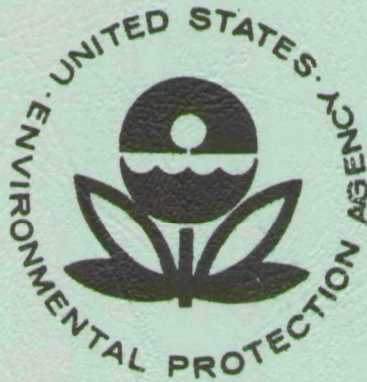


EMERGENCY
RESPONSE PLANS
STATE AND LOCAL ASPECTS



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ENGINEERS - ARCHITECTS - PLANNERS
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EMERGENCY RESPONSE PROGRAMS FOR MUNICIPAL
WASTEWATER TREATMENT FACILITIES
STATE - LOCAL ASPECTS

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NOTICE

This document is a preliminary draft. It has not been formally released by EPA and should not at this stage be construed to represent Agency policy. It is being circulated for comment on its technical accuracy and policy implications.

ABSTRACT

This document provides information to assist in the development of State and local emergency programs in responding to spills of raw or inadequately treated municipal wastewater. This report emphasizes the legal aspects of spill reporting, the definition of a reportable spill, State and local aspects of emergency response planning, and a model State emergency response program.

Preliminary steps in this work included a review of existing and proposed Federal statutes and current State water pollution control laws and regulations. Input from the National Oil and Hazardous Substances Pollution Contingency Plan, the U. S. Office of Emergency Preparedness, the American Water Works Association's Emergency Planning Handbook, the Office of Civil Defense's Publication, Civil Defense Aspects of Waterworks Operation, and Virginia's Natural Disaster Assistance Plan has been incorporated in this report. Over 55 State and interstate agencies were asked to provide information on existing or future water pollution contingency plans, and over two hundred wastewater treatment facilities were asked to provide information on local emergency plans.

This manual includes a separate section on State emergency response plans and another separate section on local aspects of emergency planning. The guidelines presented are not intended as rigid formats; each State and local response plan must be modified to the individual situation.

This report was submitted in fulfillment of Contract No. 68-01-0341, under the sponsorship of the Office of Water Programs Operations, Environmental Protection Agency.

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SECTION I

CONCLUSIONS

1. Very few States have written into their State laws a requirement that municipal wastewater treatment system owners report spills of raw or inadequately treated sewage. However, many State water pollution control agencies have adopted regulations, under authority of State law, that require that such a spill be reported.
2. Because of the many conditions that must be evaluated when investigating a municipal wastewater spill (waste characteristics to include strength and volume, receiving stream assimilation capacity, and downstream water uses), the States do not place the burden of estimating incident severity on the individual treatment system owner. The States require reporting of any discharge of inadequately treated wastewater, and the State water pollution control agency collects the information necessary to determine the environmental impact of the spill.
3. Few States currently have formal contingency plans specifically for spills of municipal wastewater. However, several States have oil and hazardous materials spill plans, and several States provide stream sampling teams to respond to water pollution emergencies. General information on the philosophy of emergency response planning is available from the National and Regional Oil and Hazardous Substance Pollution Contingency Plans, the U.S. Office of Emergency Preparedness, the Department of Defense, Office of Civil Defense, and State Civil Defense Plans.
4. With little effort, the existing water pollution control agencies in most States could be organized to provide a more efficient response to municipal wastewater spills. All State water pollution control agencies now respond to water pollution emergencies. In most cases,

the agencies have sufficient personnel and communication capability to respond in an acceptable manner. A well thought-out plan, similar to the Oil and Hazardous Materials Plans now existing in several States, would minimize the environmental, public health and public welfare impact of municipal wastewater spills.

5. Very few municipal treatment systems have formal emergency response plans. Most owners rely on adequate staffing and sufficient equipment to cope with emergencies.

SECTION II RECOMMENDATIONS

All States should review their existing Water Pollution Control Laws and Regulations and, if necessary, provide a requirement for reporting spills of raw or inadequately treated municipal wastewater.

All States should develop a plan for receiving spill reports on a 24-hour-a-day basis and set up a mechanism for responding in a prompt and efficient manner. Coordination of emergency plans between adjacent States that have a common river basin should be encouraged.

All municipal wastewater treatment system owners should develop local emergency response plans and provide training for local personnel involved in emergency planning.

Receiving waters in each State should be studied and flow models developed. These models will help provide a rapid severity estimate for a given spill.

State water pollution control agencies should develop a preliminary spill classification procedure. This procedure will enable a State representative to classify a given spill as major or minor using preliminary spill report information. This classification will insure early and appropriate responses to spill reports.

State water pollution control agencies should investigate the use of a computerized stream monitoring system in critical areas. This system could be similar to the one now employed by the Ohio River Valley Water Sanitation Commission.

Municipal wastewater treatment system owners should analyze the vulnerability of their systems, data which can aid them in developing local emergency programs.

All municipal wastewater treatment facilities should develop an acceptable breakdown of treatment capabilities during periods of equipment or treatment process failure. Such a breakdown will aid in estimating the degree of treatment that the wastewater is receiving for any given failure condition.

Emergency equipment and personnel inventories should be established by all municipal wastewater treatment facilities.

Professional, technical, and service organizations (Water Pollution Control Federations, American Society of Civil Engineers, etc.) should provide opportunities for personnel involved in emergency planning to receive up-to-date training in this area.

All States, either through existing organizations (Council of State Governments, etc.) or new groups, should exchange ideas, techniques, and philosophy concerning emergency response plans.

SECTION III INTRODUCTION

Scope and Purpose

The primary function of municipal wastewater treatment facilities is to collect and treat municipal wastewaters so as to attain an interim national "...goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and provides for recreation in and on the water." The Federal Water Pollution Control Act Amendments of 1972 stipulate that this to be accomplished by publicly owned treatment works in a consistent and reliable manner; treatment works must meet effluent limitations based upon secondary treatment, or any more stringent applicable limitations, by July 1, 1977, and must employ the best practicable waste treatment technology by July 1, 1983. The specific conditions and limitations will be identified in a permit issued to each point source discharge under the "National Pollutant Discharge Elimination System" as established by the Act.

Since the discharge of pollutants in excess of the effluent limitations of discharge permits is prohibited by the Act, it is essential that municipal wastewater plants, from the day of initial operation, effectively treat wastewater in compliance with those limitations. This manual has been prepared to assist in the accomplishment of this objective.

This manual provides information to assist in the development of State and local emergency response programs to detect, respond to, and minimize the environmental and public health and welfare impact of spills of raw or inadequately treated municipal wastewater.

Project Phases

The development of this manual began with a thorough review of the National Oil and Hazardous Substances Pollution Contingency Plan. The literature survey was expanded to include Regional Oil and Hazardous

Substances Pollution Contingency Plans, Interstate Water Pollution Contingency Plans, various EPA publications dealing with control and spill prevention techniques for hazardous polluting substances, various State techniques for response to water pollution emergencies, civil defense planning, and the emergency planning philosophy of various organizations in water related fields.

Federal statutes, both existing and proposed, related to water pollution were reviewed and a tabulation of pertinent features from applicable statutes was prepared. All State water pollution control agencies were contacted and requests for current water pollution control laws and agency regulations were made.

Surveys of organizations with expertise in emergency planning and conferences with individuals working in this field were conducted. A request for information on existing or proposed contingency plans was made to all States and major interstate agencies. A questionnaire was prepared, approved by the Office of Management and Budget, and mailed to over 200 municipal treatment facilities across the country.

The results of the literature survey, the review of Federal and State statutes, the field trips, the responses to the questionnaire, and input from Wiley & Wilson's sanitary engineering conceptual design team are included in this manual.

Manual Format

Users of this manual should become familiar with its Table of Contents. A principal section discusses State emergency response programs and another section deals with the local aspects of emergency planning.

The Appendix of this manual contains a model State emergency response plan and tabulations of pertinent Federal and State laws related to water pollution control.

SECTION IV

REPORTABLE SPILL DEFINITION

INTRODUCTION

Prior to initiating any statewide program for responding to municipal wastewater treatment plant emergencies, the criteria for defining a reportable spill must be selected. This section contains a sample definition for municipal wastewater spills. Also several reportable spill definitions from existing State water pollution control agency regulations are given.

SAMPLE DEFINITION:

Any discharge from a municipal wastewater system which may not be in compliance with the effluent limitations established for that system. In the absence of a certificate/permit system, any discharge of a quality lower than the normal effluent quality should be classified as a reportable spill.

For the purpose of the above definition, a wastewater system includes, but is not limited to, the wastewater treatment plant, sewer lines, and sewage pumping stations. A discharge includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, dumping, overflowing or bypassing.

The intent of the reportable spill definition given above is to provide maximum protection to the downstream water users and to give the responsibility for the incident severity analysis to the State water pollution control agency.

EXISTING DEFINITIONS

FLORIDA

In the event the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or other cause, the permittee is to immediately notify this Department. Notification shall include pertinent information as to cause, and what steps are being taken to correct the problem and prevent its recurrence and the owner's intent toward reconstruction of destroyed facilities where applicable. (Rules of the Department of Pollution Control, Chapter 17-4.13)

GEORGIA

Whenever, because of an accident or otherwise, any toxic or taste-and-color producing substance, or any other substance which would endanger downstream users of the waters of the State or would damage property, is discharged into these waters, or is so placed that it might flow, be washed, or fall into them, it shall be the duty of the person at the time in charge of such substance to forthwith notify the Division for Georgia Water Quality Control in person or by telephone of the location and nature of the danger, and it shall be such person's further duty to immediately take all reasonable and necessary steps to prevent injury to property and downstream users of said waters. (Rules of State Water Quality Control Board, Chapter 730-5-.03)

INDIANA

Any unusual change in volume and characteristics of the effluent, either planned or accidental, shall be reported immediately to the Office of the Technical Secretary. (Stream Pollution Control Board of the State of Indiana, Regulation SPC 11, March 3, 1971)

KENTUCKY

Whenever by reason of emergency, accident, or otherwise excessive spills or discharges of sewage, industrial, or other wastes, shall have occurred from impoundments, treatment works, disposal system or outlet, storage basins or otherwise, the responsible person, persons, corporation, or others shall immediately by phone or telegram notify the office of the Water Pollution Control Commission, giving all information concerning the point of discharge, characteristics of the effluent being discharged and whether or not such discharge is continuing or has been stopped. (Water Pollution Control Commission Regulation, WP-3, Paragraph 2)

OREGON

Approval shall be obtained from the State Sanitary Authority before bypassing any sewage or industrial waste treatment plant or unit thereof except in case of emergency. If an emergency occurs and bypassing for more than 24 hours is necessary, the authority shall be notified immediately. A record of the date and duration of all bypassing shall be maintained. (Oregon Administrative Rules Chapter 340, 42-020, April 15, 1972)

VIRGINIA

Every owner certified under the State Water Control Law shall immediately advise the Board by telephone or telegram, to be confirmed by letter, giving all available details, including known adverse effects on aquatic life and the known number of fish killed, should any unusual or extraordinary discharge of wastes to State water occurs.

Unusual or extraordinary discharges are defined as any discharges of waste resulting from:

1. Unusual spillage of materials resulting directly or indirectly from the owner's processing operations.
2. Breakdown of processing or accessory equipment.
3. Failure of or taking out of service sewage or industrial waste treatment plant or auxiliary facilities (such as sewer lines or sewage or industrial waste pump station).
4. Flooding or other acts of nature.

(Regulation No. 4, State Water Control Board)

OKLAHOMA

When a lift station or the water pollution control plant, or any part of such facilities are bypassed, the operating reports shall include the time such units were bypassed, the volume of waste bypassed, and the reason for such bypassing. (Sec. 3-D State Board of Health Rules and Regulations Governing the Operation of Water Pollution Control Facilities)

KANSAS

...emergency or accidental discharge of sewage or other materials detrimental to the quality of waters of the State shall be immediately reported to the State Department of Health by the owner of the Treatment Plant or his representative... (State Board of Health Regulation 28-16-27)

SUMMARY

The sample definition for a reportable spill and the existing State spill definitions have been provided to assist in developing a new definition, to help in the revision of an existing definition, or to permit comparisons between existing State definitions.

SECTION V

STATE EMERGENCY RESPONSE PROGRAM

INTRODUCTION

A statewide plan for responding to municipal wastewater treatment plant emergencies can serve to minimize the damage caused by spills of raw or inadequately treated municipal wastewater. Even during emergencies that affect large portions of a State, such as floods and hurricanes, an existing plan will help ensure that wastewater treatment capabilities are maintained or are returned to service in an efficient manner.

This section contains information and considerations for developing State emergency response programs for spills of municipal wastewater. (Appendix A is a Model State Emergency Response Plan.)

GENERAL

Responsibility

The responsibility for a State's emergency response program should be given to a single State agency. This does not eliminate other State agencies from participation in the program but simply establishes a procedure to improve coordination and avoid duplication of effort.

Regions

The emergency planning agency should divide the State into regions. The regions might be river basins, political jurisdictions, planning districts, or might be defined according to population density. Each State can best determine how the regions within its boundaries are defined. However, these regions should not be chosen arbitrarily and, once selected, a periodic review should be made to insure that they remain consistent with overall emergency program objectives.

Plant Inventory

An inventory of all municipal wastewater treatment plants within the State should be made with the plants grouped according to the region in which they are located. A map showing the boundaries of the regions and the location of the municipal wastewater treatment facilities should be produced and kept up-to-date.

Stream Modeling

The receiving streams in the State should be studied and modeled. These models will provide an initial estimate of the effect a given spill will have for a specific stream flow condition. The models should be updated periodically to ensure reliability of their predictions. The type and location of downstream water users also should be determined for each municipal wastewater treatment facility discharge. A priority list and a procedure for alerting these downstream water users should be established and updated continuously.

Dye studies can be used to estimate the travel time for water-soluble wastes being transported by a river. The dye is injected into the river and travel time measured at downstream locations. The studies should be made during various flow conditions in order to minimize the errors resulting from extrapolating data from only one or two river flow conditions. All limitations built into such a study should be clearly defined. This will enable the personnel preparing and using the tables containing this data to apply proper engineering judgment in their work.

Figure No. 1 is a typical presentation of the data that can be obtained from a dye study. It can be used by the State water pollution control agency personnel and downstream water users to estimate when a spill at a known river mile/station will arrive at a given downstream location. This travel time information should be given for various receiving stream flow conditions.

Water Intake for Capital City
(DOWNSTREAM WATER USER)

RM 30.5
(RIVER MILE/STATION)

TABLE GIVES TIME IN HOURS FOR A SPILL TO ARRIVE AT

RM 30.5 IN THE Black Water River FROM SPILLS
(RIVER MILE/STATION) (RECEIVING STREAM)

UPSTREAM.

LOCATION OF SPILL (RIVER MILE/STATION)

RECEIVING STREAM FLOW RATE* IN CUBIC FEET PER SECOND (CFS)				
<u>MILE/STATION</u>	<u>2000 CFS</u>	<u>3000 CFS</u>	<u>5000 CFS</u>	<u>8000 CFS</u>
<u>RM 32.0</u>	_____ HR.	_____ HR.	_____ HR.	_____ HR.
<u>RM 33.0</u>	_____ HR.	_____ HR.	_____ HR.	_____ HR.
<u>RM 34.0</u>	_____ HR.	_____ HR.	_____ HR.	_____ HR.
<u>RM 35.0</u>	_____ HR.	_____ HR.	_____ HR.	_____ HR.
<u>RM 36.0</u>	_____ HR.	_____ HR.	_____ HR.	_____ HR.

* Note: Give location (River Mile/Station) where this flow was measured.

FIGURE NO. 1 SAMPLE DYE STUDY FLOW DATA PRESENTATION
(Similar to that used by Louisiana State Health Dept.)

Local Emergency Response Programs

The State regulatory agency should ensure that municipalities have acceptable emergency response plans to detect, respond to, and minimize the effects of spills of raw or inadequately treated wastewater from all collection systems and/or treatment facilities within the State. Each municipal plan should have contingencies for spills from upstream sources and should provide for coordination or mutual assistance as required. The municipal emergency plan also should be compatible with the State plan. As a requirement to be met prior to issuing a discharge permit, the State regulatory agency should obtain from each facility owner an acceptable breakdown of treatment capabilities during periods of equipment or treatment process failures. This description will aid the State in estimating the degree of treatment that wastewater is receiving for any given failure condition.

Each plant's Operations and Maintenance Manual should include a list of all parts, components, lubricants, tools and chemicals to be kept on hand and in what quantities. The plant owners should provide the State with a breakdown of their maintenance forces and their maintenance capabilities. The owners should maintain a complete and current list of equipment manufacturers and their local representatives. The State should obtain each plant's in-house laboratory capability and a list of private laboratories within the State. The location of emergency equipment, such as generators, radio communication equipment, and portable sampling equipment, should be inventoried by the owner. Detailed information on local aspects of emergency planning are found in Section VI of this manual.

Emergency Stream Sampling

For each municipal wastewater discharge and other potential spill location, such as a pump station, the State should select sampling points along receiving streams below these locations. This will enable sampling to be done promptly and efficiently to determine the effects of a spill from a given source. The State should organize and provide personnel for emergency stream sampling teams. The teams may consist of members of the State water pollution control agency staff. The teams should have a team chief and be tailored to handle expected duties at the site of any given spill. The team members could be on call during a period of one week and then be relieved by a second team at the end of the week. Team personnel would continue to perform their normal jobs within the agency during the day and be available during the evenings of the week they are on call. The teams should be provided with transportation and also a boat if required. These teams are to be used strictly for initial response action, and if prolonged sampling is required, this work should be turned over to the State's regular stream sampling staff. (See Appendix A - Model State Emergency Response Plan, Page 70 for additional information.)

