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COPY

HAZARDOUS WASTE MANAGEMENT PLAN  
FOR MICHIGAN

AND

REPORT

OF THE

Hazardous Waste Management Planning Committee:

- |                         |                    |                    |
|-------------------------|--------------------|--------------------|
| James A. Kent, Chairman | H. Douglas Fenske  | Robert Willihnganz |
| Jerald Stone            | Timothy Westerdale | John Hesse         |
| Thomas Cooper           | John Sobetzer      | Carol Hoffman      |
| Earl Borden             | Gail Griffith      | William Marks      |
| R. A. Gaska             | Shirley K. Axon    |                    |

This document contains the State Hazardous Waste Management Plan required by the Hazardous Waste Management Act, Act 64, P.A. 1979, the report of the Hazardous Waste Management Planning Committee and an executive summary. This plan was adopted on January 15, 1982 by the Natural Resources Commission.

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Environmental Services Division  
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STATE OF MICHIGAN



NATURAL RESOURCES COMMISSION

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DEPARTMENT OF NATURAL RESOURCES

STEVENS T. MASON BUILDING  
BOX 30028  
LANSING, MI 48909  
HOWARD A. TANNER, Director

February 10, 1982

Dear Interested Citizen:

The last draft of the Hazardous Waste Management Plan which you received (yellow cover) was adopted by the Natural Resources Commission. The Hazardous Waste Management Planning Committee was reconstituted as a provision of the plan to oversee plan implementation. The Planning Committee will not meet on a regular basis, but will meet at the request of the Committee Chairperson or the Department of Natural Resources. Unless you notify us otherwise, we will keep your name on the mailing list to be notified of further Hazardous Waste Management Planning Committee meetings. If you would like additional copies of the State Hazardous Waste Management Plan, contact this office at the above address, or phone (517) 373-8542.

Sincerely,

A handwritten signature in cursive script that reads "Cheryl Bartz".

Cheryl Bartz,  
Office of Environmental Planning

CB:cju

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## EXECUTIVE SUMMARY

The Hazardous Waste Management Plan recommends actions for encouraging methods of hazardous waste management which are environmentally sound and which encourage the reuse and recovery of valuable resources. The Plan is also intended to create a climate conducive to the siting and operation of hazardous waste management facilities to meet existing and future needs, and to respond to the broad range of concerns held by business, government, citizens, and communities.

Adequate future funding of Department of Natural Resources hazardous waste monitoring and compliance programs is an area of major concern to the public. The plan recommends to the Governor and the Legislature that such funding should be assured and that consideration should be given to using funds from the Hazardous Waste Trust Fund for current monitoring and compliance. A strong monitoring and compliance program now will reduce the potential for future problems requiring resources from the trust fund after closure of sites. Fees paid into the trust fund should not be increased to accomplish this.

The Plan recommends that private enterprise be relied upon to develop necessary hazardous waste management facilities and to select environmentally and economically sound sites. The Department of Natural Resources and the Site Approval Board created by Act 64 will be responsible for assuring that selected sites conform to standards established by law and administrative rules.

The Plan recommends that waste reduction, recycling, treatment and destruction be given preference over landfilling. The Plan does, however, recognize that landfilling is the only alternative for management of some wastes.

Early citizen involvement is recognized as important by the planning committee. A Citizen Information Committee is recommended as one alternative method of involving citizens. The Citizen Information Committee will facilitate information exchange between the community, facility sponsor, and Department. A broad educational program is recommended to promote informed citizen participation.

The Report of the Hazardous Waste Management Planning Committee elaborates on considerations which led to the development of the recommendations in the Plan.

## MICHIGAN HAZARDOUS WASTE MANAGEMENT PLAN

### I. Authority

This Plan is prepared pursuant to the authority of Act 64, P.A. 1979, the Hazardous Waste Management Act.

### II. Goals

The goal of the plan is to encourage, develop and implement methods of hazardous waste management which are environmentally sound and which encourage resource conservation, including source separation and waste reduction.

This Plan is further intended to create a climate conducive to the siting and continued operation of socially acceptable, and environmentally and economically sound hazardous waste management facilities to meet existing and future needs, and to respond to the broad range of concerns held by business, government, citizens and communities.

### III. Ownership

- A. It is the policy of this Plan that private enterprise, regulated by Act 64, its rules, this Plan and other applicable environmental laws, shall be relied upon to develop necessary hazardous waste management facilities in Michigan. Accordingly, the construction of state-owned facilities should not presently be undertaken.
- B. Three years after adoption of this Plan, the Department of Natural Resources, with advice from the Hazardous Waste Management Planning Committee, shall initiate an examination of the private sector's ability to manage hazardous waste in Michigan and decide whether another ownership option should be recommended at that time. (Target: January, 1985)

### IV. Waste Reduction

- A. The Department of Natural Resources, Site Approval Board, and any other person or governmental body, in carrying out its duties as prescribed in Act 64, its rules, or this Plan, shall:
  - 1. encourage elimination, reduction, recycling, exchange, reuse, treatment or destruction of hazardous wastes in preference to landfilling, wherever feasible and prudent, and
  - 2. recognize that secure landfilling is necessary for some hazardous wastes at this time.
- B. The Department of Natural Resources shall immediately seek legislation which would grant an investment tax credit for new equipment or facilities installed to eliminate, reduce, recycle or separate hazardous industrial by-products which would become hazardous wastes

