



# Weymouth Township MUA Atlantic County, NJ. Emergency Response Plan Wastewater System



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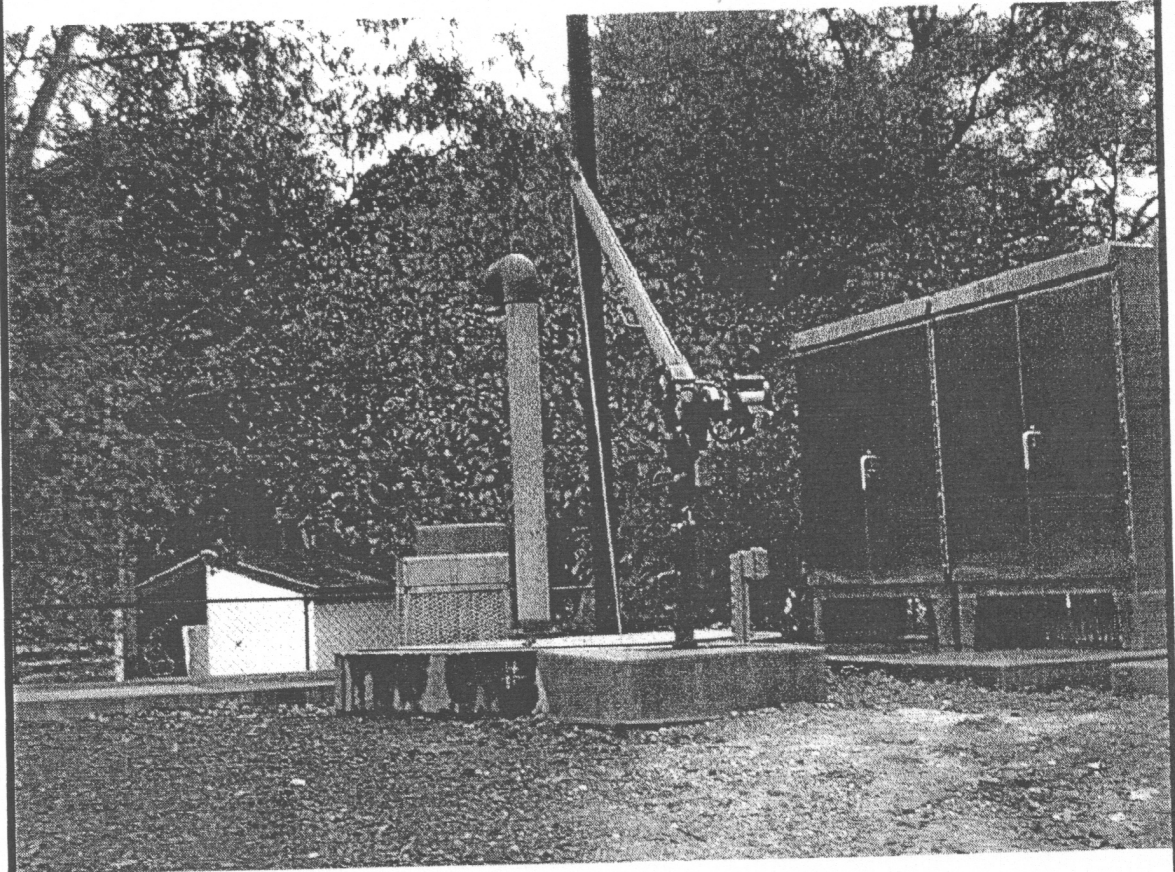


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By Rural Community Assistance Corporation, Western RCAP  
RCAP Safety and Security Education Program*

# Emergency Response Planning Guide for Public Wastewater Systems

## RCAP Regional Offices:

If you need technical assistance to complete your Emergency Response Plan, please contact one of our regional offices listed below.



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RCAP National Office	888/321-7227	<a href="http://www.rcap.org">www.rcap.org</a>
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Midwest RCAP	952/758-4334	<a href="http://www.map-inc.org">www.map-inc.org</a>

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For additional copies of this publication, call 888/321-7227 or visit RCAP's web site at [www.rcap.org](http://www.rcap.org).

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# Guidance and Instructions

## Introduction: Protecting public health

Adequate and reliable wastewater management is vital to every community. Emergency response planning is an essential part of managing a wastewater system.

Most public wastewater systems have had routine operating emergencies such as pipe breaks and blockages, equipment malfunctions, and power outages. These are manageable if the system has an emergency response plan that can be put into action quickly.

More serious non-routine emergencies may result from intentional acts of sabotage, chemical spills, floods, earthquakes, windstorms, or droughts. These can drastically affect the system and the community that depends on it.

Each emergency has unique effects on different parts of a wastewater system. Floods can cause widespread infiltration; earthquakes can damage collection systems and equipment; and storms can disrupt power supplies. The common element is that each emergency may threaten the system's ability to treat wastewater reliably.

Emergency response planning is a process by which wastewater system managers and staff explore vulnerabilities, make improvements, and establish procedures to follow in an emergency. It is also a process that encourages people to form partnerships and get to know one another. Preparing a response plan and practicing it can save lives, prevent illness, enhance system security, minimize environmental and property damage, and lessen liability.

## The requirement for an emergency response plan

The United States Department of Agriculture, Rural Development (USDA/RD) is requiring that all systems that receive USDA/RD funding must complete a Security Vulnerability Assessment (SVA) and Emergency Response Plan (ERP). In addition to the USDA/RD requirements, the preparation of a VA and ERP will help improve the management of the wastewater system and will increase the system's ability to respond to emergencies.

