**\*\*\*Facility Name\*\*\* Emergency Response Plan**

**\*\*THIS DOCUMENT IS EXEMPT FROM FOIA\*\***

**\*\*DO NOT SHARE UNDER FOIA OR ANY OTHER REQUEST\*\***

5 ILCS 140/7 (From Ch. 116, par. 207)

 Sec. 7. Exemptions.

1. When a request is made to inspect or copy a public record that contains information that is exempt from disclosure under this Section, but also contains information that is not exempt from disclosure, the public body may elect to redact the information that is exempt. The public body shall make the remaining information available for inspection and copying. Subject to this requirement, the following shall be exempt from inspection and copying:

(v) Vulnerability assessments, security measures, and response policies or plans that are designed to identify, prevent, or respond to potential attacks upon a community's population or systems, facilities, or installations, the destruction or contamination of which would constitute a clear and present danger to the health or safety of the community, but only to the extent that disclosure could reasonably be expected to jeopardize the effectiveness of the measures or the safety of the personnel who implement them or the public. Information exempt under this item may include such things as details pertaining to the mobilization or deployment of personnel or equipment, to the operation of communication systems or protocols, or to tactical operations.

(w) (Blank).

(x) Maps and other records regarding the location or security of generation, transmission, distribution, storage, gathering, treatment, or switching facilities owned by a utility, by a power generator, or by the Illinois Power Agency.

**PURPOSE**

The purpose of this Emergency Response Plan (ERP) is to fulfill the requirements of Section 2013 of the America's Water Infrastructure Act (AWIA). AWIA requires water systems serving more than 3,300 people to develop, or update, risk and resiliency assessments (RRA) and ERPs. It further establishes components that the RRAs and ERPs must address and creates deadlines by which water systems must certify to the United States (US) Environmental Protection Agency (EPA) completion of the RRA and ERP. The City of \*\*\*Facility Name\*\*\* completed its RRA on xx/xx/2025 and submitted the requisite certification on that same date.

Additionally, this ERP is also intended to fulfill the requirements of 35 Illinois Administrative Code Section 604.135 regarding “Repair Work and Emergency Operation.” This Illinois regulation requires all community water supplies to develop emergency operations plans (EOP) for the provision of water under emergency circumstances. In the context of this report, ERP and EOP are intended to be synonymous and this document is intended to satisfy both Federal and State requirements.

Finally, this plan will be updated every three years to comply with the more stringent Illinois EOP requirement and the community water supply will recertify to U.S. EPA that its RRA and ERP has been reviewed and modified, as necessary, every five years.

**Introduction**

To aid in continuing the water system’s mission of providingsafe water of adequate quantity to meet the needs of our customers, water supply officials commit to proactive preparedness and timely response to malevolent acts or natural disasters that could pose a risk to our community. In addition to developing this emergency mitigation plan, officials will use every means available for the early detection and reaction to malevolent threats/acts, cyber intrusions, natural disasters or other emergency conditions. Water supply official will diligently monitor facilities for unauthorized entry, cyber threats, and extreme weather forecasts from the National Weather Service or Army Corps of Engineers.

To ensure the adequacy of this ERP, water supply officials have evaluated the four required planning elements outlined in the AWIA. Specifically, this plan contains:

* strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system;
* Plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water;
* Actions, procedures and equipment which can obviate or significantly lessen the impactof a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes and construction of flood protection barriers; and
* Strategies that can be used to aid in the detectionof malevolent acts or natural hazards that threaten the security or resilience of the system.

To accomplish this planning and documentation process, the attributes of the water supply have been systematically analyzed, leading to the development of a comprehensive plan. The elements included: system specific information; chain of command; notification information; communication procedures; alternate water source or alternate treatment plan; local emergency planning; coordination; safety and sample collection; and plans, actions and procedures.

The ERP is divided into two sections. The first section is intended to be used for responding to any emergency and describes basic plans and procedures unique to the utility. The second section contains specific scenarios that are created based on the threats, mission and critical equipment that were identified in the RRA as well as other emergencies such as specific natural disasters (e.g. flood, hurricane, tornado, etc.). These individual action plans are intended to be 'rip and run' type documents that can be used in the field during an emergency.