- C. The Department shall assist municipalities, counties, and/or regions in the development and implementation of local hazardous waste management plans that could:
1. include reasonable zoning ordinances that would not prohibit the location of hazardous waste facilities in a municipality, but provide for their appropriate location pursuant to section 20(7) of Act 64;
  2. include reasonable ordinances and requirements that are to be included in the Site Approval Board's stipulations to the fullest extent practicable, pursuant to section 20(8) of Act 64;
  3. include a system for establishing a citizen information committee, determining critical issues, and selecting local board members, when a construction permit application is received;
  4. include provisions for an education program before, during and after a site is permitted;
  5. coordinate solid and hazardous waste management.
- D. The Department shall notify municipalities where a facility has been proposed of any available technical assistance programs.
- E. The Departments of Natural Resources, Agriculture, Public Health, and Transportation should form an advisory body to the Department of Commerce on site selection. (Target: January 1982)
- F. In recognition of the fact that membership on the Site Approval Board is an extremely time-consuming responsibility for the two permanent public members appointed by the Governor, the Governor should consider appointing additional members to serve on the board.
- G. The Department shall provide for reasonable means for public review of Site Approval Board procedures.
- H. When a facility owner or operator seeks a permit issued by the Department of Natural Resources for a facility which will require an Act 64 permit, notice issued by the Department shall indicate that the facility will require a hazardous waste management permit under Act 64.

- F. The DNR shall study the problem of disposal of small quantities of hazardous waste, including such issues as: viability of municipal storage facilities, product labeling, co-mingling, need for a state-owned storage facility, and state assistance to local communities for education, collection, or disposal programs. The DNR shall develop a recommendation on this issue and report to the Governor and the Legislature. (Target: December, 1982, resources permitting)

#### VIII. Commerce Department

- A. The Department of Commerce shall encourage the development of necessary and environmentally sound hazardous waste management facilities in Michigan by assisting facility sponsors in the selection of appropriate sites and providing information on available economic incentives.

#### IX. Public Health Department

- A. The Michigan Department of Public Health shall assist and encourage communities having a hazardous waste management facility to develop and implement local emergency preparedness plans for incidents involving hazardous wastes. The Michigan Department of Public Health's Chemicals and Health Center may serve as the environmental health focal point for local health departments.

#### X. Education

- A. The Department shall seek the cooperation of the Departments of Commerce and Public Health in conducting a coordinated and sustained information program which shall, at a minimum:
1. educate hazardous waste generators, haulers and disposers about their responsibilities under Federal and State hazardous waste management laws and rules and this Plan. Information on waste reduction, new technologies and public involvement shall also be provided;
  2. ensure that appropriate employees of state and local agencies are informed about new hazardous waste management developments;
  3. provide citizens and local officials, including local health officers, with a handbook or other information explaining opportunities for citizen and municipal involvement in decision making processes, including formation of a citizen information committee, basic information needed to evaluate the suitability of a site, existing technologies, technical assistance available, proper methods of handling small quantities of waste, the need for hazardous waste management facilities, the origins of hazardous waste, Site Approval Board functions, negotiations, incentives, compensation, emergency response, impacts of facilities, and responding to issues of local concern with local ordinances;
  4. notify hazardous waste generators and facility operators of waste reduction, reuse, and recycling incentives and technologies and new regulations;

HAZARDOUS WASTE MANAGEMENT PLANNING COMMITTEE  
FINAL REPORT  
CHAPTER I - INTRODUCTION

This report is designed to give an overview of the Hazardous Waste Management Planning Committee's plan development process as well as the data and rationale that led to the decisions themselves.

Governor William G. Milliken appointed Hazardous Waste Management Planning Committee members on April 29, 1980, to represent the following interests:

- City Government - Jerald D. Stone, City Administrator, Lathrup Village
- Township Government - Earl E. Borden, Supervisor, Avon Charter Township, Oakland County
- County Government - Thomas F. Cooper, Newaygo County Commissioner
- Hazardous Waste Hauler - Timothy A. Westerdale, President, General Oil Company
- Hazardous Waste Generator - R. A. Gaska, Manager, Inorganic Chemicals Production, Energy and Utilities, Dow Chemical U.S.A., Michigan Division
- Facility Operator - H. Douglas Fenske, Landfill Manager, Fenske Enterprises, and co-owner of Cascade Resource Recovery, Inc.
- Environmental Group - John Sobetzer, Executive Director, East Michigan Environmental Action Council.
- Conservation Group - Gail Griffith, Adjunct Associate Professor, Chemistry Department, Northern Michigan University, and a member of Citizens to Save the Superior Shoreline.
- Public Member - James A. Kent, Dean of the College of Engineering and Science at the University of Detroit
- Public Member - Shirley K. Axon, Member, American Association of University Women
- Public Member - Robert A. Willihnganz, Attorney
- Department of Commerce - Carol Hoffman, Director, Office of Community Development
- Department of Natural Resources - W. D. Marks, Assistant Chief, Bureau of Environmental Protection
- Department of Public Health - John Hesse, Chief, Chemicals and Health Center



and operation of hazardous waste management facilities. The role of the State should be to determine whether sites selected by private industry meet the environmental and public health standards established by law and regulations. The Site Approval Board established under Act 64 would then decide whether a site should be permitted.

