



The Commonwealth of Massachusetts
Executive Office Of Environmental Affairs
Department of Environmental Quality Engineering
Division of Hazardous Waste

MANAGEMENT FOR SITE INVESTIGATIONS: THE PRELIMINARY SITE ASSESSMENT

Part A: Confirmed Hazardous Waste Sites

Part B: Sites Requiring Further Investigation

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ABSTRACT

The purpose of this report is to set into motion a comprehensive and coordinated program to address the issue of waste which is potentially hazardous and has been mismanaged or abandoned throughout Massachusetts.

Specifically this report is intended to:

- I. Inform municipal officials and all the citizens of Massachusetts about the nature of the hazardous waste problem and the steps being taken to address it;
- II. Provide Massachusetts citizens with a list of sites where hazardous waste is known to be deposited and a list of other sites requiring further investigation; and
- III. Provide communities with guidance on how to respond to the list and other potential hazardous waste problems within their jurisdiction.

Properly managing the generation, handling, treatment, and disposal of our hazardous waste requires the understanding and cooperation of us all. The Department of Environmental Quality Engineering (DEQE) does not have the staffing or the resources to do the job alone. The contributions of time and energy by all concerned officials, business leaders, and citizens are essential to the development of a successful statewide program.

The Department's Division of Hazardous Waste is releasing in this report a listing of confirmed sites where hazardous wastes have been deposited or abandoned and a listing of sites requiring further investigation to determine the type and volume of their waste content.

The Massachusetts Hazardous Waste Management Act requires the Department to "conduct a survey, and prepare and publish a list of sites where hazardous wastes have been deposited or abandoned" (General Laws Ch. 21C, Section 4). Since the formation of the Division of Hazardous Waste in January 1980, DEQE has been actively conducting programs to find and verify sites where hazardous waste has been disposed of. This report contains all of the information the Department has gathered to date through state and federal surveys and through investigations of hazardous waste incidents. Specifically, these sources include DEQE's study, "Surface Waste Impoundments in Massachusetts," the U.S. Congress' "Eckhardt Report," and the U.S. EPA's Quick Look Report. Additional information has been obtained through hazardous waste investigations conducted by DEQE, the Attorney General's Office, state and municipal police, and the U.S. Environmental Protection Agency (EPA).

This site information is divided into two parts: Part A, a list of confirmed hazardous waste disposal sites; and Part B, a report on other sites identified for further investigation.

The Part A list consists of 51 sites where illegal or improper treatment, storage, or disposal of hazardous waste has occurred. Each site listed is followed by a brief summary of the particular incident and its current status. The public drinking water supplies which could have been impacted by these sites have been tested for many contaminants and remedial actions have been taken where necessary:

The Part B list consists of 321 waste treatment, storage, or disposal sites identified for further investigation. DEQE stresses that the Part B list is a first-round approximation of the numbers and types of sites which require both investigation and verification. It is not designed to provide complete data on site specific hazardous waste issues. The Department has made no determination

concerning the accuracy of all the site information obtained from the various sources used in preparing the Part B list. Most importantly, the Department is not accusing the owners and/or operators of specific sites listed of polluting the environment.

The significance of the Part B list lies in the considerable number of sites and the need to initiate a coordinated and comprehensive program to locate, investigate, and eliminate environmental pollution from hazardous waste. This investigation and assessment program is a major task facing the Department which will require assistance from municipal officials and all the citizens of Massachusetts. A typical investigation for each site would include:

- A. Conducting a preliminary assessment;
- B. Evaluating the preliminary site assessment - eliminating the site from the list if it is not a problem, or setting its priority for further investigation among the confirmed sites according to the degree of threat to health and environment; and
- C. When necessary, conducting a complete site investigation and clean-up or other remedial action;

This program to conduct investigations of sites on the Part B list is discussed in detail in this report. The Part A and Part B lists will be updated every six months.

If your community is listed among the:

1. Part A Confirmed Sites, studies and remedial actions are being planned, are in progress, or have already been conducted at each site;
 2. Part B Sites Identified For Further Investigation, the community hazardous waste coordinator and other municipal officials should begin preliminary site assessment to obtain more complete information about the site.
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INTRODUCTION

Today, in 1980, managing hazardous waste is the most demanding environmental challenge facing Massachusetts and the nation. These wastes, which are corrosive, flammable, explosive, or toxic, are being disposed of carelessly, ending up in our fields, rivers, woodlands, and groundwater. During the past decade, a better understanding of the need for careful control of hazardous wastes was established and the first steps toward that control were made. But also during the 1970's, the sobering legacy of more than a century of toxic waste mismanagement was discovered. "Hazardous waste" has become a household term as one community after another has discovered an illegal dump site or found that its water supply was contaminated by toxic chemicals.

Approximately one half million tons of hazardous waste are generated in Massachusetts each year. This is seven percent of the estimated 7.5 million ton total of industrial, commercial, and residential solid waste generated annually in state. Hazardous waste is created by a variety of sources including industry, the military, schools, hospitals, and research laboratories. Most items found in our homes and workplaces produce some hazardous waste in their manufacture. When improperly handled, this residue can work its way into the environment, endangering public health and damaging local ecology.

Massachusetts began regulating hazardous waste in 1973, well before many other states or the federal government. At that time, the Commonwealth established regulations for licensing hazardous waste haulers and treatment, storage, or disposal facilities.

In 1976, the United States Congress enacted the Resources Conservation and Recovery Act (RCRA) to "promote protection of health and the environment and to conserve valuable resources" by significantly changing the ways in which solid and hazardous wastes are handled. RCRA requires the United States Environmental Protection Agency (EPA) to regulate hazardous wastes from cradle to grave by developing a list of specific standards that must be met by those who produce, handle, transport, store, treat and dispose of hazardous wastes. The federal regulations were issued in part on May 19, 1980; they will take effect on November 19, 1980. RCRA encourages states to take over the hazardous waste management program if they develop regulations and programs equivalent to those of EPA. States must apply to EPA to have their programs approved. If a state does not develop an equivalent program, EPA is responsible for enforcing the federal program in that state. The Massachusetts Department of Environmental Quality Engineering (DEQE) Division of Hazardous Waste has applied and expects approval of its program from EPA during January, 1981.

In November 1979, the legislature enacted the Massachusetts Hazardous Waste Management Act (Chapter 21C of the General Laws) to revise the existing hazardous waste management program in the Commonwealth to be consistent with RCRA. The Act requires the Department of Environmental Quality Engineering (DEQE) to develop comprehensive and stringent hazardous waste regulations, to develop a strong licensing program to enforce the regulations, and to involve interested and affected persons in all aspects of the program. The Act also requires that the Department publish a list of sites in Massachusetts where hazardous waste is known to be deposited. The Act establishes a new division of hazardous waste within the Department to develop and administer the hazardous waste program.

Bringing about proper hazardous waste management in Massachusetts will depend on several important programs;

1. developing comprehensive regulations to carefully track and stringently control hazardous wastes from their point of generation through each stage in handling, processing and final disposal, in order to safeguard public health and the environment;
2. conducting an effective surveillance and enforcement program to ensure that the regulations are being followed;
3. developing a network of environmentally sound, tightly controlled treatment, storage, and disposal facilities to provide an acceptable alternative to illegal dumping; and
4. assessing and resolving the problems posed by improper hazardous waste disposal activities, at both abandoned and active sites.

The success of each element largely depends on the effectiveness of the others. For example, even the best regulations will have little impact unless they are backed up by an effective enforcement program. Likewise, strong regulations and a tough enforcement program may result in even more illegal dumping unless the badly needed, tightly controlled treatment, storage, and disposal facilities can be located in the state. Finally, the legacy of more than a century of improper waste disposal must be understood and addressed before the Commonwealth's hazardous waste problem can be completely resolved.

Since its establishment in December 1979, the Division of Hazardous Waste has been developing these programs. Publication of this report is an important step in developing a coordinated, comprehensive program to assess and resolve the problems posed by improper hazardous waste disposal activities (item 4 above).

Please see Section IV. B. for a detailed status report on the steps that are being taken by the state in the program areas described above and Section IV. A. for an overview of the hazardous waste problem in Massachusetts.

I. COMMUNITY INVOLVEMENT IN HAZARDOUS WASTE MANAGEMENT

Managing the generation, handling, treatment, or disposal of hazardous waste at active or abandoned sites is the most demanding environmental challenge facing Massachusetts. Coping with this challenge requires the understanding and cooperation of us all. The Department of Environmental Quality Engineering (DEQE) alone cannot ensure that all aspects of the hazardous waste management program are properly developed and carried out. The contributions of time and energy by all concerned officials, business leaders, and citizens are essential to the development of a successful statewide program.

Since community, state, and federal officials, industrial and environmental leaders, and the general public all need to participate actively in the program, good communications is essential to make it a success.

As a first step toward establishing good lines of communication, the Department has appointed four Regional Hazardous Waste Coordinators to work closely with municipal officials and generators in the management of hazardous waste. They are:

Stephen Joyce - Western Region;
Edmond Benoit - Central Region;
Richard Slein - Metropolitan Boston/Northeast Region; and
Robert Donovan - Southeast Region

See Appendix I to determine who is your regional coordinator and how to contact him.

The regional coordinators are responsible for facilitating communication between municipal and state officials. They are developing working relationships with state and local police, fire departments, boards of health, conservation commissions, and citizen groups. They coordinate DEQE and community efforts in examining abandoned disposal sites, investigating illegal industrial waste handling practices, and keeping surveillance over sanitary landfills to stop hazardous waste dumping. The regional coordinators serve as the state contact for any hazardous waste incident.

To establish good lines of communication with each community across Massachusetts and to strengthen the hazardous waste management program, the DEQE Commissioner Anthony D. Cortese requested in September 1980 that the chief elected officials in all cities and towns designate a community hazardous waste coordinator. This position does not require hiring a new employee. Just as the regional staff are coordinating DEQE's efforts, the community coordinator would organize municipal agencies in responding to hazardous waste problems. At this time, one third of the 351 towns and cities across Massachusetts have appointed community hazardous waste coordinators. DEQE hopes that the remaining communities appoint their coordinators by January 1981.

The Department believes that a previous knowledge of hazardous waste is not necessary to serve as community coordinator but that a strong interest in the problem and the ability to manage people and projects are essential. The community coordinators' responsibilities include:

- establishing a municipal committee consisting of concerned elected officials, business leaders, and citizens to work on hazardous waste issues and to make information publicly available;

- coordinating preliminary assessments to obtain more complete information about sites requiring investigation and verification of their hazardous waste content;
- developing a local hazardous waste management plan which includes:
 - identifying potential sources of contamination;
 - outlining emergency actions in the event of spills, fires, etc.;
 - clarifying the responsibility of municipal agencies in hazardous waste management;
 - coordinating a community enforcement program; and
 - responding to the discovery of abandoned barrels and other problems.
- facilitating communications among and relaying hazardous waste information to relevant boards and departments (it's important that the community coordinators establish good working relationships with a variety of local officials);
- acting as Liaison between the community and the Division of Hazardous Waste and the regional coordinator;
- serving as local government's contact with industry;
- coordinating the community response to any actual hazardous waste problem, as authorized by the chief elected officials; and
- establishing a central file containing pertinent information about hazardous waste including ground water maps, transportation routes, the location of generators, transporters, and storage areas, etc.

The Division plans to provide educational materials, including workshops, and brochures, throughout the development of the community coordinator program. A community hazardous waste management manual, which will discuss community participation in detail, is expected to be available during 1981.

Once fully established the lines of communication will include the DEQE Division of Hazardous Waste, the Division of Hazardous Waste's Regional Coordinators, and the Community Hazardous Waste Coordinators.

In this effort to improve communications, the DEQE Division of Hazardous Waste will be responsible for:

- coordinating state and federal agencies;
- coordinating inter-departmental activities within state government;
- encouraging public participation;
- publishing the community hazardous waste management manual; and
- conducting training sessions for community coordinators.

The DEQE Regional Hazardous Waste Coordinators will be responsible for:

- coordinating inter-divisional activities within DEQE;
- acting as liaison between the community coordinators and the Division of Hazardous Waste;
- providing training for the community coordinators.

The Community Hazardous Waste Coordinators will be responsible for:

- establishing citizen/industry task forces;
- acting as liaison between the public and the Division of Hazardous Waste; and
- providing training to community governmental agencies and the public.

This communications program will help to ensure that the citizens of Massachusetts including industrial and environmental leaders, and our state, federal and municipal officials will be working together, sharing available information to best use the limited resources for solving our hazardous waste management problems.

II. THE SITE LISTINGS

The primary focus of this report is to present available information on confirmed, uncontrolled hazardous waste sites and to establish a coordinated program to locate and verify other sites where the improper treatment, storage or disposal of hazardous waste is resulting in environmental contamination. This program is described in detail later in this report (Section III).

Briefly, the site verification program consists of first conducting preliminary assessments of the sites. These will provide the necessary background information to establish whether or not a site requires a more detailed environmental investigation. A preliminary assessment is a non-technical information-gathering process which can be performed by the community coordinators and municipal officials who have firsthand knowledge of activities within their communities. The preliminary assessment information will be used to prioritize sites across the state for further investigation. The limited analytical and environmental monitoring services of both DEQE and the U.S. EPA will be directed to those sites which, after prioritization, appear to pose the most serious threats to health and the environment. Once these steps have been completed, confirmed sites can be secured and/or cleared of the hazardous waste.

The Massachusetts Hazardous Waste Management Act requires DEQE to "conduct a survey, and prepare and publish a list of sites where hazardous wastes have been deposited or abandoned" (Section 4 of Chapter 21C of the General Laws). Since the formation of the Division of Hazardous Waste, DEQE has been actively conducting programs to find and verify hazardous waste disposal sites. This report contains all the information the Department has gathered to date through studies such as the DEQE "Surface Waste Impoundments in Massachusetts," the U.S. Congress' "Eckhardt Report," and the investigations of hazardous waste incidents conducted by the Department, the Attorney General's office, state and municipal police, and the U.S. EPA.

The site information is divided into two parts: Part A, a list of confirmed hazardous waste disposal sites; and Part B, a report on other waste disposal sites identified for further investigation.

A. THE CONFIRMED HAZARDOUS WASTE SITES

(See Appendix V for the listing of these sites.)

These are sites where illegal or improper treatment, storage or disposal of hazardous waste has occurred. Each site listed is followed by a brief summary of the particular incident and its current status.

These sites are listed in alphabetical order by city and town and are divided into two sections. The first section contains those confirmed sites where corrective actions have been completed. The second section contains those confirmed sites which are being actively investigated by DEQE in cooperation with other state, municipal, and federal agencies. In many cases, DEQE and the Attorney General are prosecuting and/or negotiating with the responsible parties to clean or secure the sites.

The confirmed sites list summarizes information available to DEQE today; as investigations proceed, the status of many sites will change. DEQE will be updating the lists every six months to incorporate these changes as well as new sites listings. More detailed information on the listed sites is available by contacting the offices listed in the Epilogue of this report.

B. SITES IDENTIFIED FOR FURTHER INVESTIGATION

(See Appendix VI for the listing of these sites.)

These sites are waste treatment, storage or disposal sites identified for further investigation. This investigation program is one of the most time consuming and difficult tasks facing the Department. Only with the assistance and cooperation of the Community Hazardous Waste Coordinators and the site owner/operators, can significant progress be made in verifying whether or not sites have hazardous wastes deposited on them.

DEQE stresses that the Part B list is a first round approximation of the numbers and types of waste treatment, storage or disposal sites which require investigation and verification. It is not designed to provide complete data on site-specific hazardous waste issues. The Department has made no determination concerning the accuracy of all the information obtained from the various sources used in preparing the Part B list. The Department also stresses that it is not accusing the owners and/or operators of the specific sites listed of polluting the environment. The significance of this list lies in the considerable number of sites to be investigated and the need to initiate a coordinated and comprehensive program to seek, identify, and eliminate environmental pollution from hazardous wastes.

1. Sources of Information for Sites Listed in Part B.

The following sources of information were used in preparing the Part B list of sites requiring further investigation:

- a. "Surface Waste Impoundments in Massachusetts," DEQE, March 1980;
- b. "The Eckhardt Report," Waste Disposal Site Survey, Committee on Interstate and Foreign Commerce, October 1979;
- c. Reports from DEQE's Divisions; and
- d. The Quick Look Report, U.S. EPA.

a. Surface Waste Impoundments In Massachusetts

This study was funded by a Surface Impoundment Assessment (SIA) Grant which DEQE received from EPA in August 1978. The purpose of the study was to locate surface waste impoundments across Massachusetts, identify their owners, and categorize them according to criteria provided by EPA.

Surface impoundments, better known as "pits, ponds, and lagoons," generally are ponds designed to hold liquid and semi-solid waste until: 1) it evaporates; 2) the solids settle out or it is otherwise purified; 3) it is stabilized; or 4) it filters out through the soil. There is no typical design for an impoundment. It may be natural or artificial, lined or unlined, and range in size from a few feet in diameter to hundreds of acres. Some lagoons, basins, and pits are intended to discharge through the soil; others are designed to be leakproof.

A large variety of wastes are deposited in impoundments. Some of these are potentially hazardous. Either by design or accidentally, these wastes may seep into shallow aquifers (ground water systems) underlying disposal sites. Eventually they may work their way into drinking water supplies, as well as into lakes, rivers, and other surface waters. Most impoundments operate on the principle that some leakage will occur. In some cases the result may be a slight tainting of ground water quality; in other cases substantial ground water contamination may occur. Regional and local conditions influencing the potential for contamination from an impoundments include: soil permeability, distance from the water table, direction

of ground water flow, rainfall, evaporation, types of potentially hazardous materials present, and rate of discharge.

In Massachusetts, impoundments of industrial waste were not regulated in the past. Today the Division of Water Pollution Control and the new Division of Hazardous Waste have begun to regulate new surface impoundments stringently and to study old impoundments to ensure that they do not contaminate the ground water.

The surface impoundment study is only a first-round estimate of the potential for ground water contamination associated with surface impoundments. The surface impoundment sites constitute the majority of the Part B sites list. It is the Department's responsibility, with the cooperation of communities, industry, and the U.S. EPA to verify the data on a site-by-site basis and to gather information necessary to make conclusions regarding the actual contamination threat posed by each surface impoundment.

b. The Eckhardt Report (U.S. Congress)

The Eckhardt Report resulted from an investigation, begun in October, 1978, of hazardous waste disposal and the legislation regulating it. The Subcommittee on Oversight and Investigations of the Interstate and Foreign Commerce Committee conducted this study.

The Subcommittee's investigation revealed that little was known about the actual problem of disposal, despite the enactment of the Resource Conservation and Recovery Act of 1976 (RCRA). To initiate a systematic effort to identify the number, nature and location of all disposal sites in the country, the Subcommittee conducted the first national study of waste disposal sites.

The subcommittee chose to focus on the chemical industry because of the nature of its wastes. Rather than survey a random sample of the entire chemical industry, the Subcommittee sent standardized questionnaire forms to the 53 largest chemical companies in the country. The returned questionnaire yielded descriptive information on chemical generating facilities, waste generation and disposal per year, number of closed sites, frequency and volume of on site disposal, and frequency and volume of wastes transported to unknown locations.

A nationwide total of 3,383 waste disposal sites were identified in the Subcommittee's survey (Waste Disposal Site Directory); approximately 54 of those listed were from Massachusetts. Although these disposal sites represent only those locations used by the surveyed chemical companies, the directory provides a preliminary list of sites which must be studied further to determine whether they have an impact on public health and the environment. Those sites listed for Massachusetts are included among the Part B Sites.

c. Reports from DEQE's Divisions

The DEQE Division of Water Pollution Control is responsible for responding to oil and hazardous materials spills. The DEQE Division of Hazardous Waste is responsible for responding to leads about illegal hazardous waste sites or activities and for inspecting the operations of hazardous waste generators and licensed transporters. Reports on these incidents and inspections are incorporated into the Part B List.

The Land and Water Use Section of each DEQE regional office is responsible for maintaining a current list of both existing and closed landfills located across Massachusetts. A sanitary landfill, as defined by the Massachusetts "Regulations for the Disposal of Solid Waste by Sanitary Landfill" (310 CMR 19.00) is a method of disposing of solid wastes on land without endangering public health and safety which must be engineered and scientifically planned to ensure that it is properly located, and confines the refuse to the smallest practical area. The refuse must be covered at least once each day. Refuse is solid waste material which is either degradable or non-degradable, combustible or non-combustible, and includes garbage, but not sewage.

Under existing landfill regulations, special wastes or materials requiring special handling such as sewage solids and some chemicals, may be disposed of at properly designed sanitary landfills. However this is allowed only where the special wastes exhibit none of the characteristics of hazardous wastes, such as toxicity, corrosiveness, ignitability and reactivity. The Department and the municipal board of health must issue permits for special waste disposal. Examples of special wastes, which are permitted for disposal at approved sanitary landfills in Massachusetts, are wet asbestos and certain non-hazardous sewage or industrial sludges.

