WATER SYSTEM AND WASTEWATER EMERGENCY RESPONSE PLAN (ERP)

City of Big Rapids
Mecosta County, Michigan

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WATER SYSTEM EMERGENCY RESPONSE PLAN

I. GENERAL INFORMATION

A. How To Use This Plan

This Emergency Response Plan has been divided into four main sections, as follows:

Part 1 – General Information – This section includes basic descriptions of the Plan, such as why it is being implemented, what agencies have a copy of the Plan, what the Emergency Response organizational structures are, and when to activate the Plan.

Prior to an emergency incident, this section should be reviewed to obtain an understanding of the Emergency Response Plan. It is intended that this Plan will be reviewed the beginning of each year.

Part 2 – Action Plans – This section includes Action Plans (outline of steps to consider in the event of an emergency or threat to the water system). Action Plans are included for four main types of incidents:

Water System
- Water Contamination
- Structural Damage/Intrusion
- Power Failure

Wastewater Treatment System
- Structural Damage/Intrusion
- Power Failure
- Water Contamination

The Action Plans provide a sequential order of actions to be considered during an initial evaluation of a possible, credible, or confirmed incident involving the water system. These Action Plans should be considered immediately upon obtaining knowledge that an incident has or may have occurred.

It is important to regularly review, train, exercise and update the Action Plans.

Part 3 – Emergency Contingency Information – This section includes specific water system information (e.g., maps, drawings), and contact information for emergency response teams, regulatory agencies, equipment or service suppliers, and other persons or organizations that may be involved in an emergency response. Since situations will likely change throughout an emergency event, the information included in Part 3 should be provided to the Incident Commander(s) for their immediate access.

It is important to keep this information up to date to ensure that the contact names and phone numbers are current.

Part 4 – Support Documents & Guidelines – This section includes various documents, notifications, guidelines, and checklists of items to consider during an emergency response event. The information provided in Part 4 should be reviewed by water system personnel and other plan holders or potential emergency responders during training and exercising of this Plan.

B. Plan Certification

I hereby acknowledge that I have reviewed and accept this plan as the official City of Big Rapids Water System Emergency Response Plan (ERP).

NAME & SIGNATURE	AGENCY	DATE
Department of Public Works (DPW) Director	City of Big Rapids	
Water Superintendent	City of Big Rapids	
Wastewater Superintendent	City of Big Rapids	
City Manager	City of Big Rapids	

Director	Mecosta County Emergency Management	

C. Plan Coordination

The ERP has been coordinated with the following plan:

PLAN	AGENCY	NAME OF CONTACT
City of Big Rapids Water System Emergency Contingency Plan	City of Big Rapids	Steve Cook
City of Big Rapids Wastewater System Emergency Contingency Plan	City of Big Rapids	Dave Cushway

D. Plan Distribution List

Since documentation of a facility's emergency response procedure is sensitive, the information in this report should be treated confidentially. This document is herein marked as "Security Sensitive – Not for Public Dissemination." As such, the number of copies and distribution of this report should be on a limited basis, only to those people, including contractors, vendors, and the City of Big Rapids employees, with a specific need to know.

AGENCY	TITLE	DATE	COPY #
DPW	Emergency Response Lead (Mobile Copy #1)		
DPW	Emergency Response Lead Alternate for Water (Mobile Copy #2)		
DPW	Emergency Response Lead Alternate for Wastewater (Mobile Copy #2)		
County Emergency Management	Director		
City	City Manager		
Police	Chief		
Fire Department	Chief		
Engineer	Manager		

E. General Mission of ERP

The mission of the City of Big Rapids Water System ERP is to protect the health of our customers by being prepared to effectively respond to threats or events that may result in contamination or disruption of customer's safe drinking water supply.

The ERP should be utilized to respond to a threat or actual event impacting the operations of the Public Water Supply System (PWSS) and Wastewater Treatment (WWT). The ERP contains contacts for key local, state, and federal agencies to assist in an emergency response. The plan was constructed to increase the preparedness of the PWSS and WWT staff and lessen the effects on a water system emergency within the City's PWSS and WWT.

The goals are as follows:

- Quickly identify an emergency and assess timely and effective response action.
- Protect public health by quickly assessing if the water in or entering the City of Big Rapids PWSS is safe to drink or use and being able to quickly notify customers of the situation and recommend appropriate protective action.
- Protect the City of Big Rapids and surround communities of disturbance of the WWT.
- Quickly notify local, state, and federal agencies to assist in the response.
- Quickly assess, respond, and repair damages to return to normal operations.

F. Plan Activation

ERPs contain vital information and procedures for Water Operation and Maintenance staff to utilize during an emergency pertaining to the water system. This ERP is divided into four main parts:

1. General Information
2. Action Plans
3. Emergency Contingency Information
4. Supporting Documents & Guidelines

These parts are summarized in the page "How to Use This Plan" which is located at the front of this document.

During an emergency, Big Rapids PWSS and WWT staff are responsible for the activation of this ERP. Activation should be based on the credibility and analysis of available information regarding a threat. The ERP may also be activated based on an actual event. Based on United States Environmental Protection Agency (U.S. EPA) guidance and America's Water Infrastructure Act (AWIA) of 2018 requirements, potential system threats or emergency events identified in this Plan include:

Emergency	Action Plan
Water Contamination	2.A
Structural Damage / Intrusion	2.B
Power Failure	2.C

THREAT ASSESSMENT PROCESS OVERVIEW

Typically, an emergency occurs as the result of an event. Some events are expected to occur randomly (e.g., water line break); other events are weather related (e.g., tornado) or manmade (e.g., bombing). Additionally, an event can be the result of what was initially only a threat (e.g., tornado warning or a bomb threat). However, some threats, upon consideration, are deemed impossible to carry out into an actual event. The threat assessment process assists PWSS or WWT staff in evaluating appropriate responses to threats. If before, during, or after the threat assessment process, an event is confirmed to have occurred, the threat assessment process is terminated, and appropriate response actions are initiated. The response actions may, or may not, include activating the ERP depending on the type and severity of impact to the PWSS or WWT.

The threat assessment process has three primary stages. When a threat or indicated event occurs, the first stage is to assess the possibility of a threat becoming an actual event, or whether an indicated event could be reasonably possible. Based on review of available information or changing situations, the threat or event may be re-classified into subsequent stages. The overall threat assessment process is summarized below. The threat assessment process is detailed starting in Section 2.A.

STAGE 1. Assess if the Threat is Possible:

- The Stage 1 threat assessment is a rapid assessment.
- The Stage 1 threat assessment should be conducted by the on-duty senior-most Water Operation staff or other authorized personnel. During the assessment, staff may request the assistance of the DPW Director and/or law enforcement officers (911) as necessary and appropriate.
- A threat is assessed as 'possible' if the circumstances of the threat warning indicate that there is an opportunity for an event. Stage 1 is the point at which a decision is rapidly made regarding whether or not to further assess if the threat is credible.
- A threat to the PWSS or WWT could occur from:
    - Direct notification to water system personnel (e.g., phone, email, or written threat)
    - Information received by the public at large of unusual activity taking place at a PWSS or WWT locations
    - Security incident
    - Unusual laboratory analysis results
    - Unusual customer complaints

    - Public Health Advisory issued by another agency (e.g., Mecosta County Health Department)
- If the threatened event is not considered possible, the threat information is documented and a return to normal operations occurs.
- If the threatened event is considered possible, Stage 2 assessment is conducted to determine if the threat is credible.

STAGE 2. Determine if the Threat is Credible:

- The Stage 2 threat assessment is a rapid assessment.
- The Stage 2 threat assessment should be conducted by the on-duty senior-most Water Operation staff or other authorized personnel. During the assessment, staff may request the assistance of the DPW Director and/or law enforcement officers (911) as necessary and appropriate.
- This assessment may include mobile resources for on-scene observations and/or validation (e.g., deployed PWSS or WWT staff and/or Law Enforcement Officers).
- If the threat is not considered credible, the threat information is documented and a return to normal operations occurs.
- If the threat is considered credible, a Stage 3 assessment is conducted.

STAGE 3. Threat or Event Confirmation:

- The Stage 3 threat assessment is a rapid assessment.
- The Stage 3 threat assessment should be conducted by the on-duty senior-most Water Operation staff or other authorized personnel. During the assessment, staff may request the assistance of the DPW Director and/or law enforcement officers (911) as necessary and appropriate.
- This assessment may include reviewing, validating, and testing of system information and/or conditions.
- The DPW Director or other authorized personnel should validate that the threat or event is confirmed.
- If the threat or event is not confirmed, the threat or event information is documented and a return to normal operations occurs.
- If the threat or event is confirmed, the DPW Director or other authorized personnel should assess the impact on the PWSS or WWT and related public safety and initiates appropriate actions. This may or may not include activating the ERP. The ERP is generally not activated for routine water system events (e.g., line break).

If the ERP is activated, additional entities may be notified and/or resources requested based on the needs of the situation. If activated, the ERP remains activated until the event is terminated. Upon event termination, recovery is initiated to return the PWSS or WWT to normal operations.

G. Incident Command System (ICS) Overview

Emergencies and disasters can occur at anytime and anywhere, from a wide variety of incidents (tornados, floods, fire, hazardous material spills or a terrorist act). How an incident is managed can impact the safety and wellbeing of staff, citizens, and the community. Most incidents are handled locally but, during large-scale events, the coordination of resources becomes critical. The Incident Command System (ICS) is used across America to provide a common operating structure for emergency response agencies. The ICS structure allows for management of increasing response personnel.

Incident Command System (ICS): A standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for various kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

Incident Commander (IC): The individual responsible for incident activities, including the development of strategies and tactics and the ordering and the release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of incident operations at the incident site.

ICS was originally developed in the 1970's following a series of catastrophic fires in California. In response to attacks on September 11, 2001, the President issued the following Homeland Security Presidential Directives (HSPDs).

- **HSPD – 5:** Identified steps for improved coordination in response to incidents. It requires federal, state, local, and tribal governments to establish and adopt a National Incident Management System (NIMS).
- **HSPD – 8:** Strengthen the preparedness of the United States to prevent and respond to threatened or actual domestic terrorist attacks, major disasters, and other emergencies.

The NIMS provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, to reduce the loss of life and property, and harm to the environment. NIMS also provides for standardization of ICS programs in the United States, including the State of Michigan and Mecosta County. The Federal Emergency Management Agency (FEMA) provides and coordinates a wide variety of NIMS and ICS training courses. The Homeland Security Presidential Directives require NIMS compliance for departments and agencies to be eligible to receive Homeland Security Grant Funds. PWSS and WWT employees should take Independent Study NIMS-ICS courses based on their organizational roles and responsibilities. The "Introduction to Incident Command System ICS-100 for Public Works Employees" (IS-100PWb) is an example of a targeted training course.

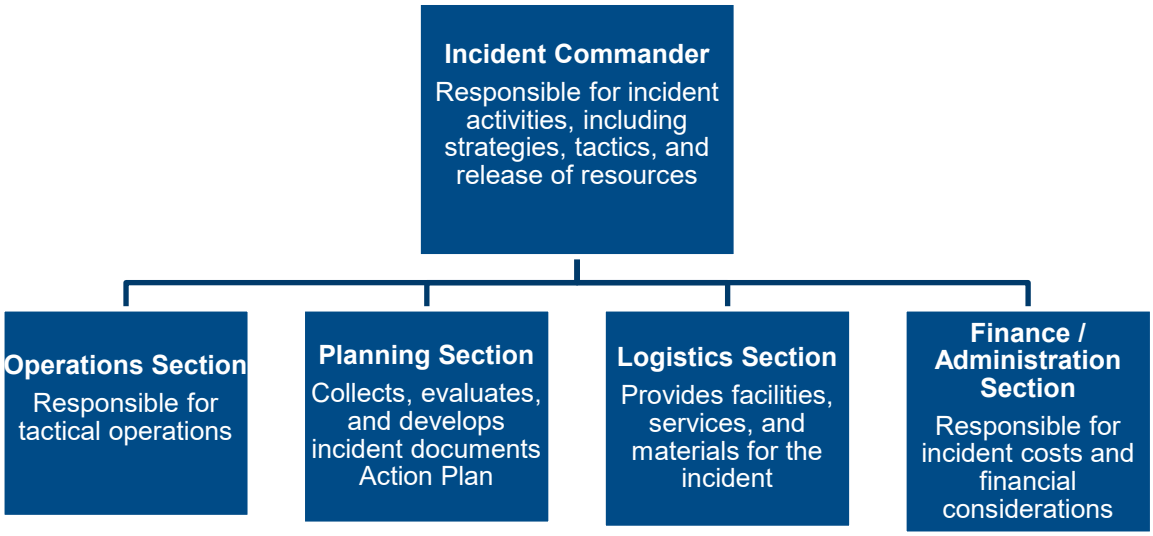
The principles of the ICS enable response agencies from all disciplines to utilize common terminology, span of control, organizational flexibility, personnel accountability, comprehensive resource management, unified command, and Incident Action Plans.

The ICS addresses critical command and control issues such as:

- Accountability of staff and resources
- Chain of Command and Supervision (Who is in charge?)
- Communications (common systems and language across different agencies)
- Systematic planning process to reach objectives (common operating picture)
- Standardized, expandable, and integrated organizational structures and roles

The ICS provides flexibility so it can be used to manage various types of incidents including planned events, natural hazard events, technological events, and human-caused events. The ICS organizational structure is based on five major management elements as illustrated in Figure 1.6.A:

Figure 1.6.A – ICS Structure



INCIDENT COMMAND TRANSFER
During Stage 1 and Stage 2 of the threat assessment process, on-duty or on-call PWSS and WWT staff should have initial responsibility for managing the threat. If the threat assessment advances to Stage 3, other responding agencies may be included in the ICS or take the lead in overall response activities. Regardless, PWSS and WWT staff should continue to maintain water system resources, staff, and assets.

H. County Emergency Operations Center

Emergency events vary in nature, scope, and dynamics. Most water system emergency events are addressed by PWSS and WWT staff and resources following established normal operating procedures. Some large-scale events may require the assistance and coordination of multiple agencies. During these large-scale events a variety of Emergency Operations Centers (EOCs) may be activated. The following is a description of these facilities.

An EOC serves as a single, central location where key officials gather to provide support, guidance, and coordination during a large-scale incident.

The Mecosta County Emergency Operations Center (County EOC) has been identified as a Primary County Emergency Operations Center by the State of Michigan. The County EOC is linked to the Michigan State Emergency Operations Center (SEOC) by a variety of communication and information sharing systems. The County EOC has the responsibility to assess damage, impacts, capabilities, and needs related to a major disaster, emergency, or large-scale event within Mecosta County. The County may declare a local state of emergency or disaster and request state and federal (through the state) resources to support emergency and relief activities within the County as outlined in Michigan Public Act 390 of 1976 and the Federal Stafford Disaster Relief Act.

The Michigan SEOC has been identified as the Primary Statewide EOC. The SEOC is the coordination center that connects Michigan's Emergency Management Programs with state and federal resources. The SEOC evaluates, coordinates, and assists during large-scale events, emergencies, and disasters. Participants include the Governor, Directors of State Departments and Functional Areas support, as well as statewide organizations.