5. The preferred methods of hazardous waste management are those which conserve natural resources, reduce the amount of waste to be incinerated or landfilled, or minimize the amount of environmental monitoring necessary. In the foreseeable future, there will be a need for incineration and landfilling; however, for some wastes, that is not the preferred method of treatment. Recognizing that wastes cannot all be treated the same way, the following hierarchy of treatments is preferred:
  - a. Reduction
  - b. Recycling
  - c. Treatment
  - d. Destruction (generally suitable for organic wastes)
  - e. Fixation (generally suitable for inorganic wastes)
  - f. Storage, including landfilling
6. Local residents should be involved very early in the siting process. The Site Approval Board is the major forum for public involvement in the construction permit review process. However, there is a need for involvement before and after Site Approval Board proceedings.
7. To participate effectively in hazardous waste management facility siting decisions, the public must have reliable and timely information about hazardous waste laws, technologies, and impacts.
8. Sound hazardous waste management is a joint responsibility of all Michigan residents. We all are responsible for the generation of hazardous waste, either as a result of the products we produce at work or the products we use at home. Therefore, we must all work together to develop sound hazardous waste management facilities in Michigan.

#### FORMAT OF THIS REPORT

The Committee decided that the plan itself should contain only specific recommendations, and that the rationale and general supporting information should be included in this report. This report is intended to assist readers in evaluating the Plan.

## CHAPTER II. BACKGROUND

### A. Historical Background

Improperly managed hazardous waste disposal sites received widespread state and national recognition during the 1970's. By 1978, the Michigan Department of Natural Resources, in cooperation with the Michigan State Police, and Michigan Department of Public Health, had already been involved in the clean-up of several disposal sites. These clean-ups impressed upon the agencies the need for greater in-state capacity to properly treat and manage certain wastes, the high costs to taxpayers of cleaning up abandoned sites, the high potential risk associated with improper disposal, and the inadequacy of existing laws for handling the problem.

To alleviate these conditions, the Legislature and the Department of Natural Resources staff began in 1978 to examine the possibility of developing new legislation to regulate hazardous wastes and permit a state-owned hazardous waste disposal facility. In support of this effort, Governor Milliken created a task force composed of representatives of a diverse range of interests to examine existing hazardous waste management problems in Michigan and to recommend whether the state should own a hazardous waste disposal facility. The task force consulted generators, haulers, processors, representatives of local government, and others in considering the hazardous waste problem. They concluded that Michigan did have a serious hazardous waste problem characterized by a lack of disposal facilities; that technologies existed to safely and effectively treat hazardous waste; that facilities for treatment and disposal of hazardous waste should be integrated into existing areas of industrial activity; and that it might be necessary for the state to own, but not operate, a hazardous waste disposal facility<sup>1</sup>. Similar concepts were embodied in House Bill 4804 which was introduced in 1978, but was not enacted by the Legislature.

Early in 1979, House of Representatives' Speaker Bobby Crim created an Ad Hoc Committee on Hazardous Waste Management Legislation. Chaired by Representative Tom Mathieu, the committee worked with many diverse interests, including generators, municipal officials, environmental groups, and those seeking to site hazardous waste disposal or treatment facilities. Consensus was reached on proposed legislation, House Bill 4380, introduced by Representative Alice Tomboulion. House Bill 4380 was passed by both the Michigan House of Representatives and the Senate nearly unanimously, and was signed into law as Act 64, P.A. 1979, the Hazardous Waste Management Act.

### B. Summary of Current Situation

The Hazardous Waste Management Act, Act 64, P.A. 1979, created the authority for the Department of Natural Resources to regulate hazardous wastes in Michigan. Act 64 defines hazardous waste as that which "...because of its quality; concentration; or physical, chemical, or infectious

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<sup>1</sup> INTERIM REPORT - GOVERNOR'S ADVISORY TASK FORCE ON HAZARDOUS AND TOXIC WASTE

CHAPTER III  
MANAGEMENT OPTIONS

A. INTRODUCTION

The Planning Committee shall "...assist in encouraging, developing, and implementing methods of hazardous waste management which are environmentally sound, which maximize the utilization of valuable resources, and which encourage resource conservation..." (Act 64, Section 7)

This chapter discusses general categories of waste management techniques and the advantages and disadvantages of each. For purposes of the plan, the categories of waste management are:

1. Reduction and Elimination
2. Recycling and Reuse
3. Treatment
4. Destruction (incineration and biological destruction)
5. Fixation
6. Storage, including deep well disposal and landfilling

These categories are listed in order of their ability to conserve resources and land space, and reduce risk. Categories four, five, and six require more intensive monitoring to insure protection of the environment. Some waste streams may require handling that fits into two or more categories. Other wastes are suited to one category of treatment only. However, landfilling and incineration, as well as reduction, recycling, and treatment will all play a necessary role in hazardous waste management in the foreseeable future. Refer to Part IV of the State Plan for specific recommendations about management options.

B. WASTE REDUCTION

Reducing waste conserves valuable resources for future use. It also reduces the demand for existing, over-burdened management facilities, and can, in some cases, cost less than transporting waste to a recycling plant, incinerator, or landfill.

