

Emergency Response Plan

North Lawrence Water Authority (NLWA)

Community Public Water Supplier and ERP Information

PWSID # 5247004

Street Address: P.O. Box 277

City, State and Zip Code: Bedford IN, 47421

Phone number: 812-279-2774

Population Served: 4795

Prepared by: Monte Johnson General Manager

Reviewed by: Steve Mosier Board President

Date Completed: 3/4/2026

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UTILITY INFORMATION

During an incident, you need to have system information about your water utility readily available for your personnel, first responders, repair contractors/vendors, the media, and other response partner agencies.

I Utility Overview

Utility Information	
PWSID #	5247004
Utility name and address	North Lawrence Water Authority
Owner	Steve Mosier, Board President
Directions to utility from major roadway, include lat/long coordinates	Turn Left on Bailey Scales road from St Rd 58 east. Lat 1322163.8823257552 Long 3125526.0019337474
Total population served and total service connections	Connections: __4795__
Name, title, phone number of primary contact (ERP lead)	Monte Johnson General Manager 812-583-1197
Alternate contact	Water Operator
Location of treatment, distribution, collection schematics and operation manuals	Water Treatment Plant, Address

Use this checklist to ensure the following additional utility information (as applicable) is included as a part of your ERP.

- Map of distribution systems
- Pressure boundary map
- Process flow diagram
- Site plans and “as built” drawings for the following components of your system (as applicable):
 - Pumping and storage facilities
 - Reservoir facilities
 - Water treatment facilities
 - Chemical storage locations
 - Booster pump stations
 - Pressure-regulating valve (PRV) sites
- Distribution system diagrams and instrumentation information
- Equipment specifications and operation instructions
- Emergency power and light generation operation specifications
- Supervisory Control and Data Acquisition (SCADA) system operation instructions
- Communications systems operation instructions

II Personnel Information

Personnel			
Name / Title	Job Responsibilities	Contact Info	Emergency Info
Monte Johnson	General Manager	812-583-1197	
Greg Johnson	Office Manager	812-804-8709	
Michelle Riester	Office Assistant	812-327-1512	
Whitney Fleetwood	Office Assistant	812-583-5848	
Neal Neideffer	Maintenance	812-508-9184	
Daniel Blackwell	Maintenance	812-797-0597	
Eric Chaney	Maintenance	812-583-2230	
Willie Brock	Maintenance	812-797-7969	
Ryan Hardesty	Maintenance	812-675-7307	
Kadin Hill	Maintenance	812-583-9360	

III Primary Utility Components

Wells			
Well Name	Depth (ft) / Location (UTM North, East)	Available Yield (gpm)	Treatment Requirements / Associated Treatment Plant
1			Groundwater treatment (non-GWUDI), Main plant
2			“ “
3			“ “

Treatment Plants			
Plant Name	Location	Capacity	Treatment Train
Stumphole Water Treatment Plant	2406 Stumphole Bridge Rd Williams IN 47470	2.1 MGD	Pressure Filters

Storage and Distribution System – Tanks, Primary Mains and Pumping Stations		
Location	Area Served	Comments
9 Water Towers	Williams, Fayetteville, Springville, Judah, Needmore, Guthrie, Coveyville, Harden Ridge, 446	
4 Primary booster stations	Coxton Rd, Reuter Lane, Chapel Hill, Bailey Scales	

Treatment Chemical Storage Facilities		
Location	Chemical (s)	Comments
Treatment plant, at	Chlorine	This is in gas form and there is both an eye wash and shower station in the pump house

Other Key Facilities		
Location	Function	Comments
315 Bailey Scales Rd, Bedford IN 47421	Main Office	

IV Industry Chemical Handling and Storage Facilities

This pertains to surrounding chemical production, handling or storage industries that could impact our utility during incidents such as accidental releases or earthquakes

Industry Chemical Handling Facilities			
Facility Name	Location	Distance	Chemical and Exposure Pathway
N/A			

Chemical Storage Tanks (gasoline underground storage tanks, for example)			
Facility Name	Location	Distance	Chemical and Exposure Pathway
N/A			

V Safety

This section lists safety materials and important safety information to help protect utility personnel during and incident. This is where the Health and Safety Plan, if available, is referenced.

Safety Materials	
Type	Location
Toxic material detection and testing supplies	Stumphole Water Treatment Plant
Emergency food and water supplies	N/A
Emergency PPE (note what PPE are present at each location)	SCBA, Respirators, Chemical Gloves
Other equipment (note what is present at each location)	

Safety Information	
Topic	Description
Wind speed	Utility personnel may not work outdoors when the sustained wind speed is 45 mph or greater.

VI Response Resources

This provides an inventory of available resources (ie, equipment, supplies) either maintained on site or readily available off-site (see attached inventory sheet, if applicable)

Resources			
Kind	Type	Quantity	Location
Generator	Cummings, Caterpillar	4	Stumphole Plant Reuter Ln Booster Chapel Hill Booster
Fuel	Diesel		Stumphole Plant Reuter Ln Booster Chapel Hill Booster
Pump			
Other			

VII Key Local Services

This provides information of the closest locations of key logistical and medical services that may be needed by the utility or mutual aid and assistance providers during an incident. Map may be attached.

Essential Services	
Facility	Location / Description
Hospital	IU Health 2900 16 th St Bedford Indiana
Gas station	
Pharmacy	CVS, 1206 16 th St Bedford Indiana
ATM	
Grocery store	
Other service	

1.0 RESILIENCE STRATEGIES

This section contains strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system.

1.1 Emergency Response Roles

This section describes the roles and responsibility for key utility and external response partner personnel.

Water Utility and Partner Roles		
Name / Title	Emergency Response Role	Responsible
Monte Johnson General Manager	Emergency Response Lead	Responsible for all incident response activities, including developing strategies and tactics and ordering and releasing resources.
Neal Neideffer, Daniel Blackwell, Water Operator	Alternate ER Lead	Perform duties as assigned by ER Lead; assumes duties listed above when ER Lead is not available.
City Public Affairs Officer: Valerie Luchauer	Public Information	Responsible for leading the public information effort based on information supplied by either the ER or Alternate ER Lead.
Police Chief: Mike Branham	Security	Will provide incident security as needed once notified by ER Lead.
	Other	

External Response Partner Roles		
Local Partners	Organization	Responsibilities during and Incident
	County Emergency Mgmt.	<i>Overall coordination to emergency response</i>
	911	<i>Immediate response to incident to contain and mitigate</i>
	Police	Will provide incident security as needed once notified by ER Lead.
	Fire / HazMat	<i>Suppressing fire, chemical hazards</i>
	Elected Officials	<i>Coordination with emergency responders</i>
	Neighboring Wastewater Utility	<i>City Of Bedford Utilities</i>
	Neighboring Water Utility	<i>City Of Bedford Utilities</i>
	Power Utility	<i>Duke, REMC Bloomfield</i>
	Health Dept.	<i>Alan F. Smith</i>
	Contractor/Vendor	<i>Brenntag Chemical Co.</i>
	Industry Representative	
	Mutual Aid	
	Other	
State Partners		
	IDEM	
	State Board of Health	
	State Police	
	INWARN	
Federal Partners		
	EPA Regional Office	
	FBI Field Office	
	CDC	

1.2 Incident Command System (ICS) Roles

ICS is used to organize both near-term and long-term field-level operations for a broad spectrum of emergencies, from small to complex incidents, both natural and manmade. An ICS Incident Organization Chart (ICS Form 207), available at FEMA's ICS Resource Center, may be completed for your utility and inserted here or attached to your ERP.