Based on the severity of the event and other non-water related activities, a water event may only impact internal water system operations. In incidents where the situation is County-wide or severe, the Mecosta County EOC may be activated. If the EOC is activated, the City and/or public service agencies may have a representative in the EOC or a liaison to the Public Works Section of the EOC.

The PWSS and WWT is a critical emergency / crisis response partner in the County Emergency Management System. At the time of a community crisis, emergency, or disaster, the PWSS or WWT may be called upon to provide a variety of actions. Their primary resources include personnel, equipment, and specialized knowledge and expertise. The standard PWSS and WWT mission is the primary focus, but secondary activities may include debris removal, scene control, traffic control, heavy equipment operations, engineering resources, and a variety of other activities.

I. Safety

The need for safety and to follow established procedures is never greater than at the time of an emergency or crisis. The overwhelming nature of crisis decision-making during an emergency should not cause a diversion from standard operational safety procedures. Safety measures and procedures are designed to protect employees, citizens, and assets. Employees are a non-renewable resource and provide vital functions and guidance during an emergency. They are also responsible for maintaining safety in the workplace.

During an event, the Incident Commander assumes the role of Safety Officer unless delegated to another qualified person. The Safety Officer’s purpose is to protect the safety and well-being of responders and response operations.

II. ACTION PLANS

A. Water Contamination

- Consider access control in the event a possible crime scene exists.
- Notify the DPW Director and Water Superintendent, as appropriate.

Date: _____ **Time:** _____

Who reported the threat/event?
Name: _____
Org: _____
Phone: _____
Email: _____

How was information on the threat/event received?
□ Phone: _____
□ Email: _____
□ Other: _____

Log Completed by:
Name: _____
Title: _____

If a threat is confirmed or an event has occurred, proceed to ERP Part 4.A; otherwise proceed to Stage 1.

NOTES, OBSERVATIONS, AND ACTIONS:

_____

_____

_____

_____

_____

_____

STAGE 1: ASSESS IF THE THREAT IS POSSIBLE
A water contamination threat is characterized as 'possible' if the circumstances of the threat warning indicate that there is/was an opportunity for contamination. Stage 1 is the point at which a decision is rapidly made regarding whether or not to further assess if the threat is possible. If the threat is determined to not be possible, there is no need to continue the threat evaluation or consider response actions, but the threat needs to be documented.

A potential threat of water system contamination could be indicated by:

- A positive total coliform (bacteriological) test
- A notification to PWSS and WWT personnel that some constituent has been added to the water system (e.g., phone or written threat)
- Information received by public at large of unusual activity taking place at a PWSS or WWT location
- Security incident
- Unusual water customer complaints
- Public Health Advisory issued by Mecosta County Health Department

IF THREAT IS INITIATED BY NOTIFICATION OF A POSITIVE 'BACTI' TEST:

- ☐ If the Water Superintendent receives a positive total coliform analysis, the **City's Bacteriological Sampling Plan** should be followed to resample the PWSS at predetermined locations to confirm the initial positive test result. The City should also contact the Michigan Department of Environment, Great Lakes and Energy (EGLE) District Engineer to discuss appropriate steps. Reference Part 4.A – Water System Personnel Response Guidelines.
- ☐ Issue media release pursuant to **City of Big Rapids Bacteriological Sampling Plan**. Reference Part 4.E – Public Information Guidelines

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

FOR THREATS (BACTERIOLOGICAL AND/OR OTHERWISE):

- ☐ Without conducting an on-site review, check for other evidence of PWSS contamination, (e.g., SCADA and/or other real-time monitoring data).

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

- ☐ Water Superintendent and applicable staff review the Stage 1 assessment. Reference Part 3.C – Emergency Response Team
- ☐ Water Superintendent or other authorized personnel evaluates if the threat may be possible. If conditions dictate, this evaluation may be made before data is collected.
  _____ Threat may be possible; Water Superintendent authorizes proceeding to Stage 2.
  _____ Threat is not possible; return to normal operations.

If water contamination is confirmed, proceed to Stage 3, otherwise proceed to Stage 2.

STAGE 2: DETERMINE IF THE THREAT IS CREDIBLE

A water contamination threat is characterized as 'credible' if at any time information collected during the threat evaluation process corroborates information from the threat warning. Stage 2 is the point at which additional information is collected and assessed to rapidly decide regarding whether or not to further assess if the threat is "confirmed". If the threat is determined to not be credible, there is no need to continue the threat evaluation or consider response actions but the threat needs to be documented.

- ☐ Water Superintendent confirms that the necessary staff are notified. Reference Part 3.C – Emergency Response Team

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

- ☐ If needed, water staff and/or law enforcement are sent to the scene to verify/validate the threat information. This may consist of general site observation as well as focused inspections and identification of physical evidence of threat (e.g., suspect empties containers in vicinity of water system asset). Responder safety concerns should be addressed based on the situation. If assistance is needed, Water Superintendent contacts authorized water personnel and/or the jurisdictions local law enforcement agency for assistance.

_____ Central Dispatch: 911

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

□ Personal Safety - Notify police and fire personnel to follow applicable City of Big Rapids safety policies and procedures.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

□ Notify Mecosta County Environmental Health Director. Reference Part 3.D – External Response Partners.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

□ Notify Water District Engineer, EGLE. Reference Part 3.F – State Contacts.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

□ Water Superintendent or authorized water personnel evaluate and record changes in normal system operating parameters (e.g., chlorine residuals, pressure, turbidity, odor, color, pH, conductivity, etc.) Reference Part 4.F - Water Monitoring

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

□ Water Superintendent or other authorized personnel evaluates if the threat is credible.
_____ Threat is credible; Water Superintendent authorizes proceeding to Stage 3.
_____ Threat is not credible; return to normal operations.

STAGE 3: THREAT CONFIRMATION

A water contamination threat is 'confirmed' if at any time the information collected over the course of the threat evaluation provides strong evidence that the threatened event has occurred, or conditions are conducive for the threatened event to occur. Stage 3 is the last stage to rapidly assess information and

decide regarding whether or not to further assess if the threat requires ERP activation. If the threat is determined to not be credible, there is no need to continue the threat evaluation or consider response actions but the threat needs to be documented.

IF THREAT IS INITIATED BY NOTIFICATION OF A POSITIVE 'BACTI' TEST:

☐ Water Superintendent to review bacteriological testing results from the confirmation sampling event and notify authorized personnel.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

☐ Notify Mecosta County Environmental Health Director of bacteriological resampling results. Reference Part 3.D – External Response Partners.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

☐ Notify Water District Engineer, EGLE of bacteriological resampling results. Reference Part 3.F – State Contacts.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

☐ Issue Public Notification pursuant to **City of Big Rapids Bacteriological Sampling Plan or Plan of Action as identified by EGLE.**
Reference Part 3.H - Critical Customers
Reference Part 3.I - Media Contacts
Reference Part 4.E - Public Information Guidelines

FOR THREATS (BACTI AND/OR OTHERWISE):

☐ If not already notified, contact Water Superintendent.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

☐ Water Superintendent notifies the authorized personnel as identified on the Emergency Response Team. Reference Part 3.C – Emergency Response Team.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

☐ Notify personnel to follow applicable City of Big Rapids police and fire service safety policies and procedures.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

☐ Consider additional analytical support and assistance from the State of Michigan Laboratory or another laboratory to determine presence of 'unknown' chemical and/or biological contaminants. If needed, notify and request assistance through the Mecosta County Office of Emergency Management. Reference Part 3.D – External Response Partners.

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

☐ Consider conducting additional sampling and analysis to confirm or determine the extent of contamination in the water system. Reference Part 4.E - Water Monitoring

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

☐ Water Superintendent reviews and assesses the possible event impact, cause of the contamination, mitigation actions, water system capabilities, public health, and safety issues and concerns.

Water Superintendent or other authorized personnel evaluates if the threatened event has occurred or if conditions are conducive for the threatened event to occur.
_____Threat is confirmed; Water Superintendent considers authorizing activation of this ERP.
Reference Part 4.A - Water System Personnel Response Guidelines
_____Threat is not confirmed; document threat and return to normal operations.

☐ If the threat is confirmed by the Water Superintendent, information notifications, exchanges, updates, and requests for support and assistance from local, county, and state agencies are conducted, as appropriate.

Contacted agencies are informed that:
"The City of Big Rapids Water Department has conducted a Stage 3 Assessment of a water contamination threat to the water system's (asset from "Initial Threat Documentation log") located at (jurisdictional boundary from "Initial Threat Documentation log"). The Stage 3 Assessment has confirmed the threat and initiating response activities that include this notification. Additional information should be provided when available."

_____ City of Big Rapids Police Department: 231.527.0005
_____ Mecosta County Sheriff Department: 231.592.0150
_____ Mecosta County Emergency Management: 231.592.9484
_____ Mecosta County Environmental Health Director: 231.796.4300
_____ Central Dispatch: 911
_____Others as necessary

Reference Part 3.C through Part 3.J
Reference Part 4.E - Public Information Guidelines

Assigned to: _____ Time: _____

Notes/Actions:_____

_____

_____

B. Structural Damage / Instruction

- Threat warning received

☐ Notify:
Water ER Lead: Heather Bowman
Work: 231.592.4018
Cell: 231-250-9232

Water Alternate ER Lead: Steve Cook
Cell: 231.287.4075
Home: 231-796-8106

☐ Notify:
Wastewater ER Lead: Heather Bowman
Work: 231.592.4018
Cell: 231-250-9232

Wastewater Alternate ER Lead: Dave Cushway
Office: 231.796.8483
Cell: 231.349.6182

☐ Record and document known threat information.

☐ Do not disturb site if the threat warning could be a possible crime scene.

If structural damage or an intrusion is confirmed, proceed to Stage 3.

STAGE 1 – IS THE THREAT POSSIBLE?

☐ Initiate precautionary notification measures, as necessary:
_____ Central Dispatch: 911
_____ Local Law Enforcement: 231.527.0005
_____ Staff and Personnel (Refer to Part 3.C of this plan)
DPW: 231.592.4015
_____ City Manager, Mark Gifford: 231.592.4058

☐ In consultation with appropriate agencies, evaluate if the threat is possible:
_____Yes, the threat is possible, continue the evaluation and move to Stage 2.
_____No, there is no threat, take appropriate action and return to normal operations if no further action is required.

STAGE 2 – IS THE THREAT CREDIBLE?

☐ Notify the following agencies, as necessary:
- Mecosta County Emergency Management: 231.592.9484
- Mecosta County Health Department: 231.796.4300
- EGLE 24 Hr. Emergency Number: 800.292.4706

Assigned to: _____ Time: _____

☐ Physically secure water system facilities (Refer to Part 3.B of this Plan).

Assigned to: _____ Time: _____

□ Inspect physical evidence of **threat** (e.g., **security breach**).

Assigned to: _____ Time: _____

□ Maintain personal safety.

□ Activate appropriate **notification** portions of the ERP (Refer to Part 3 of this Plan).

Assigned to: _____ Time: _____

□ Consider evacuation areas (public and private population areas).

Assigned to: _____ Time: _____

□ Evaluate, in consultation with appropriate agencies, whether the threat is credible:
_____Yes, the threat is credible, continue the evaluation and move to Stage 3.
_____No, there is no threat, take appropriate actions and return to normal operations if no further action is required.

STAGE 3 – HAS THE INCIDENT BEEN CONFIRMED?

□ Coordinate response activities with the following agencies if not already contacted.
- Mecosta County Emergency Management: 231.592.9484
- Mecosta County Health Department: 231.796.4300
- EGLE 24 Hr. Emergency Number: 800.292.4706
- Central Dispatch: 911
- City Manager, Mark Gifford: 231.592.4058
- Others as necessary (Refer to Part 3.C through Part 3.J of this Plan).

Assigned to: _____ Time: _____

□ Deploy water personnel to assess system damage (Refer to Part 3.C of this Plan).

Assigned to: _____ Time: _____

□ Evaluate potential water system impact.

Assigned to: _____ Time: _____

□ Consider public notification options while evaluating situation (Refer to Part 3.I and Part 4.E of Plan).

Assigned to: _____ Time: _____

□ Maintain personal safety.

□ Evaluate, in consultation with appropriate agencies, whether the **threat** is confirmed.
_____Yes, **threat** is **confirmed**, initiate ERP activation (Refer to Part 4.A of this Plan).
_____No, there is no **threat**, take appropriate action and return to normal operations.

C. Power Failure

- Electrical power outage may, or has occurred

 Notify:
Water ER Lead: Heather Bowman
Work: 231.592.4018
Cell: 231-250-9232

Water Alternate ER Lead: Steve Cook
Cell: 231.287.4075
Home: 231-796-8106

 Notify:
Wastewater ER Lead: Heather Bowman
Work: 231.592.4018
Cell: 231-250-9232

Wastewater Alternate ER Lead: Dave Cushway
Office: 231.796.8483
Cell: 231.349.6182

 Record and document known advisory information received from the power company.

 Evaluate the impact on the water system operation.

If power outage occurs, proceed to Stage 2.

STAGE 1 – IS THE THREAT POSSIBLE?

 Initiate precautionary **notification** measures, as necessary:
_____ Central Dispatch: 911
_____ Staff and personnel (Refer to Part 3.C of this plan)
DPW: 231.592.4015
_____ City Manager
Mark Gifford: 231.592.4058
_____ Fire Department (notify of possible limited water supply).
Fire Department: 231.527.0005
_____ Critical Customers (notify of possible limited water supply).
Refer to Part 3.H of this Plan.

 Coordinate with law enforcement to heighten security at critical facilities. (Refer to Part 4.D of this Plan).

Assigned to: _____ Time: _____

 Maintain contact with power company to remain updated on situation (Refer to Part 3.E of this Plan).

Assigned to: _____ Time: _____

 Inventory and examine portable **generators** and necessary equipment.

Assigned to: _____ Time: _____

 Confirm ability of staff to operate necessary equipment.

 In consultation with appropriate agencies, evaluate if the power outage may affect normal operations.
_____Yes, power outage is **possible** and may affect normal operations; take appropriate safety and intervention steps to lessen the impact and Continue to Stage 2.
_____No, a power outage should not affect normal operations, guide staff.

STAGE 2 – THE POWER OUTAGE HAS OCCURRED

 Consider deploying staff and equipment to critical locations. (Refer to Part 3.C and Part 3.H of this Plan).

Assigned to: _____ Time: _____

□ Monitor water systems and levels for impact.

Assigned to: _____ Time: _____

□ Coordinate response activities with the following agencies if not already contacted.
- Mecosta County Emergency Management: 231.592.9484
- Mecosta County Health Department: 231.796.4300
- EGLE 24 Hr. Emergency Number: 800.292.4706
- Central Dispatch: 911
- Fire Department 231.527.0005
- City Manager, Mark Gifford: 231.527.0005
- **Critical Customers** (Refer to Part 3.H of this Plan).
- Others as necessary (Refer to Part 3.C through Part 3.J of this Plan).

Assigned to: _____ Time: _____

□ Notify the community of the power outage and issue use restrictions as needed (Refer to Part 3.E and Part 4.E of this Plan).