## How to use this document

Developing an emergency response plan can take a lot of time and effort. The purpose of this document is to make the job easier and help create a plan that works for your wastewater system. The document is intended for use by any wastewater system and may be modified to fit the specific needs of each system. Larger wastewater systems should use it only as a starting point, because the complexity of larger systems requires more detail. Smaller wastewater systems should consider each section and use what is relevant for the type, size, and complexity of the system.

The document has two manuals with identical structure. The RCAP ERP Guide discusses important emergency response planning elements and provides instructions and examples to help complete the RCAP ERP Template, which is for creating your own plan. You can also use RCAP ERP Guide as an educational tool to help system staff understand the key components needed for a well thought-out plan. The document is available electronically on the web at: <http://www.rcap.org>

The RCAP ERP Template is just a guide; you may modify it in any way that works for your system – add sections, take them out, or rearrange them if you wish. You may also use a completely different format for your plan if you find one that works better for your system.

Since the completed Emergency Response Plan may contain sensitive information, **do not** submit it to USDA/RD and make sure to keep it stored in a safe and secure location. It is recommended you have one copy stored on-site and one off-site to ensure the document is available in the event you are unable to access your offices or facilities.

## Section 1. System Information

In any emergency, a wastewater system needs to have basic information available for both system personnel, and external parties such as emergency responders, repair people, the media, and others. The information needs to be clearly formatted and readily accessible so system staff can quickly find it and provide it to those who may be involved in responding to the emergency. Providing this information in advance is an important step in forming partnerships.

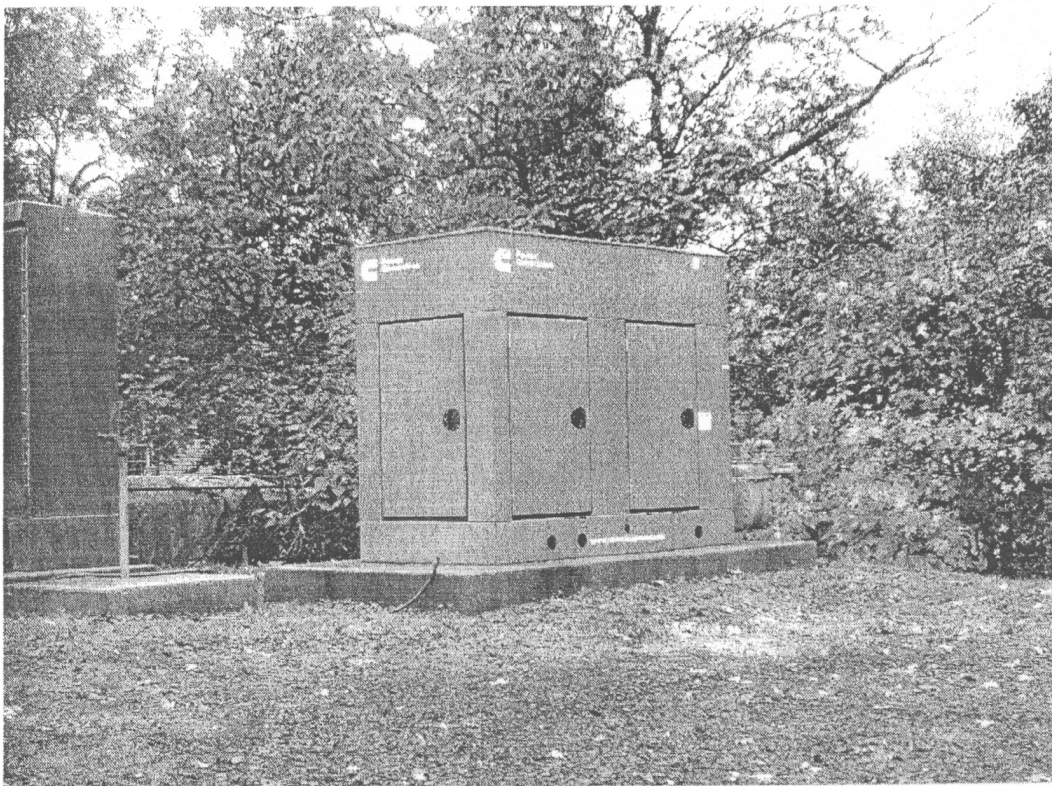
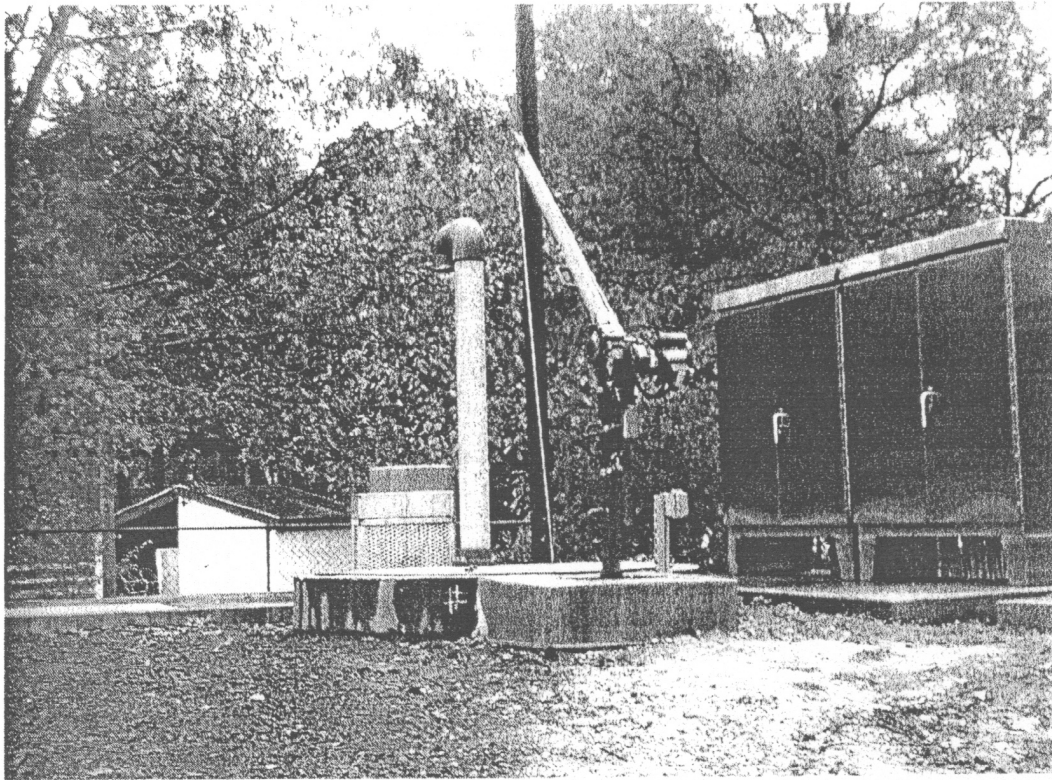
Basic information that should be presented in the emergency response plan are the system's ID or discharge number, system name, system address or location, directions to the system, population served, number of service connections, area of service, discharge location, system owner, and information about the person in charge of managing the emergency. See the example of how to present the information on the next page.