Waste reduction can be defined as either a decrease in waste volume, or elimination of the hazardous nature of a waste. Volume reduction of some wastes can be achieved by changing the process for producing a product. Elimination of the hazardous aspect of a waste can be achieved by various changes in production processes, or by substituting a non-hazardous for a hazardous material in production.

Waste reduction techniques are very specific to each industry. New manufacturing plants can be designed to minimize waste generation, but it is frequently difficult for an existing plant to change processes for the purpose of waste reduction. The requirements of Act 64 and RCRA have made hazardous waste disposal more expensive. As a result, it has become feasible for more companies to implement waste reduction technologies in cases where the expense was previously considered to be prohibitive.

## E. DESTRUCTION

Destruction includes incineration, pyrolysis, and biological oxidation. Incineration is controlled combustion where carbon-containing compounds are combined with oxygen. Pyrolysis is thermal treatment of wastes in the absence of oxygen which causes carbon compounds to break down. Biological treatment uses naturally occurring microorganisms to destroy carbon compounds. This discussion will focus on incineration and biological treatment, both widely-used technologies.

During incineration, oxygen combines with carbon compounds and destroys the original molecule. Non-hazardous substances such as water and carbon dioxide are formed. The ash must be landfilled in a secure hazardous waste landfill.

Not all hazardous wastes can or should be incinerated. Incineration is not suitable treatment for inorganic (non-carbon containing) substances such as metallic sludges. It is, however, an excellent method for destroying organic (carbon containing) substances. Among the various types of incinerators, rotary kilns similar to those used to produce cement are extremely well suited to destruction of organic hazardous wastes.

Biological oxidation of hazardous wastes is a widely practiced method of waste management. It utilizes naturally occurring microorganisms to metabolize biodegradable wastes to carbon dioxide and water -- harmless, naturally-occurring materials. It is suitable only for the treatment of dilute, biodegradable, organic wastes. It cannot be used to treat wastes which are bio-resistant, such as inorganic salts. Because the process utilizes living organisms, the system must be carefully controlled to protect and nurture the organisms. Municipal sewage treatment plants are an example of biological treatment.

## F. FIXATION

Inorganic wastes can be fixated so that the hazardous component is bound into a solid substance. The resulting product can be landfilled more safely.

## G. STORAGE

Hazardous wastes are stored on both a short-term and a long-term basis. Wastes stored for the short-term are usually stored on the generator's site. Long-term storage is carried on by generators, on and off-site, and by off-site commercial businesses.

Short-term storage is defined by Act 64 to be storage of less than one year's duration. Long-term storage is defined by Act 64 to be storage for a period of longer than one year. A generator may not accumulate enough wastes to make collection economical on a weekly or a monthly basis, and would, therefore, need to temporarily store wastes. Similarly, a hauler or facility operator might also need to store wastes until enough had been accumulated to handle efficiently.

CHAPTER IV  
OWNERSHIP OPTIONS

Hazardous waste management facilities in Michigan have traditionally been owned and operated by private enterprise. However, government ownership, or a combination of public/private ownership, was considered by the Committee as an alternative for management of hazardous waste in Michigan.

There are several possible variations of government involvement in the management of hazardous waste. In this chapter, ownership options are reviewed. The recommendations on ownership in Part III of the Plan are based upon extensive discussion with the private sector and other interested parties about the ability and interest of the private sector to effectively and efficiently meet Michigan's hazardous waste management needs.

A. PRIVATE SECTOR OWNERSHIP AND OPERATION

Although Act 64 and RCRA are in the early stages of implementation, representatives of the private sector have indicated that they believe this strong regulatory structure will provide the opportunity to establish or expand facilities in Michigan. Act 64 and RCRA place new restrictions on the management of hazardous waste. This creates a market for new facilities. Prior to passage of Act 64 and RCRA, potential facility owners were uncertain with what regulations they would eventually need to comply. However, once the regulatory structure is fully implemented, industry will be willing to make necessary capital investments because the economics of managing waste will be attractive and relatively uniform throughout the United States. These circumstances indicate that a state-owned facility is not necessary at this time. RCRA and Act 64 give the state the authority to ensure that sites measure up to strict environmental standards. In addition, Act 64 creates a public participation process which should facilitate public acceptance of privately owned sites. Private ownership has the advantages of not tying up state capital, and facilitating a clear regulatory role for state government in the siting process (further developed in Chapter V - Siting).

B. PUBLIC/PRIVATE COOPERATIVE VENTURE

1. Public Ownership of Land, Private Ownership of Facility

Under this option, the state would acquire a site and lease it to the private sector for construction and operation. This alternative has the potential advantage of easing the difficulty of obtaining a site where there has been local opposition. This option minimizes state financial investment in the facility relative to other options, with the exception of a totally private facility.

2. Public Ownership of Facility and Land

Under this option, the state would own the site and the facility and would lease both to the private sector for operation.

C. STATE-OWNED AND OPERATED FACILITY

State ownership and operation of hazardous waste management facilities has been recommended by those concerned about the lack of private capacity to recycle, treat, and landfill or manage hazardous waste. (All state-owned facilities would not necessarily be operated by the state. Mixed public/private enterprises were examined under Section B).

State ownership and operation of one or more facilities might provide needed treatment capacity that, for one reason or another, private enterprise could not provide. State ownership would necessitate thorough assessment of existing and future needs for hazardous waste management capacity and careful setting of treatment or landfilling rates to avoid putting private industry at a competitive disadvantage.