1.3 Communication

Communication during an incident is critical to relay information to employees, response partners and critical customers about potential risks to health, infrastructure, and the environment.

1.3.1 Internal Communication

Utility Emergency Response team members are shown on the chart below.

Contact List				
Name	Role / Title	Phone	Alternate Phone	Email
Monte Johnson	General Manager / Oversight of Water Utility	812-583-1197	812-279-2774	office@northlawrencewater.com
Greg Johnson	Office Manager	812-804-8709	812-279-2774	office@northlawrencewater.com
Ryan Hardesty	Maintenance	812-675-7307	812-279-2774	office@northlawrencewater.com
Neal Neideffer	Maintenance	812-508-9184	812-279-2774	office@northlawrencewater.com
Eric Chaney	Maintenance	812-583-2230	812-279-2774	office@northlawrencewater.com
Willie Brock	Maintenance	812-797-7969	812-279-2774	office@northlawrencewater.com

1.3.2 External Communication

External response partners are shown on the chart below.

Contact List				
Name	Role / Title	Phone	Alternate Phone	Email
Local				
County Emergency Mgmt.	Director	812-277-9680	812-583-0157	lcema@lawrencecounty.in.gov
911				
Police	Dispatch	812-275-3316	911	
Fire / HazMat			911	
Elected Officials	Steve Moiser	812-797-4269		mosiertrenching@gmail.com
Neighboring Wastewater Utility	Bedford Utilities	812-275-1626	812-275-1627	
Neighboring Water Utility	Bedford Utilities	812-275-1626	812-275-1627	
Power Utility	Duke Energy REMC Bloomfield			
Health Dept.		812-275-3234		
Contractor/Vendor	Water Solutions Unlimited	812-736-2866		
Industry Representative				
Mutual Aid				
State Partners				
IDEM	Dustin Hiten	812-249-7875		
State Board of Health		317-233-1325	1-800-382-9480	
State Police	District 33	812-332-4411	800-423-1286	
INWARN				
Federal Partners				
EPA Regional Office	Region 5	800-621-8431		
FBI Field Office	Bloomington Office	812-332-9275		
CDC	ISDH	317-233-1325		

1.3.3 Critical Customer Communications

List critical customers below who should be given priority notification due to their reliance on the water supply either for medical reasons, based on usage, public health mission or because they may serve customers considered to be sensitive sub-populations.

Critical Customer Contact List Prioritizing sensitive populations and large users				
Customer	Contact	Phone (area code ---)	Alternate Phone	Email / website
Springville Community School		812-508-1568		
Needmore Elementary School		812-279-2192		
Fayetteville Community School		812-279-2376		
Crossroads Daycare		812-279-0131		

1.3.4 Critical Customer Communications

Water utility communication equipment is listed below.

Communication Equipment			
Type	Assigned to	Location	Number / Frequency / Channel

1.4 Media Outreach

Contact information for all media outlets that may be coordinated with during notification efforts. This includes any risk communication procedures, such as composing and delivering messages (e.g. message mapping), or reference to an existing Risk Communication Plan.

Contact List				
This can include TV and radio stations, social media, newspapers, advertising agencies				
Organization	Contact / Title	Phone	Alternate Phone	Email

1.5 Public Notification Templates

Templates for public notifications are included in this section or referenced where they can be found. Templates must be consistent with the regulatory requirements for public notification contained in the Public Notification Rule (CFR 141, Subpart Q) and all relevant state regulations.

2.0 EMERGENCY PLANS AND PROCEDURES

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

Core procedures (Section 2.1) are the “building blocks” for incident specific response procedures, as they are typically implemented across a broad variety of incidents.

Incident specific emergency procedures are divided into those in response to natural or accidental hazards (Section 2.2) and those in response to attacks on the system (Section 2.3).

Information on response scenarios in this plan are based in part on templates available from the Indiana Department of Environmental Management (IDEM) and the U.S. EPA, including the EPA’s Incident Action Checklists (IACs) that can be used to help develop Incident-Specific Response Procedures (ISRPs). EPA also published the “Prepared for Contamination in Your Distribution System?” guidance that can help develop a distribution system contamination ISRP.

These plans and procedures should be reviewed at least once every five years (the time frame over which EPA requires review and recertification). As new ideas on how to respond to emergencies arise over time, the plan may incorporate new ideas and procedures, or new scenarios as is deemed appropriate.

2.1 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. Core procedures are listed here.

Access (to infrastructure)	
Item	Description
Debris clearing	Excavators, Skid steer, trailers, chainsaw
Alternative routes	List or reference here alternate routes (e.g., if there is a bridge that connects your community, what are your travel options if the bridge becomes impassable?). If the alternate routes are too long, consider staging similar critical equipment and resources in different areas of your community.
ID badges	Provide personnel with an official utility ID for access through police barricades or hazmat contaminated zones. If your jurisdiction has an identification program for first
Other	

Physical Security	
Item	Description
Access control procedures	The Treatment plant only has 5 keys, and the Office only has 5 keys. Each one of these are numbered and assigned Keys for the distribution system are all numbers and assigned, each employee has one of these and they are Non-Duplicate
Restricted areas	Chlorine gas Storage room, Chlorine gas feed room, and the fluorosilicate acid room
Evidence protection measures	Describe or reference your procedures for working with law enforcement if an incident is declared a crime scene.
Security Culture	Increase organizational attentiveness to security to help reduce vulnerability and enhance preparedness. For example, a “See Something, Say Something” campaign for your utility. List measures your utility implements here.
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	<p>General manager Monte Johnson Office assistant Laura Eads IT Contractor Brian Corn</p> <p>Include any state resources that may be available such as State Police, National Guard Cyber Division or mutual aid programs, as well as the Department of Homeland Security National Cybersecurity and Communications Integration Center (NCCIC) (888-282-0870 or NCCIC@hq.dhs.gov).</p>
Assess procedure	Assess any damage to utility systems and equipment, along with disruptions to utility operations. Contact General Manager
Implementation processes	Implement actions to restore operations of mission critical processes (e.g., switch to manual operation if necessary) and provide public notification (if required).
Documentation	Include forms to document key information on the incident, including any 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	List or reference your auxiliary power sources (fixed and portable) if you have not already done so elsewhere in your ERP. Provide a summary of critical facility power requirements, generator siting requirements, and the location
Power utility	Coordinate with your power utility for expected restoration priorities and timing. Power utility contact information should be listed in Section 3.2 above.
Fuel plan	Provide an inventory of on-site fuel supplies and list or reference your procedures to obtain additional fuel from vendors for your backup generators during an incident.
Maintenance plan	Maintaining generators during extended outages is critical. List your maintenance procedures for each generator, who is responsible for implementation and include lists of on-hand items such as spare parts and filters. Cummings Crosspoint LLC
Other	