With the new solid waste regulations described above and the recently enacted Hazardous Waste Management Act, the Department is empowered to regulate landfilling operations. Because landfills are a traditional dumping ground for all kinds of waste, some of which might be hazardous, they are sites which need further investigation and verification. Those landfills reported as allegedly receiving hazardous waste are included in the Part B List. The total list of open and closed landfills is available from the Solid Waste Branch of the Division of Hazardous Waste, DEQE, 600 Washington Street, Room 320, Boston, Massachusetts 02111.

d. The Quick Look Report

The Quick Look Report is the U.S. EPA's computerized listing of uncontrolled hazardous waste sites located across the nation. Those sites listed for Massachusetts in this Report are included in the Part B List.

2. Prioritization of the Part B List

The surface impoundment sites of the Part B list are prioritized according to three ratings: a waste rating, a general priority rating, and a rating of the distance of impoundment to water supply wells or surface waters.

The waste rating estimates the severity of the potential ground water contamination due to the type of waste suspected in the impoundment. The scale for this rating is one through nine with nine being the most potentially harmful types of waste.

The general priority rating estimates the total ground water contamination potential for the impoundment. It sums the waste rating with a variety of hydrological characteristics for each site which influence the potential for contamination. The scale for this rating is one through 29, with 29 indicating the highest potential.

The rating for the distance of impoundment to water supply wells or surface waters incorporates both the distance in meters and the anticipated direction of the ground water flow.

Sites which have the highest ratings on all of these scales are the sites which must be evaluated first because they potentially pose the most severe threats to environment and public health. A key for these ratings accompanies the Part B List.

III. RESPONSE TO A SITE LISTED IN YOUR COMMUNITY

Investigating and assessing the Part B sites is a major task facing DEQE which will require assistance from municipal officials and all the citizens of Massachusetts. A typical investigation for each site would include:

- A. Conducting a preliminary assessment;
- B. Evaluating the preliminary site assessment - eliminating the site from the list if it is not a problem or setting its priority for further investigation among the confirmed sites according to the degree of threat to health and environment; and
- C. When necessary, conducting a complete site investigation and clean-up or other remedial action.

The Department anticipates that this program for site investigations will be fully established during the spring of 1981.

If your community is listed among the:

1. Part A Confirmed Sites, studies and remedial actions are being planned, are in progress, or have already been conducted at each site;
 2. Part B Sites Identified for Further Investigation, the community hazardous waste coordinator and other municipal officials should begin preliminary site assessment to obtain more information about the site.
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A. PRELIMINARY SITE ASSESSMENT

Gathering all the information needed to determine which of the Part B sites pose a threat to health or environment will be very time-consuming. For each site, extensive legwork often must be done simply to determine what types of wastes may be at the site, what types of pollution may result from the site, and who in the community may be exposed to the pollutants. The DEQE Division of Hazardous Waste, given its limited budget and personnel and other program responsibilities (see appendix III), cannot assess all the sites alone.

The community hazardous waste coordinator and other officials and citizens can play a very constructive role in the investigation of the Part B sites by working with DEQE on preliminary site assessment. Community residents know their town better than anyone else and important site-specific information is available to them. They are well qualified to perform the needed assessments in their own communities. The preliminary assessment information should be gathered without going on the site and examining the wastes.

Preliminary assessments will provide the necessary background information to determine the level of threat to health and environment posed by the site. The assessments consist of a site-use history and answers to specific predetermined questions about the site. (See Appendix II for a sample preliminary assessment form).

Information needed to assess a site includes:

1. A complete site-use history;
 - a. site uses over the years: industrial; residential; waste disposal
 - b. owners of the site (past and present) property maps, deed descriptions and restrictions, etc.
 - c. chemicals manufactured or possibly dumped at the site.
2. Types of waste suspected on site;
 - a. nature of industrial process that generated the waste
 - b. names of the parties responsible for the suspected waste
3. Evidence of pollution resulting from the site;
4. Location of nearest surface water, including changes in surface water elevations (presence of dams/diversions, culverting of streams) and changes in direction of flow by natural or man-made causes;
5. Direction of ground water flow in relation to the site now and in the historical past;
6. Location of nearest dwellings;
7. Location of nearest drinking water supply; and
8. Type and permeability of the soil.

The Department anticipates that the community coordinators and their committees will be involved in preliminary site assessment by the spring of 1981.

B. EVALUATING THE SITE ASSESSMENTS

As the preliminary assessment information on each site is gathered and returned to DEQE, DEQE will use it to evaluate whether the site poses a threat to public health or the environment.

Those sites whose assessments indicate they are not a threat will be eliminated from the list. Where the preliminary assessments confirm that the sites do contain hazardous waste, the sites will be reviewed by a joint committee of state and federal environmental officials. The committee will set priorities for conducting detailed site investigations and site clean-ups. A set of standard review criteria will be used at all times to ensure a uniform approach to site prioritization. Although DEQE is committed to cleaning up and securing all hazardous waste dump

sites quickly, severe limitations in staff and funding make it essential that the Department sets priorities to clean the sites posing the most serious threats to public health and the environment first.

C. SITE INVESTIGATION AND CLEAN-UP

While a confirmed site is being investigated to determine how to best clean or secure it, immediate safety precautions should be taken by the responding state or federal agency. These would include removing highly flammable substances from the site, stopping any waste leakage, and fencing the site to prevent unauthorized entry.

A comprehensive site investigation may involve identifying the contents of any abandoned barrels or containers and extensive testing of soil, air, and water samples at a qualified laboratory. The various options for cleaning or securing each particular site must be determined, evaluated, and the best option chosen.

The contaminated soil from the site may be treated, contained on site, or trucked to an out-of-state, licensed secure disposal facility. The contaminated groundwater may be treated although the complete removal of the chemicals frequently is not possible.

The waste from the site can be treated to reduce its hazardous nature. There are several physical, chemical, and biological processes through which hazardous waste can be detoxified. Most of these require the construction of temporary on-site treatment facilities or hauling the waste to a secure facility.

The volume of waste from the site can be greatly reduced through dewatering or incineration. Incineration has been widely used for the destruction of toxic organic wastes and results in the production of ash which is usually landfilled.

For certain wastes found on some sites no adequate treatment exists. They must be chemically fixed or encapsuled to prevent their further dispersal.

After the wastes from the site are treated as much as possible, they must be disposed of at secure chemical waste landfilling facilities which are designed to limit leaching of chemicals into the ground or surface waters. Massachusetts does not have such a facility.

D. FUNDING SITE INVESTIGATION AND CLEAN-UP

In Massachusetts, the site owner, the waste generator or the party that is responsible for the illegal disposal must fund the studies to determine the nature and extent of the contamination and must fund the clean-up.

DEQE's Division of Water Pollution Control (DWPC) responds to emergency situations caused by spills and discharges of oil and other hazardous materials. DWPC can contain or remove the spills by whatever method necessary when the hazardous material may result in damage to the "waters, shores, or natural resource utilized or enjoyed by citizens of the Commonwealth" (Ch. 705 of the Acts of 1979). When state funds are expended in this manner, the Commonwealth is entitled

to recover all costs and expenses, including damage to natural and recreational resources, from the responsible parties. DWPC funding for these activities comes from a \$300,000 revolving fund. During fiscal year 1980, \$225,000 was spent from this fund to clean up oil and hazardous waste spills including incidents at Westford, Salem, and Kingston.

Chapter 798 of the Acts of 1979 establishes a \$5 million hazardous wastes clean-up fund to clean hazardous waste dumped in landfills or other areas and to recover damages from individuals and enterprises responsible for the illegal and improper disposal. A portion of this capital outlay, \$800,000 was spent this year to continue the clean-up of Silresim in Lowell.

Special Legislative Appropriations have been made to fund the clean-up of several sites. During fiscal year 1979, \$1.5 million was appropriated for the clean-up of Silresim in Lowell. During fiscal year 1980, an appropriation of \$500,000 was made for the clean-up of Dartmouth and Freetown.

IV. THE HAZARDOUS WASTE PROBLEM AND ITS MANAGEMENT

A. HAZARDOUS WASTE OVERVIEW

According to the recently enacted Massachusetts Hazardous Waste Management Act (Chapter 21C of the General Laws), hazardous waste is "a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to an increase in mortality or an increase in serious ...illness or pose a substantial present or potential hazard to human health, safety, or welfare or to the environment when improperly treated, stored, transported, used, or disposed" The Act also authorizes the Department of Environmental Quality Engineering (DEQE) to regulate radioactive wastes which are not regulated by the federal Nuclear Regulatory Commission.

1. Hazardous Waste Generators

Hazardous wastes are created by a variety of sources including industry, the military, schools, hospitals, and research laboratories. Of these, industry is the largest generator.

Most industrial and manufacturing processes generate some hazardous waste. Listed below are seventeen (17) industries expected to be most affected by hazardous waste regulations because the type of hazardous wastes they produce are expensive to treat or dispose of and/or because large volumes of hazardous wastes are generated¹:

- | | |
|-----------------------------------|-------------------------------------|
| - electronics | - leather tanning and finishing |
| - electroplating | - pesticides |
| - plastics | - rubber |
| - metal finishing | - pharmaceuticals |
| - special machinery manufacturing | - paint and allied products |
| - inorganic chemicals | - batteries |
| - organic chemicals | - explosives |
| - textiles | - petroleum refining and rerefining |
| - metals smelting and refining | |

2. The Volumes and Types of Waste Generated

A recent study² has estimated that between 230 and 330 million gallons of hazardous waste are generated per year in New England. That is an average of

¹ Robert B. Pojasek, "Disposing of Hazardous Chemical Wastes." Environmental Science and Technology, Vol. 13, p. 810, July, 1979.

² Arthur D. Little, "A Plan for Development of Hazardous Waste Management Facilities in the New England Region," September, 1979.

25 gallons per person per year. The estimated volumes of waste generated in Massachusetts, which DEQE judges to be low, are shown below:

<u>Waste</u>	<u>Million gallons per year</u>
automotive oil	14
industrial oil	12
solvents	8
acid/alkali	6
sludges	19-55 *
chemicals	3
other (includes PCBs, reactive materials, asbestos, plastics, resins and other wastes)	1
<hr/>	
63-99 million gallons per year	

* The low figure, 19 million gallons, is the amount of sludge currently generated each year in Massachusetts. The high figure, 55 million gallons, assumes that Massachusetts will produce substantially more sludge after the pretreatment program for industrial wastes is fully established.

3. Hazardous Waste Disposal Today in Massachusetts

The 100 hazardous waste haulers and 30 treatment/storage facilities licensed by DEQE, reported hauling about 43 million gallons of waste during 1979 to both instate and out of state facilities. Most used oil, which is the largest category of hazardous waste produced instate, is burned as fuel. Other treatment or recovery processes being used on a limited basis include the reclamation of certain solvents, the incineration of some organic wastes, neutralization of acids and alkalis, and some land disposal of stabilized metallic sludges.

EPA estimates that nationally approximately 90 percent of all hazardous wastes are improperly handled. However, based on volumes reported by DEQE licensees, between 43 and 68 percent of the estimated 63-99 million gallons generated in Massachusetts are properly handled. This means that between 30 and 60 percent of our hazardous waste may not be properly handled. In addition, an unknown quantity of hazardous waste is dumped in Massachusetts by illegal interstate operations. (See Section B. 3, for a discussion of the need for hazardous waste treatment facilities in Massachusetts).

4. Hazardous Waste Contamination of Our Environment

When improperly handled, hazardous wastes can work their way into the environment by several paths. The most frequent route of re-entry is through the ground water underlying dump sites, poorly located or designed landfills, or improperly managed treatment, storage and disposal lagoons. Ground water is a major source of drinking water supplies in Massachusetts. Hazardous constituents may migrate for many miles after seeping into the ground water, eventually contaminating drinking water supplies.

Ground water is water that exists beneath the surface of the ground, as distinguished from surface lakes and streams. It collects in formations called aquifers (a layer of rock, sand, or gravel retaining significant quantities of subsurface water) and flows at variable rates in identifiable patterns. Unlike rivers and streams, ground water flows extremely slowly—from a few feet a day to a few feet a decade. It may move vertically as well as horizontally. Gravity, hydraulic pressure from other wells, and the composition of the subsurface strata have a great effect on its movement. Depending on the soil composition of the area, ground water may be found from a few feet to several hundred feet below the surface.

Surface water and ground water usually are directly connected underground. Ground water flows into rivers and streams through springs. Surface waters at the same time "recharge" - or replenish - ground water sources. Recharge areas such as some river beds and marshes are a major source of ground water supplies. These connections between surface and ground water allow the contamination of one source to contaminate the other.

Ground water contamination can result when contaminants leach (seep) into the ground in an area lacking impermeable underground strata between the contamination source and the ground water which would bar the movement of the contaminants. Industrial waste, for example, dumped in an unlined lagoon on top of soil underlain with a layer of thick clay, would probably not allow most wastes to leach into the ground water below. However, the same wastes placed in an unlined lagoon atop sandy soil would leach readily into the ground water below.

Hazardous wastes may also work their way into our rivers, lakes, and other surface waters through direct dumping, or as run-off from stockpiled wastes, landfills, and open dumps. They may pollute the air through open burning, wind erosion, evaporation and volatilization. Our soil and land may be contaminated by direct dumping or by improperly managed disposal sites.

Our state taxes have been used for clean-up and containment of hazardous waste that has been improperly/illegally disposed of in our environment. Other costs must be borne by the affected communities. Citizens from communities with contaminated water supplies often must pay for fresh water from other sources. For example in North Reading, several wells were shut down in 1978 due to unacceptably high TCE (trichloroethylene) contamination and emergency water supplies were bought from Andover at a cost of \$1350 per million gallons. In Auburn, \$180,000 was appropriated in 1978 to extend water district lines to homes that lost the use of private drinking water wells because of contamination from leachate from the town landfill.³ As of September, 1980, wells in 25 Massachusetts communities have been contaminated with toxic chemicals.

(See Appendix IV for an interim report on the organics testing program of water supplies across Massachusetts.)

³ Special Legislative Commission on Water Supply, Chemical Contamination September 1979.

5. The Impact of Hazardous Waste On Public Health

The impact of improper disposal activities on public health is extremely difficult to estimate. Once hazardous contaminants have been released into the environment, people may be exposed to them in many different ways including:

- Breathing noxious and/or poisonous fumes and polluted air;
- Drinking contaminated water;
- Touching explosive, corrosive, or toxic material; and
- Eating contaminants from foods, that were accidentally exposed to hazardous chemicals through the uptake of the chemicals from the soil or through the deposition of airborne chemicals.

Many hazardous contaminants have long latency periods; symptoms may not become apparent for many years after exposure. The effects of long term exposure to relatively low doses of contaminants are not well documented. An example of this type of problem is the potential health effects from small quantities of illegally dumped hazardous waste leaching into a community water supply. Little is known about synergistic effects, or the effects on human health from exposure to a number of different types of substances at the same time. Some substances become more potent in combination while others become weaker.

Because of the wide range of potentially toxic substances to which human beings are exposed daily, it is difficult to determine "cause and effect" relationships with certainty in the general community. The most solid evidence on the health impacts of toxic substances come from occupational exposure studies. Some efforts are now underway to do epidemiological (or population) studies of people exposed to hazardous wastes. These studies are only in the preliminary stages; much work remains to be done.

B. PROPER HAZARDOUS WASTE MANAGEMENT: A STATUS REPORT FOR MASSACHUSETTS

Proper hazardous management in Massachusetts will depend on several important programs:

1. developing comprehensive regulations to carefully track and stringently control hazardous wastes from their point of generation through each stage in handling, processing and final disposal, in order to safeguard public health and the environment;

2. conducting an effective surveillance and enforcement program to ensure that the regulations are being followed;

3. developing a network of environmentally sound, tightly controlled treatment, storage, and disposal facilities to provide an acceptable alternative to illegal dumping; and

4. assessing and resolving the problems posed by improper hazardous waste disposal activities, both abandoned and on-going practices.

The success of each element largely depends on the effectiveness of the others. For example, even the best regulations will have little impact unless they are backed up by an effective enforcement program. Likewise, strong regulations and a tough enforcement program may result in even more illegal dumping unless badly needed, tightly controlled treatment, storage, and disposal facilities can be located in the state. Finally, the legacy of more than a century of improper waste disposal must be understood and addressed before the Commonwealth's hazardous waste problem can be completely resolved.

1. Comprehensive Regulations

In November, 1979, the legislature enacted the Hazardous Waste Management Act (Ch. 21C of the General Laws) to revise the existing hazardous waste management program in the Commonwealth. The purpose of this law is "to provide adequate safeguards from the point of generation, through handling, processing, and final disposition of certain hazardous wastes which threaten the public health and safety or animal health and the environment, and to establish a statewide program to provide for the safe management of hazardous wastes."

To accomplish this program, the bill assigns responsibility for regulating hazardous wastes to the Department of Environmental Quality Engineering and established a new Division of Hazardous Waste within DEQE.

The DEQE is required to develop a regulatory program to carefully track and stringently control hazardous wastes by licensing the collectors, haulers, processors, and disposers of hazardous wastes, and by regulating hazardous wastes at the site of generation. In addition, all of these parties must comply with a manifest system which will track the movement of the wastes from "cradle to grave."

Highlights of the Hazardous Waste Management Act

The DEQE, with the input and review of interested and affected persons, shall:

- define what constitutes a hazardous waste;
- establish standards and requirements for treating, storing, transporting, using and disposing of hazardous waste and for the recovery of resources from hazardous waste;
- establish regulations concerning collection, treatment, use, or disposal of hazardous wastes at the site of generation; and
- conduct programs of public participation to assure that before undertaking actions of programmatic or policy level significance, interested and potentially affected members of the public are given an opportunity to be heard regarding such actions.

In addition the Act required that:

- no person will be allowed to collect, transport, store, treat, use or dispose of hazardous waste unless that person is in possession of a valid license and a manifest;
- DEQE must require licensees to obtain and maintain a contract of liability insurance, a surety bond, or other evidence of financial responsibility sufficient to assume the costs of damages resulting from accident or negligence, and to provide for the long-term care of licensed facilities after they reach capacity; and
- improper hazardous waste disposal is punishable by a fine of up to \$25,000 per violation per day, and/or up to five year's imprisonment. This means that offenses will be a felony.

The Division of Hazardous Waste (DHW) currently is developing new comprehensive regulations, and hopes to have them finalized by fall 1981. Until the new regulations are developed the Massachusetts Hazardous Waste Regulations (315 CMR 2.00) which have been used since 1973 will remain in effect. These regulations require that all generators must continue to use transporters licensed by the state and the transporters must continue to send their wastes to approved facilities, either in state or out of state. Hazardous waste licensees are required to submit monthly reports to DHW detailing the volume and types of wastes handled, and where the wastes are taken. In addition, DEQE on October 27, 1980 adopted the federal Resource Conservation and Recovery Act (RCRA) hazardous waste regulations which apply to generators, transporters, and treatment, storage, or disposal facilities (40 CFR Parts 260-265).

2. An Effective Surveillance and Enforcement Program

An effective, comprehensive enforcement program must be established in order to stop illegal hazardous waste activities and ensure an effective regulatory program. Developing such a program is particularly crucial because strict enforcement efforts in adjacent states appear to be resulting in more illegal hazardous waste dumping in Massachusetts. For these reasons, DEQE and the Executive Office of Environmental Affairs is committed to effectively utilizing all of the resources available to the Commonwealth in launching an aggressive hazardous waste enforcement program.

The Hazardous Waste Management Act expands state enforcement authority and imposes penalties of up to \$25,000 per offense per day, and/or up to five years imprisonment for violation of hazardous waste regulations. This means that illegal disposal is a felony. These new provisions, along with the other specific requirements of the new Act, have resulted in more aggressive enforcement actions by both the Attorney General and DEQE. Fifty indictments have been issued in hazardous waste cases to date.

The Department and the Attorney General's office are joining forces in several areas to combat "midnight dumping". These include:

- establishing a hazardous waste strike force to review potential criminal enforcement cases and coordinate state investigations of those cases;
- holding training sessions for law officers, lawyers, and DEQE's technical personnel to increase their effectiveness in investigating criminal waste handling activities and ensuring that wastes are properly handled during the police raids;
- working closely with other state Attorney Generals and environmental officials to investigate suspected interstate waste dumping operations; and
- increasing surveillance of suspected illegal "gypsy" haulers and impounding suspected hazardous waste cargoes.

To expand its own program to prevent "midnight dumping" the Department has:

- designated four regional hazardous waste coordinators (RHWCS) to ensure that DEQE responds to hazardous waste problems in a effective and timely manner;
- re-assigned one of the departments's attorneys to work full time to oversee the tightening of the licensing process, and to support the enforcement work of the Attorney General's office;
- established an internal task force to strengthen the department's solid waste enforcement program, in order to prevent hazardous waste dumping at landfills; and
- developed an interim enforcement strategy for the period before the comprehensive regulations are adopted to provide the most visible and most effective enforcement program possible given the resources now available.