## System information

<b>System or Discharge Identification Number(s)</b>	No Discharge Permit for Sewer System	
<b>System Name and Address</b>	Weymouth Township MUA PO Box 252 Mays Landing, NJ 08330	
<b>Directions to the System</b>	The Sanitary Sewer System has 2 pumping stations. The WTMUA PS is 1 Mile south from the RT 40 & RT 50 intersection on the left. The Lenape Landing PS is located approximately ½ mile south from the RT 40 & RT 50 intersection on the left approximately 500 feet east of Rt 50.	
<b>Basic Description and Location of System Facilities</b>	The WTMUA Sanitary Sewer system consists of approximately 10,400 ft of gravity sewer pipe, approximately 4,000 feet of force main and one pump station. There is also a private sanitary sewer system in Lenape Landing that connects into the WTMUA system. The WTMUA does not own or operate that system.	
<b>Location/Town</b>	Weymouth Township NJ (Belcoville)	
<b>Population Served and Service Connections</b>	500 people (Estimate)	225 Residential Connections 3 Commercial Connections
<b>System Owner</b>	Weymouth Township MUA	
<b>Name, Title, and Phone Number of Persons Responsible for Maintaining and Implementing the Emergency Plan.</b>	Alisa Owen (Maintaining) Water Sewer Utility Clerk/CFO Chairperson (Implementing)	Phone 609-909-0487 Cell 609-412-4371

The information in this table is a starting point. The system may have unique circumstances, or it may have a geographical range that expands over a large area requiring additional information. In any case, make sure the information is clear, accurate, and easily located.

In addition to this basic information, the wastewater system should have a detailed map of the collection system and a plan for how to communicate if phones and radios don't work. For example, arrange places to meet and designate less technical ways to share and distribute information.



## Section 2.

### Chain of Command – Lines of Authority

When an emergency occurs, there can be confusion, lack of coordination, and poor communication. Timely and effective response can minimize the effects of an emergency. Often, the initial response sets the tone for the entire emergency.

Having a chain of command that defines clear lines of authority and responsibilities for system personnel during an emergency speeds up response time and helps eliminate confusion. System personnel need to know who to report the emergency to, who manages the emergency, who makes decisions, and what their own responsibilities are.

**The first response step** in any emergency is to notify the person at the top of the chain of command – the person responsible for managing the emergency and making key decisions. This lead person will assess the situation and initiate a series of response actions (using the emergency response plan as a guide) based on the type and severity of emergency. Larger systems may have a variety of persons involved in the chain of command. However, a small system may only have one or two people in the chain of command. It is likely that very small systems may only have one person, usually the wastewater system operator, in their chain of command. In these cases make sure each responsibility is clearly defined so the person does not forget it during an emergency. Some very small systems may not have an operator that lives near the facilities. In these cases, another responsible person should be designated to act as the lead person.

In addition to an individual having the lead responsibility, other key responsibilities that should be assigned to system personnel include the following tasks:

- Handle incoming phone calls and administrative support;
- Provide information to the public and media;
- Contact the customers;
- Assess the system's facilities and operations in the field; and
- Organize and carry out repairs.



## Chain of command – lines of authority

Name and Title	Responsibilities During an Emergency	Contact Numbers
Patricia Doerr Chairperson WTMUA	Responsible for overall management and decision making for the water system and sewer systems. Chairperson is the lead for managing the emergency, providing information to regulatory agencies, the public and news media. All communications to external parties are to be approved by the Chairperson.	Phone:  Cell:609-476-4267
Stephen Blankenship Water/Sewer System Operator	In charge of operating the water and sewer systems, performing inspections, maintenance and sampling and relaying critical information, assessing facilities, and providing recommendations to the WTMUA .	Work 609-625-1872
Ed Speitel, Engineer	Provides recommendations to Chairman and Water/Sewer Operator	Phone:856-627-3102  Cell: 609-417-1271
Alisa Owen Water & Sewer Utility Clerk/CFO	Responsible for administrative functions in the office including receiving phone calls and keeping a log of events. This person will provide a standard carefully pre-scripted message to those who call with general questions. Additional information will be released through the Chairperson	Office Phone: 609-909-0487 Cell 609-412-4371

## Section 3. Events that Cause Emergencies

Why do emergencies happen? There are a variety of reasons including:

- Natural disasters;
- Accidents;
- Deliberate acts of vandalism or terrorism; and
- System neglect or deferred maintenance.