Assigned to: _____ Time: _____

□ Continue to monitor information from the utility company.

Assigned to: _____ Time: _____

□ Determine if safety and impact issues need additional resources.
_____Yes, additional resources are necessary, take appropriate steps to lessen the impact. Continue to Stage 3.
_____No, additional resources are not necessary, educate staff on the power outage operations plan.

STAGE 3 - THE POWER OUTAGE HAS IMPACTED THE WATER SYSTEM OR WATER SAFETY

□ Coordinate response activities with the following agencies if not already contacted.
- Mecosta County Emergency Management: 231.592.9484
- Mecosta County Health Department: 231.796.4300
- EGLE 24 Hr. Emergency Number: 800.292.4706
- Central Dispatch: 911
- Fire Department 231.527.0005
- City Manager, Mark Gifford: 231.527.4058
- **Critical Customers** (Refer to Part 3.H of this Plan).
- Others as necessary (Refer to Part 3.C through Part 3.J of this Plan).

Assigned to: _____ Time: _____

□ Notify the public of water use restrictions, and health advisories as necessary (Refer to Part 4.E of this Plan).

□ Initiate ERP activation (Refer to Part 4.A of this Plan).

STAGE 2 – IS THE THREAT CREDIBLE?

□ Coordinate response activities with the following agencies if not already contacted.
- Mecosta County Emergency Management: 231.592.9484
- Mecosta County Health Department: 231.796.4300
- EGLE 24 Hr. Emergency Number: 800.292.4706

Assigned to: _____ Time: _____

□ Inspect physical evidence of **threat** (e.g., chlorine storage container tampering, **security breach**).

Assigned to: _____ Time: _____

☐ Physically secure water system facilities and specifically the chlorine treatment areas of the facility.

Assigned to: _____ Time: _____

☐ Evaluate potential extent of public evacuation needed or shelter in place order.

Assigned to: _____ Time: _____

☐ Maintain personal safety.

☐ Evaluate, in consultation with appropriate agencies, whether the threat is credible.
_____Yes, **release threat** is **credible**, continue the evaluation and move to Stage 3.
_____No, there is no **release**, take appropriate action and return to normal operations.

STAGE 3 – HAS THE RELEASE BEEN CONFIRMED?

☐ Coordinate response activities with the following agencies if not already contacted.

- Mecosta County Emergency Management: 231.592.9484
- Mecosta County Health Department: 231.796.4300
- EGLE 24 Hr. Emergency Number: 800.292.4706
- Central Dispatch: 911
- City Manager, Mark Gifford: 231.527.4058
- Others as necessary (Refer to Part 3.C through Part 3.J of this Plan).

Assigned to: _____ Time: _____

☐ Maintain personal safety (use respirator, PPE, etc.) during investigation.

☐ Consider public notification options while evaluating data (Refer to Part 3.I and Part 4.E of Plan).

Assigned to: _____ Time: _____

☐ Evaluate, in consultation with appropriate agencies, whether the **release threat** is **confirmed**.
_____Yes, **release** has occurred, initiate ERP activation (Refer to Part 4.A of the Plan.)
_____No, there is no **release**, take appropriate action and return to normal operations.

If release is confirmed, immediately:

☐ Stop leak (e.g., shut off valve, rotate containers) if it can be done safely.

Assigned to: _____ Time: _____

☐ Do not apply water to chlorine.

☐ Refer to Part 4.A.

III. WATER AND WASTEWATER SYSTEM EMERGENCY CONTINGENCY INFORMATION

A. Area and Map Description

City/Town: City of Big Rapids

State: Michigan

County: Mecosta

Township/Section (at center of town): Big Rapids Twp (T15N, R10W), Sec. 11

Latitude: 43° 41’ 53.08” N

Longitude: 85° 29’ 1.16” W

Primary Road Access: The City of Big Rapids is located approximately 57 miles north of Grand Rapids, Michigan. Primary access to Big Rapids is along US Highway US 131, which runs north-south along the western edge of the City. The City is located approximately one mile east of US Highway US 131.

Area Description: Big Rapids is situated along the banks of the Muskegon River. The river meanders through the City flowing north to south across the center of town. The topography of Big Rapids and the surrounding area is hilly with abundant lakes, ponds and wetlands. The land through town overall slopes towards the river, with a maximum relief of approximately 100 ft.

The City covers nearly 4.5 square miles and has a population of approximately 10,368. The surrounding land use is primarily rural residential, agricultural, and vacant woodlands. The closest two cities are White Cloud (population 1.387), located approximately 11.63 miles southwest of Big Rapids, and Reed City (population 2,391), which is located approximately 14.83 miles north.

A site location map is provided in Attachment A.

B. Water System Information

Public Water Supply System (PWSS) ID Number: MI 0000710

Administrative Contact Person: Heather Bowman

Alternate Administrative Contact Person: Steve Cook

General Information:

Communications

1. Methods of communication available during power outages:
   DPW Radio, Cell Phones
2. Means of notifying public affected by emergency:
   Radio, Television, Loudspeakers on Fire Trucks and Police Cars, Social Media, Mail and Hand Delivery

Source

Master Meter

Location(s) and Size(s)

Water Plant - 226 North Michigan Ave, Big Rapids, Michigan

PRODUCTION WELLS

Well Number	Diameter (inches)	Depth (feet)	Capacity (gpm)	Location
PW-1	12	210	500	City Airport
PW-2	16	155	1,200	City Airport
PW-3	16	168	1,200	City Airport
PW-4	16	213	800	City Airport

TREATMENT CHEMICAL STORAGE FACILITIES

Location	Chemical(s)	Comments
Water Treatment Plant	Calcium hypochlorite tablets, fluoride, orthophosphate.	City Staff adds the calcium hypochlorite to the system each day. The SCADA system adds the fluoride and orthophosphate automatically based on the measured flow.

1. If treatment employed at wells:
    a. Describe method to provide auxiliary power to chemical feed pumps:
        i. Not Applicable (N/A)
2. If centralized treatment (iron removal, zeolite softening, etc.):
    a. Describe method to provide auxiliary power to high service pumps: The plant has an electrical generator(500 KW diesel) to provide electricity if there is a power interruption.
    b. Describe method to provide auxiliary power to chemical feed pumps: The plant's backup generator provides electricity to the feeder pumps and SCADA system.
    c. Describe procedure to bypass treatment facility: N/A
3. If no treatment:
    a. Describe method to provide emergency chlorination: N/A

**STORAGE AND DISTRIBUTION SYSTEM –
TANKS, PRIMARY MAINS, AND PUMPING STATIONS**

Location	Size	Comments
Water Main from well field to Water Plant	20-inch diameter	Water main from well field to treatment plant.
Water Treatment Reservoir	500,000	Ground
Water Treatment Reservoir	1,000,000	Ground
Bjornson Water Tower	250,000	Tower
State Street Water Tower	300,000	Tower
Perry Water Tower	200,000	Tower
Ferris Water Tower	500,000	Tower

1. Describe procedure to bypass storage facility:
    a. The water tanks can be isolated from the distribution system via valves located at their bases.
2. Pumping Station:
    a. Identify location and capacity of pumps: A pump station is located at the base of State Street Water Tower.
    b. Describe method to provide auxiliary power to pumps: 150 kW natural gas generator provides the alternative electricity.
3. Location and size of emergency interconnections with other supplies (include persons to contact and telephone number): N/A

List of Attachments:

_____

_____

OTHER KEY FACILITIES

Location	Function	Comments
Water Treatment Plant, 226 North Michigan Ave	Houses the SCADA system and treatment chemicals.	

INDUSTRY CHEMICAL HANDLING FACILITIES

Facility Name	Location	Distance	Chemical and Exposure Pathway
None Identified			

CHEMICAL STORAGE TANKS

Facility Name	Location	Distance	Chemical and Exposure Pathway
Admiral	805 North State Street		Gas Station with active Underground Storage Tanks (USTs)
BP	620 Maple Street		Gas Station with active USTs
Meijer	15375 Waldron Way		Gas Station with active USTs
Sunoco	525 South Third Street		Gas Station with active USTs

SAFETY MATERIALS, PLANS, & AGREEMENTS
List safety materials and important safety information to help protect utility personnel during an incident. You may also reference your utility Health and Safety Plan, if available.

SAFETY MATERIALS

Type	Location
Testing Kits for Samples	Water Treatment Building
Front Loader, Backhoes, Dump Trucks, Other Equipment	DPW Building
Emergency PPE	Water treatment houses rubber boots, gloves, safety glasses, Tyvek suits and other PPE; Big Rapids Fire Department also houses PPE.

SAFETY INFORMATION

Topic	Description
Downed Power Line	Utility personnel must stay 25 feet from a downed power line and contact the Big Rapids Fire Department. Once the Fire Department indicates it is safe, utility personnel should clear the streets of debris.
Tornado Warning/Watch	Remain cautious and return to DPW Building if tornado warning or watch is in effect.

1. General Layout. Attach the general layout (piping schematic) of the waterworks system or indicate the location of the General Plan as well as valve and hydrant records and other information that would be helpful in fully describing the water system.

   Maps are located at Water Plant. Map of the water system in Attachment A.

2. Personnel Safety Plans. List relevant plans and indicate their locations. Examples may include evacuation plans, lock down procedures, location of personal protective equipment (PPE) and procedures for use, and location of Material Safety Data Sheets (MSDS).

   Personnel Safety Plans are located at the Water Plant.

3. Water Sampling and Monitoring Plans. Describe monitoring to be conducted to identify potential public health threats. List plans and their locations. Examples include the Bacteriological Sample Siting Plan, sampling procedures for different types of contaminants, locations of sampling containers and procedures to obtain more, laboratories to analyze other contaminants, identify laboratories to contact (with phone numbers) to arrange for rapid sampling for volatile organic chemicals or other unknown compounds.

   EGLE sends a report of what samples are needed each year to DPW. Samples are drawn and sent to the State of Michigan Laboratory in Lansing. Part 3.6 State Contacts includes State of Michigan Laboratory information. Results are kept at the Water Plant.

4. Mutual aid agreements. Describe type and terms of agreements with other water supplies that may be implemented during an emergency. Attach or include location of agreements. Examples include sharing personnel and equipment, and loaning supplies.

   The City has a verbal agreement with Ferris State University and they can borrow parts if needed. They also have a user charge agreement with Big Rapids Township.

5. Emergency Supplies and Equipment Plans
   a. Emergency equipment available. Identify and indicate location of equipment and vehicles that may be needed in an emergency. If the equipment is leased, rented, shared or otherwise not immediately available, describe the procedure for securing the equipment including contact information.

      If a larger backhoe is needed, the City can contact Morningstar Enterprises, Inc. to receive assistance from their staff. Otherwise, equipment is stored at the City of Big Rapids DPW.

   b. Replacement equipment. Identify and indicate location of replacement equipment or parts that may be needed in an emergency. Describe how to secure replacements, if not on site, including contact information.

      If parts are needed, refer to Part 3.5 Service Repair Contact in the ERP.

   c. First aid supplies and equipment. Include locations and contact information for securing additional supplies and equipment.

      Small First Aid boxes are on site in trucks. If more significant emergency, call 911.

RESPONSE RESOURCES

Provide an inventory of available resources (e.g., equipment, supplies) either maintained onsite or readily available off site (e.g., neighboring water system) in the table below, or insert an existing inventory sheet.

RESOURCES

Kind	Size/Fuel	Quantity	Location
Well Field	250 kW/Natural Gas	1	West Ave
Water Treatment Plant	500 kW/Diesel	2	Osceola Ave
Ferris Tank	6.8 kW/Natural Gas	1	S. State
State Street Booster	150 kW/ Natural Gas	1	S. State
Hill Mitchell Creek Pumps	60 W/Natural Gas	1	Rolling Hills

C. Wastewater Treatment Plant (WWTP) Information

National Pollutant Discharge Elimination System (NPDES) ID Number: MI 0022381

Administrative Contact Person: Heather Bowman

Alternate Administrative Contact Person: Dave Cushway

General Information:

Communications

Methods of communication available during power outages:
DPW Radio, Cell Phones

Means of notifying public affected by emergency:
Radio, Television, Loudspeakers on Fire Trucks and Police Cars, Social Media, Mail and Hand Delivery

Facility Location
Wastewater Treatment Plant – 531 River Street, Big Rapids, Michigan

WWTP System Description
There is 185,060 feet (35.05 miles) of sanitary sewer (gravity pipe and force mains), 6 lift stations in the collection system, and 759 wastewater manholes connecting the gravity pipelines. The pipes flow to the WWTP that treats approximately 1.2 million gallons of waste per day and provides sanitary services for 21,000 people living in the City of Big Rapids, Green Township, and Big Rapids Township.

Sanitary Sewer and Pipes
Sanitary sewer mains transport sewage from the customer facilities to the WWTP. The City maintains several miles of gravity sewer pipes ranging in diameter from 8 to 30- inches. Five lift stations assist with the gravity system to transport the sewage. Refer to Attachment B to view the Sanitary Sewer Figure.

Sanitary Sewer Lift Stations

Location	Capacity (gpm)	Backup Energy
North State Street Lift Station	150	On site natural gas generator with automatic start
Waterloo Lift Station	150	Water Treatment Plant generator provides backup power to station with automatic start
Novak Lane Lift Station	110	On site natural gas generator with automatic start
Tioga Park Lift Station	100	On site natural generator with automatic start
County Garage Lift Station	30	Receptacle is present for portable generator with manual start.

Float switches operate the lift station pumps and are connected to an auto dialer to report alarm conditions via land lines to the SCADA system. The lift stations have hatches and are locked to prevent access. The lift stations are not located within a flood zone.

Wastewater Treatment Plant
The City's WWTP is located at 531 River Street, Big Rapids, Michigan. The plant is secured with perimeter fencing and locked gates, CCTV recording, and locked doors. The sewage influent pipe enters the plant into a three-stage process. The first stage of the sewage treatment is screened for grit and grease removal. Screw pumps transport the sewage to the second stage where it is aerated within tanks with ferric chloride. It then flows into clarifying tanks where cationic polymer is added to separate the solids from the liquids. The clarified water then enters the third stage where it is disinfected with ultraviolet light and discharged to the Muskegon River. When needed, chlorine tablets are added to the final

disinfection stage. The separated solid sludge is placed into aerobic digesters and is prepared for land application. The treatment additives are manually entered based on flow through volume. Refer to Attachment B to view the Wastewater Treatment Plant Flow Diagram.

WASTEWATER TREATMENT CHEMICAL STORAGE FACILITIES

Location	Chemical(s)	Comments
WWTP	Ferric Chloride, Chlorine, and Cationic Polymer.	City Staff will use chorine tablets to process when required.

The City collects water samples per their NPDES permit requirements for analysis by the City's certified Wastewater Laboratory. Samples are collected from the sludge/solid holding tanks and are submitted to independent laboratories prior to land application. The plant has an electrical generator to provide electricity if there is a power interruption.

The WWTP can operate if one of its process lines is inoperable.