Spill Classification

The State water pollution control agency should provide a representative for each region within the State. These personnel would follow-up on spill reports, estimate spill severity, and coordinate State and local response actions. Criteria should be established for each treatment facility so that the State's personnel can classify a given spill as major or minor using preliminary spill report information. The spill classification may be changed after an on-scene inspection of the spill site. A preliminary classification will allow appropriate response action to be initiated, particularly if the response requires providing physical assistance. For example, a bypass condition where unchlorinated raw sewage is entering a receiving stream above a domestic water supply intake might require portable chlorination units to be moved to the spill site and an extensive river sampling program initiated to monitor water quality. (See Appendix A - Model State Emergency Response Plan, Page 77 for a sample classification system.)

Emergency Response Drills

After the State has developed an emergency response program, it should conduct emergency response exercises for simulated emergencies. These exercises should be critiqued and improvements made to the emergency response plan. All responses to actual emergencies should also be critiqued.

Note to manual users: Most State and local civil defense organizations conduct periodic drills to test their preparedness. These organizations can be a valuable source of information on the methods and techniques used for conducting emergency response drills.

Evaluation Team

In the judgment of the State water pollution control agency, it may be advisable to activate an evaluation team. The purpose of the team should be to:

1. Evaluate the techniques, equipment, and materials used in response to the spill.
2. Assess damage to aquatic life and public health.
3. Assess damage to wildlife.

The evaluation team should consist of representatives from the following State agencies:

1. State Water Pollution Control Agency
2. State Health Department
3. State Department of Natural Resources
4. State Game and Fish Commission

Any state agency that has the necessary expertise, including the attorney general's office, may be designated as a member of the evaluation team for a particular incident.

REPORTING SYSTEM

Introduction

A legal requirement for reporting spills of raw or inadequately treated municipal wastewater will ensure that spills are reported promptly. To aid the personnel responsible for this reporting, the State's emergency response program should be widely publicized. All State employees should be made aware of the program, especially game wardens, marine police, fishery biologists and State police.

Telephone Reporting

All municipal treatment facilities should be provided with the names and telephone numbers of the State water pollution control agency regional representatives and a number that can be called 24-hours-a-day, 7-days-a-week, to report emergencies. The initial call for reporting a spill should be made to the State water pollution control agency regional representative. Figure No. 2 is a sample State map showing the regions within the State and listing the State water pollution control agency representative for each region. If persons reporting spills are unable to contact their regional representative, the 24-hour number at the State headquarters should be called. The operator who receives the call should have a checklist to use in obtaining the basic information required for followup by a qualified member of the emergency response staff. Figure No. 3 shows samples of forms used for receipt of spill reports. Responsibilities and time lag for reporting spill conditions should be clearly defined.

Regional Reporting

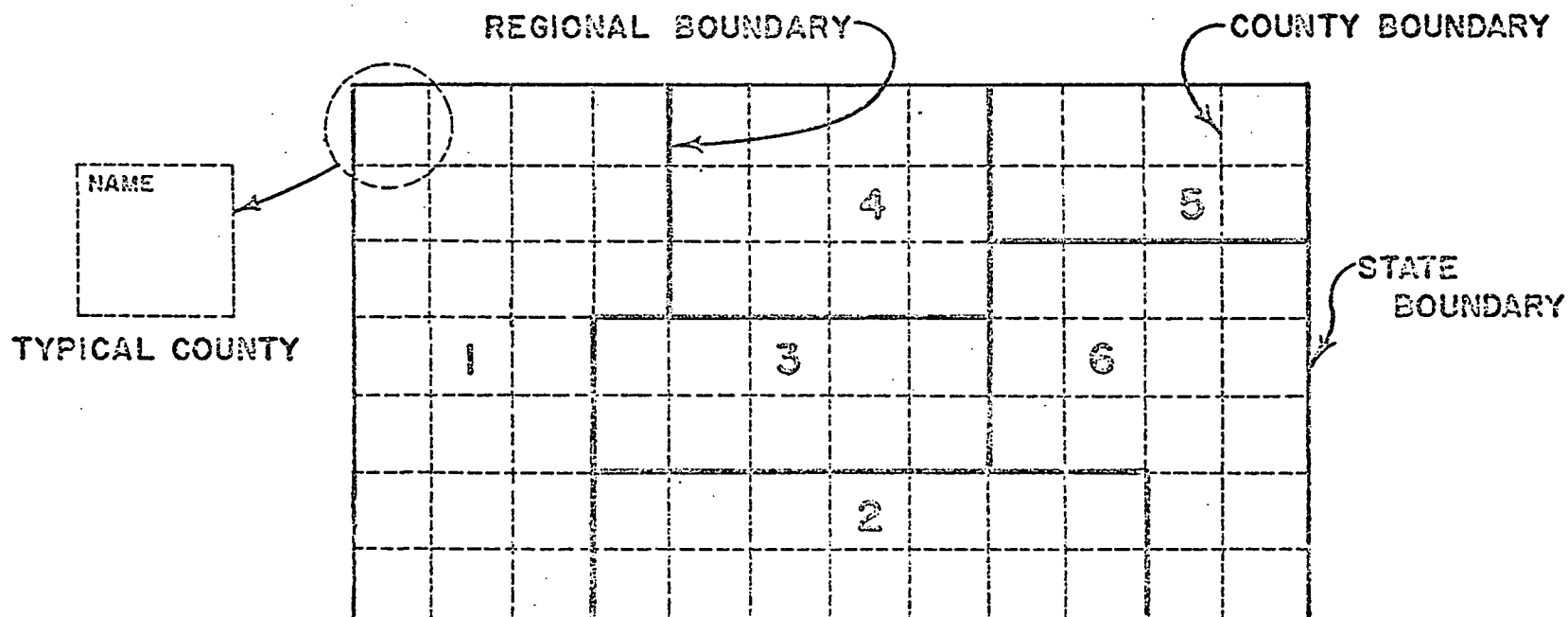
The regional response staff in the area where the emergency occurs should have a working knowledge of the characteristics of all treatment systems for which it is responsible. This staff should have a good working arrangement with the key personnel from each of these systems.

Flow charts complete with names, titles, telephone numbers, and alternates should be produced, widely circulated and continually updated to assist in the reporting of an emergency. (See Page 49, Figure No. 13, for a sample spill report flow diagram.)

Any regional staff member at a spill site must ensure that his report on the severity of the emergency is relayed promptly and accurately to the regional center. (See Appendix A - Model State Emergency Response Plan, page 87, for a sample on-scene spill report.)

STATE WATER POLLUTION CONTROL AGENCY

STATE MAP SHOWING REGIONAL BREAKDOWN FOR SPILL REPORTING



REGION NO.

NAME

AGENCY REPRESENTATIVE

ADDRESS

OFFICE

PHONE

HOME

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

* Similar to map used in Kansas

FIGURE NO 2 SAMPLE STATE MAP SHOWING REGIONAL BREAKDOWN FOR SPILL REPORTING

MUNICIPAL WASTEWATER SPILL REPORT*

FILE REFERENCE: _____

NAME OF FACILITY _____

LOCATION (CITY) _____ (RIVER-BASIN) _____

OWNER _____ TELEPHONE _____
(AREA CODE)

PERSON REPORTING SPILL _____

DATE REPORTED _____ TIME REPORTED _____
(DAY) (MONTH) (YEAR)

SPILL STARTED (DATE) _____ (TIME) _____
(DAY) (MONTH) (YEAR)

SPILL STOPPED (DATE) _____ (TIME) _____
(DAY) (MONTH) (YEAR)

SPILL VOLUME _____ GALLONS IF SPILL STOPPED

SPILL RATE _____ MGD IF SPILL CONTINUING

IF SPILL CONTINUING, ESTIMATED DURATION _____ HOURS

ESTIMATE TREATMENT AS PERCENT OF NORMAL _____ %

IS CHLORINATION BEING PROVIDED _____ YES _____ NO

DESCRIBE CONDITIONS SURROUNDING SPILL (POWER FAILURE, EQUIPMENT BREAKDOWN, BROKEN LINE, ETC.) _____

ACTION TAKEN TO STOP SPILL AND PREVENT REOCCURENCE _____

ASSISTANCE REQUIRED _____

OWNER'S PLAN FOR SAMPLING AT SPILL SITE _____

STATE WATER POLLUTION CONTROL AGENCY REPRESENTATIVE TAKING REPORT _____

(SIGNATURE)

*Similar to form used in West Virginia

STATE WATER POLLUTION CONTROL AGENCY
MUNICIPAL WASTEWATER SPILL REPORT*

DATE: _____ TIME: _____ A.M.
_____ P.M.

MUNICIPALITY _____

COUNTY _____

SANITATION DISTRICT _____

TREATMENT FACILITY ☐ COLLECTION SYSTEM ☐

REPORTED BY: _____ PHONE NO. _____

NATURE OF PROBLEM: _____

SPILL LOCATION: _____

CORRECTIVE ACTION: _____

TIME INITIATED: _____ ESTIMATED COMPLETION: _____

REMARKS: _____

REPORT RECEIVED BY: _____

*Similar to form used in Colorado

FIGURE NO. 3 SAMPLE SPILL REPORT FORMS

Reporting Format

To avoid confusion, the emergency response plan should call for all reports from the spill site to follow a specific format. The SITREP (Situation Report) format follows:

1. Situation - Should include location, what happened, strength and volume of wastewater spilled, extent of emergency, success of emergency response actions.
2. Action - Summary of all actions taken by the municipality, State, or by others.
3. Plans - All planned actions by municipality, State, or any others.
4. Recommendations - Any recommendations pertaining to the response that the State-On-Scene Coordinator has.
5. Status - Should indicate whether emergency condition has ended or, if continuing, should give details of conditions existing.

STRIKE FORCES

Introduction

The State emergency response plan should provide for immediate reaction to spill reports by properly trained and equipped teams and/or individuals. These strike forces should be tailored to respond to the specific emergency condition.

Composition and Mission

As a minimum, the strike force will consist of a State-On-Scene Coordinator. The State-On-Scene Coordinator is charged with the responsibility and delegated the authority for directing the overall operations

of all forces engaged in combating a discharge of raw or inadequately treated municipal wastewater. This individual may be dispatched from a State regional response center for regional incidents or may be from the State water pollution control agency headquarters if the emergency involves a multi-region or interstate incident. The strike force might be expanded to include a team to conduct a stream sampling program and/or sanitary engineering consultants.

Equipment and personnel solicited by the State to assist a municipality experiencing an emergency should come under the control of the State-On-Scene Coordinator. It is possible the State police or highway department would be requested to assist during an emergency.

A State may decide to maintain personnel and equipment to respond to emergencies at municipal wastewater treatment facilities. However, it is anticipated that most municipalities will be able to provide the physical necessities through their in-house capability or through mutual aid agreements.

The strike forces (in most cases, the State-On-Scene Coordinator) will be responsible for making the severity analysis. The severity analysis will determine the degree to which the region and State will respond to the incident.

State Emergency Response Team*

A State's strike force might take the form of a two-man emergency team. The personnel on this team should have completed a junior college program in sanitary/environmental technology. This team should be under the direct control of the State water pollution control agency.

The emergency response team members should receive training from sanitary engineers, aquatic biologists, and water resource planners. The

* Similar to the "Spill Response Team" proposed by the Ohio Department of Health.

personnel should also be familiar with municipal wastewater treatment systems, State water quality standards, and the characteristics of the State's river basins. Additional training should be given in civil defense concepts, first aid, and operation of emergency equipment. Rehearsals of responses to simulated emergencies should be conducted with emphasis on actions at the spill site and legal aspects of the incident.

The head of the State water pollution control agency should place the emergency response team under the control of the stream monitoring section of the Agency. The team's responsibility should include:

1. When so directed, responding to spills of raw or inadequately treated municipal wastewater.
2. Conducting a stream sampling program to monitor receiving stream water quality. The test results from any sampling program should be recorded in the team's log book.
3. Maintaining a record of all the response actions taken.
4. Coordinating with owner of municipal facility on emergency response actions.
5. Ensuring downstream water users are kept informed of situation.
6. Providing technical assistance during cleanup.

The following is a partial list of equipment that should be furnished to the emergency response team:

1. Four-wheel-drive van type vehicle
2. Two way radio communications
3. Small boat with outboard motor and trailer

4. Gasoline driven generator with tools and light sets
5. Breathing apparatus for chlorine gas incidents and working in sewers
6. Camera
7. Field laboratory with the following testing capability:
 - Dissolved Oxygen (DO)
 - Temperature
 - Residual chlorine
 - pH
 - Biochemical Oxygen Demand (BOD)
 - Solids tests
 - Color and turbidity
 - Other

PUBLIC INFORMATION

Introduction

When an emergency response action is initiated, the public must be promptly and accurately informed about the nature of the emergency and about what actions are being taken to minimize the environmental impact of the incident. To accomplish this goal, a good working relationship must be established with the news media. Out of this relationship should come a mutual understanding of the problems involved and agreements on procedures to be followed during emergencies.

News Releases

News releases cannot be written in advance, but they should be planned in advance for water pollution emergencies that may occur. A planned format for a news release will facilitate the quick and accurate release of information to the media during emergencies. A thorough news release should include at least the following data:

1. Location of incident
2. Extent of spill (volume and strength of waste)
3. Areas and/or facilities that have been affected by the incident

4. Whether or not chlorination is being provided
5. Resources that are being committed to the emergency
6. An estimate of the time required before the emergency condition will be over

State News Office

A public information officer should be appointed within the State water pollution control agency to handle emergencies related to spills of raw or inadequately treated municipal wastewater. This individual should provide support to the regional public information officers in his State. He also will serve as the primary news media contact when an emergency condition exists which directly involves two or more of the regions of his State. The State public information officer should assist the regional officers in preparing a statewide list of the news media to be contacted during an emergency. This list should be broken down by regions within the State.

The State public information officer should ensure that news conferences are held at appropriate intervals and that at least two written status reports are given to the news media each day until the emergency condition is over. Personal or telephone requests from the general public should be anticipated and provisions made to provide these requests with the information contained in the latest status report. When the emergency condition is over, a form letter should be drafted including all facts related to the incident. This form letter can be sent in reply to mailed inquiries about the incident. Liaison with adjacent States is also an important function of the State public information officer.

Regional News Office

A public information officer should be appointed within the State water pollution control agency for each region within the State. This individual will work closely with the State-On-Scene-Coordinator and the State public information officer. His duties will be similar to that of the

State officer except that he will function on the regional level. He should establish a good working relationship with the local news media representatives. It is important that the regional information officer coordinate with his counterparts in adjacent regions of the State. The regional officer should look to the State news office for support during an emergency. The support might take the form of additional personnel to handle incoming telephone calls or radio communications with a remote spill site.

COST RECOVERY

Sample State Cost Recovery Laws

A revolving fund to reimburse the State for money expended in containing and removing pollution from State waters has been established by several States. Portions of several State's laws concerning these funds follow:

INDIANA

(Special Fund) All moneys collected pursuant to Section 1 of this chapter shall be remitted by the officials collecting the same to the Treasurer of the State of Indiana, and credited to a special account of the State to be established by the Auditor of State and to be known as the "Environmental Management Special Fund". It is hereby declared to be the policy of the State of Indiana that the moneys on deposit in the Environmental Management Special Fund shall be used exclusively for the purposes of the Board and the Agencies. (Section 1, IC 1971, Title 13, Chapter 12, Section 2)

OREGON

449.167 Oil Spillage Control Fund; sources; uses.

1. All penalties recovered under ORS 449.995 shall be paid into an Oil Spillage Control Fund, which account is hereby established within the General Fund, to be administered by the department for the advancement of costs incurred in carrying out cleanup activities as outlined in subsections (1), (2) and (3) of ORS 449.163 and for the rehabilitation of affected fish and wildlife as provided under ORS 449.103.
2. With the approval of the Commission, the moneys in the Oil Spillage Control Fund may be invested as provided by ORS 293.701 to 293.776 and earnings from such investment shall be credited to the fund.
3. The Oil Spillage Control Fund shall not be used for any purpose other than that for which the fund was created.
(Oregon Statutes, Ch. 449, 1971 Replacement Part)

CONNECTICUT

Any person, firm or corporation which directly or indirectly causes pollution and contamination of any waters of the State through the discharge, spillage, seepage, filtration or otherwise of oil or any petroleum or chemical liquid or product shall be liable for all costs and expenses incurred by said (commission) Commissioner in containing and removing such pollution and contamination. Upon request of the (chairman of the water resources commission) Commissioner, the attorney general shall bring a civil action to recover all such costs and expenses. All costs and expenses so recovered shall be applied

1. To reimburse the State for all sums of money advanced or expended by it under sections 25-54bb to 25-54hh, inclusive, AS HEREIN AMENDED, in containing and removing any such pollution and contamination.
2. For the general purposes of said sections without further appropriation.

(H.B. No. 9254, Sec. 104)

MASSACHUSETTS

It shall be the duty and responsibility of the division to enhance the quality and value of water resources and to establish a program for the prevention, control and abatement of water pollution. Said division will:

- (10) Undertake immediately, whenever there is spillage, seepage or other discharge of oil into any of the waters of the commonwealth or into any offshore waters which may result in damage to the waters, shores or natural resources utilized or enjoyed by citizens of the commonwealth to cause said spillage, seepage or discharge to be contained and removed by whatever method it considers best....

The division shall determine the person responsible for causing such spillage, seepage or discharge and the names of all persons who owned or controlled the oil or who owned or controlled or leased the vessel, tank, pipe, hose or other container in which the oil was located when the spillage, seepage or discharge occurred. Said persons shall be jointly and severally liable to the commonwealth for all costs and expenses incurred by the division in making such investigation, and in containing and removing the oil, and shall be jointly and severally liable to the commonwealth for all damages done to natural and recreational resources, including all costs of restoring damaged areas to their original condition, and to any other person for any damages to his real and personal property...

