to seven factors:

- 1) acute toxicity
- 2) carcinogenicity
- 3) hereditary mutagenicity
- 4) teratogenicity
- 5) persistence
- 6) bioaccumulation
- 7) other adverse effects, including subacute and chronic effects, phototoxicity and asthetic damage.

These seven factors are further broken out into categories which are assigned a 1-7 point value commensurate with the relative magnitude of environmental impact; for example, categories under the first factor of acute toxicity span the spectrum from extremely toxic, to highly toxic, moderately toxic, slightly toxic and relatively non-toxic, with an asterisk assigned where insufficient information is available to make a determination. Top priority for further information gathering and possible monitoring and investigation is assigned to those companies utilizing chemicals/mixtures with the most asterisks. The register contains 250 chemicals which scored a sufficient number of points. Six hundred chemicals have been assessed to date for possible inclusion on the register.

Michigan industries are required to report the use and discharge of the chemicals on the register in annual water discharge reports submitted to the Department. The chemical inventory created from the reports is stored on a computer system having various sort and select options to suit program needs. These options can access data in a variety of formats (i.e. geographic locations, river drainage basin, industrial categories, and discharge classifications). This information is shared with other State agencies and interested citizens. Within DNR, the Register is used in the following specific ways:

- 1) All NPDES permits and applications are reviewed by the Office of Toxic Materials Control in light of environmental and health related information from the CMR in order to avert potential damage from a particular toxic substances;
- 2) All chemicals listed must be considered in a pollution incident prevention plan developed by each facility using or storing any of the listed materials;
- 3) The Department of Public Health uses the data to identify potential impacts on human health through exposure to water contamination by listed materials;
- 4) The Air Quality Division currently utilizes the data to investigate possible fugitive emissions from critical materials storage facilities and processing facilities; and
- 5) Selective survey/questionnaire mailings are made to obtain information from industry on manufacturing, distribution and disposal practices, and regulation and warning notices are issued to businesses which have listed materials in use and discharge patterns similar to a known problem, in order to rectify, abate or prevent potential environmental/health hazards associated with such industry practices.

The air discharge priority list is authorized under Michigan's administrative rules promulgated under the Air Pollution Control Act. The air list is assembled in the same way as the Critical Materials Registry. Commercial, industrial, or governmental entities which disperse emissions to the air are required to report use and emissions data for all substances on the air priority chemicals list.

The purpose of the toxic and hazardous waste survey is to obtain information on the identity, quantity, generation rate and location of hazardous wastes in Michigan. This information equips DNR to consider existing and future needs for hazardous waste disposal and treatment facilities as well as determine environmental control strategies.

The DNR Office of Toxics Materials Control is also responsible for conducting chemical evaluations based upon literature on the physical, chemical and toxicological properties of chemicals and for maintaining a reference file summarizing the hazards and environmental fate associated with compounds investigated. These evaluations are provided upon request to other DNR Divisions, and to other federal, state and local government agencies. Chemical evaluations are used for NPDES permit reviews, air pollution control permit reviews, hazardous waste disposal recommendations, problem evaluations, environmental emergencies (e.g. chemical spills) and the Michigan Critical Materials Program. Approximately 2,000 chemical evaluations have been completed.

In addition to the above mentioned research tools, DNR and DPH have developed a monitoring program. The goal of the program is "to measure the levels of toxic materials in discharge and in the receiving environments for determination of necessary remedial or preventive actions and to evaluate the effectiveness of completed programs." Monitoring is perceived as an interdependent activity with standard setting and enforcement. Monitoring information is needed to set standards and limits as well as to determine what enforcement actions are necessary. Once standards and enforcement actions are established, they serve to guide the monitoring program. The monitoring program is divided into three categories: monitoring of discharges, monitoring of the receiving environment and miscellaneous monitoring. Monitoring of discharges includes major and minor municipal water discharges, municipal sludge disposed on land, industrial water discharges and industrial discharges to municipal systems, as well as air discharges. Monitoring of the receiving environments involves streams and lakes, groundwater, Great Lakes open water, air inputs to the Great Lakes and terrestrial animals. Miscellaneous is defined as food, human monitoring, medical surveillance and special studies.

In order to provide funding for air/water monitoring and surveillance activities, two surveillance fee programs have been established. The Water Resources Commission estimates an "administrative and graduated" fee for each industry discharging waste water into the sewer system or State waters. The Air Pollution Control Commission takes the same action, and levies an annual surveillance fee. The surveillance fee system is currently being phased out by the State.

Michigan has been grappling with how to make technical information and non-technical information available to the public. Although not functioning yet, the Department of Health has developed a comprehensive public information proposal regarding toxics and is interested in obtaining practical assistance from other States.

#### IV. Toxics Control

The State perceives its first line of defense in toxics control to be the issuance and enforcement of surface and groundwater discharge,

air emissions and solid and hazardous waste permits and licenses. Under the Federal Water Pollution Control Act, the State has been granted the authority to administer its own National Pollutant Discharge Elimination System (NPDES) for all surface waters. This responsibility has been directed to the Water Quality Division of DNR's Environmental Protection Bureau.

State groundwater standards regulate wastewater discharges to State groundwaters. Essentially, these statutes do not allow any discharge of toxic substances or wastewaters to the groundwaters that would impair or degrade a "useable" aquifer. These statutes also provide for establishment of special studies (hydrogeological evaluations) and monitoring requirements (monitoring well installation, sampling and monthly reporting) in State groundwater permits. Permits are developed by the Water Quality Division. Office of Toxic Materials Control staff reviews State groundwater permits as they are developed to assure that toxic substances, which could pose public health problems, or that would impair or degrade a useable aquifer are properly controlled and, to assure that special conditions and monitoring requirements are adequate to address critical material concerns.

Air emissions standards for criteria pollutants are mandated under the Federal Clean Air Act and the State's Air Pollution Act which was amended to adopt these same standards. The Air Quality Division has also been concerned with non-criteria pollutants of toxic substances including toxic organic compounds. All new sources of non-criteria pollutants installed since 1967 have been subject to the permit requirements. Any staff recommendation to issue the permit has been made only after assurance that the proposed action is environmentally acceptable. Then permit review process results in the establishment of emission standards and/or equipment and operating specifications.

For compounds that have a major but more localized impact on the public, (Section 112 of the Clean Air Act, as amended in 1977) the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) sets emission limits, equipment specifications, and/or operating procedures for sources that emit specific hazardous air pollutants.

Additionally, (Section 111 of the Clean Air Act) New Source Performance Standards sets emission limits and/or equipment specifications for many new sources. Some of these sources are required to continuously monitor in-stack emission concentrations.

In the past, there has been no formalized process in Michigan to determine the degree of risk associated with chemical substances in the environment. The risk assessment process was largely intuitive and depended on the values of the individual and/or State agency conducting the study. In March 1981 EPA's OPTS/OTI awarded a TSCA Section 28 grant to the DNR in order to develop an interdepartmental risk assessment program. The Department of Agriculture and Health are the two other agencies involved. The goals of the project are to:

- 1) establish an extensive data base on environmental fate of chemicals in the environment,
- 2) establish criteria for evaluating and utilizing this information in a formal risk assessment process.

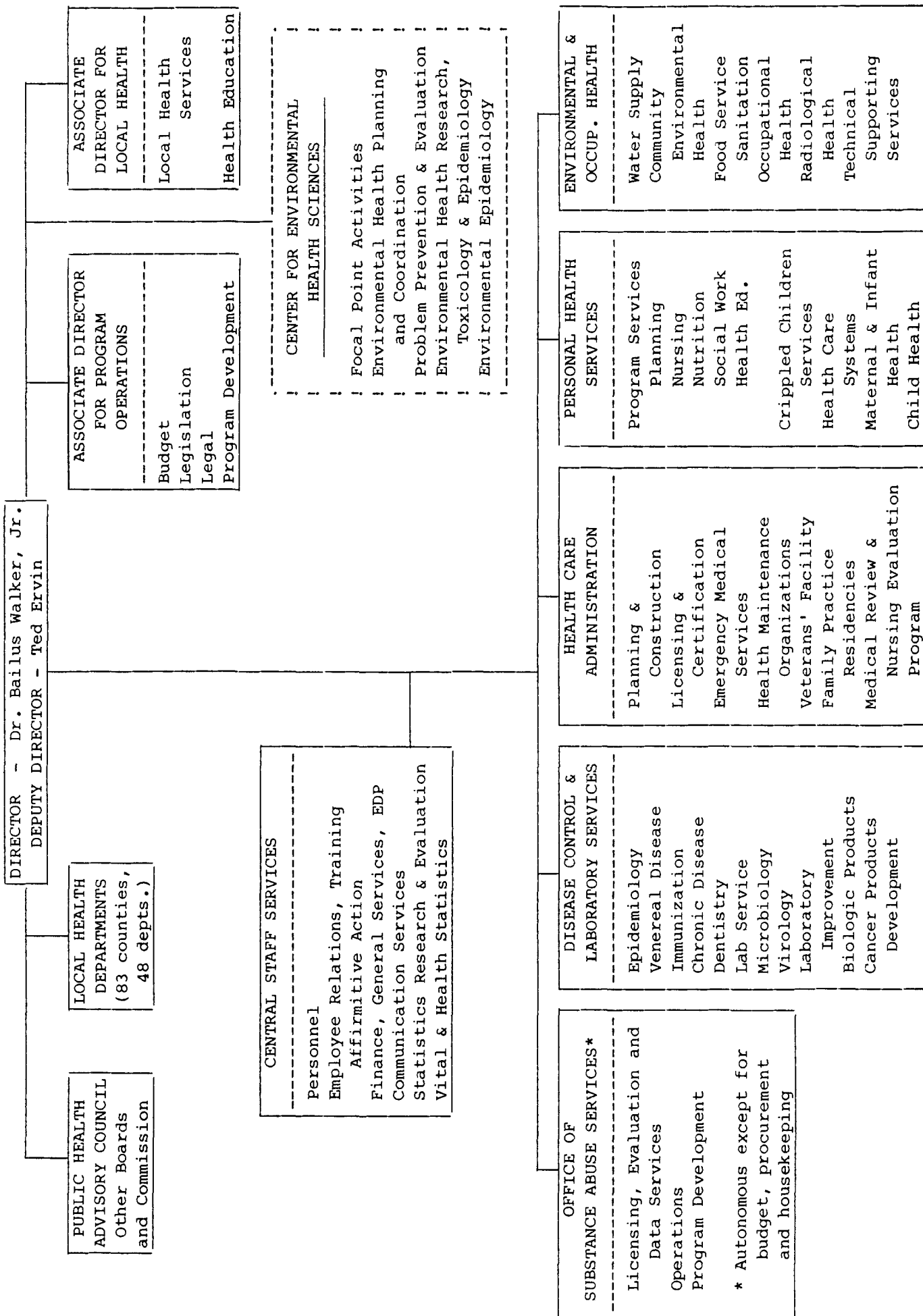
## V. Analysis

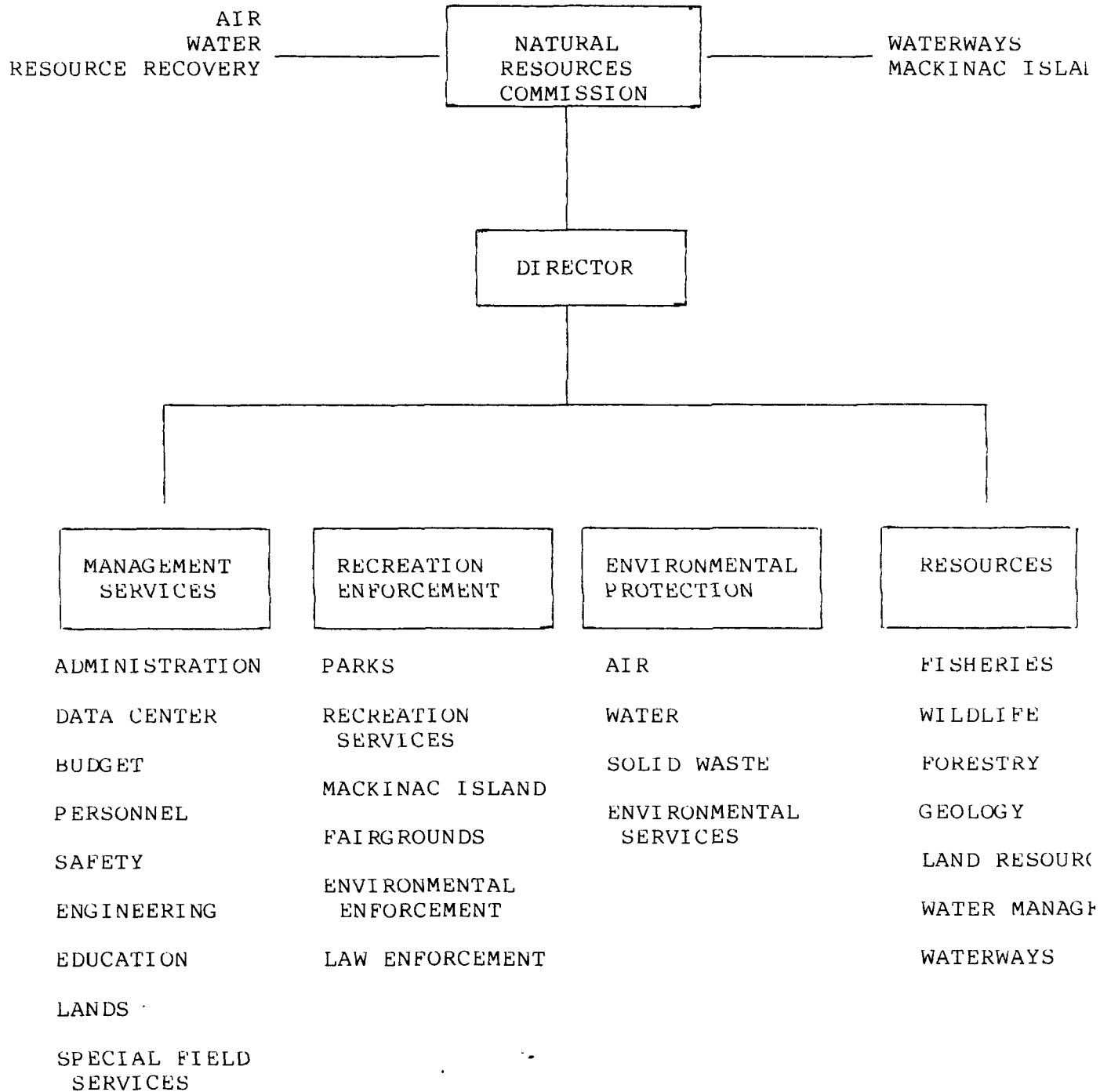
Michigan has had major pollution problems leading to considerable media attention, public concern and Executive and Legislative Branch response. A major toxic substances problem in Michigan is the contamination of the State's groundwater. The Department of Natural Resources has identified 900 sites where groundwater is either known or suspected of being contaminated. The DNR published a compendium of these sites in 1979 and has recently updated the list. A Site Assessment System "prioritization model" has also been developed in order to assist the State select which areas require immediate remedial action.

As this example and the material presented in the body of the report reveals, Michigan has developed an extensive toxics information gathering system by media, industry, and geographical locations. The information is, for the most part, computerized and accessible by the relevant State agencies/offices. This information is then used in the issuance of permits, standard setting and regulation development. The State has developed a chemical prioritization process which helps to set the goals and directions for each agency/office dealing with toxics, while the unusually sophisticated intra/inter-agency communication strategy makes the whole approach workable.

Michigan appears to be a "model" State. However, the State is working under dire financial restraints (recently cutting back approximately 10,000 State employees). Consequently, there is some question as to the future of the State toxics programs.

# MICHIGAN DEPARTMENT OF PUBLIC HEALTH







## Montana ITM

### I. Toxics Authorities

#### A. Major Toxics Related Legislation

1. Clean Water Act
2. Clean Air Act
3. Pesticides Act
4. Hazardous Waste Management Act

#### B. Major Departments

1. Department of Health and Environmental Sciences (DHES)
2. Department of Military Affairs-Disaster and Emergency Services Division
3. Department of Agriculture

#### C. Other Departments

1. Department of Livestock
2. Department of Highways
3. Department of Justice
4. Department of Fish, Wildlife and Parks
5. State Fire Marshall Bureau
6. Department of Lands

### II. Organizational Coordination in Toxics Management

#### A. No mandate for interagency integration exists in Montana.

#### B. Major Cooperative Efforts

1. Advisory committee with representatives from four agencies
2. EPA - proposed integrated toxics strategies (not yet implemented)
3. Agreement between Department of Agriculture and DHES regarding pesticides management
4. State- appointed toxics coordinator within DHES

### III. Information Management

#### A. Means of Gathering Data

1. Required reporting of hazardous waste disposal and generation
2. Cooperative effort between Departments of Agriculture and Livestock involving milk monitoring
3. Montana Air Pollution Study (MAPS) - Completed in 1981
4. Comprehensive biological monitoring performed by many agencies

#### B. Data Coordination

1. Centralized data base within DHES

#### IV. Toxics Control

- A. Emergency Response System.
  - 1. Hazardous Materials Response Plan.
- B. DHES effort to address contamination problem from a lead smelter in East Helena.
- C. Hazardous Waste Management Program.
- D. Cooperative DHES - Department of Lands effort to address energy-related, i.e. mining, problems.
- E. DHES technical assistance to schools regarding asbestos.
- F. Cooperation with EPA on Superfund activities.

#### Key State Officials

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I. Toxics Authorities

When one views the laws of Montana, one sees very little mandate for toxics integration. However, underneath this surface lies a burgeoning, vibrant system of coordination and integration. Whereas much of this integration traditionally has been informal and ad hoc in nature, a growing effort is taking place to establish more "concrete" mechanisms.

The major relevant enabling pieces of legislation for the Department of Health and Environmental Sciences are the State Clean Water Act and the State Clean Air Act, which are quite similar to their Federal counterparts, and the Hazardous Waste Management Act. The primary implementer of the Hazardous Waste Management Act, the Solid Waste Management Bureau within DHES, has continually grown in responsibility and is strongly concentrating on hazardous wastes. The Hazardous Waste Management Program, to be discussed below, is implemented through the Bureau.

The relevant enabling legislation for the Department of Agriculture is the Pesticides Act. In its implementation of the Act, the Department has emphasized preventive, rather than reactive, measures. The Pesticides Act has proven very successful in this large, rural State.

One of the most positive aspects of Montana's integrated toxics management is the involvement of many agencies. By encouraging cooperation and input from a broad variety of agencies in fora such as the Advisory Committee and the Emergency Response System, the State has recognized the fact that toxics problems have the potential to affect many different elements of society.

II. Organizational Cooperation in Toxics Management

The major impetus for formal toxics coordination and integration in Montana involved the contamination of feed with PCBs which occurred in Billings in 1979. This feed was not discovered to be contaminated until it had been shipped to several states and two foreign countries. The manner in which this incident was addressed opened the eyes of State officials to the fact that more formal mechanisms of cooperation were needed.

One of these mechanisms is the Advisory Committee set up last year to study problems connected with endrin, an insecticide. The Committee, made up of representatives from the Departments of Health and Environmental Sciences, Agriculture, Fish, Wildlife and Parks, and Livestock, has since expanded to coordinate efforts to deal with other environmental problems, including toxics. The Committee places strong emphasis on preventive, anticipatory actions, and is reported to have had a successful first year.

Montana is a large, predominantly rural state in which large volumes of pesticides are used. In order to more efficiently address the potential problems connected with these pesticides, DHES and DOA have recently proposed a cooperative agreement which explicitly spells out the role each is to play regarding pesticides management. Under the agreement, DOA has full licensing and regulatory authority while DHES is responsible for the determination of which landfills are to be utilized for the discarding of pesticides containers, etc. The proposed agreement calls for cooperation between the two agencies whenever possible.

Additional efforts being made in the State towards more integrated toxics management include the appointment of a toxics coordinator within DHES. The major duties of this official are to review situations and materials in order to determine where integration could be most useful. Furthermore, the U.S. EPA Region VIII office, as well as the branch office located in Helena, have proposed a series of toxics integration strategies. The strategies were drafted upon consultation with State officials who provided suggestions for areas of concentration. None of these strategies, however, has yet to be implemented.

### III. Information Management

Montana's largest information gathering effort to date was a four-year \$1.5 million study of air pollution - health effects correlations, conducted by the Air Quality Bureau within DHES. This Montana Air Pollution Study (MAPS), completed in 1981, resulted in the compilation of important data which should be used in the future.

Among the other methods of data collection utilized in Montana is the mandatory disclosure of any hazardous materials generated or disposed of within the State. (Some materials are exempted from disclosure, however, under the provisions of the Hazardous Waste Management Act.) There also exists a cooperative effort between the Departments of Livestock and Agriculture involving the monitoring of milk. All of this monitoring data is openly shared between the two agencies.

Comprehensive biological monitoring is performed by several State agencies in Montana; however, the information sharing among these agencies is somewhat limited. Information sharing does exist on an informal basis, but no permanent mechanism currently is utilized. However, there are efforts at coordination and integration of data within the agencies themselves; DHES's centralized data base is example of such an effort.

### IV. Toxics Control

The most ambitious endeavor towards toxics control and integration currently existing in Montana is the Emergency Response System. Whereas the entire system is designed to meet problems ranging from flood to plague, the Hazardous Materials Response Plan within the System, completed approximately eight months ago, is particularly relevant to toxics control. Under the Plan, all efforts are coordinated under the auspices of the Disaster and Emergency Services Division of the State Department

of Military Affairs. Other agencies involved in the Plan include DHES, DOA, Department of Highways, Department of Justice, State Fire Marshall Bureau and Department of Fish, Wildlife and Parks. The Disaster and Emergency Services Division maintains a 24-hour a day reporting hotline. Once the true nature of the emergency has been determined, the DESD contacts the relevant agencies and assigns their respective roles. The Plan has had a short, but positive, track record, and it was once again successfully put to the test a short while ago when a gasoline pipeline leak occurred in Missoula County.

Last year approximately 200,000 tons of potentially hazardous materials were generated in Montana. The possible environmental effects resulting from these materials necessitated the establishment of the Hazardous Waste Program within the Solid Waste Management Bureau. Under the Program, the Bureau has initiated transporter requirements as well as the licensing of treatment and storage facilities. The Bureau is also in the midst of a comprehensive investigation to determine the extent of the hazardous waste problem and to establish the mechanisms to properly deal with the problem. No licensed hazardous waste disposal site currently exists within the State. Historically, some small generators of hazardous waste have conducted on-site disposal while larger volumes of waste are transported to disposal sites in neighboring states, particularly Idaho. It is now being determined whether the growing amount of hazardous waste in the State should warrant an "in-house" disposal site.

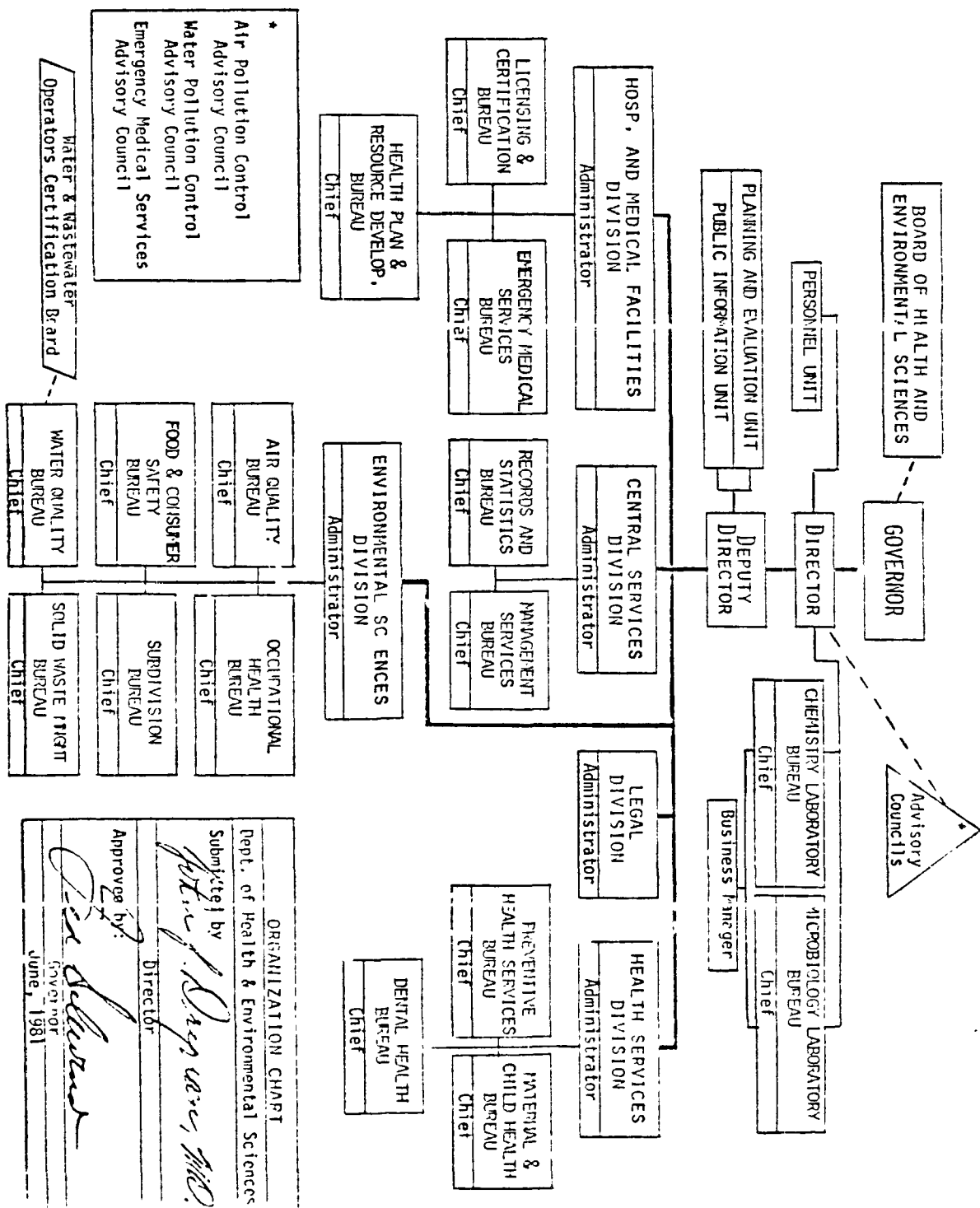
Montana is one of several Western states possessing rich coal, and other energy, reserves which are just beginning to be extensively tapped. Strong efforts are being made to establish anticipatory policies to address the potential environmental effects of energy source extraction and refining before they begin to truly burgeon. Among the formal attempts is a DHES -Department of Lands cooperative effort to address energy-related environmental problems, particularly those connected with surface coal mining. (Note: Increased energy extraction and refining within Montana will undoubtedly result in greater volumes of hazardous waste and may, therefore, necessitate an in-state hazardous waste disposal site.)