Wastewater SCADA System
A SCADA control system is utilized to control and monitor the flow through the plant. The SCADA system will notify staff of alarm conditions via cell phones after hours. The system operates through the City's intra network and is password protected, has anti-malware software and is backed up on a third-party service. Access to the SCADA is limited to select City computers and tablets. It is serviced by Topline Electric and they perform updates of the Wonderware Software Program.

The WWTP SCADA system is supported by the WWTP fixed natural gas generator to provide auxiliary electricity in the event of a power failure. If the SCADA system were to lose power, or if the SCADA system were inoperable, the WWTP can be manually operated.

D. Key Local Services

Note the closest locations of key logistical and medical services that you or mutual aid and assistance providers may need during an incident. Include a map if available.

ESSENTIAL SERVICES

Facility	Location/Description
Hospital	Spectrum Health Big Rapids Hospital, 605 Oak Street, Big Rapids, MI
Gas station	Admiral (805 North State Street), BP (620 Maple Street), Meijer Gas (15375 Waldron Way)
Pharmacy	Walgreens (1010 S. State), Rite Aid (842 State Street), Walmart Pharmacy (21400 Perry Ave.)
ATM	Fifth Third Bank (101 North Michigan), PNC Bank (805 Campus Drive), Huntington National Bank (301 South State Street), and Independent Bank (404 Perry Avenue)
Grocery store	Red Fox Market (112 South Michigan Avenue), Meijer (15400 Waldron Way, Aldi (21481 Perry Road), and Walmart (21400 Perry Avenue
Other service	

E. Emergency Response Team

WATER AND WASTEWATER UTILITY AND PARTNER ROLES

Name/Title	Emergency Response Role	Responsibilities
Heather Bowman/Director	Emergency Response (ER) Lead for Water and Wastewater	Responsible for incident response activities, including developing strategies and tactics and ordering and releasing resources.

Steve Cook/Water Superintendent	Alternate Emergency Response Lead for Water	Perform duties as assigned by ER Lead; assumes duties listed above when ER Lead is not available.
Dave Cushway/Wastewater Superintendent	Alternate Emergency Response Lead for Wastewater	Perform duties as assigned by ER Lead; assumes duties listed above when ER Lead is not available.
Mark Gifford/City Manager	Public Information Lead	Perform duties as assigned by ER Lead; Responsible for leading the public information effort based on information supplied by either the ER or Alternate ER Lead.
Fred Guenther/Mayor	Public Information Alternate Lead/Municipal Official	Perform duties as assigned by ER Lead; Responsible for leading the public information effort based on information supplied by either the ER or Alternate ER Lead if the Public Information Lead is not available.
Jon Eppley/Mayor Pro Tem	Municipal Official	Perform duties as assigned by ER Lead
Danielle Haynes/Chief of Police	Security	Provide incident security as needed once notified by ER Lead. The police are responsible for securing the scene and maintain site security. They keep the area secure and work to preserve the scene for investigations and inquiries which could lead to criminal prosecutions.
Steve Schroeder/Fire Chief	Fire/Contamination Incident	Provide fire and/or contamination incident response as needed once notified by the ER Lead. The Fire Department are tasked with identifying, rescuing, and mitigating chemical spills. Their role is to be the “first on the scene” at the incident, protect life and property, and lessen environmental impact.

Personnel available during emergency conditions. Include position, job duties, telephone number, and whether available during strikes.

EMERGENCY RESPONSE (ER) LEAD CONTACT

Name	Title	Contact Information	Emergency Information
Heather Bowman	Director	Day: 231.592.4018 Cell: 231.250.9232	

ER ALTERNATE CONTACT FOR WATER

Name	Title	Contact Information	Emergency Information
Steve Cook	Water Superintendent	Cell: 231.287.4075 Office: 231.796.6231	

ER ALTERNATE CONTACT FOR WASTEWATER

Name	Title	Contact Information	Emergency Information
Dave Cushway	Wastewater Superintendent	Office: 231.796.8483 Cell: 231.349.6182	

**EMERGENCY TEAM MEMBERS –
WATER DEPARTMENT PERSONNEL**

Name	Title	Contact Information	Emergency Information
Steve Cook	Superintendent	Cell: 231.287.4075 Home: 231.796.8106	ER Alternate Lead for Water
Kevin Cushway	Operator	Cell: 231.580.9336	
Jim Bouman	Operator	Cell: 231.250.7610 Home: 231.796.9257	
Earl Battle	Operator	Cell: 231.598.2933	
AJ Herendeen	Operator	Cell: 574.377.2812	
Tyler Spurbeck	Distribution	Cell: 231.250.3820	
Bob Halstead	Distribution	Cell: 231.349.8834	

Back-up Operation Plan—List personnel available for back-up system operation when the operator-in-charge is unavailable. If the individual is certified, indicate level and class of certification:

**EMERGENCY TEAM MEMBERS –
BACK-UP WATER OPERATION PERSONNEL**

Name	Title	Contact Information	License
Kevin Cushway	Operator	Cell: 231.580.9336	Operator D-2
Jim Bouman	Operator	Cell: 231.250.7610	Operator D-3
Earl Battle	Operator	Cell: 231.598.2933	Operator D-3
Aj Herendeen	Operator	Cell: 574.377.2812	Operator D-2

**EMERGENCY TEAM MEMBERS –
WASTEWATER DEPARTMENT PERSONNEL**

Name	Title	Contact Information	Emergency Information
Dave Cushway	Wastewater Superintendent	Office: 231.796.8483 Cell: 231.349.6182	ER Alternate Lead for Wastewater
John Wright	Operator	Cell: 231.250.4389	
Troy McDonald	Operator	Cell: 231.629.2481	
Jake Renne	Operator	Cell: 231.349.8393	
Tyler Wible	Operator	Cell: 231.287.2543	
Ken Devery	Operator	Cell: 231.527.5112	
Amy Prescott Ambler	Operator	Cell: 231.349.0734	

**EMERGENCY TEAM MEMBERS –
CITY PERSONNEL**

Name	Title	Contact Information	Emergency Information
Mark Gifford	City Manager	Office: 231.592.4020 Cell: 231.250.8177	Spokesperson
Heather Bowman	Director of DPW	Office: 231.592.4018 Cell: 231.250.9232	ER Lead
Fred Guenther	Mayor	231.592.4000	Alternate Spokesperson
Jake Walston	Street Superintendent	Office: 231.796.8542 Cell: 231.679.2492	
Tammy Gillis	City Clerk	Office: 231.592.4020 Cell: 231.250.8835 Home: 231.629.8036	
Aaron Kuhn	City Treasurer	Office: 231.592.4002 Cell: 989.600.2192	
Matt Ruelle	Engineering Office	Office: 231.592.4021 Cell: 231.679.1295	
Cody Wyman	Engineering Office	Office: 231.592. 4019 Cell: 231.349.2060	
Dave Cushway	Wastewater Superintendent	Office: 231.796.8483 Cell: 231.349.6182	
Steve Schroeder	Fire Chief	Cell: 231.679.1583	
Danielle Haynes	Police Chief	Cell: 231.250.826	

F. External Response Partners

EXTERNAL RESPONSE PARTNER ROLES

Name/Title	Organization	Responsibilities During an Incident
Mecosta County Emergency Management/EOC	County Emergency Management/EOC	Emergency Management protects communities by coordinating and integrating activities that are necessary to build, sustain, and improve the capability to militate against, prepare for, respond to, and recover from threatened or actual natural disasters, acts of terrorism, or other man-made disasters. The Emergency Operations Center (EOC) serves as the central hub for coordination during an incident to facilitating and directing recovery/cleanup. They do not, however, manage the incident.
Mecosta County Health Department	Health Department	Staff serve as a resource and are responsible for the “health” of a community. This includes providing basic services such as food safety, water supply, shelter, sanitation, and waste management.
	911	The emergency service phone number that should be the first notification for the incident. Dispatch should then reach out to first responders.
	LEPC	The Local Emergency Planning Committee (LEPC) is made up of community organizations, including the fire service. They use their expertise to help the community be prepared for, mitigate, and respond when there is a disaster by developing site specific ERPs that can be used during an incident. The LEPC also establishes procedures for processing requests for information about extremely hazardous substances and they develop a method to inform

		residents about their right to know about hazardous substances in their community.
	Elected Officials	The primary role of elected officials during an incident is that of support. This may include facilitating communication with and obtaining assistance from other agencies, declaring a local state of emergency, and issuing emergency orders.
Reed City, City of White Cloud	Neighboring Wastewater Utility	Partnerships, communication, and verbal/written agreements with neighboring wastewater utilities can be extremely beneficial in an emergency. Supplies, manpower, or resources can be borrowed and/or shared.
Reed City, City of White Cloud	Neighboring Water Utility	Partnerships, communication, and verbal/written agreements with neighboring water utilities can be extremely beneficial in an emergency. Supplies, manpower or resources can be borrowed and/or shared.
Consumers Energy	Power Utility	Ensuring, inspecting, maintaining, and restoring electricity and/or natural gas services during an incident.
See Part 3. E	Contractor/Vendor	Provide the necessary supplies, equipment, services, and manpower.
Big Rapids Township, Ferris State University	Mutual Aid	Partnerships, communication, and verbal/written agreements with neighboring water utilities can be extremely beneficial in an emergency. Supplies, manpower, or resources can be borrowed and/or shared.

EXTERNAL RESPONSE PARTNER CONTACT LIST

Organization or Department	Point Person Name or Position	Phone	Alternate Phone	Email or Website
County Partners				
Mecosta County Emergency Management/EOC	Scott Schroeder Emergency Management Coordinator	231.592.9484		emermgmt@mecostacounty.org
Mecosta County Sheriff's Department		911 231.592.0150		
Mecosta County Health Department	Jennifer Schmidt	231.796.4300 (C)		
Other Partners				
LEPC				
Elected officials				
Laboratories				
State of Michigan Lab		517.335.9800		

G. Service Repair Contacts

SERVICE REPAIR CONTACTS

Organization or Department	Point Person Name or Position	Phone	Alternate Phone	Email or Website
Utilities				
Power Utility	Consumers Energy	616.527.2230	800.477.5050	
Gas Utility	DTE	800.528.8020		
Excavators				
Morning Star Excavating		231.796.7263		
Fred Myers Excavating		231.796.5267		
Well Drillers				
Peerless Midwest		574.254.9050		
Welders				
Cooks Blacksmith Welding		231.796.6819		
Fritz Bauman		231.796.9065		
Electricians				
Traditions Electric	Jerry Davis	616.799.4017		
Top Line Electric		231.922.8626 Stephen King Cell: 231.590.0005 Andy Bliss Cell: 231-590-2248		
Weeks Electric		616.754.2246		
Plumbers				
Mall City Mechanical		616.453.5483 Bill Thompson Cell: 616.293.1117		
Security—Alarm Systems				
Riverside Fire and Security		616.656.2630		
Chemical Suppliers				
Chlorine	Elhorn	517.676.3786		
Fluoride	Elhorn	517.676.3786		
Phosphate	Elhorn	517.676.3786		
Lab		800.766.7000		
Pump Suppliers				
Process Systems	Intermediate Pumps	586.757.5711		
Krum Pump	High Service	269.381.6220		
Water Main Repair Materials Supplier				
Municipal Supply		517.647.6597		
ETNA Supply		800.290.3862	616.257.8038 (Emergency)	
Engineering Services				
Fleis & VandenBrink		616.977.1000		

Other				
Kendal Electric (Instrumentation)		800.442.2523		
RS Technical		616.897.7041		
Barricade Supply Contact				
DPW Garage				
Sandbag(s) Supply Contact				
DPW Garage				

H. State Contacts

EXTERNAL RESPONSE PARTNER ROLES

Name/Title	Organization	Responsibilities During an Incident
EGLE	Primacy Agency	Depending on the incident may depend on whether EGLE should be notified. If the incident is a spill, release, or environmental emergency, EGLE should be notified. EGLE can also work with the utility during the incident on regulations, reporting requirements, and response.
Michigan State Police (MSP), Emergency Management and Homeland Security Division	Police	Responsible for coordinating state and federal resources to assist local government in response and relief activities in the event of an **emergency** or disaster, as well as coordinating homeland security initiatives and various federal grants.
Michigan WARN	WARN	Statewide Water/Wastewater Agency Response Network (WARN) where members help members to prepare for the next natural or human-caused emergencies. Provides utilities with mutual aid agreements for sharing resources in an emergency to a predetermined and agreed manner.
State of Michigan Public Health Laboratory (SPHL)	Laboratory	The SPHL is available to provide laboratory analytical and consultation services in the event of an emergency involving known or unknown contamination to the water supply. The SPHL should work directly with the Federal Bureau of Investigation (FBI) and other emergency responders to provide water sampling glassware and containers, analytical procedures, and data evaluation. They provide testing capabilities to make sure water/wastewater requirements are met. The SPHL should be contacted immediately in the event of a threat or incident involving an unknown contaminant.

STATE OF MICHIGAN CONTACT LIST

Organization or Department	Point Person Name or Position	Phone	Alternate Phone	Email or Website
EGLE Water Division	Wood Chooi, District Engineer/ Sanitarian	616.356.0228		Chooi @michigan.gov
EGLE Water Division	Brian Esparsa, Environmental Quality Analyst	616.250.1053		eparsab@michigan.gov
EGLE Surface Water Division	Phillip DePetro Lead Environmental Engineer	517.897.2982		DePetroP1@michigan.gov

EGLE Surface Water Division	Laura Mathews Environmental Quality Analyst	517.388.3404		MathewsL2@michigan.gov
EGLE	Emergency Number	800.292.4706		
EGLE	Emergency Fax	616.356.0298		
MSP	MSP Mt Pleasant Post	989.773.5951 or 911	989.772.2854 (fax)	
State of Michigan Public Health Laboratory	24-Hour Emergency	517.335.9800		
Hazmat Hotline		517.373.4823		

I. Federal Contacts

EXTERNAL RESPONSE PARTNER ROLES

Name/Title	Organization	Responsibilities During an Incident
	U.S. EPA	The U.S. EPA works to protect human health and the environment. They work to make sure that Americans have clean air, water, and land by reducing environmental risk, enacting, enforcing, and administering federal laws, cleaning contaminated lands, educating citizens, providing grant funding, and studying environmental issues.
Grand Rapids Satellite Office, 330 Mecosta Avenue NW, 301 Grand Rapids, MI 49503 616.456.5489	FBI field office	The FBI has been given the primary responsibility for investigating ***threats*** involving chemical or ***biological agents*** or weapons in ***terrorism*** matters. The FBI has also been given the responsibility for investigating and helping to prevent ***terrorist*** attacks or ***threats*** to our national infrastructure, including both physical attacks and computer (cyber) intrusions. Infrastructure includes, but is not limited to, our use of energy, water and wastewater systems, transportation systems, and financial institutions. Satellite offices throughout Michigan.
Centers for Disease Control (CDC) Hotline, 800.232.4636 or https://www.cdc.gov	CDC	Work to protect public health, safety, and security threats, both foreign and in the United States. CDC fights disease, both within and outside of the United States, chronic or acute, curable, or preventable, by human error or deliberate attack.
	U.S. Department of Health and Human Services (DHHS) CDC Emergency Preparedness and Response Branch (EPRB)	The EPRB coordinates the CDC emergency preparedness and response activities. Collectively, the departments research and provide valuable resources regarding bioterrorism agents, chemical agents, radiation emergencies, mass trauma situations, and natural disasters. Resources and services available during emergencies include: ▪ Conducting a preliminary human health assessment of the situation either by telephone or by sending an ***emergency response*** coordinator to the affected site. ▪ Coordinating CDC's activities with those of local, state, and other federal agencies that are responding to the ***emergency***. ▪ Consultation and advice on public health matters. ▪ Support of the local public health ***response***.