Emergency Alternate Drinking Water Supplies	
Item	Description (provider, phone, contract #, quantity available, distribution point)
Bottled water	
Bulk water	

Sampling and Analysis	
Item	Description
Sampling procedures	Identify proper sampling procedures for different types of contaminants and attach those procedures to your ERP or reference where they can be found. Determine the quantity of required samples.
Pre-identified sampling locations	While some sampling sites will be dictated by the emergency, you can pre-plan your ideal sampling locations such as tanks and reservoirs or entry and exit points from pressure zones.
Sampling containers and preservatives	Obtain and inventory all sample containers and preservatives and list or reference them here.
Sample collection	Confirm who will be responsible for sample collection during an emergency and who can take over if that person is not available. List those names here.
Sample transportation	Confirm who will be responsible for transportation during an emergency and who can take over if that person is not available. List those names here.
Laboratory capabilities	Confirm what contaminants can be analyzed and your lab's surge sampling capacity. It may be helpful to have several backup laboratories in case your utility's lab or preferred contract lab are overwhelmed with high sample volume. Identify contract laboratories in the following table.
Interpreting results	Work with the appropriate lab, utility and regulatory agency personnel to interpret sample results. List those names here.
Other	

Family and Utility Personnel Well Being	
Item	Description
Family disaster plan	Implement your family plan to ensure their well-being during an incident.
Assembly area	List all the assembly areas and evacuation procedures for personnel.
Supplies	List the supplies necessary to maintain personnel health and well-being during an incident (e.g., food, potable water, cots, first aid kit, sanitary products).
Alternate work and shelter locations	Personnel may need to work from home. Or, they may need to shelter at a hotel or your utility if conditions do not permit travel home. List conditions for which work at home provisions will be triggered and list sheltering locations and procedures here.
Extreme temperatures	List or reference here any supplies or equipment your utility owns to mitigate extreme temperatures such as cold weather items (e.g., sand, salt, ice melt, tire chains, snowshoes) and hot weather items (e.g., pop-up shade canopies, water coolers, broad-brimmed hats).
Other	

2.2 Incident-Specific Response Procedures – Natural / Accidental Hazards

This section provides steps to follow in incidents that are not deliberate, malevolent acts against the system. Some responses or actions are common to more than one incident. These steps should be seen as a guide on how to respond, and are not intended to restrict responders to a single course of action.

2.2.1 Chlorinator Failure

Shut off the chlorine feed system and proceed to shut down the entire treatment plant. Spare parts are located within the treatment plant. There is a backup post chlorination system located at the chlorine room on the east wall. It is on a 24-hour availability.

2.2.2 Cold / Winter Storms

Steps to utilize as needed:

- 1 – Notify EMA and IDEM of system status, or as changes in the situation occur.
- 2 – Notify Customers of any steps needed to respond to any situation that may impact the system (one common example would be to keep a thin stream of water running at home faucets during extreme cold snaps).
- 3 – Conduct damage assessments of the utility to prioritize any repairs and other actions needed.
- 4 – Check that backup equipment and facility systems, such as controls and pumps are in working order, and ensure that chemical containers and feeders are intact.
- 5 – Inspect the utility and service area for damage. Identify facility components and fire hydrants that have been buried in snow, frozen or are inaccessible.
- 6 – Ensure pressure is maintained throughout the system and isolate those sections where it is not.
- 7 – Isolate and control leaks in water transmission and distribution piping.
- 8 – Monitor source water quality, develop a sampling plan and adjust treatment as necessary. Increase usage of road salt within the service area may be a concern.
- 9 – Document the incident.

2.2.3 Contamination – Spills

Policy for Handling Spills:

The fire department responds to all emergency calls. If absorbent pads or sand are not available in-house, a licensed cleanup company may be called to assist with these materials and to evaluate the spill and oversee other appropriate actions necessary for proper clean-up.

The local fire chief will complete all reports and notifies the appropriate enforcement agencies, including IDEM's Office of Emergency Response. Wells should be able to remain in normal operation (unless the spill is at a wellhead). Contaminants travel relatively slowly, and may provide more time to prepare a plan of action.

Any spill near the wellfield on major thoroughfares needs to be contained and cleaned up immediately. The police and fire authorities shall report all spills to the water department as soon as possible.

As part of NLWA's wellhead protection plan contingency planning, the Bedford County EMA and the fire departments have been notified of the wellhead protection area boundaries and the municipal well locations and have been asked to relay information on spills as soon as possible to the water department.

2.2.4 Contamination – System

PROBLEM: Back Siphonage and High Pressure Chemical Pump

Action Needed:

- 1 - Locate the problem and shut it off.
- 2 - Issue an order to NOT USE WATER.
- 3 - Use main valves to control the flow of water and isolate the chemical.
- 4 - Flush fire hydrants in the area until the water is clean.
- 5 - Have water samples collected from fire hydrants and neighboring homes to evaluate the extent of contamination.
- 6 - When the mains appear to be clean and testing verifies that no chemical contaminants are present, issue a boil water order for all water customers.
- 7 - If testing does not indicate the presence of the chemical or bacteria in the system, cancel the boil order.

- 8 - If a chemical pump was involved, require backflow prevention to be installed.
- 9 - If back siphonage was the problem, determine why it happened and require backflow prevention to be installed.

PROBLEM: If treated water is found to be unsafe

Action Needed:

- 1 - Contact the general manager, inform IDEM (Inspector as of May, 2021: Angie Willoughby, 812-249-7875), and notify the public through radio and internet.
- 2 - Provide the following information:
 - Nature and expected duration of the problem
 - The geographical area affected
 - The limitations on consumption of water
 - Progress reports and recovery schedules
 - Location of alternate water supply
- 3 - If contamination can be isolated to an area within the grid system, that area shall be flushed and perhaps disinfected with a higher chlorine dosage. If a high chlorine dosage is used, each metering service must be shut off to ensure customer safety. After removal of high chlorine residual, samples should be taken for examination to protect public safety. Call IDEM (above number) for consultation and help.
- 4 - Any type of cross connection contamination must be dealt with at once. Isolate the area, shut off water meters in area, and flush as above.

2.2.5 Contamination – Wells

General: If the raw water source is found to be contaminated by toxic chemicals, that endanger the Public Health. Shut down the water plant operation immediately and call the water plant operation immediately and call the general manager. IDEM shall be notified at 812-249-7875 (Angie Willoughby, as of May, 2021)

Action Needed:

- 1 - If this situation arises, a professional environmental, consulting engineer, or well service company will be called immediately.
- 2 - Issue an order to NOT USE WATER.
- 3 - The wellfield shall be shut down until a professional can analyze it.