Upon request of the director, the attorney general shall bring an action to recover all costs and expenses incurred for such investigation, containment, removal and restoration.

Such costs and expenses shall be recovered in an action of tort, and shall be credited to the account from which said sums of money had been advanced and may, subject to appropriation, be expended by the division for the purposes set forth in this clause. In any such action the commonwealth may also seek recovery for all lost and damage to the natural and recreational resources of the commonwealth. (Ch. 21, Sec. 27, Clean Waters Act as amended through the Acts of 1970)

CALIFORNIA

Article 3. State Water Pollution Cleanup and Abatement Account

13440. There is in the State Water Quality Control Fund the State Water Pollution Cleanup and Abatement Account (hereinafter called the "account"), to be administered by the State board.

13441. There is to be paid into the account all moneys from the following sources:

- (a) All moneys appropriated by the legislature for the account.
- (b) All moneys contributed to the account by any person and accepted by the State board.
- (c) One-half of all moneys collected by way of criminal penalty and all moneys collected civilly under any proceeding brought pursuant to any provision of this division.
- (d) All moneys collected by the State board for the account under Section 13304.

All moneys paid into the account are available without regard to fiscal years, for expenditure by the State board in accordance with the provisions of this article.

13441.5 The State Treasurer, when requested by the State board and approved by the Director of Finance, shall transfer moneys in the nature of a loan from the State Water Quality Control Fund to the account created pursuant to Section 13440, which shall be repayable from the account to such fund; provided, that the moneys transferred from the fund to the account shall not exceed the sum of twenty-five thousand dollars (\$25,000) at any one time.

(Added by Stats. 1970, Ch. 918)

13442. Upon application by a public agency with authority to clean up a waste or abate the effects thereof, the State board may order moneys to be paid from the account to the agency to assist it in cleaning up the waste or abating its effects on waters of the State. The agency shall not become liable to the State board for repayment of such moneys, but this shall not be any defense to an action brought pursuant to subdivision (b) of Section 13304 for the recovery of moneys paid hereunder.

(Porter-Cologne Water Quality Control Act)

Cost Recovery Recommendations

All States have a system of fines to be imposed on owners of municipal wastewater treatment facilities for violations of State water quality standards. Treatment system owners should also be liable to the State for the reasonable cost of cleanup. Revenues from these two sources should be placed in a revolving fund to provide public agencies with money to pay for cleanup activities. Reimbursable costs include travel expenses and the cost of supplies procured specifically for response to an incident. Funds should not be used for costs which would have been incurred during normal operations and functions performed in support of any enforcement actions.

SYSTEM OF FINES

Sample State Systems

All States have a system of penalties and fines for violations of water pollution control laws and regulations. These existing systems can be used to help enforce the requirements for reporting spills or raw or inadequately treated municipal wastewater. Fines collected can be placed in a revolving fund for use in cleaning up spills. Portions of several State's laws dealing with penalties and fines follow:

CONNECTICUT

Any person or municipality which knowingly violates any provision of this charter shall forfeit to the State a sum not to exceed one thousand dollars, to be fixed by the court, for each offense. Each violation shall be a separate and distinct offense, and, in case of a continuing violation, each day's continuance thereof shall be deemed to be a separate and distinct offense. (Public Act 872, House Bill No. 9254, Sec. 93)

FLORIDA

Violation is punishable by a civil penalty of not more than \$5,000 for the first offense and of not more than \$5,000 for each offense thereafter. Each day during any portion of which such violation occurs constitutes a separate offense. (Air and Water Pollution Control Act, Chapter 403.161)

GEORGIA

....Any person violating any provision of this Act or failing, neglecting, or refusing to comply with any final order of the Board issued as herein provided, shall be liable to a penalty not to exceed \$1,000 for said violation and an additional penalty not to exceed \$500 for each day during which such violation continues, and, in addition thereto, such person may be enjoined from continuing such violation as hereinbefore provided....
(Georgia Water Quality Control Act, as amended through 1971, Section 22A)

INDIANA

Sect. 1 (Civil Penalties) (a) Any person who violates any provision of this article, or any regulation or standard adopted pursuant to this article, or who violates any determination or order of the board or an agency made pursuant to this article, shall be liable to a penalty not to exceed ten thousand dollars (\$10,000) for the first day of any violation and an additional penalty not to exceed one thousand dollars (\$1,000) for each additional day of continuing violation.... (Section 1, IC 1971, Title 13, Chapter 13)

Recommendations For A System of Fines

The systems of fines and penalties used by different States vary widely as illustrated by the four States cited above. The concept of using each day of continued violation as a separate offense is used by most States. Placing an upper limit on fines is a just method to enable an owner to estimate his maximum fine. The minimum fine, if used, should be low enough to achieve maximum flexibility in the system. The exact monetary values for the maximum and minimum fines should be established by each State based on their individual experiences with pollution incidents.

RESPONSE CENTERS

State Response Center

The purpose of the State response center is to provide facilities for coordination and control of response actions that involve a multiregion or interstate incident. The facilities should include necessary office space, adequate communications, access to a technical library, information on water quality and water uses of streams within the State, access to a computer capability for stream modeling, and maps showing all waste discharges, river intakes, and recreation areas along the streams of the State. A room should be available for use as a "Situation Room" where maps and communications equipment can be installed. From this room the response actions can be monitored and plotted. The facilities and technical, administrative, and clerical staff of the State response center should be available to support request for assistance from any regional center within the State. Figure No. 4 shows a sample floor plan for a State emergency response center.

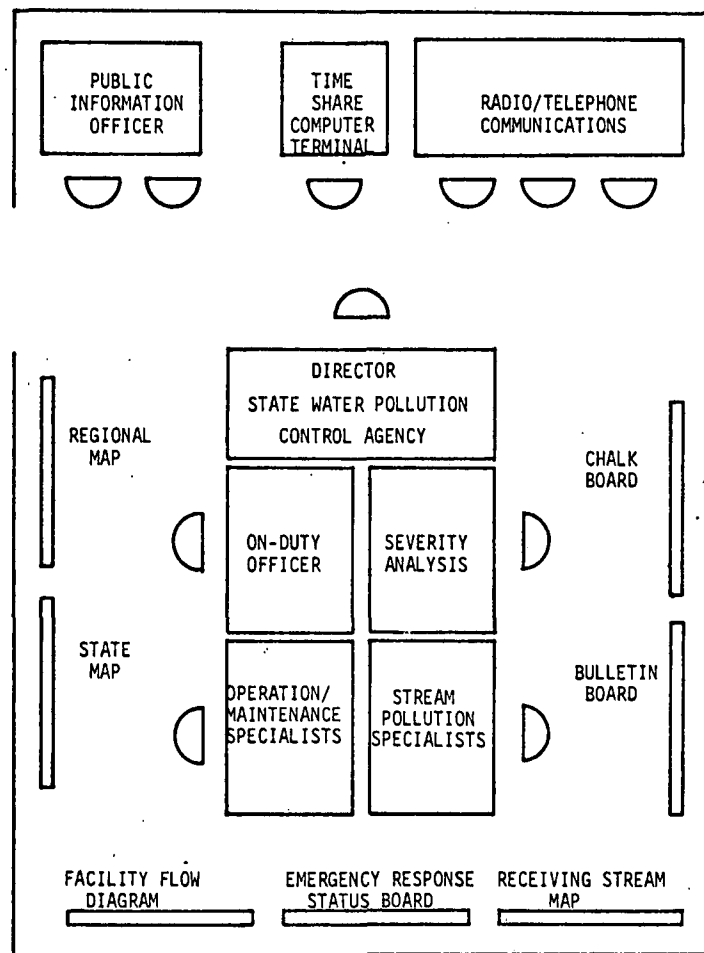


Figure No. 4 Sample: Floor Plan - State Emergency Response Center
 *Similar to floor plan in Virginia's "Natural Disaster Assistance Relief Plan".

The logical location for the State response center would be the headquarters offices of the State water pollution control agency. This agency generally possesses most of the desired capabilities as part of their normal operations. In most cases minor augmentation to existing facilities will be sufficient. The keys to an efficiently operated response center are adequate communications and staffing. Key personnel at the State response center should have alternates that have been pre-selected and trained. The State public information officer should operate from the center during an emergency.

Regional Response Center

The regional response centers should be selected by the group developing the State emergency response plan. These regional centers will form the network that will determine whether or not the State plan will function properly.

The basic needs of these centers will be adequate communications and up-to-date maps of the streams within their respective regions. These regional centers will be used to relay situation reports and support requests from the State-On-Scene Coordinator to the State response center. The critiques of actual emergency responses should tell whether or not the location and/or facilities of the regional centers are proper.

The State-On-Scene Coordinator should be in continuous contact with the regional center. This will ensure prompt and efficient response actions. The regional centers could be located at the State water pollution control agencies' regional offices as these locations are generally selected for communication capability and proximity to area of responsibility. The regional centers could be staffed by the agencies' personnel in that region or by personnel from the State headquarters.

SECTION VI

LOCAL ASPECTS OF EMERGENCY PLANNING

INTRODUCTION

If a State is to have an effective program for responding to municipal wastewater treatment plant emergencies, all the individual treatment systems within the State must have emergency plans of their own. This section contains information on the local aspects of emergency planning and should assist persons at both the State and local level in preparing and evaluating a treatment system's emergency plans. The EPA has developed a manual entitled "Emergency Operating Procedures For Municipal Wastewater Treatment Facilities", under Contract No. 68-01-0341 to provide detailed information on emergency planning for individual treatment systems.

GENERAL

Objectives

The objectives of an emergency response program are to:

1. Eliminate or minimize adverse effects from emergency situations affecting the treatment system.
2. Develop procedures for properly responding to emergencies.
3. Provide instruction for system personnel to ensure that they understand their responsibilities during emergency situations.
4. Provide inventories of available emergency equipment and outline existing mutual aid agreements and contracts with outside organizations for specialized assistance.

Natural Disaster and Civil Disorder

A study should be performed to determine the potential for natural disaster and civil disorder in the area where the municipal wastewater treatment system is located. The following natural disasters should be investigated:

1. Floods
2. Tornadoes and Windstorms
3. Hurricanes and Storm Surges
4. Forest and Grass Fires
5. Earthquakes
6. Landslides
7. Tsunami (Tidal Wave)
8. Volcanoes
9. Snow and Ice Storms
10. Droughts

This study will result in a priority list to use in performing the various system vulnerability analyses. For example, in areas that have a history of frequent hurricanes, the treatment system should be prepared to continue operation under the emergency conditions imposed on that system by a hurricane.

Vulnerability Analysis

A vulnerability analysis of a treatment system is an estimation of the degree to which that system is adversely affected, in relation to the function it must perform, by an emergency condition. Such an analysis is necessary if an effective emergency plan is to be prepared.

The following steps should be followed in making a vulnerability analysis:

1. List components of treatment system.
2. Select emergency condition to be investigated.

3. Estimate effects of emergency condition on each component of system; use vulnerability worksheet.
4. Estimate treatment system's ability to perform its intended function during the emergency.
5. If system fails to perform, identify key system components responsible for the failure.

A sample vulnerability analysis can be found in the EPA manual entitled "Emergency Operating Procedures For Municipal Wastewater Treatment Facilities", under Contract No. 68-01-0341. Figure No. 5 is a sample vulnerability analysis worksheet.

Methods to Reduce System Vulnerability

The emergency response program should indicate priorities for repair of the system and alternate provisions in case of light or severe damage. The following methods can be employed to reduce the system's vulnerability.

1. An optimum preventive maintenance and testing program.
2. Duplication and separation of vital works.
3. Minimizing dependence on power and pumping.
4. Flexibility in operation of treatment works.
5. Maintenance of adequate chemical supplies.
6. Provision of dual power sources, on-site storage of fuel and auxiliary power units, remote and/or automated controls, and ready conversion of automatic controls to manual operation.

VULNERABILITY ANALYSIS WORKSHEET

TREATMENT SYSTEM: _____

ASSUMED EMERGENCY: _____

DESCRIPTION OF EMERGENCY: _____

SYSTEM COMPONENT	EFFECTS OF EMERGENCY	PREVENTION RECOMMENDATIONS
	TYPE AND EXTENT	
<u>Collection Lines</u>		
<u>Pumping Stations</u>		

FIGURE NO. 5. VULNERABILITY ANALYSIS WORKSHEET

VULNERABILITY ANALYSIS WORKSHEET

SYSTEM COMPONENT	EFFECTS OF EMERGENCY	PREVENTION RECOMMENDATIONS
	TYPE AND EXTENT	
<u>PRETREATMENT</u>		
<u>CLARIFICATION</u>		
<u>SECONDARY UNITS</u>		

FIGURE NO. 5 CONTINUED

VULNERABILITY ANALYSIS WORKSHEET

SYSTEM COMPONENT	EFFECTS OF EMERGENCY	PREVENTION RECOMMENDATIONS
	TYPE & EXTENT	
<u>SLUDGE HANDLING</u>		
<u>ADVANCED TREATMENT</u>		
<u>POWER SUPPLY</u>		

FIGURE NO. 5 CONTINUED

VULNERABILITY ANALYSIS WORKSHEET

SYSTEM COMPONENT	EFFECTS OF EMERGENCY TYPE AND EXTENT	PREVENTION RECOMMENDATIONS
<u>COMMUNICATIONS</u>		
<u>PERSONNEL</u>		

DATE: _____

ANALYST: _____

FIGURE NO. 5 CONTINUED

7. Provision of portable pumps with fuel-operated units.
8. Provision at major pumping stations of more than one incoming and discharge pipeline.
9. Training of regular and auxiliary personnel in emergency operations and procedures. Training should be a combination of classroom instruction and on-the-job training.
10. Conducting emergency operations exercises periodically.
11. Provide proper tools in adequate supply and in the proper location. A tool and work room or shop is a necessity and should be in proportion to the plant size.

LOCAL PLANS

Emergency Planning Responsibilities

The municipal wastewater treatment system director should have overall responsibility for the emergency response program. The wastewater treatment superintendent and the collection system superintendent are responsible for implementing the emergency program within their respective areas and they report directly to the treatment system director. If the treatment system is organized so that a single individual is in charge of the treatment facilities and the collection system, then this facility superintendent has overall responsibility for the emergency operations plans.

The wastewater treatment system management should be familiar with the Disaster Relief Act of 1970 (Public Law 91-606). Management also should be familiar with the Office of Emergency Preparedness Circular 4000.5C, Manual for Applications, Federal Disaster Assistance Program. If management is familiar with the procedures described in these documents, it will ensure that Federal assistance is received in a prompt and efficient manner.

Mutual Aid Agreements

A list of mutual aid agreement alternatives should be prepared. The following is a partial list of organizations to be considered:

1. Other community divisions
2. Consulting engineers for the facility
3. Industrial firms
4. Construction companies
5. Electric, gas and telephone utilities
6. Fire and police departments
7. Civil defense organization
8. Health department
9. Local ham radio station operators

A sample mutual aid agreement form is shown in Figure No. 6 and Figure No. 7 is a sample mutual aid agreements/contracts sheet.

Emergency Inventory

An inventory should be made of equipment, materials and chemicals that are available within the treatment system. A sample wastewater treatment system emergency inventory worksheet is shown in Figure No. 8. Using this inventory and the results of the system vulnerability analysis, any additional emergency equipment/supplies required may be purchased and stockpiled and/or arrangements made to obtain these items through mutual aid agreements or outside contracts. A sample emergency inventory sheet is shown in Figure No. 9.

SAMPLE

MUTUAL-AID AGREEMENT*

EMERGENCY SITUATIONS COULD ARISE IN A MUNICIPALITY'S WASTEWATER TREATMENT SYSTEM THAT WOULD REQUIRE ASSISTANCE FROM AN ADJOINING MUNICIPALITY TO RESTORE NORMAL OPERATION.

IF AN EMERGENCY SITUATION ARISES IN _____ OR

(City)
THE OFFICIALS IN BOTH MUNICIPALITIES AGREE
(City)
TO SUPPORT EACH OTHER DURING THE EMERGENCY.

EACH CITY HAS A CONTINGENCY PLAN FOR RESPONSE TO EMERGENCIES AFFECTING ITS WASTEWATER TREATMENT SYSTEM. THE _____ AGREES TO
SUPPORT _____ IN THE FOLLOWING AREAS: _____
(City) (Firefighting,
Rescue Crews, Communications, Portable Chlorination, Operational/
Maintenance, Personnel, etc.)

_____ TO
THE EXTENT POSSIBLE UPON REQUEST INITIATED BY:

_____ Name	_____ Name
_____ Title	_____ Title
_____ City	_____ City

PERSONNEL RESPONDING TO THE REQUESTS FOR ASSISTANCE UNDER THIS AGREEMENT WILL REMAIN UNDER THE CONTROL OF THE CITY PROVIDING THEM.

_____ Signed	_____ Signed
_____ Name	_____ Name
_____ Title	_____ Title
_____ City	_____ City

*Similar to format suggested by Planning Section, Virginia Office of Civil Defense.