Representatives of national and state hazardous waste management firms have convinced the Planning Committee that private capital is available, and that private facilities will be developed to meet the state's needs as soon as the regulatory structure is firm and siting problems are resolved.

CHAPTER V  
SITING

The roles and responsibilities of the Hazardous Waste Management Planning Committee, Site Approval Board, Departments of Natural Resources and Public Health, site applicant, local government and general public are established in the Hazardous Waste Management Act, Act 64, P.A. 1979. Building upon the siting roles established in Act 64, the Planning Committee in this chapter recommends ways of clarifying and improving the siting process. Refer to Section V of the Plan for specific siting recommendations.

A. HAZARDOUS WASTE MANAGEMENT PLANNING COMMITTEE

Section 9(2)a of Act 64 states that "the plan shall provide for a reasonable geographic distribution of disposal facilities to meet existing and future needs."

The committee sought the advice of a broad range of interests in reaching a consensus on this issue.

Consistent with the majority of views expressed by interest groups, including business and industry, environmental associations and others, the Planning Committee has concluded that the determination of facility location should remain the responsibility of the facility proposer. The Committee's conclusion on this issue was based on the following findings:

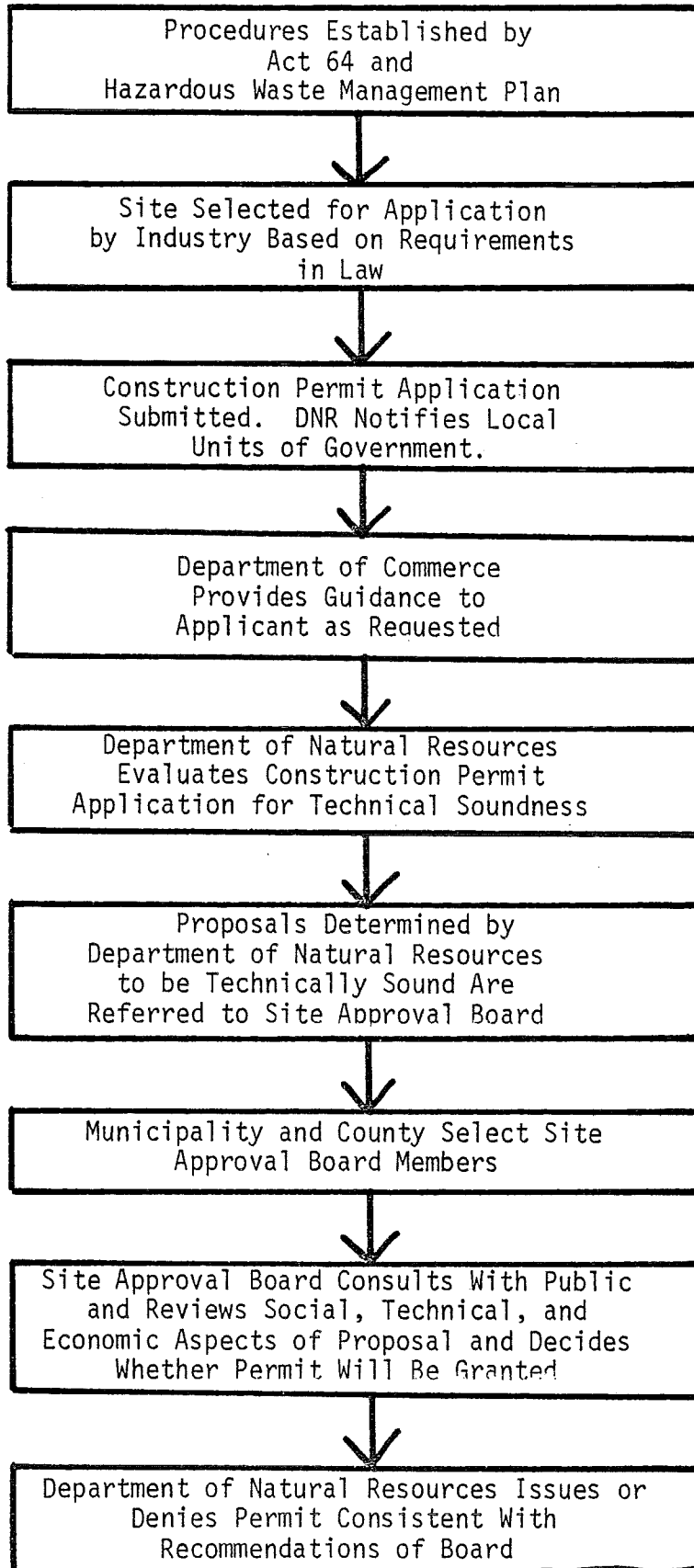
1. Economic conditions, based upon the location of generators and existing disposal facilities, and economic outlook for the particular industry to be served, will determine where facilities are needed and will create a reasonable distribution of sites.

To specify where facilities should be located would, in the view of the Committee, unreasonably restrict development of these critically needed facilities and associated economic development.

2. No matter where facilities are proposed, they must comply with the requirements established under Act 64. The Committee does not believe that specifying locations for facilities in this plan will provide any greater degree of environmental protection than that which will be afforded under Act 64.
3. Industrial processes and disposal technologies are in a dynamic state of development. The Committee does not believe it would be in the best interest of Michigan to establish a geographic distribution for facilities which cannot reflect or keep pace with technological advances.
4. Representatives of private enterprise have not indicated that they anticipate any difficulty in finding sites which will comply with Act 64. Representatives of local government and citizen groups indicated no preference for sites selected by the state.