4 - Look at all options to try and restore operation.

5 - Set up a bottled drinking water distribution point at an open area such as the school. Other emergency water supplies may need to be brought in, through coordination with the County EMA.

6 – The feasibility of connecting to alternate water supplies, if a connection is already available, will be evaluated (must ensure that contamination does not spread to another system).

2.2.6 Drought / Excessive Heat

Actions to be Taken or Considered:

1 – Monitor source water quantity through well levels.

2 – Also monitor groundwater quality, which can be affected by lower quantity and higher temperatures. Treatment process may need to be adjusted.

3 – Evaluate alternate water supplies or design changes.

4 – Monitor for potential fire hazards and conditions.

5 – Notify IDEM if water quality or quantity are affected.

6 – Implement mandatory or voluntary water conservation efforts, and conduct regular outreach to customers.

7 – If water shortages or outages occur, notify customers of water advisories, consider collaborating with local media to get the message out. If emergency water is being supplied, provide information on the distribution locations.

8 – Use backup generators, as needed, to supply power to system components. Monitor and plan for additional fuel needs in advance. Coordinate fuel deliveries to generators

9 – Document all damage assessments, mutual aid requests, emergency repair work, equipment used, purchases made, staff hours worked and contractors used during the response to assist in requesting reimbursement and applying for federal disaster funds. When possible, take photographs that illustrate the drought conditions (with time and date stamp).

2.2.7 Earthquake

PROBLEM: Distribution System Leaks

Action Needed:

Disperse all personnel to locate and repair leaks. Repair larger leaks first. Try to maintain system pressure at all times. If pressure drops below 20 PSI or a water main is shut off, follow the guidelines below:

- 1 - If possible, keep full pressure on the distribution system to prevent contamination problems.
- 2 - If system pressure drops below 20-PSI monitor and maintain chlorine to help avoid contamination problems.
- 3 - If pressure is completely lost in the affected area, issue a boil order, use main line valves to direct the flow of water and do extensive flushing to clean the distribution system.
- 4 - Add chlorine per Indiana Department of Health standards.
- 5 - Collect bacteriological samples from all water mains involved. When all samples are identified as being bacteriological safe, cancel the boil order.

PROBLEM: Damage to a Well Casing

Action Needed:

- 1 - Switch the pump into last place on the control panel and shut it off.
- 2 - Switch the other three pumps into lead and lag position.
- 3 - Call a well casing supplier to make the needed repairs.

PROBLEM: Loss of one Elevated Water Tower

The elevated water tanks are designed to withstand ground movement as well as high winds. Damage to these tanks although unlikely is a possibility. Should one tank be damaged or lost follow the procedures outlined below.

Action Needed:

- 1 - Shut the incoming water main off.
- 2 - Call the electric company to disconnect the service.
- 3 - Call the elevated tank manufacturer to evaluate damage and assist with repairs.

4 - Supply the distribution system and customers utilizing the other elevated water tower.

PROBLEM: Loss of two or more Elevated Water Towers

Action Needed:

- 1 - Shut off the main supply valve to the elevated tanks.
- 2 - Run the high service pumps in hand or manual position as needed to maintain service to the community at designated times.
- 3 - Install pressure relief valves within the system to prevent damaging water mains and customer plumbing.
- 4 - Have the electric utility shut off and remove electricity from the tanks.
- 5 - Call the elevated tank manufacturer for assistance in repairing the tank.
- 6 - Continue manual operation until one of the elevated tanks is back in service then change the pressure relief controls back to the repaired tank.

2.2.8 Fire

In case of fire or during an emergency requiring a building evacuation, the following procedures will be used without exception.

1. The person discovering the problem will do the following:
 - a. Notify all employees of the emergency.
 - b. Notify the FIRE DEPARTMENT by dialing 911 and have them contact the general manager.
2. All employees will evacuate the building using the nearest exit.
3. Under no circumstances is anyone to remain behind or attempt to extinguish a fire.
4. Any employee requiring medical assistance will be transported to the hospital.
5. Under no circumstances will any employees re-enter a building to attempt a rescue.

Given the above policy, summaries of action needed to address fires at different areas of the water system are discussed below.

PROBLEM: Fire at an Elevated Tank

The fire would probably be contained within the telemetry system, heater or dehumidifier. These are the only items in the tank that could overheat and possibly catch fire.

Action Needed:

Fill the tanks manually until the telemetry system, heater or dehumidifier can be replaced by the utility or an electrical contractor.

PROBLEM: Fire at the Water Plant

Action Needed:

- 1 - Fire would most likely be contained to an individual unit and damage to the entire structure is not likely.
- 2 - Take involved unit out of service and continue operation.
- 3 - If the telemetry system is affected, switch to local control.
- 4 - If controls are damaged, call the electrical contractor for assistance.

2.2.9 Flood (when advance warning is available)

Action Needed:

- 1 – Secure equipment and electronics to a water-tight facility or out of flood-prone areas. Determine areas outside the floodplain where vehicles and equipment can be moved.
- 2 – Clear storm drains and set up sandbags to protect facilities in flood-prone areas. Place sandbags on the top of tanks so that backwash water is directed away from plant structures.
- 3 – Check that backup equipment and facility systems, such as controls and pumps, are in working order, and ensure that the utility has a two-week supply of all chemicals on hand.
- 4 – Protect exposed lines or pipes that may become vulnerable due to streambank erosion.
- 5 – Fill storage tanks to full capacity to maximize storage and fill empty chemical storage tanks with water if a heavy precipitation event is anticipated to prevent floating.
- 6 – Fuel vehicles and fill fuel tanks to full capacity and ensure that you have the ability to manually pump gas in the event of a power outage. Ensure this equipment and other hazardous materials are located in a safe zone.

7 – Notify customers.

8 – Inspect the utility and service area for damage due to debris, downed trees, and floodwaters. Identify facility components and fire hydrants that are inaccessible or have been destroyed.

9 – Isolate and control leaks in system.

10 – Monitor water quality, develop a sampling plan and adjust treatment as necessary.

11 – Inspect all manholes and pipelines in flood-prone areas for inflow and infiltration after the flood water recede.

12 – Consider suspending solid waste processing during periods of high flow to conserve bacteria and prevent it from washing out of the plant.

13 – Deploy emergency operations and clean-up crews.

2.2.10 Leaks – Chlorine

Action Needed:

Chlorinator Failure: Shut off the chlorine feed system and proceed to shut down the entire treatment plant. Spare parts are located within the treatment plant to rebuild the chlorinator and return the plant to normal operation. If the system is not restored soon, then DO NOT USE / BOIL WATER orders may be needed.

Chlorine Gas Leak: Isolate the leak immediately; if possible, but always observe all safety requirements. If leaks cannot quickly be isolated, seal chlorine room door, notify the fire department and general manager, and evacuate to an upwind area. There is a plunger “KHC” button inside WTP that will completely shut down chlorination equipment. A chlorine gas detector and alarm that activates an automatic shutdown of chlorine cylinders.