Other noteworthy toxics control programs currently being implemented in the State include a DHES effort to address a contamination problem from a lead smelter in East Helena, and DHES's providing of technical assistance to schools regarding asbestos.

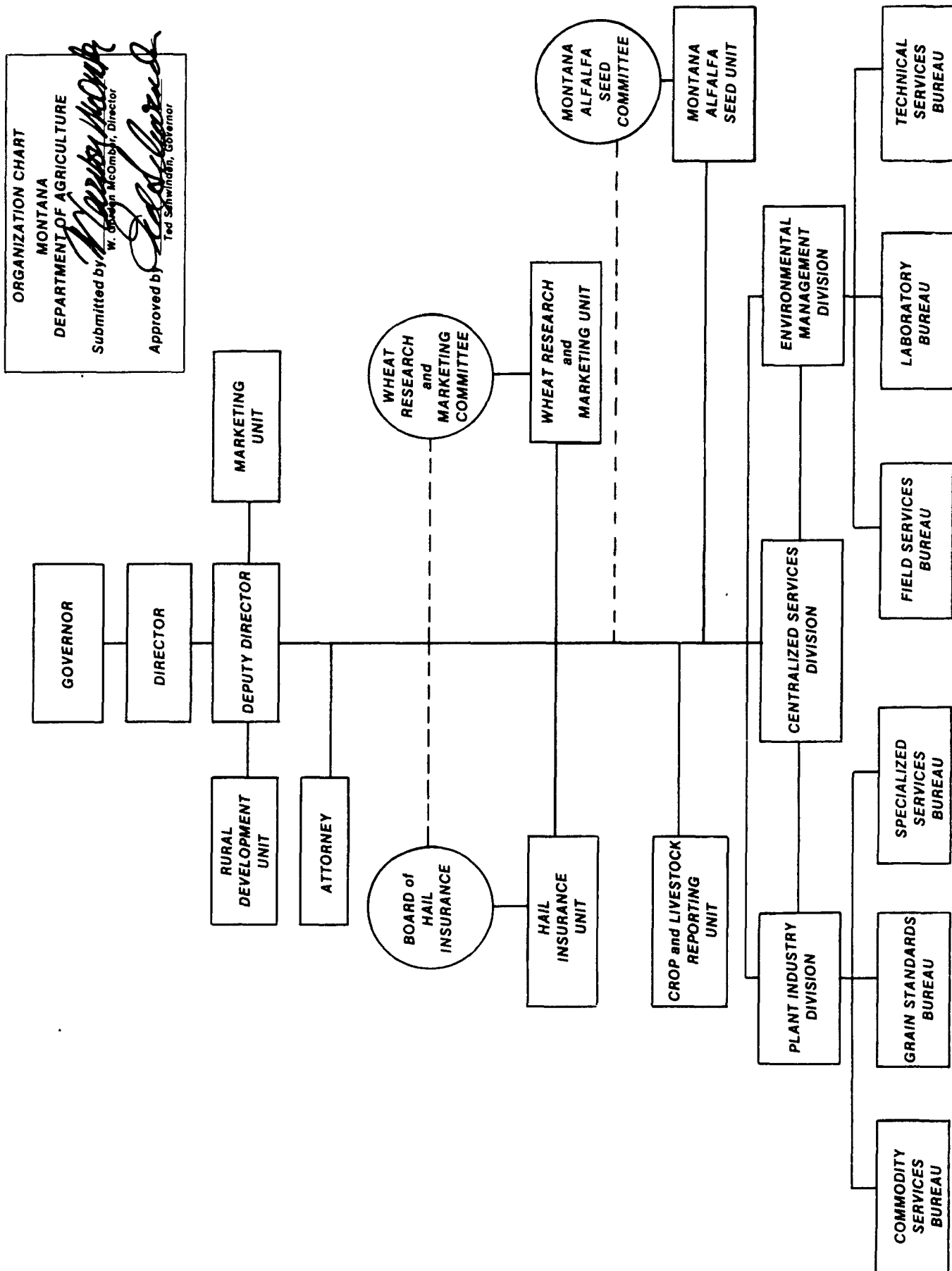
## V. Current Status and Analysis

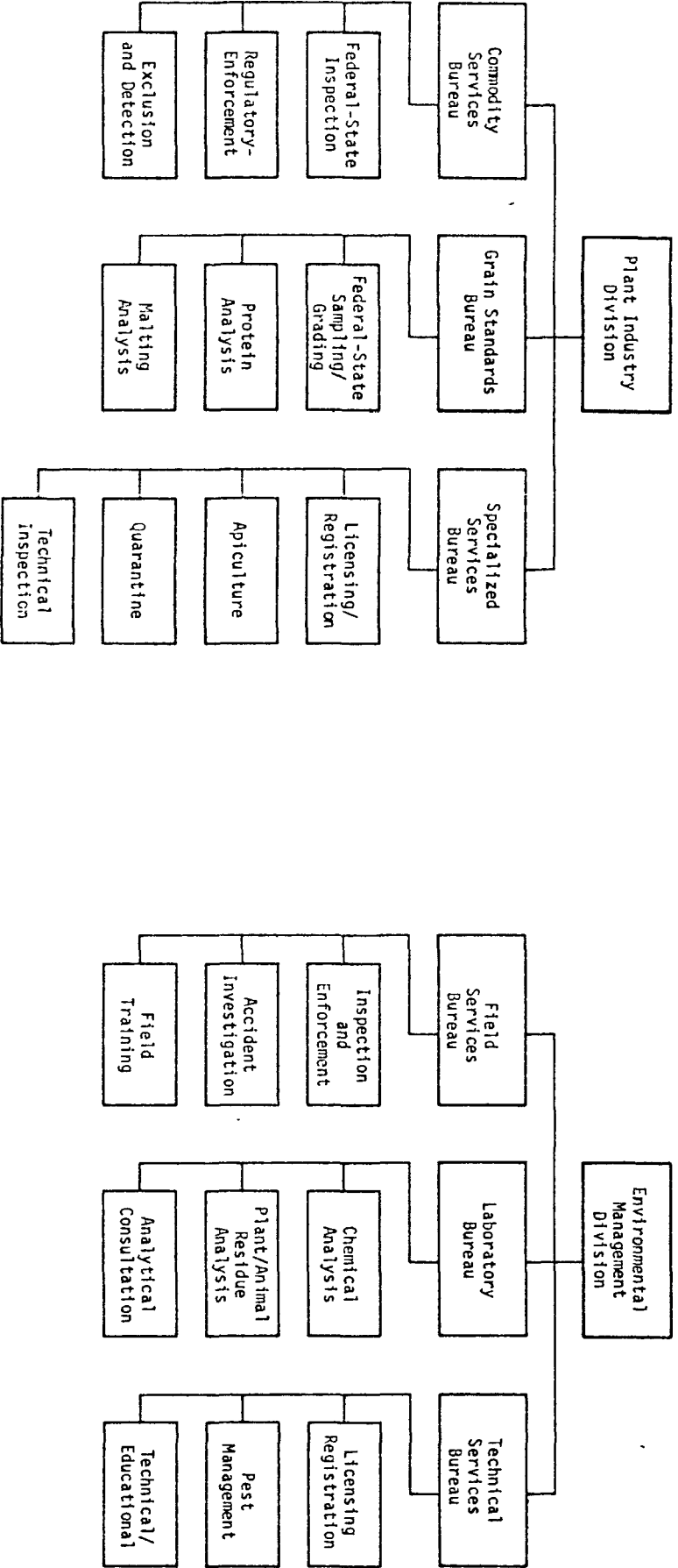
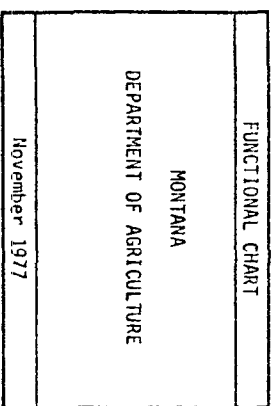
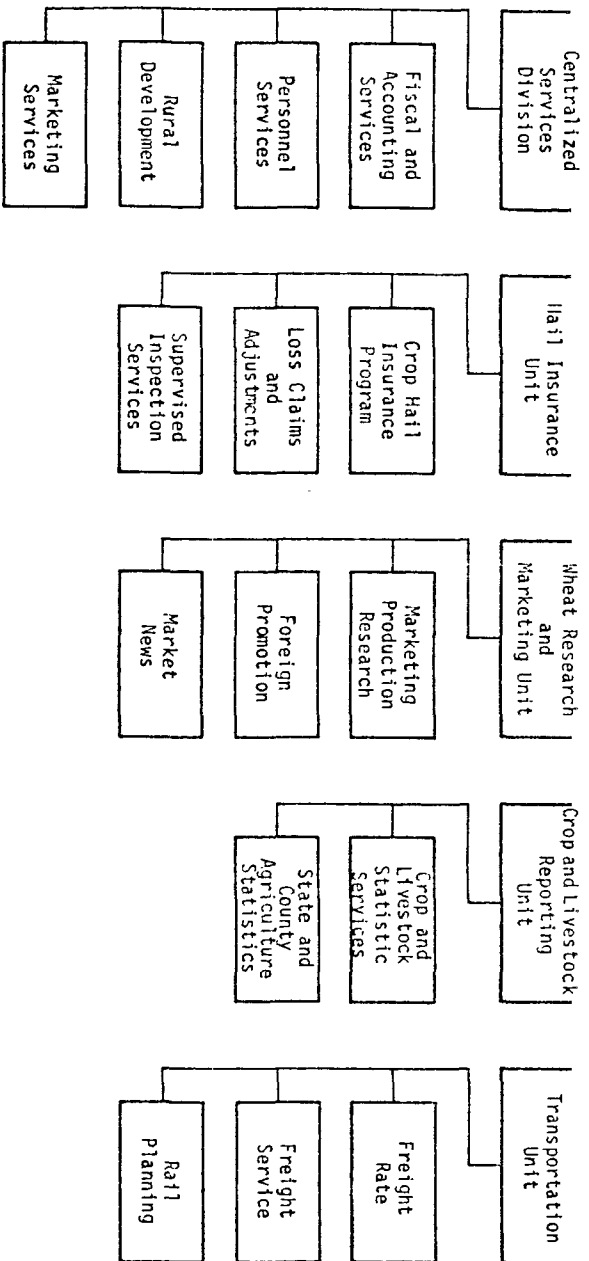
Until the occurrence of the PCB incident in 1979, Montana's integrated toxics management predominantly consisted of an informal network in which all relevant actors knew one another on a first-name basis. After discovering that more formal mechanisms were needed, the State has gone to work in order to "plug up the holes" where needed. The informal coordination is still highly evident, but it is now firmly coupled with the formal, resulting in a cohesive system.

An area of environmental concern which will require greater integrated efforts in the future is energy-related wastes. The State's anticipatory policy has gotten off to a strong start, but it must grow concomitant with expanding energy development. It is hoped that fiscal constraints will not render this growth stagnant.









## New Jersey ITM Summary

### I. Toxics Authorities

#### A. Major Toxics Related Legislation

1. Major Hazardous Waste Facility Siting Act 1981.
2. The Hazardous Waste Discharge Bond Act 1981.
3. New Jersey S.W.M.A. 13:1D-1 et seq. - The Environmental Protection Act of 1970.
4. New Jersey S.A. 26:2C-9 et seq. - The Air Pollution Control Act (1954).
5. New Jersey S.A. 58:10A-1 et seq. - The Water Pollution Control Act.
6. New Jersey Administration Code NJAC 7:1F-1.1 et seq.
7. The Spill Compensation and Control Act 1977.
8. The Landfill Closure and Contingency Fund Act 1982.
9. Executive Order No. 40 1976.

#### B. Major Agencies

1. Department of Environmental Protection.
2. Department of Health.

#### C. Other Agencies

1. Department of Agriculture.
2. Department of Transportation.
3. Department of Labor and Industry.

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate

1. No comprehensive ITM legislation exists although a memorandum of understanding is being written to improve DEP and DOH cooperation on toxics.

#### B. Major Cooperative Efforts

1. AB 280 would establish an inter-agency Health Assessment Group on drinking water quality standards.
2. DEP utilizes the Department of Health Laboratory and toxics data is mutually exchanged.
3. SB 1670 Worker and Community Right to Know Act is supported by various State agencies.

### III. Information Management

#### A. Means of Gathering Data

1. The DEP/OCTSR does extensive environmental testing and monitoring of air, water and hazardous waste sites.
2. The industrial survey project provides crucial data as does the Department of Health's Health Assessment Division.
3. The DEP is about to initiate a Pretreatment Survey which will generate substantial data on liquid discharge and characteristics of pretreatment wastes.
4. All significant sources of air pollution in New Jersey are required to obtain permits from the Bureau of Air Pollution Control. Permit data relating to air pollution characteristics is computerized on the Air Pollution Emission Data System (APEDS).
5. New Jersey has received delegation from EPA to administer the NPDES Program. Substantial monitoring and data collection is required by this program.
6. Hazardous waste generated, transported or disposed of in New Jersey must be accompanied by a State manifest. The qualities and quantity of hazardous waste are recorded and maintained. (The new manifest data handling system allows immediate access to all data on hazardous waste generated transported and treated or disposed of in New Jersey.)
7. Routine air and water quality monitoring provides a substantial quantity of information related to toxic pollutants.

#### B. Data Coordination

1. OCTSR in managing the CEO UPGRADE data base and the New Jersey Environmental Health data base.
2. All toxics data is coordinated in the DEP Geographical and Statistical Analysis Unit or the Information Resources Center.

#### C. Information Availability

1. The DEP Information Resource Center.

### IV. Toxics Control

#### A. Problem Identification and Ranking

1. Input received from local health departments, citizens, DEP and DOH data.
2. The Governor's Cabinet and Science Advisory Board in addition to DEP and DOH Executive staffs set priorities for the State and their individual agencies.

1. New Jersey uses the Department of Health guidelines, tends to place less emphasis on risk assessment as a decision tool.
- C. Emergency Management
1. The State has developed an Emergency Management plan.
- D. Current Character of Toxics Control
1. Coordination between the DEP and DOH tends to be informal but there are efforts being made to formalize toxics communication.

Key State Officials

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## New Jersey ITM

### I. State Authorities Directing Toxics Control

Existing authorities governing toxics are:

1. The Major Hazardous Waste Facility Siting Act 1981 - The Act creates a Hazardous Waste Facility Siting Commission and a Hazardous Waste Advisory Council. The Commission is responsible for developing and managing a Hazardous Waste Siting Plan.
2. Hazardous Waste Discharge Bond Act 1981 - The act establishes a \$100 million fund to pay for identification, clean-up and removal of hazardous wastes.
3. New Jersey S. A. 13: ID-1 et seq. - The Environmental Protection Act of 1970 - This act provides the Department of Environmental Protection with the authority to administer all of the State statutes pertaining to natural resource management and protection of the environment.
4. New Jersey S.A. 26:2C-9 et seq. The Air Pollution Control Act (1954) - Specific authorization is provided for the Department of Environmental Protection to regulate sources of air pollution in the state.
5. New Jersey S.A. 58:10A-1 et seq. - The Department of Environmental Protection is authorized to control discharges to New Jersey's waters.
6. N.J. Administration Code NJAC 7:1F-1.1 et seq. - Authorizes the New Jersey Industrial Survey Project. (Mentioned later in the paper)
7. The Spill Compensation and Control Act 1977 - The Spill Compensation and Control Act (similar to the Federal superfund) is currently undergoing legislative revision. A State court recently decided that the State could use the taxing scheme designated in the Act despite the existence of the Federal Superfund.
8. The Landfill Closure and Contingency Fund Act 1982 - The Act ensures proper operation and closure of State landfills.
9. Executive Order No. 40 1976 - This order created the Office of Cancer and Toxic Substances Research. The Executive Order allows the Department of Environmental Protection (DEP) to conduct research and public integration programs, monitor, inspect premises, conduct registration programs for selected pollution activities, enforce statutes and regulations and clean-up chemicals.

The New Jersey legislature was very active in 1982, introducing a number of toxics related bills. Listed below are the major bills.

1. NJ AB 280 - The Safe Drinking Water Act - Introduced by Assemblyman Lesniak. The bill would require that the DEP sample potable water supplied once a year and, with the creation of an inter-Agency Health Assessment Group, establish Environmental Health Standards for State drinking water quality. The bill has been assigned to the Senate Energy and Environment Committee.
2. N.J.S.B. 1670 Worker and Community Right to Know Act - Introduced by Senator Dalton. This bill requires employees at facilities where chemicals are stored, handled, or emitted to prepare information sheets on the chemicals indicating the nature of the chemicals and the health risks which they pose. These information sheets would be kept on file at the facility, where employees would have access to them, and at the offices of the Department of Environmental Protection and at county health departments, where members of the community could have access to them.

This bill also requires employers to label containers of chemicals indicating the chemical's health dangers, and to provide employees with education and training programs concerning the safe handling of dangerous chemicals. In addition, this bill establishes procedures to protect employees who exercise the right to information concerning chemicals provided by this bill.

3. NJ AB 901 - Solid Waste Management Act - Introduced by Assemblyman Lesniak. The bill would require that a person "seeking approval to collect, transport, treat, store or dispose of solid waste or hazardous waste file a disclosure statement with the Department of Environmental Protection..." The bill is pending an Assembly vote after legislative recess.

Several other waste related bills are still pending in New Jersey. One such bill would authorize county health departments or certified health agencies to issue complaints pertaining to environmental health laws. Another proposal would make it a crime to generate, transport or dispose of hazardous waste without completing a manifest. This bill would also establish criminal penalties for those who make false or misleading statements to others in the toxic waste field.

## II. Organizational Structure of Lead Agency/Office on Toxics Management

The DEP is currently undergoing reorganization and this will not be completed for a few months. The attached organization chart is still the most recent arrangement. Robert E. Hughey is the new DEP Commissioner and Arbesman, the Deputy Commissioner, will retain his position.



Several units in the Department of Environmental Protection (DEP) are involved in the study and control of toxic substances. The Office of Cancer and Toxic Substances Research (OCTSR) is the lead research group and is charged with identifying the sources, levels and effects of toxic substances in New Jersey. The Office of Hazardous Substances Control is charged with on-site response to hazardous substances spills and other emergencies, as well as ensuring the integrity of facilities using large quantities of dangerous substances. The operating DEP line divisions develop, implement and enforce the Department's control efforts in the various environmental media.

The Office of Cancer and Toxic Substances, is composed of six units, each with its own "unit manager". The six units are:

- Industrial Investigation
- Information Resource Center
- Geographical and Statistical Analysis Unit
- Water and Biota research
- Industrial Investigation
- Information Resource Center

Many of the projects being conducted by these units are funded through the TSCA Section 28 grant program.

There seems to be more informal than formal coordination and exchange of information within DEP and between other State agencies. Formalized integration activities within DEP take place in advisory committees or task forces, of which there are many. One such committee is the Laboratory Advisory Committee which includes representatives from each DEP division and meets once a month. Informal communication consists of memos and phone calls. Inter-agency communication on toxics occurs primarily between the DEP and the Department of Health. Currently, the Department of Health does most of the laboratory analysis (particularly water quality) for the DEP. However, the DEP has just completed construction of a Pesticides/Toxics Laboratory which in 1983 will begin doing most of DEP's analytical work. DEP has worked with the Department of Health on human monitoring studies on (cancer clusters), organic compounds analysis (vinyl chloride), and abandoned hazardous waste sites. DEP has had very little contact with the Department of Agriculture or the Department of Labor and Industry. However, this summer DEP and the Governor's Science Advisory Committee's Subcommittee on Quality Control/Quality Assurance will sponsor a meeting on lab testing and quality control guidelines. The Departments of Transportation and Agriculture, plus industry and academia representatives will attend. In addition to the intra and inter-agency activities, the DEP has established sixty or so "public councils". A selection of these councils include the Clean Air, Clean Water and Solid Waste Advisory Councils. The councils report directly to the DEP Commissioner and are composed of representatives from government, industry, academic and citizen organizations.

The New Jersey Department of Public Health (DOH) works with other State agencies both informally and formally. Its divisions usually telephone other agencies or divisions to report new epidemiological data or other important findings. Interaction occurs on a case-by-case basis. Formal interaction occurs on various task forces created for a specific issue or problem.

The Governor's Science Advisory Committee meets at the direction of the Governor's Cabinet to discuss priority environmental concerns. In the past, the Advisory Committee has arranged and coordinated a number of intra-agency task forces on priority environmental issues. One of the most successful was the Governor's Task force on Asbestos. The Departments of Treasury, Education, Health, Environmental Protection, and Labor and Industry participated in developing a State policy on Asbestos. By the time EPA's asbestos regulation on Asbestos in Schools was published, New Jersey had gathered and analyzed data on 60% of the schools in the State.

### III. Information Management

In the New Jersey Department of Environmental Protection, the Office of Cancer and Toxic Substances Research performs the majority of toxics research. According to OCTSR's annual report this program has "assembled the Nation's most comprehensive data base on environmental toxics." Under the direction of the six research units, OCTSR has established environmental testing and monitoring programs in each media utilizing a variety of information gathering methods and analytical models. For example, concerning water, New Jersey is studying sublethal effects of toxic pollutants on aquatic organisms. The major objective of the study is to develop early warning biomonitoring techniques which can be implemented by the State as future monitoring tools. The State has also used the Ames test as a general screen for toxics as a part of their water sampling program. A number of air monitoring projects are also being conducted such as the Toxic Substances Investigation and Integration Unit's (TSII) study on ambient lead levels and the mobile laboratory unit.

Like many states, New Jersey DEP information gathering is both reactive and preventive. The State places a great deal of attention on identifying which environmental contaminant(s) maybe linked to public health problems. OCTSR has investigated cancer and birth defects clusters, as well as utilized their Industrial Survey data to identify areas in the State which are subject to an increased disease risk. OCTSR studies are exchanged with other DEP offices and are often used as evidence in enforcement actions.

The DEP Information Resource Center is one form of Information Management. The Resource Center has three main projects: library services, public information and public participation. The Center has an extensive collection of reference materials including texts, government research reports, periodicals, pamphlets, maps and microfilms. In addition to the Center, the DEP Geographical and Statistical Analysis Unit coordinates all data collected by OCTSR and oversees all data processing requirements. This unit is managing the NCI-funded Environmental Health data base and the CEQ UPGRADE data base. The Environmental Health data base contains all available information on toxic substances in the New Jersey environment.

### IV. Toxics Control

As mentioned, the State is making efforts to be both reactive and preventive. Historically, the State has been reactive in response to toxic problems. If a toxic problem becomes controversial enough because

of a public or local health department concern, the Governor usually responds. Taking a more preventive approach, when divisions within the DEP discover important data on potential environmental problems, this data is presented at DEP Executive Staff meetings. (The data is derived from testing, monitoring, citizen complaints, and the industry survey etc.) The DEP Commissioner and staff will then decide on environmental/chemical priorities.

The DEP (OCTSR) relies on the Department of Health for "internal guidelines" rather than risk assessments. Using a complicated set of formulas, the Department of Health extrapolates from testing and monitoring data, occupational exposure information and safety factors to develop these guidelines or standards.

The Department of Health is first alerted to public health problems through the local health departments (which are autonomous), residents and the DEP. Investigation and testing then takes place. In deciding which public health problems are highest priority, the Department determines the level of toxicity and the number of people possibly exposed. The Department is skeptical of risk assessments and tends to rely more on the "straight data" assembled and the internal guidelines established by the DOH.

One of the more innovative programs established by the Department is the Health Effects Public Clinic. If a citizen suspects that he/she has been exposed to a chemical, the clinic will conduct a free series of tests on the individual. This information is then reported back to the individual and could possibly be utilized later by the State in determining disease clusters and identifying problem chemicals.