This interim enforcement strategy involves increasing surveillance of hazardous waste generators, transporters, and treatment, storage, and disposal facilities and solid waste landfills. It involves working with landfill operators to stop illegal hazardous waste dumping at landfills and with waste oil users to ensure that waste oil is being incinerated and otherwise handled in an environmentally sound manner. The interim enforcement strategy also requires that generators fill out a manifest, that transporters supply detailed information to be licensed, and that transporting vehicles must carry a license.

3. Hazardous Waste Treatment, Storage, and Disposal Facilities

Massachusetts must develop a network of properly sited and controlled facilities to store, treat, and dispose of hazardous wastes in an environmentally sound manner. The lack of facilities is a severe problem which affects businesses in Massachusetts as well as throughout New England. Developing a network of these facilities is a high priority of the Executive Office of Environmental Affairs (EOEA). A recent study prepared for the New England Regional Commission indicates that Massachusetts has only enough facilities to process approximately eight percent of the estimated 63-99 million gallons of hazardous waste generated annually. This means that businesses committed to proper waste disposal must send waste to out of state facilities.

Industry will continue to face escalating costs for proper waste disposal if facilities do not become available. Disposal costs at out of state disposal facilities have been increasing at an approximate rate of 65 percent per year during the last two years. Transportation costs have also risen sharply. For example a local business which last year spent 400 dollars per truckload to send its waste to an out of state facility is now paying 4000 dollars.

The lack of facilities is becoming increasingly critical. Not only is the cost of out of state disposal rising dramatically, but the few environmentally adequate hazardous waste disposal facilities in the country are experiencing tremendous demands for their services and are quickly reaching capacity. Massachusetts firms are constantly threatened with the prospect of shipping wastes even greater distances as nearer facilities refuse to accept their wastes.

Strong regulations and a tough enforcement program may result in even more illegal dumping unless badly needed, tightly controlled facilities can be located in the Commonwealth and throughout New England.

Earlier this year the legislature enacted the Massachusetts Hazardous Waste Facility Siting Act (Chapter 508 of the Acts of 1980) based on the report of the Special Legislative Commission on Hazardous Waste. The law emphasizes community involvement in decision making and stresses the protection of public health and the environment in the construction and operation of facilities. The process for facility siting emphasizes negotiation and encourages compensation between the potential developer and the host community. Because this process is expected to take two and one half to five years, the Commission now is addressing the immediate concern of where to dispose of hazardous wastes in the years before a facility is sited and constructed.

4. Improper Hazardous Waste Disposal Activities

The regulatory and enforcement programs described above are aimed at stopping illegal disposal practices today and in the future. This involves stopping violations of the present hazardous waste regulations, and bringing the estimated 30 to 60 percent of hazardous waste being disposed of illegally under proper control.

In addition to the problems posed by on-going operations are the substantial problems created by more than a century of improper waste disposal. Many communities are learning today about the presence of old deposits of hazardous wastes within their own boundaries. The trouble may be discovered at an old disposal pit, in abandoned barrels, or through contaminated drinking water.

After the nature and extent of the problem at a hazardous waste site is determined, the waste can be safely treated and properly disposed of. But the process is extremely time-consuming and expensive. The state has already spent almost 3 million dollars of our tax money to clean three sites alone. One of them is Silres, in Lowell, where 21,000 barrels were abandoned at a five acre chemical reclamation facility. The site has been largely cleaned up at a cost of 2.3 million dollars. Additional funds have been spent in the small southeastern towns of Dartmouth and Freetown. At these sites hazardous wastes were dumped onto the ground, and illegally stored in warehouses in 55 gallon drums. To date, \$500,000 has been spent on the clean-up of these sites.

Sites like these can be cleaned by removing all barrels and securing the area to prevent further disposal of the waste. The contaminated soil from the site may be treated, contained on site, or trucked to a secure disposal facility out-of-state. Contaminated groundwater may be treated, although the complete removal of the chemicals is frequently not possible.

The incentive for improper hazardous waste disposal will continue to escalate, until enough proper treatment, storage, and disposal facilities are available in New England to handle the hazardous waste we create.

EPILOGUE

We, the citizens of Massachusetts, have begun the battle of controlling our hazardous waste as demonstrated by our growing concern for its management. This report, while providing background information on the problem, details only one of the four integral parts of our hazardous waste program; concerned municipal officials, business leaders, and citizens must become involved in surveillance and enforcement, in finding sites for treatment, storage, and disposal facilities, and in regulation development, as well as in responding to uncontrolled disposal sites.

For more information on this report write or call the:

Public Information Office, DEQE
100 Cambridge Street, 20th floor
Boston, MA 02202
(617) 727-0170

Division of Hazardous Waste, DEQE
600 Washington Street, Room 320
Boston, MA 02111
(617) 727-0774

(800) 882-1497

For information on siting and development of hazardous waste treatment, storage, and disposal facilities, as discussed in part IV section B.3 of this report, write or call the:

Executive Office of Environmental Affairs
100 Cambridge Street, 20th Floor
Boston, MA 02202
(617) 727-9800

Bureau of Solid Waste Disposal
Department of Environmental Management
100 Cambridge Street, 19th Floor
Boston, MA 02202
(617) 727-4293

APPENDICES

- I. Regional Hazardous Waste Coordinators List
- II. Preliminary Site Assessment Sample Form
- III. Summary of the Division of Hazardous Waste's Program
- IV. Water Supply Status: SPOT Program
- V. Part A Confirmed Hazardous Waste Disposal Sites
- VI. Part B Sites Requiring Further Investigation

APPENDIX I

REGIONAL HAZARDOUS WASTE COORDINATORS

The Department of Environmental Quality Engineering (DEQE) has designated four regional hazardous waste coordinators to ensure that hazardous waste problems are responded to in an effective and timely manner. DEQE urges each community to designate a community hazardous waste coordinator to work together with its regional counterpart.

WESTERN REGION 1

Hazardous Waste Coordinator: Stephen Joyce
 Western Region
 DEQE
 1414 State Street
 Springfield, MA 01101
 (413) 785-5327

Communities in this region are:

Adams	Florida	Middlefield	Sandisfield
Agawam		Monroe	Savoy
Alford	Gill	Montague	Sheffield
Amherst	Goshen	Monterey	Shelburne
Ashfield	Granby	Montgomery	Shutesbury
Athol	Granville	Monson	Southampton
	Great Barrington	Mount Washington	South Hadley
Becket	Greenfield		Southwick
Belchertown		New Ashford	Springfield
Bernardston	Hadley	New Marlboro	Stockbridge
Blandford	Hampden	New Salem	Sunderland
Brimfield	Hancock	North Adams	
Buckland	Hardwick	Northampton	Tolland
	Hatfield	Northfield	Tyringham
Charlment	Hawley		
Cheshire	Heath	Orange	Wales
Chester	Hinsdale	Otis	Ware
Chesterfield	Holland		Warwick
Chicopee	Holyoke	Palmer	Washington
Clarksburg	Huntington	Pelham	Wendell
Colrain		Peru	Westfield
Conway	Lanesboro	Petersham	Westhampton
Cumington	Lee	Pittsfield	West Springfield
	Lenox	Plainfield	West Stockbridge
Dalton	Leverett		Whately
Deerfield	Leyden	Richmond	Wilbraham
	Longmeadow	Rowe	Williamsburg
Easthampton	Ludlow	Royalston	Williamstown
East Longmeadow		Russell	Windsor
Egremont			Worthington
Erving			

CENTRAL REGION 2

Hazardous Waste Coordinator: Edmond G. Benoit
 Central Region
 DEQE
 75 Grove Street
 Worcester, MA 01605
 (617) 791-3672

Communities in this region are:

Acton	East Brookfield	Marlborough	Shirley
Ashburnham		Maynard	Shrewsbury
Ashby	Fitchburg	Medway	Southborough
Auburn		Mendon	Southbridge
Ayer	Gardner	Milford	Spencer
	Grafton	Millbury	Sterling
Barre	Groton	Millville	Stow
Bellingham			Sturbridge
Berlin	Harvard	New Braintree	Sutton
Blackstone	Holden	Northboro	
Bolton	Hopedale	Northbridge	Templeton
Boxborough	Hopkinton	North Brookfield	Townsend
Boylston	Hubbardston		Tyngsborough
Brookfield	Hudson	Oakham	
	Holliston	Oxford	Upton
Charlton			Uxbridge
Clinton	Lancaster	Paxton	
	Leicester	Pepperell	Warren
Douglas	Leominster	Phillipston	Webster
Dudley	Littleton	Princeton	Westborough
Dunstable	Lunenburg		West Boylston
		Rutland	West Brookfield
			Westford
			Westminster
			Winchendon
			Worcester

METROPOLITAN BOSTON/NORTHEAST REGION 3

Hazardous Waste Coordinator: Richard F. Slein
 Met. Boston/Northeast Region
 D.E.Q.E.
 323 New Boston Street
 Woburn, MA 01801
 (617) 727-5194 - (617) 935-2160

Communities in this region are:

Amesbury	Essex	Malden	Salem
Andover	Everett	Manchester	Salisbury
Arlington		Marblehead	Saugus
Ashland	Framingham	Medfield	Sherborn
		Medford	Somerville
Bedford	Georgetown	Melrose	Stoneham
Belmont	Gloucester	Merrimac	Sudbury
Beverly	Groveland	Methuen	Swampscott
Billerica		Middleton	
Boston	Hamilton	Millis	Tewksbury
Boxford	Haverhill	Milton	Topsfield
Braintree	Hingham		
Brookline	Holbrook	Nahant	Wakefield
Burlington	Hull	Natick	Walpole
		Needham	Waltham
Cambridge	Ipswich	Newbury	Watertown
Canton		Newburyport	Wayland
Carlisle	Lawrence	Newton	Wellesley
Chelmsford	Lexington	Norfolk	Wenham
Chelsea	Lincoln	North Andover	West Newbury
Cohasset	Lowell	North Reading	Weston
Concord	Lynn	Norwood	Westwood
	Lynnfield		Weymouth
Danvers		Peabody	Wilmington
Dedham			Winchester
Dover		Quincy	Winthrop
Dracut			Woburn
		Randolph	
		Reading	
		Revere	
		Rockport	
		Rowley	

SOUTHEAST REGION 4

Hazardous Waste Coordinator: Robert A. Donovan
Southeast Region
D.E.Q.E.
Lakeville Hospital
Main Street
Lakeville, MA 02346
(617) 947-1231

Communities in this region are:

Abington	Fairhaven	Nantucket	Sandwich
Acushnet	Fall River	New Bedford	Scituate
Attleboro	Falmouth	North Attleboro	Seekonk
Avon	Foxborough	Norton	Sharon
	Franklin	Norwell	Somerset
Barnstable	Freetown		Stoughton
Berkley		Oak Bluffs	Swansea
Bourne	Gay Head	Orleans	
Brewster	Gosnold		Taunton
Bridgewater		Pembroke	Tisbury
Brockton	Halifax	Plainville	Truro
	Hanover	Plympton	
Carver	Hanson	Plymouth	Wareham
Chatham	Harwich	Provincetown	Wellfleet
Chilmark			West Bridgewater
	Kingston	Raynham	Westport
Dartmouth		Rehoboth	West Tisbury
Dennis	Lakeville	Rochester	Whitman
Dighton		Rockland	Wrentham
Duxbury	Mansfield		
	Marion		Yarmouth
Eastham	Marshfield		
East Bridgewater	Mashpee		
Easton	Mattapoisett		
Edgartown	Middleborough		

APPENDIX II

PRELIMINARY SITE ASSESSMENT SAMPLE FORM

In the past, if environmental contamination was suspected at a particular site, analytical testing of the water, soils, or air was performed immediately. This is a sensible approach to detect traditional pollution problems such as bacterial contamination from sewage discharges.

Today, hazardous waste pollutants present a more complicated problem; analytical tests do not provide a practical solution to detecting this environmental contamination. Hazardous wastes often are complex mixtures of inorganic and organic chemicals. The number of laboratories certified to perform organic chemical analyses of samples is extremely limited; these analyses frequently cost over \$1000 per sample. These chemical mixtures can pollute our ground water as well as volatilize into the air. Ground water is difficult to sample and test because it is not easily accessible; the technology of monitoring volatile air pollutants is expensive and complex.

Preliminary site assessment is a way of gathering significant factual information about a site before analytical testing programs are designed and implemented. The preliminary site assessment information will be used to prioritize more complex investigations so that the limited state or federal funds available for the costly analytical procedures can be utilized in the most effective manner.

The following forms were standardized by the U. S. EPA for use throughout the nation. The Division of Hazardous Waste is incorporating these forms into its assessment program, so that the data on Massachusetts sites can be fed into the national computerized system.

Detailed instructions and more copies of the form are available from the DEQE Division of Hazardous Waste, 600 Washington Street, Room 320, Boston, MA 02111.

REGION	SITE NUMBER (to be assigned by Hq)
--------	------------------------------------

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

A. SITE NAME		B. STREET (or other identifier)	
C. CITY	D. STATE	E. ZIP CODE	F. COUNTY NAME
G. OWNER/OPERATOR (If known) 1. NAME		2. TELEPHONE NUMBER	
H. TYPE OF OWNERSHIP <input type="checkbox"/> 1. FEDERAL <input type="checkbox"/> 2. STATE <input type="checkbox"/> 3. COUNTY <input type="checkbox"/> 4. MUNICIPAL <input type="checkbox"/> 5. PRIVATE <input type="checkbox"/> 6. UNKNOWN			
I. SITE DESCRIPTION			
J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)		K. DATE IDENTIFIED (mo., day, & yr.)	
L. PRINCIPAL STATE CONTACT 1. NAME		2. TELEPHONE NUMBER	

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED (*no hazard*)

☐ 2. IMMEDIATE SITE INSPECTION NEEDED

a. TENTATIVELY SCHEDULED FOR: _____

b. WILL BE PERFORMED BY: _____

☐ 3. SITE INSPECTION NEEDED

a. TENTATIVELY SCHEDULED FOR: _____

b. WILL BE PERFORMED BY: _____

☐ 4. SITE INSPECTION NEEDED (*low priority*)

C. PREPARER INFORMATION		
1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)

A. SITE STATUS <input type="checkbox"/> 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)		<input type="checkbox"/> 2. INACTIVE (Those sites which no longer receive wastes.)	<input type="checkbox"/> 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)
B. IS GENERATOR ON SITE? <input type="checkbox"/> 1. NO <input type="checkbox"/> 2. YES (specify generator's four-digit SIC Code): _____			
C. AREA OF SITE (in acres)	D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES 1. LATITUDE (deg.-min.-sec.) 2. LONGITUDE (deg.-min.-sec.)		
E. ARE THERE BUILDINGS ON THE SITE? <input type="checkbox"/> 1. NO <input type="checkbox"/> 2. YES (specify): _____			

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MOUNTAIN DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☐ 2. LIQUID ☐ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☐ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE
☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGENATED SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- ☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify): _____
☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER
☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER
☐ 10. OTHER (specify): _____

B. IN COMPLIANCE?

- ☐ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): _____

VIII. PAST REGULATORY ACTIONS

- ☐ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

- ☐ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

- ☐ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

APPENDIX III

SUMMARY OF THE DIVISION OF HAZARDOUS WASTE'S PROGRAM

The primary objective of the Division is to fulfill the requirements of the Hazardous Waste Management Act. A set of specific standards must be designed to regulate the transportation, storage, disposal, and treatment of hazardous waste. A task force to write these regulations has been formed and a "discussion draft" is expected to be distributed in December 1980. At that time, the draft will be circulated at public meetings throughout the state. The regulations will then be rewritten incorporating comments and suggestions. The proposed regulations will be reviewed at public meetings and hearings during May and June, 1981 and their promulgation is expected in the fall of 1981.

These regulations must be enforced through an extensive permitting and surveillance program. If the problem of improper disposal is to be solved, a strong preventive enforcement program must be established.

The current enforcement program is being upgraded to increase surveillance by inspecting all licensees, giving special attention to firms with storage, treatment, or disposal facilities located in Massachusetts; inspecting key hazardous waste generators; and increasing the monitoring of solid waste landfills. The current licensing process is being tightened to make it more difficult for non-licensed haulers to represent themselves as licensees; a revised license format is being adopted which commits licensees to specific standards of performance.

The Division must obtain from the United States Environmental Protection Agency interim and then final authorization of the state program by 1983. The Division plans to obtain interim authorization in January 1981.

The management of the response to abandoned sites, as discussed in the body of this report, is another aspect of the Division's program.

The solid waste regulatory program, which is part of the Division's responsibilities, is being examined from technical and policy standpoints. An updated program is being developed which addresses the current concerns of groundwater contamination, resource recovery and the economy.

At present, the Division's program has 22 staff members as well as 19 additional personnel which are borrowed from other Divisions. Among those borrowed are four regional hazardous waste coordinators. The U.S. EPA recommends that a successful hazardous waste regulatory program in a state like Massachusetts should have a staff of 74. Twenty-six new state positions have been approved for the Division; they will be filled before January 1981. Filling these new positions and finalizing the structure and organization of the program are among the Division's highest priorities.

Despite hazardous waste program improvements, the Division will clearly need help from other sources to ensure that the problems associated with hazardous waste

are dealt with in a timely manner. The Division hopes to accomplish this through the establishment of:

- community hazardous waste committees involving citizens, and industrial, environmental, and municipal leaders, and organized by the community coordinators; and
- good communications between the Division, the regional coordinators, and the community coordinators as described in this report (Section I).

APPENDIX IV

WATER SUPPLY STATUS: SPOT PROGRAM

Organics Testing Program

Interim Report

The DEQE Division of Water Supply is responsible for monitoring public surface and ground water supplies for microbiological, chemical, and radiological contamination in accordance with the Safe Drinking Water Act. Due to the increased concern about the contamination of water supplies by toxic organic chemicals, and as a part of the State-EPA Agreement (SEA), DEQE began, in February 1980, a special program to test ground water supplying municipal drinking water for this type of contamination.

This program is designed to investigate the levels of volatile halogenated hydrocarbons linked to many adverse health impacts including carcinogenicity and toxicity. The tests performed are for twelve most common purgeable organics and, therefore, the program has been called SPOT, State Purgeable Organics Testing Program.

By the end of September 1980, over 500 wells had been tested and the results were submitted to the water purveyors. The 500 wells represented samples from over 160 separate water supply systems across the Commonwealth. Because the above mentioned SEA called for testing 1,000 wells, it is appropriate to submit this interim report at the half-way point of the agreement. Also, since the signing of the agreement, DEQE has determined that all community ground water sources in the Commonwealth should be tested; the program will be extended until this is accomplished.

Of over 5,600,000 persons in the Commonwealth over 97% are serviced by public water supplies. Almost 4,000,000 use public surface supplies for water, about 1,500,000 use public ground water sources, and the remainder of the state's population is served by private wells. This survey, when complete will have addressed the public water supply sources of about 1,500,000 persons.

Presently, the water supplies of approximately 1,403,000 people or 93.5% of persons served by public ground water sources have been tested. The results of the analyses thus far available, are summarized below:

<u>Category</u>	<u>Sources</u>	<u>Comments</u>
Acceptable	507	Presently meet all applicable Federal and State standards and criteria.
Over guidelines	3	Wells were shut down, remain shut and DEQE personnel are conducting surveys into contamination sources.
TOTAL	510	

Finally, as agreed with EPA, a report will be submitted after 1,000 sources have been tested, and upon completion of testing of all Community groundwater supplies.

NOTE: Prior to the SPOT program, the Special Legislative Commission on Water Supply published a report entitled Chemical Contamination in Massachusetts, September, 1979. The report describes 22 incidents of toxic chemicals contaminating water supply wells in Massachusetts.

APPENDIX V

CONFIRMED HAZARDOUS WASTE SITES

Section I: Remedial Actions Completed

This section contains sites where corrective actions have been taken and completed. The listings contain brief summaries of each incident. More detailed information about specific sites is available through the Division of Hazardous Waste.

Agawam
777 Silver Street

History

One hundred and fifty barrels of waste paints and solvents originating from Spaulding North America Company of Chicopee were found abandoned at this site. The wastes had been transported to the site by another party.

Current Status

Spaulding hired a licensed contractor to remove the materials. Cleanup began during the week of May 19, 1980 and was completed during the week of June 2, 1980 under DEQE supervision.

Billerica
Winning Road

History

In June, 1979, seven barrels of hazardous waste were found abandoned in a wooded area off Winning Road. Their contents included methyl ethyl ketone (MEK) and waste ferric chloride.

Current Status

The source of the barrels could not be determined. After a site inspection by DEQE and the Billerica Board of Health, the Board funded the removal and proper disposal of the barrels. No spillage of the waste was observed. There were no public water supply impacts.

Brockton
121 Crescent Street

History

Approximately 60 drums of hazardous waste were found abandoned on property formerly occupied by the Magic Chemical Co. in July 1980.

Current Status

Due to the potential fire hazard and leaching from spillage at the site, the Department removed the wastes during July 1980. No drinking water supplies which depend on ground water are in the vicinity of the site. No impact on surface waters has been observed.