An emergency may affect the entire wastewater system or only isolated sections. You should evaluate a variety of events regarding their potential effects on the wastewater system and its infrastructure. Each type of event can cause different types of damage to system components or contamination resulting in inadequate wastewater collection and/or treatment. These evaluations should be reflected in the wastewater system's vulnerability assessment and procedures for responding to specific events that are discussed later in this document.

### Natural Disasters

Consider common natural disasters when developing an emergency response plan, including:

**Earthquakes:** Damage resulting from the earth shifting along geologic faults resulting in shaking and settling of the ground can cause severe structural damage to virtually all wastewater system facilities, including lift stations, force mains, collection lines, customer connections, electrical service, treatment facilities, and outfalls.

Emergency response plans should evaluate what facilities are at risk during an earthquake, what can be done to mitigate impacts, and what actions can be taken to respond to such an event. It is also important to have backup communication plans, because radios and cell phones may not work after an earthquake.

**Hurricanes or tornados:** Hurricanes or tornados can cause a wide range of emergency situations over large areas. Each wastewater system should evaluate its ability to withstand the potential effects of a hurricane or tornado.

**Floods:** Wastewater facilities are often located near waterways and thus close to potential floods. Floods can cause widespread infiltration into the collection system as well as damage to treatment and pumping facilities. Floods can also ruin electrical components and telemetry systems.

It is important for a wastewater system to assess its vulnerability to flooding. Consider damage to roads and bridges where gravity sewers or force mains are located. Washout of roads or bridges not only damages pipes but also can interfere with repair. Even buried pipe can be washed out if a stream bed scours deeply enough. If the risk for a flood is high, the wastewater system should plan for and consider mitigating actions to protect facilities and equipment.

Another consideration is identification of alternative transportation routes to get in and out of the area.

**High winds:** High winds can be generated in thunderstorms, tornadoes, or unusual weather events. These winds often disrupt power and communications and damage wastewater system facilities.

**Ice Storms:** Ice storms can cause major or localized power outages and slow the ability of crews to get to areas to make repairs.

**Human-caused events:** Human-caused events that can result in a wastewater system emergency include chemical spills, vandalism, terrorism, cyber-attack, fires, construction accidents, and basic neglect of maintaining the system.

**Vandalism:** Vandalism is generally a spur-of-the-moment act using materials at hand rather than pre-planned or pre-meditated activities. Vandals often break into systems, damage facilities, and paint graffiti. These acts are relatively easy to prevent by enhancing security, increasing lighting, installing locks on doors and hatches, and putting up security fencing.

**Terrorism:** Acts of terrorism are conducted by someone whose intent is to instill fear or induce harm to people and facilities. Acts of terrorism are a very real threat in America. Even though it may seem unlikely, it would only take one well-staged event to undermine confidence in drinking water safety. Being prepared and knowing what to look for are crucial elements of preventing an attack on the system.

**Events that cause emergencies:**

Type of Event	Probability or Risk (High – Med – Low)	Comments
Earthquake	Low	none
Hurricane or Tornado	Medium	Hurricane potential during summer and fall
Flood	High	The WTMUA Pump Station is above the 100 year flood elevation. However, a portion of the gravity sewer system is within the 100 year flood plain and is prone to flooding. Flooding of the gravity system can create flows greater than the pump station can discharge.
High winds/Thunderstorms	High	Power outages occurring during severe thunderstorms and wind storms. Backup generator is then used.
Ice Storm	Med	
Drought	No	
Terrorism	Low	Need to be trained on suspicious activity.
Construction Accident	Low	

## Section 4. Emergency Notification

During most emergencies, it will be necessary to quickly notify a variety of parties.

Preparation for such notification has three essential components:

- Assigning responsibility to oversee and carry out the notifications;
- Assembling comprehensive call-up lists with names and contact numbers; and
- Writing out procedures for quickly disseminating information to appropriate parties.

There are many potential threats to wastewater systems, including chemical, biological or radiological contamination as well as damage to infrastructure and computer systems. In most cases, failure of the treatment process or overflow at lift stations would cause the most concern for a wastewater system. The threat is real, and wastewater systems need to enhance security around facilities and be prepared to respond.

**System neglect:** System neglect, often referred to as deferred maintenance, is a major cause of emergencies. System components that are aging and need replacement go without attention for so long that they fail, causing an emergency. Wastewater systems need to evaluate facilities continuously and replace them before a massive failure occurs.

**Construction accidents:** Construction accidents sometime fall into the category of a routine operating emergency. For example, when a contractor damages a sewer line and the system needs a pump-around and repair. If the response is not timely and effective, this kind of incident can turn into a serious emergency. The utility must be aware of construction in and around the system and be prepared to respond quickly to an accident if it happens.

**Chemical spills:** Many chemicals that are routinely transported can harm humans directly or by contaminating air or water. No wastewater system is safe from a hazardous chemical spill and the resulting contamination. Spills can come from motor vehicles, trains, airplanes, boats, industries or fixed containers. They can occur at any time without warning, and many solvents are able to kill biological activity in the treatment process.

Wastewater systems should evaluate the potential for chemical spills within their collection system and use that information for emergency response planning.