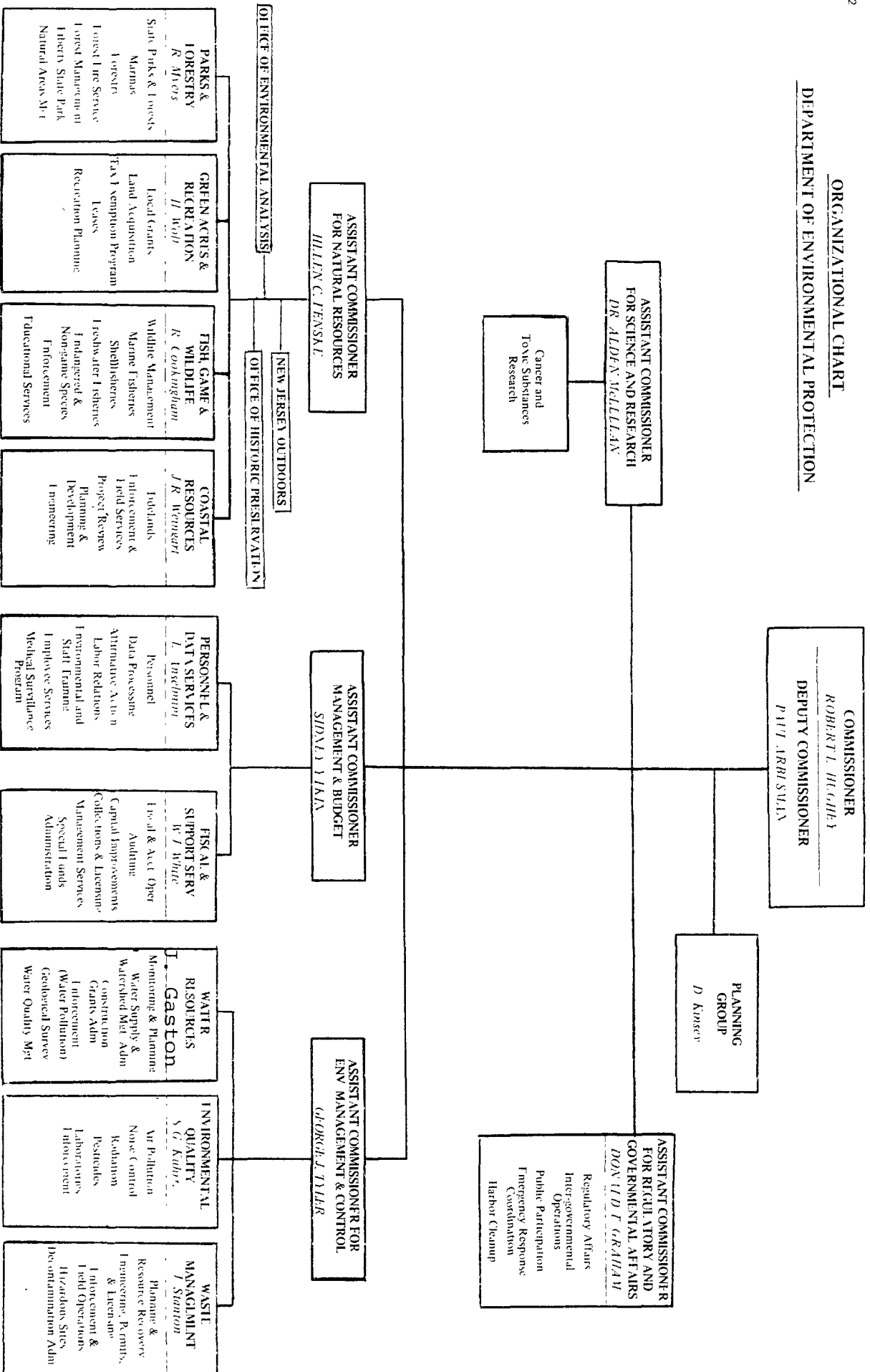
## V. Analysis

New Jersey has long recognized the need for a thoroughly integrated approach to controlling toxic substances. New Jersey is one of the leading centers of the petrochemical industry and currently ranks second in the nation in industrial chemical output. The state is well aware of the causal relationship between environmental pollution and health effects.

Over the last ten years, New Jersey has developed and implemented progressive legislation and programs to deal with toxic pollution problems. In addition, the State has improved its testing, monitoring and analytical capabilities in order to upgrade the State's toxic information base.

The strongest aspect of New Jersey's program appears to be the combination of a concerned Legislature and administration coupled with tough enforcement of toxics regulations and an intensive toxics research program.

**ORGANIZATIONAL CHART**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**



## New Mexico ITM Summary

### I. Toxics Authorities

#### A. Major Toxic Related Legislation

1. Environmental Improvement Act
2. State Governmental Reorganization Legislation of 1978
3. New Mexico Water Quality Act
4. New Mexico Clean Air Act
5. New Mexico Hazardous Waste Act
6. New Mexico Occupational Health and Safety Act

#### B. Major Departments

1. Health and Environment Department
  - Environmental Improvement Division
  - Health Services Division
  - Scientific Laboratory Division

#### C. Other Departments

1. Department of Agriculture
2. Department of Transportation
  - Motor Transportation Division
3. Department of Energy and Minerals

### II. Organizational Coordination in Toxic Management

#### A. Legislative Mandate for Integration

1. The Environmental Improvement Act provides a broad mandate which may be considered as integrative in nature

#### B. Cooperative Efforts

1. The Environmental Improvement Board
2. The Water Quality Control Commission
3. New Mexico Department of Agriculture Pesticide Advisory Board
4. Cooperation between EID and EPA on the regulation of Hazardous Waste Transport
5. M.O.U's are being developed on (3) and (4)

### III. Information Management

#### A. Means of Gathering Data

1. Permitting, monitoring
2. Tumor Registry

B. Data Coordination

1. Each office coordinates its own data.
2. Interdepartmental sharing of office space facilities communication.
3. An "Integrated Management Information System" is being developed.

IV. Toxic Substances Control

A. Problems Identification and Ranking

1. Problem identification comes chiefly from citizen complaints and state monitoring.
2. No formal priority-setting process has been established.

B. Risk Assessment Models

1. Risk Assessment models are not used in New Mexico, although epidemiological studies are conducted.

C. Emergency Management

1. A 24-hour emergency response team, with an emergency response coordinator.

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## New Mexico ITM

### I. Toxics Authorities

Toxics management and all environmental affairs in the State of New Mexico are guided principally by the Environmental Improvement Act of 1971, as amended. The Act established an Environmental Improvement Agency and gave it the broad mandate to "insure an environment that in the greatest possible measure: will confer optimum health, safety, comfort and economic and social well being on its inhabitants..." Towards this end the agency was delegated regulatory and enforcement authority on those standards promulgated by the Environmental Improvement Board, and the Water Quality Control Commission. In addition, such State statutes as: the New Mexico Water Quality Act, New Mexico Clean Air Act, Hazardous Waste Act, and the Occupational Health and Safety Act empower the various environmental offices with specific authority.

Through 1978 legislation, the State reorganized the structure of its environmental management. All environmental and health offices were placed within a Health and Environment Department. Currently, the vast majority of toxic authority is vested in the Environmental Improvement Division of HED. Through EID's Air Quality Bureau, Occupational Health and Safety Bureau, Radiation Protection Bureau and the Water Pollution Control Bureau, the regulatory and enforcement functions outlined in the Environmental Improvement Act are maintained. In addition, the Environmental Improvement Board continues to promulgate regulations and standards in the area of environmental management and consumer protection. The same is true for the Water Quality Control Commission.

In addition to EID, the Health and Environment Department also houses the Health Services Division and the Scientific Laboratory Division, as well as four other divisions. The Scientific Laboratory Division does all lab work for offices both within and outside of HED. The Health and Environment Department also has 22 environmental field offices arranged in four districts which report to EID, and 44 health services offices which are under HSD supervision. The local services do play a major role in the program implementation stage.

As was stated earlier, the majority of authority in toxics management lies with the Health and Environment Department. However, some program control has been delegated to other departments. Most notably, the New Mexico Pesticide Control Act grants the Pesticide Division of the Department of Agriculture with full program responsibility. In addition the New Mexico Motor Carriers Act grants the New Mexico Department of Transportation authority to regulate the transport of hazardous materials.

### II. Organizational Coordination

The Environmental Improvement Act, combined with the 1978 reorganization, serves as a mandate for integration. The fact that the reorganization placed everything from water quality management to occupational health and safety under one department, coupled with the broad directive already stated in section I, "sets the state" for integrated management. However,

with a few notable exceptions, the present mode of coordination and cooperation is primarily informal.

The chief "formal" coordinative mechanisms in New Mexico are the Environmental Improvement Board (EIB), Water Quality Control Commission (WQCC) and the Agriculture Pesticide Advisory Board. All environmental regulations promulgated by the offices within the Environmental Improvement Division must be approved by the EIB and WQCC. The Pesticide Advisory Board is composed of representatives from the Department of Agriculture and the Health and Environment Department, and acts as a technical advisory for the Pesticide Division on the formulation of pertinent regulations. In addition, Memoranda of Understanding are currently being developed between Agriculture and HED, to formally define their respective roles in toxic management. A final cooperative mechanism is the centralized laboratory system in HED which conducts all laboratory work for offices in and outside of HED.

The majority of the integration between offices in New Mexico is, however, rather informal. The interaction between EID bureaus is facilitated by the sharing of common office space. Therefore, communication is generally on a less structured but more personal level. The same holds true for contacts outside of EID. The "task force" style of management is not used in New Mexico.

### III. Information Management

Information gathering activities primarily center around monitoring and permitting activities. Much of this information is not yet computerized although New Mexico is beginning the development of an "Integrated Management Information System" which will incorporate epidemiology, health and environment data in computerized files.

Currently, each office coordinates its own data. The sharing of information between programs is purely ad hoc; but, the sharing of common offices does facilitate this type of communication. Health data is not presently used in setting environmental priorities. New Mexico does, however, maintain a tumor registry at the University of New Mexico. The registry information is made available to those who visit the University in Albuquerque.

The general accessibility of data is not addressed by any specific legislation.

### IV. Toxic Control Strategies

Toxics problem identification comes chiefly from monitoring/surveillance and citizen complaints. There have not been a greater number of serious toxic incidents in the State, primarily because of New Mexico's low concentration of industrialization. Uranium contamination has required some inter and intradepartmental action. However, no formal strategy for dealing with toxic problems has been formulated. As a situation arises, a strategy is developed to meet the individual needs of the

time. It was reported by one State official that the implementation of Superfund has drawn individual programs together in order to determine possible priorities and to determine jurisdictional duties. So, there has been some movement towards a more formal policy.

In the area of emergency management, an emergency response system has been developed for New Mexico. A trained emergency response team is available on a 24-hour a day basis. The emergency response coordinator in EID directs activities by notifying and requesting assistance from the relevant programs. Currently, however, there is no staff to deal with hazardous incidents; all such work would have to be done through private contractors.

In short, toxic control is centralized largely within EID, but the methods for dealing with other agencies or departments on specific incidents is primarily informal.

#### V. Current Status and Analysis

The priority problem in New Mexico is carbon monoxide and ozone pollution from automobiles in Albuquerque. Another air problem did center around the Four Corner's Power Plant, but the plant is now on a compliance schedule. New Mexico also is particularly concerned about contamination of their water resources, due to the scarcity of supply within the State. The primary pollution problem up until this point has been mine drainage, however, any possible source of contamination will continue to be of utmost concern to New Mexico State officials. It should be noted, however, that this problem is less severe in the Albuquerque area due to a large and pristine aquifer which runs beneath the city.

Problems common to other states, such as hazardous waste, are not as significant in New Mexico due to an environmental protectionism sentiment shared among the populace, which guides their selection of "cleaner" industries to locate within the State. This sentiment cannot be fairly characterized as "anti-business" but rather one of extreme "environmental protectionism". This attitude appears to be a dominant in New Mexico politics and policy making. This, combined with an organizational structure which is amenable to coordination, whether formal or informal, places New Mexico in a very favorable position for the management of any toxic substances problems.

In general, however, it must be stressed that given the lack of any overriding toxic problem in the State of New Mexico, the current environmental management structure seems to be in a good position to adapt to make the necessary improvements. New Mexico's organization may be of particular interest to states seeking more integrated management.



## New York ITM Summary

### I. Toxics Authorities

#### A. Major Toxics Related Legislation

1. New York Public Health Law
2. New York Labor Law, 1980
3. State Occupational Safety and Health Act
4. New York Environmental Conservation Law, 1978
5. Industrial Hazardous Waste Management Act of 1978
6. New York State Sanctuary Code, Part 22
7. Environmental Disease Registry Act, 1980

#### B. Major Departments

1. Department of Environmental Conservation (DEC)
2. New York State Health Department - Office of Public Health (OPH)

#### C. Other Departments

1. Department of Labor
2. Department of Transportation
3. Department of Law (Attorney General)
4. State Disaster Preparedness Commission - Office of Disaster Preparedness
5. Department of Agriculture and Markets

### II. Organizational Coordination in Toxics Management

#### A. Agency Mandate

1. Delegation Memorandum - written in May 1979 by Commissioner of the Department of Environmental Conservation. Directs major Department reorganization on toxics management
2. Office of Public Health Reorganization - January 1982

#### B. Major Cooperative Efforts

1. Inter-agency intergovernmental effort to identify hazardous waste dump sites. Frequent meetings on cooperative DEC/OPH hazardous waste site investigations
2. Advisory committee on Right-to-Know
3. DEC use of OPH laboratories
4. OPH provides review of permits, recommends standards to DEC
5. OPH/DEC and Department of Law cooperative efforts on litigation
6. OGS/OPH/DEC Task Force on PCBs in public facilities
7. OPH conducts risk assessment for DEC

### III. Information Management

#### A. Means of Gathering Data

1. Air and water source control inventories
2. Industrial chemical survey and the registry of inactive hazardous waste sites
3. Computerized manifest system tracks generation of hazardous wastes
4. OPH and DEC sampling and monitoring data
5. OPH epidemiology studies
6. OPH registries include cancer, congenital malformations, industrial exposure, heavy metals and occupational lung disease

#### B. Data Coordination

1. Data is collected and stored by the individual agencies. OPH has a centralized system and DEC prefers decentralized system

#### C. Information Availability

1. Right to Know law
2. N.Y. Registries protect health and industrial secrets

### IV. Toxics Control

#### A. Problem Identification and Ranking

1. Input received from county health departments, DEC Regional offices, local citizens, and OPH/DEC data.
2. The DEC environmental quality programs do establish priorities for toxics control through DEC division workplans, the annual EPA/State environmental quality agreements, and the annual Department Executive Program Planning and Budget System

#### B. Risk Assessment Models

1. The Department of Health performs risk assessments; using such models as Global, Mantel Bryan, and One-hit, recommends guidance for the State

#### C. Current Character of Toxic Control

1. In general, toxics management is divided between DEC and OPH

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## New York ITM

### I. State Legislative Authorities

New York State agencies involved with toxics management function broad statutory and regulatory authority as well as specific legislative mandates. Legislation enacted in the early 70's tended to broadly focus on air and water pollution concerns while the late 70's was a time for more specific legislation. Listed below are laws which address toxic substances issues in New York.

1. New York Public Health Law - October 1979 This is an all encompassing law which addresses worker right-to-know, medical record maintenance, confidential business information, employee toxics training, and authorization to inspect facilities. Specifically the law states that:
  - Employers may register trade secrets with the Department of Health and the Department will not release the data;
  - The Department of Health will record all inquiries received from chemical manufacturers and employers regarding toxic effects;
  - All workers are to be provided information concerning the nature of toxic substances in the workplace; and
  - Employers must provide copies of employees' health/exposure records to the Department of Health.
2. New York Labor Law 1283 (Supp. 80-81) as amended L. 1974 C. 1046 3 effective June 15, 1974. This labor law provides authority for the Industrial Commissioner/and the Public Health Commissioner to regulate chemical company employers regarding trade secrets. Employers are required to keep the names, addresses and the records of employees exposed to toxics substances.
3. New York Environmental Conservation Law 27-0919 (Supp. 80-81) "Propriety Information" L. 1978 C. 639, 7, effective September 1, 1978. This law is one of the State's major environmental laws. It encompasses the State Superfund act (Chapter 857), Financial assurance (Chapter 855) and a number of other provisions.

In addition to the above-mentioned legislation, a Delegation Memorandum was written in May 1979 by Robert Flacke, Commissioner for the Department of Environmental Conservation. The Memorandum directed a reorganization for toxics management within the Department and established the Policy and Toxics Coordination Unit. This unit was created to coordinate the Department's toxics control effort. (The reorganization will be discussed in more detail later in this profile.)

The New York State Legislature was very active in 1982. The total number of relevant toxics bills with a high probability for passage is eight:

two toxics management, two community right-to-know, one workers' right-to-know, one data reporting, one data collection and one bill broadening the definition of environment. A brief description of each of these bills follows, although their fate is unknown at this time:

NY AB 11543 - This bill would amend the Environmental Conservation Law concerning environmental impact on schools and health care facilities. The definition of "Environment" is expanded to mean both "physical conditions" and conditions which have an effect on the health and welfare of all those working in school systems and health care facilities.

NY SB 8540 - This bill would amend the New York statutes concerning State and local natural and man-made disaster plans. The amendment authorizes each city, town and village to develop disaster preparedness plans and specifies how and which officials should carry out the plans.

NY SB 9813 - This bill would require the Public Service Commission to direct all gas and electric corporations possessing capacitors, transformers, or other equipment containing greater than 500 parts per million of PCBs to place a warning label on the pole houses.

NY AB 12488/SB 9629 - The bills would require the Fire Administrator to consult with fire fighting and code enforcement personnel to establish a specialized hazardous material emergency response training program for employees responsible for providing emergency response following accidents involving hazardous materials.

NY AB 7743/SB 5774 - These bills are concerned with art supplies' labeling. The manufacturers of art supplies whose materials contain hazardous substances, would be required to supply labels stating potential toxic hazards and methods of avoidance.

NY AB 11917/SB 10120 - The bills would authorize the permanent establishment of an Industrial Chemical Survey requiring manufacturers, storers, transporters, etc. of raw chemical materials to notify the State Department of Environmental Conservation of the names and amounts of such substances. Such a policy is now voluntary. The bills would make disclosure mandatory with a maximum penalty of \$25,000 a day for non-disclosure. These surveys would be implemented in coordination with a compilation done by the DEC of all hazardous wastes dumped in the State over the past three decades. All of this information would be disseminated throughout the State to local health officials and would be made available to the public.

## II. Organizational Coordination in Toxics Management

The major responsibility for toxics substances control in New York State has been assigned to the Department of Environmental Conservation (DEC) and the State Health Department's Office of Public Health. Working under the overall authorities and mandates of major Federal and State

legislation enacted in the 70's, the Department of Environmental Conservation's mandate is to prevent and control contamination of the State environment. The Department has regulatory, resource management and enforcement powers; the State Health Department possesses the toxicological, environmental health and laboratory expertise which often supports DEC.

The Department of Environmental Conservation's Office of Environmental Quality has the major responsibility for toxics control. The Office is organized by media (air, water, and solid waste divisions). Under the direction of an Assistant Commissioner, the divisions provide technical expertise.

Under the reorganization plan toxics was placed under the Assistant Commissioner for Environmental Quality. Each DEC program division was also directed to assign a toxic substances coordinator and "develop priorities and objectives, including budgetary needs, for inclusion in the overall toxic substances program strategy..." The toxic substances coordinators are most often section heads within the Divisions who have toxics related functions. In addition, each of the eight DEC regions designates a toxics coordinator and directs all regional toxics control activities including remedial and emergency response. Considerable authority is provided to the DEC regions to implement regulatory and enforcement program elements.

The Policy and Toxics Coordination Unit in the Office of Environment was created in 1979 in an effort to assist the Department's ability to focus on toxics and improve the Department's toxics coordination. Improved toxics information flow through the Department and the decentralized management scheme is facilitated by the Policy and Toxics Coordination Unit. This Unit aids the Assistant Commissioner for Environmental Quality in coordinating inter-media toxics programming activities, responses to incidents and other high priority situations. Specifically, the Unit:

1. Coordinates activities, communications and status reports on toxics incidents and emergencies;
2. Coordinates the development of policy and procedures to provide a more consistent response to department-wide toxics problems; and
3. Leads ad-hoc work groups to develop new department management initiatives such as improved toxics monitoring strategies in all media areas and comprehensive employee toxics safety programs.

In January 1982 the New York Office of Public Health was reorganized into four major divisions: Health Risk Control, Environmental Protection, Community Health and Epidemiology, and Health Manpower. The Division of Community Health and Epidemiology houses the Bureau of Vital Statistics and the Bureau of Chronic Disease Prevention. The Bureau of Chronic Disease Prevention is responsible for managing the State's Cancer Registry, among other activities. A selection of these activities

include a breast cancer program which provided screening services to approximately 4,000 women in 1981, birth defects epidemiology studies and cancer epidemiology studies. The Division of Health Risk Control is most directly responsible for toxic substances. This division is divided into the Bureau of Toxic Substances Assessment and the Bureau of Environmental Epidemiology and Occupational Health. Listed below are the "Section Offices" under each Bureau and each sections' toxics activities.

I. The Bureau of Toxic Substances Assessment

- A. Indoor Air Quality Section - This office responds to citizen requests for OPH sampling and analyses of asbestos and formaldehyde in homes, schools etc.
- B. Special Studies Section - This office provides technical information to the New York Attorney General on environmental/public health cases under litigation. Presently, the office is working on Love Canal and contamination of Niagara Falls area.
- C. Surveillance and Investigation Section - The office samples and monitors hazardous waste dump sites and public wells.
- D. Health Effects Assessment Section - This office establishes drinking water standards and reviews air, water and soil discharge permits by testing and assessing contamination limit levels. (DEC makes the final decision on the permits).
- E. Chemical Information Section - This section is responsible for implementing the New York Right-to-Know law. This office has also developed chemical fact sheets and organized a major public information program.

II. Bureau of Environmental Epidemiology and Occupational Health

- A. Health Hazard Evaluation and Special Study Section - This office conducts the Epidemiology Studies.
- B. Radiological Medical Assessment. This one person office has the responsibility for Radiological Disaster Preparedness.
- C. Environmental Disease Registry Section - This section is responsible for managing and computerizing the information obtained from recently established registries. The registries are:
  - 1. Elevated heavy metals levels registry - Laboratory staff and physicians are required to report blood test results if heavy metal content is present.
  - 2. Occupational lung disease registry - Laboratories and physicians are required to report all cases of lung disease.

3. Adverse pregnancy outcomes registry - Physicians and hospitals report congenital malformations up to two years of age. This information is to be included in the New York vital statistics information base.
4. Exposure registry - Employers must identify employees who have used, made or been exposed to 45 chemicals listed by the OPH.

In general terms, the Office of Public Health is responsible for researching and assessing environmental and public health problems, determining the seriousness of a specific problem and determining acceptable levels. The Department of Environmental Conservation on the other hand, makes the final decision on air, water and disposal permits and possess regulatory and enforcement authority. The Department of Environmental Conservation interacts with the Office of Public Health on State employee safety training programs, hazardous waste site investigations, human health monitoring guidelines, setting of permit standards for toxic air and water discharges, and laboratory analyses.

The Division of Laboratories and Research is located within the State health department. The division investigates risk to human health from diseases and environmental contamination. The program operates patient screening programs, regulates clinical and other laboratory studies and conducts research into the causes and detection of human disease. Seven institutes focus on birth defects, environmental health, infectious diseases, kidney disease, laboratory medicine, radiologic sciences and toxicology.

DEC has also worked with the Department of Labor on Right-to-Know issues, the Department of Transportation on oil and hazardous waste spills, and the Disaster Preparedness Commission on disaster preparedness plans. On occasion, the Departments will form an advisory committee on a particular problem. Such was the case with the Right-to-Know issue. OPH chairs this inter-agency committee. Close communication seems to be the norm between agencies, especially parts of OPH and DEC. If an issue is considered a priority, such as litigation, a formalized telephone network is developed.

The Office of Public Health also works with the Department of Education on the asbestos in schools program, and Agriculture on pesticides issues.

### III. Information Management

New York's toxic research program includes the monitoring of disease incidents, mortality and morbidity trends, the evaluation and identification of health hazard sources, and the study of disease problems among high risk groups and data correlations with the industrial chemical survey. The basic foundation of the State's environmental data base is the air and water inventories, the registry of inactive hazardous waste sites and the Industrial Chemical Survey. The hazardous waste registry is a list assembled in 1979 of all the dump sites in the State. A new computerized manifest system will provide data on generation, transport, and disposal of hazardous waste. The Industrial Chemical Survey, conducted

during the 1976-1978 period, involved over 5,000 industries throughout the State. The results of the survey were catalogued and computerized according to industry, county and water shed. The survey is water oriented and has been valuable in the permit writing process. However, the 1976 survey had two basic problems. The survey was based on industries' volunteer response and failed to gather information on chemicals that had been previously deposited. Pending legislation, NY AB 11197 and AB 10120, has addressed these two problems.

The intensive State effort to identify hazardous waste dumps has been a joint project between the Office of Public Health and the Department of Environmental Conservation since 1978. At that time, an inter-agency Task Force on Hazardous Wastes formed to investigate the industrial dumping practices in Erie and Niagara Counties. A DEC - OPH task force also initiated a survey to identify hazardous waste sites outside the Niagara area. Approximately 700 sites were located. The State has conducted air, soil and water sampling and monitoring programs in or near many of the hazardous dump sites.

Aside from the hazardous waste dump sampling, extensive tests have been conducted on the State's drinking and ground water supplies. Surface water analyses are routinely conducted, including sediments in Lake Ontario. The analysis revealed Mirex contamination (a pesticide) from past discharges dispersed by industries located on the Niagara and Oswego Rivers. A State-wide fish monitoring program has also been underway to analyze a variety of fish species for the presence of heavy metals as well as a monitoring program for chlorinated organic chemicals in New York's major waterways.

The Air Division at DEC has also been extremely active. The Division has developed three major program goals. These are:

- the identification of toxic emissions and establishment of safe air levels;
- the development and implementation of a program to regulate toxic emissions and;
- the monitoring of significant in-place toxic problems.

A major new initiative to develop real time toxics ambient monitoring is the use of a mobile lab. This lab can also be used for source control permit enforcement.

As toxics data is gathered by the DEC divisions, it is basically coordinated and kept within each division on a separate data base. However, in the last two years the DEC has moved towards a centralized data base, the Division of Management Planning and Information System. The DEC prefers to maintain distinct data bases because the Department is concerned about "unwieldy data systems". The State Health Department data, on the other hand, is centralized and managed by the Department's Computer System Management and Data Processing Group and the Bureau of Vital Statistics. The information is stored on a case, or investigation basis, and divisions are able to program and access their own data bases, as well.

Additional resources include the State Health Department Library and OPH's own library. DEC and OPH information is available to the public by simple request or by using the Freedom of Information Act. The DEC and OPH also refer public information requests to their respective Public Relations Offices.