**PLAN TRACKING INFORMATION**

| **Plan Distribution** |
| --- |
| **Recipient/Title** | **Distributed By** | **Date** |
| Fill in each recipient’s name and title, the person who gave them the plan and on what date. |  |  |
|  |  |  |
|  |  |  |

| **Change History** |
| --- |
| **Description of Change** | **Name/Title** | **Date** |
| Describe the changes made to this plan since its original development, who made the changes and on what date the changes were incorporated into this plan. (e.g., Update contact and added cyber security.) |  |  |
|  |  |  |
|  |  |  |

The following relevant information has been included as Appendices to this document:

***(Note the ones that are applicable and delete the rest)***

* Service area map with pressure zones (if more than one)
* Process flow diagram
* As constructed plans with source, treatment, pumping and storage facilities
	+ Including wells/intake locations, chemical storage locations, ground storage locations, elevated storage locations, high and low service pumping locations, pressure regulating valves (altitude valves)
* Distribution system map illustrating valve location 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 (radio) operation instructions
* Most recent Illinois EPA Inspection Report (and response) with inventory
* Nitrification Action Plan (trigger levels and actions/responses to limit nitrification)

**SECTION 1: BASIC PLANS AND PROCEDURES**

**ELEMENT 1: SYSTEM SPECIFIC INFORMATON**

During the development of this ERP and the preceding RRA, water supply officials identified the following baseline information regarding the water system. Included, in the system specific information, is an inventory of critical assets and customers.

**Descriptive Information**

Water System ID: IL#######
Water System Name: \*\*\*Facility Name\*\*\*
County Served: County
Population Served: #####
Address: #####
City State Zip: #####
Phone: (###) ###-####
Fax: (###) ###-####

Email: ###

The following is a brief set of **directions to the water treatment plant** in the event it is necessary to describe our staging location to a technical service provider or emergency responder:

Directions: e.g., Continue north 1 mile on Route 58 from the intersection of Route 58 and Route 145. The water treatment plant is located on the east side of Route 58.

Lat.: 39.94783644441089 Long.: -90.21228381344022

***(Note: To include a GPS location in latitude/longitude you can use one of many free following websites, including:*** [***https://gps-coordinates.org/***](https://gps-coordinates.org/) ***)***

**Primary Emergency Contact Information**

Contact Name: #
Contact Title: #
Daytime Phone: (###) ###-####
Cell Phone: (###) ###-####
Email: #

**Secondary Emergency Contact Information**

Contact Name: #
Contact Title: #
Daytime Phone: (###) ###-####
Cell Phone: ((###) ###-####
**Email:** #

**Local Emergency Services Coordinator**

Date of Last Contact: xx/xx/2025
Name: #
Phone Number: (###) ###-####
24-Hour Emergency: (###) ###-####
Cell Phone Number: (###) ###-####
Location: #

**Asset Inventory**

|  |  |  |  |
| --- | --- | --- | --- |
| **Category/Type** | **State and Local ID** | **Description/Location with Security Measure Summary** | **Relative Priority****(High, Medium, Low)** |
| Source | *(List all sources of water- E.g. Well #1, EPA0000)* | *(Provide Location and security. r.g., Located at 801 Mans Street- Pumphouse is locked and surround by a security fence.)*  |  |
|  |  |  |  |
| Treatment | *(Indicate Treatment plant with appropriate level of specificity -i.e., List WTP or break down by components of treatment. How do you have the plant ensured?)* | *(Provide Location and security. e.g., Located at 801 Mans Street- Plant is locked and surround by a security fence. Eye wash is provided within plant.)* |  |
|  |  |  |  |
| Chemical Storage Facilities |  | *(Indicate location and description if other than the water treatment facility. e.g,, NaOH provided at 100,000-gal elevated storage within security fence.)* |  |
|  |  |  |  |
| Distribution | *e.g.. – 100,000-gal Ground Storage Tank**e.g., 500,000-gal Elevated Storage Tank* | *(Provide Location and security.* *e.g., Located at 801 Main - Tower is surrounded by security fence.)* |  |
|  |  |  |  |
| Other |  |  |  |

**Critical Customer Inventory**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Customer** | **Contact Name** | **Location** | **Customer Type** | **Phone Number(s)** |
|  |  |  | **Hospital** |  |
|  |  |  |  |  |
|  |  |  | **School** |  |
|  |  |  |  |  |
|  |  |  | **Day Care** |  |
|  |  |  |  |  |
|  |  |  | **Nursing Home** |  |
|  |  |  |  |  |
|  |  |  | **Food Processing** |  |
|  |  |  |  |  |
|  |  |  | **Health Care** |  |

**Industrial Chemical Handling and Storage Facilities**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Customer** | **Contact Name** | **Location** | **Risk/Environmental Pathway** | **Phone Number(s)** |
| *e.g.,* *Pete Shwety PVC Manufacturing* | *Pete Shwety* | *801 Main St* | *Power failure could result in chemical release to atmosphere* | *xxx-xxx-xxxx* |
| *e.g.,* *Pamela Shwety’s Full Service Gas Station and Car Wash* | *Pamela Shwety* | *803 Main St* | *Earthquake could rupture below ground fuel storage tanks.* | *xxx-xxx-xxxx* |
|  |  |  |  |  |
|  |  |  |  |  |

**ELEMENT 2: CHAIN OF COMMAND**

During the development of this ERP and the preceding RRA, water supply officials identified the following individuals that must be notified in an emergency. This notification list is intended to be scalable based upon the brevity of the emergency (i.e., Should local government lack the ability to respond, county government contact would follow. Should county government lack the ability to respond, state government contact would follow.)