FIGURE NO. 6 SAMPLE MUTUAL-AID AGREEMENT FORM

SAMPLE MUTUAL AID AGREEMENTS/CONTRACTS SHEET

<u>NAME</u>	<u>DESCRIPTION OF ASSISTANCE</u>	<u>COORDINATION INFORMATION</u>
Public Works Department	Department of Parks maintains 1,000 feet of 6 inch quick coupling aluminum pipe that is available to assist treatment system during emergencies.	To obtain pipe contact Dept. of Parks (Phone) during normal working hours or call city switchboard (Phone) after normal working hours.
City Water Department	Water Department maintains 2 portable chlorinators which can be used for emergencies within the wastewater treatment system.	Contact Water Department Supt. (Phone) or operator on duty at main filter plant (Phone).
ABC Construction Company	4 tractor mounted back-hoes are available on a 24-hour basis.	Contact company main office (Phone) or after hours call John Doe, Equipment foreman (Phone)
ACME Welding Co.	Machine shop facilities and a portable welding machine are available on a 24-hour basis.	Call: (Phone) Office (Phone) Home (Phone) Home

FIGURE NO. 7. SAMPLE MUTUAL AID AGREEMENTS/CONTRACTS SHEET

WASTEWATER TREATMENT SYSTEM
EMERGENCY INVENTORY

SYSTEM: _____

PREPARED BY: _____ DATE: _____

(Signature)

DUPLICATE EQUIPMENT IN STOCK

DESCRIPTION	MAKE	SIZE	TYPE	VOLTAGE	HP	CAPACITY	NO.

PARTS & COMPONENTS IN STOCK

DESCRIPTION	SIZE	NO.	APPLICATION IN SYSTEM

FIGURE NO. 8 SAMPLE INVENTORY WORKSHEET

EMERGENCY EQUIPMENT & REPAIR TOOLS

DESCRIPTION	NO.	APPLICATION IN SYSTEM

PIPE	SIZE					
	TYPE					
	LENGTH					

AVERAGE CHEMICAL STOCK	TYPE				
	FORM				
	QUANTITY				

COMMUNICATIONS EQUIPMENT

DESCRIPTION	LOCATION

MAPS AND FACILITY LAYOUT DETAILS

FIGURE NO. 8 CONTINUED

OFFICIAL AUTHORIZING
INVENTORY

EMERGENCY INVENTORY

EQUIPMENT

LOCATION	PUMPS	PIPE	CHLORINATORS	GENERATORS	HEAVY EQUIPMENT	COMMUNICATIONS	MISC.	CHEMICALS	PERSONNEL
(NAME OF MUNICIPALITY, SANITARY DIST. OR INDUSTRY)	TWO PORTABLE GASOLINE-POWERED 6" PUMPS	600' OF 4" LIGHTWEIGHT QUICK-COUPLING ALUMINUM PIPE			TWO DUMP TRUCKS 5 CU. YD. CAPACITY				TWO EXPERIENCED LABORATORY TECHNICIANS
NAME			ONE MOBILE CHLORINATOR, 300 LBS. PER 24-HR. CAPACITY				ONE, AIR COMPRESSOR, 125 CFM, 100 PSI		
NAME					ONE 35-TON CAPACITY MOBILE CRANE				ONE EXPERIENCED INSTRUMENT TECHNICIAN
NAME			TWO-40 KW, 110/208 VOLT GASOLINE DRIVEN ELECTRIC GENERATOR SETS					FIFTY 100 LB. BAGS OF LIME	
NAME							ONE, PORTABLE ARC WELDING MACHINE		

FIGURE NO. 9 SAMPLE EMERGENCY INVENTORY SHEET

Treatment Facility Records

A program should be developed for the protection of essential records, maps and inventories. It is especially important that maintenance crews and service vehicles be provided with maps and current records showing location and condition of collection lines. Full size copies of maps and other detail sheets should be reviewed, updated each year, and kept in a vault that is not subject to flooding. Copies of the layouts of important pumping installations can also be kept here. These items are available for immediate use and can be reproduced as required. These records are readable and do not have to be processed by any further mechanical steps.

Industrial Waste Inventory

An inventory should be made of all industrial contributors to the municipal treatment system. Each industry should be located on a collection system map and a list of the potential hazardous spill materials present prepared. The names and phone numbers of key personnel with each industry should also be listed. Consideration should be given to installing industrial waste monitoring equipment in the sewer network at critical locations. A sample industrial waste inventory form is shown in Figure No. 10.

INDUSTRIAL WASTE INVENTORY*		
<u>Name & Location</u>	<u>Industrial Waste Description/ Pretreatment Provided</u>	<u>Key Personnel</u>
Industries should be in alphabetical order. Location should include manhole where industrial waste enters municipal system.	List waste by common name, chemical nomenclature, and trade name if applicable. Also list any other hazardous materials on hand that can potentially enter municipal treatment system and give neutralizing agents if applicable. Describe pretreatment system.	Give names, titles and phone numbers of all key personnel. At least one number should be designated as a 24 hour a day number.
<u>SAMPLE</u>		
Acme Mfg. Co. Industrial waste is discharged into manhole at intersection of Main St. and Church St.	Waste is acidic, pH below 4.0 due to presence of sulfuric acid, H ₂ SO ₄ . There exists potential for a spill of concentrated sulfuric acid which can be neutralized with strong basic materials such as lime. No pretreatment is provided.	John Doe Plant Manager (Phone) Bill Smith Maintenance Supt. (Phone) Plant Security Office (Phone)** **24-hour number

*Inventory should be cross-referenced using common names of chemicals/materials found under Industrial Waste Description.

FIGURE NO. 10 SAMPLE: INDUSTRIAL WASTE INVENTORY

Coordination with Police and Fire Departments

The treatment system's emergency response program should be coordinated with the local police and fire departments. Consideration should be given to the items in the following checklists:

Police Department Checklist:

1. Critique existing treatment system security measures.
2. Make routine checks of treatment facility and pumping stations.
3. Notify treatment plant in the event of a street spill of hazardous materials.
4. Be prepared to assist during emergencies within the treatment system.

Fire Department Checklist:

1. Routinely check fire fighting equipment within the facility and inspect facility for potential fire hazards.
2. Provide first aid instruction to treatment system personnel.
3. Coordinate with treatment system personnel on safety precautions to be used with chlorine gas.
4. Check representative sewer manholes for explosive gases or liquids such as leakage from filling station gasoline tanks.

Emergency Response Cards

All regular and auxiliary wastewater treatment system's personnel should be issued an emergency response card. The cards are prepared by the group developing the treatment system's overall emergency program. Each individual should familiarize himself with the data contained on his card. This information outlines what tasks and responsibilities he has for given emergency situations. Figure No. 11 is a sample emergency response card.

Treatment system personnel should also be given identification cards with their pictures attached. These cards will permit personnel to gain access to areas that may be restricted during an emergency.

SAMPLE
EMERGENCY RESPONSE CARD*

(NAME OF CITY) WASTEWATER TREATMENT SYSTEM
EMERGENCY RESPONSE CARD

NAME: John J. Jones
 (FIRST) (MIDDLE) (LAST)

NORMAL DUTY ASSIGNMENT: Mechanics Helper

<u>EMERGENCY SITUATION:</u>	<u>EMERGENCY ASSIGNMENT:</u>
Pump Station Power Failure	Report to Maintenance Shop and stand by to serve on emergency crew for portable pumps. (Give Name of Crew Chief)
Mechanical Equipment Failure	Report to maintenance foreman (Give Name) in treatment plant main control building for assignment.
Chlorine Gas Leak	Assist senior mechanic to correct problem. Pick up air packs and chlorine cylinder repair kit located in main control building.
Natural Disaster or Civil Disorder	Try to contact Emergency Response Center to determine if conditions require you to report to maintenance shop. If you are told to report for duty, your supervisor is (Give Name).

* Similar to cards in Virginia's "NATURAL DISASTER ASSISTANCE RELIEF PLAN".

FIGURE NO. 11 SAMPLE EMERGENCY RESPONSE CARD

Emergency Response Center

A study should be made to determine the location, facilities, and staffing of the treatment system's emergency response center and alternate center. In most cases, the emergency response center will be located in the main building of the treatment facility. The senior operator on duty should be responsible for the center and all individuals who perform this function must be adequately trained and thoroughly familiar with the emergency response program.

A main control panel at the emergency response center should contain the pumping station high water/power failure alarms and the high water alarms for critical manhole locations. Upon receipt of an alarm, the operator on duty should dispatch the on-call maintenance crew to the scene of the alarm. A current telephone call list should be maintained at the emergency center as well as collection system maps and treatment facility piping and wiring diagrams. Figure No. 12 is a sample telephone call list for a municipality.

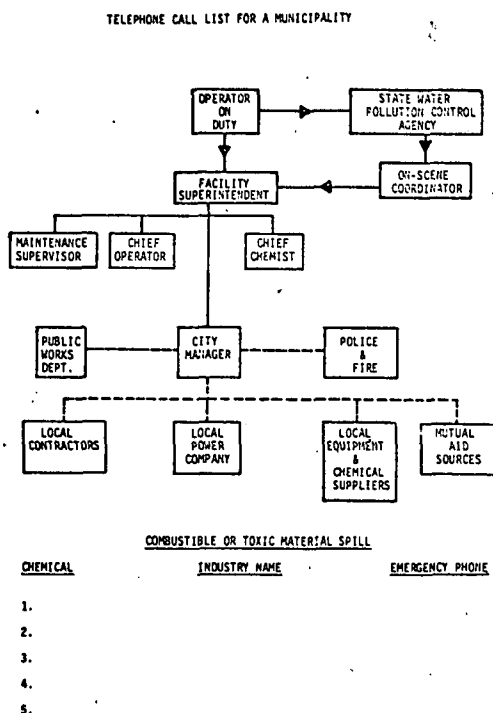


FIGURE NO. 12 SAMPLE TELEPHONE CALL LIST FOR A MUNICIPALITY

When emergency condition notices are received by telephone at the emergency response center, the operator on duty should have a procedure to ensure all pertinent information surrounding the emergency is accurately recorded and forwarded to the proper agency. Figure No. 13 is a sample spill report flow diagram.

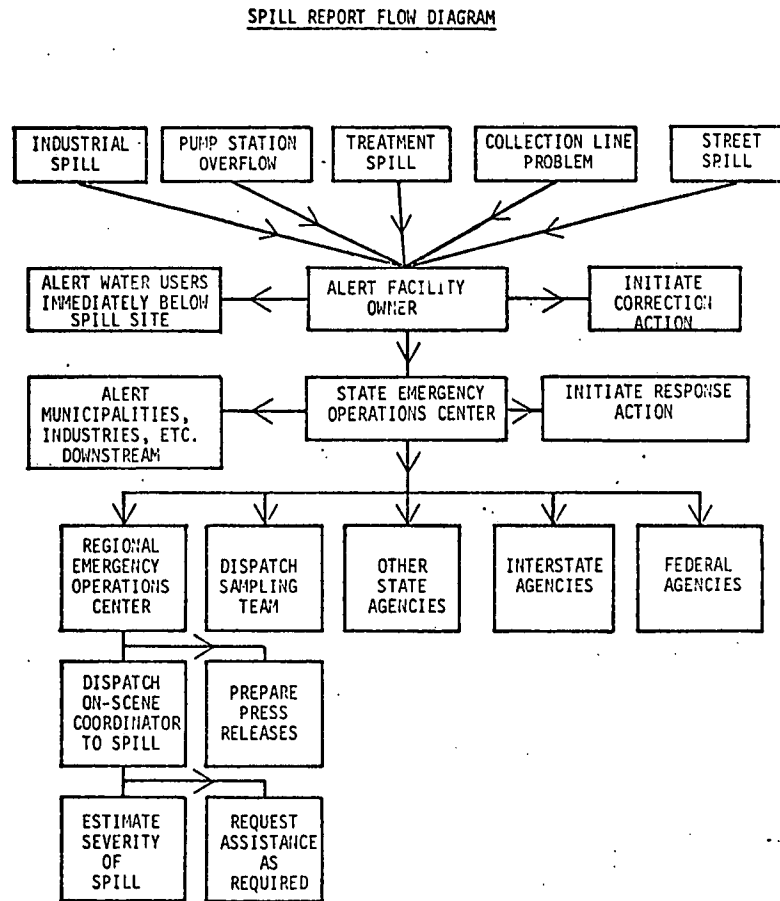


FIGURE NO. 13 SAMPLE SPILL REPORT FLOW DIAGRAM

Auxiliary Personnel

Based on the results of the system vulnerability analysis, the person preparing the emergency plan can make recommendations on auxiliary personnel needs.

Conditions can occur for which the treatment system is not adequately staffed or during which staff members are not able to reach their assigned emergency positions. Auxiliary personnel obtained from other departments within the local government or through mutual aid agreements should be trained as backups for the regular staff. Procedures for alerting these auxiliary personnel should be clearly outlined and drills should be conducted to keep these personnel up-to-date on emergency operating procedures.

Process Diagrams

Process diagrams should be developed to show how treatment units may be bypassed during emergencies or to help pinpoint problem areas when emergencies arise. These diagrams would show all treatment units within the facility, valve arrangements and settings for various conditions and splitter box locations with their function described.

Emergency Response Critique

A procedure should be established to let the treatment system owner critique responses to emergency situations. The areas that should be critiqued include:

1. Performance of automatic alarm system
2. Performance of emergency standby equipment
3. Response time reasonable
4. Personnel training adequate
5. Mutual aid agreements and/or contracted assistance adequate
6. Emergency equipment/supplies adequate
7. Treatment process flexibility
8. Adequacy of emergency procedures

Emergency Operating and Response Program - Operation and Maintenance Manual Chapter

The following are general considerations for preparing the Emergency Operating and Response Program Chapter of an operation and maintenance manual:

1. Recommend a sewer ordinance for the protection of the collection system, treatment facility, receiving waters, and the public.
2. Recommend a system for maintaining adequate engineering drawings of the wastewater treatment system.
3. Provide facilities for chlorination during emergencies affecting the system.
4. Outline procedure for notifying Federal/State Regulatory Agencies of discharges of raw or inadequately treated wastes.
5. Suggest a program to eliminate storm flows and illegal connections to the sanitary sewers.
6. Recommend staffing of the system with sufficient numbers of trained personnel.
7. Suggest an inspection program for remote pumping stations.
8. Provide an alarm system for all remote pumping stations and at critical manholes for flood flows and gas.
9. Provide recommendations on accepting discharges from septic tank trucks.
10. Outline State monthly reporting requirements for pump station failures.
11. Ensure adequate laboratory facilities and personnel are provided to detect and monitor emergencies affecting effluent characteristics.

12. List required emergency equipment for response to emergencies involving chlorine gas.
13. Recommend a system for recording on-the-job injuries with emphasis on prevention measures.
14. List all safety equipment required (safety harness, devices to measure flammability of an atmosphere, and devices to measure oxygen in an atmosphere).
15. Set up a first aid training program for facility personnel and recommend type and number of industrial first aid kits to be maintained.
16. Recommend a procedure to ensure all personnel receive tetanus toxoid inoculations and typhoid vaccine inoculations on a regular basis.
17. Outline a drill schedule for proper use of emergency breathing equipment.
18. Give preventive maintenance schedule for all emergency alarm systems.
19. Develop a list of industrial process chemicals that might enter the treatment system.
20. Recommend that a list of downstream and upstream water users be prepared. (Water intakes, recreation areas, shellfish beds, etc.)
21. Discuss problems that will exist upon failure or shutdown of major treatment system components with respect to effluent quality, effect on receiving stream and potential health hazard.

22. Outline corrective maintenance procedures to be employed to eliminate or minimize bypassing of treatment units.
23. Recommend coordination between the treatment system emergency response program and local civil defense activities.
24. State the potential for various natural disasters in the area where the treatment system is located.
25. Suggest mutual aid agreement alternatives and recommend a standard mutual aid agreement form.
26. Prepare an emergency equipment inventory for the treatment system.
27. Suggest that the treatment system prepare a list of key personnel at local utility companies and request the local telephone company give treatment system calls priority during a disaster.
28. Outline auxiliary personnel requirements.
29. Recommend a system for receipt of emergency reports on a 24-hour-a-day, 7-day-a-week basis.
30. Develop an emergency response program organization chart.
31. Provide guidelines for an emergency response center (location, facilities, and staffing).
32. Prepare treatment process flow diagrams for use in emergencies.

33. Prepare diagrams showing how emergency reports are received and relayed to appropriate personnel.
34. Provide owner with sample vulnerability worksheets so he may continually upgrade his emergency response program.

NOTE: For additional information on emergency plan preparation, the EPA manual entitled "Considerations For Preparation of Operation and Maintenance Manuals", Contract No. 68-01-0341 should be consulted.

SECTION VII

ACKNOWLEDGMENTS

The support of the project by the Office of Water Programs Operations, received from the Water Quality Office, U. S. Environmental Protection Agency, and the help provided by Mr. Lehn J. Potter, the Project Officer, is acknowledged with appreciation.

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APPENDIX A

Note to Manual User: The model State Emergency Response Plan presented in this Appendix is intended to be a flexible guide for the development of a State program for responding to spills of raw or inadequately treated municipal wastewater. To avoid unnecessary duplication the model plan contains several references, where applicable, to discussions and figures located in the text of this manual.

MODEL PLAN

STATE EMERGENCY RESPONSE PLAN
FOR
SPILLS OF RAW OR INADEQUATELY TREATED
MUNICIPAL WASTEWATER

STATE WATER POLLUTION CONTROL AGENCY
STREET
CITY/STATE ZIP CODE

DATE

APPENDIX A

MODEL PLAN
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MODEL PLAN

STATE EMERGENCY RESPONSE PLAN FOR SPILLS OF RAW OR INADEQUATELY TREATED MUNICIPAL WASTEWATER

INTRODUCTION

A spill of raw or inadequately treated municipal wastewater calls for positive coordinated response actions to minimize health hazards and adverse effects on the environment. Lack of organization and delays in response have increased the damaging effects of past spills. To minimize the adverse effects from these spills, the Governor, the Honorable (name), has requested that the State Water Pollution Control Agency (SWPCA) develop a contingency plan which provides a mechanism for coordinating response actions.