2.2.11 Leaks – Water from the System

PROBLEM: Major Water Main Break

General: Notify the Utility Office or dispatch after 4:00 p.m. and they will contact Water Distribution personnel and inform them of the situation. Closing the necessary valves will isolate the leak. A set of valve location drawings is located in the Distribution Office and the Water Treatment Plant. If parts are needed to repair the break, which are not in stock, see the “Business Contact” section of the “Phone List” located in the general manager’s Office.

Action Needed:

- 1 – Unless otherwise directed, the water plant will remain in operation
- 2 – The general manager will coordinate the location of the main break and the affected area. This area will be isolated by closing all applicable main valves.
- 3 – The break shall be repaired and the following procedure utilized to reinstate use of the main whenever possible
 - a – If at all possible isolate the fire hydrants in the shutdown section of the distribution main, to allow proper flushing of the system
 - b – Open the fire hydrant at one end of the isolated water main
 - c – On the opposite end of the isolated main, slowly open one main line valve until water is heard flowing past the valve.
 - d – When the water begins to flow from the open fire hydrant at the opposite end, begin again to slowly open the main line valve.
 - e – After the main line valve is fully open; leave the fire hydrant open until clear water is flowing and all air has been expelled.
 - f – Continue this procedure until all isolation valves have been opened.
 - g – Take the bacteriological water sample from the nearest possible sampling point both upstream and downstream.

PROBLEM: Water Leak in Plant

Isolate if possible and shut down equipment affected. Repairs will be performed with City equipment, material, and workforce. In an emergency, the iron pressure filters can be bypassed for a short time. Call list is available.

2.2.12 Pandemic / Absent Employees

If the certified water operator fails to come in to work, call the general manager to find someone who is cross-trained in Water System Operation. It is important to have several people cross-trained in operations and trouble-shooting the Water System.

General steps to take to lessen the impacts of a pandemic:

- 1 – Close offices to the public, communicate via phone, email or website, and consider halting in-person meetings with customers or others until further notice.

- 2 – Inform staff on the latest recommendations to limit further transmission of the disease.
- 3 – Consider temporarily suspending drinking water shut-offs due to non-payment in order to protect staff and maintain essential water services.
- 4 – Consider increasing the frequency of cleaning and disinfecting all surfaces and equipment, including control rooms, vehicles, computers and other e-devices, break and conference rooms.
- 5 – Implement telework for staff where feasible to maintain operations. Consider implementing shift rotations. Reach out to local assistance providers such as RCAP, NRW, and others who may be able to provide licensed operators or technical assistance. Coordinate with EMA where applicable.
- 6 – If the situation is warranted, make preparations to house critical staff on-site (with access to beds, food, water, medical supplies, communications, etc.)
- 7 – Remind staff to anticipate cyber threats seeking to exploit the situation.
- 8 – Secure all facilities in preparation for limited access and surveillance.
- 9 – Stay in close contact with your suppliers of equipment, materials treatment chemical, and other supplies, especially if you were not able to stockpile chemicals or materials. If a shortfall is anticipated, contact INWARN of other utilities for assistance, and the EMA.
- 10 – Documentation.

2.2.13 Power Outage

General: If emergency generator fails to start or is inoperative, turn off all equipment switches and contact the Utility Office or dispatch after 4:00 p.m. They can notify the general manager of the situation.

PROBLEM: Water Filtration Plant Loses Power (Short Term Outage, <8 hours)

Action Needed:

Notify the electric utility of the problem and try to determine how long it will take to restore electricity. If electricity can be restored in eight (8) hours or less, allow the system to run. Generator will run to keep the plant operational.

PROBLEM: Elevated Tanks Out of Electric (Short Term Outage, <8 hours)

Action Needed:

Place generator at the elevated tank, or fill the tanks manually until electricity can be restored by the utility.

Short Term Power Failure – Power loss at water tower only:

- 1 – Notify the manager of the outage.
- 2 – The water plant operator will operate the plant and/or booster pumps according to the sequence as directed.
- 3 – Upon receiving the all-clear from the telemetry monitoring system, the water plant operator shall return the system to normal operation.

Short Term Power Failure – Power loss at water filtration plant only:

- 1 – The utility supervisor shall coordinate with the electric utility to determine the predicted length of the outage.
- 2 – If the outage is anticipated to last for over two hours and/or depending upon the levels in our affected water tower storage, the manager will approve the switch over to our alternate water supply for the wellfield.
- 3 – Upon restoration of power to the water plant, the assistant maintenance manager will coordinate restoring the system to normal operation.

Short Term Power Failure - Power loss in the entire system:

- 1 – The general manager shall direct the monitoring of the water towers by field personnel, by radio if available, or by scheduled meetings.
- 2 – The electric utility shall be contacted to determine the anticipated length of outage.
- 3 – The telemetry monitoring system will signal when the electrical power returns and the system can be returned to normal operation.

PROBLEM: Water Filtration Plant Out of Electric (More than 8 hours)

Action Needed:

Use generators where needed until electricity can be restored. Notify the news media, declare a water emergency and ask customers to conserve water.

Call the planning commissioner or mayor, either has the authority to contact the power company for repairs or a mobile substation.

Contact the appropriate contractor in Section 1.3.2 to make emergency generator repairs.

2.2.14 Pressure Drop in the System

General: The water utility has one elevated water tank. The system can be pressurized manually at the water treatment plant during emergency situations.

Due to the configuration of the water system, it is not possible to fill the water tower storage prior to re-supplying water to the distribution system. Also, there may be more than one pressure zone affected. The water department supplies several separate pressure zones. The manager will coordinate the following activities:

- 1 – Identify the pressure zone(s) affected.
- 2 – Notify customers through the notification system to not use water for any purpose.
- 3 – The general manager will determine the perimeter hydrants to open in the service areas affected, and direct the maintenance personnel accordingly.
- 4 – The water plant will increase the chlorine dosage to achieve a 2.5 ppm residual at the point of entry into the system.
- 5 – Free chlorine residuals will be monitored at the perimeter hydrants and recorded on half hour intervals.
- 6 – Each hydrant will be flushed until at least a 0.5 ppm free residual is achieved.
- 7 – Once the free chlorine residuals of 0.5 ppm are achieved at all hydrants and sampling sites, the general manager shall notify the public that they may resume the use of water.
- 8 – The general manager will issue the instruction to close all fire hydrants and resume normal operations after the completion of the above steps.

With a loss of water pressure or very low system pressure, the general manager shall determine if switching to the alternate water source is deemed necessary, depending upon the reason for the system water pressure loss.

2.2.15 Pump or Motor Failure

The pumps can be isolated. Some repair parts are in stock. For electric motor or pump repairs, see the “Business Contact” section of the “Phone List” located in the General Manager’s Office. There is a spare 60 HP motor that will replace any of three operating pumps inside WTP.

2.2.16 Tornado Scenarios

PROBLEM: A tornado hit the phone lines and has disabled the telemetry controls

Action Needed:

If the phone lines from the treatment plant to the elevated water towers are still operational, the tanks can be controlled from the treatment plant. If the phone lines are totally down, the water level can be manually monitored at the tower by checking pressure gauge status and filling manually as needed.