A wastewater system may be vulnerable to many natural and man-made disasters. Understanding these vulnerabilities is an important part of emergency planning. In preparing a plan, you may not consider it necessary to do an extensive analysis of a rare event such as a tornado or earthquake. However, analyzing the impacts of uncommon as well as common events is important. Consider the probability of an event and its likely effect on the wastewater system. Then focus on the actions needed to reduce impacts and respond in a timely and effective manner.

If you don't have readily available notification information or the means to deliver it, you run the risk of losing valuable response time. This may make the difference between minor and major damages. Having well-formed partnerships will help during these times.

In addition to phone, email and media for notification, consider forming partnerships with local community groups, emergency planning committee, scout troops, and school clubs to assist in delivering information when needed.

Wastewater system managers from relatively small systems should poll customers to determine the best method of communicating. It is also a good idea to give customers some general safety information regarding what to do in case of an emergency before one happens.

### **Notification call-up list**

Call-up lists should be comprehensive, including local law enforcement, regulatory agencies, local mayors and city officials, local health officials, safety officials, local emergency responders, water testing laboratories, and service/repair providers. A list of priority customers, such as hospitals, nursing homes, clinics, and schools should also be maintained for immediate notification. The ERP Template has comprehensive lists to assist you. You may modify them as necessary.

### **Notification procedures**

Once you have your list completed it is important to describe the procedures you will use to distribute information quickly to appropriate parties. These procedures describe how to make notifications to specific parties, who is responsible for conducting the notifications, who assists in the notifications, and what methods are used to complete them. In addition, specific procedures on how to issue a public health advisory should be defined so that you are prepared to do so in the event that your discharge is unsafe for public contact or down stream users. Issuing a public health advisory should be done by the wastewater system when there is reason to believe that there is a threat to public health. Regulatory agency staff members are available for consultation in making this decision.

### **Other procedures to define include:**

- Notifying system personnel who may be on-call or off-duty;
- Notifying customers, priority customers, and industrial customers about the potential for limited wastewater services;
- Notifying downstream users of potential contamination in their source water;
- Alerting local law enforcement, drinking water officials, local health officials, and water testing laboratories when appropriate;
- Contacting service and repair contractors;
- Contacting neighboring wastewater systems for assistance, if necessary; and
- Coordination with water supply agencies.

At Each January Board Meeting develop a specific procedure for each type of event described in Section 3. (work through a specific event year)

**Notification call-up lists** - Use these lists to notify first responders of an emergency.

Emergency Notification List				
Organization or Department	Name & Position	Telephone	Night or Cell Phone	Email
Local Law Enforcement				
	State Police Buena Vista Barracks	911 or 609-561-7267		
Fire Department	Weymouth Fire Dept  Chief	911/  Cell		
Emergency Medical Services	Dorothoy Fire Dept Robert Gibney Chief	911  609-476-4441		www.dorothyfire.org  Robert.gibney@dorothyfire.org
Wastewater Operator (if contractor)	Stephen Blankenship	609-625-1872		
Primacy Agency Contact	DEP			
Hazmat Hotline		911		
Interconnected Wastewater System Treatment	Hamilton Township MUA	609-625-1872		
Neighboring Wastewater System (not connected)				
RCAP Contact	Tom Essig	717-766-0960	717-418-4068	tessig@rcapsolutions.org

Priority Customers				
Organization or Department	Name & Position	Telephone	Night or Cell Phone	Email
Hospitals or Clinic(s)				
Public or Private Schools				
Public Water System				
Adult Care Facility				

State, Federal or Tribal Notification List				
Organization or Department	Name & Position	Telephone	Night or Cell Phone	Email
State or Tribal Police	State Police	911 or 609-561-7267		
Regulatory Agency State/Federal/Tribal	DEP			
Authorized Testing Laboratory				

Service / Repair Notifications				
Organization or Department	Name & Position	Telephone	Night or Cell Phone	Email
Electric Utility Co.	Atlantic City Electric	800-642-3780		
Electrician				
Natural Gas	South Jersey Gas	800-582-7060		
Water Testing Lab.				
Sewer Utility Co.	Hamilton Twp MUA	609-625-1872		
Telephone Co.	Verizon	1-800-verizon		
Plumber				
Pump Supplier				
Leak Detection				

Septic Hauler				
"Call Before You Dig"	811	800-272-1000		
Rental Equipment Supplier				
Chlorine Testing Supplier				
Chlorine Supplier				
Pipe Supplier				
Excavating Contractor				

Media Notification List				
Organization or Department	Name & Position	Telephone	Night or Cell Phone	Email
Newspaper - Local	Atlantic City Press	1-877-773-7724 609-272-7000		<a href="http://www.pressofatlanticcity.com">www.pressofatlanticcity.com</a>
Radio				
Radio				
TV Station	Chanel 40	(609) 927-4440		<a href="http://www.nbc40.net">www.nbc40.net</a>

### Notification procedures

**Procedures for notifying downstream water users of potential of inadequately treated discharge.**

<b>Who is Responsible:</b>	As directed by the Chairperson, the Water Sewer Utility Clerk/CFO and or Hamilton Township MUA
<b>Procedures:</b>	Contact NJDEP as necessary



**Alert local law enforcement, state, federal or tribal regulatory officials, and local health agencies**

<b>Who is Responsible:</b>	As directed by the Chairperson, the Water Sewer Utility Clerk/CFO and or Hamilton Township MUA
<b>Procedures:</b>	Contact NJDEP as necessary

**Contact service and repair contractors**

<b>Who is Responsible:</b>	As directed by the Chairperson, the Water Sewer Utility Clerk/CFO and or Hamilton Township MUA
<b>Procedures:</b>	Contact (via phone) HTMUA for any repairs.