This plan was developed in accordance with guidelines established by the head of the SWPCA. Although this response plan is based on inter-agency cooperation, the SWPCA hereby assumes primary responsibility on behalf of the State for municipal wastewater spill prevention and control in waters of the State.

PURPOSE

The best method to deal with spills is to prevent their occurrence through planning, adequate equipment, proper maintenance, and safe operating procedures. If spills do occur, rapid response actions are necessary to minimize damage. The purpose of this State Emergency Response Plan is to provide guidelines for a coordinated and integrated response by the SWPCA and other State agencies to municipal wastewater spill emergencies in any waters of the State. The overall goal of this plan is prevention of spills.

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OBJECTIVES

The objectives of this State emergency response plan are to:

1. Define a simple and effective procedure to facilitate spill reporting.
2. Protect the public health and welfare from the hazards of spilled municipal wastewater.
3. Encourage municipalities to eliminate spills.
4. Initiate a prompt and rapid response to spill emergencies by trained personnel with the necessary equipment and materials.
5. Designate State-On-Scene Coordinators (SOSC) and response teams in all regions of the State with the abilities to alert and coordinate the resources of manpower, equipment and materials to monitor, abate, and cleanup spills.
6. Encourage the development of local emergency planning and mutual assistance groups so that municipalities themselves can take prompt and effective response actions to minimize adverse spill effects.
7. Coordinate emergency response activities with local, State and Federal government agencies.
8. Provide an inventory of emergency equipment and materials available within the State.
9. Provide a means to supply timely and accurate spill information to the public.
10. Institute actions for the recovery of damages and cleanup costs, and effect enforcement of existing State laws and regulations with regard to municipal wastewater spills in the waters of the State.

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STATE POLICY

Pursuant to (Reference State Law), it is declared to be against public policy for any municipal wastewater treatment system owner to discharge into State waters inadequately treated municipal wastewater or otherwise to alter the properties of such State waters and make them detrimental to the public health, to the propagation and protection of wildlife, or to domestic or industrial consumption, or to recreation.

It is further the policy of the State to combat municipal wastewater spills through prevention and preparedness. This Emergency Response Plan has been developed by the SWPCA as a preparatory measure to coordinate the efforts of the State and local governments thereby providing an organized effort for combating spills in all waters within and bordering the State, both inter- and intrastate waters.

STATE AUTHORITY

(Reference State Law) charges the State Water Pollution Control Agency with the authority to adopt such regulations as it deems necessary to enforce the general water quality management program of the State.

(Reference SWPCA Regulation) states that any discharge from a municipal wastewater system which is not in compliance with the effluent limitations established by the SWPCA for that system shall be immediately reported to the SWPCA by telephone by the treatment system owner.

MODEL PLAN

DEFINITIONS

- | | |
|-----------------------------|--|
| Municipal Wastewater Spill | - Any discharge from a municipal wastewater system which may not be in compliance with the effluent limitations established for that system. |
| State-On-Scene Coordinator | - Individual designated by State Water Pollution Control Agency to be in charge of emergency response activities at the site of a spill of raw or inadequately treated municipal wastewater. |
| Vulnerability Analysis | - An estimation of the degree to which a specific wastewater treatment system is adversely affected, in relation to the function it must perform; by an emergency condition. |
| Wastewater Treatment System | - Includes but not limited to wastewater treatment plant, sewer lines, and sewage pump stations. |

AGENCIES CONCERNED

State/Interstate Agencies

The following State and/or interstate agencies have direct responsibilities related to water pollution control:

1. State Water Pollution Control Agency (SWPCA)
2. State Department of Health (SDH)
3. State Department of Natural Resources (SDNR)
4. Interstate Agencies (List)

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The following State agencies have certain responsibilities related to State waters and are listed because they may be in a position to help abate any spill emergency:

1. State Game and Fish Commission (SGFC)
2. State Police (SP)
3. State National Guard (SNG)

Federal Agencies

The following Federal agencies have certain direct responsibilities relative to interstate waters under Federal law:

1. U. S. Environmental Protection Agency (EPA)
2. U. S. Coast Guard (USCG)
3. U. S. Army Corps of Engineers (CE)

EMERGENCY RESPONSE PLAN ABBREVIATIONS

SOSC	State-On-Scene Coordinator
SRRC	State Regional Response Center
SRRT	State Regional Response Team
SITREP	Situation Report
SRC	State Response Center
SPIO	State Public Information Officer
HAT	Hazard Alert Team (Stream Sampling)

FUNDING

Anyone discharging municipal wastewater, which is in violation of certified emission rates established for the treatment system whether intentionally, negligently, or accidentally, is required to abate and cleanup the waste. If the waste is cleaned up or abated by a State government agency, the discharger is liable to the agency for the reasonable costs

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of cleanup or abatement. In the event the identity of the spiller is unknown, or he is unable to fund the abatement costs, the cost will be paid from the State Water Pollution Cleanup and Abatement Fund within its capability. Reimbursement of costs relating to municipal wastewater spill emergencies incurred by State agencies when the violator cannot be identified or is unable to pay the cleanup costs will be determined by the State Fiscal Management Office.

PRELIMINARY SPILL CLASSIFICATION*

General

The spill classification procedure presented herein was developed to provide a consistent method of rapidly classifying a reportable spill of municipal wastewater as Major or Minor. The preliminary classification will serve as an alert mechanism for the Emergency Response Plan. The method is not intended to provide the final spill classification since the severity of a given spill is dependent upon many parameters, most of which must be developed as the on-scene investigation progresses. The spill classification is weighed to evaluate the response requirements in terms of manpower and equipment with respect to the spill location, character of waste spilled, quantity of spill, and potential for ecological damage.

Spill Classification Parameters

The five spill classification parameters employed in the preliminary classification procedure are:

1. Location of the municipal wastewater spill
2. Character of the waste

* Similar to Department of Ecology, State of Washington, Oil Spill Classification Procedure.

MODEL PLAN

3. Quantity
4. Potential for ecological damage
5. Estimated response effort required

Spill Classification Procedures

To classify a spill as Major or Minor, select one of the statements beneath each of the classification parameters that most clearly describes the existing spill situation. The numerical values assigned to each statement chosen are then added together. If their total is less than 75, the preliminary classification of the spill would be Minor; if their total is greater than 75, the preliminary spill classification would be Major.

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<u>Parameter</u>	<u>Value</u>	
Location	(5)	On land with potential for entering State waters
	(10)	Offshore ocean waters
	(20)	Streams, lakes and estuaries
	(50)	Endangers public health; into stream above and in close proximity to domestic water supply intakes, recreation areas, shellfish beds
Character	(5)	Partially treated with chlorination
	(10)	Partially treated without chlorination
	(20)	Raw sewage with chlorination
	(50)	Raw sewage
Quantity	(5)	Equal to or less than 1% of facility design flow
	(10)	Between 1% and 25% of facility design flow
	(20)	Between 25% and 50% of facility design flow
	(50)	100% of facility design
Ecological Damage	(5)	Minimum potential; on land, offshore, inland salt waters
	(10)	High potential; streams, lakes, estuaries
	(50)	Critical potential; shellfish beds, spawning grounds, game reserves, public water supply
Response Effort	(0)	Notification received and no State assistance necessary
	(5)	State-On-Scene Coordinator (SOSC) only State representative at scene.
	(10)	SOSC plus Hazard Alert Team (HAT)
	(50)	SOSC, HAT, plus mobile chlorinators and other emergency equipment

SPILL CLASSIFICATION EXAMPLES

PARAMETERS	EXAMPLE #1	EXAMPLE #2	EXAMPLE #3
	VALUE	VALUE	VALUE
LOCATION	50	20	5
CHARACTER	50	50	5
QUANTITY	50	50	5
ECOLOGICAL DAMAGE	50	10	5
RESPONSE EFFORT	50	5	0
TOTAL	250	135	20

<u>EXAMPLE</u>	<u>DESCRIPTION</u>	<u>CLASSIFICATION</u>
#1	MAXIMUM POINT VALUE	75 OR GREATER - MAJOR
#2	SPILL TO RECEIVING STREAM, RAW SEWAGE, 100% OF DESIGN FLOW, HIGH POTENTIAL FOR ECOLOGICAL DAMAGE, SOSC ONLY	75 OR GREATER - MAJOR
#3	MINIMUM POINT VALUE	LESS THAN 75 - MINOR

MODEL PLAN

ALERT PROCEDURE FOR SPILLS

A municipality responsible for any discharge from a wastewater system which is not in compliance with the effluent limitations established by the State Regulatory Agencies shall immediately notify the State Water Pollution Control Agency by calling the agency's regional office on the 24-hour telephone number, (NUMBER) and give as much of the following information as is available:

- Name and owner of facility
- Telephone number of owner/facility
- Time/date spill started
- Spill volume and strength
- Provisions for chlorination
- Conditions surrounding spill
- Action taken to abate spill
- Assistance required
- Stream sampling plan

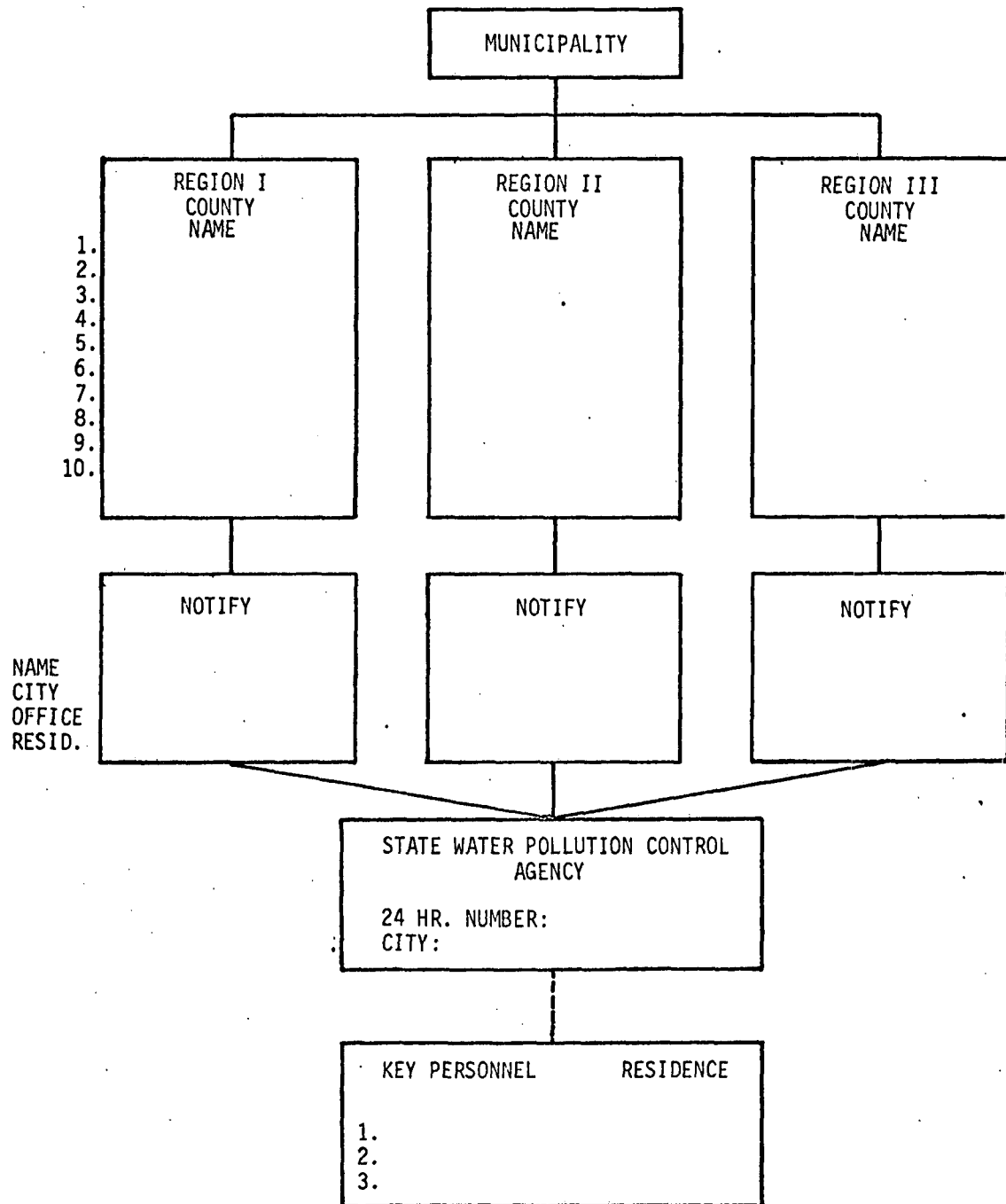
Note to Manual User: A sample form for receipt of spill reports is shown in Figure No. 3, page 18, of this manual.

A sample telephone call list has been outlined and is shown in Figure No. 1. The telephone call list gives a breakdown of the regions within the State and the SWPCA representatives that are responsible for each region. The 24-hour telephone number for emergency reporting is also given on this call list.

The SWPCA will maintain current rosters of staff and on-duty officers and the means of contacting each at all hours of the day or night.

So that all members of the public as well as State employees will be cognizant of the alert procedures, the SWPCA 24-hour telephone number

MODEL PLAN
TELEPHONE CALL LIST *



* Format similar to that used by West Virginia

FIGURE NO. 1 TELEPHONE CALL LIST

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will be published on wall posters with proper instructions and distributed to all police and fire stations, post offices, Government agencies, and municipal wastewater treatment facilities. Telephone companies will be urged to publish the SWPCA 24-hour number with other emergency numbers in all new telephone directories. A copy of the wall poster is shown in Figure No. 2.

DUTIES OF THE RECIPIENT OF SPILL REPORTS

The importance of obtaining clearly written, correct information that is properly documented cannot be overemphasized. In all cases SWPCA personnel who receive incoming spill reports will:

1. Obtain as much information as possible regarding the spill incident from the reporting party.
2. Ensure all blocks on the spill report form that can be completed are correctly filled in.
3. Make certain that the name and home number of the reporting party are recorded.
4. Include a brief description of the conditions surrounding the spill.
5. A copy of the complete spill report form should be forwarded to the SOSC.

SPILL REPORT PROCESSING

Three possibilities exist within the SWPCA regarding the office that initially receives a spill complaint and the office that has the responsibility for processing the report. To provide explicit guidelines which will be followed in processing these reports, it is hereby stipulated that:

IN CASE OF SPILLS OF RAW OR
INADEQUATELY TREATED MUNICIPAL
WASTEWATER IN THE STATE.

CALL THE STATE WATER POLLUTION
CONTROL AGENCY;

NUMBER

AND GIVE AS MUCH AS POSSIBLE OF
THE FOLLOWING INFORMATION;

NAME OF FACILITY :
TIME/DATE SPILL STARTED
SPILL VOLUME AND STRENGTH
PROVISIONS FOR CHLORINATION
CONDITIONS SURROUNDING SPILL
ABATEMENT ACTIONS
ASSISTANCE REQUIRED
STREAM SAMPLING PLAN

THE STATE WATER POLLUTION
CONTROL AGENCY WILL ACCEPT
COLLECT CALLS IF YOU INFORM
OPERATOR THAT YOU WISH TO
REPORT A SPILL. THE STATE WATER
POLLUTION CONTROL AGENCY
MAINTAINS 24 HOUR SERVICE.

FIGURE NO. 2 SAMPLE WALL POSTER
(SIMILAR TO POSTER USED BY STATE OF WISCONSIN)

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1. If a spill report is received at the SWPCA regional office of the region in which the spill occurred, the SWPCA regional manager or his designee will record the information and dispatch the State-On-Scene Coordinator.
2. If a spill report is received at the SWPCA headquarters, the on-duty officer or his designee will receive the report and record the information which will be immediately forwarded to the appropriate regional manager or his designee who will dispatch the State-On-Scene Coordinator.
3. If a spill report is received by a SWPCA regional office in a region other than the one in which the spill occurred, the SWPCA regional manager or his designee will record the information and immediately forward it to the regional manager of the region in which the spill occurred. The regional manager in that region will then dispatch the State-On-Scene Coordinator.

STATE ORGANIZATION

Regions

The SWPCA has divided the State into three regions. The three regions correspond to the State's three major river basins. A periodic review of the regional boundaries is made to ensure the regions remain consistent with overall emergency program objectives.

The SWPCA provides each region with a regional office and a representative from that office follows up on spill reports, estimates spill severity and coordinates State and local response actions within that

MODEL PLAN

region. Criteria has been established for all wastewater treatment facilities to permit a SWPCA regional representative to classify a given spill as Major or Minor with the preliminary information provided when the spill is first reported. The spill classification may be changed after the on-scene inspection of the spill site is completed. However, a preliminary spill classification will allow appropriate response action to be initiated, particularly if the response requires providing physical assistance. For example, a bypass condition where unchlorinated raw wastewater is entering a receiving stream above a domestic raw water supply intake might require portable chlorination units to be moved to the spill site and an extensive river sampling program initiated to monitor water quality.

State-On-Scene Coordinator

The regional director in each SWPCA region has designated the SOSCs and alternates for that region. Individuals chosen as SOSCs have been selected for their ability to:

1. Function effectively under stress.
2. Work well with personnel of municipalities.
3. Remain informed about activities in their area of responsibility.

The State-On-Scene Coordinators possess the following:

1. Working knowledge of the characteristics of all municipal wastewater treatment facilities for which he is responsible.
2. Good working arrangement with the key personnel at each treatment facility.

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3. Current flow charts complete with names, titles, telephone numbers, and alternates to assist in the reporting of an emergency.
4. Mechanism to ensure that his report on the severity of the emergency is relayed promptly and accurately to the regional center.