PROBLEM: A power surge from downed electrical lines burned out the control board in the control center at the water plant

Action Needed:

Notify the electrical contractor of the emergency situation. Advise of the immediate need for help. When help is on site, try to salvage enough parts to get at least one high service pump and one well running.

If the power panel cannot be temporarily repaired to allow a high service and well pump to operate, try to establish a temporary electric service to a high service and well pump and utilize hand to run the pumps until the panel is repaired. This should be accomplished within eight (8) hours. If it takes longer than eight (8) hours, notify residents and industries to conserve. If the temporary service is not in operation within twenty-four (24) hours, call the County EMA and request a generator to establish temporary electricity.

PROBLEM: Damage to the water treatment plant caused damage to the chlorinating system and created a chlorine leak

Action Needed:

- 1 - Call the Fire Department with as much information as possible.
- 2 - Evacuate as needed. Maintain isolation of controls from chlorine leak.
- 3 - Shut the main chlorination power off.
- 4 - Ventilate the gas to the atmosphere.
- 5 - Once the site is declared safe by the Fire Department, assess damage and repair if possible.
- 6 - If repair with local resources is not possible, call mechanical contractor/supplier and request immediate help.

7 - Assess probable downtime and total stored water to determine if temporary chlorination needs to be established. Follow procedures to introduce chlorine manually into system.

8 - When repairs are complete turn to automatic and discontinue the manual operation.

PROBLEM: A tornado destroyed a Well Pump House

Action Needed:

1 - Turn the involved well off and switch the other wells to operate.

2 - Call the electrical utility and have the power lines removed from the well.

3 - Once all power is off to the area, use a backhoe and loader to carefully remove the damaged structure and uncover the pump, motor and piping.

4 - Assess total damage to the electric, pump motor and piping. Call pump/well casing contractor, if damage to pump, motor or piping has occurred. If only electrical damage is keeping the pump from operating, utilize an electrical contractor to assist in the repair.

5 - Build a temporary enclosure to protect the electrical service, pump and motor so well can be operated.

6 - Rebuild the well house. A portable generator may be required to establish interim operations.

PROBLEM: Water Treatment Plant Building was hit and building collapsed

Action Needed:

1 - Shut off all incoming electricity at the transformer pole and downed power lines. (have the electrical company do this).

2 - Shut off all water, check for and correct chemical leaks and pumps.

3 - Notify the public of the disaster and ask them to conserve water.

4 - Notify electrical and mechanical contractors, PSI and the fire department for assistance. (phone numbers are listed in this document).

5 - Utilize loaders and backhoe to remove fallen parts of the building.

6 - Call in local carpenters and plumbers as needed to assist in removal of debris, constructing a temporary roof and making plumbing repairs.

7 - Assess damage to electric power panel, controls, high service pumps and chemical feed systems. Make necessary repairs.

8 - Once protected, try to restore temporary power and control at least one high service pump and one well pump. If filtration is lost bypass the filtration to get the water into the distribution system (this will allow fire protection).

9 - Set up a distribution point at the fire station for potable water.

10 - Notify public of conservation needs.

PROBLEM: Loss of One Elevated Water Tower (if more than one tower is in the system).

Action Needed:

1 - Shut the incoming water main off.

2 - Call the electric company to disconnect the service.

3 - Call the elevated tank manufacturer to evaluate damage and assist in repairs.

4 - Supply distribution system and customers by utilizing the other elevated water tower.

PROBLEM: Loss of Two or More Elevated Water Towers

Action Needed:

1 - Shut off the main supply valve to the elevated tanks.

2 - Run the high service pumps in hand or manual position as needed to maintain service to the community at designated times.

3 - Install pressure relief valves within the system to prevent damaging water mains and customer plumbing.

4 - Have the electrical utility shut off and remove electricity from the tanks.

5 - Call the elevated tank manufacturer for assistance in repairing the tanks.

6 - Continue manual operation until one of the elevated tanks is back in service then change the pressure relief controls back to the repaired tank.

Residential or Commercial Area

PROBLEM: Tornado hit a developed area of the city.

Action Needed:

Disperse personnel to locate and repair water leaks in the affected area. Repair larger leaks first. Try to maintain system pressure at all times. If pressure drops below 20 PSI or a water main is shut off, follow the guidelines below:

- 1 - If possible, keep full pressure on the distribution system to prevent contamination problems.
- 2 - If system pressure drops below 20-PSI monitor and maintain chlorine to help avoid contamination problems.
- 3 - If pressure is completely lost in the affected area, issue a boil order, use main line valves to direct the flow of water and do extensive flushing to clean the distribution system.
- 4 - Add chlorine per Indiana Department of Health standards.
- 5 - Collect bacteriological samples from all water mains involved. When all samples are identified as being bacteriological safe, cancel the boil order.

2.3 Incident Specific Response Procedures – Attacks On System

The three categories of attacks in this section are: deliberate contamination at some point in the system, cyber-type attacks, or physical destruction or damage of elements of the system and/or personnel.

2.3.1 Contamination - Distribution System

This scenario would be similar to that followed for introduction of contaminants at a booster station, in that hydrants can be access points to introduce contaminants into the system. In addition, tampering with hydrants can reduce water pressure below that required to adequately serve customers, and low pressure increases the chance for bacteriological contamination. Potential assailants may see this as a more vulnerable target, due to the numbers of hydrants and that it is not possible to monitor all of these appurtenances 24/7.

Step 1) Notify emergency responders by dialing 911. Emergency responders will secure the area, and summon any additional help deemed necessary. The incident commander of the emergency responders will restrict the area if it is suspected that hazardous materials are involved. Evacuate any injured personnel for emergency care. Notify the general

manager. The site should be secured before water utility and repair personnel enter to proceed with the subsequent steps.

If the situation turns out to be a false alarm or if the perpetrator is apprehended before damage has been done, then no further action, other than documenting the incident, may be necessary.

Step 2) The preliminary assessment should determine to the extent possible, the amount and type of contaminants, if any, in piping and other process equipment. Look for evidence of tools used by assailant and determine any further information on the assailant, methods or motives, and note any unusual water characteristics such as turbidity, discoloration, odor or reduced chlorine residuals. Samples of suspicious material and/or water samples should be collected if necessary. In physical damage has occurred, make an estimate on how areas serviced by the line will be affected, and if so, for approximately how long.

Step 3) The problem should be isolated if possible using isolation valves. If physical damage has occurred, assess whether the equipment can continue running and order new parts and supplies. Assign a crew to repair the damage. If the equipment is non-functional until repairs are made, shut down the impacted area, and make arrangements for backup water supply to be used until service to the affected area can be restored. Options include No-Use Orders, Boil Orders, or purchasing water from alternate sources.