**Water Supply Incident Command Structure**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Title/Position** | **Primary Phone Number** | **Secondary Phone Number** |
|  | Water Super. |  |  |
|  | Treatment Operator |  |  |
|  | Distribution Operator |  |  |

**Incident Command Structure (Contact List)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Title/Position** | **Primary Phone Number** | **Secondary Phone Number** |
|  | Water Super. |  |  |
|  | Public Works Dir. |  |  |
|  | Mayor |  |  |
|  | Water Committee Chair |  |  |

**ELEMENT 3: NOTIFICATION INFORMATON**

During the development of this ERP and the preceding RRA, water supply officials identified the following stakeholders who may be resources in the event of an emergency.

**First Responder and Law Enforcement Contact List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Title/Position** | **Primary Phone Number** | **Secondary Phone Number** |
|  | Chief, Fire Department |  |  |
|  | Chief, Local PD |  |  |
|  | Sheriff, County PD |  |  |
| Illinois State Police (ISP) District Office – Division of Patrol | State Police |  (217) 524-0191. |  |
| ISP- Division of Criminal Investigation, Statewide Terrorism & Intelligence Center (STIC) | STIC | 217-782-1320 |  |
| FBI Springfield | FBI | (217) 522-9675 |  |
| FBI | FBI | (312) 431-1333 |  |

**Utility Provider Contact List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Primary Phone Number** | **Secondary Phone Number** |
|  | Electricity Provider |  |  |
|  | Gas Provider |  |  |
| J.U.L.I.E. |  | 811 | (800) 892-0123) |

**Health Care Contact List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Primary Phone Number** | **Secondary Phone Number** |
|  | Hospital |  |  |
|  | Hospital |  |  |
|  | Medical Clinic |  |  |

**Laboratory and National Response/Information List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Primary Phone Number** | **Secondary Phone Number** |
|  | Laboratory *(specify analyses type as needed- i.e., list as many laboratories as necessary to cover SDWA monitoring requirements. Additionally, if you have alternate laboratories under contract list these labs.)* |  |  |
|  | Laboratory  |  |  |
|  | Laboratory  |  |  |
| National Response Center | NRC  | (800) 424-8802 |  |
| CHEMTREC | CHEMTREC  | (800) 424-9300 |  |

**Local Government Contact List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type/Title** | **Primary Phone Number** | **Secondary Phone Number** |
|  | Water Department |  |  |
|  | City Hall - Public Works Dept. |  |  |
|  | Mayor  |  |  |
|  | Secretary |  |  |
|  | Treasurer |  |  |
|  | Board Member |  |  |
|  | Board Member |  |  |
|  | Board Member |  |  |
|  | Billing Clerk |  |  |

**County Contact List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type/Title** | **Primary Phone Number** | **Secondary Phone Number** |
|  | County Engineer |  |  |
|  | Sheriff |  |  |
|  | XYZ County Health Department |  |  |
|  | XYZ County Health Department |  |  |
|  |  |  |  |
|  |  |  |  |

**State Contact List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type/Title** | **Primary Phone Number** | **Secondary Phone Number** |
| **Kirk Bergstrom,** Andrew Holloway, Roy Slick, Victor Aguado **Segundo Nallatan,** Grover Hopkins, Dharmishtha Patel, Dwayne Booker, Gopi Ramanathan, Fei Zhao **Shane McCulley**, Matt Talbert. Jeremy Chervinko**John Bartolomucci**, Mike Dragovich, Jamie Cowles, Cody Bauer**John Kinder,** Regan Taylor, James Blessman**John Kinder,** Eric Lamczyk, Steven Henkel | Illinois EPA, Rockford Illinois EPA, Elgin Illinois EPA, Champaign Illinois EPA, Springfield Illinois EPA, Collinsville Illinois EPA, Marion  | (815) 987-7760(847) 608-3131(217) 278-5800(618) 346-5120(618) 346-5120(618) 993-7200 |  |
| Tatum DeMay (EPA.PWSCompliance@illinois.gov) | Illinois EPA, Compliance Manager | (217) 558-0903 | (217)785-0561 |
| Chris Johnston(EPA.PWSPermits@Illinois.gov)  | Illinois EPA, Permit Section Manager | 618/964-0050 | (217)782-1724 (On call Engineer) |
| **Illinois Emergency Management Agency (IEMA)** | **IEMA- 24/7 Hotline** | **(800) 782-7860** | (217)782-7860 |
|  |  |  |  |