FIGURE V-1

## HAZARDOUS WASTE MANAGEMENT FACILITY SITE SELECTION PROCESS





has proceeded according to plans approved by the Department;  
- Section 22;

- f. Initial Department of Natural Resources inspection report stating what conditions were observed - Section 24;
- g. Operating license with any stipulations specifically applicable to site and operation - Section 24;

--Available on a Continuing Basis After Operation Begins:

- h. Manifest data on types and quantities of material handled - Section 33;
- i. Periodic reports of hazardous waste handled by facility - Section 35(b)(c);
- j. Quarterly Department of Natural Resources or certified local health department inspection reports - Section 44(1);
- k. Reports of inspections made in response to a complaint - Section 44(4);

The Hazardous Waste Management Act also requires that the Department of Natural Resources maintain a mailing list to notify the public about any rules, plans, construction permit applications, contested case hearings, public hearings, or other information or procedures relating to the administration of Act 64 (Section 18(3)). Anyone can request that the DNR add his or her name to the list. Because any expansion or alteration of a facility beyond the originally authorized capacity or area requires a new construction permit, citizens can thus remain informed of any changes at a local facility. (See Appendix B for additional information about the DNR's hazardous waste management program.)

#### E. DEPARTMENT OF PUBLIC HEALTH

Act 64 involves the Michigan Department of Public Health in the hazardous waste management program in several ways.

Section 7 of Act 64 requires the actions of the Department, Site Approval Boards and the Planning Committee be consistent with Section 12103(d) of Act 368, P.A. 1978, the Public Health Code. Section 12103(d) of the Health Code states that the Department of Public Health shall provide an environmental health policy and an environmental health services plan to include environmental health activities of local health jurisdictions.

Section 8(j) requires that the Director of Public Health or a designated representative serve on the Planning Committee.

Section 10(1) of Act 64 requires the Natural Resources Commission, with the advice of the Director of the Public Health Department, to adopt or reject the hazardous waste management plan.

Section 17(2)(a) of Act 64 requires a representative of the Department of Public Health serve on the Site Approval Board as a permanent member.

Sections 34, 35, and 37 require that hazardous waste haulers, facility owners or operators, and generators make manifest copies and reports readily available for review and inspection by the Department of Natural Resources, Michigan Department of Public Health or a peace officer.

Section 47 requires the DNR Director to consult with the Director of MDPH upon receipt of information concerning a situation which may pose an imminent and substantial hazard to human health or the environment such that corrective action is necessary. This Section also stipulates that an instance of imminent and substantial hazard to human health shall be identified by the Director of Department of Public Health.

Because a chemical spill can result in a serious threat to health and the environment and large clean-up costs, communities should establish a Local Emergency Preparedness Plan for chemical incidents to be periodically practiced and refined by all local response agencies. The Michigan Department of Public Health, Community Environmental Health Division, sponsored, on July 15, 1980, a Hazardous Materials Incident Training Program for local environmental health officers. The material and guidelines made available at the sessions are useful in preparing a local hazardous materials plan for emergency response, and in publicizing emergency response contacts. Additional copies of the materials are available from the Consultation, Evaluation and Training Section, Division of Community Environmental Health, Michigan Department of Public Health.

F. FEDERAL

The Resource Conservation and Recovery Act (RCRA) Public Law 94-580, and the Comprehensive Emergency Response, Compensation, and Liability Act of 1980 (Superfund), are the legal framework for hazardous waste management at the Federal level. Superfund provides funds to respond to chemical contamination problems. The U.S. Environmental Protection Agency (U.S. EPA) is primarily responsible for managing the Federal program. States with substantially equivalent programs can be authorized to carry out the Federal program. Michigan expects to receive such authorization. The Federal role in siting then becomes one of technical and financial assistance to the state in complying with requirements.

The U.S. Environmental Protection Agency currently administers a technical assistance program under the Resource Conservation and Recovery Act. There is a consultant under contract to USEPA Region V to work on very technical or time-consuming problems. Application for technical assistance should be made to:

Director  
Air and Hazardous Materials Division  
U.S. Environmental Protection Agency - Region V  
230 S. Dearborn  
Chicago, IL 60604

ATTENTION: Regional Panels Coordinator  
Waste Management Branch  
Phone: 312/886-3712

in decision-making and accurately informed about impacts a proposed facility will have on a community. Act 64 requires early public notification; when an application for a construction permit is submitted to the Department of Natural Resources, the Department of Natural Resources immediately notifies the permanent Site Approval Board members, the municipality, the county, the local soil erosion and sedimentation control agency, the regional planning agency and other appropriate agencies.

Local ordinances may not prohibit construction of hazardous waste management facilities. However, local governments may pass ordinances regulating the operation of such a facility (e.g., limiting hours of operation). This type of ordinance might later be incorporated into the construction permit by the Site Approval Board, to the extent practicable.

## 2. Citizen Information Committee

The Site Approval Board will provide information to citizens and involve them in decision-making. However, the Site Approval Board will exist for only 120 days. It will probably be beneficial in most communities to involve citizens both before and after the Site Approval Board process. One possible approach would be to create a Citizen Information Committee.