Step 4) With a preliminary assessment in hand, make the appropriate contacts listed in Section 1.1. Critical users (Section 1.3.3) will be contacted and be notified to not use the water or to implement water use restrictions until normal service can be restored. In the case of a water emergency, all users will be considered "critical", and will be notified by local TV, radio, or door to door by personnel designated by the water department.

In the event of a large number of customers being affected by an interruption of the water supply, the water department will contact the water hauler and an alternate source. If a relatively small number of customers lose service, bottled water suppliers may be contacted to provide bottled potable water.

Step 5) Make a full assessment of the damage, *if a complete understanding of the impact is not already known*. This may involve additional hazmat or law enforcement investigators at the scene, additional sample collection, or a more detailed inspection by water utility personnel and/or the process equipment contractor.

Step 6) Implement repairs and other remedial measures. If hazardous substances are involved, then the repair crew should consist of personnel with current Hazwoper Training and should be wearing the appropriate PPE. The time frame for repairs depends upon the severity of the damage, and mobilization time for the repair crew if additional expertise is needed beyond that available in-house.

If safe drinking water cannot be supplied, the following measures will be carried out:

- 1) Issue a general NO USE order for the affected area.
- 2) The main valves would then be used to control the flow of water and isolate the chemical.
- 3) Fire hydrants in affected areas should be flushed until the water is clean. The wastewater treatment plant should be notified.
- 4) When the mains appear to be clean and testing verifies no chemical is present, a BOIL WATER order will be issued for all water customers.
- 5) When testing shows that no chemical or bacteria remain in the system, the BOIL order will be cancelled and normal operation of the system will be resumed.

Repairs will be prioritized and logged with work orders and photographic evidence of the damage, in order to recover costs where possible.

Step 7) Monitor progress. Ask for status reports on repair progress. The frequency is dependent on the estimated time of completion and the severity of the damage. Report status to your media contact and any other contacts as necessary.

Step 8) Restore the system to normal. Restarting the station may proceed at a pace that is gradual enough to note any unusual effects that may have resulted from the attack, and to not overload the equipment. Upon completion of this step, release a statement that full system operation has been restored. Notify the insurance carrier of the repairs.

Step 9) Monitor the impacted part of the system to note any out of the ordinary performance that might be related to the attack.

Step 10) Record the incident and include the documentation in this plan. Report your summary of the incident and findings to law enforcement and government agencies, as applicable. After the incident has been resolved, review the actions taken and update this plan if necessary.

2.3.2 Contamination – Tower

A contaminant placed in an Elevated Water Tower might go undetected over a period of time. This would dilute the chemical. Hydrant flushing would help to clean the chemical out of the system.

NOTE: All the above facilities are secured with door locks and pad locks. It would not be easy to introduce contaminants at this point in the system.

Action Needed:

- 1 - Issue a general NO USE order.
- 2 - Identify the chemical and how much of the system is involved.
- 3 - Contact IDEM's Office of Water Management to discuss remediation options.
- 4 - Try to contain the contaminant and prevent it from spreading into the entire distribution system by using valves and flushing hydrants.
- 5 - Do extensive water main flushing and sampling in the affected areas.
- 6 - When testing shows mains are free of chemical contamination(s), issue a boil water order.
- 7 - If the contaminant is in the water distribution system, test water quality at hydrant locations.
- 8 - When bacteria tests show the water is safe, cancel boil water order.

2.3.3 Contamination – Water Treatment Plant

If someone contaminates the Water Treatment Plant, the system could continue supplying water indefinitely by valving off water plant and using alternate source of supply. In this event, the following response, recovery and communication procedures would be initiated:

ACTION NEEDED:

- 1 - Issue a general NO USE order.
- 2 - Identify the chemical and how much of the system is involved.
- 3 - Contact IDEM's Office of Water Management to discuss remediation options.
- 4 - Try to contain the contaminant and prevent it from spreading into the entire distribution system by using valves and flushing hydrants.
- 5 - Do extensive water main flushing and sampling in the affected areas.
- 6 - When testing shows mains are free of chemical contamination, issue a boil water order.
- 7 - If the contaminant is in the water distribution system, test water quality at hydrant locations.

8 - When bacteria tests show the water is safe, cancel boil water order.

2.3.4 Contamination – Wells

A contaminant spilled or released at the wellfield would not necessarily migrate downward towards the aquifer, particularly if the release is of known quantity, and it contained and removed from the spill site. Several feet of clayey material overlies the aquifer, which serves to impede downward migration (assuming it was not introduced directly into a well). If the contaminant was introduced into the aquifer, injection wells could be installed between the well field and the contaminant to stop its progress toward the well(s). Pursuant to analysis, a treatment system could be set in operation.

Action Needed if the chemical gets into the system:

- 1 - Issue a general NO USE order.
- 2 - Identify the chemical and how much of the system is involved.
- 3 - Contact IDEM's Office of Water Management to discuss remediation options.
- 4 - Try to contain the contaminant and prevent it from spreading into the entire distribution system by using valves and flushing hydrants.
- 5 - Do extensive water main flushing and sampling in the affected areas.
- 6 - When testing shows mains are free of chemical contaminants, issue a boil water order.
- 7 - If the contaminant is in the water distribution system, test water quality at hydrant locations.
- 8 - When bacteria tests show the water is safe, cancel boil water order.

2.3.5 Cyber Attack

Action Needed:

- 1 – If possible, disconnect compromised computers from the network to isolate breached components and prevent further damage, such as the spreading of malware. Do not turn off or reboot systems – this preserves evidence and allows for an assessment to be performed.
- 2 – Notify IT personnel and/or vendor of the incident and the need for emergency assistance. In addition, NCCIC can assist with IT system response and recovery (888-282-0870) or NCCIC@hq.dhs.gov.

- 3 – Assess any damage to utility systems and equipment, along with disruptions to utility operations.
- 4 – Restore operations of mission critical processes (eg switch to manual operation if necessary), and notify the public if necessary.
- 5 – Report the cyber incident as required to law enforcement and regulatory agencies
- 6 – Notify any external entities (eg vendors, other government offices) that may have remote connections in the affected network(s).
- 7 – Document key information on the incident, including any suspicious calls, emails or messages before or during the incident, damage to utility systems, and steps taken in response to the incident (dates and times).

2.3.6 Physical Attack on a Booster Station

If someone disables a booster station, the system could continue supplying water indefinitely by valving off water plant and using alternate source of supply. In this event, the following response, recovery and communication procedures would be initiated:

- 1 – Call 911 and report to the appropriate agencies
- 2 – Determine if this is a crime scene by the scope and extent of damage created by the event.
- 3 – If it is determined to be a crime scene, contact all water department personnel responsible to address emergency. Next, contact the IDEM inspector.
- 4 – Notify the general manager for further decisions
- 5 – Assess damage to the booster station(s). Physically inspect the booster(s) to determine the extent of the damage.
- 6 – Isolate and fix the damage to the booster(s). Isolate transmission mains from the booster(s). Contact appropriate contractors and begin making repairs as necessary.
- 7 – Monitor damaged booster(s). This will involve site inspections, monitoring repairs, and getting progress reports from contractors.
- 8 – Restore damaged booster(s) to normal. Restore power to booster(s) and start pump(s).
- 9 – Return system to safety. Same as prior.