The Environmental Disease Registries, established by Part 22 of the New York State Sanitary Code, provide the State Health Department with the capacity to monitor the health outcomes of a wide variety of occupational and environmental exposures. Forming an interlocking surveillance network, the four registries provide objective human data for problem identification and assessment. Directed analysis, in turn, provides a firm foundation for the development of clearly delineated, goal oriented, intervention programs to deal with specific problems.

The Heavy Metal Registry was the first of the four registries and was implemented on December 1, 1981. A concerted and intensive developmental effort was mounted during the first half of 1982 preparatory to bringing the remaining three registries on line. Input was solicited from more than 5,000 physicians and 200 pulmonary function laboratories in the development of the registry forms for the Occupational Lung Disease Registry. The first actual report of occupational lung disease was received from a physician in early August, 1982. During the spring and summer of 1982 a survey of some 5,000 New York State employers was conducted gathering information on the numbers of New York State employees occupationally exposed to the potentially dangerous substances. This Exposure Registry Industrial Survey Profile was the first mandated survey of the usage of specific toxic substances conducted in New York State and reporting was received without formal follow-up from better than 95% of the employers contacted. With this information and the assistance of a Scientific Advisory Committee, composed of top scientists representing industry, labor, government and academia, plans are underway to develop the criteria for employer reporting of employees exposed to potentially toxic substances on the job. These cohorts of workers at risk will then be followed prospectively to gain a better understanding of occupational risk factors.

Finally some 6,000 pediatricians, obstericians, gynecologists and neonatologists were asked to participate in a review of the draft reporting form the Congenital Malformations Registry. Response to the proposed registry was overwhelmingly positive and particularly helpful were the encouraging comments and suggestions from many of the major teaching hospitals. Mindful of the suggestions received to keep the form short, a simplified form was designed and distributed in late summer to physicians and hospitals across the State. Although the official start up date for this registry was October 1, 1982, reporting from some sources began in September.

The New York Department of Health (Bureau of Health Statistics) and Health Research Inc. has received a grant from EPA to enhance New York's birth defects data base. The Bureau of Health Statistics is located within the OPH Community Health and Epidemiology Division.

Information on congenital malformation which is diagnosed up to one year of age will be coded and added to the vital records. Current reporting occurs only for readily discernible malformations within the five day reporting period for the birth record. The data base will be used for analyzing, screening and monitoring of selected or suspected environmental problem areas.

#### IV. Toxics Control

In New York, specific chemical problems are identified by county health departments, the nine Regional DEC offices, local citizens, DEC monitoring data, industry survey, and the hazardous waste, air and water inventories. When chemical problems are identified through either the State Health Department or Department of Environmental Conservation each agency determines its own priority concerns in senior staff meetings.

The State does not appear to have a specific set of criteria to determine which problem chemicals or situations are a priority. However, New York seems to be well equipped to address problems as they arise. Love Canal served as a valuable training ground for the State; it considerably strengthened its environmental and health capabilities. The State has been working to encourage companies to show initiative in preventing, controlling, and, if necessary, cleaning-up problems.

New York has done considerable work in the area of risk assessment. Generally safe levels for toxics are recommended by OPH which utilizes risk assessment models. The Office of Public Health has worked with three models: Global, Mantel Bryan and One-hit. The Agency has just bought four additional models from Canada which have not been used yet. These models are Probit, Logit, Weibull, and Gamma Multi-hit. The models have been used to help assess risk in all media.

#### V. Analysis

New York State is very involved in the nation's chemical business. The State ranks fourth among the States in number of manufacturers and importers reporting for the TSCA inventory of chemicals in commerce and second in the number of different substances reported. Consequently, the State has experienced a number of toxic substances incidents such as chemical waste in Niagara and Erie Counties, mercury contamination of fish in Lake Onondaga, PCB contamination of the Hudson River and contamination of sole source aquifers on Long Island by various chlorinated hydrocarbons. The State has the highest cancer mortality rate in the country for white females and among the highest for other race/sex groups. In essence, all indicators reveal that the need for toxics control is there. It is clear that the State is progressing well to meet the challenge.

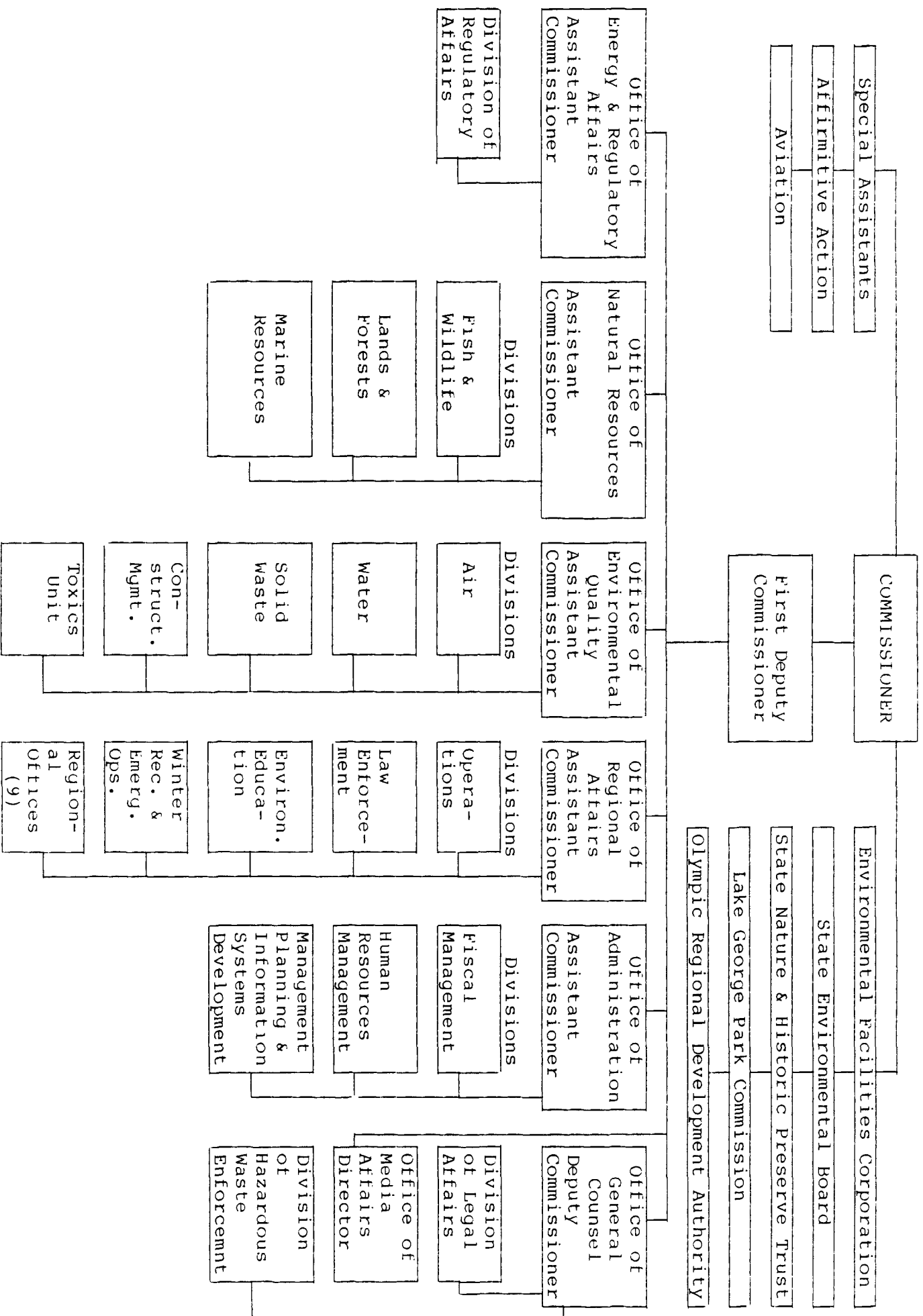
Attempts are being made, particularly by the Office of Public Health, to establish a logical and in-depth approach to fulfilling research and standard-setting responsibilities. The initiation of four new environmental disease registries and the Agency's effort to improve its birth defects data base are two good examples of this.



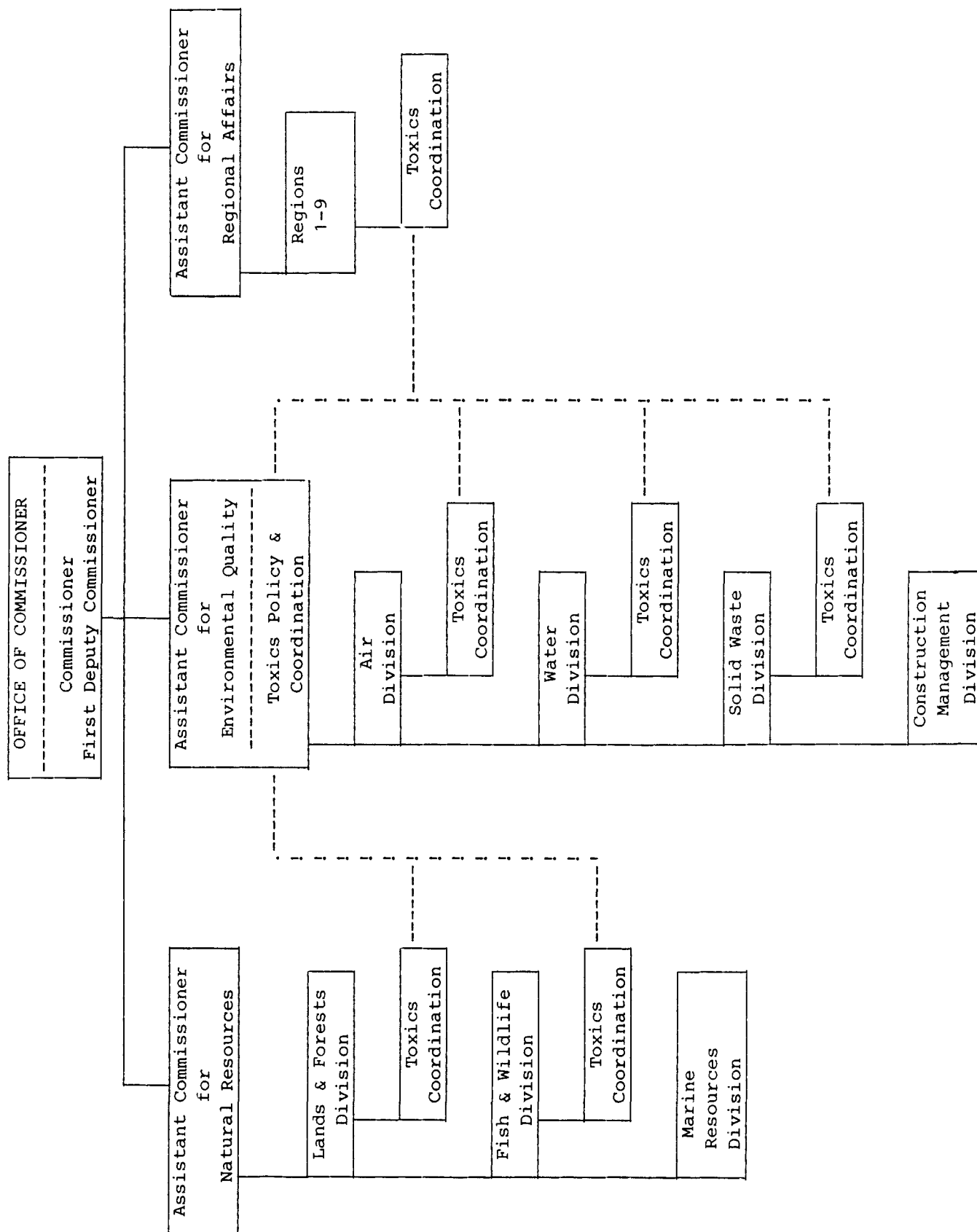
The Department of Environmental Conservation's reorganization and creation of the Policy and Toxics Coordination office reflects a concern for department management of toxic problems. The department has developed a well coordinated system of procedures and staff responsibilities.

New York's Integrated Toxics Management style is more intra-agency than inter-agency. Both the DEC and DOH exchange technical information and toxic plans within their own Agencies but this exchange is less frequent between the two Agencies. This contributes to the State's reactive rather than preventive approach to toxics control. New York is definitely moving towards a preventive approach, however.

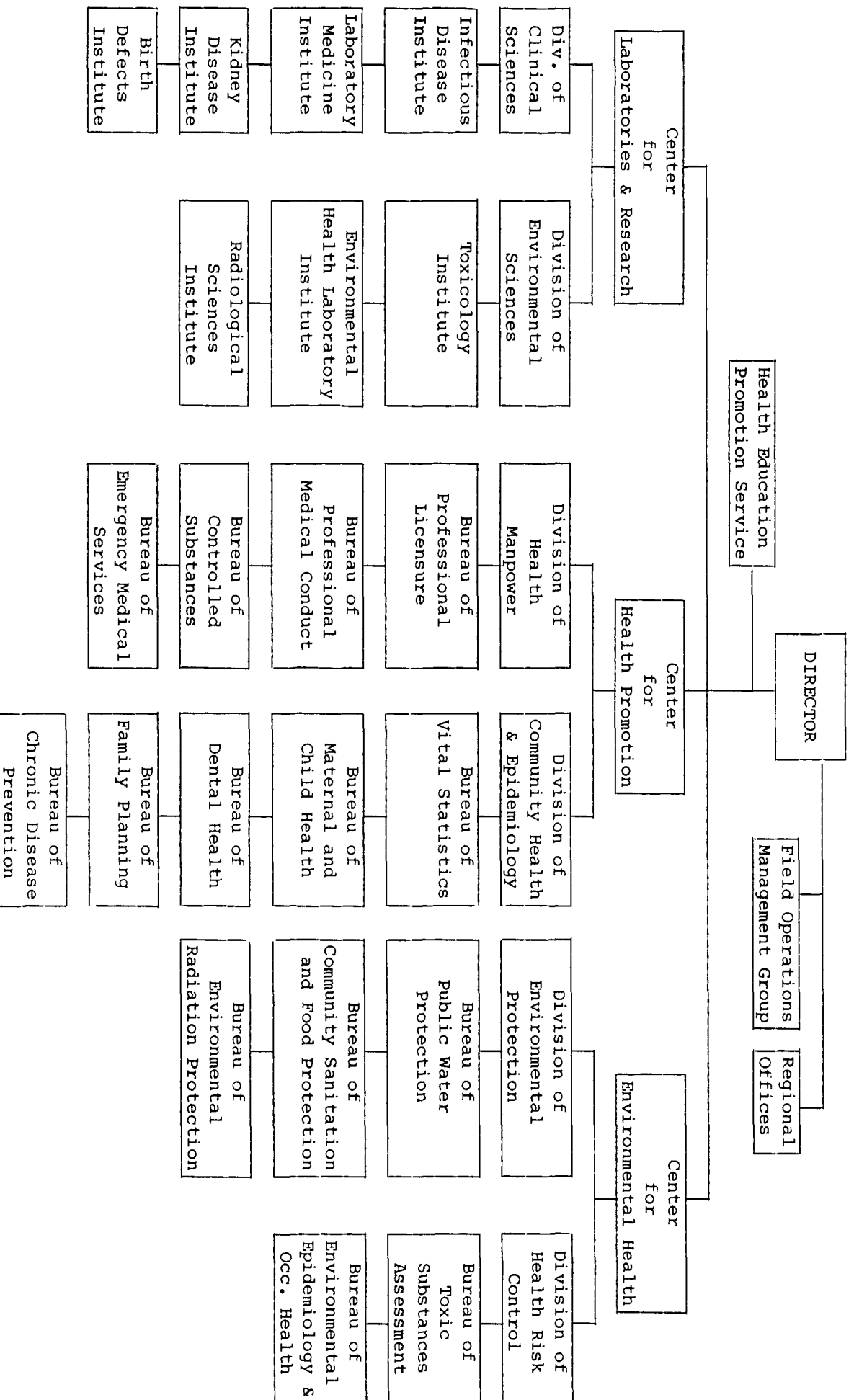
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



# ORGANIZATION FOR TOXIC SUBSTANCES CONTROL EFFORT



# OPH ORGANIZATION CHART



## North Carolina ITM Summary

### I. Toxics Substances Authorities

#### A. Major toxic substances-related laws.

1. Waste Management Act of 1981
2. Consolidated Emergency Management Act of 1980
3. North Carolina Pesticide Law of 1971
4. Occupational Safety and Health Act of North Carolina
5. North Carolina Drinking Water Act
6. North Carolina Food and Drug Act
7. Air Pollution Control Law, General Statutes, Article 21(b)
8. Water and Air Resources Law, General Statutes, Article 21(a)
9. Oil Pollution and Hazardous Substances Act of 1978

#### B. Major Agencies

1. Department of Natural Resources and Community Development
2. Department of Human Resources

#### C. Other Agencies

1. Department of Agriculture
2. Department of Labor
3. Department of Crime Control and Public Safety
4. Department of Transportation
5. Department of Administration

### II. Organizational Coordination in Toxic Substances Management

#### A. Legislative Mandate

1. Governor's Waste Management Board
2. North Carolina Pesticide Board
3. Pesticide Advisory Committee
4. North Carolina Hazardous Materials Emergency Management Plan

#### B. Major Cooperative Efforts

1. Governor's Toxic Substances Project
2. Office of Regulatory Relations
3. Department of Natural Resources and Community Development Mapping Project

4. Memoranda of Understanding
5. Governor's Toxic Substances Project
6. Pesticide Emergency Response Team
7. Agricultural Task Force

### III. Information Management

#### A. Means of Gathering Data

1. Voluntary inventory of hazardous waste
2. North Carolina Toxic Substances Management Guides
3. Cancer Control Registry
4. Limited birth defects and occupational disease reporting

#### B. Data Coordination

1. Though much data is computerized, each is housed by own separate agency
2. Development of data over-lay system for greater information sharing underway
3. Wide access to published data bases and among agencies
4. Catalogue of lists

### IV. Toxic Substances Control

#### A. Problem Identification and Ranking

1. Voluntary inventory of hazardous waste
2. North Carolina Toxic Substances Management Guides
3. State/EPA agreement to study airborne toxics
4. Environmental Management Commission's standards for 30 toxic pollutants in waste water

#### B. Risk Assessment Models

The Governor's Toxic Substances Project is developing a risk assessment model for use by the Governor's Office and other State agencies

C.     Emergency Management

      The State has a comprehensive, inter-agency toxic substances emergency response plan

D.     Current Character of Toxic Substances Control

      Toxic substances coordination is carried out by the Governor's Toxic Substances Project, several inter-agency boards, task forces and advisory committees, the Division of Emergency Management in the Department of Crime Control and Public Safety, and informal mechanisms

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## North Carolina ITM

### I. State Authorities Regulating Toxic Substances

Legislative authority over toxic substances management in North Carolina rests primarily with enabling legislation for the implementation of Federal programs administered by the U.S. Environmental Protection Agency, Food and Drug Administration, Department of Labor, Department of Transportation, and others. Chief among these acts are: North Carolina Drinking Water Act, Air Pollution Control Law, Water and Air Resources Law, Oil Pollution and Hazardous Substances Control Law, Pesticide Law of 1971, Occupational Safety and Health Act of North Carolina, and North Carolina Food and Drug Act.

In addition to enabling legislation for Federal programs, North Carolina has passed a number of laws which expand the State's role. In 1978, largely in response to rising public concern following a PCB spill along State highways, the North Carolina Civil Preparedness Act was passed to improve State capabilities and coordination in responding to emergency situations. In 1979, the Toxic Substances Task Force and the Incident Response Procedures Act created an inter-agency task force headed by the Department of Crime Control and Public Safety to make recommendations for handling of toxics emergencies. In 1980, the Civil Preparedness Act was amended as the Consolidated Emergency Management Act, and a comprehensive inter-agency emergency management plan was developed for the State.

The Waste Management Act of 1981 strengthened North Carolina's hazardous waste management procedures and created an inter-agency advisory board, the Governor's Waste Management Board, which consists of representatives from state agencies, universities and the private sector. Both were the result of recommendations of the Governor's Hazardous and Low-level Radiation Waste Task Force. The Board is involved in public education efforts and is developing an in-depth report. The report is due to the North Carolina Legislature by January 1983 and will address State organizational structure and make recommendations for changes. The Waste Management Act also gave the State override power in siting of hazardous waste facilities.

The North Carolina Pesticide Law of 1971 established two inter-agency committees to assist the Commissioner of Agriculture in carrying out the act, the North Carolina Pesticide Board and the Pesticide Advisory Committee.

In spring of 1981, the Natural Resources Study Commission Act was passed to study and make recommendations on coordination of environmental health programs between the Department of Natural Resources and Community Development and the Department of Human Resources; however no funds were appropriated. Since then, the Waste Management Board has been assigned responsibility for recommending improved mechanisms for dealing with interagency coordination of toxic materials management.

## II. Organizational Coordination in Toxic Substances Management

Primary responsibility for toxic substances management in North Carolina is shared between two agencies, the Department of Human Resources and the Department of Natural Resources and Community Development. Solid and hazardous waste programs are carried out within the Department of Human Resources, while the air, surface water and groundwater programs are carried out within the Department of Natural Resources and Community Development.

Inter-agency coordination in the State began largely as a result of the illegal dumping of PCBs along 210 miles of North Carolina highways. In response to the incident, the Governor appointed an informal Toxic Substances Task Force. As concerns in the State grew over hazardous wastes, the Governor created a Task Force on Hazardous and Low-level Radiation. This inter-agency coordinating committee was comprised of representatives from existing State agencies involved in toxics substances management, legislators, citizens, and representatives from academia and local government. The Task Force was supported by advisory groups concentrating on hazardous wastes, low-level radioactive wastes, public information and research. In February of 1981, the Task Force issued a report containing 19 recommendations on ways the State could improve management of hazardous and low-level radioactive wastes. These recommendations went to the State legislature in Spring of 1981.

In June 1981, the legislature passed the Waste Management Act. The Act mandated a comprehensive system for managing toxics wastes and established an inter-agency board, the Governor's Waste Management Board. The Board consists of fifteen members one each from the Department of Human Resources, Department of Natural Resources and Community Development, Department of Crime Control and Public Safety, Department of Agriculture and the Department of Commerce. The Board also contains eight members appointed by the Governor, including

representatives from the environmental community; higher education, research or technology; private industry; and county and municipal governments. In addition, there are members from the General Assembly one appointed by the Speaker of the House and the other by the Lieutenant Governor. Members serve one to three year terms.

The Waste Management Act assigned the Board a broad role in studying and evaluating hazardous waste management in the State.

The Act did not provide methods or funds for monitoring or cleaning up hazardous waste, but it did give the Governor substantial pre-emptive powers over local ordinances in hazardous waste facility siting.

The Department of Human Resources provides the staff assistance to the Governor's Waste Management Board and is required to enforce any rules adopted by the Board; however, the Board reports directly to the Governor.

The solid and hazardous waste programs in the Department Human Resources are carried out in the Environmental Health Section with the Health Services Division. The Health Services Division also includes the Laboratory Section and the Epidemiological Section. In addition to working with the Governor's Waste Management Board, the Solid and Hazardous Waste Branch works on an ad-hoc basis with the Environmental Management Division in the Department of Natural Resources and Community Development and the pesticides program in the Department of Agriculture. Two Memoranda of Agreement have been issued between the Department of Human Resources and the Departments of Commerce and Transportation to formalize safety inspection of vehicles carrying hazardous waste.

The hazardous waste program has conducted a comprehensive voluntary hazardous waste survey, does investigative monitoring of toxic wastes and is responsible for hazardous waste disposal permitting and enforcement. There is a large technical assistance program for industry which will be expanded into a waste information exchange program under the Waste Management Act.

Also in the Environmental Health Section is the Water Supply Branch which monitors drinking water and initiates enforcement actions under the Federal Safe Drinking Water Act and the North Carolina Drinking Water Act.

Primary responsibility for air and water programs in the Department of Natural Resources and Community Development rests with the Environmental Management Division. In 1980, the Division was reorganized into a functional approach to improve cross-cutting coordination between air and water programs. Since North Carolina has had a water quality program since the 1940's, changes were difficult to make. In 1982, the program was reorganized again, returning to the media approach, but retaining the importance of informal inter-media coordination. The Division is now divided into four areas: air, surface water, ground water and grants management. Each media program conducts its own permitting, monitoring and enforcement actions, while laboratory analysis is conducted in an administration unit.

The Emergency Response Program in the Department of Natural Resources and Community Development is developing a comprehensive mapping effort to help in assessing potential environmental impact from toxic substances incidents.

Overall policy and standards for the Division of Environmental Management are developed by the Environmental Management Commission. Technical Assistance to the Commission is provided by two advisory boards, the Air Quality Council and the Water Quality Council, with membership from local governments, industry, environmental groups and scientists.

The Air Quality Section operates primarily under enabling legislation for the Federal Clean Air Act; the North Carolina Water and Air Resources Act, the Air Pollution Control Act and the Oil, Pollution and Hazardous Substances Act. The program has worked with the Department of Human Resources in developing an inventory of non-regulated chemicals in the State and will continue working with them in the implementation of RCRA. In the upcoming State/EPA Agreement, North Carolina will study airborne toxics and develop recommendations for managing these pollutants.

The Environmental Management Commission developed standards for thirty toxic pollutants, including fourteen pesticides, in waste water. In a cooperative effort with the Department of Human Resources the Groundwater Section conducted a survey of over six hundred waste disposal or storage sites in the State and ranked them for potential groundwater pollution.

The Department of Natural Resources and Community Development also contains a special program that reports to the Deputy Secretary, the Office of Planning and Assessment. This office is responsible for assisting the public in coordination of the permitting process, as well as developing alternatives to regulation, and conducting economic and cost-benefit analyses of regulatory programs.