Burlington
Microwave Associates
Third Avenue

History

In September, 1979, DEQE inspected the site after an accidental spill of TCE (trichloroethylene) from a chemical storage tank.

Current Status

Contaminated soils were removed by the company in September, 1979. Although no direct connection to this incident has been demonstrated, two nearby municipal water supply wells were shut-down due to TCE contamination.

Charlestown
6 Roland Street

History

Approximately 500 barrels of hazardous wastes were discovered illegally stored in a warehouse in April 1980.

Current Status

After an investigation by DEQE in April, 1980, the barrels were voluntarily removed by the waste generator and disposed of properly. No environmental impact was observed from the illegal storage operation.

Clarksburg
River Road
The yard adjacent to the Strong-Hewitt Building

History

Approximately 1400 drums which contained waste toluol, methyl ethyl ketone (MEK), cured rubber, and glue base were improperly stored at this site.

Current Status

Cleanup began in April, 1980 and was completed in May, 1980. The cleanup was supervised by DEQE in coordination with the Attorney General's Office.

Dedham
150 Bridge Street

History

In March, 1980, eight 55 gallon drums of solvents and waste oils were discovered abandoned in a wetland area. The persons responsible for the incident could not be identified.

Current Status

The barrels were removed by the Department at a cost of \$550.00. No environmental impact was observed.

Dorchester
The Liquidator, Inc.
Freeport Street

History

In 1979, some 2000 barrels of various organic chemicals were found improperly stored at the site which is adjacent to a residential area.

Current Status

All stored wastes have been removed from the site per order of the City of Boston, Division of Health and Hospitals. The operators of Liquidator have been convicted of both civil and criminal offenses relating to this incident.

Halifax

Off Route 58, Halifax/Plympton townline

History

Ten barrels of hazardous waste were found on a power line right-of-way in Halifax in May 1980.

Current Status

The barrels were removed from the site on June 4, 1980 by the Department. Because the waste was contained and removed from the site rapidly, testing of the drinking water was not necessary.

Lowell

Middlesex St. Warehouse

History

In October, 1979, DEQE in conjunction with the Lowell Police and the Attorney General discovered an illegal hazardous waste transportation, storage, and disposal operation at the site. Approximately 250 drums of waste were found. The investigation also determined that tank trucks were discharging wastes through a floor drain at the warehouse into the Merrimac River.

Current Status

Several persons have been indicted in the case. The state removed the stored waste at a cost of approximately \$15,000. At the time, the wastes discharged into the Merrimac River directly impacted Lawrence's water supply which is downstream from Lowell. There is no present impact on water supply.

North Adams

Inflated Products Co.
Mill and Union Streets

History

This site contained 351 drums of improperly stored chemical wastes.

Current Status

Cleanup began in May, 1980 and was completed in September, 1980. It was supervised by personnel from the Division of Water Pollution Control, Western Regional Office, in coordination with the Attorney General's Office.

Pepperell

Off Rte. 111 (Nashua Road)

History

Approximately two years ago, the Department received a call from a member of the Pepperell Board of Health, alleging that barrels had been abandoned at this site.

Current Status

The inspection of this site by the Department indicated that the barrels already had been removed, although some spillage remained. Samples from the spillage were tested; there is no apparent environmental impact. No public water supplies are located in the vicinity of the site.

Reading

Incom Inc.

312 Ash Street

History

After the sale of this facility to Incom Inc., it was discovered that approximately 600 drums of polyurethane waste was improperly stored at the site which was formerly owned by Trancoa Chemical Corporation.

Current Status

After DEQE inspection in July, 1980, Incom Inc. agreed to voluntarily remove and properly dispose of the wastes.

Salem

12 Franklin Street

History

In May, 1980, DEQE and the Attorney General discovered an illegal waste storage depot operating in a Salem warehouse. Approximately 400 barrels of hazardous waste were discovered.

Current Status

DEQE removed the wastes and secured the site at a cost of \$19,000.00. The Attorney General is continuing its criminal investigation.

Shrewsbury

Worcester Sand & Gravel

182 Holden Street

History

On August 14, 1978, Liquid Waste Specialists, Inc. deposited approximately 1200 gallons of waste oil as a dust suppressant on the dirt roads of Worcester Sand and Gravel. Worcester Sand and Gravel is located near two of Shrewsbury's municipal drinking water wells.

Current Status

On August 15, 1980, the Department ordered the company to remove all oil contaminated soil within 400 feet of the wells. The soil was removed. Subsequent analysis indicated that the waste oil was contaminated with various organic compounds; no contamination of the wells was detected. Liquid Waste Specialists were brought to court, found guilty, and fined \$2,000.

Springfield

282 Cottage Street

History

Two hundred and thirty eight barrels of waste paints and waste solvents originating from Spaulding, North American Company of Chicopee, were found abandoned at this site. The wastes had been transported to the site by another party.

Current Status

Spaulding hired a licensed contractor to remove the materials. Cleanup was completed on May 21, 1980. The cleanup was supervised by personnel from the Division of Water Pollution Control, Western Regional Office.

Wakefield

Pleasure Island area

History

In 1978, 200 barrels of chemical wastes were dumped illegally at the Pleasure Island area of Wakefield. Wakefield officials found those responsible.

Current Status

The responsible parties were in the process of removing the wastes, when the site caught on fire; they removed the wastes remaining after the fire. There is no present impact on public water supply.

Weymouth

Webb State Park

History

In May, 1980, DEQE responded to a request to investigate an abandoned dump at the Webb State Park. The investigation revealed soils contaminated with low levels of arsenic, chromium and lead.

Current Status

Corrective actions were taken at the park which included securing the waste areas and providing an impervious cover over the contaminated soils.

Woburn
Mishawaum Road.

History

In May, 1979, Woburn Police informed DEQE of numerous abandoned barrels of hazardous waste on a vacant lot on Mishawaum Road, adjacent to Rte. 128. DEQE's inspection revealed approximately 175 barrels of waste toluene diisocyanate, and polyurethane resin. A nearby chemical company had hired an out-of-state waste disposal firm to remove the waste from the plant. The disposal firm abandoned the waste at the vacant lot.

Current Status

The barrels were voluntarily removed by the out-of-state disposal firm prior to a court hearing. DEQE's site investigation led to the discovery of TCE (trichloroethylene) contamination of two of Woburn's municipal drinking water supply wells, (wells G & H). The wells have been closed since DEQE discovered the contamination. No cause for the well contamination has yet been discovered.

Wrentham
775 South Street (Route 1A)

History

Two thousand gallons of hazardous wastes were stored in one quart containers and approximately 150 gallons had been spilled onto the ground on the Nana property in Wrentham. The wastes included the pesticide dieldren and the solvent methyl ethyl ketone (MEK).

Current Status

The state removed and properly disposed of the wastes on October 2, 1978. The clean-up was financed through a special legislative appropriation of \$7000. The drinking water was monitored in Wrentham; no contamination was detected.

Yarmouth
Intersection of Old Town House Road and East Yarmouth Road

History

In 1979, several drums of paint wastes were improperly dumped in the Yarmouth landfill allegedly by Liquidator, Inc.

Current Status

Liquidator, Inc. hired the licensed contractor, Chem-Waste, Inc. to remove the drums and transport them to a secure landfill in New York.

APPENDIX V

CONFIRMED HAZARDOUS WASTE SITES

Section II: Active Investigations

This section contains sites which are being actively investigated by DEQE in cooperation with other state, municipal and federal agencies. In many cases, DEQE and the Attorney General are prosecuting and/or negotiating with responsible parties to clean or secure the sites. Several listings contain additional site information gathered during the Department's Surface Waste Impoundments (SIA) study. For a complete explanation of the terms and symbols used for the SIA information, consult Appendix VI. More detailed information about specific sites is available through the Division of Hazardous Waste.

W. R. Grace Company
Independence Road

History

In December, 1978, contamination from volatile organics was discovered in Acton's public water supply wells, Assabet 1 and 2. The wells were closed on December 18, 1978. A hydrogeological study funded by W. R. Grace Company traced the organics to lagoons on the grounds of the W. R. Grace facility.

Current Status

On July 14, 1980, the Department and W. R. Grace Company entered into a consent order requiring the W. R. Grace Company to comply with a schedule for preventing further contamination of the ground water from the primary, emergency, and secondary lagoons and an industrial landfill on the site. The order also requires a complete report from the company on the types and quantities of wastes in the landfill, as well as a plan to close and secure the landfill. The U.S. EPA and W. R. Grace Company agreed to similar requirements leading to a consent decree on October 21, 1980.

SIA Information (IND 87, ID210)

9 impoundments, SIC 2899; Step 4: 9, Step 5: 29, Step 6: 9A

Amesbury

Microfab, Inc.
Haverhill Road

History

A large volume of industrial wastewater was found discharging into nearby wetlands. The plating wastewater contained copper, nickel, silver, lead, and other heavy metals. The owner corrected the situation in 1977. A barrel rinsing operation is also at this site.

Current Status

The Department currently is investigating this site. Tests of on-site private wells in October, 1980, found 2 wells to be contaminated with organic chemicals. In its investigation, the Department will assess the flow of the ground water, and the possible movement of contaminants into wetlands and surface waters.

Andover

Reichold Chemical Inc.
77 Lowell Junction Road

History

Industrial sludge containing organics was landfilled and deposited on the ground at this site. Industrial wastewater containing similar materials were deposited in unlined lagoons and were discharged into the ground.

Current Status

The Department completed a preliminary assessment of the site in April, 1978. In April, 1979, the site owner submitted a detailed plan for evaluating and cleaning the site; he removed the sludge in July, 1979, and installed a new wastewater treatment system in January, 1980. The unlined lagoons

have been removed and wastewater discharge has been stopped. The owner is continuing to clean the ground water at the site. The Department's on-going investigation will address the flow of contaminants with the ground water, and the potential impact on the municipal water supply. It will also address the quality of the water and sediments of the Shawsheen River.

SIA Information (IND 23, ID198)

6 impoundments, SIC 2821; Step 4: 8, Step 5: 27, Step 6: 6B

Andover

GSF Corporation

Lowell Junction Road

History

During a November, 1979 preliminary assessment of this facility, DEQE discovered numerous drums of waste buried at the site and an apparent barrel rinsing operation. The wastes contained chlorinated hydrocarbons and dyes.

Current Status

After DEQE inspection, the site owner excavated the buried drums and contaminated soils which are now stored on site awaiting proper disposal.

Ashland

Industrial Park

Megunco Road

History

During its on-going site investigation which began in March, 1980, the Department found that the site formerly owned by Nyanza, Inc. had been used as a textile dye waste dump for industrial sludges, drums, and spill residue.

Current Status

A detailed site assessment has been initiated by the new site owners; abandoned burial areas as well as impacts on ground water and surface water are being examined. Evidence of chemical contamination of bottom sediments in a municipal reserve water supply (Sudbury Reservoirs #1 and #2) has been obtained however a direct cause and effect relationship has not yet been established. The Department's investigation and compliance monitoring is continuing.

SIA Information (IND 16, ID218)

5 impoundments, SIC 2819; Step 4: 9, Step 5: 28, Step 6: 5C

Ashland

Colonial Lacquer and Chemical Company

409 Eliot Street

History

DEQE, in September, 1978, inspected the site and confirmed that liquid chemical wastes were being discharged onto the ground and that drums of chemical wastes had been buried at the site.

Current Status

DEQE ordered that the wastes be removed and properly disposed of in

September, 1978. Immediate corrective actions were taken by the site owner. DEQE is continuing investigation of the site.

Bedford
BASF Industries
Crosby Drive

History

During a May 1978 site inspection, the Department detected the discharge of industrial wastes onto the ground.

Current Status

In September 1978, DEQE ordered BASF to eliminate the discharge. Immediate corrective measures were initiated by BASF. Engineering studies to determine the impacts of the waste disposal are continuing. Although no direct cause and effect relationship has been demonstrated, 3 municipal wells located near the site were closed due to chemical contamination.

Belchertown
Belchertown Bulk Carriers
Bay Road

History

In May 1979, DEQE investigated Belchertown Bulk Carriers after reports that the firm's septic system was being used to dispose of waste chemicals from truck washing operations. DEQE ordered this practice to stop in June 1979. The firm also maintained an on-site lagoon for the storage and disposal of waste which has since been removed.

Current Status

DEQE has also ordered site study and cleanup by Belchertown Bulk Carriers. The District Attorney's office has funded a hydrogeological study of the area. DEQE is currently awaiting the hydrogeological report before acting on Belchertown Bulk Carriers appeal of the order.

SIA Information (IND 6, ID483)

4 impoundments, SIC 2869; Step 4: 8, Step 5: 27, Step 6: 9A

Cambridge
W. R. Grace Company
62 Whittenmore Avenue

History

In 1978, engineers testing soils for the MBTA Red line Extension discovered acid sludges on the property of W. R. Grace & Company.

Current Status

After inspection by DEQE in March, 1979, Grace contracted for a detailed topographical and hydrogeological study of the site. DEQE's investigation is continuing during the ongoing site clean-up being performed by Grace and the MBTA. There is no public drinking water supply in the vicinity.

SIA Information (IND 37, ID182)

9 impoundments; SIC 2822; Step 4: 9, Step 5: 28, Step 6: 9A

Dartmouth
Route 6,
Southeast of the Intersection with Reed Road

History

The Freetown investigation led to the discovery on April 19, 1979 of illegal storage and disposal of hazardous wastes at this site in Dartmouth. Testing showed that the site was a threat to public health and safety through the potential for fire and ground water contamination.

Current Status

To address the immediate need for clean-up, the Massachusetts' Legislature passed a special appropriations bill of \$500,000 to clean both the Dartmouth and Freetown sites. The clean-up is nearly completed, although some barrels are still stored on site awaiting final disposition. The municipal water supply was tested for contamination from this site; none has been detected. Harold Mathews of H. and M. Drum Co. was convicted for involvement in this case. The Department is taking further enforcement action in this matter.

Dracut
Wells Metal Finishing
1934 Lakesville Avenue

History

The Department and EPA conducted a site investigation in May, 1980 and discovered industrial wastewater discharging onto the ground. The discharge contained chromium plating wastes.

Current Status

The Department ordered Wells Metal Finishing to cease the discharge and submit remedial action plans. Immediate corrective actions were taken by the company in June, 1980. No municipal water supply is in the vicinity. The Department's investigation and compliance monitoring is continuing.

Freetown
Ridgehill Road
East of the Junction of
Routes 79 & 24

History

On April 9, 1979, the Freetown Police Department notified the Department of the illegal storage and disposal of thousands of gallons of hazardous waste in the village of Assonet. Investigations by the Department and Freetown police revealed the storage of hazardous wastes in a warehouse and in three unlicensed trailers, as well as illegal dumping and burial of wastes on the surrounding property.

Current Status

The cleanup of the Freetown site is nearly completed, although some barrels are still stored on site awaiting ultimate disposal. The cleanup of the Dartmouth and Freetown sites was funded by the state through a special legislative appropriation; the cost was \$500,000. No municipal water supply is located in Freetown, but near-by private wells were monitored during the year between the discovery of the site and completion of clean-up. No contamination was detected. Harold Matthews of H. and M. Drum Co. was convicted for involvement in this case and for similar illegal dumping in Dartmouth. The Department is taking further legal action.

Kingston.

Smith Lane

History

On February 29, 1980, in conjunction with the Massachusetts' State Police and the Attorney General's Office, DEQE investigated Marty's GMC on Smith Lane and determined that waste was illegally stored and buried on site and on adjacent properties.

Current Status

The Department removed 250 exposed drums of hazardous waste. The estimated 800 barrels remaining and 900 cubic yards of contaminated soil were secured at the site awaiting final and complete disposition. The cost of the remaining clean-up is estimated at \$350,000. Municipal and private wells near the site were monitored for contamination; none was detected.

LeeClark Aiken Co.
Water StreetHistory

Waste cutting oil and some solvents have been discharged into a sand and gravel excavation on the site.

Current Status

On October 30, 1980, the Department issued an Order requiring that the company hire a licensed hauler to move the wastes and retain an environmental consultant to determine the extent of the contamination and the method of clean-up.

Leicester
Liquid Waste Specialties, Inc.
Off Stafford Street

History

In late February 1976, an industrial waste storage lagoon located near the Auburn town line broke open, discharging chemical waste into an area of streams and wetlands in Auburn.

Current Status

The Department ordered the owner of the lagoon, Liquid Waste Specialties, to remove the remainder of the wastes from the lagoon, to install a device to separate the oil from the water, and to secure the lagoon by covering it with a clay liner. The Department's ongoing investigation of this site indicates evidence of continued oil discharge and contamination of the aquifer below the site. The potential for movement of the contaminants in the groundwater and possible affects on drinking water supplies are currently being investigated by the Department.

SIA Information (AIN 4, ID 471)

2 impoundments, SIC 2899; Step 4: 9, Step 5: 21, Step 6: 3A

Lowell
Roche Brothers Barrel and Drum Co.
161 Phoenix Avenue

History

In 1978, large amounts of many types of wastes were found at this site which houses a barrel reclamation facility. Problems at this site include:

- o disposal of industrial sludges on the ground;
- o disposal of dregs (burnt out drum contents) at the site;
- o leakage of liquid industrial waste from faulty containers; and
- o illegal storage of drums containing chemical wastes.

Current Status

The Department and EPA are jointly investigating this site. The site owner has been requested to submit an inventory of waste materials contained on site and to begin to develop clean-up plans.

Lowell
Silresim Corp.
Tanner Street

History

In 1977, 15,000 barrels of hazardous waste and tanks storing vast amounts of chemicals were left at the bankrupt Silresim Chemical Corporation site.

Current Status

The state has removed all the barrels and much of the bulk storage from the site at a cost of approximately \$2.4 million. DEQE's investigation of the site is continuing. There was no impact upon public water supply.

Lunenburg
Off Townsend Harbor Road

History

In 1979, the Department found an estimated 2000 drums of waste, including resins and organics (primarily toluene) in a pit located off Townsend Harbor Road. The Department estimates that the material was dumped between 1972 and 1975.

Current Status

The Department's plan for clean-up of this site includes installing a solvent recovery system, carrying out a hydrological study to determine the movement of contaminants in the groundwater, and conducting a water testing program. This recovery program will continue through 1981. At this time, sampling of near-by private drinking water wells has not detected any contamination.

SIA Information

1 impoundment; Step 4: 9, Step 5: 28, Step 6: 9A

Middleborough
Plain Street

History

An estimated 300 barrels of waste are located at a truck junk yard on Plain Street in Middleborough. The Department has excavated the site to determine the extent of the contamination and the disposal problem.

Current Status

The clean-up of the site is currently being planned. The Attorney General's Office is conducting an investigation. No impact has been observed on the public water supply.

New BedfordNew Bedford Sanitary LandfillHistory

Two industries in New Bedford which manufacture electric capacitors used PCBs (polychlorinated biphenyls) until 1977 and dumped wastes and defective products in the New Bedford landfill. An estimated one-half million pounds have been deposited. The landfill was originally located on a swamp having a thick layer of peat; this has prevented the mass migration of the PCBs out of the landfill. The Pasquamasset River originates in the swamp; New Bedford Harbor has been found to contain significant levels of PCB contamination.

Current Status

The EPA and the Department are jointly monitoring the landfill, the river, drinking water wells in Dartmouth, and dredgings from the New Bedford Harbor. DEQE has funded a management study aimed at defining options for mitigative action throughout the New Bedford Harbor area.

Palmer10 Water StreetHistory

Approximately 1,400,000 gallons of waste oil were improperly stored at this site. PSC Resources, Inc. was a licensed waste oil storage facility from 1974 to 1977. During 1978, the Department requested that the Attorney General take action against the firm for improper storage of waste materials. Agreement was reached between the Department and the owner on a clean-up plan in September, 1979.

Current Status

Clean-up operations began in fall, 1979. As of September 4, 1980, 1,063,000 gallons of hazardous waste (primarily waste oil) were removed from the storage tanks. There are 337,000 gallons of hazardous waste remaining in these tanks. The Attorney General, the Environmental Protection Agency, and the Department currently are working to achieve final clean-up.

Provincetown, Truro
Off Route 6

History

During 1978, DEQE investigated a gasoline leak which had contaminated a portion of Provincetown's public water supply. Approximately 3,500-15,000 gallons of gasoline leaked from a storage tank at a service station which has since been removed and replaced.

Current Status

The Department has committed approximately \$80,000, in addition to \$100,000 from a Housing and Urban Development grant, to a aquifer clean-up program designed to remove the gasoline from the groundwater.

Rehoboth
Intersection of Wheeler and County Street

History

Hundreds of barrels of chemical wastes were discovered in Rehoboth on April 6, 1978. Oil and other hazardous waste had been poured into an open pit. More wastes potentially may be deposited on site. The owner of the property has declared bankruptcy and a property auction has been held.

Current Status

The state removed the barrels, the liquid waste, and the contaminated soils from the site at a cost of approximately \$130,000. The Department is presently reassessing this site to determine its potential impact on water supplies.