The SOSCs and alternates are trained in all phases of emergency response to wastewater spills. The SWPCA staff responsible for the SOSC training program ensures all new developments in spill response techniques are promptly incorporated in SOSC training programs.

The SOSC is kept informed of the availability of resources in his own region and in adjoining regions. He is also familiar with the emergency equipment inventories maintained by the State.

To avoid confusion, all messages from the SOSC follow the SITREP (Situation Report) format. (Note to Manual User: The SITREP format is discussed on page 19 of this manual.)

A sample on-scene spill report form is shown in Figure No. 3.

State Response Center

The purpose of the State Response Center (SRC) is to provide physical facilities for coordination and control of emergency response actions. The "Situation Room" complete with maps and communication equipment is located in the SWPCA headquarters. The State Response Center facilities include the following:

1. Communication equipment to include telephone and radio equipment.

MODEL PLAN

STATE WATER POLLUTION CONTROL AGENCY
ON-SCENE SPILL REPORT*

NAME OF FACILITY _____

OWNER _____ TELEPHONE _____ (AREA CODE) _____

PLANT CAPACITY _____ (MGD) SPILL DURATION _____ (HOURS)

SPILL VOLUME _____ (GALLONS) ESTIMATE OF SPILL STRENGTH _____ (5-DAY BOD)

NAME OF RECEIVING STREAM _____

SPILL LOCATION _____

RECEIVING STREAM WATER TEMPERATURE _____ STREAM FLOW ESTIMATE _____ (CFS)

RESULTS OF ANY STREAM SAMPLING _____

ESTIMATE OF DEGREE OF TREATMENT SPILL RECEIVED _____

RESULTS OF ANY WASTEWATER SAMPLING _____

NORMAL TREATMENT EXPECTED FOR CONDITIONS OF WASTEWATER FLOW & STRENGTH SIMILAR TO CONDITIONS DURING SPILL DURATION _____

COMMENTS ON EFFECTS OF SPILL FROM INTERVIEWS WITH DOWNSTREAM OWNERS _____

CRITIQUE OF OWNER & STATE RESPONSE TO THE EMERGENCY _____

ATTACH ANY CORRESPONDENCE, REPORTS, LABORATORY DATA, OR OTHER PERTINENT INFORMATION.

(SIGNATURE)

(NAME PRINTED)

(SIGNATURE)

(SIGNATURE)

* Similar to form used in West Virginia

MODEL PLAN

2. Maps showing all waste discharges, raw water intakes, recreation areas, and spawning grounds and/or shellfish beds in the State.
3. Computer facilities with programs that model all receiving streams in the State.
4. Technical library with up-to-date sanitary engineering literature and reference works.
5. Water quality information on waters of the State.

The technical administrative and clerical staff for the State Response Center will come from the regular SWPCA staff. Personnel will be on call to man the Response Center and a duty roster system will rotate these personnel. The on-duty officer will take charge of the Response Center when a spill report is received that requires the center to be activated.

Regional Response Center

The Regional Response Centers are located in the SWPCA regional offices. Each Regional Center is staffed by SWPCA personnel assigned to that region and backed up by personnel from the State headquarters. The SWPCA Regional Director will be in charge of the center during emergency response actions. The basic characteristics of the center are:

1. Adequate communications
2. Up-to-date maps of the receiving waters within the region
3. Up-to-date inventories of emergency equipment within the region

The SOSOC will be in continuous contact with the Regional Response Center during emergencies to ensure prompt and efficient response actions. The Regional Response Center performs the following tasks:

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1. Relay SITREPs and support request from the State-On-Scene Coordinator to the State Response Center.
2. Establish a network throughout the State that ensures the State Emergency Response Plan functions properly.

Public Information

The director of the SWPCA has directed the agency's information officer to be the State Public Information Officer to handle emergencies related to spills of raw or inadequately treated municipal wastewater. The duties of the State Public Information Officer (SPIO) are as follows:

1. Establish a good working relationship, mutual understanding of problems involved and agreements on procedures to be followed during emergencies with the news media.
2. Prepare news releases in advance of water pollution emergencies. These preformatted news releases should include:
 - a. Location of incident
 - b. Whether or not chlorination is being provided
 - c. Time required before emergency condition is over
3. Prepare statewide list of news media to be contacted during emergency.
4. Hold news conferences at appropriate intervals during and after emergency.

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5. Issue at least two written status reports on the emergency daily.
6. Provide for information contained in latest status report to be given to personnel and telephone requests from the general public.
7. Draft a form letter after the emergency condition is over that contains all facts related to the incident. This letter can be sent to mailed inquiries about the incident.

The SWPCA Regional Director or his designee will act as the Regional Public Information Officer. The Regional Information Officer's duties are as follows:

1. Establish good working relationship with the local news media representatives.
2. Coordination with counterparts in adjacent regions of the State.
3. Work closely with the SOSC and SPIO.

Strike Forces

When emergencies arise resulting from the spillage of raw or partially treated municipal wastewater, the Strike Force will consist of the SOSC plus any other SWPCA personnel that the SOSC deems necessary in carrying out his assignment. The SOSC may be dispatched from the Regional Response Center for regional incidents or may be dispatched from the SWPCA headquarters if the emergency involves a multi-region or interstate incident. The Strike Force might include the State's Hazard Alert Team to conduct a stream sampling program and/or sanitary engineering consultants.

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Under the direction of the SOSOC, the Strike Force will:

1. Establish a command center with adequate communication capability.
2. Set up a log book and a record keeping of costs and expenses related to the emergency response.
3. Collect information for completing the on-scene spill report form, including:
 - a. Spill location
 - b. Receiving stream parameters, (temperature, flow, dissolved oxygen level, etc.)
 - c. Wastewater sampling results
4. Assess effect on environment.
5. Monitor municipalities emergency response performance.
6. Control activities of equipment and personnel solicited by the State to assist the municipality experiencing the emergency.
7. Keep Regional and State Response Centers advised of developments.

Hazard Alert Team (Stream Sampling)*

For each municipal wastewater discharge or potential spill location, such as a pump station, the State has selected sampling points along

* Similar to the Hazard Alert Team Standby "HATS" teams, currently used by the Virginia State Water Control Board.

MODEL PLAN

the receiving stream. These predetermined sampling points will enable sampling to be done promptly and efficiently to determine the effects of a spill from a given source.

The SWPCA has created several six-man sampling teams known as Hazard Alert Teams (HAT). The teams consist of SWPCA headquarters personnel. The team members are on call during a one week period and are relieved at the end of that period by a second team. A duty roster system is employed to rotate teams in an equitable manner.

The teams have a team chief and an assistant team chief. The team rosters, complete with telephone numbers, are available to the On-Duty Officer at the SWPCA headquarters. The teams are tailored to handle expected duties at the site of any given spill. The teams are provided with transportation, boats, and other equipment (such as dissolved oxygen sampling kits, pH meters, etc.) to insure prompt and effective response to an alert.

The teams are strictly used for initial response action. If prolonged stream sampling is required, this work should be turned over to the SWPCA regular stream sampling staff. Team personnel will continue to perform their normal jobs within the SWPCA during the day and will be available during the evenings and weekend of the week they are on duty. Figure No. 4 is a sample Hazard Alert Team Roster.

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Team No.

(Name), Team Chief (Phone)

(Name), Asst. Team Chief (Phone)

(Name), Sanitary Engineer (Phone)

(Name), Chemist (Phone)

(Name), Laboratory Technician (Phone)

(Name), Vehicle and Boat Operator (Phone)

Vehicle

Make _____

Model _____

Year _____

Motor Pool No. _____

License No. _____

Boat

Type _____

Length _____

Motor _____

Motor Pool No. _____

License No. _____

Equipment

Gas Masks

First Aid Kit

D. O. Kit

pH Meter

Sample Containers

Thermometers

Flashlights

Two-Way Radio

Maps

Ice Chests

Camera

Chlorine Residual Test Equipment

FIGURE NO. 4 SAMPLE: HAZARD ALERT TEAM ROSTER

LOCAL EMERGENCY RESPONSE PLANS

General

Prior to receiving a discharge permit, the owner of every municipal wastewater treatment system must submit a Local Emergency Response Plan to the SWPCA. Each plan should have provisions to detect, respond to, and minimize the effects from spills of raw or inadequately treated wastewater. Each plan should also have contingencies for spills from upstream sources and provide for coordination or mutual assistance as required. Also, as a requirement to be met prior to receiving a discharge permit, the treatment system owner must provide the SWPCA with an acceptable breakdown of treatment capabilities during periods of equipment or process failures. These treatment capability descriptions

MODEL PLAN

will aid the State in estimating the degree of treatment the wastewater is receiving for any given emergency condition.

Emergency response plans all have a common base. This common base consists of assessment of severity and response to the emergency so as to minimize environmental impact of the incident. This is due largely to the fact that many of these different type emergencies create similar effects on the wastewater treatment system. Each system has its own characteristics and problems. The specifics of an emergency response plan must therefore be tailored to allow for the peculiarities of the specific system. The purpose of an emergency response plan is to minimize damage and to provide the most efficient utilization of resources available to the system owner. The objects of any emergency response plan can only be achieved with trained personnel and sufficient emergency equipment and material. Figure No. 5 is a personnel requirement matrix for local emergency response plans.

LOCAL EMERGENCY RESPONSE PLAN CHECKLIST

Form Emergency Organization

1. Appoint responsible personnel for development, training, and research.
2. Appoint advisory committee to these personnel.
3. Designate emergency organization staff and teams.
 - a. Designate alternates.
 - b. Define responsibilities, and channels of command.
4. Designate and equip stations for post emergency operations.
 - a. Response center and alternate

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PERSONNEL REQUIREMENT MATRIX*

	MANAGEMENT	SANITARY ENGINEERING PERSONNEL	FACILITY OPERATORS	CHEMISTS & LABORATORY PERSONNEL	SYSTEM MAINTENANCE CREWS
VULNERABILITY ANALYSIS		X	X		
MUTUAL AID AGREEMENTS	X				
SEVERITY ASSESSMENT		X		X	
EMERGENCY OPERATIONS	X	X	X	X	X
EMERGENCY REPAIRS		X			X

*Similar to requirements outlined in American Water Works Association Handbook "Emergency Planning for Water Utility Management".

FIGURE NO. 5 PERSONNEL REQUIREMENT MATRIX FOR LOCAL EMERGENCY RESPONSE PLANS

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- b. Control points and alternate
- c. Assembly areas and reporting centers

Initiate Mutual Aid Agreements and Other Cooperative Arrangements

1. Provide agreements with related utility, service and civil defense agencies.
2. Define and assign responsibilities.
3. Provide for exchange or assignment of personnel, equipment and materials.
4. Provide for coordination of communication, training, assessment, inventorying, standardization, etc.
5. Consider legal problems.
6. Plan and provide interconnections with adjacent systems.

Establish Security Protective Measures

1. Determine degree of physical security protection needed.
2. Provide security procedures.

Develop Inventories and Records

1. Stockpile essential equipment, materials and supplies for recovery.
2. Provide records which will facilitate recovery:
 - a. Maps and engineering plans
 - b. Personnel, regular and auxiliary

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- c. Emergency sources of supply, availability and means of using
 - d. Stockpile items
 - e. Emergency operating methods and procedures
3. Keep records readily available at all levels of operation.
 4. Keep mutual aid parties informed of content and location of records.
 5. Keep records up to date.
 6. Protect all essential records.

Study Collection/Treatment System and Initiate Action to Correct Weakness Measures

1. Develop procedures for analyzing system to determine weaknesses.
2. Analyze the following:
 - a. Collection, treatment and disposal facilities
 - b. Equipment, material and supplies
 - c. Personnel
 - d. Power supply
 - e. Communications
 - f. Emergency procedures
3. Using results of system analysis determine:
 - a. Probable post-emergency condition of system for various emergency conditions
 - b. Repair methods and equipment, materials, and personnel needed to initiate recovery and restoration
 - c. Priorities
 - d. Alternate courses of action

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4. Formulate program for strengthening system with reasonable achievement dates.

Establish Treatment Requirements

1. For normal and emergency conditions:
 - a. Monitor effluent for chemical and biological quality.
2. For emergency conditions:
 - a. Determine treatment capabilities.
 - b. Prepare guidelines for recovery priorities, and time-phasing of estimated treatment requirements.
 - c. Determine guidelines for minimum supplies, equipment, manpower and organization to meet treatment requirements.
 - d. Establish procedures and prepare for emergency treatment, pumping and disposal.
 - (1) Provide for both fixed and mobile equipment.
 - (2) Establish improvised operation within system.
 - (3) Provide for stations for service of emergency water.

Provide Communications

1. Study and coordinate all possible means of communication.
2. Bring existing facilities up to an acceptable level.
 - a. Provide fixed and mobile units.
 - b. Provide communication between all critical locations.
 - c. Provide standby power and on-site storage of fuel and generators at response centers and control points.
3. Provide trained communications personnel.

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4. Prepare procedures for release of information to the public.
 - a. Designate personnel to be in charge of release of information.
 - b. Establish relations with press and radio.
 - c. Prepare releases in advance for emergency conditions likely to develop.

Plan Post Emergency Operation

Provide for time-phased procedures to:

1. Activate emergency organization.
2. Mobilize available emergency staff.
3. Initiate liaison with other utility units and mutual aid organizations.
4. Make assessment of severity.
5. Determine priority of actions.
6. Initiate procedures for operation of facilities to ensure optimum treatment.
7. Keep work challenging to help employees cope with psychological letdown following a disaster.

Federal Assistance

Obtain copies and review the following documents:

1. Disaster Relief Act of 1970 (PL 91-606).
2. Office of Emergency Preparedness (OEP) Circular 4000.5C, Manual for Applications, Federal Disaster Assistance Program.

Emergency Response Planning Funds

Ensure budget contains money for following items related to the Emergency Plan:

1. Periodic updating of plan.
2. Personnel training.
3. Emergency equipment and supplies purchased.

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STATE EMERGENCY RESPONSE PLAN

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*NOTE TO MANUAL USER: A subject index helps make formal emergency planning documents usable tools.

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STATE EMERGENCY RESPONSE PROGRAM
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APPENDIX B

PERTINENT FEDERAL STATUTES

INTRODUCTION

This Appendix contains excerpts from several Federal statutes related to water pollution control. These excerpts provide background information on the Federal Government's attempt to minimize the environmental, public health and public welfare impact of spills in the nation's waters. The excerpts in this section are from the following statutes:

Federal Water Pollution Control Act Amendments of 1972:

Pertinent features cited under Section 311, Oil and Hazardous Substance Liability, primarily deal with granting the President the authority to prepare and publish a National Contingency Plan for removal of oil discharges and hazardous substance from waters of the United States. Other features tabulated include: requirement to notify appropriate U. S. agency in the event of a discharge, definition of "owner or operator" and "offshore or onshore facility", and granting of authority to the President to designate hazardous materials.

Section 301, Effluent Limitations, establishes the concept of effluent standards for municipal wastewater treatment facilities. Section 402, National Pollutant Discharge Elimination System, outlines the National Discharge Permit concept. System 304 (h) gives the Environmental Protection Agency the responsibility for establishing guidelines for owners applying for permits and for States setting up permit programs.

Executive Order 11548: This order delegates to the Secretary of the Interior the responsibility and authority to carry out provisions of various subsections of Section 311 of the Water Pollution Control Act Amendments of 1972 (Formerly Sections 11 and 12 of original act).

Reorganization Plan No. 3 of 1970: This plan establishes the Environmental Protection Agency and transfers to EPA all functions formerly administered by the Federal Water Quality Administration.

Designation of Hazardous Substances EPA Notice of Proposed Rule Making: The pertinent feature cited from this document is the fact that digested sewage sludge and raw undigested sewage sludge are designated as hazardous substances.

FEDERAL STATUTE TABULATION

The following is a tabulation of the excerpts from Federal Statutes pertinent to the emergency response planning aspects of water pollution control:

STATUTE

Federal Water Pollution
Control Act Amendments
of 1972.

AUTHORIZED ACTION

TITLE III STANDARDS AND
ENFORCEMENT

OIL AND HAZARDOUS SUBSTANCE LIABILITY

Sec. 311. (a) For the purpose of this section, the term--
(2) discharge includes, but is not limited to, any
spilling, leaking, pumping, pouring, emitting, emptying
or dumping;

(6) owner or operator means (A) is the case of a
vessel, any person owning, operating, or chartering
by demise, such vessel, and (B) in the case of an onshore
facility, and an offshore facility, any person owning or
operating such onshore facility or offshore facility, and
(C) in the case of any abandoned offshore facility,
the person who owned or operated such facility immediately
prior to such abandonment;

(7) person includes an individual, firm, corporation,
association and a partnership;

(8) remove or removal refers to removal of the oil
or hazardous substances from the water and shorelines
or the taking of such other actions as may be necessary
to minimize or mitigate damage to the public health
or welfare, including, but not limited to, fish, shell-
fish, wildlife, and public and private property, shore-
lines, and beaches;

(10) onshore facility means any facility (including
but not limited to, motor vehicles and rolling stock)
of any kind located in, on, or under, any land within
the United States other than submerged land;

(11) offshore facility means any facility of any
kind located in, on, or under, any of the navigable
waters of the United States other than a vessel or a public
vessel;

(14) hazardous substance means any substance designated
pursuant to subsection (b) (2) of this section.

(b) (1) The Congress hereby declares that it is the policy
of the United States that there should be no discharges of
oil or hazardous substances into or upon the navigable
waters of the United States, adjoining shorelines, or
into or upon the waters of the contiguous zone.