The Citizen Information Committee should be a representative body with balanced membership. Suggested composition would include at least the following:

- Local Official
- Local Health Officer
- Resident of Municipality in which the facility is proposed to be located
- Resident of the County in which the facility is proposed to be located
- Representative of Hazardous Waste Management Facility
- Local Hazardous Waste Generator
- Representatives of other affected interests in the community

The decision to create a Citizen Information Committee rests with the local government. The municipality should appoint the local health officer or other local official and the resident of the municipality. It is recommended that the municipality request appointments from the county for the county representative, and from the facility operator for the facility representative and a local hazardous waste generator. The municipality could appoint representatives of any other viewpoints not already represented.

This composition would have several advantages:

- Committee includes broad representation. The presence of both a representative of the hazardous waste management facility and a hazardous waste generator should give citizens easy

still may be a role for those which are not certified. The role of the local health department could vary from serving as the primary liaison between local government and residents on hazardous waste matters, to serving as a repository for documents and reports on hazardous waste.

The local health departments are encouraged to accept citizen calls on hazardous wastes. If convinced that an emergency situation exists (for example, probability of severe damage to human health or the environment if no immediate action is taken within hours) the DNR 24-hour Pollution Emergency Alerting System (PEAS) number (800/292-4706) and the Department of Public Health 24-hour number, 517/373-1360 should be used. If it is judged that the situation requires the additional attention of a state office, but is of a non-emergency nature, a focal point office should be notified and transmitted information on the complaint. State action on chemical concerns of citizens would then be reported back to the local health department for relay to the citizen.

## CHAPTER VI EDUCATION

Hazardous waste management affects everyone. Responsible, environmentally sound hazardous waste management permits Michigan residents to enjoy the products of industrial society. Irresponsible disposal could potentially injure the health and environment of many people. Hazardous waste management is an issue of such importance that all decisions should be based upon reliable, up-to-date information. This chapter examines the information needs of the general public, residents in a community where a facility is proposed, those regulated by hazardous waste management laws, and those whose business is communicating. Refer to Section X of the Plan for specific recommendations about education.

### A. GENERAL PUBLIC INFORMATION

"The general public and local officials have legitimate concerns about the safety of disposal facilities and the value of property near such a location.

Without adequate public education and acceptance, building of necessary facilities will continue to be stymied all over the state. I direct the Department of Natural Resources to develop an educational program to explain the expertise, control, and safety built into the current laws."

Governor William G. Milliken  
1981 Michigan State of the State Message

Uncertainty about the legal requirements for a hazardous waste management facility, its immediate effects, and potential long-term risks frequently leads citizens to oppose siting of hazardous waste management facilities in their community. Local officials, legislators, and the general public need factual, unbiased information on hazardous waste management to participate effectively and constructively in hazardous waste management. The purpose of an informational program should not be to persuade, but rather to provide a basis for citizens to make decisions. Access to reliable information should diminish conflict by reducing the uncertainty that leads to opposition.

#### 1. Educational Program Contents

Educational programs must be geared toward the intended audience. However, any educational program for the general public should include at least the following concepts:

##### a. Need for Facilities

The major hazardous waste management problem today is inadequate capacity to recycle, treat, incinerate and landfill hazardous waste. Failure to provide suitable hazardous waste management facilities increases costs for industry, which must ship wastes out of state. In

and landfills for household refuse. Society requires these institutions, yet few communities willingly accept them within their boundaries. Decisions about where to site controversial facilities are thus based not only on purely technical considerations, but also on political considerations. Act 64 created the Hazardous Waste Management Planning Committee and Site Approval Board to provide the opportunity for all views to be aired and considered prior to implementing solutions (see Chapter V). Citizens must be informed about the decision making process and their roles in negotiating with the Site Approval Board for mitigation of effects of a hazardous waste management facility.

There are always some societal costs or some residual risks and inconveniences borne by the community that accepts a hazardous waste facility, much as there is risk associated with the companies which generate hazardous waste. The cyanide and chrome used in some plating companies, for example, are no more dangerous when they become wastes than they were when used by the original manufacturer. In fact, the hazardous waste management facility is regulated more closely because it must account for all material entering or leaving the site. What is known with great certainty is that any risk associated with hazardous waste management facilities is far less than the risk of not developing adequate, environmentally-sound disposal facilities.

This does not imply that every construction permit application submitted to the DNR is sound. Some may not measure up to the environmental criteria established by law, and will, therefore, not be recommended for approval by the DNR. Facilities not recommended by the DNR will not be considered by the Site Approval Board.

## 2. Dissemination of Information

The need for information is of such magnitude that no one organization could be solely responsible for the program. The implications of inadequate information are so serious that Michigan cannot afford to neglect this aspect of the hazardous waste management program. The responsibility for disseminating information must be shared by those involved in hazardous waste management (generators, haulers, facility operators, and regulatory agencies), and those who are experienced in communications (the press, school systems, teachers' associations).

Background information is needed by the public before a facility is proposed and opinions become polarized. Maximum benefits from an informational program will be achieved by a sustained effort, rather than a one-time-only program. Many different organizations will be needed to conduct a thorough information campaign. Some, such as the Department of Natural Resources

Generators, haulers, and facility operators require timely information about new technologies, handling methods, and possible health hazard. Additionally, generators should be advised of new developments in waste reduction.