Salem
57 Marlborough Road

History

During a September, 1980 inspection of the site, owned by Salem Acres, Inc., DEQE discovered the improper disposal of mixed industrial and domestic wastes, including tannery wastes.

Current Status

The site owner has implemented corrective actions. DEQE's ongoing investigation is addressing potential groundwater and surface water contamination.

Tewksbury
Marshall Corporation
Marshall Street

History

In October, 1980, DEQE inspected the site and found 14 barrels of aqueous inorganic chemical wastes improperly deposited. There was no evidence of spillage of waste materials.

Current Status

A site clean-up order was issued by DEQE in November, 1980. No public water supply is affected. Remedial actions are being monitored by DEQE.

Walpole
Hollingsworth and Vose Co.
Washington Street

History

In October, 1980, DEQE inspected the site and found inactive industrial waste filter beds, inactive sludge drying beds, and current ground disposal of industrial sludges.

Current Status

A voluntary clean-up program is being initiated by the site owner. No public water supply is affected. DEQE's investigation and compliance monitoring is continuing.

SIA Information (IND 5, ID287)

12 impoundments, SIC 2621; Step 4: 6, Step 5: 23, Step 6: 8B

Westford
Route 117

History

Star Chemical of Lowell leased this site in 1974 for collection and storage of waste chemicals, but was not licensed by the state for these activities. The firm eventually discontinued using the site. During a March, 1979 inspection of the site, Department staff estimated that 150 to 200 barrels were abandoned there.

Current Status

In April, 1980, the Department removed the wastes when neither the property owner nor the previous tenant would accept the responsibility for clean-up, despite more than a year of negotiation. Three thousand six hundred gallons of organic waste chemicals contained in 55 gallon drums, were removed. The remaining drums were empty. The Department's on-going investigation will address the flow of contaminants with the ground water, and the depths and concentrations of the materials in the ground.

Woburn
 Industriplex 128
 Commerce Way

History

In June, 1978, DEQE and EPA investigated the site and found abandoned waste pits of chromium and arsenic and large areas of soil contaminated with tannery wastes.

Current Status

DEQE in its on-going investigation is working toward the privately or publicly funded clean-up of the site and is examining the potential contamination of all environmental elements. DEQE is working closely with the Massachusetts Department of Public Health to detect any potential effects on public health within Woburn and neighboring communities.

SIA Information (AIN 8, ID260)

10 impoundments, SIC 2899; Step 4: 9, Step 5: 28, Step 6: 8B

Woburn
 Whitney Barrel Co.
 256 Salem Street

History

In June, 1979, DEQE's inspection of the site revealed spills of washwater from a drum reconditioning operation and spills from barrels and tanks of chemical wastes stored on the site.

Current Status

DEQE ordered the site to be cleaned in June 1979. The two near-by municipal drinking water wells (G & H) had been closed prior to the site's discovery for contamination problems not related to this incident. DEQE's investigation and compliance monitoring is continuing.

Woburn
 Beatrice Foods
 Salem Street

History

In August, 1980, DEQE inspected property at the rear of Beatrice Foods and discovered the improper disposal of liquid and solid wastes and drums of chemical waste.

Current Status

DEQE ordered the site clean-up in October, 1980. The two municipal drinking water wells (G & H) near this site had been closed, prior to the site's discovery, for contamination problems not related to this incident.

PART B SITES REQUIRING FURTHER INVESTIGATION

KEY TO SYMBOLS AND RATING SYSTEM

1. Information sources:

The information sources used in preparing this list have been discussed in the narrative of this report. The information source key on the Part B list means:

SIA - Surface Waste Impoundments in Massachusetts, 1980;
Massachusetts Department of Environmental Quality
Engineering

E - the "Eckhardt Report"; Waste Disposal Site Survey,
Committee on Interstate and Foreign Commerce,
U. S. House of Representatives, October 1979.
These disposal sites represent only those
locations used by the surveyed chemical companies;
the list provides a preliminary accounting of sites
which must be studied further to determine if the
alleged disposal impacted the environment.

The other information sources mentioned in the narrative (i.e. state files, EPA's Quick Look Report) contained all of the SIA and Eckhardt information, therefore, the major sources of the information are the only ones listed.

The SIA report information constitutes the major portion of List B. A summary of the SIA Report is attached. It contains a detailed overview of the SIA study. However, for the convenience of the reader, a summary of the SIA rating system will be presented in this key.

The modified LeGrand System of groundwater pollution potential evaluation was used in evaluating SIA sites.

The LeGrand System is presented in detail in Silka & Swearingen, 1978, A Manual for Evaluating Contamination Potential of Surface Impoundments, EPA 570/9-78-003. We briefly review it here. Using a set of matrix tables, the system assigns numbers and letters as follows: Step 1 (9 points) describes the unsaturated zone in terms of porosity and depth to water table; step 2 (6 points) evaluates transmissivity and thickness of the water table aquifer; step 3 (5 points) notes the quality (in terms of Total Dissolved Solids, TDS); step 4 (9 points) rates the potential groundwater contamination hazard from the known or estimated most critical waste processed in the facility; step 5 (29 possible points) adds together the ratings of the first four steps to produce a "total groundwater contamination potential" score; step 6 (to 9 points) rates distance from the waste impoundment to water supply wells or surface waters; step 7 assigns a "degree of confidence rating" to each of the first four steps; and step 8 refers to local conditions (such as Karst topography, etc.) of special significance to groundwater conditions.

It is important to stress that this study is intended to locate waste impoundments and to identify potential problem sites. It provides what EPA has repeatedly called "first-cut data", to ascertain the nature of groundwater problems related to waste impoundments. The LeGrand System is useful for establishing a priority list of sites to examine in further detail, using in particular step 5 ratings and "distance to water supply" step 6 numbers. For example, the highest step 5 rating possible is 29. It was

the consensus of the Advisory Board that sites ranging from 25 to 29 would receive the highest priority for further investigation, and that nearness to water supply and type of materials impounded would serve as secondary characters to further prioritize this step 5 group of sites. DEQE's recent discovery of widespread groundwater contamination has emphasized the urgency of providing some such "quick review" numbers. DEQE is currently engaged in the examination of high priority sites.

The Part B list includes the SIA step 4, step 5 and step 6 rating for each SIA site; these are, respectively: waste rating, total groundwater contamination potential score, and distance to known water supply wells or to surface waters.

2. Site Ownership Key

The site owner listing is in three parts:

DEQE Industries (a)
600 Washington Street.
(IND 106, ID 999) (b)
2 impoundments SIC 4953 (c)

- (a) Each listing includes the reported name and address of the owner or operator of the site on which impoundments are located.
- (b) The information in parenthesis, in the example (IND 106, ID 999), is the DEQE site reference information. The "ID 999" refers to a site identification number in DEQE files, and the "IND 106" refers to a category designation. The category designations included in the list are:

MUN - Municipal Sewage Treatment Plants, including facilities with open-bottomed impoundments, sand filters (underdrained or not), rapid sandfilters/groundwater recharge basins, unlined settling lagoons, aeration and anaerobic lagoons, septage lagoons and pits (including those at landfills), and landfill leachate ponds; but excluding concrete-lined structures, and steel tanks.

IND - Industrial Facilities with waste impoundments, lined or unlined, including such features as oil separators, but excluding steel tanks.

AGR - Manure pits and ponds, and some polishing ponds related to agricultural/commercial operations, such as cider mills, etc.

OTR - Institutional and commercial facilities of a wide variety, from State Hospitals and Prisons to restaurants and laundries. Where sanitary waste only was contained therein, structures under MUN, above, were applied. Otherwise, "worst-case" possibilities were assumed, and waste hazard ratings typical for products used/produced at the facility were used, and concrete-lined facilities were included.

Other categories were those for abandoned sites corresponding, respectively, to the four given above, i.e.: AMU, AIN, AAG, and AOT.

- (c) The specific source information includes the number of impoundments on each site and an "SIC" number or Standard Industrial Classification number. Common waste sources as represented by SIC numbers appear in Table 1.

3. Waste Rating (Step 4)

The Waste Rating (or Step 4 rating) grades the potential for groundwater contamination, based upon the most critical waste known or suspected to be produced by a facility which uses a surface waste impoundment. The waste rating ranges from a low rating of one to a high rating of nine (with one being the least hazardous and nine being the most hazardous).

Contaminants and their waste ratings are classified in two ways:

- (1) by contaminant source (table 1), and
- (2) by contaminant type (table 2).

Waste ratings consider the following factors and their interactions:

- Toxicity - The ability of a substance to produce harm in or on the body of living organisms.
- Mobility - The ability of the waste to enter groundwater and to travel with the groundwater.
- Persistence - The ability of the waste to decay or degrade naturally in the environment.
- Volume - The quantity of the waste produced.
- Concentration - The apparent ability of the waste to dilute or attenuate through the waste's interaction with soils, groundwater, etc.

4. Priority Rating (Step 5)

The overall groundwater contamination potential of a site can be determined by totalling all the Steps 1, 2, 3 and 4 which have been previously discussed. The overall score allows a comparison of one site with other rated sites by indicating the general, overall contamination potential. Sites may be rated identically in Step 5, yet be very different in one or several of the parameters included in the overall score; thus the overall score of Step 5 should be used with caution in assessing a particular sites potential to allow groundwater contamination. In addition, this overall score cannot be used to assess the actual amount of groundwater contamination at a site. The score is only for relative comparison with other sites. An actual determination of groundwater contamination requires an intensive on-site investigation.

5. Nearness to Water Supply (Step 6)

The distance from the impoundment to a ground or surface public drinking water supply, together with the determination of anticipated flow direction

of the waste plume is used to ascertain the potential endangerment to water supplies presented by a surface waste impoundment. The anticipated direction of groundwater flow within 1600 meters (1 mile) was determined through interpretation of United States Geological Survey Maps (USGS) and hydrologic atlases. Groundwater movement depends upon natural groundwater flow direction, variations due to pumping wells, mounding of the groundwater beneath a site and other factors influencing flow direction, such as faults, fractures and other geologic features. Artesian wells (those located in confined aquifers separated from sources of contamination by relatively impermeable confining layers) were not considered in this step unless there was an indication that the anticipated flow direction of the contaminated groundwater would be in the direction of such wells. In scoring Step 5, certain site-specific criteria (cases A-D in Table 3) have been established for rating the site according to the potential magnitude of endangerment to water supplies.

Table 4 includes a summarized listing of sites reported to be within 200 metres of municipal, industrial, public or private water supply wells.

Note: See last page of Part B list for late additions.

Table 1 Common Waste Sources by SIC Number

02	AGRICULTURAL PRODUCTION—LIVESTOCK	1474	Potash, soda, and borate minerals	2097	Manufactured ice
021	Livestock, exc. Dairy, Poultry, etc.	1475	Phosphate rock	2098	Macaroni and spaghetti
0211	Beef cattle feedlots	1476	Rock salt	2099	Food preparations, nec
0212	Beef cattle, except feedlots	1477	Sulfur	22	TEXTILE MILL PRODUCTS
0213	Hogs	1479	Chemical and fertilizer mining, nec	221	Weaving Mills, Cotton
0214	Sheep and goats	148	Nonmetallic Minerals Services	2211	Weaving mills, cotton
0219	General livestock, nec	1481	Nonmetallic minerals services	222	Weaving Mills, Synthetics
024	Dairy Farms	149	Miscellaneous Nonmetallic Minerals	2221	Weaving mills, synthetics
0241	Dairy farms	1492	Gypsum	223	Weaving and Finishing Mills, Wool
025	Poultry and Eggs	1496	Talc, soapstone, and pyrophyllite	2231	Weaving and finishing mills, wool
0251	Broiler, fryer, and roaster chickens	1499	Nonmetallic minerals, nec	224	Narrow Fabric Mills
0252	Chicken eggs	20	FOOD AND KINDRED PRODUCTS	2241	Narrow fabric mills
0253	Turkeys and turkey eggs	201	Meat Products	225	Knitting mills
0254	Poultry hatcheries	2011	Meat packing plants	2251	Women's hosiery, except socks
0259	Poultry and eggs, nec	2013	Sausages and other prepared meats	2252	Hosiery, nec
027	Animal Specialties	2016	Poultry dressing plants	2253	Knit outerwear mills
0271	Fur-bearing animals and rabbits	2017	Poultry and egg processing	2254	Knit underwear mills
0272	Horses and other equines	202	Dairy Products	2257	Circular knit fabric mills
0279	Animal specialties, nec	2021	Creamery butter	2258	Warp knit fabric mills
029	General Farms, Primarily Livestock	2022	Cheese, natural and processed	2259	Knitting mills, nec
0291	General farms, primarily livestock	2023	Condensed and evaporated milk	226	Textile Finishing, Except Wool
07	AGRICULTURAL SERVICES	2024	Ice cream and frozen desserts	2261	Finishing plants, cotton
071	Soil Preparation Services	2026	Fluid milk	2262	Finishing plants, synthetics
0711	Soil preparation services	203	Preserved Fruits and Vegetables	2269	Finishing plants, nec
072	Crop Services	2032	Canned specialties	227	Floor Covering Mills
0721	Crop planting and protection	2033	Canned fruits and vegetables	2271	Woven carpets and rugs
0722	Crop harvesting	2034	Dehydrated fruits, vegetables, soups	2272	Tufted carpets and rugs
0723	Crop preparation services for market	2035	Pickles, sauces, and salad dressings	2279	Carpets and rugs, nec
0724	Cotton ginning	2037	Frozen fruits and vegetables	228	Yarn and Thread Mills
0729	General crop services	2038	Frozen specialties	2281	Yarn mills, except wool
074	Veterinary Services	204	Grain Mill Products	2282	Throwing and winding mills
0741	Veterinary services, farm livestock	2041	Flour and other grain mill products	2283	Wool yarn mills
0742	Veterinary services, specialties	2043	Cereal breakfast foods	2284	Thread mills
075	Animal Services, Except Veterinary	2044	Rice milling	229	Miscellaneous Textile Goods
0751	Livestock services, exc. specialties	2045	Blended and prepared flour	2291	Felt goods, exc. woven felts & hats
0752	Animal specialty services	2046	Wet corn milling	2292	Lace goods
076	Farm Labor and Management Services	2047	Dog, cat, and other pet food	2293	Paddings and upholstery filling
0761	Farm labor contractors	2048	Prepared feeds, nec	2294	Processed textile waste
0762	Farm management services	205	Bakery Products	2295	Coated fabrics, not rubberized
078	Landscape and Horticultural Services	2051	Bread, cake, and related products	2296	Tire cord and fabric
0781	Landscape counseling and planning	2052	Cookies and crackers	2297	Nonwoven fabrics
0782	Lawn and garden services	206	Sugar and Confectionery Products	2298	Cordage and twine
0783	Ornamental shrub and tree services	2061	Raw cane sugar	2299	Textile goods, nec
14	NONMETALLIC MINERALS, EXCEPT FUELS	2062	Cane sugar refining	24	LUMBER AND WOOD PRODUCTS
141	Dimension Stone	2063	Beet sugar	241	Logging Camps & Logging Contractors
1411	Dimension stone	2065	Confectionery products	2411	Logging camps & logging contractors
142	Crushed and Broken Stone	2066	Chocolate and cocoa products	242	Sawmills and Planing Mills
1422	Crushed and broken limestone	2067	Chewing gum	2421	Sawmills and planing mills, general
1423	Crushed and broken granite	207	Fats and Oils	2426	Hardwood dimension and flooring
1429	Crushed and broken stone, nec	2074	Cottonseed oil mills	2429	Special product sawmills, nec
144	Sand and Gravel	2075	Soybean oil mills	243	Millwork, Plywood & Structural Members
1442	Construction sand and gravel	2076	Vegetable oil mills, nec	2431	Millwork
1446	Industrial sand	2077	Animal and marine fats and oils	2434	Wood kitchen cabinets
145	Clay and Related Minerals	2079	Shortening and cooking oils	2435	Hardwood veneer and plywood
1452	Bentonite	208	Beverages	2436	Softwood veneer and plywood
1453	Fire clay	2082	Malt beverages	2439	Structural wood members, nec
1454	Fuller's earth	2083	Malt	244	Wood Containers
1455	Kaolin and ball clay	2084	Wines, brandy, and brandy spirits	2441	Nailed wood boxes and shooks
1459	Clay and related minerals, nec	2085	Distilled liquor, except brandy	2448	Wood pallets and skids
147	Chemical and Fertilizer Minerals	2086	Bottled and canned soft drinks	2449	Wood containers, nec
1472	Barite	2087	Flavoring extracts and sirups, nec		
1473	Fluorspar	209	Misc. Foods and Kindred Products		
		2091	Canned and cured seafoods		
		2092	Fresh or frozen packaged fish		
		2095	Roasted coffee		

Table 1 Common Waste Sources by SIC Numbers

245	Wood Buildings and Mobile Homes	2819	Industrial inorganic chemicals, nec	348	Ordnance and Accessories, nec
2451	Mobile homes	282	Plastics Materials and Synthetics	3482	Small arms ammunition
2452	Prefabricated wood buildings	2821	Plastics materials and resins	3483	Ammunition, exc. for small arms, nec
249	Miscellaneous Wood Products	2822	Synthetic rubber	3484	Small arms
2491	Wood preserving	2823	Cellulosic man-made fibers	3489	Ordnance and accessories, nec
2492	Particleboard	2824	Organic fibers, noncellulosic	349	Misc. Fabricated Metal Products
2499	Wood products, nec	283	Drugs	3493	Steel springs, except wire
26	PAPER AND ALLIED PRODUCTS	2831	Biological products	3494	Valves and pipe fittings
261	Pulp Mills	2833	Medicinals and botanicals	3495	Wire springs
2611	Pulp mills	2834	Pharmaceutical preparations	3496	Misc. fabricated wire products
262	Paper Mills, Except Building Paper	284	Soap, Cleaners, and Toilet Goods	3497	Metal foil and leaf
2621	Paper mills, except building paper	2841	Soap and other detergents	3498	Fabricated pipe and fittings
263	Paperboard Mills	2842	Pollishes and sanitation goods	3499	Fabricated metal products, nec
2631	Paperboard mills	2843	Surface active agents		
264	Misc. Converted Paper Products	2844	Toilet preparations	35	MACHINERY, EXCEPT ELECTRICAL
2641	Paper coating and glazing	285	Paints and Allied Products	351	Engines and Turbines
2642	Envelopes	2851	Paints and allied products	3511	Turbines and turbine generator sets
2643	Bags, except textile bags	286	Industrial Organic Chemicals	3519	Internal combustion engines, nec
2645	Die-cut paper and board	2861	Gum and wood chemicals	352	Farm and Garden Machinery
2646	Pressed and molded pulp goods	2865	Cyclic crudes and intermediates	3523	Farm machinery and equipment
2647	Sanitary paper products	2869	Industrial organic chemicals, nec	3524	Lawn and garden equipment
2648	Stationery products	287	Agricultural Chemicals	353	Construction and Related Machinery
2649	Converted paper products, nec	2873	Nitrogenous fertilizers	3531	Construction machinery
265	Paperboard Containers and Boxes	2874	Phosphatic fertilizers	3532	Mining machinery
2651	Folding paperboard boxes	2875	Fertilizers, mixing only	3533	Oil field machinery
2652	Set-up paperboard boxes	2879	Agricultural chemicals, nec	3534	Elevators and moving stairways
2653	Corrugated and solid fiber boxes	289	Miscellaneous Chemical Products	3535	Conveyors and conveying equipment
2654	Sanitary food containers	2891	Adhesives and sealants	3536	Holsts, cranes, and monorails
2655	Fiber cans, drums & similar products	2892	Explosives	3537	Industrial trucks and tractors
266	Building Paper and Board Mills	2893	Printing ink	354	Metalworking Machinery
2661	Building paper and board mills	2895	Carbon black	3541	Machine tools, metal cutting types
		2899	Chemical preparations, nec	3542	Machine tools, metal forming types
27	PRINTING AND PUBLISHING	34	FABRICATED METAL PRODUCTS	3544	Special dies, tools, jigs & fixtures
271	Newspapers	341	Metal Cans and Shipping Containers	3545	Machine tool accessories
2711	Newspapers	3411	Metal cans	3546	Power driven hand tools
272	Periodicals	3412	Metal barrels, drums, and pails	3547	Rolling mill machinery
2721	Periodicals	342	Cutlery, Hand Tools, and Hardware	3549	Metalworking machinery, nec
273	Books	3421	Cutlery	355	Special Industry Machinery
2731	Book publishing	3423	Hand and edge tools, nec	3551	Food products machinery
2732	Book printing	3425	Hand saws and saw blades	3552	Textile machinery
274	Miscellaneous Publishing	3429	Hardware, nec	3553	Woodworking machinery
2741	Miscellaneous publishing	343	Plumbing and Heating, Except Electric	3554	Paper industries machinery
275	Commercial Printing	3431	Metal sanitary ware	3555	Printing trades machinery
2751	Commercial printing, letterpress	3432	Plumbing fittings and brass goods	3559	Special industry machinery, nec
2752	Commercial printing, lithographic	3433	Heating equipment, except electric	356	General Industrial Machinery
2753	Engraving and plate printing	344	Fabricated Structural Metal Products	3561	Pumps and pumping equipment
2754	Commercial printing, gravure	3441	Fabricated structural metal	3562	Ball and roller bearings
276	Manifold Business Forms	3442	Metal doors, sash, and trim	3563	Air and gas compressors
2761	Manifold business forms	3443	Fabricated plate work (boiler shops)	3564	Blowers and fans
277	Greeting Card Publishing	3444	Sheet metal work	3565	Industrial patterns
2771	Greeting card publishing	3446	Architectural metal work	3566	Speed changers, drives, and gears
278	Blankbooks and Bookbinding	3448	Prefabricated metal buildings	3567	Industrial furnaces and ovens
2782	Blankbooks and looseleaf binders	3449	Miscellaneous metal work	3568	Power transmission equipment, nec
2789	Bookbinding and related work	345	Screw Machine Products, Bolts, etc.	3569	General industrial machinery, nec
279	Printing Trade Services	3451	Screw machine products	357	Office and Computing Machines
2791	Typesetting	3452	Bolts, nuts, rivets, and washers	3572	Typewriters
2793	Photoengraving	346	Metal Forgings and Stampings	3573	Electronic computing equipment
2794	Electrotyping and stereotyping	3462	Iron and steel forgings	3574	Calculating and accounting machines
2795	Lithographic platemaking services	3463	Nonferrous forgings	3576	Scales and balances, exc. laboratory
28	CHEMICALS AND ALLIED PRODUCTS	3465	Automotive stampings	3579	Office machines, nec
281	Industrial Inorganic Chemicals	3466	Crowns and closures	358	Refrigeration and Service Machinery
2812	Alkalies and chlorine	3469	Metal stampings, nec	3581	Automatic merchandising machines
2813	Industrial gases	347	Metal Services, nec	3582	Commercial laundry equipment
2816	Inorganic pigments	3471	Plating and polishing	3585	Refrigeration and heating equipment
		3479	Metal coating and allied services	3586	Measuring and dispensing pumps
				3589	Service industry machinery, nec