(2) (A) The Administrator shall develop, promulgate,
and revise as may be appropriate, regulations designating
as hazardous substances, other than oil as defined in this
section, such elements and compounds which, when discharged
in any quantity into or upon the navigable waters of the
United States or adjoining shorelines or the waters of
the contiguous zone, present an imminent and substantial
danger to the public health or welfare, including, but
not limited to, fish, shellfish, wildlife, shorelines, and
beaches.

STATUTE

Federal Water Pollution
Control Act Amendments
of 1972 (Continued)

AUTHORIZED ACTION

(5) Any person in charge of a vessel or of an onshore facility or an offshore facility shall, as soon as he has knowledge of any discharge of oil or a hazardous substance from such vessel or facility in violation of paragraph (3) of this subsection, immediately notify the appropriate agency of the United States Government of such discharge. Any such person who fails to notify immediately such agency of such discharge shall, upon conviction, be fined not more than \$10,000, or imprisoned for not more than one year, or both. Notification received pursuant to this paragraph or information obtained by the exploitation of such notification shall not be used against any such person in any criminal case, except a prosecution for perjury or for giving a false statement.

(c) (1) Whenever any oil or a hazardous substance is discharged, into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone, the President is authorized to act to remove or arrange for the removal of such oil or substance at any time, unless he determines such removal will be done properly by the owner or operator of the vessel, onshore facility, or offshore facility from which the discharge occurs.

(2) Within sixty days after the effective date of this section, the President shall prepare and publish a National Contingency Plan for removal of oil and hazardous substances, pursuant to this subsection. Such National Contingency Plan shall provide for efficient, coordinated, and effective action to minimize damage from oil and hazardous substance discharges including containment, dispersal, and removal of oil and hazardous substances, and shall include, but not be limited to--

(A) assignment of duties and responsibilities among Federal departments and agencies in coordination with State and local agencies, including, but not limited to, water pollution control, conservation, and port authorities;

(B) identification, procurement, maintenance, and storage of equipment and supplies;

(C) establishment or designation of a strike force consisting of personnel who shall be trained, prepared, and available to provide necessary services to carry out the Plan, including the establishment at major ports, to be determined by the President, of emergency task forces of trained personnel, adequate oil and hazardous substance pollution control equipment and material, and a detailed oil and hazardous substance pollution prevention and removal plan;

(E) establishment of a national center to provide coordination and direction for operations in carrying out the Plan;

(F) procedures and techniques to be employed in identifying, containing, dispersing, and removing oil and hazardous substances.

STATUTE

Federal Water Pollution
Control Act Amendments
of 1972 (Continued)

AUTHORIZED ACTION

(G) a schedule, prepared in cooperation with the States, identifying (i) dispersants and other chemicals, if any, that may be used in carrying out the Plan, (ii) the waters in which such dispersants and chemicals may be used, and (iii) the quantities of such dispersant or chemical which can be used safely in such waters, which schedule shall provide in the case of any dispersant, chemical, or waters not specifically identified in such schedule that the President, or his delegate, may, on a case-by-case basis, identify the dispersants and other chemicals which may be used, the waters in which they may be used, and the quantities which can be used safely in such waters; and

(H) a system whereby the State or States affected by a discharge of oil or hazardous substance may act where necessary to remove such discharge and such State or States may be reimbursed from the fund established under subsection (k) of this section for the reasonable costs incurred in such removal.

(2) Any owner or operator of a vessel or an onshore facility or an offshore facility and any other person subject to any regulation issued under paragraph (1) of this subsection who fails or refuses to comply with the provisions of any such regulation, shall be liable to a civil penalty of not more than \$5,000 for each such violation. Each violation shall be a separate offense. The President may assess and compromise such penalty. No penalty shall be assessed until the owner, operator or other person charged shall have been given notice and an opportunity for a hearing on such charge. In determining the amount of the penalty, or the amount agreed upon in compromise, the gravity of the violation, and the demonstrated good faith of the owner, operator, or other person charged in attempting to achieve rapid compliance, after notification of a violation, shall be considered by the President.

(k) There is hereby authorized to be appropriated to a revolving fund to be established in the Treasury not to exceed \$35,000,000 to carry out the provisions of subsections (c), (d), (i), and (l) of this section. Any other funds received by the United States under this section shall also be deposited in said fund for such purposes. All sums appropriated to or deposited in, said fund shall remain available until expended.

STATUTE

Federal Water Pollution
Control Act Amendments
of 1972 (continued)

AUTHORIZED ACTION

TITLE III - STANDARDS AND ENFORCEMENT

EFFLUENT LIMITATIONS

Sec. 301. (a) Except as in compliance with this section and sections 302, 306, 307, 318, 402, and 404 of this Act, the discharge of any pollutant by any person shall be unlawful.

(b) In order to carry out the objective of this Act there shall be achieved --

(1) (B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 203 of this Act prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 304(d) (1) of this Act; or,

(2) (B) not later than July 1, 1983, compliance by all publicly owned treatment works with the requirements set forth in section 201 (g) (2) (A) of this Act.

(d) Any effluent limitation required by paragraph (2) of subsection (b) of this section shall be reviewed at least every five years and if appropriate, revised pursuant to the procedure established under such paragraph.

(e) Effluent limitations established pursuant to this section or section 302 of this Act shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this Act.

INFORMATION AND GUIDELINES

Sec. 304. (h) The Administrator shall (1) within sixty days after the enactment of this title promulgate guidelines for the purpose of establishing uniform application forms and other minimum requirements for the acquisition of information from owners and operators of point sources of discharge subject to any State program under section 402 of this Act, and (2) within sixty days from the date of enactment of this title promulgate guidelines establishing the minimum procedural and other elements of any State program under section 402 of this Act which shall include:

- (A) monitoring requirements;
- (B) reporting requirements (including procedures to make information available to the public);
- (C) enforcement provisions; and
- (D) funding, personnel qualifications, and manpower requirements (including a requirements that no board or body which approves permit applications or portions thereof shall include, as a member, any person who receives, or has during the previous two years received, a significant portion of his income directly or indirectly from permit holders or applicants for a permit.

STATUTE

Federal Water Pollution
Control Act Amendments
of 1972 (continued)

AUTHORIZED ACTION

INSPECTIONS, MONITORING AND ENTRY

Sec. 308. (a) Whenever required to carry out the objective of this Act, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 305, 311, 402 and 504 of this Act --

(A) the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require; and

FEDERAL ENFORCEMENT

Sec. 309. (a) (3) Whenever on the basis of any information available to him the Administrator finds that any person is in violation of section 301, 302, 306, 307, or 308 of this Act, or is in violation of any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act by him or by a State, he shall issue an order requiring such person to comply with such section or requirement, or he shall bring a civil action in accordance with subsection (b) of this section.

TITLE IV - PERMITS AND LICENSES

CERTIFICATION

Sec. 401. (a) (1) Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate, that any such discharge will comply with the applicable provisions of sections 301, 302, 306, 307 of this Act.

STATUTE

Federal Water Pollution
Control Act Amendments
of 1972 (Continued)

AUTHORIZED ACTION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Sec. 402. (a) (1) Except as provided in sections 318 and 404 of this Act, the Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 301(a), upon condition that such discharge will meet either all applicable requirements under sections 301, 302, 306, 307, 308, and 403 of this Act, or prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this Act.

(2) The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.

(3) The permit program of the Administrator under paragraph (1) of this subsection, and permits issued thereunder, shall be subject to the same terms, conditions, and requirements as apply to a State permit program and permits issued thereunder under subsection (b) of this section.....

(b) At any time after the promulgation of the guidelines required by subsection (h) (2) of section 304 of this Act, the Governor of each State desiring to administer its own permit program for discharges into navigable waters within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. In addition, such State shall submit a statement from the attorney general (or the attorney for those State water pollution control agencies which have independent legal counsel), or from the chief legal officer in the case of an interstate agency, that the laws of such State, or the interstate compact, as the case may be, provide adequate authority to carry out the described program.

PERMITS FOR DREDGED OR FILL MATERIAL

Sec. 404. (a) The Secretary of the Army, acting through the Chief of Engineers, may issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites.

STATUTE

Federal Water Pollution
Control Act. Amendments
of 1972 (Continued)

AUTHORIZED ACTION

DISPOSAL OF SEWAGE SLUDGE

Sec. 405. (b) The Administrator shall issue regulations governing the issuance of permits for the disposal of sewage sludge subject to this section. Such regulations shall require the application to such disposal of each criterion, factor, procedure, and requirement applicable to a permit issued under section 402 of this title, as the Administrator determines necessary to carry out the objective of this Act.

(c) Each State desiring to administer its own permit program for disposal of sewage sludge within its jurisdiction may do so if upon submission of such program the Administrator determines such program is adequate to carry out the objective of this Act.

STATUTE

Executive Order 11548
Delegating functions of the
President under the Federal
Water Pollution Control Act,
as amended (Continued)

AUTHORIZED ACTION

Section 1. Delegations to the Secretary of the Interior. There is hereby delegated to the Secretary of the Interior responsibility and authority

(f) to carry out the provisions of subsection (a) (1) of section 12, of the Act, relating to the designation of hazardous substances, other than oil, which when discharged into or upon the navigable waters of the United States or adjoining shorelines of the contiguous zone, present an imminent and substantial danger to public health or welfare;

(g) in consultation with the Secretary of Transportation, to carry out the provisions of subsection (a) (2) of section 12 of the Act, relating to the establishment of recommended methods for the removal of hazardous substances within the meaning of subsection (a) (1) of section 12 of the Act.

Section 2. Delegations to the Secretary of Transportation responsibility and authority.

(c) to administer the revolving fund established pursuant to subsection (k) of section 11 of the Act;

(e) in consultation with the Secretary of the Interior, to carry out the provisions of subsection (g) of section 12 of the Act, including the preparation of a report for submission by the President to the Congress.

Section 4. Delegation to the Council on Environmental Quality. (a) There is hereby delegated to the Council on Environmental Quality the responsibility and authority to carry out the provisions of subsection (c) (2) of section 11 of the Act, providing for the preparation, publication, revision or amendment of a National Contingency Plan for the removal of oil (hereinafter referred to as the National Contingency Plan).

Section 5. Other delegations. (a) There is hereby delegated to the Secretary of the Interior and to the Secretary of Transportation, respectively, in and for the waters and areas assigned to each in section 306.2 of the National Contingency Plan (35 F.R. 8511) responsibility and authority.

(5) to carry out the provisions of subsection (d) of section 12 of the Act, relating to the removal of discharged hazardous substances.

STATUTE

Executive Order 11548
(Continued)

AUTHORIZED ACTION

Section 6. Agency to Receive Notices of Discharges of Oil or Hazardous Substances. The Coast Guard is hereby designated the "appropriate agency" for the purpose of receiving the notice of discharge of oil required by subsection (b) (4) of section 11 of the Act and for the purpose of receiving the notice of discharge of any hazardous substance required by subsection (c) of section 12 of the Act. The Commandant of the Coast Guard shall issue regulations implementing this designation.

Section 9. Reorganization Plan No. 3 of 1970. Upon the taking effect of Reorganization Plan No. 3 of 1970, the responsibility and authority conferred upon the Secretary of Interior by this order, including the authority conferred by reason of his designation in the National Contingency Plan, and including the responsibility to consult with other officers, shall vest in the Administrator of the Environmental Protection Agency: Provided, that the Administrator shall thereafter consult with the Secretary of the Interior regarding the responsibility and authority delegated by section 1 (a) of this order and officers who by this order are required to consult with the Secretary of Interior shall consult with the Administrator of the Environmental Protection Agency.

STATUTE

Reorganization Plan No. 3 of
1970

AUTHORIZED ACTION

ENVIRONMENTAL PROTECTION AGENCY

Section 1. Establishment of Agency. (a) There is hereby established the Environmental Protection Agency, hereinafter referred to as the "Agency".

Section 2. Transfers to Environmental Protection Agency. (a) There are hereby transferred to the Administrator:

(1) All functions vested by law in the Secretary of the Interior and the Department of the Interior which are administered through the Federal Water Quality Administration, all functions which were transferred to the Secretary of the Interior by Reorganization Plan No. 2 of 1966 (80 Stat. 1608), and all functions vested in the Secretary of the Interior or the Department of the Interior by the Federal Water Pollution Control Act or by provisions of law amendatory or supplementary thereof.

STATUTE

Environmental Protection Agency,
Designation of Hazardous Sub-
stances Notice of Proposed Rule
Making (40 CFR Part 118)

AUTHORIZED ACTION

Notice is hereby given that the Administrator, Environmental Protection Agency, pursuant to the authority contained in section 12(a) (1) of the Federal Water Pollution Control Act [33 U.S.C. 1162(a) (1)] which was delegated to the Secretary of the Interior by the President in Executive Order No. 11548 (Section 9) dated July 20, 1970 (35 F.R. 11677) and transferred to the Administrator by Reorganization Plan No. 3, 1970, proposes to adopt a new Part 118. The term "discharge" is defined by the statute as including "any spilling, leaking, pumping, pouring, emitting, emptying or dumping". While this definition covers continuous as well as noncontinuous, spill-type discharges, this proposed regulation would only require notification or noncontinuous, spill-type discharges. Notification of the discharge of a designated hazardous polluting substance is required regardless of the quantity discharged or the expected harm.

Section 2 Definitions

(g) "Mixture" means mixtures of any kind or in any form, including, but not limited to, mixtures in containers and vessels and waste water effluents.

Section 3 Designation of Hazardous Substances

(3)...Sludge, Digested Sewage
Sludge, Raw, Undigested Sewage

For the purposes of section 12(c) of the Federal Water Pollution Control Act, all of the elements, compounds or their isomers, ions or mixtures included within the provisions of section 3 above are hazardous substances.

APPENDIX C

STATE LAW/REGULATION TABULATION

INTRODUCTION

For each State, the following items have been tabulated: Statutory (State law) requirement to report discharges of raw or partially treated municipal wastewater; State Water Pollution Control Agency regulation requiring reporting of municipal wastewater spills; State certification/permit program for municipal discharges; and a system of penalties and/or fines for water pollution incidents. A listing of State Water Pollution Control Laws used to develop these tables is included in this Appendix.

PURPOSE

The purpose of the State Law/Regulation tabulation is to illustrate a legal requirement for reporting a spill of raw or inadequately treated municipal wastewater to an appropriate State Water Pollution Control Agency. Table 3 - State Law Tabulation shows majority of State Legislatures have not deemed it necessary to include reporting requirements in their water pollution control law. However, most laws do give the State Water Pollution Control Agencies the power to make such regulations as they feel are necessary to maintain the water quality standards of the State. The table also shows that most State Water Pollution Control Agencies have adopted regulations that require spill reporting.

The permit systems now employed by many of the States and now required by EPA can provide a valuable mechanism for helping to establish spill reporting criteria. The system can also be used to ensure municipal wastewater treatment system owners develop acceptable local emergency operating and response programs.

NOTE: All State Water Pollution Control Agencies were contacted and asked for copies of their current water pollution control laws and agency regulations. Water pollution control legislation is constantly changing at both the State and Federal levels. The information contained in this Appendix reflects each State's status at the time of this manual's development.

TABLE 3 - STATE LAW TABULATION

STATE	STATUTORY REQUIREMENT TO REPORT DISCHARGES OF RAW OR PARTIALLY TREATED MUNICIPAL WASTEWATER	WATER POLLUTION CONTROL AGENCY REGULATION REQUIRES REPORTING OF MUNICIPAL WASTE- WATER SPILLS	STATE HAS A CERTIFICATION/ PERMIT SYSTEM FOR MUNICIPAL DISCHARGES	SYSTEM OF FINES AND/OR PENALTIES FOR MUNICIPAL WATER POLLUTION INCIDENTS
Alabama			X	X
Alaska			X	X
Arizona			X	X
Arkansas			X	X
California			X	X
Colorado				X
Connecticut		X	X	X
Delaware				
District of Columbia				
Florida		X	X	X
Georgia		X	X	X
Hawaii		X	X	X
Idaho		X	X	X
Illinois			X	X
Indiana		X	X	X
Iowa		X	X	X
Kansas		X	X	X
Kentucky		X	X	X
Louisiana			X	X
Maine		X	X	X
Maryland			X	X
Massachusetts		X	X	X
Michigan			X	X
Minnesota				
Mississippi			X	X
Missouri			X	X
Montana			X	X
Nebraska		X	X	X
Nevada			X	X
New Hampshire			X	X
New Jersey		X	X	X
New Mexico				X
New York	X		X	X
North Carolina			X	X
North Dakota		X		X
Ohio		X	X	X
Oklahoma		X	X	X
Oregon		X	X	X
Pennsylvania				
Rhode Island	X		X	X
South Carolina			X	X
South Dakota		X	X	X
Tennessee			X	X
Texas	X	X	X	X
Utah		X	X	X
Vermont	X		X	X
Virginia		X	X	X
Washington		X	X	X
West Virginia		X	X	X
Wisconsin				X
Wyoming			X	X