The North Carolina Pesticide Law of 1971 set up two inter-agency committees. The North Carolina Pesticide Board, together with the Commissioner of Agriculture, is responsible for carrying out the provisions of the Law. Its seven member board is appointed by the Governor and has representation from the Department of Agriculture, the Department of Human Resources, a State conservation agency and the agricultural chemical industry, as well as a person engaged in agricultural production and two at large members. In addition, the Pesticide Advisory Committee assists the Board with technical questions and the development of rules and regulations. It's seventeen members are appointed by the Board and include representatives from the Departments of Agriculture and Human Resources, from a State conservation agency, farming, the pesticides industry, environmental organizations, academia and the public at large.

The Pesticides Division of the Department of Agriculture has had several informal and ad hoc coordinating mechanisms for working with toxics programs in other agencies. Its Agricultural Task Force has been working with the State water program in studying non-point sources of water pollution from agricultural operations and is presently conducting a study to identify illegal pesticides dumpsites across the State. The Pesticides Section has worked with other agencies in emergency management and has designated a special Pesticide Emergency Response Team with representation from other Departments. The Pesticides Division works informally with the Department of Human Services' epidemiology section and the Solid and Waste Management Branch, and the Food and Drug Protection Division within the Department of Agriculture.

Several other State Agencies touch on toxic substances work. Occupational health advice and monitoring are carried out within the Occupational Health Branch in the Environmental Health Section in the Department of Human Services.

Inspections, enforcement activities and problem identification work is primarily carried out within the Occupational Safety and Health Division of the Department of Labor. The Health Department's epidemiological follow-up of toxic substances related problems is limited to asbestos and silicon.

The Department of Crime Control and Public Safety has been designated the lead agency for emergency management for

the State, though the Department of Transportation is responsible for overseeing inspection and enforcement activities for the transportation of toxic substances.

The Department of Administration has some responsibility for hazardous waste disposal siting and coastal disposal policy decisions.

The Governor's Office, primarily under funding through a TSCA Section 28 grant, has set up the Toxic Substances Project. Together with the Governor's Science Advisor, the project conducts informal inter-agency meetings on several topics. The Project's activities include a toxics education program for industry, teachers and health professionals, several case studies on management of specific toxic problems, a priority assessment of toxic chemicals produced and used in the State, and the development of profiles on the top 51 toxic chemicals, a pilot project utilize and evaluate the Chemical Substances Information Network (CSIN) for State government agencies, and the development of economic and risk assessment models for the State.

A major conference for industry and government officials was held in May, "Pollution Prevention Pays," on pollution reduction technologies. Following the conference the North Carolina legislature adopted as its chief objective: "prevention, recycling, detoxification and reduction of hazardous waste," and followed through with legislation to encourage research and information exchange to promote this concept.

The project has also conducted several workshops and developed curricula materials to educate science, art and vocational teachers about toxics substances. Further workshops are planned to educate doctors, nurses and other health professionals about occupational disease and other toxic related health problems.

### III. Information Management

North Carolina conducted a comprehensive voluntary inventory of hazardous waste generated, stored, treated or disposed of in the State. In July 1982, it released its first Annual Report of Hazardous Waste which categorized the information by type, location, storage or treatment method and transportation. Non-confidential information will be computerized and made available to other State programs. Although reporting was voluntary, the State's Solid and Hazardous Waste Branch estimates that it is 95% complete. The State worked cooperatively with industry and other agencies in gathering the information. It plans to encourage the non-reporting companies to participate. The State takes little enforcement action, but does provide industry with technical assistance to help them in clean-up efforts. This role will be further expanded under the new Waste Management Act to include development of studies and information on recycling and

recovery technologies.

The Governor's Office's Toxic Substances Project has developed a list of toxic chemicals produced, used or stored in North Carolina. It reviewed information on toxicity and production of and selected 100 of these priority chemicals. The Project has produced the North Carolina Toxic Substances Management Guides on 51 of these chemicals, which include a summary of the health effects, routes of human exposure, environmental significance, first aid and emergency response information for each chemical, as well as a detailed profile on the substance's physical and chemical properties, human and environmental properties, human and environmental toxicity, manufacturing data, and research and regulatory information. The Guides have gone through extensive State and research institution review and will be released to relevant government agencies, industry and the public soon.

The State has recently passed legislation to expand its Cancer Control Registry. The new law strengthened reporting procedures and provides funds to update, expand and computerize data which will enable epidemiologists to research data and identify possible sources of exposure. The State plans to expand its Epidemiology Branch to cover environmental health. Presently the State has a limited birth defects registry and occupation disease reporting only for asbestosis and silicosis.

Each agency houses its own data. Much is computerized, but data sharing between agencies presently is on an informal and ad hoc basis. Plans to develop a data exchange system are presently being developed. There is wide access to published data banks. North Carolina is presently the only state user of the Chemical Substances Information Network (CSIN). Over 40 personnel from key State agencies and regional offices have been trained, and an auto-tutorial training program has been developed for additional personnel. The Governor's Office has also developed a Catalogue of Lists of toxic chemicals designated and/or regulated by international, Federal and state agencies and the private sector. Information on the Catalogue of Lists is computerized and available to all State agencies.

#### IV. Toxic Substances Control

Although the impetus for much of North Carolina's toxics program sprang from rising public concern from the PCB incident, the State is developing mechanisms for managing its toxic substances problems to set priorities and develop plans to prevent future problems. Its recent inventory of hazardous waste in the State will enable the State to establish categories and priorities for sources of concern. The North Carolina Toxic Substances Management Guides indicate the State's toxic substances of major concern. Several programs in air, water and pesticides have identified key toxic substances



and are developing long-range mechanisms to control problems.

The Governor's Toxic Substance Project is also developing an exposure and risk assessment methodology that will assist State programs in setting priorities. The Project is working with the University of North Carolina's Department of Environmental Sciences and Engineering under a TSCA Section 28 grant and has developed a preliminary model that will be used in preparing detailed human exposure and adverse health effects assessments of three to five key substances; as well as in assisting other State agency toxic programs.

The Department of Human Resources Epidemiology Section does do studies of pesticide and some occupational related toxic health problems. Although the State presently does not have the capacity for doing epidemiology studies on other toxic related problems, it does plan on creating an environmental health program in the Epidemiology Section.

In 1981, North Carolina developed a comprehensive inter-agency emergency response system, the Hazardous Materials Emergency Response Plan, which gives primarily responsibility for emergency management to the Department of Crime Control and Public Safety. The plan outlines responsibilities for eight different State agencies and coordination procedures between those agencies and the private sector. The Division of Emergency Management is within the Department of Crime Control and Public Safety. In an emergency the Division activates the State Emergency Operating Center and sets up a State Emergency Response Team to coordinate action from appropriate State agencies.

## V. Analysis

North Carolina ranks twelfth in the country in the number of manufacturers and importers reporting under the TSCA Inventory of chemicals in commerce. The State is highly agricultural and a center for the dye, textile and furniture industries. North Carolina is also the southern center for the chemical trade which is a burgeoning fast-growing industry in the State.

After the PCB incident in 1978, public concern about toxics in North Carolina rose sharply. New laws and programs to address toxics problems in the State mushroomed. Several toxic substances management programs have been developed with excellent integrating mechanisms or potential. Chief among these are the North Carolina Hazard Materials Emergency Management Plan, the Governor's Waste Management Board, the North Carolina Toxic Substances Management Guides, State-wide training in CSIN, the Hazardous Waste Inventory, Toxic Substances Project educational program, the Catalogue of Lists, the Office of Planning and Assessment permitting assistance for industry and economic analysis for other programs, and other informal mechanisms.

North Carolina's toxics programs are still evolving. Although the State has no overall comprehensive toxics strategy; informal, ad hoc inter-agency and inter-program meetings have been held on key issues by the Governor's toxic Substances Project and Science Advisor. In addition, new programs are being developed or planned, including a formal risk assessment model, an environmental health capability in the State's Epidemiology Section, a more comprehensive cancer registry program and a data overlay exchange mechanism.

North Carolina's pesticide program does have several interagency management mechanisms that have been in existence since the early 1970s and might serve as a model for other states. These include the North Carolina Pesticide Board, the Pesticide Advisory Committee, the Pesticide Emergency Response Team and the Agricultural Task Force.

Toxic integration management in North Carolina is fast growing, but still in the formative stage. The State's toxics programs are backed by support from the Governor's Office, the Legislature and the public. There is a considerable State effort to implement programs to prevent future problems that might occur from North Carolina's rapidly developing chemical industry. The driving force behind toxics integration in the State has come from the Governor's Toxic Substances Project, primarily funded by a TSCA Section 28 grant. Although the Project has developed many formal mechanisms and instilled in State officials a commitment to toxics integration, there is no overall formal inter-agency toxics coordinating committee

or toxics substances management strategy that will maintain this commitment in the future. The lack of these overall toxics coordinating mechanisms may be even more important when the TSCA Section 28 grant funding for the Governor's Toxics Substances Project ends, or if toxics programs continue to be divided between the Department of Natural Resources and Community Development and the Department of Human Resources.

## Oklahoma ITM Summary

### I. Toxics Authorities

#### A. Major Toxic Related Legislation

1. Oklahoma Clean Air Act
2. Pollution Remedies Act
3. Oklahoma Controlled Industrial Waste Act
4. Hazardous Substances Labelling Act
5. Oklahoma Pollution Control Coordinating Act

#### B. Major Departments

1. Department of Health
  - Environmental Health Service
  - Personal Health Service
2. Water Resources Board
3. Department of Pollution Control
  - Pollution Control Board - composed of Directors of:
    - Department of Health
    - Water Resources Board
    - Corporation Commission
    - Department of Wildlife Conservation
    - Department of Agriculture
    - Department of Mines
    - Conservation Commission
    - 4 Citizen Appointees of Governor
4. Department of Agriculture
5. Corporation Commission

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate for Integration

1. The Pollution Control Coordinating Act provides a mandate for integration

#### B. Cooperative Efforts

1. Monthly meetings of the Pollution Control Board
2. Task forces have been established on various topics
3. Many informal, ad hoc interactions

### III. Information Management

#### A. Means of Gathering Data

1. Environmental monitoring of media
2. Hazardous Waste Disposal Plan

3. Agent Orange and T.B. registries are being developed
4. Local Health Departments

B. Data Coordination

1. Each office coordinates its own data
2. The Environmental Toxicology Division in the Environmental Health Service is coordinating environmental health information with the Epidemiology Service

C. Data Accessibility

1. Confidentiality of business information is protected under the Controlled Industrial Waste Act
2. Environmental information collected by the government is public record
3. Health data accessibility is sporadic

IV. Toxic Substances Control

A. Problem Identification and Ranking

1. Problem identification comes chiefly from citizen complaints and State monitoring
2. No formal priority-setting process has been established

B. Risk Assessment Models

1. Risk assessment models are not used

C. Emergency Management

1. Coordination of Emergency Management is handled on a 24 hour-a-day basis by the Radiation and Special Hazardous Service in the Department of Health
2. Emergency Spills are handled under the lead of the Department of Pollution Control

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## Oklahoma ITM

### I. Toxics Authorities

Jurisdiction over toxic pollutants under Oklahoma statutes comes from the following definition in Title 63 Section 1-1601(b): "The term 'toxic' shall apply to any substance (other than a radioactive substance) which has the capacity to produce personal injury or illness to man through ingestion, inhalation, or absorption through any body surface." Oklahoma's management strategy for toxic substances involves the interaction of a number of State agencies including: The Oklahoma State Department of Health (OSDH); the Oklahoma Water Resources Board (OWRB); the Oklahoma State Department of Agriculture (OSDA); The Oklahoma Corporation Commission (OCC); and the Department of Pollution Control (ODPC).

The Oklahoma State Department of Health (OSDH) fulfills duties under State law and carries out the mandates of several Federal laws relative to toxics management. This is accomplished through a number of Administrative Service units within the Environmental Services section of the State of Health Department. OSDH maintains a staff of field personnel through the the State's system of 62 local county health departments. Each county health department has field sanitarians assigned to them. OSDH's Air Quality Service oversees potential air quality toxics problems. The Waste Management Service oversees sanitary landfills, hazardous waste disposal sites, and has been delegated authority over non-petroleum related Underground Injection Control (UIC) system activities. The Water Facilities Engineering Service has oversight over municipal waste treatment and pretreatment facilities and public water supply facilities. The Radiation and Special Hazards Service oversees public health aspects of exposure to radioactive materials and x-ray equipment. It also has authority in the area of industrial hygiene in workplaces and public areas. This service coordinates with the Highway Patrol and Civil Defense in natural emergencies as well as accidents involving hazardous substances. The State Environmental Laboratory Service provides routine and special analyses for all environmental media and supports activities of the OSDH as well as other State agencies. The Environmental Health Service of the State Health Department is also the State's designated "superfund" agency.

The State Health Department also uses the concept of environmental epidemiology to address various toxics problems in Oklahoma. This involves the use of an interdisciplinary approach which addresses both environmental and medical aspects of exposure to toxic materials. Assistance is given to problem evaluation design and data collection. These data are then used to prepare reports, fact sheets, and to assist with the preparation of public information materials and news media information items. Environmental epidemiology provides the mechanism for environmental and medical interface and maintains a toxics reference library and resource contact persons in both State and Federal agencies.

Oklahoma Water Resources Board (OWRB) has primary responsibility in defining water quality standards, including toxics standards, for the waters of the State. It also issues State permits for industrial discharges into the waters of the State and handles complaints involving industrial pollution.

Oklahoma State Department of Agriculture (OSDA) acts to prevent toxics problems from pesticides through programs to insure correct labeling of pesticides and certification of any persons doing business as commercial, non-commercial, or private pesticide applicators. OSDA also oversees programs regulating levels of pesticides in foodstuffs and other materials used as animal feeds.

Oklahoma Corporation Commission (OCC) has exclusive jurisdiction in the areas of toxic pollutants resulting from the oil the gas industry. It regulates petroleum industry activities from "cradle to grave" except in the area of refinery facility effluent discharges to waters of the State. These discharges are under the jurisdiction of the OWRB. OCC regulates all aspects of oil and gas exploration and production, wastehaulers of oil, and petroleum-related UIC system activities. OCC's "exclusive jurisdiction" over some issues is currently the subject of litigation.

The Oklahoma State Department of Health (OSDH), the Oklahoma Water Resources Board (OWRB), the Oklahoma Corporation Commission (OCC), the Oklahoma State Department of Agriculture (OSDA), the Oklahoma Department of Wildlife Conservation (ODWC), the Oklahoma Conservation Commission (OCC), and four citizen members comprise the Pollution Control Coordinating Board (PCCB), of which the Department of Pollution of Control (ODPC) is the executive arm. The PCCB, with ODPC as their administrative arm, coordinates the pollution control activities of the separate environmental agencies. ODPC acts on behalf of the Board in cases where a single member agency lacks clear authority to act or when a member agency has not adequately performed its statutory duties. ODPC also acts on a routine basis to receive citizen complaints, refer them to the appropriate agency, and monitor the effectiveness of the response.

## II. Organizational Coordination in Toxic Management

The Oklahoma Pollution Control Coordinating Act of 1968, as amended, provides a legislative mandate for the integrated management of all environmental pollution. The Act serves as an umbrella statute, with its primary goal being to "coordinate all pollution control programs of the State carried on by all State agencies" ( 932.2 - 4). The comprehensive nature of the law is further enhanced by broad definitions given to "environment" and "pollution". The purpose of the Act was not to reorganize the structure of environmental management, but rather to create greater cooperation within the existing organizational structure through the work of the Pollution Control Coordinating Board, and the Department of Pollution Control. In practice, the Board has served as more of a forum for inter-agency discussion of major problems and issues. The Board and the department have not made great use of their power to assume control in special circumstances. Its main goal has been to identify problem areas and to foster better communication among agencies.

In addition, multi-agency task forces have been established on a number of specific issues, concerning PCB's, two instances of heavy metal contamination, and a hazardous waste incident. In the case of Ft. Gibson Lake and Tar Creek the Governor's Office assumed the role of "project coordinator" by establishing the task force, appointing agency liaisons and managing the operations. This effort has been characterized by State officials as a successful undertaking.



The third major example of cooperation and coordination in Oklahoma is the existence of an office, and specifically one person within the Environmental Health Service of OSDH, which coordinates health and environmental information. The office, the Local Environmental Health Service, works in close cooperation with the Epidemiology Service under OSDH's Personal Health Service to gather and disseminate information.

The final form of cooperation in the State is through informal exchanges. Personal contacts are made on an ad hoc, day to day basis. State officials have characterized this type of exchange as perhaps the most important and effective form of cooperation.

### III. Information Management

The primary means of data gathering in Oklahoma is through environmental monitoring done by State Department of Health offices, Water Resources Board and the Department of Agriculture. There are no reporting requirements for either the manufacture or the use of toxic substance within the State. Oklahoma does, however, have a hazardous waste disposal plan which requires industry reporting, as well as restricts such waste from being brought into the State without the submission of detailed reports concerning the handling of the waste. In addition, the Corporation Commission operates a manifest system.

In the field of health data gathering, no tumor registry currently exists, although an Agent Orange and T.B. registry are in the development stages. Morbidity and mortality data are available, although they are not frequently used. Data is gathered from physicians, but availability of such information is somewhat sporadic, depending upon the source and type of information requested. Finally, local health departments, with the exception of two, report directly to the Department of Health, and therefore serve as valuable data gathering sources.

Coordination of data is not extensive in Oklahoma and is primarily informal. Monitoring data is computerized; however, health data is not stored in computer data banks. There is no central indexing system for either data file. Therefore, the channels by which information is shared between environmental media offices, and between environmental and health offices tends to be informal.

Information dissemination is guided by varying policies which are dependent upon the type and the recipient of the data. In general, all data is public record, but this pertains largely to the monitoring data. Health data are not available for public review and are only available to State officials with reasonable cause for inquiry. In addition, the confidentiality of business information is protected under the Controlled Industrial Waste Act.

### IV. Toxic Control Strategies

Toxic problems in Oklahoma are identified chiefly by monitoring activities and citizen complaints. There is not, however, any uniform approach for dealing with those problems that are identified. No integrated

priority setting process is evident, and although the State has dealt with a number of incidents (among them 2,4,5T, arsenic, vinyl chloride, PCB and herbicides), no standardized management strategy has been developed. Task forces have been established and the Epidemiology Service has responded to a number of incidents based on available environmental data, but this process is ad hoc. Risk assessment models are not used in the State.

In the area of emergency management, the Oklahoma State Department of Health has developed an "Emergency Response Plan". The Department of Pollution Control also maintains the Oil and Hazardous Materials Spill plan. Under the OSDH plan all emergencies of an environmental health nature, including toxics, are coordinated by the Radiation and Special Hazards Service (RSHS). RSHS provides the following services: maintains a 24 hour-per-day telephone service, notifies the appropriate Environmental Health Service offices and all other offices deemed necessary, in specific cases acts as the news media contact, and finally, acts as liaison to the Oklahoma Civil Defense, which carries out the majority of the necessary emergency operations. Therefore, Oklahoma does maintain an on-going coordinated emergency response system.

#### V. Current Status and Analysis

The priority problems in Oklahoma, as indicated earlier, center around PCB's (Ft. Gibson Lake), heavy metals (Tar Creek and Bartlesville), and hazardous waste (Pryor Creek). In all of these cases, task forces have been formed to deal with the problems, however, no permanent solutions have yet been formulated. In addition, air pollution in and around the highly industrialized city of Tulsa is becoming an increasingly important area of concern for environmental planners. Finally, due to the predominance of the oil and mining industry in the State, there is some concern about potential problems of environmental pollution.

Oklahoma has tended to give greater priority to growth than environmental concerns in State policy planning; nonetheless, the State has chosen to fund a substantial portion of programs which had previously been under EPA funding. This, combined with the strong desire for greater coordination and elimination of duplication, places Oklahoma in a relatively favorable position for future integrated toxics management.

Future areas for concentrated State efforts in toxic management could possibly center around the development of a more extensive data base and greater coordination of data, in general. This is particularly true with respect to health data. Discussions with other states who are now developing various data systems might provide useful assistance for Oklahoma.

## Pennsylvania ITM Summary

### I. Toxics Authorities

#### A. Major Toxics - Related Legislation

1. Solid Waste Management Act of 1980 (Act 97)
2. Hazardous Substance Transportation Act of 1978
3. Air Pollution Control Act of 1960, as amended
4. Clean Streams Act of 1937, as amended

#### B. Major Agencies - Agencies having major regulatory responsibilities

1. Department of Environmental Resources
2. Department of Agriculture
3. Department of Health
4. Department of Transportation
5. Pennsylvania Emergency Management Agency
6. Pennsylvania State Police

#### C. Other Agencies - Agencies that impact certain areas of toxics management

1. Fish Commission
2. Game Commission
3. Department of Community Affairs
4. Public Utilities Commission

### II. Organization Coordination in Toxics Management

#### A. Legislative Mandate -

No comprehensive ITM legislation exists in PA.

### III. Information Management

#### A. Means of Gathering Data

1. Newly established Statewide cancer registry -  
to be initially established in Southcentral Pennsylvania

#### B. How is data coordinated

1. Data collection is conducted and stored by individual agencies,  
agencies, with no central index

#### C. Information Availability

1. Statewide - Confidential Business Information is  
well protected by the State
2. The City of Philadelphia has landmark right-to-know  
legislation

#### IV. Toxics Control

- A. PEMA is the State agency responsible for coordinating activities during all emergencies

#### Key Pennsylvania Officials

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## Pennsylvania ITM

### I. State Authorities

The primary responsibility for Pennsylvania's toxics management lies with the Department of Environmental Resources (DER). The 1970 enabling legislation mandated DER, through its various bureaus (Water Quality Management, Air Quality Control, Solid Waste Management, and Radiation Protection and Toxicology) to act to protect the environment. Currently three major statutes define the scope of DER's mission and authority: The Solid Waste Management Act of 1980; the Air Pollution Control Act of 1960, as amended; and, the Clean Streams Act of 1937, as amended.

Although DER has a major role in the control and management of toxics substances, a great deal of authority is also maintained outside of the agency. Pesticide management was delegated to the Department of Agriculture in 1972 legislation; toxics transportation authority has been given to the Department of Transportation through the Hazardous Substance Transportation Act of 1978. In addition, minor authority in toxics management is delegated to the Public Utility Commission in the area of rail transport of hazardous substances. The Department of Health has the responsibility to protect, detect, treat and prevent illness and diseases within the Commonwealth.

### II. Organizational Coordination in Toxics Management

No formal legislative plan concerning integrated toxics management exists within Pennsylvania. The only cooperative efforts are:

- (1) The Toxics Integration Strategy Committee which is an interagency working group. This group is developing a unified approach to dealing with the problems of toxics that enter the environment. Agencies represented on the Committee include: DER, Health, Agriculture, Transportation, Public Utility Commission, Fish & Game Commissions, Community Affairs, and PEMA. Key DER bureaus represented are: Air Quality Control, Community Environmental Control, Laboratories, Solid Waste and Water Quality.
- (2) Pennsylvania Emergency Management Agency (PEMA) is the State's emergency preparedness and response agency which was created by Act 323, November 26, 1978. The Agency's principle power and duty is to develop and keep current a comprehensive emergency management plan and program for the defense of the Commonwealth.
- (3) Department of Environmental Resources adopted its first Emergency Management Plan covering departmental responsibilities to respond to 18 different types of emergencies in 1981. The Plan was developed to meet the Department's general obligations under Act 323 requiring the Department to have a plan to accomplish the tasks assigned to it by PEMA.

A few non-legislative agreements do exist in Pennsylvania which serve to facilitate cooperation. A protocol has been established among the various bureaus within DER which deals with the principle of data and general information exchange. DER has a toxicology coordinator to aid in this process. A similar protocol exists between the main offices of DER and other responsible agencies. No such agreement is in place among the county and municipal authorities. A memorandum of understanding exists between DER and the Department of Health which not only expresses intentions, but also establishes contact points within the agencies to facilitate the process.

It should be stressed that these arrangements deal with cooperation on a case-by-case basis and do not constitute coordination of general policy, as would be implied by "umbrella" statutes.

Interaction among the agencies appears to be extremely limited; it is therefore, informal among the main offices, and according to DER officials, sporadic or nonexistent at county and municipal levels.

### III. Information Management

A new enacted cancer registry under the Department of Health constitutes a major reporting mechanism relating to toxics in Pennsylvania. Regular accident reporting is accomplished through the permitting process under specific program areas (i.e. water, air, solid waste, etc.). The cancer registry has begun in southcentral Pennsylvania. It is anticipated that the registry will serve as an epidemiological tool for understanding incidences of cancer within the State. Beyond this, all information gathered on toxics is through voluntary reporting or through State-initiated surveys. Any information that is obtained is stored by the relevant agency in a combination of computerized and card files. However, no central index exists for inter-agency use and information must therefore be accessed through special requests.

A "right-to-know" law exist in Philadelphia which: 1) imposes reporting requirements on manufacturers and transporters, and 2) makes public record of any information pertaining to the presence of toxic substances in the city and the resulting health effects. Proprietary information is, however, guarded by the bureaucracy.

### IV. Toxics Control

As in most states in the U.S., toxic control strategies are developed on a program by program basis. Priorities and standards are set by the Federal government, and the program is then administered by the State. Therefore, the main functions of problem identification and ranking are primarily the responsibilities of the individual bureaus.

PEMA has the major responsibility of coordinating all activities during an emergency. PEMA is currently developing a plan to coordinate the response of all state agencies to hazardous substances incidents in line with directions they received from the Emergency Management Council, and along the requirements of S. 65, now pending in the Legislature. This Hazardous Substance Emergency Response Plan will involve county emergency management agencies. PEMA will also maintain a 24hour "hotline" for reporting hazardous substances incidents through which State agency responses will be coordinated.