		▪ Protocols for environmental and biologic tests and assistance in collecting appropriate environmental and biologic samples. ▪ Laboratory tests to identify chemical or biologic contaminants that may have been ***release***d during the ***emergency*** and assistance in identifying the sources of the contamination. ▪ Identification of populations at risk for adverse health effects. ▪ Surveillance programs at healthcare delivery locations. ▪ Advice on ways to protect the health of ***emergency*** workers and clean-up personnel. ▪ Protocols for infectious and vector-borne disease control. Post-***disaster*** environmental and public health consequence assessments
1.800.424.8802	National Response Center (NRC)	Many incidents that are reportable to EGLE also require reporting to the federal NRC which serves the U.S. EPA. The primary function of the NRC is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States. In addition to gathering and distributing spill data for Federal On-Scene Coordinators and serving as the communications and operations center for the National Response Team, the NRC maintains agreements with a variety of federal agencies to make additional notifications regarding incidents meeting established trigger criteria. In brief, the NRC works closely with the following agencies: ▪ Department of Transportation (DOT) - transportation emergencies ▪ U.S. Coast Guard - waterway spills ▪ U.S. EPA - oil and chemical releases ▪ FEMA - natural disasters ▪ Nuclear Regulatory Commission, and Department of Energy (DOE) - radioactive material releases ▪ Department of Defense (DOD) - ammunitions and explosives ▪ Soldier and Biological Chemical Command (SBCCOM) - domestic biological/chemical terrorism ▪ FBI - terrorism threats ▪ DHHS, CDC - etiological, biological, and chemical agents Additionally, the NRC is the contact point for activation of the National Response Team when required.

FEDERAL CONTACTS

Organization or Department	Point Person Name or Position	Phone	Alternate Phone	Email or Website
U.S. EPA Headquarters & Regional Office	Region 5 Main Number	312.353.2000 (Region 5)	800.621.8431 (Headquarters)	
DHHS Emergency Preparedness & Response Branch		770.488.7100 (Emergency Hotline)		
FBI	Grand Rapids Satellite Office	616.456.5489		
National Response Center		800.424.8802 (24-hr. Emergency Hotline)		
CDC		800.232.4636		
U.S. Army Corps of Engineers Emergency Response		313.554.8218		
FEMA Michigan Division of Emergency Management		517.333.5042		
U.S. Forest Service		800.821.6263		
DHS Protective Security Advisor		616.233.0237		
Other				

J. Critical Customers

CRITICAL CUSTOMER CONTACT LIST

Organization or Department	Point Person Name or Position	Contact Instructions	Phone	Alternate Phone	Email or Website
Ferris State University			231.591.2000 x 2970 or 2600		
Big Rapids High School			231.796.7651		
Big Rapids Middle School			231.769.3365		
Brookside Elementary School			231.796.8323		
Riverview Elementary School			231.796.2550		
Eastwood Elementary School			231.592.9605		
Spectrum Health Big Rapids		605 Oak Street	231.796.8691		
Big Rapids Field Assisted Living & Memory Care		18900 16 Mile Road	231.252.7532		

Metron of Big Rapids		725 Fuller Avenue	231.769.2631		
Evergreen Terrance Assisted		801 Fuller Avenue	231.527.1050		
Ferris State Early Learning Center		1349 Cramer Circle	231.591.2390		
Spectrum Health Big Rapids Hospital		605 Oak Street	231.796.8691		
Fresenius Kidney Care/Big Rapids Dialysis clinic		14307 Northland Drive	231.527.1622	231.527.1644	

K. Media Contacts

MEDIA CONTACTS

Social Media	Contact Information
City Hall Staff	231.527.0005
Newspapers	**Contact Information**
Pioneer Group	231.796.4831
Grand Rapids Press	800.878.1411
Radio	**Contact Information**
WBZX (103.9 FM – Oldies)	800.633.9393
WYBR (102.3 FM – Hit Radio)	616.451.9548
WDEE (97.3 FM – Classic Rock)	616.459.9797
WBRN (107.7 FM/1460 AM – News)	231.796.7000
WWBR (100.9 FM – Country)	616.451.8369
Television	**Contact Information**
WOOD (NBC)	616.456.8888
WWMT (CBS)	269.388.3383
WZZM (ABC)	616.559.1300
WXMI (FOX)	616.364.8722
WOTV 41 (ABC)	269.343.4141

L. Alternate Water Sources

EMERGENCY ALTERNATE DRINKING WATER SUPPLIES*

Item	Description
Bottled Water Supplier	Provider name: Ice Mountain Location: Fremont, MI Phone: 800.678.4423 Distribution point (notify public of location): City Hall, 231.527.0005, 226 North Michigan Avenue
Bottled Water Supplier	Provider name: Nestle Water North America Location: Stanwood, MI Phone: 231.823.8100 Distribution point (notify public of location): City Hall, 231.527.0005, 226 North Michigan Avenue
Bulk Water Hauler	Provider name: J&H Oil Company (licensed in State of Michigan) Location: Phone: 616.534.2181 Distribution point (notify public of location): City Hall, 231.527.0005, 226 North Michigan Avenue

** If interconnections are available, they are listed and described in Section 3.A*

Additional sources of water may include the following:

- Bulk water transported or provided by military assets (i.e., National Guard or U.S. Army Corps of Engineers (USACE). Refer to Part 3.G for contact information.
- Bulk water transported or provided by federal assets (i.e., FEMA. Refer to Part 3.G for contact information.
- Bulk water provided by neighboring water utilities or by certified water haulers.
- Water treated by plant and hauled to distribution centers (i.e., in the case of water distribution system contamination using certified water haulers).
- Water pumped from surface water sources, treated at the plant or nearby plants, and hauled to distribution centers using certified water haulers.

Additional water infrastructure equipment may be available from:

- Local businesses such as dairies, well drillers, irrigation supply firms, or distributors that may have tank trucks that can be made to carry water, chlorinators, or ***generators*** that can be used for ***emergency*** disinfection, and pipes that can be used to extend water supply lines.
- Other water utilities in the area that may have spare parts (such as valves, pumps, and pipe) available for use in an ***emergency***.
- FEMA, USACE, and the U.S. Forest Service that may be able to provide firefighting equipment (Refer to Part 3.G of this Plan).
- Mutual Aid Agreements.

IV. SUPPORT DOCUMENTS AND GUIDELINES

A. Water System Personnel Response Guidelines

This section contains plans and procedures that can be implemented in the event of a malevolent act or natural hazard that threatens your utility's ability to deliver safe drinking water.

CORE RESPONSE PROCEDURES

Core procedures are the "building blocks" for incident specific response procedures, as they are typically implemented across a broad variety of incidents (e.g., hurricane, earthquake, flood). List your core procedures here:

1. Access
2. Physical Security
3. Cybersecurity
4. Power Loss
5. Sampling and Analysis
6. Local, Contract, and State Laboratory Contact List
7. Family and Utility Personnel Well Being

ACCESS

Item	Description
Debris clearing	The City has appropriate supplies and equipment at the DPW Building to clear debris. Items include, but are not limited to, loaders, backhoes, dump trucks, a woodchipper, chainsaws, pickup trucks, safety tripods, safety harnesses, gloves, chaps, hardhats, safety vests and eye protection.
Alternate routes	The City has the Baldwin Street and Maple Street bridges that connect the east and west sides of the City. In the event of an emergency, there are multiple ways to get into or out of the City without having to cross the bridges. The main streets to exit the City consist of State Street for the North and South evacuation, Business Route US 131 for the West and State Route 20 would be used to the East.
Identification badges	City personnel have official identification badges that are worn daily.
Other	

PHYSICAL SECURITY

Item	Description
Access control procedures	The wellfield is secured by a limited access service road with a pad locked gate with a "No Trespassing" sign. Each well is encircled by fences and each have a lock gate. The wells share one common well house constructed of brick and is secured with a locked door, contact alarm sensor, and smoke alarm. The Water Plant is secured with perimeter fencing and locked gates, CCTV recording, and locked doors.
Restricted areas	The Water Plant chemical room is restricted to staff members only. The chemical delivery drivers use the same for delivery drivers and the staff are familiar with them.
Evidence protection measures	Water Department staff work closely with police and fire personnel. The Water Department staff have DPW radios. Central Dispatch notifies staff when incidents are in need of being addressed.

Security culture	Each wellhouse has signage on the building with contact alarms that would notify the SCADA and police department.
Other	

CYBER SECURITY

Item	Description
Disconnect procedure	If possible, disconnect compromised computers from the network to isolate breached components and prevent further damage, such as the spreading of malware.
Notification	City of Big Rapids IT: 231.592.4033 Michigan Cyber Command Center - mc3@michigan.gov/877-MI-CYBER ▪ F/Lt Jim Ellis, Commander MC3 ▪ D/Sgt Jeff Hoffman, MC3 Michigan DTMB/Michigan Cyber Partners: www.Michigan.gov/cyberpartners ▪ Laura Clark, Chief Security Officer ClarkL17@michigan.gov ▪ Andy Brush, Cyber Partners BrushA1@michigan.gov ▪ Ray Davidson, Cyber Civilian Corps (MiC3) DavidsonR5@michigan.gov Department of Homeland Security ▪ National Cybersecurity and Communications Integration Center (NCCIC), 888.282.0870 or NCCIC@hq.dhs.gov ▪ Cybersecurity and Infrastructure Security Agency: www.cisa.gov ▪ Kelley Goldblatt, Cybersecurity Advisor, Region V: Michigan and Ohio o Email: kelley.goldblatt@hq.dhs.gov o Phone: 202.893.2304
Assess procedure	Assess damage to utility systems and equipment, along with disruptions to utility operations.
Implementation processes	Implement actions to restore operations of mission critical processes (e.g., switch to manual operation; if necessary, see procedures under 4.A Power Loss) and provide public notification (if required, see templates in Section 4.E Public Information Guidelines). Refer to Cybersecurity Incident Checklist in the City's RRA Attachment D.
Documentation	Include forms to document key information on the incident, including suspicious calls, emails, or messages before or during the incident, damage to utility systems, and steps taken in response to the incident (including dates and times).
Other	

POWER LOSS

Item	Description
Backup Power Systems	Auxiliary Power Type: Natural Gas Location: Inside Wellhouse Capacity: 250 KW Describe method of operation (manual and automatic): Manual/Auto switch on switch gear door

Power Utility	Coordinate with Consumers Energy for expected restoration priorities and timing. Power utility contact information is listed in Section 3.E Service Repair Contacts.
Fuel Plan	The City has a 1000-gallon underground storage tank of diesel at the Water Plant Building. In the event of an emergency, the City would work with Michael Oil Co. to fill tanks. In addition, the City owns 55-gallon containers that could be loaded into a vehicle, taken to another nearby town and filled. The Mecosta County Emergency Manager can also assist the City on who has fuel.
Maintenance plan	Maintaining generators during extended outages is critical. The City also has a regular maintenance plan for generators throughout the year. The DPW Director is responsible for implementation and on-hand items such as spare parts and filters are kept at the DPW. The City works with Michigan Cat to conduct maintenance throughout the year.
Manual or Automatic Operation of Wells and Treatment	Implement actions to restore operations of mission critical processes (e.g., switch to manual operation if necessary) and provide public notification (if required). **Describe method to operate wells for groundwater sources, or pumps for surface water sources (manual and automatic).** Manual switches are on PLC door inside well house. **If auxiliary power is leased, rented, shared or otherwise not immediately available on the property, describe the procedure for securing the equipment:** N/A **If treatment employed at wells, describe method to provide auxiliary power to chemical feed pumps.** No treatment employed at wells. **If centralized treatment employed (iron removal, zeolite softening, etc.):** *Describe method to provide auxiliary power to high service pumps:* Building powered by 500 KW diesel generator that automatically switches when power is lost. *Describe method to provide auxiliary power to chemical feed pumps:* Done automatically *Describe procedure to bypass treatment facility:* N/A

SAMPLING AND ANALYSIS

Item	Description
Sampling procedures	The City has a sample monitoring plan that is followed and kept at the Water Plant. The licensed water operator is responsible for

	sample collections and procedures. Bacteriological samples are taken at the Water Plant and throughout the City. Sample bottles and instructions can be received from the State of Michigan Laboratory. In the event of an emergency, the City would work with EGLE to determine sampling requirements. The WWTP Licensed Operator confirms the discharge samples are collected per NPDES Permit requirements.
Pre-identified sampling locations	While some sampling sites may be dictated by the emergency, ideal sampling locations such as tanks and reservoirs or entry and exit points from pressure zones can be pre-planned and will be considered.
Sampling containers and preservatives	While there are some sample containers kept on site, the majority would be provided by the State of Michigan Laboratory. The bacteriological sample containers are kept at the Water Plant. In the event of an emergency, the licensed Water Operator would work with EGLE to obtain additional sample containers. The WWTP keeps reserved sample containers within its Certified Lab located within the plant.
Sample collection	The licensed Water Operator would be responsible for sample collection during an emergency. If not available, the backup operator would be responsible. For contact information, see II. Personnel Information.
Sample transportation	The licensed Water Operator would be responsible for sample collection during an emergency. If not available, the backup operator would be responsible.
Laboratory capabilities	The City of Big Rapids utilizes the State of Michigan laboratory for bacteriological samples and it forwards results to EGLE, which can be very beneficial to avoid violations. The NPDES discharge samples are analyzed by the WWTP Lab.
Interpreting results	The City would work with EGLE on the appropriate sampling requirements. Contact information for EGLE staff are listed in 3.F External Response Partners. The WWTP compares the samples results to the NPDES requirements.