**Contact neighboring wastewater systems, if necessary**

<b>Who is Responsible:</b>	Not Applicable
<b>Procedures:</b>	

**Contact downstream water systems, if necessary**

<b>Who is Responsible:</b>	As directed by the Chairperson, the Water Sewer Utility Clerk/CFO and or Hamilton Township MUA
<b>Procedures:</b>	

### Procedures for issuing a health advisory

<b>Who is Responsible:</b>	As directed by the Chairperson, the Water Sewer Utility Clerk/CFO and or Hamilton Township MUA
<b>Procedures:</b>	Send information to the media and customers, neighboring wastewater and water systems if necessary.

### Other procedures, as necessary

<b>Who is Responsible:</b>	
<b>Procedures:</b>	

## Section 5. Effective Communication

Effective communication is a key element of emergency response. Make sure you have a well thought out communications strategy in place as part of your emergency response plan. If you haven't planned ahead by the time a crisis hits, it's too late. How you communicate with your employees, customers, and the media can affect the outcome of the situation.

Developing partnerships with others in your local emergency response network, establishing relationships with your customers and the media, and creating communication tools such as fact sheets and media releases ahead of time will help you communicate efficiently and successfully during a crisis. For example, establish positive media relations before an emergency. Make an effort to meet with reporters in your local area to share information about your wastewater system and how they could receive information should an emergency occur. Also contact your local emergency response organization if one exists (e.g., the Local Emergency Planning Committee) and determine what assistance they can provide during an emergency.

During an emergency, the media, your customers, and others will have many questions. Be prepared by organizing basic facts about the crisis and your wastewater system. Assemble a team of players quickly, including a main spokesperson and one or more people to answer customer calls.

Expect your customers to be concerned or upset during a wastewater emergency. How you communicate with people is as important as the content of the information you are delivering. Body language, tone of voice, and expressions of sympathy all play an important role in how the

information is received. When an emergency occurs, the news media may be on-scene quickly, requesting information that will inevitably go to the public. Appoint a spokesperson to communicate to the media. Make sure the spokesperson is credible, accessible, in a position of authority, and trained in media interview techniques.

Develop key messages to use with the media that are clear, brief, and accurate. Make sure your messages are carefully planned and have been coordinated with local and state officials. If your messages are different you'll want to know that and be prepared to explain why.

Make sure field and office staff know how to deal with the media and questions from customers and the public. It may be necessary to establish protocols for both field and office staff to respectfully defer questions to the spokesperson.

Small wastewater systems that have limited staff should remember that your state, federal, or tribal regulatory agency is available to assist in developing and communicating messages to the media and the public. This can be especially helpful when staff need to focus on other tasks.

### Communication Tips

**Do:**

- Be prepared;
- Designate a spokesperson; (Manager or President of Board)
- Provide complete, accurate, and timely information;
- Tell the truth;
- Express empathy;
- Acknowledge uncertainty and offer to get back with more information later; and
- Document your communications.

**Do not:**

- Speculate on the cause or outcome of an incident;
- Blame or debate;
- Minimize or brush off concerns of customers; and
- Treat inquiries from interested parties as an annoying distraction from the real business of emergency response.

### Designate a spokesperson and alternate

<b>Spokesperson</b>	<b>Alternate</b>
Chairperson	Vice Chairperson

## Section 6.

# The Vulnerability Assessment

It is essential that wastewater systems identify and assess the vulnerability of each system component for both natural and human-caused emergencies. Assessing wastewater system vulnerability for earthquakes, floods, other natural events, and vandalism is common and is good management practice. This document uses the term vulnerability assessment to mean the process by which the wastewater system evaluates each wastewater system component for weaknesses or deficiencies that may make the system susceptible to damage or failure during a natural or human-caused emergency.

In conducting the vulnerability assessment, the wastewater system must estimate how the system and its facilities may be affected in emergency situations. Another integral part of the vulnerability analysis is to assess facilities for security enhancements that may guard against unauthorized entry, vandalism, or terrorism. This overall effort forms the basis for determining what preventive actions or improvements are needed and identifying response actions to take in the event of an emergency.

A vulnerability assessment is essentially a four-part process:

1. Identify and map the wastewater system's components, including collection system, treatment facilities, lift stations, effluent outfall or other facilities, key valves, electrical power connections, communication systems, telemetry control, and computer systems.
2. Evaluate the potential and possible effects of various types of emergencies (earthquake, vandalism, etc.) on the components. You may also want to assess the impact on the system's operations personnel from both a safety standpoint and the added stress of working in these conditions.
3. Define the system's expectations or set performance goals for system components in each event.
4. Identify improvements that can be made and mitigating actions the system can take to lessen the impact of the events.

### Assessing system facilities

When conducting an assessment, it is important to involve all appropriate personnel because they are the best source of information on the system's history, operating conditions, and vulnerable components. Partners, including public health agencies, can also provide valuable insight. Many questions need to be asked:

- What components are aging and unreliable?
- Are prolonged power outages a high probability?
- Does the system have design flaws that make it more susceptible?
- What components are susceptible to vandalism?
- What security measures are in place?
- Are the remotely located facilities fenced?
- Are entry gates and doors locked?

There are many ways to organize the assessments. One method is to identify the types of emergencies that are preventable and unpreventable as you assess each component. Preventable causes such as aging equipment, poor maintenance, poor system design, lack of security measures such as fencing and lighting, spare parts are all factors that can be managed to prevent wastewater system emergencies.

Unpreventable causes are those that are beyond control of the wastewater system. Earthquakes, floods, vandalism, terrorism, and power outages are a few examples. These events can be anticipated, and some mitigating actions can be taken to lessen the impact. However, every emergency is unique and you can never anticipate everything that may happen. As you complete your assessment, pay particular attention to understanding how to respond to the event by developing a series of quick response actions that will help protect public health and the environment and lessen the overall impact.