Table 1 Common Waste Sources by SIC Number

359 Misc. Machinery, Except Electrical	3743 Railroad equipment	47 TRANSPORTATION SERVICES
3592 Carburetors, pistons, rings, valves	375 Motorcycles, Bicycles, and Parts	471 Freight Forwarding
3599 Machinery, except electrical, nec	3751 Motorcycles, bicycles, and parts	4712 Freight forwarding
36 ELECTRIC AND ELECTRONIC EQUIPMENT	376 Guided Missiles, Space Vehicles, Parts	472 Arrangement of Transportation
361 Electric Distributing Equipment	3761 Guided missiles and space vehicles	4722 Passenger transportation arrangement
3612 Transformers	38 INSTRUMENTS AND RELATED PRODUCTS	4723 Freight transportation arrangement
3613 Switchgear and switchboard apparatus	381 Engineering & Scientific Instruments	474 Rental of Railroad Cars
362 Electrical Industrial Apparatus	3811 Engineering & scientific instruments	4742 Railroad car rental with service
3621 Motors and generators	382 Measuring and Controlling Devices	4743 Railroad car rental without service
3622 Industrial controls	3822 Environmental controls	478 Miscellaneous Transportation Services
3623 Welding apparatus, electric	3823 Process control instruments	4782 Inspection and weighing services
3624 Carbon and graphite products	3824 Fluid meters and counting devices	4783 Packing and crating
3629 Electrical industrial apparatus, nec	3825 Instruments to measure electricity	4784 Fixed facilities for vehicles, nec
363 Household Appliances	3829 Measuring & controlling devices, nec	4789 Transportation services, nec
3631 Household cooking equipment	383 Optical Instruments and Lenses	49 ELECTRIC, GAS, AND SANITARY SERVICES
3632 Household refrigerators and freezers	3832 Optical instruments and lenses	491 Electric Services
3633 Household laundry equipment	384 Medical Instruments and Supplies	4911 Electric services
3634 Electric housewares and fans	3841 Surgical and medical instruments	492 Gas Production and Distribution
3635 Household vacuum cleaners	3842 Surgical appliances and supplies	4922 Natural gas transmission
3636 Sewing machines	3843 Dental equipment and supplies	4923 Gas transmission and distribution
3639 Household appliances, nec	385 Ophthalmic Goods	4924 Natural gas distribution
364 Electric Lighting and Wiring Equipment	3851 Ophthalmic goods	4925 Gas production and/or distribution
3641 Electric lamps	386 Photographic Equipment and Supplies	493 Combination Utility Services
3643 Current-carrying wiring devices	3861 Photographic equipment and supplies	4931 Electric and other services combined
3644 Noncurrent-carrying wiring devices	387 Watches, Clocks, and Watchcases	4932 Gas and other services combined
3645 Residential lighting fixtures	3873 Watches, clocks, and watchcases	4939 Combination utility services, nec
3646 Commercial lighting fixtures	39 MISCELLANEOUS MANUFACTURING INDUSTRIES	494 Water Supply
3647 Vehicular lighting equipment	391 Jewelry, Silverware, and Plated Ware	4941 Water supply
3648 Lighting equipment, nec	3911 Jewelry, precious metal	495 Sanitary Services
365 Radio and TV Receiving Equipment	3914 Silverware and plated ware	4952 Sewerage systems
3651 Radio and TV receiving sets	3915 Jewelers' materials & lapidary work	4953 Refuse systems
3652 Phonograph records	393 Musical Instruments	4959 Sanitary services, nec
365 Communication Equipment	3931 Musical instruments	496 Steam Supply
3661 Telephone and telegraph apparatus	394 Toys and Sporting Goods	4961 Steam supply
3662 Radio and TV communication equipment	3942 Dolls	497 Irrigation Systems
367 Electronic Components and Accessories	3944 Games, toys, and children's vehicles	4971 Irrigation systems
3671 Electron tubes, receiving type	3949 Sporting and athletic goods, nec	55 AUTOMOTIVE DEALERS & SERVICE STATIONS
3672 Cathode ray television picture tubes	395 Pens, Pencils, Office and Art Supplies	551 New and Used Car Dealers
3673 Electron tubes, transmitting	3951 Pens and mechanical pencils	5511 New and used car dealers
3674 Semiconductors and related devices	3952 Lead pencils and art goods	552 Used Car Dealers
3675 Electronic capacitors	3953 Marking devices	5521 Used car dealers
3676 Electronic resistors	3955 Carbon paper and inked ribbons	553 Auto and Home Supply Stores
3677 Electronic coils and transformers	396 Costume Jewelry and Notions	5531 Auto and home supply stores
3678 Electronic connectors	3961 Costume jewelry	554 Gasoline Service Stations
3679 Electronic components, nec	3962 Artificial flowers	5541 Gasoline service stations
369 Misc. Electrical Equipment & Supplies	3963 Buttons	555 Boat Dealers
3691 Storage batteries	3964 Needles, pins, and fasteners	5551 Boat dealers
3692 Primary batteries, dry and wet	399 Miscellaneous Manufactures	556 Recreation & Utility Trailer Dealers
3693 X-ray apparatus and tubes	3991 Brooms and brushes	5561 Recreation & utility trailer dealers
3694 Engine electrical equipment	3993 Signs and advertising displays	557 Motorcycle Dealers
3699 Electrical equipment & supplies, nec	3995 Burial caskets	5571 Motorcycle dealers
37 TRANSPORTATION EQUIPMENT	3996 Hard surface floor coverings	559 Automotive Dealers, nec
371 Motor Vehicles and Equipment	3999 Manufacturing industries, nec	5599 Automotive dealers, nec
3711 Motor vehicles and car bodies	40 RAILROAD TRANSPORTATION	
3713 Truck and bus bodies	401 Railroads	
3714 Motor vehicle parts and accessories	4011 Railroads, line-haul operating	
3715 Truck trailers	4013 Switching and terminal services	
372 Aircraft and Parts	404 Railway Express Service	
3721 Aircraft	4041 Railway express service	
3724 Aircraft engines and engine parts		
3729 Aircraft equipment, nec		
373 Ship and Boat Building and Repairing		
3731 Ship building and repairing		
3732 Boat building and repairing		
374 Railroad Equipment		

Table 1 Common Waste Sources by SIC Number

57	FURNITURE AND HOME FURNISHINGS STORES	726	Funeral Service and Crematories	82	EDUCATIONAL SERVICES
571	Furniture and Home Furnishings Stores	7261	Funeral service and crematories	821	Elementary and Secondary Schools
5712	Furniture stores	729	Miscellaneous Personal Services	8211	Elementary and secondary schools
5713	Floor covering stores	7299	Miscellaneous personal services	822	Colleges and Universities
5714	Drapery and upholstery stores			8221	Colleges and universities, nec
5719	Misc. home furnishings stores	73	BUSINESS SERVICES	8222	Junior colleges
572	Household Appliance Stores	731	Advertising	823	Libraries and Information Centers
5722	Household appliance stores	7311	Advertising agencies	8231	Libraries and information centers
573	Radio, Television, and Music Stores	7312	Outdoor advertising services	824	Correspondence and Vocational Schools
5732	Radio and television stores	7313	Radio, TV, publisher representatives	8241	Correspondence schools
5733	Music stores	7319	Advertising, nec	8243	Data processing schools
		732	Credit Reporting and Collection	8244	Business and secretarial schools
58	EATING AND DRINKING PLACES	7321	Credit reporting and collection	8249	Vocational schools, nec
581	Eating and Drinking Places	733	Mailing, Reproduction, Stenographic	829	Schools & Educational Services, nec
5812	Eating places	7331	Direct mail advertising services	8299	Schools & educational services, nec
5813	Drinking places	7332	Blueprinting and photocopying		
		7333	Commercial photography and art	83	SOCIAL SERVICES
65	REAL ESTATE	7339	Stenographic and reproduction, nec	832	Individual and Family Services
651	Real Estate Operators and Lessors	734	Services to Buildings	8321	Individual and family services
6512	Nonresidential building operators	7341	Window cleaning	833	Job Training and Related Services
6513	Apartment building operators	7342	Disinfecting and exterminating	8331	Job training and related services
6514	Dwelling operators, exc. apartments	7349	Building maintenance services, nec	835	Child Day Care Services
6515	Mobile home site operators	735	News Syndicates	8351	Child day care services
6517	Railroad property lessors	7351	News syndicates	836	Residential Care
6519	Real property lessors, nec	736	Personnel Supply Services	8361	Residential care
653	Real Estate Agents and Managers	7361	Employment agencies	839	Social Services, nec
6531	Real estate agents and managers	7362	Temporary help supply services	8399	Social services, nec
654	Title Abstract Offices	7369	Personnel supply services, nec	86	MEMBERSHIP ORGANIZATIONS
6541	Title abstract offices	737	Computer and Data Processing Services	861	Business Associations
655	Subdividers and Developers	7372	Computer programming and software	8611	Business associations
6552	Subdividers and developers, nec	7374	Data processing services	862	Professional Organizations
6553	Cemetery subdividers and developers	7379	Computer related services, nec	8621	Professional organizations
		739	Miscellaneous Business Services	863	Labor Organizations
70	HOTELS AND OTHER LODGING PLACES	7391	Research & development laboratories	8631	Labor organizations
701	Hotels, Motels, and Tourist Courts	7392	Management and public relations	864	Civic and Social Associations
7011	Hotels, motels, and tourist courts	7393	Detective and protective services	8641	Civic and social associations
702	Rooming and Boarding Houses	7394	Equipment rental and leasing	865	Political Organizations
7021	Rooming and boarding houses	7395	Photofinishing laboratories	8651	Political organizations
703	Camps and Trailering Parks	7396	Trading stamp services	866	Religious Organizations
7032	Sporting and recreational camps	7397	Commercial testing laboratories	8661	Religious organizations
7033	Trailering parks for transients	7399	Business services, nec	869	Membership Organizations, nec
704	Membership-Basis Organization Hotels			8699	Membership organizations, nec
7041	Membership-basis organization hotels	80	HEALTH SERVICES	88	PRIVATE HOUSEHOLDS
72	PERSONAL SERVICES	801	Offices of Physicians	881	Private Households
721	Laundry, Cleaning, & Garment Services	8011	Offices of physicians	8811	Private households
7211	Power laundries, family & commercial	802	Offices of Dentists	92	JUSTICE, PUBLIC ORDER, AND SAFETY
7212	Garment pressing & cleaners' agents	8021	Offices of dentists	921	Courts
7213	Linen supply	803	Offices of Osteopathic Physicians	9211	Courts
7214	Diaper service	8031	Offices of osteopathic physicians	922	Public Order and Safety
7215	Coin-operated laundries and cleaning	804	Offices of Other Health Practitioners	9221	Police protection
7216	Dry cleaning plants, except rug	8041	Offices of chiropractors	9222	Legal counsel and prosecution
7217	Carpet and upholstery cleaning	8042	Offices of optometrists	9223	Correctional institutions
7218	Industrial laundries	8049	Offices of health practitioners, nec	9224	Fire protection
7219	Laundry and garment services, nec	805	Nursing and Personal Care Facilities	9229	Public order and safety, nec
722	Photographic Studios, Portrait	8051	Skilled nursing care facilities	95	ENVIRONMENTAL QUALITY AND HOUSING
7221	Photographic studios, portrait	8059	Nursing and personal care, nec	951	Environmental Quality
723	Beauty Shops	806	Hospitals	9511	Air, water & solid waste management
7231	Beauty shops	8062	General medical & surgical hospitals	9512	Land, mineral, wildlife conservation
724	Barber Shops	8063	Psychiatric hospitals	953	Housing and Urban Development
7241	Barber shops	8069	Specialty hospitals, exc. psychiatric	9531	Housing programs
725	Shoe Repair and Hat Cleaning Shops	807	Medical and Dental Laboratories	9532	Urban and community development
7251	Shoe repair and hat cleaning shops	8071	Medical laboratories	97	NATIONAL SECURITY AND INTL. AFFAIRS
		8072	Dental laboratories		
		808	Outpatient Care Facilities		
		8081	Outpatient care facilities		
		809	Health and Allied Services, nec		
		8091	Health and allied services, nec		

TABLE 2
CONTAMINANT HAZARD POTENTIAL RANKINGS OF WASTES, CLASSIFIED
BY TYPE¹ FOR STEP 4

Description	Hazard Potential Initial Rating
A. SOLIDS	
Ferrous Metals	1-4 ²
Non-Ferrous Metals	1-7 ²
Resins, Plastics and Rubbers	2
Wood and Paper Materials (except as noted below)	2
- Bark	4
Textiles and Related Fibers	2
Inert Materials (except as noted below)	2
- Sulfide Mineral-Bearing Mine Tailings	6
- Slag and other Combustion Residues	5
- Rubble, Construction & Demolition Mixed Waste	3
Animal Processing Wastes (Except as noted below)	2-4
- Processed Skins, Hides and Leathers	6
- Dairy Wastes	4
- Live Animal Wastes-Raw Manures (Feedlots)	5
- Composts of Animal Waste	2-4
- Dead Animals	5
Edible Fruit and Vegetable Remains - Putrescables	2-3
B. LIQUIDS	
Organic Chemicals (Must be chemically Classified) ²	
- Aliphatic (Fatty) Acids	3-5
- Aromatic (Benzene) Acids	7-8
- Resin Acids	
- Alcohols	5-7
- Aliphatic Hydrocarbons (Petroleum Derivatives)	4-6
- Aromatic Hydrocarbons (Benzene Derivatives)	6-8
- Sulfonated Hydrocarbons	7-8
- Halogenated Hydrocarbons	7-9
- Alkaloids	7-9
- Aliphatic Amines and Their Salts	1-4
- Anillines	6-8
- Pyridines	2-6
- Phenols	7-9
- Aldehydes	6-8
- Ketones	6-8
- Organic Sulfur Compounds (Sulfides, Mercaptans)	7-9
- Organometallic Compounds	7-9
- Cyanides	7-9
- Thiocyanides	2-6
- Sterols	
- Sugars and Cellulose	1-4
- Esters	6-8

<u>Description</u>	<u>Hazard Potential Initial Rating</u>
Inorganic Chemicals (Must be Chemically Classified) ²	
- Mineral and Metal Acids	5-8
- Mineral and Metal Bases	5-8
- Metal Salts, including Heavy Metals	6-9
- Oxides	5-8
- Sulfides	5-8
- Carbon or Graphite	1-3
Other Chemical Process Wastes Not Previously Listed (Must be Chemically Classified) ²	
- Inks	2-5
- Dyes	3-8
- Paints	5-8
- Adhesives	5-8
- Pharmaceutical Wastes	6-9
- Petrochemical Wastes	7-9
- Metal Treatment Wastes	7-9
- Solvents	6-9
- Agricultural Chemicals (Pesticides, Herbicides, Fungicides, etc.)	7-9
- Waxes and Tars	4-7
- Fermentation and Culture Wastes	2-5
- Oils, including Gasoline, Fuel Oil, etc.	5-8
- Soaps and Detergents	4-6
- Other Organic or Inorganic Chemicals, includes Radioactive Wastes	2-9
Conventional Treatment Process Municipal Sludges	4-8
- From Biological Sewage Treatment	4-8
- From Water Treatment and Conditioning Plants (Must be Chemically Classified) ²	2-5

¹Classification based on material in Environmental Protection Agency Publication, 670-2-75-024, pages 79-85, Prepared by Arthur D. Little, Inc. and published in 1975..

²For individual material ranking refer to solubility-toxicity tables prepared by Versar, Inc. for the Environmental Protection Agency.

TABLE 3

Step 6. Rating the Potential Endangerment to a Water Supply

Case A	-	Highest Priority: Rate the closest water well within 1600 meters of the site that is in the anticipated direction of waste plume movement.
Case B	-	Second Priority: If there is no well satisfying Case A, rate the closest surface water within 1600 meters of the site that is in the anticipated direction of the waste plume movement.
Case C	-	Third Priority: If no surface water or water well satisfying Case A or B exists, rate the closest water supply well or surface water supply within 1600 meters of the site that is not in the anticipated direction of waste plume movement.
Case D	-	Lowest Priority: If there are no surface waters or water wells within 1600 meters of the site in any direction, rate the site as "OD."

Select the appropriate rating for the given distance and case:

Distance (Meters)	Case A	Case B	Case C	Case D
≤ 200	9A	8B	7C	-
>200, ≤400	7A	6B	5C	-
>400, ≤800	5A	4B	3C	-
>800, ≤1600	3A	2B	1C	-
>1600				OD

TABLE 4

Identification, by priority rating and category number, of those sites reported to be within 200 metres of municipal, industrial, public, or private water supply wells.

PRIORITY RATING 25 AND ABOVE

MUN 00016	ID 0151	Wilbraham - Town of Wilbraham - well type not reported (N.R.)
MUN 00103	ID 0414	Mashpee - Town of Mashpee - private wells.
IND 00006	ID 0483	Belchertown - Belchertown Bulk Carriers - private.
IND 00008	ID 0033	Barre - Barre Wool Combing Ltd. - municipal well.
IND 00027	ID 0210	Acton - W.R. Grace Co. - company wells.
IND 00057	ID 0246	Tyngsboro - Charles George Landfill Trust - N.R..
IND 00060	ID 0313	Attleboro - Teknor Apex Co. - unused municipal test well.

PRIORITY RATING 22-24

MUN 00086	ID 0292	Weymouth - Town of Weymouth - municipal well.
MUN 00108	ID 0430	Tisbury - Town of Tisbury - municipal well.
MUN 00128	ID 0388	Lakeville - Town of Lakeville - N.R.
AIN 00002	ID 0018	Groton - Nielsen Molding Co. - N.R.
AGR 00002	ID 0012	Sterling - Pine Crest Duckfarm Trust - N.R.
OTR 00007	ID 0020	Shirley - MCI Shirley - municipal well.
OTR 00032	ID 0247	North Reading - J.T. Berry Rehabilitation Centre - municipal well.

PRIORITY RATING 18-21

MUN 00078	ID 0412	Eastham, Town of Eastham - N.S.
IND 00089	ID 0449	Lee - Westfield River Paper Co. - private well.
IND 00001	ID 0017	Groton - Hollingsworth & Vose Co. - N.S.