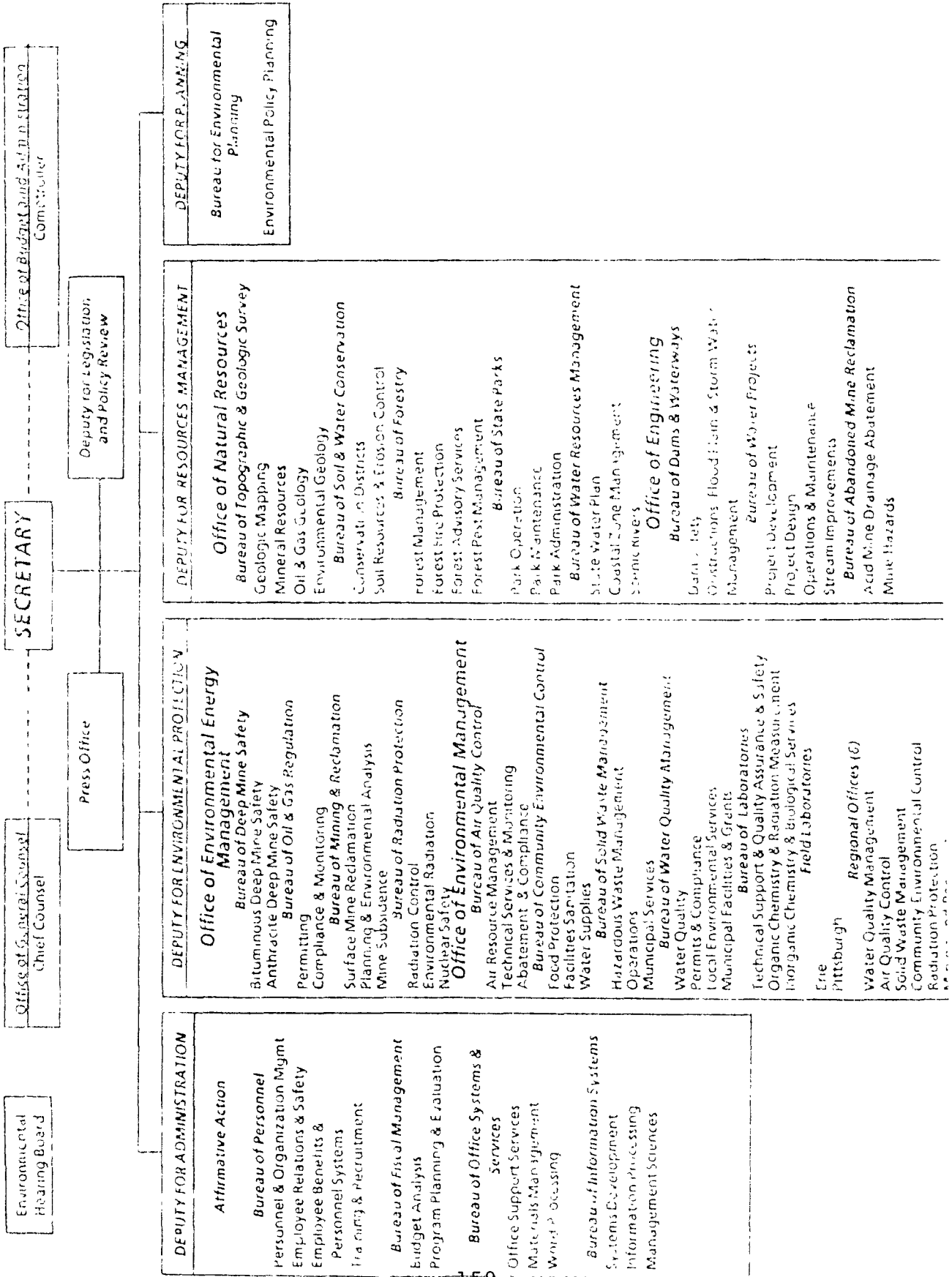
V. Current Status and Analysis

The toxic substances problem in Pennsylvania encompasses a wide range of concerns. The single biggest problem area in Pennsylvania is the management of hazardous waste. Pennsylvania has been identified as the third largest generator of hazardous waste in the nation. The State has also placed a high priority on comprehensive emergency management which enables the State to qualify for aid under Superfund.

Existing levels of cooperation both within and outside of DER seem to provide a good foundation for integration. Present exchanges between the bureaus and departments create a favorable environment from which to expand.



# DEPARTMENT OF ENVIRONMENTAL RESOURCES



# DEPARTMENT OF ENVIRONMENTAL RESOURCES

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PUBLIC INFORMATION

OFFICE OF  
BUDGET AND ADMINISTRATION  
COMPTROLLER

**BOARDS AND COMMISSIONS**

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ENVIRONMENTAL QUALITY BOARD  
COAL AND CLAY MINING SUBSIDIES  
INSURANCE BOARD  
STATE BOARD FOR CERTIFICATION OF  
SEWAGE TREATMENT PLANT AND  
WASTEWATER TREATMENT  
STATE BOARD FOR CERTIFICATION OF  
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### DEPUTY FOR ADMINISTRATION

AFFIRMATIVE ACTION SECTION

BUREAU OF PERSONNEL

DIVISION OF  
• PERSONNEL AND SERVICES  
• PERSONNEL AND TRAINING  
• PERSONNEL AND DEVELOPMENT  
• PERSONNEL AND EVALUATION

BUREAU OF SPECIAL SERVICES

DIVISION OF

• SPECIAL SERVICES  
• PERSONNEL AND EVALUATION  
• PERSONNEL AND TRAINING

BUREAU OF OFFICE SERVICES

DIVISION OF

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• PERSONNEL AND EVALUATION

BUREAU OF INFORMATION SYSTEMS

DIVISION OF

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### OFFICE OF CHIEF COUNSEL

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REGULATORY COUNSEL

BUREAU OF LEGAL SERVICES

BUREAU OF LITIGATION

DIVISION OF THE  
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WATER QUALITY MANAGEMENT  
BUREAU OF AIR QUALITY CONTROL

DIVISION OF

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BUREAU OF SOIL AND WATER MANAGEMENT

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BUREAU OF ENVIRONMENTAL CONTROL

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BUREAU OF WASTE MANAGEMENT

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### DEPUTY FOR RESOURCES MANAGEMENT

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BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY

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### DEPUTY FOR PLANNING

BUREAU OF ENVIRONMENTAL PLANNING

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### OFFICE OF DEEP SEAS SAFETY

BUREAU OF  
ATMOSPHERIC DEEP SEAS SAFETY

BUREAU OF

• ATMOSPHERIC DEEP SEAS SAFETY  
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## Utah ITM Summary

### I. Toxics Authorities

#### A. Major Toxics - Related Legislation

1. Hazardous Waste Act of 1979
2. Hazardous Waste Disposal Facility Siting Act of 1981
3. Pesticide Control Act
4. Utah OSHA, 1973

#### B. Major Departments

1. Utah Department of Health (UDH)
2. Department of Agriculture (DOA)
3. Department of Public Safety - Division of Comprehensive Emergency Management
4. Department of Transportation
5. Utah Industrial Commission

#### C. Other Departments

1. Department of Natural Resources
2. State Fire Marshall
3. State Highway Patrol

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate

1. No mandate for inter-agency integration currently exists in Utah

#### B. Major Cooperative Efforts

1. UDH - DOA joint project regarding the disposal of pesticide containers
2. Inter-agency pre-design conference
3. Memorandum of Agreement between UDH and Department of Transportation regarding hazardous waste transportation
4. The UDH Office of Epidemiology and Surveillance is beginning to work on a cooperation effort to develop a State Epidemiology Plan
5. The agencies have established numerous advisory committees, some of which are statutorily authorized
6. UDH Bureau of Radiological Control - Department of Public Safety effort to develop radiological emergency response plan

### III. Information Management

#### A. Means of Gathering Data

1. On-going inventory of hazardous materials within the State formulated by UDH
2. Collection and study of industry-illness correlation information done by Department of Public Safety
3. Completed project by the University of Utah studying the environmental and health effects of pesticides
4. Inventory of all hazardous waste movement within the State performed by the Hazardous Materials Enforcement Development Program within Department of Public Safety
5. Environmental monitoring programs
6. The Rocky Mountain Center for Environmental and Occupational Health at the University of Utah researches and provides information on occupational and environmental health problems

#### B. Data Coordination

1. Small data base within Department of Public Safety pertaining to occupational safety and health
2. Proposed computerized data base for the UDH Hazardous Waste Bureau
3. Utah Cancer Registry

### IV. Toxics Management

#### A. Chemical Emergency Response Program

1. Involves Department of Public Safety, UDH, Department of Natural Resources, DOA, and State Fire Marshall

#### B. Hazardous Materials Enforcement Development Program

1. Involves Department of Public Safety, Department of Transportation, and State Highway Patrol

#### C. Recently established Office of Epidemiology within UDH addressing occupational and environmental related disease

### Key State Officials

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## Utah ITM

### I. Toxics Authorities

Utah's integrated toxics management found its beginning with the passage of the Hazardous Waste Act of 1979. The Act's major function was the establishment of the Hazardous Waste Committee, a nine-member body made up of a member of the manufacturing industry, one representative of the mining industry, two members of the general public, a State Department of Health official, a registered professional engineer, a representative of the solid waste industry, and two county or local officials. Among the Committee's duties includes the recording and monitoring of the activities of generators of hazardous waste, transporters of operators of hazardous waste treatment, storage and disposal facilities. Despite its diverse representation, the Committee has proven very effective, and meets on a regular basis at least once a month.

A related piece of legislation, passed in 1981, is the Hazardous Waste Disposal Facility Siting Act. The Act grants UDH's Hazardous Waste Management Bureau the power to decide which landfills are suitable for the disposal of hazardous wastes. Once the site is decided, the Act pre-empts all local ordinances; however, local officials work very closely with the UDH before the final decision is made (Note: There are currently 70 hazardous waste disposal facilities within the State, 67 of which are low-level, on-site facilities. Of the remaining three, two are used predominantly for recycling while one is used exclusively for the disposal of hazardous waste brought in from around the State. All other hazardous waste, that is, all waste known by the State government, is shipped to neighboring states. The number of disposal facilities licensed to receive hazardous waste from outside sources should dramatically increase in the near future due to the fact that Colorado will soon be shipping much of its waste into the State.)

Utah does not possess its own versions of the Clean Air Act, the Clean Water Act, or TSCA, but rather it simply adheres to the Federal statutes themselves. The State does have a Pesticide Control Act which is very similar in nature to FIFRA. Utah passed an Occupational Safety and Health Act in 1973.

### II. Organizational Coordination in Toxics Management

Major toxic control activities take place within the Utah Department of Health. There are eight programs within the Department and twelve local health departments. The Division of Environmental Health has the major responsibility for the regulation, implementation and oversight of Utah and federal environmental programs. The Division is composed of air, water, solid and hazardous wastes, general sanitation and radiation bureaus. A second program, the Division of Community Health Services, is responsible for public health disease investigations and services, including overseeing the activities of the State Epidemiologist's Office. The State Health Laboratory handles all human health laboratory tests for the Department of Health and frequently other departments, such as Agriculture, when human health concerns are involved.

In addition, the Department of Agriculture is the lead agency for pesticides and the Industrial Commission for Occupational Health and Safety.

Although no mandate for inter-agency integration currently exists in Utah, several major efforts are being made in that direction. One such effort is the UDH-DOA joint project regarding the disposal of pesticide containers. State officials are attempting to address this potentially serious problem by arranging separate areas of landfills designed specifically for the disposal of pesticide containers. Although efforts have not yet borne fruit, the interaction between the two agencies has served to improve their relations.

One particularly innovative program is the State's pre-design conference. This conference calls for industries entering the State, or those wishing to expand, to meet with officials from pertinent State agencies before the initiation of construction. This conference facilitates and clarifies the permitting process while improving relations between government and industry.

Other inter-agency cooperative efforts include a Memorandum of Agreement between UDH and the Department of Transportation spelling out the roles each is to play regarding the transportation of hazardous waste. Further efforts are being made between UDH's Bureau of Radiological Control and the Department of Public Safety to develop a radiological emergency response plan.

### III. Information Management

One of the most extensive individual projects is the UDH Hazardous Waste Management Bureau's attempt to inventory all hazardous wastes within the State. This monumental effort has resulted in the revelation that much more hazardous material is being generated, stored, etc. in the State than had previously been thought. The Bureau has requested a computerized data base to better store this information, but, due to fiscal constraints, the prospects of obtaining the base do not appear to be promising.

Another data collection project was performed by the Industrial Commission of Utah involving correlations between worker illness and the industries in which they were employed. The study, using data compiled between 1960 and 1970, identified certain "hotspots" which required special emphasis. The project has continued on a smaller basis, and still provides valuable information.

The Department of Agriculture sponsored a project, performed at the University of Utah, dealing with the environmental and health effects of pesticides. The University study, which has been completed, provided useful information which has allowed the Department to better license the manufacture and application of pesticides.

Furthermore, the Hazardous Materials Enforcement Development Program within the Utah Industrial Commission which was formally initiated July 20, 1982, has begun "phase one", the data collection phase, of a three phase program. "Phase one" will involve an inventory of all hazardous materials movement within the State. This already difficult task will become even more Herculean once shipments of waste begin to arrive from Colorado. (The Hazardous Materials Enforcement Development Program will be discussed below at greater length.).



The Utah Cancer Registry is a comprehensive computerized system which has been funded by the National Cancer Institute. In the larger hospitals, trained registrars abstract cancer cases for the registry; Cancer Registry staff trains the registrars, abstracts data from smaller hospitals and checks information held by pathological laboratories. A Cancer Registry law was passed requiring that doctors and hospitals report incidences of cancer. Since reporting occurred before the law was passed, the major new benefit was to protect doctors who report proprietary patient information. Although the data includes current residential information, the report form does not include occupational or residential history. The State has applied for a NIOSH grant to enable the State Epidemiologist to obtain an historical record to help link possible occupational and environmental causes to cancer cases. Currently the staff organizes the data in a variety of ways: geographically, by year of incident, or according to incidence rates. Unless requested, the Cancer Registry staff does not survey or analyze the data. The resources are just not available.

Since 1977, the Rocky Mountain Center for Occupational and Environmental Health (RMCOEH), University of Utah, has had an active teaching, research and service program. The Center offers degree courses in Occupational Medicine, Industrial Hygiene and Safety and Ergonomics, as well as continuing education programs. Research has been done on pulmonary functions among coal miners, and on various adverse health effects resulting in workers exposed to heavy metals, sulfur dioxide, beryllium, oil shale and other toxics.

The State Epidemiologist's office has recently been established and is developing a comprehensive plan for its future activities. Currently, it is working with the Division of Environmental Health, State Laboratory, Department of Agriculture, RMCOEH, University of Utah Medical Center and Cancer Registry, Bureau of Health Statistics and local health departments, as well as Federal Drug Administration, on a number of epidemiology studies and surveillance projects, such as a miscarriage study in a pesticide spraying area.

#### IV. Toxics Management

Like many states around the country, Utah has developed a response plan for toxics-related emergencies, namely the Chemical Emergency Response Program. The coordinating body of the Program, the Division of Environmental Health operates a 24-hour hotline, and decides which agency, or agencies, are to address the emergency. Agencies participating in the Program include UDH, DOA, the Department of Natural Resources, and the State Fire Marshall. In addition, if county or local officials require assistance, the Department of Public Safety acts as the on-scene coordinator.

As mentioned earlier, the Department of Public Safety has developed the Hazardous Materials Enforcement Development Program in order to address problems connected with the transportation of hazardous materials within the State. The aforementioned "phase one" aspects of the Program

is being implemented simultaneously with phases two and three, namely the training of State Troopers to be hazardous materials inspectors. The Troopers will conduct inspections at the State borders and through spot-checks. (In addition, DOT will continue to conduct inspections at the point of destination). Phase three involves the actual enforcement. In order to assist in this enforcement, the Program will utilize data bases which will contain lists of industry contacts, records of past the training of State Troopers to be hazardous materials inspectors. The Troopers will conduct inspections at the State borders and through spot-checks. (In addition, DOT will continue to conduct inspections at the point of destination). Phase three involves the actual enforcement. In order to assist in this enforcement, the Program will utilize data bases which will contain lists of industry contacts, records of past inspections, and the inventory listing of hazardous materials movement within the State. The director of the Program believes that it is imperative that all three phases be initiated at one time, and he does not feel that the enforcement phase will unduly suffer from the incompleteness of the other two phases.

A final example of efforts towards toxics control is the recent establishment of an Office of Epidemiology within UDH. This Office will allow for a more expanded and formal epidemiology program within the State and will help to coordinate health effects and environmental data.

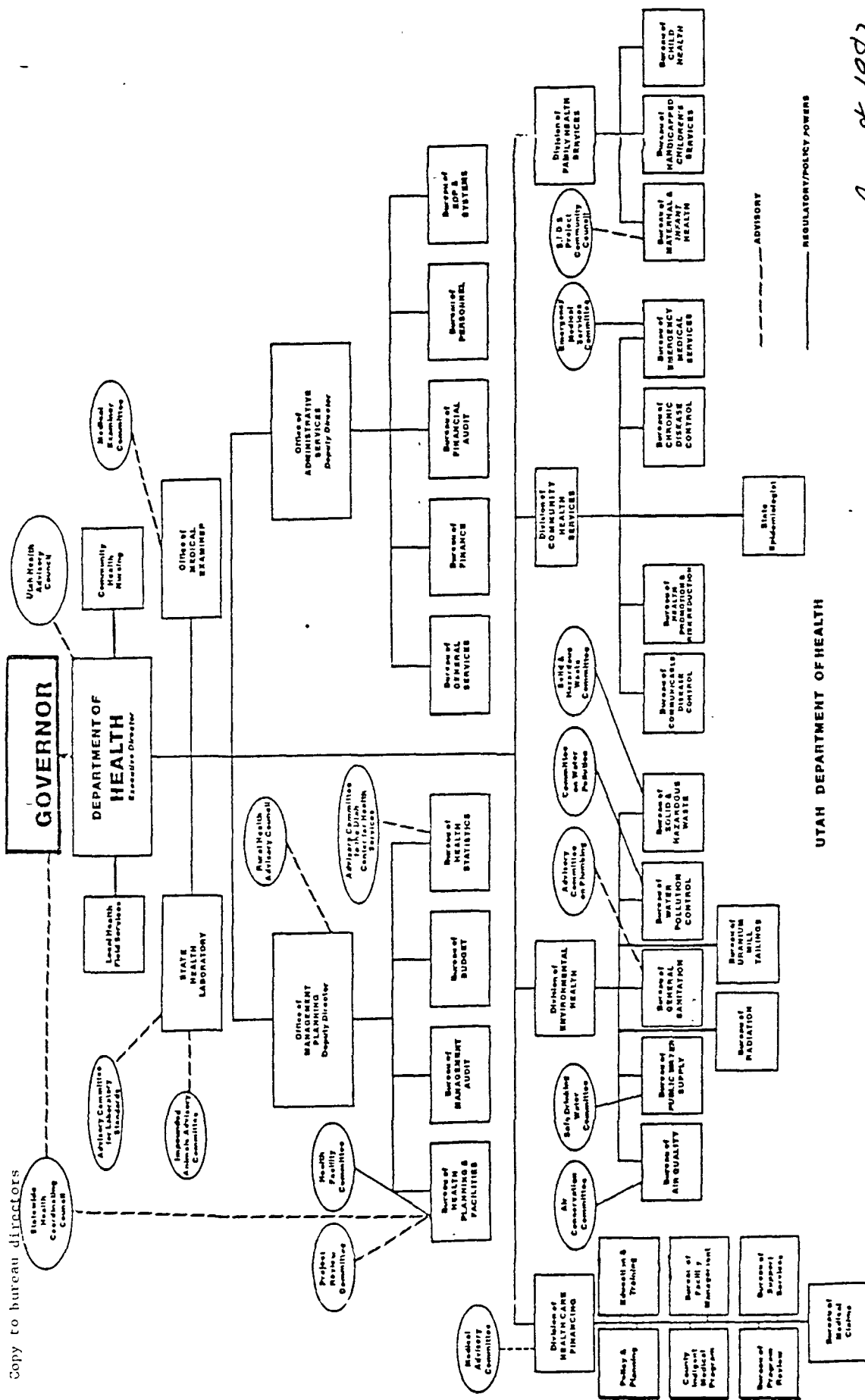
#### V. Current Status and Analysis

With the exception of a few refineries and smelters, there is little major manufacturing or processing of chemical substances in Utah; however, major toxicity problems in the State are associated with hazardous wastes. The State has made progress in addressing problems through coordinating activities and continues to enhance its data bases. In time, it is possible that a cross-media problem solving and control strategy could be shaped.

An area which warrants close scrutiny is the future increase of hazardous waste coming into Utah due to the closing of the sole hazardous waste disposal facility in Colorado. The State seems to be taking many of the necessary precautionary measures, and its officials should not be caught having underestimated the severity of the situation. While an effort is underway to identify the hazardous materials in the State, much more work needs to be done. The two states may well find joint planning of use regarding hazardous material transportation emergencies.

Finally, all proper steps should be taken to make the new Office of Epidemiology as effective as possible and encourage the integration of this Office's activities with those of the Division of Environmental Health. U.S. EPA can provide useful technical and logistical assistance in the attempt to obtain this goal.

Copy to bureau directors

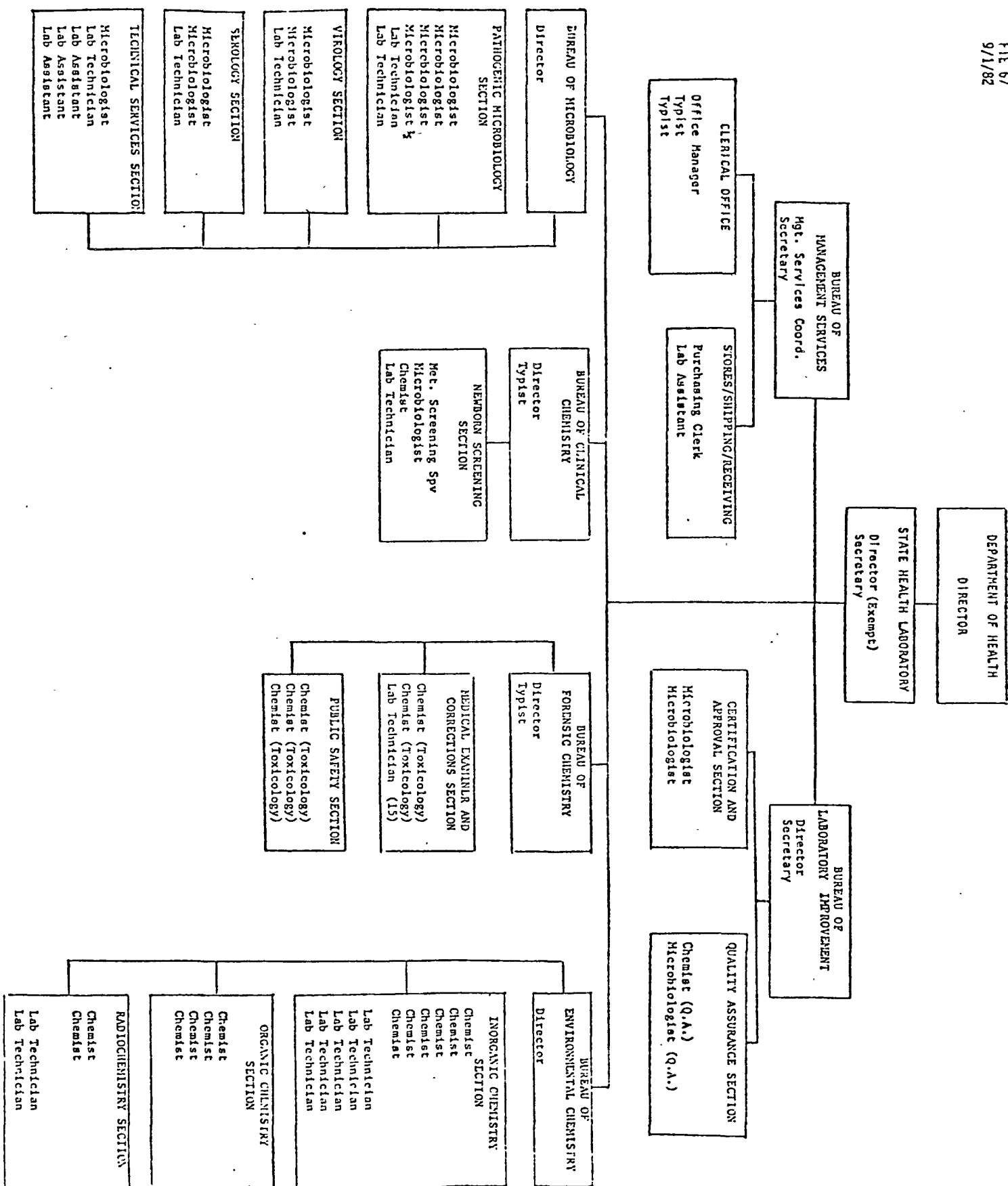


UTAH DEPARTMENT OF HEALTH

ADVISORY

REGULATORY/POLICY POWERS

August 1, 1982



## Virginia ITM Summary

### I. Toxics Substances Authorities

#### A. Major toxic substances-related laws

1. Virginia Toxic Substances Information Act
2. State Water Control Law
3. Air Pollution Control Law
4. Hazardous Waste Management Act
5. Virginia Occupational Safety and Health Act
6. Virginia Pesticides Law
7. Virginia Household Substances Act

#### B. Major Agencies

1. State Health Department
2. State Air Pollution Control Board
3. State Water Control Board
4. Department of Labor and Industry
5. Office of Emergency and Energy Services
6. Department of Agriculture and Consumer Services
7. Department of General Services
8. Department of State Police

#### C. Other Agencies

1. Department of Commerce
2. Department of Conservation and Economic Development
3. Department of Health Regulatory Boards

### II. Organizational Coordination in Toxic Substances Management

#### A. Legislative Mandate

1. Virginia Toxic Substances Advisory Council
2. Annual Report on the Status of  
Control of Toxic Substances in the Commonwealth
3. Council on the Environment

#### B. Major Cooperative Efforts

1. Consolidated Laboratories
2. SEA Agreement to conduct research and develop  
strategies for reducing the effects of toxic  
substances on the Chesapeake Bay

### III. Information Management

#### A. Means of Gathering Data

1. Information reporting requirements under the Virginia  
Toxic Substances Information Act
2. Occupational disease and injuries, tumor and birth  
defects reporting requirements

B. Data Coordination

1. Virginia Chemical Inventory
2. Other toxic substances data collected by each separate agency

IV. Toxic Substances Control

A. Problem Identification and Ranking

1. Class I priority chemical identification approach rejected for Health Hazard Alerts
2. Department of Health conducts toxicological evaluations for other agencies upon request

B. Risk Assessment Models

The Department of Health conducts several epidemiological and short-term follow-up studies on key toxics related problems, rather than using a formal risk assessment model

C. Emergency Management

Coordinated training and response program conducted by the Office of Emergency and Energy Services and the Department of State Police

D. Current Character of Toxic Substances Control

Coordination is chiefly carried out through the Virginia Toxic Substances Advisory Council and the Office of Emergency and Energy Services

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## Virginia ITM

### I. State Authorities Regulating Toxic Substances

Legislative authority over toxic substances management in Virginia rests primarily with enabling legislation for implementation of Federal programs administered by the U.S. Environmental Protection Agency, Food and Drug Administration, Consumer Products Safety Commission, Department of Labor, Department of Health and Human Services, Department of Transportation and others. Chief among these acts are the State Water Control Law, the Air Pollution Control Law, the Hazardous Waste Management Act, the Virginia Occupational Safety and Health Act, the Virginia Pesticides Law and the Virginia Household Substances Act.