<u>STATE</u>	<u>LAW</u>	<u>REFERENCE</u>	<u>ADMINISTERING AGENCY</u>
Alabama	Water Pollution Control Act	Act No. 1260, S.79, Laws of 1971 Regular Session, Sec. 4 (h) and Sec. 4(0).	Water Improvement Commission State Office Building Montgomery, Alabama 36104
Alaska	Water Pollution Control Act	Senate Bill 75, Chapter 120, Laws 1971 (Sec. 46.03.100 and Sec. 46.03.760).	Department of Environmental Conservation Pouch 0 Juneau, Alaska 99801
Arizona	Water Quality Control Act	Revised Statutes Ch. 16, Article 1, 36-1851 et seq. (Amended Law 1971)	Water Quality Control Council State Board of Health Environmental Health Services 1624 West Adams Street Phoenix, Arizona 85007
Arkansas	Water & Air Pollution Control Act	Act 472 of 1949 as amended by Act 183 of 1965 (Section 82-901 et seq., Ark. Stats.)	Department of Pollution Control & Ecology 1100 Harrington Avenue Little Rock, Arkansas 72202
California	Porter-Cologne Water Quality Control Act	Division 7, Ch. 4, Art. 4, Sec. 13260 and Ch. 5, Art. 5, Sec. 13350 (as amended through 1971)	Water Resources Control Board Room 1015 Resources Building 1416 Ninth Street Sacramento, California 95814
Colorado	Water Pollution Control Act	Chapter 66 - Article 28 (1970 Amendment - Senate Bills No. 35 and 45) (1971 Amendment - Senate Bill No. 298)	Department of Health Water Pollution Control Division 4210 East 11th Avenue Denver, Colorado 80220
Connecticut	Clean Water Act	Public Act 872, Laws 1971 H.B. 9254, Approved June 25, 1971	Department of Environmental Protection State Office Bldg., Room 539 Hartford, Connecticut 06115
Delaware	Water Pollution Control Laws		Department of Natural Resources and Environmental Control Water and Air Resources Comm. P. O. Box 916 Dover, Delaware 19901
District of Columbia	Water Pollution Control Law		Department of Environmental Ser. Environmental Health Adminis. Water Resources Management Adm. Presidential Building, 415 12th Street, N.W. Washington, D. C. 20004
Florida	Air and Water Pollution Control Act	Chapter 403, Florida Statutes 1967 (As amended through 1971)	Pollution Control Board Department of Pollution Control Tallahassee Bank Bldg. Suite 300 Tallahassee, Florida 32301
Georgia	Water Quality Control Act	Act. No. 870 (H.B. 730) (As amended through 1971)	Water Quality Control Board 47 Trinity Avenue, S.W. Room 609 Atlanta, Georgia 30334
Hawaii	Water Pollution Control Laws	Hawaii, Revised Statutes as amended by Act 100, 1972	Department of Health (Environmental Health Division) Board of Health P. O. Box 3378 Honolulu, Hawaii 96801

<u>STATE</u>	<u>LAW</u>	<u>REFERENCE</u>	<u>ADMINISTERING AGENCY</u>
Idaho	Environmental Protection and Health Act of 1972	House Bill No. 610, as amended in the Senate by State Affairs Committee	Board of Environmental Protection and Health State House, Boise, Idaho 83707
Illinois	Environmental Protection Act	Title 4, Section 12b; Title 12, Section 42 (as amended through 1971)	Environmental Protection Agency Pollution Control Board 2200 Churchill Road Springfield, Illinois 62706
Indiana	Stream Pollution Control Law	Ch. 214, Acts of 1943, as amended by Ch. 132, Acts of 1945, Ch. 64, Acts of 1957, as amended; Senate Enrolled Act No. 100, An Act to Amend IC 1971, Title 13.	Stream Pollution Control Board 1330 West Michigan Street Indianapolis, Indiana 46206
Iowa	Water Pollution Control Law		Water Pollution Control Comm. Department of Health Lucas State Office Bldg. Des Moines, Iowa 50319
Kansas	Water Pollution Control Law	K.S.A. 65-161 et. seq., (1967)	Department of Health Board of Health Topeka, Kansas 66612
Kentucky	Water Pollution Control	Ch. 224 (KRS 224.010 to 224.130 and 224.990), 1950 as emended by H.B. 370 (3/30/70)	Water Pollution Control Comm. 275 East Maine Street Frankfort, Kentucky 40601
Louisiana	Stream Control Commission Acts	Title 56, Ch. 3, Part 1, Section 1431 et. seq. (As amended through 1971.)	Stream Control Commission Wildlife & Fisheries Comm. Department of Health P. O. Drawer FC, University Sta. Baton Rouge, Louisiana 70803
Maine	Water Pollution Control Law	Title 38, Ch. 3, Revised Statutes of 1964. As amended 1971	Environmental Improvement Comm. State House Augusta, Maine 04330
Maryland	Water Pollution Control Laws	Article 43 (Sec. 387 to 427) Annotated Code of Maryland as amended by Laws 1970,	*Department of Natural Resources *Department of Water Resources Department of Health & Mental Hygiene 2305 North Charles Street Baltimore, Maryland 21218 *State Office Building Annapolis, Maryland 21401
Massachusetts	Clean Water Act	Ch. 21, General Laws as amended through the Acts of 1970	Water Resources Commission Division of Water Pollution Control Leverett Saltonstall Bldg. Government Center Boston, Massachusetts 02202
Michigan	Water Pollution Control Law	Act 245, Public Acts of 1929 as amended by Act 117, P.A. 1949; Act 165, P.A. 1963; Act 405, P.A. 1965; Act. 167, P.A. 1968; Act 209, P.A. 1968; Act 200, P.A. 1970	Water Resources Commission Stevens T. Mason Bldg., Sta. Lansin, Michigan 48926
Minnesota	Water Pollution Control Laws		Pollution Control Agency 717 Delaware Street S.E. Minneapolis, Minnesota 55440
Mississippi	Water Pollution Control Law		Air & Water Pollution Control Comm. P. O. Box 827 Jackson, Mississippi 39205
Missouri	Clean Water Law	Senate Bill No. 424 Ch. 204.026 Para. 13 and Ch. 204.076 Para. 1 (1972).	Water Pollution Board P. O. Box 154 Jefferson City, Missouri 65101

<u>STATE</u>	<u>LAW</u>	<u>REFERENCE</u>	<u>ADMINISTERING AGENCY</u>
Montana	Water Pollution Control Act	Title 69, Ch. 48, RCM, 1947, Section 69 - 4806 and 69-4823 (As amended through 1971)	State Department of Health and Environmental Sciences Helena, Montana 59601
Nebraska	Environmental Protection Act	Sections 81-1501 to 81-1532 (1971) As amended by L.B. 1435 (1972)	Department of Environmental Control Environmental Control Council State House Station Lincoln, Nebraska
Nevada	Water Pollution Control Law	NRS 445.130 to 445.385 (1971)	Commission of Environmental Protection Department of Health, Welfare and Rehabilitation Environmental Protection Hearing Board Carson City, Nevada 89701
New Hampshire	Water Pollution Control Law	Revised Statutes Annotated, Ch. 149 as amended. (1971)	Water Supply and Pollution Control Commission 105 Loudon Road, Prescott Park Concord, New Hampshire 03301
New Jersey	Environmental Protection Act	R.S. 58: 11-12, 12-3 as amended by Chapter 91, N. J. Laws of 1970.	Department of Environmental Protection P. O. Box 1390 Trenton, New Jersey 08625
New Mexico	Water Quality Act	Ch. 190, Laws of 1967 (As amended by Ch. 64, Laws of 1970 and by Ch. 277, Laws of 1971) 75-39-1 through 75-39-12 NMSA	Water Quality Control Comm. Environmental Improvement Agency P. O. Box 2348 Santa Fe, New Mexico 87501
New York	State Environmental Conservation Law	Public Health Law Art. 12 as amended (1972)	Department of Environmental Conservation State Environmental Broad Albany, New York
North Carolina	Water & Air Resources Act	Ch. 143 Art. 21 as amended (1971)	Board of Water & Air Resources P. O. Box 9392 Raleigh, North Carolina 27603
North Dakota	Water Pollution Control Law	Ch. 479, Sections 61-28-01 through 61-28-08 (1967)	Water Pollution Control Board Department of Health Bismarck, North Dakota 58501
Ohio	Water Pollution Control Act	Sections 6111.01 et. seq. as amended (1967)	Water Pollution Control Board P. O. Box 118 Columbus, Ohio 43216
Oklahoma	Water Pollution Control Statutes	Title 63 Oklahoma Statutes 1971	Department of Pollution Control Water Resources Board Department of Health 3400 North Eastern Oklahoma City, Oklahoma 73105
Oregon	Water & Air Pollution Control Laws	Oregon Revised Statutes, Ch. 449 (1971 Replacement Part)	Department of Environmental Quality Environmental Quality Comm. P. O. Box 231 Portland, Oregon 97201
Pennsylvania	The Clean Streams Law		Department of Environmental Resources Environmental Quality Board Environmental Hearing Board P. O. Box 2351 Harrisburg, Pennsylvania 17105
Puerto Rico	Water Pollution Control Law		Environmental Quality Board P. O. Box 11785 Santurce, Puerto Rico 00910

<u>STATE</u>	<u>LAW</u>	<u>REFERENCE</u>	<u>ADMINISTERING AGENCY</u>
Rhode Island	Water Pollution Control Law	General Laws of 1956, Title 46 Ch. 12 as amended by PL 170, 1958, PL 89, 1963, PL 261, 1966 PL 198, 1967, PL 88, 1970, PL 289, 1970, PL 103, 1971, PL 236, 1971	Department of Health 335 State Office Building Providence, Rhode Island 02903
South Carolina	Pollution Control Act	Act 1157-1971 as amended by the 1971-1972 General Appropriation Act for the fiscal year 1971-1972	South Carolina Pollution Control Authority 1321 Lady Street Owen Building Columbia, S.C.
South Dakota	Water Pollution Control Law		Committee on Water Pollution State Department of Health (Division of Sanitary Engineering & Environmental Protection) Pierre, S.D. 57501
Tennessee	Water Quality Control Act of 1971	Ch. 164 Public Acts of 1971 as amended by Ch. 386 Public Acts of 1971, Ch. 444 Public Acts of 1972, Ch. 631 Public Acts of 1972	Water Quality Board Department of Public Health 6th Avenue North Nashville, Tennessee 37219
Texas	Water Quality Act	Chapter 21, Subchapter C Section 21.079 and 21.091; Subchapter E, Section 21.252	Texas Water Quality Board 314 W. 11th Street Austin, Texas 78701
Utah	Water Pollution Control Act	Title 73, Ch. 14, Utah Code Annotated, 1953 as amended 1967.	Water Pollution Committee 44 Medical Drive Salt Lake City, Utah 84113
Vermont	Water Pollution Control Act	Title 10, Vermont Statutes Annotated, Ch. 33 as amended (1972)	Department of Water Resources Water Resources Board 5 Court Street Montpelier, Vermont 05602
Virginia	Water Control Law	Ch. 3.1, Title 62.1 Code of Va., 1950, as amended (1970)	State Water Control Board P. O. Box 11143 Richmond, Virginia 23230
Washington	Water Pollution Control Laws	Chapter 90.48 RCW (1970) Section 90.48.140 and 90.48.160.	Department of Ecology Ecological Commission Pollution Control Hearings Board P. O. Box 829 Olympia, Washington 98501
West Virginia	Water Pollution Control Act	Ch. 20, Article 5A, Code of West Virginia as amended (1969).	Department of Natural Resources Water Resources Board State Department of Health (Division of Sanitary Eng. 1201 Greenvriar Street Charleston, West Virginia
Wisconsin	Water Pollution Control Law	Ch. 144, Wisconsin Statutes (1967)	Department of Natural Resources Natural Resources Board P. O. Box 450 Madison, Wisconsin 53701
Wyoming	Protection of Public Water Supply Act	Article 2, Section 35-184 et seq., as amended Laws 1957	Sanitary Engineering Services Stream Pollution Control Advisory Council State Office Building Cheyenne, Wyoming 82001

STATE	REPLY RECEIVED	HAVE EMERGENCY PLAN*
ALABAMA	X	
ALASKA	X	
ARIZONA	X	
ARKANSAS	X	X
CALIFORNIA	X	X
COLORADO	X	
CONNECTICUT	X	
DELAWARE	X	
FLORIDA	X	X
GEORGIA	X	
GUAM	X	
HAWAII	X	
IDAHO	X	X
ILLINOIS, SPRINGFIELD	X	X
INDIANA	X	X
IOWA	X	X
KANSAS	X	X
KENTUCKY	X	
LOUISIANA	X	X
MAINE	X	X
MARYLAND, BALTIMORE	X	
MARYLAND, ANNAPOLIS	X	X
MASSACHUSETTS	X	
MICHIGAN	X	
MINNESOTA	X	
MISSISSIPPI	X	
MISSOURI	X	X
MONTANA	X	
NEBRASKA	X	X
NEVADA	X	
NEW HAMPSHIRE	X	
NEW JERSEY	X	
NEW MEXICO	X	
NEW YORK	X	X
NORTH CAROLINA	X	
NORTH DAKOTA	X	X
OHIO	X	X
OKLAHOMA	X	
OREGON	X	
PENNSYLVANIA	X	X
RHODE ISLAND	X	
SOUTH CAROLINA	X	
SOUTH DAKOTA	X	
TENNESSEE	X	X
TEXAS	X	
UTAH	X	
VERMONT	X	
VIRGINIA	X	X
WASHINGTON	X	X
WEST VIRGINIA	X	X
WISCONSIN	X	X
WYOMING	X	

*Emergency plan may be for oil and/or hazardous materials. Plans may be existing, tentative or in the planning stage.

C-1. Results of request for contingency plan information from State agencies.

INTERSTAGE AGENCY	REPLY RECEIVED	HAVE EMERGENCY PLAN
BI-STATE DEVELOPMENT AGENCY	X	
INTERSTATE SANITATION COMMISSION		
OHIO RIVER VALLEY WATER SANITATION COMMISSION	X	X
DELAWARE RIVER BASIN COMMISSION	X	X
KLAMATH RIVER COMPACT COMMISSION	X	
TENNESSEE RIVER BASIN WATER POLLUTION CONTROL COMMISSION		
INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN	X	
NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMM.		

* Emergency plan may be for oil and/or hazardous materials. Plans may be existing, tentative or in planning stage.

C-2. Results of request for contingency plan information from interstate agencies.

SAMPLE

(NAME OF CITY)

WASTEWATER TREATMENT SYSTEM EMERGENCY RESPONSE PAMPHLET*

GENERAL BACKGROUND

Our section of the country experiences natural disasters (hurricanes, tornadoes, etc.) on a recurring basis. This pamphlet has been prepared to serve as a guideline to prepare for and respond to this type of disaster.

The goal of this document is to disseminate information to all personnel within the treatment system. An informed and organized staff is essential in responding efficiently to emergency situations.

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GENERAL INFORMATION

- * All supervisors will meet with System Superintendent when watch alert is issued.
- * Supervisor's responsibilities:
 - * Report emergency conditions.
 - * Maintain a log of all emergency activities.
 - * Provide list of personnel to be on duty. (Provide time for these men to return home and arrange for protection of their families.)
- * Standby power equipment to be used only after power failure occurs.
- * Off duty personnel monitor local radio/television stations for work schedule information.

* Similar to Pamphlet used in Ft. Lauderdale, Florida

- * Superintendent will provide for welfare of men on duty during disaster (food, bedding, etc.)

DETAILED PROCEDURES (Hurricane/Severe Weather Watch Alert)

- * Superintendent
 - * Organize staff.
 - * Maintain continuous monitoring of weather condition.
 - * Check out communications equipment.

DETAILED PROCEDURES (Hurricane/Severe Weather Warning Alert)

- * Superintendent
 - * Initiate emergency response plan.
- * Maintenance crews
 - * Check emergency generators and fuel supply.
 - * Secure pump stations as directed.

Treatment Plant Operators

- * Check all emergency equipment.
- * Check chemical inventories.
- * Coordinate with maintenance personnel to secure equipment.

POST DISASTER ACTIONS

- * Perform severity analysis
- * Organize crews as personnel report for work to repair priority items.
- * Submit assistance requests immediately to expedite and coordinate acquisition of supplies and parts.

FACILITIES

Treatment Plants and Pumping Stations	Phone Number	Radio Call Sign
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Main Control Building
Maintenance Shop
Chlorine Building

Digester Building

Pump Station #1

Pump Station #2

COMMUNICATIONS INFORMATION

	Phone Number	Radio Call Sign
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Dept. of Public Works

Police

Fire

PERSONNEL

Title/Name	Home Phone	Emergency Duty Assignment
System Supt.		Main Control Bldg.
Asst. System Supt.		Main Control Bldg.
Maintenance Supvr.		Maintenance Shop
Chief Operator		Main Control Bldg.

EMERGENCY DIESEL GENERATORS

HP	KW	Location	Installation (Permanent/Portable)	Function
450	250	Pump Sta. #1	Portable	Pump Station
450	250	Main Plant	Permanent	Half of Treat. Plant

**SELECTED WATER
RESOURCES ABSTRACTS****INPUT TRANSACTION FORM**

1. Report No.

3. Accession No.

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WASTEWATER TREATMENT FACILITIES
STATE-LOCAL ASPECTS**

5. Report D.

6.

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Report No.7. Author(s) **Green, R. L., Page, G. L. Jr., and
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16. Abstract

This manual provides information to assist in the development of State and local emergency programs to respond to spills of raw or inadequately treated municipal wastewater.

Preliminary steps in this work included a request to over fifty-five State and interstate agencies for information on existing or future water pollution contingency plans. Over two hundred wastewater treatment facilities were also asked to provide information on local emergency plans.

The manual emphasizes the legal aspects of spill reporting; a reportable spill definition; State and local aspects of emergency planning; and a model State emergency response program.

This manual includes a separate section on State emergency response plans and another separate section on local aspects of emergency planning. The guidelines presented are not intended to be rigid formats; each State and local response plan must be modified to the individual situation.

17a. Descriptors ***Wastewater Treatment, *Sewage Effluents, *Failures, *Disasters,
*Warning Systems, Damages, Acts of God, Electric Power Failure, Floods, Hurricanes,
Tornadoes, Negligence**17b. Identifiers **Emergency Response Programs, State and Local Aspects of Emergency Planning,
Spills of Raw or Inadequately Treated Municipal Wastewater, Environmental Protection
Agency**

17c. COWRR Field & Group

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