PRIORITY RATING BELOW 18

IND 00100	ID 0376	Bellingham - New England Rug Co. - N.S.
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City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Acton	SIA	Airco Inc. Industrial Gases Division Lawsbrook Road (IND96, ID435) 2 impoundments SIC 2813	8	28	7A
	SIA	Town of Acton (Mun. 123, ID 473) 14 impoundments SIC 4953	4	23	4B
	E	Acton Town Landfill, Route 2 (chemical disposal)	-	-	-
Adams	SIA	Fillian Inc., 101 Howland Avenue (IND77, ID 396) 1 impoundment SIC 4952	4	24	8B
	SIA	Howland Co., Inc. 153 Howland Avenue (IND84, ID 394) 3 impoundments SIC 2819	3	23	8B
	SIA E	Pfizer Minerals, Pigments and Chemical Division, 260 Columbia St. (IND85, ID 398) 6 impoundments SIC 3274	1	21	8B
	E	Adams Sanitary Landfill, East Road (chemical disposal)	-	-	-
Amesbury	SIA	Town of Amesbury 19 Merrimack Street (Mun 18, ID 157) 9 impoundments SIC 4952	5	23	8B
Amherst	SIA	Town of Amherst Town Hall (Mun 2, ID 142) 1 impoundment SIC 4952	5	23	8B
Andover	SIA	Raytheon Corp., York & Haverhill Sts. (IND24, ID 264) 1 impoundment SIC 6512	9	28	4B
	SIA	Gillette Mfg. Co. Toiletries Division, 30 Burtt Road (IND26, ID 199) 2 impoundments SIC 2844	8	27	8B

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Andover (Cont.)	E	Andover Landfill, Chandler Road (chemical disposal)	-	-	-
Assonet	SIA	Polaroid Corp., 283 South Main Street (IND73, ID 356) 1 impoundment SIC 3832	6	21	8B
Athol	SIA	Athol Municipal Wastewater Treatment Plant, Rte. 2A	5	24	6B
Attleboro	SIA	Leavens Mfg. Co., Inc. Summer Street (IND41, ID 312) 3 impoundments SIC 3469	9	28	8B
	SIA	Ghines & Rhodes, Inc. 189 East Street (IND29, ID 311) 3 impoundments SIC 3496	9	26	1C
	SIA	Teknor Apex Inc. Hebronville Plant Pakhill Avenue (IND60, ID 313) 1 impoundment SIC 2821	9	28	9A
	SIA	City of Attleboro 25 South Main Street (Mun 73, ID 314) 36 impoundments SIC 4952	6	24	8B
	E	Attleboro Landfill 36 Thrandreau Avenue (chemical disposal)	-	-	-
Ayer	SIA	Mass. State Game Farm Fitchburg Road (AGR 4, ID 62) 2 impoundments SIC 9512	4	22	8B
	SIA	Town of Ayer, Brook Street (Mun 1, ID 66) 10 impoundments SIC 4952	5	24	8B

City/ Town	Inform- ation Source	Site Owner	Nearness to		
			Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Baldwinville	SIA	Hospital Cottages for Children Hospital Road (AOT 3, ID 94) 31 impoundments SIC 8051	5	21	7C
	SIA	Templeton Sewage Treatment Plant Erving Paper Mills Reservoir Street (IND 92, ID 49) 1 impoundment SIC 2647	6	23	8B
	SIA	Fernald State School Royalston Road (OTR 25, ID 95) 1 impoundment SIC 8361	5	24	8B
Barre	SIA	Leonard Martone Landfill Worcester Road (OTR 28, ID 91) 5 impoundments SIC 4953	9	28	8B
	SIA	Barre Wool Vernon Avenue (IND 8, ID 33) 3 impoundments SIC 2231	6	25	9A
Barrowsville	SIA	Defiance Bleaching Co. 138 Barrows Street (IND 102, ID 318) 7 impoundments SIC 2261	6	21	OD
Barnstable	SIA	Barnstable County Hospital Main Street (AOT 7, ID 338) 1 impoundment SIC 8062	5	24	4B
	SIA	Barnstable Public Works Dept. Main Street (Mun 77, ID 405) 16 impoundments SIC 4952	5	24	8B
	SIA	Town of Barnstable Main Street (Mun 97, ID 406) 4 impoundments SIC 4953	5	24	4B
Bedford	SIA	Veterans Administration Hospital Spring Road (OTR 4, ID 168) 16 impoundments SIC 8062	5	14	6B
Belchertown	SIA	Belchertown State, State Street (OTR 9, ID 143) 13 impoundments SIC 4952	5	22	8B

City/ Town	Inform- ation Source	Site Owner	Nearness to		
			Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Bellingham	SIA	Benzenoid Organics Rt. 140 (IND 25, ID 267) 8 impoundments SIC 2865	8	27	5A
	SIA	New England Rug South Main Street (IND 100, ID 376) 1 impoundment SIC 5713	2	12	9A
Billerica	SIA	Roy Bros. Haulers 764 Boston Road (AOT, ID 256) 1 impoundment SIC 2819	9	28	4B
	SIA	Town of Billerica 250 Boston Road (Mun 28, ID 166) 15 impoundments SIC 4952	5	24	2B
		(AMU 8, ID 227) 3 impoundments SIC 4952	5	24	8B
		(Mun 70, ID 263) 3 impoundments SIC 4952	5	24	2B
	SIA	Iron Horse Park Boston & Maine Railroad (IND 93, ID 167) 3 impoundments SIC 4011	8	27	8B
	SIA	Middlesex County House of Correction Treble Cove Road (OTR 30, ID 229) 3 impoundments SIC 9223	5	24	8B
Bolton	SIA	GenRad, Rt. 117 (IND 4, ID 114) 2 impoundments SIC 3611	7	26	8B
Boston	SIA	Boston Edison, Summer Street (IND 68, ID 215) 4 impoundments SIC 491	8	22	8B
	SIA	MDC Sewer Division, Moon Island (Mun 21, ID 220) 1 impoundment SIC 4952	5	24	OD
		Nut Island (Mun 67, ID 224) 4 impoundments SIC 4952	5	24	OD
		(Mun 31, ID 86) 4 impoundments SIC 4952	2	17	5A

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Boston (Cont.)	SIA	MDC OTR 27 ID 0102 SIC 4952 26 impoundments SIC 4952	2	19	8B
Bourne	SIA	Otis Air Force Base (OTR 20, ID 341) 52 impoundments SIC 9711	8	27	7A
Braintree	SIA E	Recycling Industries 385 Quincy Avenue (IND 40, ID 291) 5 impoundments SIC 2899	9	28	6B
Brewster	SIA	Town of Brewster Run Hill Road (Mun 98, ID 407) 2 impoundments SIC 4953	5	25	2B
Brockton	SIA	City of Brockton (Mun 24, ID 299) 3 impoundments SIC 494	2	21	8B
Bridgewater	SIA	Jenkins Products Inc. 120 High Street (IND 80, ID 306) 3 impoundments SIC 3131	7	26	7A
	SIA	MCI Bridgewater Titicut Street (Mun 81, ID 324) 13 impoundments 4952	5	20	8B
	E	Cannons Engineering First Street (waste reclamation)	-	-	-
	SIA	Cumberland Farms 143 Curve Street (AGR 3, ID 322) 1 impoundment SIC 2026	5	16	6B
Brookfield	SIA	Brookfield Wire Co., Route 9 (IND 2, ID 40) 2 impoundments SIC 349	6	23	1C

City/ Town	Inform- ation Source	Site Owner	Nearness to		
			Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Buzzards Bay	SIA	Otis Air Force Base (OTR 18, ID 337) 1 impoundment SIC 4952	6	25	4B
Cambridge	E	Organic Chemical Div/PLA Harvey Street (chemical disposal)	-	-	-
Canton	E	Allan Plastics 38 Pequit Street (chemical disposal)	-	-	-
	E	Plymouth Rubber Co., Inc. Revere Street (chemical disposal)	-	-	-
Charlton	SIA	Charlton Woolen Co. Charlton City (IND 34, ID 39) 2 impoundments SIC	6	23	6B
	SIA	Masonic Education & Charity Foundation Masonic Home Road (OTR 41, ID 462) 6 impoundments SIC 8361	4	21	8B
Chatham	SIA	Town of Chatham Sam Ryders Road (Mun 99, ID 408) 8 impoundments SIC 4952	5	25	2B
	SIA	Town of Chatham (Mun 100, ID 409) 3 impoundments SIC 4953	5	25	OD
	SIA	ACME Laundry Orleans Road (OTR 57, SID 410) 3 impoundments SIC 7215	6	26	2B
Chelmsford	SIA	Southwell Combing Co. 100 Wotten Street (AIN 11, ID 244) 1 impoundment SIC 2297	8	22	8B

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Nearness to Priority Water Rating Supply (Step 5) (Step 6)	
Chelsea	SIA	Northeast Petroleum 295 Eastern Avenue (IND 64, ID 170) 1 impoundment SIC 2992	8	27	8B
Chicopee	SIA	City of Chicopee Water Pollution Control (Mun 119-ID130) 20 impoundments SIC 4952	3	21	8B
	E	Ahern Trucking 895 Burnet Road (chemical disposal)	-	-	-
	E	Hercules Chemical Gratton Street (chemical disposal)	-	-	-
Chilmark	SIA	Town of Chilmark Menemsha Cross Road (Mun 107, ID 428) 1 impoundment SIC 4953	5	21	3C
Clinton	SIA	Town of Clinton 242 Church Street (AMU 1, ID 14) 28 impoundments SIC 4952	5	21	5A
	SIA	MDC Sewage Treatment Plant High Street (Mun 9, ID 15) 2 impoundments SIC 4952	5	21	8B
Colrain	SIA	Kendall Co., Main Street (AIN 6, ID 69) 2 impoundments SIC 2261	2	21	3A
Concord	SIA	Environmental Research & Technology 696 Virginia Road (IND 51, ID 234) 1 impoundment SIC 3611	6	25	7A
	SIA	Concord Correctional Institution Elm Street (Mun 43, ID 67) 17 impoundments SIC 9223	5	24	8B
	SIA	Middlesex School, 1400 Lowell Road (OTR 31, ID 233) 2 impoundments SIC 8211	5	24	1C
	SIA	Town of Concord, 133 Keys Road (Mun 3, ID 174) 17 impoundments SIC 4952	5	13	8B

City/ Town	Inform- ation Source	Site Owner	Nearness to		
			Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Dalton	SIA	Crane & Co., Inc. 30 South Street (IND 86, ID 399) 1 impoundment SIC 2651	3	22	8B
		(IND 91, ID 402) 3 impoundments SIC 2651	5	24	8B
Danvers	SIA	International Cars 181 Newburg Street (IND 28, ID 192) 1 impoundment SIC 4952	3	22	6B
	SIA	Deucon Corporation Endicott Street (IND 79, ID 193) 1 impoundment SIC 2821	3	22	6B
Dartmouth	SIA	Re-Solve Inc. N. Hicksville Road (IND 104, ID 362) 4 impoundments SIC 2899	9	28	8B
Deerfield	SIA	South Deerfield Sewage Treatment Plant, Rt. 116	5	19	8B
Dennis	SIA	Town of Dennis T. Smith Road (Mun 101, ID 411) 5 impoundments SIC 4953	5	25	2B
Dighton	SIA	ICI Americas, Inc. 333 Main Street (IND 72, ID 353) 6 impoundments SIC 2833	9	25	OD
Dorchester	E	Mile Road Dump (chemical disposal)	-	-	-
Dracut	SIA	Brox Dairies, Inc. 1520 Broadway (IND 56, ID 176) 2 impoundments SIC 2026	4	23	4B
	SIA	Town of Dracut, Arlington Street (Mun 93, ID 236) 13 impoundments SIC 4952	5	24	8B
Dudley	SIA	Boise Cascade Paper Co., Route 131 (IND 32, ID 28) 2 impoundments SIC	6	23	8B

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Eastham	SIA	Town of Eastham Route 6 (Mun 78, ID 412) 1 impoundment SIC 4953	5	19	9A
Easthampton	SIA	Easthampton Public Works Ferry Street (owned by Sunderland) 6 impoundments SIC 4952	5	20	3A
	SIA	Town of Easthampton 43 Main Street (Mun 55, ID 74) 2 impoundments SIC 4952	5	20	3A
East Longmeadow	SIA	East Longmeadow DPW Town Hall (AMU 4, ID 133) 3 impoundments SIC 4952	5	22	8B
Edgartown	SIA	Town of Edgartown Main Street (AMU 12, ID 432) 1 impoundment, SIC 4953	5	24	7A
		(Mun 110, ID 433) 1 impoundment, SIC 4953	5	20	7A
		(Mun 112, ID 469) 10 impoundments SIC 4952	5	24	5A
Erving	SIA	Town of Erving 3 Main Street (Mun 71, ID 137) 1 impoundment SIC 4952	5	25	8B
Everett	SIA	Exxon Corp., 30 Beacham Street (IND 94, ID 171) 1 impoundment SIC 2992	7	24	4B
	SIA E	Monsanto Co., Amelia Earhart Drive (IND 95, ID 172) 1 impoundment SIC 2819	8	25	8B
Fairhaven	SIA	Atlas Tack Co. Pleasant Street (IND 75, ID 368) 3 impoundments SIC 3964	9	28	8B
Fall River	SIA	City of Fall River (Mun 74, ID 361) 2 impoundments SIC	2	16	8B
		(Mun 89, ID 360) 14 impoundments SIC 4952	5	24	OD

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Falmouth	SIA	Town of Falmouth (AMU 15, ID 486) 1 impoundment SIC 4953 (Mun 47, ID 487) 8 impoundments SIC 4953	8	28	OD
Fitchburg	SIA	James River Paper Old Princeton Road (IND 61, ID 22) 3 impoundments SIC 2621	6	23	4B
		City of Fitchburg 718 Main Street (Mun 26, ID 24) 4 impoundments SIC 4952	6	21	4B
Foxboro	SIA	Patriot Fence, Morse Street (Old Bleachery Site) (AIN 10, ID 270) 11 impoundments SIC 2231	8	27	8B
	SIA	Town of Foxboro, 40 South Street (Mun 35, ID 372) 8 impoundments SIC 4952	5	21	8B
	SIA	Foxboro State Hospital Chestnut Street (OTR 39, ID 273) 15 impoundments SIC 8062	5	24	8B
Framingham	SIA	Town of Framingham (AMU 16, ID 480) 30 impoundments SIC 4152	5	20	OD
	SIA	Commonwealth Gas Co. 157 Cordiville Road Southboro Site address: Western Ave., Framingham	8	26	OD
Franklin	SIA	American Felt 3 Hayward Street (IND 39, ID 269) 1 impoundment SIC 2231	2	21	5A
	SIA	Town of Franklin (Mun 49, ID 378) 5 impoundments SIC 4952 (Mun 92, ID 266) 12 impoundments SIC 4952	5	24	8B
			5	24	8B
Gardner	SIA	City of Gardner (Mun 36, ID 50) 43 impoundments, SIC 4952	6	23	1C

City/ Town	Inform- ation Source	Site Owner	Nearness to		
			Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Gardner (Cont.)	SIA	Gardner State Hospital (OTR 17, ID 47) 6 impoundments SIC 4952	5	24	8B
		(OTR 18, ID 48) 20 impoundments SIC 4952	5	24	8B
Gay Head	SIA	Town of Gay Head (Mun 106, ID 427) 1 impoundment SIC 4953	5	21	6B
Gill	SIA	Mc. Hermon School (OTR 46, ID 488) 2 impoundments SIC 8211	8	23	3C
Grafton	SIA	Town of Grafton (Mun 7, ID 5) 3 impoundments SIC 4952	5	18	8B
	SIA	Grafton State Hospital Westboro Road (OTR 40, ID 4) 18 impoundments SIC 8221	8	23	8B
	SIA	Wyman Gorden, 224 Worcester Street (IND 31, ID 2) 8 impoundments SIC 3463	5	22	8B
Granby	E	M. T. Sullivan Co. New Ludlow Road (chemical disposal)	-	-	-
Greenfield	SIA	Greenfield Sewage Treatment Plant, 334 Deerfield Street (Mun 117) abandoned sludge beds	5	23	8B
Proton	SIA	Nielsen Molding Rt. 225 (AIN 2, ID 18) 3 impoundments SIC 2621	6	24	9A
	SIA	Hollingsworth & Vose, Mill Street (IND 1, ID 17) 4 impoundments SIC 2621	2	20	9A
	SIA	Hollingsworth & Vose (IND 107, ID)	6	25	8B

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Groton (Cont.)	SIA	Groton School Rt. 111 (OTR 16, ID 61) 4 impoundments SIC 8211	5	23	8B
Hadley	SIA	Earl Parsons Farms 143 Millvalley Road (AGR 1, ID 75) 2 impoundments, SIC	3	22	8B
	SIA	Town of Hadley (Mun 121, ID 465) 2 impoundments SIC 4952	4	18	8B
Halifax	SIA	David King, Plymouth Street (IND 70, ID 303) 6 impoundments SIC 7215	6	25	8B
Hamilton	SIA	Town of Hamilton (AMU 5, ID 243) 1 impoundment SIC 4953	5	24	6B
Hanson	SIA	Plymouth County Hospital High Street (Mun 94, ID 295) 4 impoundments SIC 8062	5	24	8B
Hardwick	SIA	Town of Hardwick (Mun 41, ID 146) 13 impoundments SIC 4952 (Mun 122, ID 144) 3 impoundments SIC 4952	6	23	8B
			4	24	8B
Harwich	SIA	Town of Harwich (AMU 17, ID 431) 1 impoundment SIC 4953 (Mun 102, ID 413) 2 impoundments SIC 4953	5	25	OD
			5	25	4B
Hatfield	SIA	Style Tex, Elm Street (IND 36, ID 73) 1 impoundment SIC 2821	2	20	OD
Haverhill	E	Vernon Plastics, Old Groveland Road (chemical disposal at Haverhill landfill)	-	-	-

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Hingham	SIA	Margetts & Son Septic Co. 97 Ward Street (AOT 6, ID 295) 1 impoundment SIC 4952	5	24	7A
	SIA	Merriman Div. Litton 100 Industrial Park Road (IND 83, ID 311) 5 impoundments SIC 3566	5	24	2B
Holliston	SIA	Axton Cross Corp. Cross Street (IND 17, ID 279) 4 impoundments SIC 2899	9	17	8B
Holyoke	SIA	City of Holyoke High Street (AMU 2, ID 126) 1 impoundment SIC 4952	5	20	8B
	E	Mobile Chemical Company 3 Hanover Street (chemical disposal)	-	-	-
Hopedale	SIA	Town of Hopedale (Mun 13, ID 98) 9 impoundments SIC 4952	6	23	8B
Hubbardston	SIA	Curtis Lumber Co. Old Clark Road (IND 19, ID 45) 2 impoundments SIC 2421	8	24	8B
Hyannis	SIA	Cape Cod Mall, Rt. 132 (OTR 58, ID 455) 4 impoundments SIC 8062	4	24	OD
Indian Orchard	E	Monsanto Co. Bircham Bend Plant 190 Crochonal Avenue (chemical disposal)	-	-	-
	E	Monsanto Co. Springfield Plant 730 Worcester Street (chemical disposal)	-	-	-
Ipswich	SIA	Town of Ipswich (Mun 17, ID 153) 4 impoundments SIC 4952	5	24	1C

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Kingston	SIA	Expressway Sewerage Veranzara Blvd. (AOT 9, ID 300) 1 impoundment SIC 4952	5	24	2B
Lancaster	SIA	Industrial School for Girls Old Common Road (OTR 8, ID 13) 8 impoundments SIC 8249	5	23	1B
	SIA	R. L. Cully, Rt. 117 (OTR 23, ID 116) 1 impoundment SIC 4953	8	28	3A
Lakeville	SIA	Town of Lakeville (Mun 128, ID 388) 1 impoundment SIC 4952	5	24	9A
	SIA	Commonwealth of Massachusetts Dept. of Mental Health (OTR 54, ID 330) 10 impoundments SIC 8063	5	24	3C
Lawrence	SIA	City of Lawrence 410 Water Street (Mun 65 ID 0177) 10 impoundments SIC 494	0	10	8B
Lee	SIA	Schweitzer Div., Kimberly Clark Co. (IND 88, ID 0448) 1 impoundment SIC 2621	5	20	8B
	SIA	Westfield River Paper Co. Forest Street (IND 89 ID 0449) 6 impoundments SIC 2641	6	21	9A
	SIA	Mead Corp., Specialty Paper Willow Street (IND 105 ID 0446) 1 impoundment SIC 2751	9	28	8B
	SIA	Town of Lee Town Hall, Main Street (Mun 113 ID 0450) 2 impoundments SIC 4952	5	22	8B
Leicester	SIA	Leicester Water Supply P.O. Box 86 (Mun 40 ID 0078) 5 impoundments SIC 4952	5	18	8B

City/ Town	Inform- ation Source	VI-27 Site Owner	Nearness to		
			Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Leicester	SIA	Worcester Spinning and Finishing Co. 80 Chapel Street (IND 49, ID 117) 1 impoundment SIC 2269	8	25	8B
Lenox	SIA	Town of Lenox Town Hall, Walker Street (Mun 76, ID 0442) 4 impoundments SIC 4952	5	20	8B
Leominster	E	Leominster Municipal Landfill Mechanic Street (chemical disposal)	-	-	-
	SIA, E	Borden Chemical Co. 511 Lancaster Street (IND 63 ID 0083) 2 impoundments SIC 2821	8	26	8B
	SIA	City of Leominster 109 Graham Street (Mun 10 ID 0021) 3 impoundments SIC 4952	5	23	3A
Lincoln	SIA	Lincoln Homes Corp. Lincoln Road (OTR 3 ID 0175) 1 impoundment SIC 6514	5	24	3A
Lowell	SIA	Raytheon Corp. Woburn Street (IND 22 ID 0164) 2 impoundments SIC 3761	9	28	8B
Lynn	E	Eastern Smelting 37 Bubier Street (chemical disposal)	-	-	-
Manchester	SIA	Manchester Water & Sewer Dept. (Mun 42 ID 0189) 4 impoundments SIC 4952	5	24	1C
Mansfield	SIA	Sweet Mfg. Co. Gilbert Street (IND 52, ID 155) 4 impoundments SIC 3915	9	28	8B