### **Integrating wastewater system security considerations**

Historically water system security and emergency response planning have focused on vandalism, contamination, and natural disasters. However, after recent terrorist attacks, the idea of what constitutes a threat to wastewater treatment has changed. There is new emphasis on enhancing wastewater system security to guard against vandalism and intentional acts of sabotage. A critical step in enhancing wastewater system security is integrating security considerations into the vulnerability assessment. This exercise helps to expand the identification of threats and define specific safeguards that can be taken to guard against attack.

There are many things to consider when evaluating the security of a wastewater system. What are the most probable threats to the system? Is it a hostile employee, vandal, terrorist, or random cyber attack? These potential threats have different effects and consequences and require different mitigating actions.

In addition to using a variety of wastewater system personnel to assist in conducting the overall vulnerability assessment, you may want to include a representative from local law enforcement. A fresh view from the law enforcement perspective may help identify something you have overlooked. Also, look into larger community emergency response planning efforts to assist you.

Another important security consideration is protecting sensitive information about the wastewater system. The last thing you want to do is give potential vandals or terrorists access to information on your system's vulnerabilities and emergency response procedures. Identify sensitive information and protect it.

### **Identifying vulnerabilities, improvements, and mitigating actions**

The table on the next page shows a simple way to consider your system, identify the vulnerability of each component, and define what improvements or mitigating actions can lessen the impact.

Once a vulnerability assessment has been completed, use the information for financial planning or budgeting processes. Prioritize the system improvements and security enhancements identified in the vulnerability assessment and determine how and when they can be funded. Are there some that justify a rate increase? Can they be funded from reserves? Consider these important questions as you finalize the vulnerability assessment and emergency response plan.

## Facility vulnerability assessment and improvements identification

System Component	Description and Condition	Vulnerability	Improvements or Mitigating Actions	Security Improvements
Collection System	The collection system consists of 10,400 ft of gravity sewer with manholes and 4000 Lf of force main.	Manholes are not secured and are vulnerable to acts of vandalism.	None	
Sewage Pumping	1 pump station with electrical above grade, warning lights, emergency generator.	Pump Station and Control panels are locked and fenced Generator in place for power outages wastewater overflows.		
Treatment	NA			
Effluent Disposal				
Computer and telemetry system				

## Section 7. Response Actions for Specific Events

Develop a detailed response plan for each type of emergency event that the system may experience. In any event there are a series of general steps that a wastewater system should take:

1. Analyze the type and severity of the emergency.
2. Take immediate actions to save lives.
3. Take action to reduce injuries and system damage.
4. Make repairs based on priority demand.
5. Return the system to normal operation.

Knowing the various elements of emergency response planning and keeping in mind these general steps will help you develop response actions for specific events.

### Establishing response actions for specific events

There are numerous events which may cause an emergency that are dictated by the system's size, complexity, and geographic location. As discussed before, likely causes of emergencies that a system should consider are power outages, collection system blockages or breaks, equipment failure, acts of terrorism, vandalism, floods, ice storms, earthquakes, and hazardous spills into the collection system. In any of these situations your priority is the protection of people and the environment. Be observant of what is going on around you, and if you suspect vandalism or terrorism, contact local law enforcement and make every effort to preserve evidence.

These are only starting points, since each system is unique and may encounter additional situations that are important to be prepared for. Use partnerships to assist in this effort. The following table presents a way to identify an event, summarize the assessment, set forth immediate response actions, define what notifications need to be made, and describe important follow-up actions.

#### Power outage

<b>Assessment</b>	The Wastewater pumping system is vulnerable to power outages, experiencing an average of 1-2 outages per year that last several hours. During the peak flow time of day, wet well storage is able to prevent overflows for several hours until power is restored. Additionally, the Pump Station has a generator with an automatic transfer switch when power is interrupted. The generator is a natural gas engine which will be used until electricity is restored.
<b>Immediate Actions</b>	<ol style="list-style-type: none"> <li>1. Confirm that the emergency generator started automatically.</li> <li>2. Monitor lift station.</li> </ol>
<b>Notifications</b>	<ol style="list-style-type: none"> <li>1. Power Company – let them know that a public wastewater system is experiencing an outage and that generators will be turned on until power is restored.</li> <li>2. Customers – cut back on indoor water usage until power is restored.</li> </ol>
<b>Follow-up Actions</b>	<ol style="list-style-type: none"> <li>1. Once power is restored, confirm that generator has shutdown.</li> <li>2. Inspect lift stations to ensure proper operation.</li> </ol>

#### A. Collection system blockage or line break

<b>Assessment</b>	Low
<b>Immediate Actions</b>	Contact HTMUA. External repair and replacement and/or televise line. Use flusher truck to open block.
<b>Notifications</b>	Upstream customers
<b>Follow-up Actions</b>	Determine cost effectiveness of replacement. Have regular inspection, and line flushing program (if necessary) to prevent blockages.

#### B. Collection system pumping facilities failure

<b>Assessment</b>	Low, system is new.
<b>Immediate Actions</b>	Repair pumps use emergency generators.
<b>Notifications</b>	Upstream customers and DEP
<b>Follow-up Actions</b>	Use emergency generators and/or replacement equipment on hand.