LOCAL CONTRACT/STATE/FEDERAL LABORATORY CONTACT LIST

Name	Address	Analytes/ Methods	Phone	Email or Website
State of Michigan Lab	3350 N. Martin Luther King Jr. Blvd Lansing, MI 48906		517.335.8184	
City of Big Rapids WWTP	531 River Street Big Rapids, MI		231.796.6231	

FAMILY AND UTILITY PERSONNEL WELLBEING

Item	Description
Family disaster plan	During an incident, families of staff would remain in a secure location. Staff are not able to work from home during an emergency.
Assembly area	During an emergency, staff would assemble at the Water Plant. If necessary, water would be distributed City Hall.
Supplies	Supplies are kept at the Water Plant. These include: food, water, cots, first aid kit, shower at WWTP, eye wash stations, safety shower and sanitary products.
Alternate work and shelter locations	Water Department staff are not able to work from home. If necessary, they would congregate at the Water Plant where equipment and supplies are stored. In the event of a natural hazard, staff working outside would return to the DPW and wait until conditions were better.
Extreme temperatures	Supplies and equipment are stored at the Water Plant, WWTP, and the DPW.
Other	

INCIDENT SPECIFIC RESPONSE PROCEDURES

Incident-Specific Response Procedures (ISRPs), specialized procedures tailored to an incident type, are included in the City of Big Rapids Risk and Resilience Assessment (RRA) Attachment D. Incidents may include, but are not limited to, the following:

- Cybersecurity
- Drought
- Earthquake
- Extreme Cold and Winter Storms
- Extreme Heat
- Flooding
- Harmful Algal Bloom
- Hurricane
- Tornado
- Wildfire
- Source Water Contamination
- Distribution System Contamination

During an emergency, City of Big Rapids staff are responsible for the activation of this ERP. In addition to the ISRPs in Attachment D of the RRA, activation should be based on the credibility and analysis of available information regarding a threat. The ERP may also be activated based on an actual event.

This section provides general guidance for use by water personnel during a water system ***emergency*** event. This part is arranged in a checklist format, and contains the following guidelines:

- General Checklist of Considerations
- Water Contamination
- Structural Damage/Intrusion
- Power Failure

General Checklist of Considerations

- ☐ Document consideration of guidelines.
- ☐ Initiate ICS. Refer to Part 1.F of this Plan.
- ☐ Consider, with County Emergency Management Director, if local resources may be exhausted and activity of County EOC may be required.
- ☐ Keep detailed records of man-hours and equipment used in **response** to the **disaster**.

- Establish method of communications (e.g., radio, cell phone, etc.).
- To maintain system reliability and lower water usage and losses, valve off sections.
- Maintain service to critical users and pressure for fire protection (secure alternate sources when required).
- Throttle pumps and valves to limit losses.
- Assist in response efforts by providing equipment and personnel as necessary.
- Maintain contact with Emergency Responders to implement response operations.
- Maintain contact with the City Manager (Refer to Part 3.C of this Plan).
- Coordinate **response** activities with City DPW.
- Designate incident Public Information Officer.
- Issue public notice (Refer to Part 3.I and Part 4.E).
- Confirm public notices have been issued.
- Confirm follow-up public notices are issued as necessary to inform the public of the incident progress (Refer to Part 3.I of this Plan).
- Maintain contact with City Public Information Officer (Refer to Part 3.C of this Plan).
- Assist **Incident Commander** in identifying boundaries of areas in which access must be controlled.
- Provide technical expertise in water system operations to determine appropriate actions.
- In conjunction with the County's Public Health Department, help identify sources of potable and non-potable water (Refer to Part 3.J of this Plan).
- Coordinate with necessary agencies to provide water to needed locations.
- Contact appropriate State agencies to request additional assistance, if necessary (Refer to Part 3.F of this Plan).
- Provide expertise to assess water system components to evaluate whether they are ready to use.
- Be prepared to assist the **Damage Assessment Team** by providing damage information for water infrastructure.
- Provide list of contractors and equipment resources (Refer to Part 3.E and Part 3.J of this Plan) to **Emergency Operations Center** staff, as needed.
- Evaluate the impact on the water system.
- Coordinate alternative water supply, as needed (Refer to Part 3.J of this Plan) or consider alternate (interim) treatment systems.
- Repair damaged facilities.
- Assess need for additional protection/security measures (Refer to Part 4.D of this Plan).
- Confirm Water Department responders are aware of the **hot, warm, and cold zones**.
- Coordinate movement of Water Department personnel and equipment inside a **potential hot or warm zone** with the **Incident Commander and Emergency Operations Center**.
- Workers must have access approval from the **Incident Commander** or appropriate **Emergency Operations Center** staff personnel before entering an active scene.
- Consider requesting mutual aid.
- Confirm the Water System **Incident Commander** can communicate with **the County Emergency Operations Center** (if activated).
- Confirm the **County Emergency Operations Center** can communicate with agencies providing support at the state level (i.e., EGLE, etc.).
- Evaluate if barricades are necessary for this event (Refer to Part 3.E for barricade supply contact).
- Evaluate if sandbags are needed: i.e., to act as a barrier against an unexploded device or to contain/control liquids (Refer to Part 3.E for suppliers).
- Confirm Water Department personnel are aware of the staging area location.
- Confirm Water Department personnel understand they "do not" report to the scene unless requested.
- Confirm Water Department personnel are aware of evidence preservation.

Water Contamination

- **Provide appropriate support listed under paragraph General Checklist of Considerations.**
- Examine water sample data.
- Isolate affected portion of the system, if applicable (Refer to Part 3.B of this Plan).

- Flush affected portion of the system, if applicable (Refer to Part 3.B of this Plan).
- Shut down system if obvious or **confirmed** contamination.
- Continue sampling and water monitoring.
- In the case of hazardous chemical **release**, retain evidence of the **release** prior to disposal of the agent (except for incidents involving life-safety and property protection).
- Confirm identity of chemicals prior to disposal.
- Dispose of contaminated material in an authorized and properly licensed facility.
- Assess need for additional protection/security measures (Refer to Part 4.D of this Plan).
- Conduct a damage assessment of storage tanks, filters, sediment basins, solids handling, etc.

Structural Damage / Instruction

- **Provide appropriate support listed under paragraph General Checklist of Considerations.**
- Assess need for additional protection/security measures (Refer to Part 4.D of this Plan).
- Isolate affected portion of the system (Refer to Part 3.B of this Plan).
- Coordinate alternative water supply, as needed (Refer to Part 3.J of this Plan) or consider alternate (interim) treatment schemes.

Power Failure

- **Provide appropriate support listed under paragraph General Checklist of Considerations.**
- Assess need for additional protection/security measures (Refer to Part 4.D of this Plan).
- Utilize portable **generators** to lessen impact (Refer to Part 4.J of this Plan).
- Shutdown the water system if necessary.
- If power has been lost, maintain contact with local utilities to determine the extent and cause of damage and power outages (Refer to Part 3.E of this Plan). Report this information and restoration schedules to **Emergency Operations Center** staff.
- If power has been lost, coordinate with utility companies (Refer to Part 3.E of this Plan) in the restoration of essential services.
- Shut off non-essential equipment to cut back on power consumption.

B. Contamination Guidelines

This section provides general communication guidance for use by water system personnel during an ***emergency*** event.

- If normal telephone service is disrupted and **emergency response** equipment is unavailable, consider the following:
  - Cellular telephones
  - Amateur Radio
  - E-mail
  - Nextel
  - UHF/VHF radio systems (available through County EOC)
- Establish communication links with adjacent communities and with county/state government.
- Maintain accurate records and logs.
- Be aware of the effects of adverse weather on communication systems.
- Consider effects of **personal protective equipment** on voice communications.
- Evaluate the need for additional cell phones or 2-way radios or computers.
- Evaluate if the Internet should be used.
- Confirm how the Public Information Officer (Refer to Part 3.C of this Plan) should communicate with the media.
- Consider vulnerability of off-site communications if another attack/incident is imminent, expected, or **possible.**
- Consider using 211 services.
- Maintain contact with 211 and 911 Dispatch Centers and 211 services (if used).

C. Disgruntled Employee Threats

Water Department employees have intimate knowledge of operational and security procedures. The trust relationship we have with our employees increases our vulnerability when an employee becomes

disgruntled or chooses to attack our safety systems. The **response** to **threats** may be like other sections but may include some additional safeguards.

- Analyze the threat potential based on the dynamics of the disgruntled employee's statements, actions, history and demeanor.
- Contact DPW Director, Water Department Superintendent or Team Leader. (Refer to Part 3.C of this Plan).
- Notify the City Manager (Refer to Part 3.C of this Plan).
- Notify Law Enforcement - Report crimes - Request additional surveillance (Refer to Part 3.C and 3.D of this Plan).
- Determine the appropriate safety and security **response**.

Minor employee discipline: Verbal, Written, or Counseling (continued employment with the facility)

- Monitor employee's activities (Coworker – work team).
- Monitor security procedures (Random security checks & patrols).
- Consider use of additional security measures (Access monitoring or motion detection devices).

Major employee discipline: Suspension, Discharge, or Termination (Long term suspension or no longer employed at the facility)

- Review security procedures – (Special knowledge) make appropriate adjustments.
- Increase monitoring of water samples and other quality checks.
- Change security locks on access gates.
- Change facility entry locks.
- Change passwords on computer and security system.
- Notify local law enforcement of concerns.
- Consider use of private security.
- Additional video surveillance or alarm system upgrades.
- Follow additional ERP plans if the disgruntled employee threats are confirmed.

Special Security Note:

- Random security check and monitoring of facility and perimeter fences.
- Use of inexpensive numbered breakaway or anti-tampering wires or tags.
- Installation of additional padlocks on access points.

D. Property Protection Guidelines

The water system is a critical part of the community infrastructure. Protection of the water system is vital to the survivability of the community. Each Water Department employee is responsible for the security and protection of the Water Department's property. The primary day-to-day actions include securing and locking doors, gates, vehicles, and facilities, and reporting suspicious activities or observations. In the event your water system receives a **threat** or a **security breach** is discovered, the following guide should be used.

General Property Protection

- Inspect, lock, and secure perimeter fences and gates when unattended.
- Inspect, lock, and secure wellhouse doors and activate the alarm system (if equipped) when unattended.
- Inspect, lock, and secure pump houses when unattended.
- Inspect, lock, and secure facility buildings and vehicles.
- Examine, lock, and secure chemical storage areas. Activate the alarm system (if equipped).
- Non-employee visitors must log in and out of the secured areas.
- Non-employee visitors should be escorted when inside the facility.
- Visually inspect entry doors and locks before securing the facility at the end of the day.
- Notify DPW Director of **security breaches**, suspicious situations, suspected criminal activities or necessary repairs.
- Request police conduct random facility security checks.
- Contact Police if **threats** or criminal activities are identified or suspected.

Property Protection During Threats Evaluation

- Conduct random police facility security check.
- Inspect perimeter fences and gates for security or unauthorized entry.
- Inspect facility doors, hatches, and entry points for security.
- Lock hatches, gates, doors, and points of entry.
- Inspect chemical storage sites for tampering.
- Request Police to increase surveillance of remote or vulnerable facilities.
- If evidence has shown that security is compromised, notify Police, DPW Director and Water Department Superintendent (Refer to Part 3.C and Part 3.D of this Plan).

Elevated Threat Level Protective Measures

These additional measures should be activated based on an evaluated **threat** and with the input from key community leaders, which should include Law Enforcement, Fire Department, Water Department, Health Department, EGLE, City Manager, and **Emergency** Management.

- Increase security patrol utilizing department personnel, law enforcement or private security guards.
- Consider use of heavy equipment or jersey barricades to guard critical water facilities and wells.
- Increase monitoring of security systems.
- Establish access control points to provide additional distance from key facilities.
- Increase frequency of distribution sampling.

Breach of Security

The following action should be considered if a **breach of security** occurs. Additionally, **Action Plans** (Refer to Part 2.A to Part 2.D of this Plan) should be reviewed as appropriate based on the **security breach**.

- Conduct random police facility security checks.
- Notify PWSS Emergency Response (ER) Lead (Refer to Part 3.C of this Plan).
- Notify DPW Director. (Refer to Part 3.C of this Plan).
- Notify City Manager (Refer to Part 3.C of this Plan).
- Notify Water System **Emergency Response** Team Leader (Refer to Part 3.C of this Plan).
- Notify City Police Department (Refer to Part 3.C of this Plan).
- Notify EGLE (Refer to Part 3.F of this Plan)
- Notify County Health Department (Refer to Part 3.D of this Plan).
- Notify State Health Department (Refer to Part 3.F of this Plan).
- Notify County **Emergency Management Coordinator** (Refer to Part 3.D of this Plan).
- Notify Central Dispatch (911).

E. Public Information Guidelines

PRESS RELEASE TEMPLATE

Use agency letterhead

FOR IMMEDIATE RELEASE

CONTACT INFORMATION:

NAME:

PHONE:

DATE & TIME of RELEASE:

PRIMARY MESSAGE: Two or three sentences simply describing the situation or problem.

Public Official Quote: Leadership and empathy

Action Steps: What's being done to address the situation?

Citizen's Action Steps:

- What do we want our citizens to do?
- What can they do to protect themselves & family?

Public Official Reassurance – Control

Additional Resource Information – Where can additional information be located?

- Internet - Websites
- Other agencies

Follow up information and additional releases

- Schedule may be established by time or events

Signature of releasing official

WARNING BOIL YOUR WATER BEFORE USING TEMPLATE

[The XXX Water System] water is contaminated with [CONTAMINANT]

[**CONTAMINANT**] were found in the water supply on **[DATE]**. These bacteria can make you sick and are of particular concern for people with weakened systems.

What are Fecal Coliforms and E. Coli?

- Fecal coliform and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes.

What should I do?

- DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST OR USE BOTTLED WATER. Bring all water to a boil, let it boil for [**TIME**], and let it cool before using. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and preparing food until further notice. Boiling kills bacteria and other organisms in the water.

What are the symptoms of illness caused by these organisms?

- Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
- The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical

advice. People at increased risk should seek advice about drinking water from their health care providers.

What happened? What is being done?
The water distribution system was contaminated with [CONTAMINANT]. We are working with law enforcement and the public health department to investigate/resolve this issue. We are currently increasing the chlorination levels at the treatment plant as well as at other locations throughout the system. Therefore, your water may have a stronger chlorine smell than usual. In addition, we are evaluating available information and conducting tests to confirm the extent of the contamination of the system. Notification should occur when tests show no bacteria, and you no longer need to boil your water. We anticipate resolving the problem within the next [TIME].

Who do I contact for more information?
For more information, please contact [**NAME**] at [**PHONE NUMBER**]. General guidelines on ways to lessen the risk of infection by microbes are available from the U.S. EPA Safe Drinking Water Hotline at 1-800-426-4794, and [**the Public Health Department Hotline at NUMBER].**

*****Please share this information with the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

WARNING DO NOT DRINK THE WATER TEMPLATE

[CONTAMINANT] found in the [City of XXX] water supply on [DATE]

Bottled water can be obtained at [LOCATION].

What is [CONTAMINANT]?
[CONTAMINANT DEFINITION]

What should I do?

- DO NOT DRINK THE WATER. Do **not** use the water for drinking, making ice, brushing teeth, washing dishes, or preparing food until further notice.

What are the symptoms of illnesses associated with [CONTAMINANT] poisoning?

- Symptoms associated….
- If you or someone you know exhibits any of these symptoms, immediately contact your health care provider. In addition, please notify [**the Public Health Department at NUMBER**].

What happened? What is being done?
On [**DATE**], the water distribution system was contaminated with **[CONTAMINANT]**. We are working with law enforcement and the public health department to investigate/resolve this issue. We have tested the water in various parts of the distribution system to verify the extent of the contamination. Based on these tests, we have isolated the portion of the system located **[LOCATION].** Everyone in this portion of the system **should not drink the water.** We have implemented additional security procedures to protect the system against further contamination. Additional information may be provided 24 hours/day on **[MEDIA]**.