3. The News Media and Educational Associations

The news media and educational associations are experienced in providing information to the public. Both are relied on by various sectors of the public for information. Radio, television, and newspapers are the major source of public information about specific proposals and hazardous waste management in general. Generators, haulers, facility operators, and regulators should provide representatives of news media with timely and complete information about specific siting proposals. In addition, reporters would benefit from general background information on hazardous waste management. Reliable information must be provided to news media to help ensure that a balanced picture is presented to the public.

Educational organizations provide to their members information and suggested activities on a wide range of subjects. Teachers reach a broad and important audience. The Department of Natural Resources, the Department of Public Health, and the Department of Commerce should provide these organizations with technical guidance for educational materials.

## APPENDIX A

### INCENTIVES FOR INVESTMENT IN HAZARDOUS WASTE MANAGEMENT

The intent of the Hazardous Waste Management Plan is to create a climate conducive to the siting and continued operation of hazardous waste management facilities to meet Michigan's existing and future needs. This section examines existing and alternative incentives for securing investment in hazardous waste management facilities.

Surveys conducted by the U.S. Environmental Protection Agency and government agencies in other states, as well as recent comments from hazardous waste management firms, indicate that capital availability is not a major barrier to entry into the business of hazardous waste management. All sources have concluded that adequate siting assistance and well-defined, enforceable Federal and State environmental regulations are crucial incentives. Implementation of regulations pursuant to the Federal Resource Conservation and Recovery Act, and Act 64 will clearly help to guarantee an assured market to the legitimate hazardous waste management industry and to provide a forum, the Site Approval Board, for the resolution of local/industry conflicts over siting issues.

A variety of tax and financial incentives are offered in Michigan to aid business expansion and development. It is important that Michigan be an attractive place to do business. Following are brief descriptions of incentives currently available through state and local resources.

#### 1. Financial Incentives

The proceeds of municipally-issued Industrial Revenue Bonds (IRB's) may finance the total cost of starting up or expanding a business in Michigan. The bonds may finance up to 100 percent of the cost of industrial land, buildings, machinery and equipment, air and water pollution control equipment, solid waste disposal facilities and tourist, resort and other commercial facilities.

Because the interest on such bonds is exempt from federal and state income tax, they can be marketed at a rate lower than comparably rated corporate bonds. This means lower capital costs, which in turn are reflected in the annual rental payments of the industrial or commercial concerns. Bonds may take up to 40 years to mature.

Although Michigan provides a variety of economic development vehicles for issuing IRBs, certain limitations are set by the Internal Revenue Service. Federal regulations limit the dollar amount of a project that can be financed by the tax exempt revenue bonds to:

- a. One million dollars free of any restrictions on capital expenditures.
- b. Ten million dollars, subject to certain limitations.



3. Proposed Incentives

It is felt that additional incentives are necessary to create a business climate suited to development of needed hazardous waste management facilities. One possible incentive is creation of an investment tax credit for new or expanded waste management facilities. (Refer to Part IV(B) of the Plan.)

## APPENDIX B

### DEPARTMENT OF NATURAL RESOURCES PROGRAMS

#### 1. DNR Program Funding

The Department of Natural Resources relies on two sources of funding to support program activities: (1) annual general purpose/general funds appropriated by the Michigan Legislature; and (2) Federal funds—primarily those provided to the Department under Section 3011 of the Federal Resource Conservation and Recovery Act. Federal support to Michigan under the Resource Conservation and Recovery Act is estimated to average \$1.6 to \$1.9 million through 1983. In 1981, the Department of Natural Resources assigned the hazardous waste management program the highest priority of all Department programs.

Section 43 of Act 64 provides for establishment of a hazardous waste service fund to be used in emergencies. The fund is to consist of not less than \$1 million in general fund appropriations. The Department of Natural Resources is authorized to use the fund to respond to emergencies where a release of hazardous waste to the environment occurs.

#### 2. Laboratory Capability

The Departments of Natural Resources and Public Health have proposed a joint laboratory to replace existing laboratory facilities which are inadequate. Currently, turnover of laboratory work is not as fast as desired due to inadequate space and facilities. Private laboratories, however, may be and sometimes are used by the State.

#### 3. Pollution Emergency Alerting System (PEAS)

Michigan's Pollution Emergency Alerting System (PEAS) is administered by the Oil and Hazardous Material Control Section of the Water Quality Division of the Department of Natural Resources' Environmental Protection Bureau. It provides an around-the-clock, toll-free, "hotline" service for the public in reporting chemical spills, truck accidents, train derailments, or accidental discharges. PEAS facilitates prompt and appropriate response to these situations. The PEAS number is 1-800-292-4706.

Any individual who discovers a potential pollution incident can call the special toll-free PEAS Hotline number. An answering service will collect the necessary information about the emergency. The answering service then contacts the Department of Natural Resources' Pollution Emergency Communications Coordinator (PECC). The PECC notifies appropriate agencies immediately so response to the pollution problem can be made as quickly as possible. For example, in the case of petroleum spill, pipeline break, or tanker accidents, the call would be referred to the Oil and Hazardous Materials Section. If a railroad car filled with chlorine was derailed and overturned, the State Police, Department of Natural Resources Air Quality