In addition to enabling legislation for Federal programs, Virginia has passed a number of acts which expand the State's role. In 1976, the State passed the Virginia Toxic Substances Information Act largely in response to the Kepone incident. The Act stipulated that all chemicals manufactured or used in manufacturing within the State must be reported to the Health Department. In addition, the Act created an interagency coordinating mechanism, the Virginia Toxic Substances Advisory Council which reviews and makes recommendations on toxic substances policy issues to the Board of Health. The Act also requires that an annual report on the status of toxic substances control in Virginia be made to the Governor and the General Assembly. Also contained in the Act is a broad mandate to all State agencies to cooperate with the State Board of Health in carrying out its mandate.

Additional legislation exists for toxics programs without a Federal counterpart, including the regulation of fertilizers and paints, certification of operators of water and water works, energy, and the consolidated laboratory. In addition to the Toxic Substances Advisory Council, another coordinating body, the Council on the Environment is mandated by statute.

In the 1982 session of the legislature, Virginia amended the Toxic Substances Information Act to delete the requirement that the State evaluate toxic substances to develop a Class I list of those chemicals thought to be most hazardous to health or the environment. In the past six years, only two substances, asbestos and benzene, had been designated as Class I chemicals. The Toxic Substances Advisory Committee recommended that the Class I concept be eliminated after a cost-benefit analysis indicated no benefit to the State and high costs to industry and the State. The Health Department felt that its limited staff time could be better utilized in a more problem solving approach. The amendment did not affect requirements on industry to report and update information on chemical production, use and geographical data. Further, the Act still requires industry to report any new information indicating a substance may be hazardous to health or the environment.

Another amendment to the Toxic Substances Information Act which proposed to change the confidential business information disclosure process, was defeated. Although some amending legislation was introduced in the 1982 session on hazardous waste, no other major toxic substances bills were introduced.

## II. Organizational Coordination in Toxic Substances Management

In Virginia, twelve different agencies manage twenty-two different programs to control toxic substances. The major agencies and their responsibilities are as following:

State Department of Health	Toxic Substances Information Hazardous Waste Management Occupational Health Epidemiology Sewage Waste Water
State Air Pollution Control Board	Air
State Water Control Board	Water
Department of Labor and Industry	Occupational Safety and Health Mining
Department of General Services	Consolidated Laboratory Services
Office of Emergency and Energy Services	Hazardous Materials Emergency Response
Department of the State Police	Transportation of Hazardous Materials
Department of Agriculture and Consumer Services	Pesticide Hazardous Household Substances

The primary toxic substances coordinating mechanism between agencies rests with the Toxic Substances Advisory Council. It is charged with reviewing and evaluating policies and programs on toxic substances and making recommendations to the State Board of Health. It was created by the Virginia Toxic Substances Information Act and has broad representation from every major agency working on toxic substances problems. It consists of five appointed members and twelve ex-officio members. The Governor appoints one member each from the areas of agriculture, medicine, labor, industry and local government. Ex-officio members are the chairpersons of the following State agencies: Water Control Board, Air Pollution Control Board, Board of Conservation and Economic Development, Labor and Industry, Marine Resources, Agriculture and Consumer Services and the Council on the Environment. The Council meets at least four times a year.

The State also has a Council on the Environment created by the Virginia Environmental Quality Act of 1970. Commissioners from each of eight different agencies and two citizen representatives appointed by the Governor serve on the Council and advise the Secretary of Commerce and Resources. It meets quarterly and is responsible for permit coordination, environmental education programs and reviewing regulations or policies at the request of the Secretary.

Another important tool for inter-agency coordination is the Annual Report to the General Assembly and Governor on the Status of Control of Toxic Substances in the Commonwealth by the State Board Health. Required by the Toxic Substances Information Act, the Report describes each major State program and its activities for controlling toxics, including Federal and State rules and regulations, strategies, current activities, future plans, primary contact persons, legal authority, and budget and information. By providing information on program activities and agency responsibilities, the report greatly assists personnel to quickly identify appropriate programs or individuals for their needs. The report also gives an annual update on the chemical inventory, occupational disease reports and other key toxics policies and programs.

Although authority for the State's toxic substances programs is spread among several different agencies, the State Health Department has responsibility for management of several toxics programs. Its Office of Health Protection and Environmental Management reports directly to the State Health Commissioner and includes toxic substances information, hazardous waste management, occupational health, epidemiology, radiological health and sewage waste water management.

The program with primary responsibility for toxic integration is the Bureau of Toxic Substances Information. The Bureau staffs the Toxic Substances Advisory Council and drafts the annual report. Operating under the Virginia Toxic Substances Information Act, the Bureau gathers and evaluates manufacturing and health data on chemical substances in the State. It has completed an initial chemical inventory and has computerized that data. It also has computer access to national health-related data bases. The Bureau has two toxicologists on staff and evaluates information on toxic substances upon request from other programs, from local governments and from the public, but does not regulate.

The Bureau of Occupational Health shares the administration of the Virginia Occupational Safety and Health Standards with the Department of Labor and Industry. The Bureau has primary authority over the health portion of the State OSHA program and is responsible for identification, evaluation and control of health hazards. Twenty-two inspectors are responsible for occupational health enforcement. In addition, the State employs occupational health consultants which assist employers at their request in evaluating and improving occupational and health protection on a voluntary basis without penalties or enforcement actions.

Epidemiological studies and short term investigations are conducted by the Health Department's Division of Epidemiology. The Division conducts 20-25 studies a year on toxics-related problems for different programs within the Health Department and for other State agencies.

Authority for toxics in water is shared by several agencies. The Division of Water Programs within the Health Department has responsibility for drinking water quality and has issued joint regulations with the State Water Control Board governing sewerage. The Water Board has

issued several reports on toxic pollutants and has agreed in its State EPA Agreement to further develop strategies for reducing the effects of toxic substances on the Chesapeake Bay. In addition, it plans to develop a toxic monitoring strategy and increase its investigations concerning the effects of toxic substances in the aquatic environment. Although the Board develops standards, policies and plans, as well as conducts inspections and issues discharge permits, authority for actual certification of water and waste water treatment plant operators rests with the Department of Commerce.

Authority for Virginia's air program rests with the State Air Pollution Control Board. Although the Board operates primarily under enabling legislation to adopt Federal standards, the State does have additional authority under the State Air Pollution Control Law, which has enabled the Board to issue regulations governing airborne toxics.

Laboratory analysis for all State agencies is conducted by the Division of Consolidated Laboratory Services in the Department of General Services.

### III. Information Management

The Virginia Toxic Substances Information Act gives the State Department of Health primary responsibility as the State's toxic substances information agency. The Act requires that all chemicals manufactured, or used in manufacturing within the State be reported to the Health Department. The Bureau of Toxic Substances Information was established in the Department's Office of Health Protection and Environmental Management to collect and evaluate the information to determine toxicity and potential threats to health or the environment. The initial Chemical Inventory was computerized and is available to State agencies and to the public. It contains over 30,000 pages of computerized chemical, manufacturing and geographical data. The Act has reporting procedures for confidential business information and strict penalties for their violations. This data is contained in a separate computer system with very limited access. The Bureau also has access to several medical, environmental and toxicological data systems. The Bureau has toxicologists on staff which conduct evaluations on toxics problems for other programs, local governments, the public and agencies upon request.

New substances manufactured or used in manufacturing are required to be reported if they are new ventures. New substances do not have to be reported before they reach the market, but must be reported by the end of the year. Significant changes are reported annually.

Virginia requires physicians to report incidents of occupational disease and injuries due to toxic substance exposure to the Health Department.

Additional data on toxic substances is gathered by individual agencies and stored separately. Other programs and agencies do share information on an ad hoc basis and utilize the Health Department's Division of Epidemiology, Chemical Inventory and toxicological evaluation services.

Although the State's occupational health information is not computerized, Virginia is one of 24 states that will become part of a Federal OSHA data bank, the Management Information System.

#### IV. Toxic Substances Control

The Bureau of Toxic Substances Information issues Health Hazard Alerts on key toxic problems. These advise the public of hazards and precautions which should be taken to reduce or prevent exposure. Nine have been issued, including topics such as urea-formaldehyde foam insulation, pentachlorophenol-treated lumber and asbestos. The alerts are disseminated to varying audiences targeted to reach the affected public for each hazard. In addition, the Bureau conducts toxicological evaluations for other programs and agencies. The State has not developed a formal risk assessment model, but the Division of Epidemiology conducts several long and short-term follow-up studies on key toxics problems. Recent legislation amended the Toxic Substances Information Act to delete the requirement that the State evaluate toxic substances to develop a Class I list of those chemicals thought to be the most hazardous to health or the environment.

Emergency response work is carried out in other departments within the State, chiefly the Office of Emergency and Energy Services and the Department of State Police. The State has a new program which is designed to coordinate response by Federal and State agencies, local governments, commercial, contractor and charitable organizations to hazardous materials accidents and incidents. Teams, composed of personnel from a variety of State agencies, will respond to assist in control and clean-up of hazardous materials incidents. Coordinated and combined training programs are being developed.

An additional compliance training program has been held for State troopers on the rules and regulations on transportation of hazardous materials, including radioactive materials. This training program is being integrated with the existing motor carrier safety compliance plan.

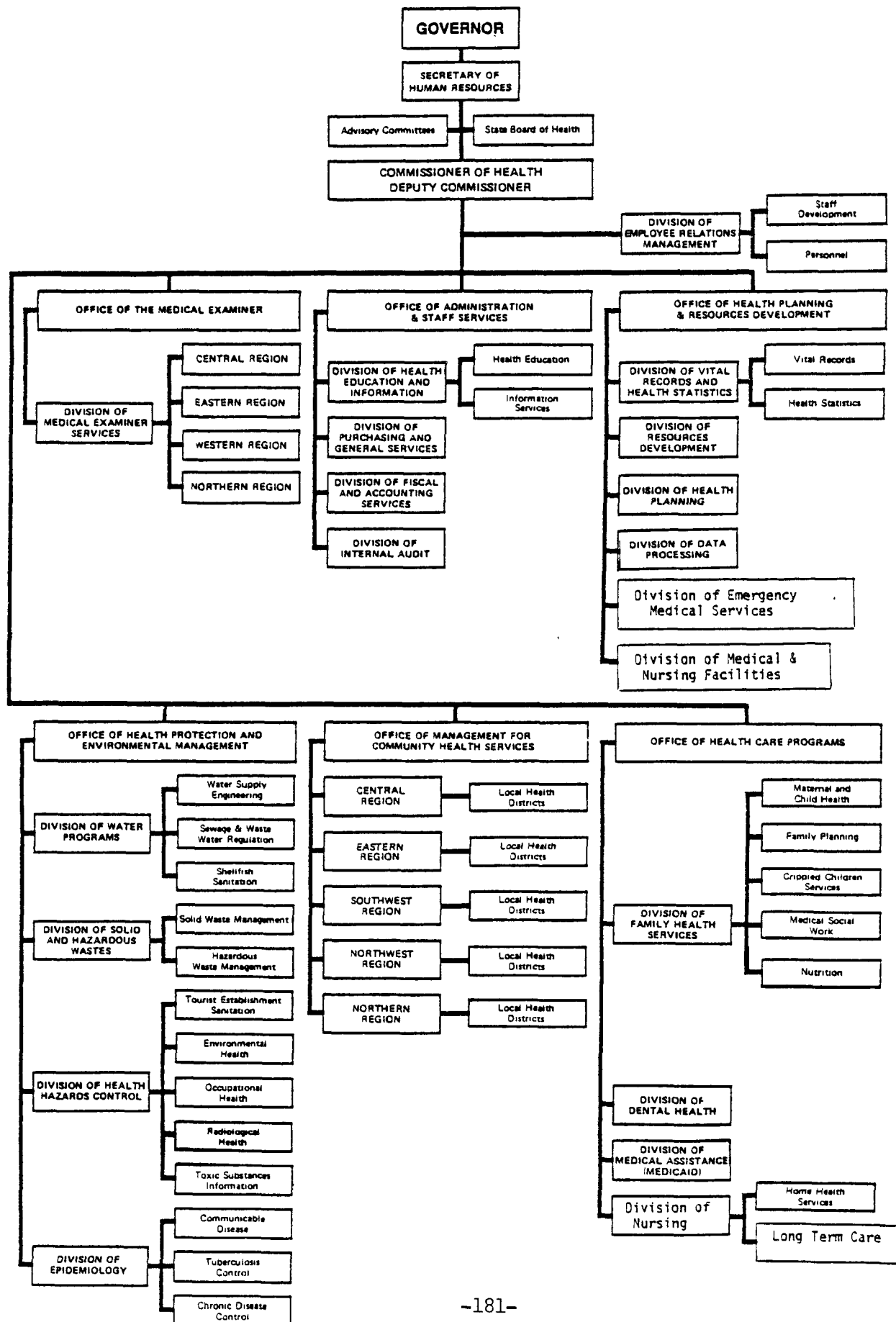
## V. Current Status and Analysis

The chief toxics management problems in Virginia are hazardous waste disposal facility and toxic pollution of the James River and the Cheasapeake Bay. The State Health Department and the Legislature are working together to revise State laws and regulations to tighten hazardous waste management and enforcement procedures and to more closely align them with Federal RCRA regulations. The State Water Board has given high priority to assessing toxic pollution in the Cheasapeake Bay. The Board is developing a toxics monitoring strategy and is stepping up investigations concerning the effects of toxics in the aquatic environment.

Although Virginia's toxic substances programs are spread among twelve different agencies, several existing management structures exists to help coordinate activities. The Virginia Toxic Substances Advisory Council and the Council on the Environment assist in breaking down barriers between separate agencies and in coordinating policies and programs on toxic substances. The Toxic Substances Annual Report greatly facilitates inter-agency coordination by providing information and a contact person for every State program with responsibility for toxic substances control. The State's newly initiated emergency response and hazardous waste transportation programs will develop important inter-agency response, training and enforcement programs. The State Health Hazard Alerts, toxicological evaluations and epidemiology services provide excellent assistance for other toxics programs in the State. The relative smallness of the State's environmental program offices also assists in improving inter-agency coordination. Further, all agencies are mandated under the Virginia Toxic Substances Information Act to coordinate information and strategies for solving toxics problems in the State.

The Virginia General Assembly has repeatedly rejected reorganization attempts designed to place all existing environmental regulatory agencies in a single larger agency. However, the Health Department has grouped together environmentally related programs under the Office of Health Protection and Environmental Management. That office is implementing a more coordinated problem solving approach to maximize limited staff and financial resources. Other State agencies, such as the Department of Agriculture and Consumer Services, with multiple programs have similarly organized their toxics related programs under one head. Greater sharing of data from the State's tumor, occupational disease and birth defects reporting system, now primarily local and hospital based, could potentially lead to identifying potential problems.

# VIRGINIA DEPARTMENT OF HEALTH ORGANIZATION CHART



## Wisconsin ITM Summary

### I. Toxics Authorities

#### A. Major Toxics Related Legislation

1. Chapter 144, Subchapter III 144.30-Air Pollution Control
2. Chapter 144, Subchapter III 147.01-Water Pollution Discharge Elimination
3. Chapter 144, Subchapter II 144.43 - Solid Waste, Hazardous Waste and Refuse
4. Chapter N.R. 157 - Management of PCB's
5. Chapter 364 101.58-Employees Right-to-Know
6. 55140.05 - Pesticide (DHSS)
7. Ag 29 Pesticide Regulation

#### B. Major Departments

1. The Department of Natural Resources (DNR)
2. The Department of Health and Social Services (DHSS)
3. The Department of Agriculture (DATCP)

#### C. Other Department/Offices

1. The Department of Labor (DOL)
2. The Department of Transportation (DOT)
3. The Division of Emergency Government (DEG)

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate

1. No comprehensive ITM legislation exists in Wisconsin

#### B. Major Cooperative Efforts

1. The Pesticide Review Board, the Pesticide Technical Advisory Council, the Governor's Task Force on Hazard Abatement, and the "Wisconsin is watching" Program
2. Agency task force committees
3. The DNR Toxic Substances Survey for the Great Lakes Basin
4. Joint agency use of State Laboratory of Hygiene facilities



5. Legislative Council Special Committee on  
Groundwater - Technical Advisory Committee

### III. Information Management

- A. Means of Gathering Data
  1. Use of DHSS Bureau of Health Statistics data
  2. Limited State reporting requirements
  3. Permit and licensing application
  4. DNR and DHSS monitoring
  5. DHSS Epidemiology Section Studies
  6. Poison Center
- B. Data Coordination
  1. Data is collected and stored by individual agencies
- C. Information Availability
  1. The DHSS publishes a newsletter for State and local health professionals

### IV. Toxics Control

- A. Problem Identification and Ranking
  1. Input is received from DNR regional officer, local health departments, citizen complaints, local physicians and DNR/DHSS investigations
  2. No priority setting process has been established
- B. Risk Assessment Models
  1. The DHSS Epidemiology Section uses risk assessment models, prepared by other offices when advising on risks. Hazard assessments using the SNARL approach are used for non-regulated water contaminants
- C. Current Character of Toxic Control
  1. The DNR has been provided the environmental oversight authority

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## Wisconsin ITM

### I. State Legislative Authorities Directing Toxic Control

For the most part, Wisconsin has taken its legislative lead from the Federal government. Excluding hazardous waste laws, the State's legislative requirements do not exceed that of the Federal government. Major toxics related legislation in the State includes:

1. Chapter 144, Subchapter III 144.30 - Air Pollution Control.
2. Chapter 144, Subchapter III 147.01 - Water Pollution Discharge Elimination. "All rules ... shall not exceed the requirements of the Federal Water Pollution Act."
3. Chapter 144 subchapter II 144.43 - Solid Waste, Hazardous Waste and Refuse.

The Hazardous Waste requirements exceed the Federal RCRA by requiring that all hazardous waste (no matter what quantity) be disposed of in a State licensed facility. If the quantity is over 100 kg. the manufacturer must submit reporting requirements as well.

4. Chapter N.R. 157 - Management of PCB's.
5. Chapter 364 101.58 1981 - Employees' Right-to-Know law. This legislation has a basic posting requirement as well as a CBI clause. It also requires any manufacturer of toxic substances to provide information to an employee within 15 days of the employee's request. Furthermore, it mandates that employers keep a list of chemicals used in the work place for 30 years. The Law differs from its counterparts in other states in that it includes agricultural workers. Under the law, an agricultural employer must provide, within 72 hours of a request, information pertaining to pesticides which the employee works with or which the employee is likely to be exposed.

Wisconsin has developed two toxics-related Memoranda of Understanding: One memorandum between the Department of Natural Resources (DNR) and Department of Agriculture (DOA) and the other between DNR and Department of Health and Social Services (DHSS). The DNR/DOA memorandum specifies under what circumstances DNR should confer with DOA on pesticide-related activities. The DNR/DHSS memorandum states that no administrative action can be taken by DNR without DOH concurrence.

The Department of Natural Resources plans to propose legislation to either expand the membership of the Pesticides Review Board to include other Agency representatives or reauthorize the Board to broaden the scope of its subject matter.

The key toxic issues in the State appear to be pesticides, occupational exposures, home poisonings, groundwater management, toxic air emissions, hazardous waste, and PCB's in the Sheboygan River.

## II. Organizational Structure of Lead Agency/Official(s) on Toxics Management

In Wisconsin, there are three major agencies/offices with significant toxics responsibilities: The Department of Natural Resources, the Department of Health and Social Services, and the Department of Agriculture. The Department of Labor, the Department of Transportation and the Division of Emergency Government are also active, but slightly less.

The Department of Natural Resources is granted the environmental regulatory and enforcement authority. There are three basic divisions within DNR: Environmental Standards, Enforcement, and Environmental Impact. The Division of Environmental Standards is the most directly involved with toxics. This division is organized by media (water quality, air management, solid and hazardous waste management) bureaus. Communication between the bureaus and the three major divisions appears to be ad-hoc. Staff meetings, the telephone, and memos all comprise what DNR labels "total interaction". Information and particular environmental problems are referred by bureau staff to their counterparts. Apparently, this informal interchange has been successful at DNR and the level of staff cooperation within the Agency is high.

The Department of Health and Social Service's (DHSS) Division of Health is the most active of the Divisions in toxics control. A number of Bureaus are located within the Division including the Bureau of Planning, the Bureau of Health Statistics and the Bureau of Community Health and Prevention. The Epidemiology Section is a major focus for the State's Toxics Management. DHSS has emphasized the need to place health effects surveillance and research at the same level as environmental pollution control programs. It is the State's position that the epidemiological approach to disease prevention and control, although known and successfully applied throughout the State for communicable disease control, has not really begun its development for environmentally-caused health problems. The Epidemiology Section has become increasingly involved in a number of areas, however. Under a TSCA Section 28 grant, the Epidemiology Section conducted a study on formaldehyde vapor-related health problems in mobile homes. The results of this study have been published and presented to a number of public health conferences. This section has also cooperated with State and local agencies on other Wisconsin public health concerns including:

1. Sheboygan River contamination by PCB;
2. Reported "clusters of chronic diseases";
3. Occupational exposures;
4. Volatile organic chemicals in drinking water;
5. Chemical spills;
6. Agent Orange exposure;
7. School Asbestos program.

The Epidemiology Section has initiated inter-agency activity on health issues such as:

- 1) Adding parental occupational information to birth certificates.
- 2) Revising disease reporting statutes to include toxic exposures and occupational illnesses.

At the intra-agency level, the Epidemiology Section has represented the Department on a number of multi-department activities such as the Pesticides Review Board, the Pesticide Technical Advisory Council, the Governor's former Task Force on Hazard Abatement and the "Wisconsin is Watching" program. The Section has also established a close working relationship with various programs in the Department of Agriculture, Natural Resources, Justice, Energy, Transportation, Emergency Government and Industry, Labor and Human Relations.

The Department of Agriculture is responsible for the management of pesticides. The Department interacts with the DNR on the disposal of pesticides, the Department of Health and Human Services on human exposure concerns and the Department of Transportation on transportation regulations and spill emergencies.

Although communication among the three key agencies is primarily ad-hoc, it is important to explain in more detail the formal cooperative activities: The Pesticide Review Board, the Pesticide Technical Advisory Council, the Governor's former Task Force on Hazard Abatement and the "Wisconsin is Watching" Program. Other intra-agency committees have been established on a short-term case-by-case basis. The Pesticide Review Board is composed of the DHSS, DNR, and DOA Department Secretaries. The Board makes final decisions on inter-agency pesticide disputes while the technical Advisory Council provides background information. The Council includes DNR, DHSS, and DOA staff as well as industrial, agricultural, environmental and academic representatives. The Council meets monthly.

The Governor's Task force on Hazard Abatement was created in order to develop a Hazardous Waste Siting Bill. Again, members of the Task Force included Agency, industry and citizen representatives. Once the bill was written, the task force disbanded.

The fourth integration mechanism "Wisconsin is Watching" is a response network with intra-agency surveillance. A 24 hour hotline was arranged to report illegal hazardous waste dumping and DNR, DEG, State police and local officials are primarily involved.

### III. Information Management

The Bureau of Health Statistics within the Department of Health and Human Services collects morbidity and mortality records, birth records, etc. Every two to three years the Bureau assembles the Hospital Discharge Survey. The Survey collects information on hospital medical diagnosis, surgical operations, therapeutic procedures and demographic statistics. The Bureau's data is beginning to be utilized as a way of identifying site-related toxic problems. In addition, Wisconsin has established a cancer reporting requirement for physicians.

The DNR manages the information provided by State reporting requirements. Hazardous waste producers and mercury users provide limited information, and the State industries report on the volume of effluent discharged and the amount of each pollutant. Although Wisconsin has not established a comprehensive industrial survey or developed air, water, or waste site inventories, the State's permit and license application process supplies some information on the industries, chemicals, and volumes produced in the State.

Information is also gathered from monitoring which DNR and the DHSS Epidemiology Section conduct. For example, one of DNR's major projects was to survey Toxic Substances in Lake Superior, Lake Michigan and tributaries. The Survey listed the toxic chemicals present in the waters. The DHSS Epidemiology Section also conducted an extensive monitoring program for the mobile-home formaldehyde study. When resources and time permit, the Section also conducts additional monitoring programs. The Regional Offices for DNR and DHSS will also initiate occasional field monitoring when a specific problem arises.

Data is stored by each agency; there are no formal methods for sharing this information. If information is needed or data surfaces which may be of interest, agency staff will utilize informal communication channels. The DHSS Bureau of Community Health and Prevention publishes a "newsletter" which provides information to local health departments, hospitals, doctors and the public on health problems occasionally related to toxics.