Who do I contact for more information?
For more information, please contact [**NAME**] at [**NUMBER**]. Additional information is available from the U.S. EPA Safe Drinking Water Hotline at 1-800-426-4794, Poison Control at 1-800-222-1222, and [**the Public Health Department Hotline at NUMBER**].

*Please share this information with the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

WARNING DO NOT USE THE WATER TEMPLATE

[Contamination Event] of the [XXX Water System] water supply on [DATE].

Bottled water can be obtained at [**LOCATION AND TIME**].

Local authorities have found evidence of contamination of the [**XXX**] Water System.

What should I do?

- DO NOT USE THE WATER. You should **not** use the water for drinking, making ice, brushing teeth, washing dishes, washing clothes, bathing/showering, food preparation, or toilet flushing.

What happened? What is being done?
The water distribution system was contaminated with an unknown contaminant. We are working with law enforcement and the Public Health Department to investigate/resolve this issue. We are conducting tests in attempts to identify the contaminant and verify the extent of the contamination. We have implemented additional security procedures to protect the system against further contamination. Additional information may be provided 24 hours/day on [**MEDIA**].

Who do I contact for more information?
For more information, please contact [**NAME**] at [**NUMBER**].

*Please share this information with the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

F. Water Monitoring

SYSTEM OPERATING PARAMETERS

Location	Time	Pressure	Residual Chlorine	Turbidity	pH	Conductivity

SAMPLING RECORD

Sample Location	Time	Analysis	Note/Result

G. Contamination Guidelines

This section contains strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system. Additionally, detection measures, countermeasures, and recommendations are included in greater detail in the City of Big Rapids RRA.

DETECTION STRATEGIES

Threat	Detection Method	Procedure
Unauthorized entry	▪ The wellfield is secured by a limited access service road with a pad locked gate with a "No Trespassing" sign. Each well is encircled by fences and each have a lock gate. The wells share one common well house constructed of brick and is secured with a locked door, contact alarm sensor, and smoke alarm. ▪ The Water Treatment Plant is secured with perimeter fencing and locked gates, CCTV recording, and locked doors. ▪	Call 911
Source water contamination	▪ National Response Center notifications ▪ Notification from 911 for releases resulting from transportation accidents	Source Water Contamination Incident Response Plan
Distribution system contamination	▪ Customer complaint surveillance ▪ Public health surveillance	Distribution System Contamination Response Procedure
Cyber intrusion	▪ Automated IT and operation technology (OT) system intrusion detection monitoring ▪ The water system SCADA system is operated through phone lines and controlled by a central computer. The SCADA system is connected to the City of Big Rapids computer system, which is connected to the internet. However, a firewall is installed with password protected computers to prevent unauthorized access to the system. ▪ Notification from utility staff ▪ Backup system built into the computer (see City's RRA for additional information)	Cyber Incident Action Checklist
Hazardous chemical release		Call fire department
Tornado, Severe Thunderstorm, Ice Storm	▪ Weather Service alerts	Incident Action Checklists

Flood	▪ Notification from Army Corp	Flood Incident Action Checklist
Power outage	▪ Notification from energy provider ▪ Alarm from line power sensor	Generator Start-up Checklist
Other		

H. ERP Review and Assessment

This ERP is intended to be a living document that is checked and updated regularly to keep the information within the Report accurate. Updates should be logged and changes tracked.

Assessment of Effectiveness

To evaluate the effectiveness of the ERP and to determine if protocols developed under the ERP are working and properly implemented, employees will perform audits of the program on a periodic basis.

One type of audit will be exercises and drills. Designated observers will be present during the exercises to evaluate the employee's performance in responding to emergency incidents as well as the overall effectiveness of the ERP in accomplishing goals. The Director of Public Services will review the results of the evaluation and the ERP and action plans will be updated as appropriate to incorporate the lessons learned from the exercises.

Practice and Update Schedule

The exercises, drills and training sessions will be conducted annually or more frequently if the ER lead deems it necessary. Training staff on the ERP will be an important component of implementation and the determine the effectiveness of the ERP.

The ER lead will be responsible for the organization and management of training programs. The Public Services Director will review and update the ERP as follows:

- Annually prior to any ERP training sessions,
- After any ERP training sessions where recommended changes are determined,
- Shortly after any significant water system modification or change,
- Immediately when there is a utility staff change, role change or internal/external contact change.

V. GLOSSARY OF TERMS

America's Water Infrastructure Act (AWIA) of 2018

America's Water Infrastructure Act of 2018 (AWIA) improves drinking water and water quality, deepens infrastructure investments, enhances public health and quality of life, increases jobs, and bolsters the economy. The AWIA provisions are the most far-reaching changes to the Safe Drinking Water Act since the 1996 Amendments, with over 30 mandated programs. Specifically, AWIA requires that community water supply systems over 3,300 conduct RRAs and ERPs.

Action Plan

Specific plans designed to be used during the response to a threat or incident. Action plans are easy to use and contain basic instructions to support staff in the field or decision officials during management of a crisis.

Biological Agent

Living organisms or the materials derived from them that cause disease in or harm to humans, animals, or plants or cause deterioration of material. Biological agents may be used as liquid droplets, aerosols, or dry powders.

Bioterrorism Act

The Public Health Security and Bioterrorism Preparedness and Response Act of 2002.

CBRNE – Formerly Known As Weapons of Mass Destruction (WMD)

A Chemical, Biological, Radiological, Nuclear or Explosive device or weapon that is designed or intended to cause serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, disease organism, radiation or radioactivity at a level dangerous to human life.

Chain of Command

A clear and definitive structure of authority.

Chemical Warfare Agent

A chemical substance that is intended to kill, seriously injure, or incapacitate people through physiological effects. Generally separated by severity of effect: lethal, blister, and incapacitating.

Chemical/Biological (C/B) Protective Ensemble
A compliant vapor-protective ensemble that is also certified as being compliant with the additional requirements for protection against C/B warfare agents such as vapors, gases, liquids, and particulate. (National Fire Protection Association [NFPA] Standard # 1991)

Collapse Search and Rescue Team (Technical Rescue Team)
Team responds to locate, rescue, and recover individuals trapped in a fallen structure or buried in structural collapse.

Command Post (CP)
A base of operations established by Police, Fire or EMS incident commanders during an emergency or disaster. Provides a location for command-and-control activities. Identified by a Green Flashing light or flag.

Confined Space Search and Rescue Team (Mine Search and Rescue)
Team provides search and rescue services to individuals in an enclosed area with limited entry or egress, which has a configuration not designed for human occupancy, such that an entrant could become trapped or asphyxiated. An Occupational Safety and Health Administration (OSHA) permit is required for confined space operations.

Confirmed
A stage in the threat evaluation process in which there is definitive evidence and information to establish that an incident or major event has occurred.

Consequence Management
Measures to protect public health and safety, restore essential government services, and provide emergency relief to governments, businesses, and individuals affected by the consequences of terrorism. State and local governments exercise primary authority to respond to the consequences of terrorism. (Source: FRP Terrorism Incident Annex, page T1-2, April 1999). The FEMA has been designated the Lead Federal Agency (LFA) for consequence management to ensure that the Federal Response Plan is adequate to respond to terrorism. Additionally, FEMA supports the FBI in crisis management.

Credible
A stage in the threat evaluation process in which there is information to corroborate a threat.

Crisis Management
This is the law enforcement aspect of an incident that involves measures to identify, acquire, and plan the resources needed to anticipate, prevent, and/or resolve a threat of terrorism. The FBI is the LFA for crisis management for such an incident. (Source: FBI) During crisis management, the FBI coordinates closely with local law enforcement authorities to provide successful law enforcement resolution to the incident. The FBI also coordinates with other Federal authorities, including FEMA. (Source: FRP Terrorism Incident Annex, April 1999).

Critical Care Transport (CCT)
An ambulance transport of a patient from a scene or a clinical setting whose condition requires care commensurate with the scope of practice of a physician or registered nurse (e.g., capable of providing advanced hemodynamic support and monitoring, use of ventilators, infusion pumps, advanced skills, therapies, and techniques).

Emergency
Any situation confronting a site, facility or community that requires emergency actions but doesn't overwhelm the resources. (Less than a disaster)

Emergency Management Coordinator

The person appointed pursuant to PA 390 of the Public Acts of 1976 to coordinate emergency planning and services within a jurisdiction

Emergency Operations Center (EOC)
Location where emergency management officials meet to coordinate operations.

Emergency Response (ER) Lead
The pre-designated main point of contact and decision-maker for a CWS during a major event.

Emergency Response Plan (ERP)
A plan developed and maintained by a site or facility for the purpose of organizing and coordinating emergency response activities.

Evacuation
The orderly movement of people from an actual or potential hazard.

External Resources
Resources that fall outside a team's particular agency, including other agency resources or commercially contracted resources.

Generators
Diesel-fueled engine generators are used to support electrical requirements at facilities of various sizes such as hospitals, housing, plants, and commercial stores. Units are usually mounted on tow behind or trailer mobilized equipment. Deployment and set up can be accomplished within hours.

Hazardous Materials (HazMat)
Material that is explosive, flammable, poisonous, corrosive, reactive, or radioactive, or any combination thereof, and requires special care in handling because of the hazards it poses to public health, safety, and/or the environment. Hazardous substance under the Clean Water Act, or any element, compound, mixture, solution, or substance designated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); hazardous waste under the Resource Conservation and Recovery Act (RCRA); toxic pollutant listed under pretreatment provisions of the Clean Water Act; hazardous pollutant under Section 112 of the Clean Air Act; or imminent hazardous chemical substance for which the administrator has taken action under the Toxic Substances Control Act (TSCA) Section 7. (Section 101[14]) CERCLA)

Hazardous Material Response Team
An organized group of individuals that is trained and equipped to perform work to control actual or potential leaks, spills, discharges, or releases of HazMat, requiring possible close approach to the material. The team/equipment may include external or contracted resources.

Hazardous Materials Incident
Uncontrolled, unlicensed release of HazMat during storage or use from a fixed facility or during transport outside a fixed facility that may impact public health, safety, and/or the environment.

Incident Command System
A standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.

Incident Commander
The emergency responder in charge at the scene of an incident. The emergency responder that is responsible for coordinating activities at the incident unless those activities are delegated to another person.

In-House
Assets or expertise specifically owned, possessed, directed, and/or controlled by the responding entity.

In-Place Shelter (Shelter-in-place)
A protective action designed to protect people from the effects of a hazard by sheltering them in a structure capable of providing protection.

Jurisdiction
The range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority for incident mitigation. Jurisdictional authority at an incident can be political/geographic (e.g., city, county, State, or Federal boundary lines) or functional (e.g., police department, health department, etc.).

Lift Station
A lift station will raise wastewater a few feet **to** move wastewater from lower to higher elevation, particularly where the elevation of the source is not sufficient for gravity flow line.

Local Emergency Planning Committee (LEPC)
Established by the Emergency Planning and Community Right-to-Know Act, LEPCs have the job of increasing community hazardous materials safety through public education, emergency planning, responder training, conducting exercises, and reviewing actual responses to releases.

Local State of Emergency
A declaration by the chief elected official of a community when circumstances indicate that a natural or man-made event is overwhelming the resources of a community.

Major Event
A domestic terrorist attack, major disaster, or other emergency (as Homeland Security Presidential Directive/HSPD-8)

Mitigation
Actions (including threat and vulnerability assessments) taken to reduce the exposure to and detrimental effects of a WMD incident.

Nonpersistent Agent
An agent that, upon release, loses its ability to cause casualties after 10 to 15 minutes. It has a high evaporation rate, is lighter than air, and will disperse rapidly. It is considered to be a short-term hazard; however, in small, unventilated areas, the agent will be more persistent.

Notification
The process of communicating information to interested parties.

Paramedic
A practitioner credentialed by a State to function at the advanced life support (ALS) level in the State Emergency Medical Services (EMS) system.

Persistent Agent
An agent that, upon release, retains its casualty-producing effects for an extended period of time, usually anywhere from 30 minutes to several days. A persistent agent usually has as low evaporation rate and its vapor is heavier than air; therefore, its vapor cloud tends to hug the ground. It is considered to be a long-term hazard. Although inhalation hazards are still a concern, extreme caution should be taken to avoid skin contact as well.

Personal Protective Equipment (PPE)
Equipment and supplies designed to protect employees from serious injuries or illnesses resulting from contact with chemical, radiological, biological, or other hazards. PPE includes face shields, safety glasses, goggles, laboratory coats, gloves, and respirators.

Plume
Airborne material spreading from a particular source; the dispersal of particles, gases, vapors, and aerosols into the atmosphere.

Possible
A stage in the threat evaluation process in which available information indicates there is an opportunity for an incident (i.e., the threat is possible).

Preparedness
Establishing the plans, training, exercises, and resources necessary to achieve readiness for hazards, including WMD incidents.

Protective Action
Emergency measures taken to protect people from the effects of a hazard. (Shelter-in-place or Evacuation)

Radiation
High-energy particles or gamma rays that are emitted by an atom as the substance undergoes radioactive decay. Particles can be either charged alpha or beta particles or neutral neutron or gamma rays.

Recovery
Recovery, in this document, includes various types of emergency actions dedicated to the continued protection of the public or promoting the resumption of normal activities in the affected area.

Release
Spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discharging of barrels, containers, and other closed receptacles containing hazardous substance or pollutant or contaminant).

Rescue
To access, stabilize, and evacuate distressed or injured individuals by whatever means necessary so that their timely transfer to appropriate care or to a place of safety is made.

Response
Executing the plan and resources identified to perform those duties and services to preserve and protect life and property as well as provide services to the surviving population.

Response Decisions
Part of the threat management process in which decisions are made regarding appropriate response actions that consider 1) the conclusions of the threat evaluation, 2) the consequences of the suspected incident, and 3) the impacts of the response actions on drinking water customers and the utility.

Risk and Resilience Assessment (RRA)
The AWIA of 2018 requires community water supply systems over 3,300 in population to develop RRAs. RRAs assess:

- Risks to the system from malevolent acts and natural hazards
- Resilience of the pipes and constructed conveyances, physical barriers, source water, water collection and intake, pretreatment, treatment, storage, and distribution facilities, electronic, computer, or other automated systems (including the security of such systems) which are utilized by the system
- Monitoring practices of the system
- Financial infrastructure of the system
- Use, storage, or handling of various chemicals by the system
- Operation and maintenance of the system

Security Breach
An unauthorized intrusion into a secured facility that may be discovered through observation, an alarm trigger, or signs of intrusion (e.g., cut locks, open doors, cut fences).

Spokesperson

The individual responsible for interfacing with the public and media or with other agencies requiring information directly from the incident. Under the ICS, there is only one spokesperson per incident.

Technical Assistance Provider
Any organization or individual that aids drinking water utilities in meeting their mission to provide an adequate and safe supply of water to their customers.

Terrorism
The unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or segment thereof, in furtherance of political or social objectives. Domestic terrorism involves groups or individuals who are based and operate entirely within the United States and U.S. territories without foreign direction and whose acts are directed at elements of the U.S. government or population.

Threat
An indication of possible violence, harm, or danger.