10 – Report the findings to the State. Upon discovering event, immediately call the IDEM inspector.

2.3.7 Physical Attack on the Distribution System

If someone disables the distribution system, the following response, recovery and communication steps would be initiated:

- 1 – Call 911 and report to the appropriate agencies
- 2 – Determine if this is a crime scene by the scope and extent of damage created by the event.
- 3 – If it is determined to be a crime scene, contact all water department personnel responsible to address emergency. Contact the IDEM inspector.
- 4 – Notify the general manager for further decisions
- 5 – Assess damage to the distribution system. Check SCADA for low pressure alarms. Investigate any reports of service outages from customers.
- 6 – Isolate and fix the damage to the distribution system. Isolated damaged areas of the system by valving off damaged water mains.
- 7 – Monitor damaged distribution system. This will involve site inspections, monitoring repairs, and getting progress reports from contractors.
- 8 – Restore damaged distribution system to normal. Fill, disinfect and flush main(s). Hydrostatic pressure test for 2 hours at 150 psi. Two satisfactory bacteriological samples 24 hours apart.
- 9 – Return system to safety. Have a lab certify by bac-t analysis that water is potable. Open valves and place in service
- 10 – Report the findings to the State. Upon discovering event, immediately call the IDEM inspector.

2.3.8 Physical Attack on the Power Grid

See Section 2.2.12, “Power Outage”, as the response to restore power will be similar.

2.3.9 Physical Attack on the Water Storage Tank(s)

This category includes physical damage and could possibly include an attempt to contaminate the system.

Actions Needed:

If someone disables water storage tanks or standpipes, the system could continue supplying water indefinitely, providing only one tank is disabled at a time. In this event, the following response, recovery and communication procedures would be initiated: Text in red are changes from the first set of response steps.

1 – Call 911 and report to the appropriate agencies

2 – Determine if this is a crime scene by the scope and extent of damage created by the event.

3 – If it is determined to be a crime scene, contact all water department personnel responsible to address emergency. Next, contact the IDEM inspector.

4 – Notify the general manager for further decisions

5 – Assess damage to the tank(s). Physically inspect tanks(s) to determine the extent of the damages.

6 – Isolate and fix the damage to the tanks(s). Isolate transmission mains from the tanks(s). Contact appropriate contractors and begin making repairs as necessary.

7 – Monitor damaged to the tank(s). This will involve site inspections, monitoring repairs, and getting progress reports from contractors.

8 – Restore damaged tank(s) to normal. Disinfect and fill Tank(s). Continue to flush and fill tanks(s) until chlorine at normal level. Take two satisfactory bacteriological samples 24 hours apart.

9 – Return system to safety. Have a lab certify by bac-t analysis that water is potable. Open discharge valves at tank(s).

10 – Report the findings to the State. Upon discovering event, immediately call the IDEM inspector.

2.3.10 Physical Attack on the Water Treatment Plant

If someone disables the water treatment plant., the system could continue supplying water indefinitely by interconnecting with the alternate source of supply (Bedford Utilities). In this event, the following response, recovery and communication procedures would be initiated: Text in red are changes from the first set of response steps.

- 1 – Call 911 and report to the appropriate agencies
- 2 – Determine if this is a crime scene by the scope and extent of damage created by the event.
- 3 – If it is determined to be a crime scene, contact all water department personnel responsible to address emergency. Contact the IDEM inspector.
- 4 – Notify the general manager for further decisions
- 5 – Assess damage to the treatment plant. Physically inspect plant to determine the extent of the damage.
- 6 – Isolate and fix the damage to the treatment plant. Close discharge valve(s) at the plant. Isolate transmission mains from the plant. Contact appropriate contractors and begin making repairs as necessary.
- 7 – Monitor damaged treatment plant. This will involve site inspections, monitoring repairs, and getting progress reports from contractors.
- 8 – Restore damaged distribution treatment plant to normal. Power up and restart the plant. Test run and flush plant until operating at normal levels. Open the plant to the system.
- 9 – Return system to safety. Have a lab certify that the water is potable. Open valves at plant
- 10 – Report the findings to the State. Upon discovering event, immediately call the IDEM inspector.

2.3.11 Physical Attack on the Wellfield

This attack could include mechanical damage and/or contamination (see Section 2.3.4) at the wellheads.

Actions Needed:

If someone disables the two 1,000 gpm well pumps, three 500 gpm high service pumps, two 300 gpm hydro-constant pumps, the system could continue supplying water indefinitely by interconnecting with the alternate source of supply (Bedford Utilities). In this event, the following response, recovery and communication procedures would be initiated: Text in red are changes from the first set of response steps.

- 1 – Call 911 and report to the appropriate agencies
- 2 – Determine if this is a crime scene by the scope and extent of damage created by the event.
- 3 – If it is determined to be a crime scene, contact all water department personnel responsible to address emergency. Contact the IDEM inspector.
- 4 – Notify the General Manager for further decisions
- 5 – Assess damage to the pumps that were damaged. Physically inspect plant to determine the extent of the damage.
- 6 – Isolate and fix the damage to the pump(s). Close discharge valve(s) at the plant. Isolate transmission mains from the plant. Contact appropriate contractors and begin making repairs as necessary.
- 7 – Monitor damaged pumps. This will involve site inspections, monitoring repairs, and getting progress reports from contractors.
- 8 – Restore damaged pumps to normal. Fill, disinfect and flush main(s). Power up and restart the plant. Test run and flush the plant until operating at normal levels. Open plant to system.
- 9 – Return system to safety. Have a lab certify that the water is potable. Open discharge valves at the plant.
- 10 – Report the findings to the State. Upon discovering event, immediately call the IDEM inspector.

3.0 MITIGATION ACTIONS

This section contains actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to your community and individuals, including the development of alternative source water options, relocation of water intakes, and construction of flood protection barriers.

3.1 Alternate Source Water Options and Interconnected Utilities

Alternate Source Water Options		
Type	Location	Comments

Interconnected Utilities			
Utility	Location	Contact Information	Comments
Bedford City Utilities		812-275-1626	

3.2 Other Mitigation Actions

This section lists any mitigation procedures or projects implemented, such as raising facilities and controls or constructing berms to protect against flood damage.

Mitigation Actions		
Type	Location	Comments
Watertight doors	Treatment plant	These doors were installed to help ensure floodwaters cannot enter the treatment building and damage control systems

4.0 DETECTION STRATEGIES

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 (see table below).

Detection Strategies		
Threat	Detection Method	Procedure
Unauthorized entry	Alarm from intrusion detection system	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, notification from utility staff	Cyber incident action checklist
Hazardous chemical release	Chlorine gas in air monitors	Call fire dept.
Tornado	Weather service alerts	Tornado incident action checklist
Flood	Notification from USACE	Flood incident action checklist
Power outage	Notification from energy provider, alarm from line power sensor	Generator start-up checklist