The State Laboratory of Hygiene houses Wisconsin's laboratory facilities. Consequently, Wisconsin agencies use the State laboratory to obtain their lab analyses.

Wisconsin has not developed a method for setting environmental priorities.

#### IV. Toxics Control

In Wisconsin, specific chemical problems are identified through the six DNR regional offices, local health departments, citizen complaints, local physicians and DRN/DHSS investigations. As mentioned, the State's chemical problems are not prioritized in a consistent fashion. Wisconsin's response is definitely reactive or as one official said, "the State is in a fire fighting stance."

The DHSS Epidemiology Section is beginning to use risk assessment models developed and used nationally. For situations of exposure where air and water standards and contamination levels do not exist guidelines are sometimes issued.

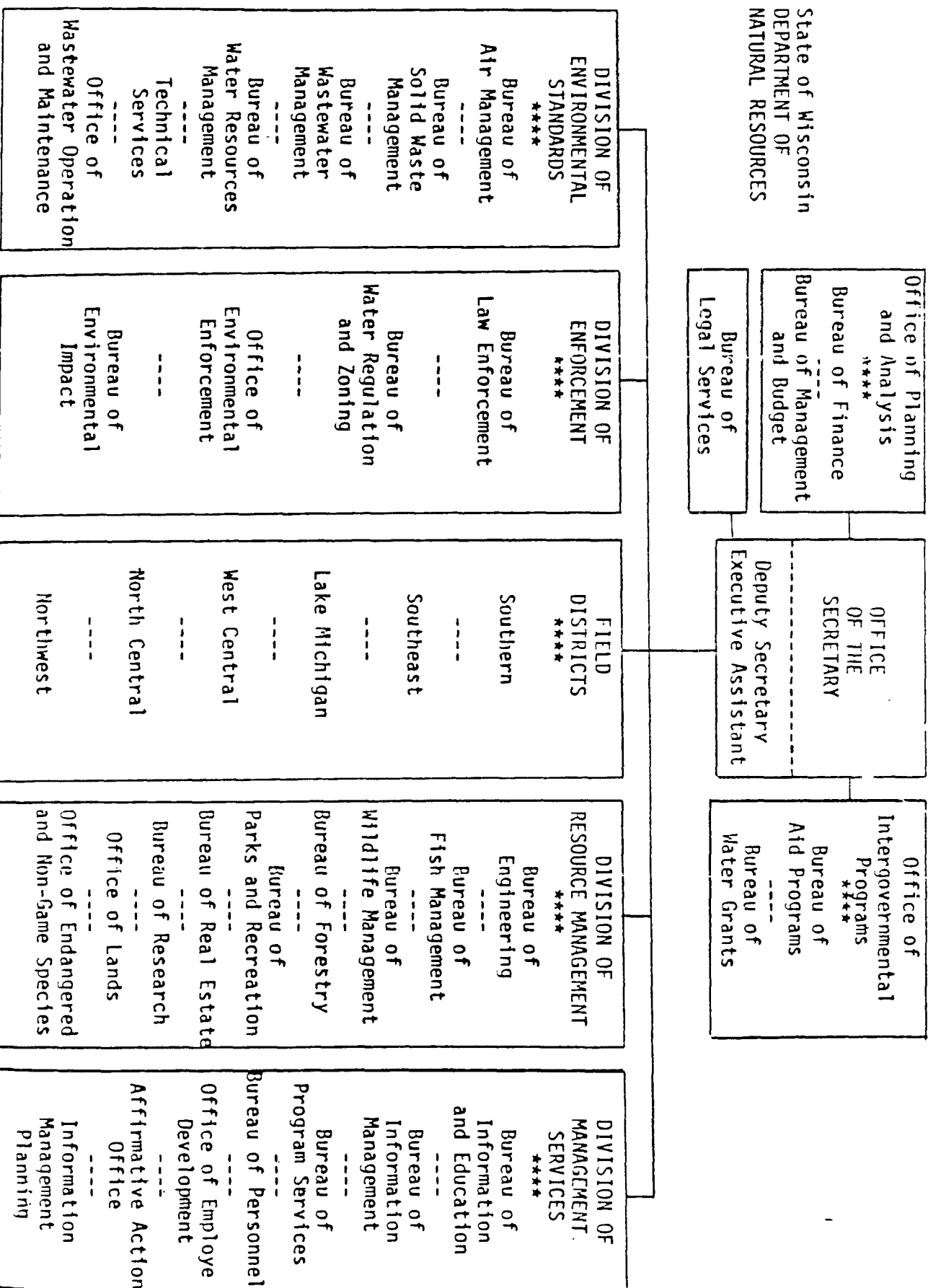
The State has developed an emergency response plan. The Division of Emergency Government is responsible for coordinating this effort, while the DNR spill response team is also active. A DHSS chemical alert system is a part of this plan.

## V. Analysis

The State of Wisconsin's major toxic concerns are pesticides, groundwater contamination, toxic air emissions, occupational exposure poisonings and hazardous waste. Information gathering and management is somewhat limited.

The State's inter-agency integration activities have been quite extensive. The key Agencies and offices have worked on a number of cooperative projects, one of which created the Hazardous Waste Siting Bill. These integration activities have primarily been arranged on a case-by-case basis.

The office most active and committed on toxic substances control appears to be the DHSS Epidemiology Section. Though the staff is small, they have taken an active role in focusing State officials' attention on toxics and have initiated and participated in a number of joint Agency efforts.





## Florida ITM Summary

### I. Toxics Authorities

#### A. Major Toxics-Related Legislation

1. Florida Statute 403
2. Florida Pesticide Application Act of 1974, as amended 1982
3. State Clean Air Act
4. State Clean Water Act

#### B. Major Agencies

1. Department of Environmental Regulation (DER)
2. Department of Health and Rehabilitative Services (DHRS)
3. Department of Agriculture (DOA)

#### C. Other Agencies

1. Department of Labor (DOL)

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate - No comprehensive ITM legislation currently exists

#### B. Major Cooperative Efforts

1. Monthly meetings between DER and DHRS
2. Pesticide Technical Council
3. Coordination of land, air, and water programs within DER
4. Memoranda of Understanding

### III. Information Management

#### A. Means of Gathering Data

1. Air and water monitoring and sampling within DER
2. Hazardous waste facility applications

3. Birth defects registry
4. Cancer registry
5. Reporting system for health effects from pesticide exposure

B. Data Coordination

1. Very limited computer capability

IV. Toxics Control

1. Emergency response plans
2. No specific control programs

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## Florida ITM

### I.     Toxics Authorities

The primary piece of legislation in Florida dealing with environmental issues is Florida Statute 403. Although this Statute does not deal directly with toxic substances, it serves as the enabling legislation for the Department of Environmental Regulation. In addition to its encompassing the pre-existing State Clean Air Act and Clean Water Act, the Statute spells out the mandated hazardous waste facility application and siting process, with the respective roles of State and local governments being specifically assigned. The Law also contains a sunshine provision which allows public access to all environmentally - related information.

The Florida Pesticide Application Act of 1974, which was amended in 1982, establishes a mandatory reporting system for adverse human health effects from pesticide exposure. The Law also provides for the certification and licensing of the applications of restricted-use pesticides. The 1982 amendments strengthened the original Act by mandating actions such as the expansion of the Pesticide Technical Council, to be discussed below at greater length.

The State agency most active in toxics-related issues is the Department of Environmental Regulation (DER). The State Department of Agriculture (DOA) is responsible for pesticide management, and both agencies work closely with the State Department of Health and Rehabilitative Services (DHRS) with regard to health effects from environmental exposure.

Included in DER's many responsibilities is enforcement authority for Phase I of RCRA. In addition, the Department is responsible for regulating public water systems. DHRS, and Florida's county health departments, have jurisdiction over small private well systems and individual wells. Pollution of underground water supplies is generally handled by DER, regardless of how the groundwaters are ultimately used. Finally, certain State legislators have proposed expanding DER authority to include jurisdiction over pesticides and underground tanks, as they affect groundwater.

### II.    Organizational Cooperation in Toxics Management

Before discussing some of the cooperative efforts among Florida's agencies, it is important to recognize the varying perspectives of each actor. Florida possesses an Executive Management form of government under which the heads of some agencies, e.g. DHRS and DER, are appointed by the Governor while others, e.g. the Commissioner of Agriculture, are elected. This leads to an interesting interplay among "equal" department heads and sometimes presents situations where the Governor may not have the final word.

No formal legislative mandate for toxics integration currently exists in Florida; however, several less-structured mechanisms have been established which serve to heighten coordination and integration among agencies. One such effort is the monthly meeting among representatives of DHRS and DER. In addition to simply "comparing notes" on their respective projects, the representatives attempt to designate responsibilities with regard to areas of overlapping jurisdiction, such as data collection and groundwater protection. (Note: Groundwater contamination is an issue of great concern in Florida due to the State's sandy, porous soil and water tables which are generally close to the surface). The meetings are also used to develop prospective and reactive responses to environmental problems.

Another major coordinating mechanism within the State is the nineteen-member Pesticide Technical Council. Agencies represented on the body include DER, DHRS, and of course, DOA. The Council's major responsibility is to provide policy recommendations to the Commissioner of Agriculture, an elected official. The Technical Council also investigates how pesticides are registered in the State.

Additional methods of coordination utilized within Florida include a number of memoranda of understanding among certain State agencies. Through these agreements, respective areas of responsibility are determined for each agency in order to eliminate any confusion or neglected areas resulting from overlapping jurisdictions. There is some danger of this concerning drinking water supplies which are controlled by both DER and DHRS.

Finally, many State agencies are striving for in-house coordination and integration in order to ameliorate redundancy and competition. Such efforts are being made within DER with respect to the land, air, and water programs.

### III. Information Management

Not unlike many other states, Florida's information management appears to include both strong and weak areas. One particularly ambitious program is the State-wide cancer registry. This State possesses a particular need in this area in that it has the highest death rate from cancer in the nation. The problem was addressed by the State Department of Health and Rehabilitative Services in 1979 when it contracted with the Comprehensive Cancer Center at the University of Miami to develop and operate the Florida Cancer Data System (FCDS). Hospitals throughout the State have three alternatives as to the manner in which they report cancer. They may use the Confidential Identification Report (CIR) form which provides basic information such as case identification, demographic information, site of tumor, date of diagnosis, and whether the patient was treated or referred. The form is to be submitted after the patient is admitted. The second alternative, and the manner encouraged by DHRS, is for the hospitals to

report to FCDS on the Confidential Report of Malignancy (CRM) form, a form which is similar to the CIR but even more extensive in nature, without coding the data on a coding strip. (Coding would be done by FCDS.) The third alternative is for the hospital to complete the CRM and code the data.

Another promising information management effort is the State's Congenital Defects Epidemiological Surveillance System. This program, within the DHRS, began as a pilot project in the five county area surrounding Jacksonville in 1971. By monitoring all vital records, CDES is now operational in all 67 Florida counties. In addition, the program employs a mechanism whereby 36 "sentinel" hospitals and birthing centers voluntarily report malformation incidents. These data are then analyzed in order to determine possible trends and clusters which may have environmental causes. Negotiations are currently underway to expand the voluntary participation to other hospitals throughout the State. This program works in conjunction with CDC's birth defects program.

In addition to the collection and analysis of air and water data, the Florida DER also gathers information on hazardous waste within the State. Florida Statute 403 requires "estimates of the composition, quantity, and concentration of any hazardous waste identified or listed under this Act, or combinations of any such waste and any other solid waste proposed to be disposed of, treated, transported, or stored, and the time, frequency, or rate at which such waste is proposed to be disposed of, treated, transported, or stored..." Responsibility for the siting of hazardous waste disposal facilities currently exists within the Regional Planning Commissions throughout the State.

Also, the State Department of Agriculture maintains a pesticide incident monitoring system which was established under the Pesticide Application Act of 1974. The Act requires all physicians to report all pesticide-related illnesses or injuries to the nearest county health department, which relays the information to the Department.

Finally, most of the environmentally-related laboratory work within the State is performed by DER, DHRS, and the county health departments. In general, DHRS has very broad laboratory capabilities in the study of tissue samples, etc., while DER tends to concentrate on air and water studies. Although DHRS performs all lab work connected with drinking water, DER possesses enforcement responsibility under the Safe Drinking Water Act. (Cooperative efforts between the two agencies have prevented this discrepancy from causing any real problems.) Extensive lab work is also performed by the 67 autonomous county health departments. A number of these county labs have better capabilities than those at the State level.

The areas of information management which appear to be the weakest are the general lack of data available within the State, its coordination among agencies and the inability of interested parties to conveniently access published data. The relevant State agencies possess little to no computer capability. Birth defects and cancer registry data are stored within bases at the Centers for Disease Control in Atlanta; State officials have no access to other major published computerized bases. Agencies such as DER and DHRS are attempting to obtain greater capability, but a large amount of resources will be needed in order to obtain this goal.

#### IV. Toxics Control

Save for certain emergency response plans, which are generally coordinated at the local level, Florida currently lacks any formal toxics control programs. However, State officials are looking towards the future development of State-wide plans to address problems such as pesticide contamination of groundwater. It is felt, however, that further problem investigation and data compilation are needed before the plans can be implemented in an effective manner.

#### V. Analysis

The most significant problem facing Florida, environmentally, is that of its high water table and an interconnecting groundwater system which is being assaulted by toxics. Temik, of which aldicarb is the major active ingredient, is a systemic pesticide used to eliminate nematodes (microscopic worms which devour small root systems). Because systemic pesticides are placed directly into soil, groundwater contamination has become a problem. To date, no epidemiological studies or health effects surveillance has been done with respect to the problem, and the major source of data has been Union Carbide, the manufacturer of Temik. There is still a question regarding the degree of aldicarb's persistence in Florida's unique environment. DER and the State Health Officer have been working closely with the Commissioner of Agriculture on this question and have served as advisors. One of the recommendations of these officials, to greatly restrict or temporarily ban the use of Temik, was recently enacted by the State. The Biscayne Aquifer provides drinking water to much of the State; 90% of the population gets its water to much of the State; 90% of the population gets its drinking water from wells, most of them private. Florida DER is monitoring well water to see where contamination has occurred; however, little has been discovered.

Florida needs to improve its data resources by gaining direct access to major sources, perhaps through CSIN. DER and DHRS, as well as the State Legislature, are investigating the current dearth of resources, such as a State toxicologist, and actions may be taken to alleviate this problem in the future. There is a perceived need for an integrated toxics management network, and State officials are very interested in participating in workshops dealing with areas such as risk assessment, data management, and epidemiology.

## Washington ITM Summary

### I. Toxics Authorities

#### A. Major Toxics-Related Legislation

1. Environmental Policy Act
2. State Health Codes
3. Pesticide Control Act
4. Clean Air Act
5. Water Pollution Control Act
6. Hazardous Waste Disposal Act
7. Solid Waste Management Act
8. Open Public Meeting Act
9. Surface Mining Act
10. Public Regulation of Groundwaters
11. Pesticide Health Hazards Act

#### B. Major Agencies

1. Department of Ecology (DOE)
2. Department of Social and Health Services (DSHS)
3. Department of Agriculture (DOA)
4. Department of Labor and Industries (DLI)

#### C. Other Agencies

1. Department of Natural Resources (DNR)

### II. Organizational Coordination in Toxics Management

#### A. Legislative Mandate - No explicit ITM legislation currently exists

#### B. Major Cooperative Efforts

1. Emergency Response Plan
2. Annual coordination meeting
3. Puget Sound Water Quality Management Program
4. Pesticide Advisory Board
5. Ad hoc pesticides coordination
6. DSHS - local health offices coordination
7. Other informal, ad hoc efforts

### III. Information Management

#### A. Means of Gathering Data

1. DOE monitoring and reporting data stored on separate computerized files
2. Chemical data computerized and classified by SIC codes



3. Chemical information gathered by DOE inspectors
4. OSHA reporting requirements
5. Occupational disease incident records maintained by industry
6. Pesticides labeling program
7. Tri-state pesticides program
8. Occupational health information gathered by DSHS
9. Birth certificate information
10. Vital statistic data
11. Laboratory data
12. Epidemiological studies
13. Fish tumor studies
14. Cancer Register
15. Pesticide Poisoning Monitoring

B. Data Coordination

1. DOE monitoring and reporting data stored on separate computerized bases
2. Chemical data computerized and classified by SIC codes
3. Computerized DLI data
4. Computerized abstracts of pesticides labeling information
5. Great majority of OSHA data computerized

IV. Toxics Control

A. Copper smelter incident

B. Puget Sound Water Quality Management Program

C. Hazardous waste problems

1. Ten Superfund sites

D. Water pollution difficulties

1. Puget Sound urban embayments
2. Groundwater
3. Surface water

E. Pesticides problems

1. 2, 4-D
2. Spraying of herbicides in non-target areas
3. Endrin

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## Washington ITM

### I.     Toxics Authorities

The State of Washington possesses a substantial number of laws and regulations which deal directly or indirectly with toxic substances. The State Agency which appears to play the largest role in the control of toxics, the Department of Ecology (DOE), is mandated authority under the Environmental Policy Act. The Department of Social and Health Services (DSHS), which is also a major actor in this area, is granted the authority to protect the health of the State's inhabitants under the State Health Codes.

The Pesticide Control Act gives the Department of Agriculture (DOA) the responsibility of regulating and licensing pesticides application and disposal. In addition, the Pesticide Health Hazards Act mandates DSHS to investigate and establish procedures for the prevention of health problems resulting from exposure to pesticides. The Department is also under contract to U.S. EPA to enforce the section of FIFRA dealing with the labeling of pesticide containers.

In addition, a third State agency, the Department of Labor and Industries (DLI), is involved in toxics-related issues through their investigation of the manufacturing and use of pesticides as they relate to worker safety in plants and large field operations.

In addition to the aforementioned enabling laws, Washington possesses a number of other statutes which pertain to the area of toxics control. These laws include the Clean Air Act; Water Pollution Control Act; Hazardous Waste Disposal Act; Solid Waste Management Act; Open Public Meeting Act; Surface Mining Act; Industrial Safety Health Act of 1973; and several water pollution-related laws including the Public Regulation of Groundwaters. The authority to establish standard for drinking water is granted to DSHS rather than DOE.

Finally, several bills recently have been passed by the State Legislature which deal with issues such as increased criminal and civil penalties for hazardous waste violators, waste reduction and recycling, and funding mechanisms for State Superfund money and hazardous waste management activities.

### II.    Organizational Coordination in Toxics Management

One of the first efforts toward the coordination of toxics control programs in Washington was the Hazardous Materials Advisory Committee, instituted under an executive order from the former governor. Although the Committee is no longer in existence, the group was responsible for the establishment of a State-wide emergency response plan which is in effect.

A current integration mechanism is the annual coordination meeting of representatives from three State agencies with U.S. EPA staff. This meeting is used as a planning apparatus for those applying for and receiving grant funds under the provisions of several Federal laws, such as the Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act. Public participation in these meetings is encouraged.

An ambitious, multi-agency program currently under development is the Puget Sound Water Quality Management Program. This program, sponsored jointly by the State Department of Ecology and the U.S. EPA, is being designed to clean up and maintain the Sound and the surrounding waters.

The area of pesticides management has fostered a number of coordinating programs within the State of Washington. The Pesticide Advisory Board, which provides recommendations regarding policy directions, includes representatives from DOE, DOA, DSHS, DLI, the Department of Natural Resources, the State's universities, pesticide manufacturers and producers, and the pesticide application industry. In addition, pesticide contamination of water supplies has triggered a large degree of communication and cooperation between DOE, DOA, and DSHS.

In addition to the coordination efforts among State agencies, others exist at the State and local levels. For example, DSHS works closely with the local health agencies with regard to problems such as drinking water protection and radiation exposure. These local health agencies are financially independent of the State government, and are free to perform their own relevant work.

These and other formal coordination mechanisms, such as the proposed consolidation of the State's laboratories, are important steps towards the effective control of toxics; however, other circumstances call for more informal, ad hoc methods of coordination. Washington State agency officials have recognized this fact and are prepared to implement these "less-structured" means.

### III. Information Management

If one were to characterize Washington's information management system, one would have to describe it as being very well established. Each of the four agencies which primarily deal with toxic substances possesses its own resources and capabilities in this area. The Department of Ecology has excellent air and water monitoring programs as well as a hazardous waste annual reporting system which is used to develop a hazardous waste generation inventory. Facilities which treat, store or dispose of hazardous waste are required to report as well. The State does not require the chemical industry to report data regarding chemical manufacturing, etc., but this information is often gathered by inspectors in the field. Industry is, however, required to maintain its own monitoring data which can be requested by the State at any time. All data maintained by DOE are computerized and placed on separate data bases. All chemical data are organized according to SIC codes.

The Department of Labor and Industries, which uses Federal OSHA reporting requirements, has the authority to subpoena such information. DLI also has the right to investigate proprietary information. In addition, industry within the State must maintain all records of occupational disease incidents; these records can be subpoenaed by DLI.

The State Department of Agriculture maintains a very comprehensive pesticides labeling program in addition to participating in a tri-state program with Oregon and Idaho. Abstracts of the information which appears on the labels are stored in a computerized data file and are readily accessible. All registration information is kept confidential and is shared, to a degree, with the other two states.

One of the more elaborate systems of information management within the State of Washington is maintained by the Department of Social and Health Services. The Department has been compiling occupational mortality information which is used for chronic disease assessment and prevention.

DSHS is currently working towards the upgrading of information placed on birth certificates. The certificates now include occupational information for each parent, but the Department is striving for better malformation reporting. DSHS staff is also closely investigating fetal deaths around the State. All vital statistic data and most comprehensive laboratory data are computerized and stored in DSHS's bases. (The Department does some lab work under contract to the Department of Ecology; however, these data are kept by DOE).

DSHS personnel conduct a number of epidemiological studies each year, usually in response to citizen concerns and suspected cancer clusters. To date, no cause and effect has been determined as a result of these studies. Investigations are also ongoing regarding fish tumor incidents in Puget Sound. In connection with this problem, human consumption of fish is being studied.

Finally, the State of Washington possesses a Cancer Register which is administered through the Hutchinson Cancer Center and is part of the National Cancer Institute's SEER program. State officials are also closely involved with the Oregon Comprehensive Cancer Registry, which serves part of Washington State.

#### IV. Toxics Control

In general, when attempting to control toxics problems in Washington, State agencies strive to work together as much as possible. For example, a number of years ago, high levels of arsenic were found in the hair and urine of children living in the vicinity of a copper smelter. After an investigation, DSHS suggested that DOE's air program and the occupational health program within DLI, tighten their respective standards and more closely investigate the situation. These actions were taken and the worker problem has since been ameliorated. Community environmental problems remain.

The Puget Sound program is another example of an integrated toxics control effort. Participating agencies will be DOE and DOA. These State agencies, and others, are currently working with the U.S. EPA in setting up this program.

Washington has a fairly extensive hazardous waste and toxics disposal problem, possessing ten of the 418 priority Superfund sites. The majority of hazardous waste is shipped to an approved disposal site in Arlington, Oregon, and a missile site in Idaho.

The Hazardous Waste Act of 1976 makes a distinction between dangerous waste and extremely hazardous waste, which is considered a sub-set of dangerous waste. Dangerous wastes are considered to be non-radioactive wastes "which are disposed of in any such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife or the environment...". Extremely hazardous wastes, on the other hand, are dangerous wastes which:

"will persist in a hazardous form for several years or more at a disposal site, and which in its persistent form:

- (1) presents a significant environmental hazard and may be concentrated by living organisms through a food chain or may affect the genetic makeup of man or wildlife, and
- (2) is highly toxic to man and wildlife..."

A secondary aspect of this classification scheme, which is described in a background paper entitled "Determination of Harmful Quantities of Hazardous Substances", is the use of criteria as designations thus avoiding the problem of providing lists of substances.

An area of growing concern within the State is that of water pollution. In addition to the problems connected with the Puget Sound and its surrounding bays, the State may have some rather serious groundwater contamination difficulties. Officials are particularly concerned with potential problems in the western section of the State where the groundwater level is high. Problems have also arisen with regard to surface water. Those studying this problem are focusing on the infusion of contaminated sediments into the surface water.

A final toxics control area which has received a great amount of attention is pesticides control. The State Department of Agriculture, and other agencies, have recognized the fact that Washington has some unique pesticides-related problems which must be dealt with in an innovative manner. For example, the State has banned the use of the pesticide 2,4-D, in designated areas and at certain times of the year, due to its adverse effects on grapes, a major source of agricultural revenue.

(Vineyards are often close to wheat fields where such spraying was prevalent.) State officials are also closely investigating the unlawful spraying of herbicides in non-targeted areas and the spraying of endrin in apple orchards, which has lead to the contamination of game birds. Pesticides labs are maintained by DSHS and DOA.

V. Analysis

In general, Washington's toxics control and integration efforts appear to be very progressive and proactive. Each of the major State agencies possesses good monitoring data, and other forms of data, which generally are well organized (computerized) and openly shared among the other departments. State officials have recognized that these data might be better organized and utilized through the use of CSIN, and they will be contacting the CSIN staff with regard to this in the near future.

Most of the specific problem areas within the State of Washington appear to be well handled. For example, the State seems to have hazardous waste difficulties under control, and there seems to exist a sufficient knowledge of exactly what kinds and amounts of hazardous wastes are currently present within the State. The State is also very active in water protection particularly with regard to the cleanup of the Puget Sound. (EPA staff has put Washington State officials in touch with Maryland officials regarding the findings from the recent Chesapeake Bay study. These findings should prove helpful due to the many similarities between the two water bodies.)

Finally, the most promising aspect of Washington's toxics control and integration efforts is the general cooperative atmosphere which apparently exists among the State's agencies. There appears to be very little conflict and competition among these departments; quite to the contrary, there seems to exist a willingness to work together and coordinate efforts whenever feasible. If this atmosphere persists, one could predict a continually successful future for the State in its toxics control.