Threat Evaluation
Part of the threat management process in which available and relevant information about the threat is evaluated to determine if the threat is 'possible' or 'credible', or if an incident has been 'confirmed.' This is an iterative process in which the threat evaluation is revised as additional information becomes available. The conclusions from the threat evaluation are considered when making response decisions.

Threat Warning
An occurrence or discovery that indicates a threat of a malevolent act and triggers an evaluation of the threat.

Toxicity
A measure of the harmful effects produced by a given amount of a toxin on a living organism.

Vulnerability Assessment (VA)
A systematic process for evaluating the susceptibility of critical facilities to potential threats and identifying corrective actions that can reduce or mitigate the risk of serious consequences associated with these threats.

Weapons of Mass Destruction (WMD)
(1) Destructive device as defined in section 921 of this title ("destructive device" defined as any explosive, incendiary, or poison gas, bomb, grenade, rocket having a propellant charge of more than 4 ounces, missile having an explosive or incendiary charge of more than 1/4 ounce, mine or device similar to the above); (2) any weapon that is designed or intended to cause serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; (3) any weapon involving a disease organism; or (4) any weapon that is designed to release radiation or radioactivity at a level dangerous to human life. (United States Code, Title 18-Crimes and Criminal Procedure, Part I-Crimes, Chapter 113B-Terrorism, Sec. 2332a)

Weapons of Mass Destruction
Explosive, incendiary, or poison gas, bomb, grenade, rocket having a propellant charge of more than 4 ounces, or a missile having an explosive incendiary charge of more than 0.25 ounce, or mine or device similar to the above; poison gas; weapon involving a disease organism; or weapon that is designed to release radiation or radioactivity at a level dangerous to human life. (Source: 18 USC 2332a as referenced in 18 USC 921).

WMD Chem/Bio
A short-hand phrase for "Weapons of Mass Destruction, Chemical/Biological," in reference to those substances that were developed by military institutions to create widespread injury, illness, or death.

Zone, Contamination Reduction (Warm Zone)

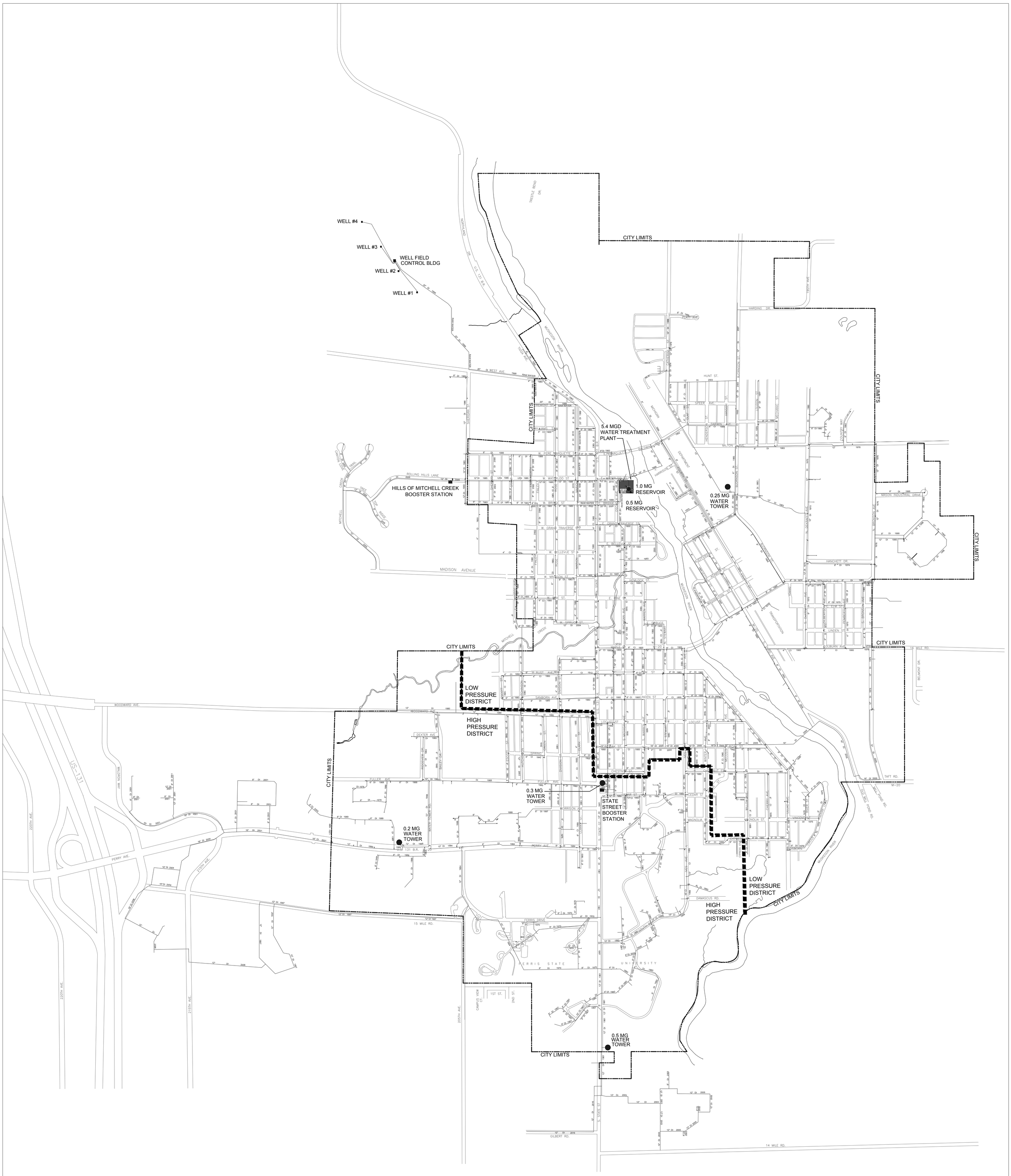
The area between the Exclusion Zone and the Support Zone. This zone contains the personnel decontamination station. This zone may require a lesser degree of personnel protection than the Exclusion Zone. This separates the contaminated area from the clean area and acts as a buffer to reduce contamination of the “clean” area. (U.S. Coast Guard Incident Management Handbook, 2001 edition)

Zone, Exclusion (Hot Zone)
The area immediately around a spill or release and where contamination does or could occur. The innermost of the three zones of a hazardous substances/material incident. Special protection is required for personnel while in this zone. (U.S. Coast Guard Incident Management Handbook, 2001 edition)

Zone, Support (Cold Zone)
The “clean” area outside of the contamination control line. In this area, equipment and personnel are not expected to become contaminated. Special protective clothing is not required. This is the area where resources are assembled to support the hazardous substances/materials release operations. (U.S. Coast Guard Incident Management Handbook, 2001 edition)

ATTACHMENT A

Water System Map



EXISTING WATER SYSTEM

LEGEND

- x" — WATERMAIN WITH SIZE
- FIRE HYDRANT
- VALVESAT
- PRESSURE DISTRICT BORDER

CITY OF BIG RAPIDS
MECOSTA COUNTY, MICHIGAN

EMERGENCY RESPONSE PLAN
ATTACHMENT A

F&V PROJECT NO. 849720

F&V

ATTACHMENT B

Wastewater System Maps

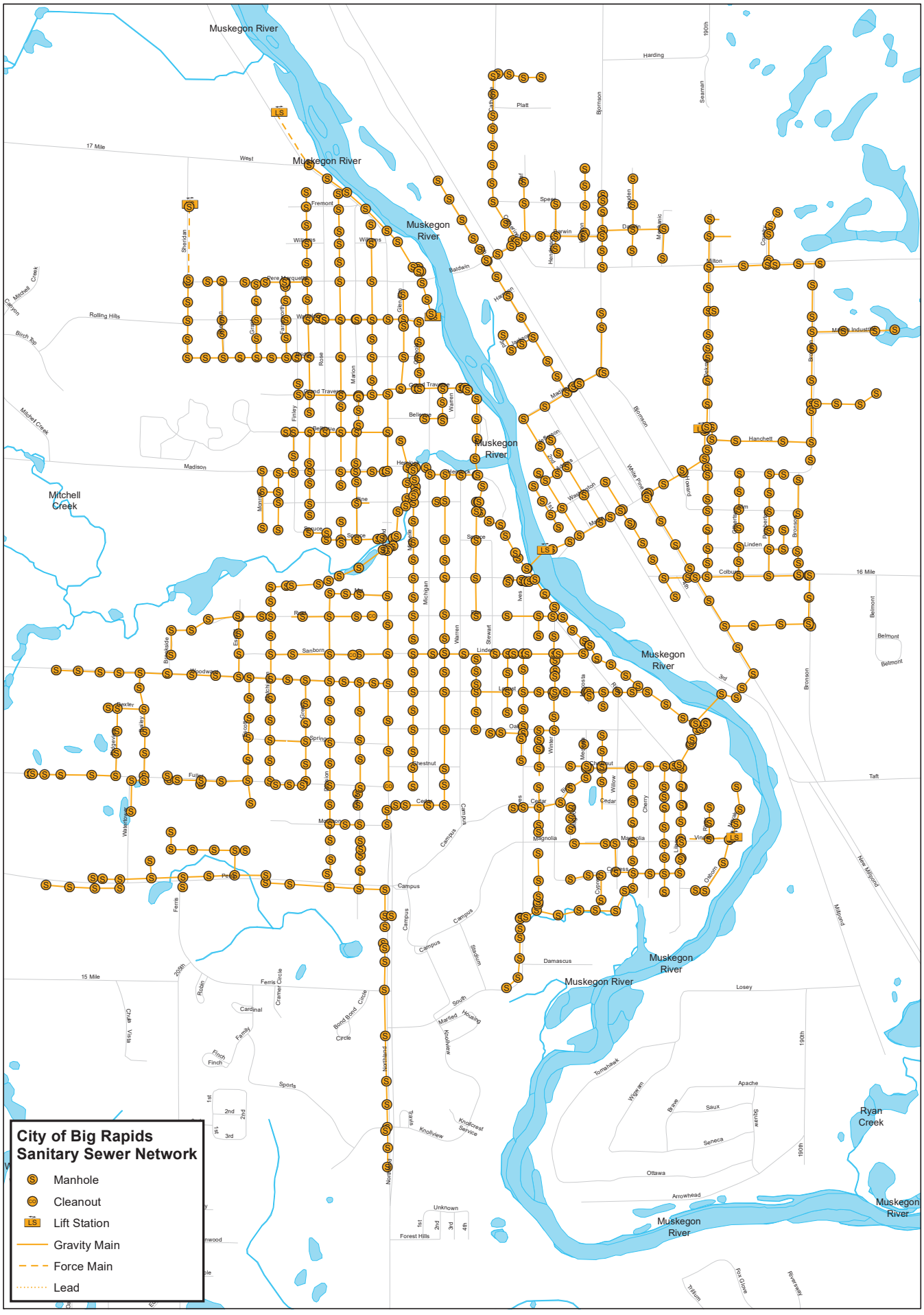


FIGURE	NORTH	DRAWN BY	DATE
A-1	0 540 1,080 SCALE IN FEET	ESP	12/11/2020
		PROJECT NO. 816340	SCALE 1:13,000
		FILE LOCATION	
		SOURCES	

City of Big Rapids

Sanitary Collection System

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

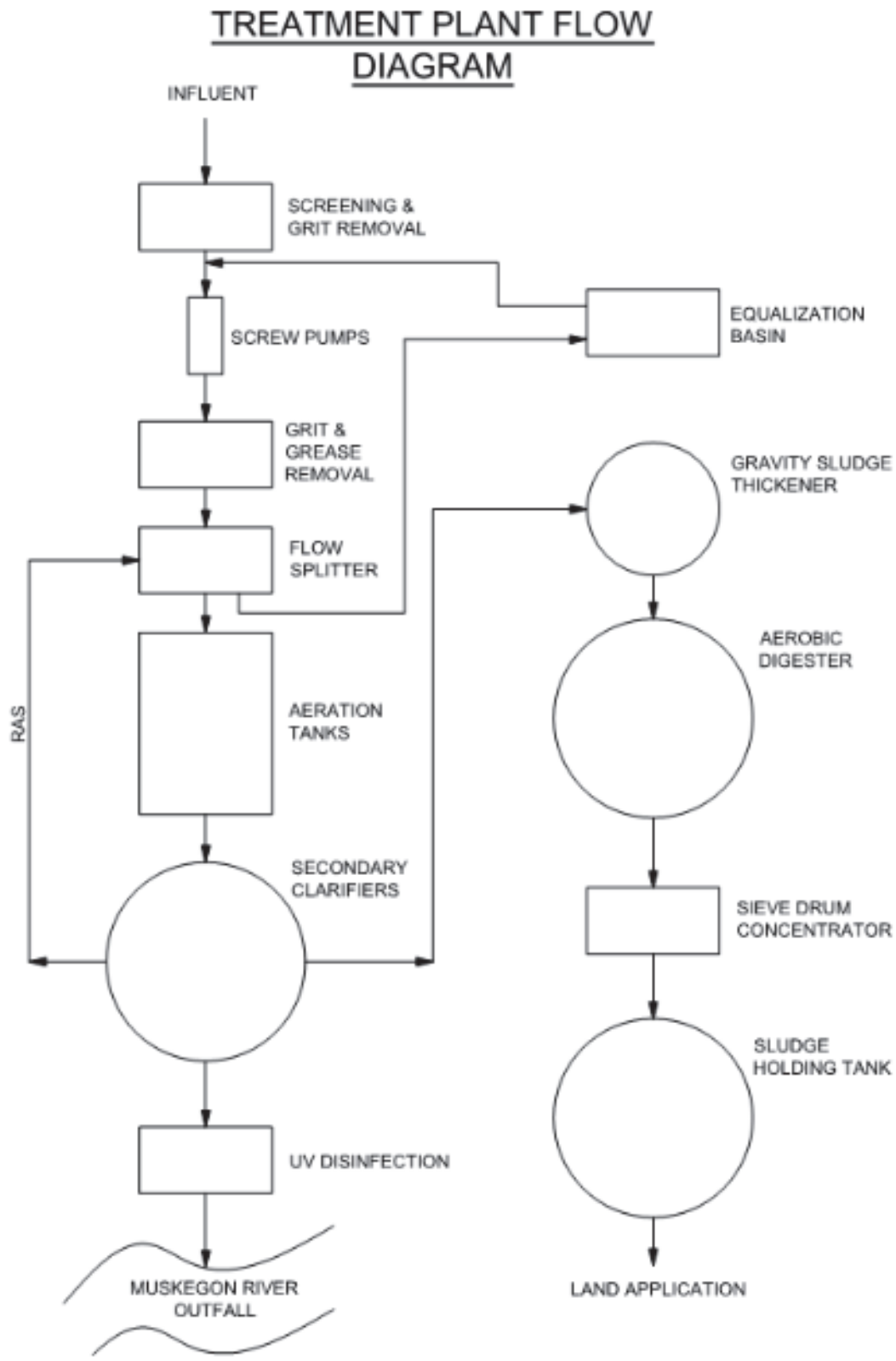


Figure 1: Big Rapids WWTP Flow Schematic