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Mansfield (Cont.)	SIA	Reichold Chemicals Inc. Blane Division 751 N. Main Street (IND 101 ID 0454) 4 impoundments SIC 2821	8	27	1C
	SIA	Town of Mansfield 50 West Street (Mun 125 ID 0373) 6 impoundments SIC 4952	6	25	8B
	E	Mansfield Town Landfill East St. & Rt. 106 (chemical disposal)	-	-	-
Marion	SIA	Marion, Town of 2 Spring Street (Mun 29 ID 0334) 12 impoundments SIC 4952	5	24	1C
Marlborough	SIA	Butcher Polish Co. 120 Bartlett Street (IND 3, ID 59) 2 impoundments SIC 2842	2	11	3B
	SIA	City of Marlborough (Mun 23 ID 0216) 34 impoundments SIC 4952	5	16	8B
Marshfield	SIA	Town of Marshfield Snow Road (Mun 46 ID 0296) 4 impoundments SIC 4953	5	24	1C
Mashpee	SIA	Town of Mashpee Asher's Path (Mun 103 ID 0414) 4 impoundments SIC 4953	5	25	9A
Maynard	SIA	Data Terminal Systems, Inc: 124 Acton Street (IND 67 ID 0212) 1 impoundment SIC 3579	3	18	8B
	SIA	Town of Maynard, Dept. of Public Works Main Street (Mun 44, ID) 1 impoundment SIC 4952	5	24	6B
		(Mun 20, ID 211) 3 impoundments SIC 4952	5	24	8B

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Maynard (Cont.)	SIA	Digital Equipment Corp. 129 Parker Street (Mun 85 ID 0213) 1 impoundment SIC 3571	5	18	3A
Medfield	SIA	Town of Medfield Main Street (AMU 10 ID 0282) 8 impoundments SIC 4952	5	24	6B
	SIA	Medfield State Hospital Hospital Road (OTR 11 ID 0281) 12 impoundments SIC 8062	5	24	6B
Medford	E	Allied Chemical 93 Corporation Way (onsite disposal 1973-77)	-	-	-
Middleborough	SIA	Rockland Industries, Inc. 555 Plymouth Street (IND 81 ID 0327) 6 impoundments SIC 2833	9	24	3A
Middleton	SIA	Peter Rubchinuk Landfill East Street (OTR 33 ID 0249) 1 impoundment SIC 4953	9	27	6B
	SIA	Bostick Div., USM Boston Street (IND 78 ID 0191) 2 impoundments SIC 2821	5	24	6B
Milford	SIA	Foster Forbes Glass Co. National Street (IND 35 ID 0056) 4 impoundments SIC 3221	6	23	8B
	SIA	Town of Milford 52 Main Street (Mun 12 ID 0053) 20 impoundments SIC 4952	5	24	8B
Milbury	SIA	Buck Brothers, Brightside Street (IND 97 ID 0003) 1 impoundment SIC 3421	6	23	8B

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Milbury (Cont)	SIA	Upper Blackstone Water Pollution Abatement District Route 20 (Mun 14 ID 0007) 16 impoundments SIC 4592	6	25	8B
	SIA	Town of Milbury Sewer Department (Mun 116 ID 0457) 2 impoundments SIC 4952	5	17	8B
Millis	SIA	Town of Millis 64 Exchange Street (Mun 124 ID 0284) 8 impoundments SIC 4952	5	27	7A
Nantucket	SIA	Town of Nantucket P.O. Box 239 (Mun 104 ID 0425) 6 impoundments SIC 4952	5	24	3A
	SIA	Town of Nantucket (Mun 105 ID 0426) 4 impoundments SIC 4952	5	24	2B
New Bedford	SIA	Polaroid Corp. 100 Duchalne Blvd. (IND 82 ID 0364) 4 impoundments SIC 3832	8	27	8B
	SIA	New Bedford Dept. of Public Works 133 William Street (Mun 75 ID 0391) 1 impoundment SIC 4952	5	24	OD
	SIA	I Mex Polymers 129 Vetere Street (IND 74, ID 363) 2 impoundments SIC 3079	9	28	5B
New Braintree	SIA	Pioneer Valley Academy (OTR 29 ID 161) 6 impoundments SIC 8211	5	14	1C

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Newburyport	SIA	City of Newburyport Pleasant Street (Mun 19 ID 0159) 2 impoundments SIC 4952	5	22	OD
Norfolk	SIA	Pondville State Hospital Dedham Street (OTR 1 ID 272) 3 impoundments SIC 8062	5	24	7A
	SIA	Mass. Correctional Institution Walpole (OTR 12, ID 286) SIC 9223	5	22	8B
North Adams	SIA	City of North Adams 10 Main Street (AMU 11 ID 0404) 4 impoundments SIC 4952	5	25	8B
	E	Sanitary Landfill W. Shaft Road (chemical disposal)	-	-	-
North Andover	SIA	Western Electric 1600 Osgood Street (IND 42, ID 0155) 10 impoundments SIC 36	9	28	5A
	E	North Andover Town Landfill Holt Road (chemical disposal)	-	-	-
	E	Sharpner's Pond Road Landfill Sharpner's Pond Road (chemical disposal)	-	-	-
North Attleboro	SIA	Town of North Attleboro 240 Smith Street (Mun 30, ID 0308) 17 impoundments SIC 4952	5	22	1C

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Northbridge	SIA	Northbridge Sewer Department Quaker Street (Mun 6, ID 01) 37 impoundments SIC 4952	5	24	8B
North Brookfield	SIA	North Brookfield Sewer Dept. School Street (Mun 39, ID 92) 4 impoundments SIC 4952	5	14	8B
Northampton	SIA	Northampton, DPW 125 Locust Street (Mun 54, ID 0077) 6 impoundments SIC 4952	2	20	8B
North Reading	SIA	John Berry Rehabilitation Center Lower/Road (OTR 32, ID 0247) 3 impoundments SIC 4952	5	24	9A
Oak Bluffs	SIA	Town of Oak Bluffs Town Hall (Mun 109 SIC 4953	5	24	5A
Orange	SIA	Orange Sewage Treatment Plant Route 2A	5	24	6B
Orleans	SIA	Town of Orleans School Road (Mun 79, ID 0415) 1 impoundment SIC 4953	5	19	2B
Oxford	SIA	Farm Bureau Association Stafford Street (IND 43, ID 0037) 1 impoundment SIC 4952	2	19	8B
Peabody	SIA	Town of Peabody, Farm Avenue (AMU 9, ID 0251) 1 impoundment SIC 4953	5	24	1C
	SIA	Eastman Gelatin Corporation 227 Washington Street (IND 66, ID 197) 4 impoundments SIC2891	6	25	1C

City/ Town	Inform- ation Source	Site Owner	Nearness to		
			Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Peabody (Cont.)	E	Lime Disposal Area Eastman Gelatine - Kodak Kingston Street (hazardous waste disposal)	-	-	-
Pepperell	SIA	Town of Pepperell Bemis & Jersey Street (Mun 61, ID 0108) 9 impoundments SIC 4952	5	24	8B
Petersham	SIA	Harry C. Buell Oliver Street (OTR 47, ID 0489) 2 impoundments SIC 4953	8	23	3C
Pittsfield	SIA/ E	General Electric Co. 100 Woodlawn Avenue (IND 87, ID 0400) 1 impoundment SIC 3612	9	28	3A
	SIA/ E	Town of Pittsfield 901 Holmes Road (Mun 96, ID 0401) 60 impoundments SIC 4952	5	24	8B
	E	Pittsfield Landfill East Street (old) Hubbard Avenue (after 1970) (chemical disposal)	-	-	-
Plymouth	SIA	Town of Plymouth 11 Lincoln Street (Mun 25, ID 302) 6 impoundments SIC 4952	5	15	8B
	SIA	Town of Plymouth Lincoln Street (Mun 95, ID 0380) 1 impoundment SIC 4952	5	25	4B
Provincetown	SIA	Town of Provincetown 260 Commercial Street (Mun 80, ID 0416) 1 impoundment SIC 4953	5	24	6B
Quincy	SIA	Moon Island M.D.C. Pump Station (IND 89, ID 214) 6 impoundments SIC 4952	5	22	OD

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Randolph	E	Sanitary Landfill Johnson Drive (hazardous waste disposal)	-	-	-
Rochdale	SIA	Worcester Tool and Stamping Co. 10 Hankey Street (IND 33 ID 0036) 4 impoundments SIC 347	8	23	5C
Rochester	SIA	Quittacas Water Treatment Plant Middleboro Road (Mun 88, ID 332) 4 impoundments SIC 494	2	20	8B
Rockland	SIA	Town of Rockland P.O. Box 330 (Mun 72, ID 0304) 1 impoundment SIC 4952	5	22	8B
	SIA	Mayflower Realty Trust 14 Howard Street (OTR 52, ID 0277) 1 impoundment SIC 6531	5	24	7A
	SIA	Rockland Water Dept. 242 Union Street (Mun 35, ID 294) 4 impoundments SIC 4952	8	23	6B
Rockport	SIA	Town of Rockport (AMU 6, ID 0248) 3 impoundments SIC 4952	5	24	5C
Royalston	SIA	Richard Lawrence, Septage Hauler Dickley Road (OTR 14, ID 0096) 2 impoundments SIC 4952	8	27	5C
Russell	SIA	Westfield River Paper Co., Inc. 16 Station Road (IND 13, ID 0135) 4 impoundments SIC 2641	2	21	8B
Salem	SIA	New England Power Co. 1 Fort Avenue (IND 65, ID 0194) 1 impoundment SIC 4911	5	22	0D

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Salisbury	SIA	Vaughn Corporation 386 Elm Street (IND 15, ID 0158) 1 impoundment SIC 3639	-	19	OD
Sandwich	SIA	Town of Sandwich Town Hall (AMU 14, ID 0485) 1 impoundment SIC 4953	6	26	OD
	SIA	Canal Electric Company Freezer Road (IND 54, ID 0342) 2 impoundments SIC 4911	7	26	8B
	SIA	Town of Sandwich Town Hall (Mun 129, ID) 1 impoundment SIC 4953	5	20	3A
Saugus	E	RESCO 100 Salem Turnpike (solid waste incinerator)	-	-	-
Scituate	SIA	Water Division 272 Chief Justice Cushing Highway (Mun 34, ID 0290) 10 impoundments SIC 4952	5	24	3C
	SIA	Town of Scituate Scituate Town Hall (Mun 126, ID 0478) 1 impoundment SIC 494	1	16	8B
Seekonk	SIA	Attleboro Dyeing and Finishing Co. 36 Maple Avenue (IND 53, ID 0315) 1 impoundment SIC 2262	6	25	8B
Shirley	SIA	MCI - Shirley Prerelease Center Shaker Road (OTR 7, ID 0020) 16 impoundments SIC 9223	5	24	9A
Shrewsbury	SIA	Shrewsbury, Town of 100 Maple Avenue (Mun 53, ID 0082) 2 impoundments SIC 4952	5	20	8B
Southboro	SIA	Fay School, Main Street (UTR 45, ID 0104) 4 impoundments SIC 8211	5	20	8B

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Southbridge	SIA	American Optical Co. 14 Mechanics Street (IND 18, ID 31 2 impoundments SIC 2421	4	22	8B
	SIA	Southbridge, Town of 41 Elm Street (Mun 57, ID 0032) 16 impoundments, SIC 4952	5	24	8B
	SIA	St. Mark's School 25 Marlborough (OTR 44, ID 60) 8 impoundments SIC 8211	5	24	3A
Spencer	SIA	St. Joseph's Abbey Rt. 31N (IND 11, ID 42) 2 impoundments SIC 3482	5	14	3C
	SIA	Spencer, Town of Sewer Dept. Rt. 9 (Mun 11, ID 0041) 17 impoundments SIC 4952	5	24	3C
Springfield	SIA	Smith & Wesson, Inc. 2100 Roosevelt Avenue (IND 12, ID 0123) 1 impoundment SIC 3482	7	16	OD
	SIA	Springfield, City of City Hall (Mun 22, ID 0160 1 impoundment SIC 4952	7	22	8B
	SIA	Springfield, City of City Hall (Mun 32, ID 0121) 2 impoundments SIC 494	2	21	8B
	SIA	Springfield, Town of Ludlow Reservoir (Mun 33, ID 149 1 impoundment, SIC	2	21	8B
	SIA	Springfield Regional Wastewater Treatment Plant - 36 Court Street (Mun 56, ID 132) 20 impoundments SIC 4952	7	27	8B

City/ Town	Information Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Springfield (Cont.)	E	Springfield Landfill (closed landfill suspect of chemical disposal)	-	-	-
Sterling	SIA	Pine Crest, Albright Road (AGR 2 ID 0012) 7 impoundments SIC 25	5	24	9A
Stockbridge	SIA	Town Hall (Mun 911, ID 0444) 8 impoundments SIC 4952	5	22	8B
Sturbridge	SIA	Town of Sturbridge STP, PO Box 253 (Mun 59, ID 0089) 5 impoundments SIC 4952	7	24	8B
	SIA	Howard Johnson, Inc. Box 373 Rt. 86 (OTR 43, ID 0463) 4 impoundments SIC 5812	4	15	6B
Sunderland	SIA	Sunderland State Fish Hatchery Rt. 116 (AGR 5, ID 0111) 1 impoundment SIC 27	2	21	3C
	SIA	Sunderland Waste Water Treatment Plant River Road (Mun 120, ID 0464) 6 impoundments SIC 4952	5	24	8B
Taunton	SIA	Paul A. Dever State School 1380 Bay Street (OTR55, ID 317) 12 impoundments SIC 7032	5	24	8B
	SIA	Taunton State Hospital 1555 King Phillip Street (OTR 40 ID 0316) 1 impoundment SIC 8062	5	24	8B
Tewksbury	SIA	Corenco Corp. 525 Woburn (IND 21 ID 0163) 1 impoundment SIC 2077	3	22	8B

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Tewksbury (Cont.)	SIA	Tewksbury State Hospital Livingston Street (OTR 15, ID 0200) 35 impoundments SIC 8062	5	24	5C
Tisbury	SIA	Tisbury, Town of Spring Street (Mun 108, ID 0430) 1 impoundment SIC 4953	5	24	9A
Townsend	SIA	Bates Corrugated Box Co. Scales Lane (IND 44, ID 0084) 1 impoundment SIC 263 (OTR 26 ID 0085) 4 impoundments SIC 4952	6 5	19 19	2B 2B
Truro	SIA	Truro, Town of Town Hall Road (Mun 81 ID 0419) 1 impoundment SIC 4953	5	24	3A
	SIA	US Air Force N. Truro Installation (OTR 37 ID 0418) 20 impoundments SIC 4952	5	17	OD
Tyingsboro	SIA/ E	Charles George Landfill Dunstable Road (IND 57 ID 246) 1 impoundment SIC 4953	9	28	9A
Uxbridge	SIA	Stanley Woolen Co. 140 Mendon Street (IND 46 ID 0099) 3 impoundments SIC 2231	8	25	8B
Walpole	SIA	Bird & Sons, Inc. Washington Street (IND 98 ID 0274) 1 impoundment SIC 2952	5	20	3A

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Water Supply (Step 6)
Walpole (Cont.)	SIA	Walpole, Town of Town Hall, Main Street (Mun 5, ID 0285) 2 impoundments SIC 494	2	21	7A
Wareham	SIA	EG&G Bionomics 790 Main Street (IND 58, ID 0346) 2 impoundments SIC 7397	9	28	5B
	SIA	Wareham, Town Of 54 Marion Road (Mun 127 ID 0347) 8 impoundments SIC 4952	5	24	8B
Wayland	SIA	Raytheon Co., Equipment Div. (IND 59 ID 0221) 2 impoundments SIC 3662	5	24	6B
Webster	SIA	Cranston Print Works Worcester Road (AIM 7 ID 0026) 1 impoundment SIC 2269	8	22	8B
	SIA	Webster, Town of Main Street (Municipal Bldg.) (Mun 48 ID 0029) 1 impoundment SIC 4952	5	24	7A
Wellfleet	SIA	Wellfleet, Town of Main Street (Mun 82 ID 0420) 1 impoundment SIC 4953	5	24	8B
	SIA	U.S. National Park Service, Rt. 6 (CTR 33)	5	24	5A
Westborough	SIA	Grant, William, Septage Hauling 50 Hopkington Road (AOT 4 ID 0475) 1 impoundment SIC 4953	6	21	OD
	SIA	Westborough Sewage Treatment Plant Meadow Road (Mun 8 ID 0009) 16 impoundments SIC 4952	6	23	8B

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City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Westborough (Cont.)	SIA	Westborough State Hospital (OTR 5 ID 0079) 13 impoundments SIC 8069	5	24	8B
	SIA	Cumberland Farms Flanders Road (IND 47 ID 105) 1 impoundment SIC 2842	8	25	3A
West Boylston	SIA	Worcester County Hospital Worcester Road (AMU 13 ID 11) 4 impoundments SIC 8069	5	24	1C
Westfield	SIA	Digital Equipment Corp. 111 South Hampton Road (IND 9 ID 0120) 1 impoundment SIC 36	2	21	3C
Westminster	SIA	State Road East (OTR 13 ID 46) 1 impoundment SIC	5	24	8B
Weston	SIA	Regis College (OTR 53 ID 0222) 14 impoundments SIC 8221	5	24	8B
	SIA	Society of Jesus of New England 314 Concord Road (OTR 51 ID 0472) 5 impoundments SIC 8661	2	21	6B
Weymouth	SIA	Weymouth, Town of 120 Winter Street (Mun 36 ID 0292) 2 impoundments SIC 4952	5	24	9A
Whitinsville	SIA	ATF Davidson Company Main Street (AIN 1 ID 0113) 1 impoundment SIC 3555	5	20	8B
Wilbraham	SIA	Wilbraham, Town of 240 School Street - P.O. Box 98 (Mun 16 ID 0151) 10 impoundments SIC 4952	6	25	9A

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Wilmington	SIA	Charles River Breeding Labs 251 Ballardvale Road (AGR 3 ID 0202) 2 impoundments SIC 2026	5	24	OD
	SIA	Stepan Chemical Co. Polymer Dept. 51 Eames Street (IND 27 ID 205) 7 impoundments SIC 2869	9	28	8B
	SIA	General Electric (IND 50 ID 203) 2 impoundments SIC 6552	6	25	7A
Winchendon	SIA	Town of Winchendon 105 Front Street (Mun 58 ID 0051) 14 impoundments SIC 4952	5	25	8B
Woburn	SIA	Atlantic Gelatin Hill Street (IND 69 ID 0231) 1 impoundment SIC 2095	2	21	8B
Worcester	SIA	Johnson Steel & Wire Co. 53 Wiser Avenue (IND 36 ID 0006) 5 impoundments SIC 3312	2	21	8B
	SIA	City of Worcester 455 Main Street (Mun 15 ID 0080) 66 impoundments SIC 4952	6	25	8B
Wrentham	SIA	Crosby Valve & Gage Co. 43 Kendrick Street (IND 99 ID 0350) 6 impoundments SIC 3829	5	24	8B
	SIA	Wrentham State School State Road (OTR 34 ID 0271) 3 impoundments SIC 8211	9	23	5C

City/ Town	Inform- ation Source	Site Owner	Waste Rating (Step 4)	Priority Rating (Step 5)	Nearness to Water Supply (Step 6)
Wrentham (Cont.)	SIA	Mt. St. Mary Abbey Arnold Street (OTR 24 ID 0379) 1 impoundment SIC 8661	5	19	4B
Yarmouth	SIA	Yarmouth, Town of Forest Road, Ext. (Mun 00130 ID 0422) 4 impoundments SIC 4953	5	25	1C
Chelmsford	DEQE files	Electrometals Inc. 275 Billerica Ave. (chemical disposal on-site)	—	—	—
Chelsea	DEQE files	Morrell Realty Trust (formerly Forbes Lithographic Co.) Marginal Street (chemical disposal on-site)	—	—	—
Danvers	DEQE files	Creese & Cook Tannery Water Street (industrial sludge Landfill)	—	—	—
Middleton	DEQE files	Bastile Corp. Main Street (industrial waste discharge, unlined industrial waste lagoon)	—	—	—
North Adams	DEQE files	Sprague Electric Co. Brown Street Landfill (chemical disposal)	—	—	—
Woburn	DEQE files	J.J. Tannery, Co. Salem Street (industrial sludge disposal, unlined industrial waste lagoon) Whitney Barrel Co. New Boston Street (chemical disposal) Atlantic Gelatin Montvale Avenue (inactive industrial sludge landfill)	—	—	—

Nearness
to

[illegible]