#### C. Vandalism or terrorist attack

<b>Assessment</b>	Low, most likely due to disgruntled or former employee, dissatisfied customer
<b>Immediate Actions</b>	Change locks and have employee turn in keys when leaving employment.
<b>Notifications</b>	Police
<b>Follow-up Actions</b>	Inspect facilities regularly, but vary the routine

#### D. Flood

<b>Assessment</b>	High
<b>Immediate Actions</b>	Use bypass pump or turn pumps off.
<b>Notifications</b>	As directed by the Chairperson, the Water Sewer Utility Clerk/CFO and or Hamilton Township MUA shall contact downstream water systems and the NJDEP. If the pump station needs to be turned off, notices should be provided to each user recommending that water use be minimized until the pump station can be restarted.



<b>Follow-up Actions</b>	As directed by the Chairperson, the Water Sewer Utility Clerk/CFO shall notify users that the water restrictions have been lifted.
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**E. Earthquake**

<b>Assessment</b>	Very Low
<b>Immediate Actions</b>	
<b>Notifications</b>	
<b>Follow-up Actions</b>	

**F. Hazardous materials spill into collection system**

<b>Assessment</b>	Medium
<b>Immediate Actions</b>	Isolate spill and neutralize if possible.
<b>Notifications</b>	As directed by the Chairperson, the Water Sewer Utility Clerk/CFO and or Hamilton Township MUA shall contact the County Haz Mat, NJDEP and ACUA.
<b>Follow-up Actions</b>	Determine how to contain in the future.

**G. Electronic equipment failure**

<b>Assessment</b>	Medium
<b>Immediate Actions</b>	Use generators, repair/replace equipment.
<b>Notifications</b>	Repair personnel.
<b>Follow-up Actions</b>	

**H. Cyber attack**

<b>Assessment</b>	Low
<b>Immediate Actions</b>	Update virus protection, change passwords and install backup files.

<b>Notifications</b>	Police, DEP
<b>Follow-up Actions</b>	Back up regularly and keep back ups off site.

**I. Other**

<b>Assessment</b>	
<b>Immediate Actions</b>	
<b>Notifications</b>	
<b>Follow-up Actions</b>	

## Section 8. Returning to Normal Operation

As the emergency passes and you regain control, the system must prepare to return to normal operating condition. This may be a very simple or very complex process, depending on the type and severity of the emergency. Returning to normal operation may simply mean the system restores power and the back-up generator is disconnected. Or it could mean the system has to reestablish biological activity in the treatment process.

Many factors might need to be considered before you decide to return to normal operation. For example:

- Has the system been repaired to the point that it can meet demand?
- Has the system operator made a safety and operational inspection of all system components?
- Is there adequate staff to operate and manage the system?
- Do federal, state, tribal and local agencies support returning to normal operation?
- Have you developed the proper public messages?

The emergency response plan should include a discussion of the follow-up actions and staff responsibilities that the system must take before returning to normal operation.

### Returning to normal operations

Action	Description and Actions
Inspect all system components	Wastewater system operator will inspect all system components and verify that facilities are adequate for return to normal operation. Wastewater system operator makes a report to the Chairperson. Chairperson makes decision on current condition of system.
Follow startup procedures for each unit operation	The existing startup procedures in the O&M manual should be followed to bring the entire system back on line.
Coordinate with regulator	Regulator should be kept notified of progress.
Notify customers	As directed by the Chairperson, the Water Sewer Utility Clerk/CFO shall send written notice to customers.

## Section 9. Plan Approval

Representatives of the wastewater system, who are ultimately responsible, such as wastewater system manager, owner, board members, and commissioners and council members, should review, approve, and sign the emergency response plan. This demonstrates support for the plan, acknowledges the effort put into its preparation, and puts it officially into effect.

Be sure to secure and protect the emergency response plan as it may contain sensitive information about facilities and response activities that you may not want others to know in order to safeguard the water system.

### Plan approval

This plan is officially in effect when reviewed, approved, and signed by the following people:

Name/Title	Signature	Date
Patricia Doerr Chairperson		
Licensed Operator		

## Section 10. Certificate of Completion

Once you have developed your Emergency Response Plan (ERP) that incorporates the results of a Security Vulnerability Assessment (SVA) you will need to complete the information on the certificate of completion. If RCAP or Rural Water assisted you in completing your Security Vulnerability Assessment and/or Emergency Response Plan be sure to check the appropriate box. If you have completed both the Security Vulnerability Assessment and Emergency Response Plan please check both boxes.

I certify that this document was prepared under my direction or supervision.

**Mail the completed certificate only (do not send your SVA or ERP) to the appropriate USDA Rural Development office.**

Wastewater System NPDES Number: NA

System Name: Weymouth Township MUA

Address: PO Box 252 Mays Landing, NJ 08330

**Print Name of Person Authorized to Sign this Certification on behalf of the System:**

Patricia Doerr Title: Chairperson

Signature: \_\_\_\_\_

Phone: 609-909-0487 Fax: \_\_\_\_\_ Email: owenalisa@aol.com

Date: \_\_\_\_\_

**Received Technical Assistance from the following:**

- Rural Community Assistance Partnership  
(, RCAP Solutions,)

**Completion of the following:**

Security Vulnerability Assessment

Emergency Response Plan

### **Disclaimer**

This document contains information on how to plan for protection of the assets of your wastewater system. The work necessarily addresses problems in a general nature. You should review local, state, tribal (if applicable), and federal laws and regulations to see how they apply to your specific situation.

Knowledgeable professionals prepared this document using current information. The authors make no representation, expressed or implied that this information is suitable for any specific situation. The authors have no obligation to update this work or to make notification of any changes in statutes, regulations, information, or programs described in this document. Publication of this document does not replace the duty of wastewater systems to warn and properly train their employees and others concerning health and safety risks and necessary precautions at their water systems.

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