**Other Resources Contact List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type/Title** | **Primary Phone Number** | **Secondary Phone Number** |
| **Illinois Rural Water Association (IRWA)**  | Roger Noe, Deputy Executive Director | (217) 820-1564 |  |
| Evan Jones Chuck Woodworth Jason Cochran | IRWA, Circuit Riders  | (217) 820-5508 (217) 820-1569(217) 707-8498 |  |
|  | Consulting Engineer |  |  |
|  | Consulting Engineer |  |  |

**Media Contact List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Primary Phone Number** | **Secondary Phone Number** |
|  | Local Print Media |  |  |
|  | Local Radio Media |  |  |
|  | Local TV  |  |  |
|  | Wide Distribution TV |  |  |
|  | Wide Distribution Radio |  |  |
|  | Wide Distribution Print Media |  |  |
|  |  |  |  |

**Service Provider List**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Primary Phone Number** | **Secondary Phone Number** |
|  | Electrical Contractor |  |  |
|  | Electrician |  |  |
|  | Plumbing Contractor  |  |  |
|  | Plumber |  |  |
|  | Excavating Contractor |  |  |
|  | Excavator |  |  |
|  | Well Contractor |  |  |
|  | Well Contractor |  |  |
|  | Chemical Supplier |  |  |
|  | Treatment Chemicals |  |  |
|  | Testing Equipment |  |  |
|  | Meter Supplier |  |  |
|  | Meters |  |  |
|  | Line Stop Supplier |  |  |
|  | Supervisory control and data acquisition (SCADA) Consultant |  |  |
|  | Informational Technology – Business Computer Consultant |  |  |
|  | Computer Hardware Consultant/Supplier |  |  |

**ELEMENT 4: COMMUNICATION PROCEDURES**

During the development of this ERP and the preceding RRA, the following individual has been identified as the spokesperson for the community water supply. Further, the following procedure for communicating with the public and media has been established.

**Public Communication and Media Notification –**

Designated Public and Media Spokesperson: **Name *(Note: Generally, this is the Mayor or Public Works Director. This allows water supply staff to manage/mitigate the emergency.)***

The system's designated Public and Media spokesperson will use the following communication and outreach plan to inform the media and general public about any emergency procedures that may be needed:

The Decision to issue **Public Notice (PN)** will only be made after all appropriate, officials, agencies and departmental heads have been consulted. Public Notification should utilize local newspaper, social media platforms (if available, television, and radio. An example press release has been included as **Appendix A**. Additional more specific PNs can be found in **Appendix B**.

A Designated Public and Media Spokesperson should know how to address the media but the following tips should be followed:

- Updates shall be fact-based and straightforward in respect to the actual facts known at that time.

- There should be no interjection of personal opinions and perceptions.

-Have relevant facts at your fingertips.

- When answering questions, only speak to the facts known. If you do not have the answer, say you will research and get back to them. Once an answer is identified, report it at the earliest possible time

- Most journalists are looking for clear, simple quotes that can be understood by a wide audience.

- If additional sources of information exist, point them in that direction.

- Capture the essence of what you want to say in the first one or two sentences of your response, and add details later.

- If the situation allows, prior to the interview, identify 3–4 points you want to convey and practice delivering them.

- Media are generally under tight deadlines, and the earlier you respond, the more likely it will be that your facts will be included in the story.

- If you misspeak, simply say so and correct your response. If the interviewer presents incorrect information, mention the error and provide the correct data.

| Communication Equipment Inventory |
| --- |
| Type | Assigned to | Location | Number/Frequency/Channel |
| e.g., Digital handheld radio | John Pubmic | Water Plant Lab | 800-900 MHz/2 for public woks department |
| Refer to Element 2, Water Supply Incident Command Structure |  |  |  |
|  |  |  |  |

**ELEMENT 5: ALTERNATE WATER SOURCE OR ALTERNATE TREATMENT PLAN**

During the development of this ERP and the preceding RRA, water supply officials evaluated available information regarding the availability of an alternate water source or alternate treatment option. The water system determined the following:

* The water system has/does not have a mutual aid agreement with XYZ. In the event of an emergency this community can be called upon for assistance. Additionally, the water system is/is not a member of Water/Wastewater Agency Response Network (ILWARN).
	+ Mutual Aid Contact Information: Community Name, Contact Name and phone number
	+ ILWARN Contact Information: ILWARN Administration – ISAWWA, 280 Shuman Blvd, Suite 100, Naperville, IL 60563. Phone: **(866) 521-3595**
* If provision of bottled water becomes necessary, the community water supply has/does not have a contractual agreement with XYZ to supply bottled water. Further/However, the water superintendent will reach out to local ESDA for assistance.
	+ Contract/Corporate Contact Information: Corporate Name, Contact Name and phone number
	+ See contact information for Local Emergency Services Coordinator on Page 4
* If provision of bulk water becomes necessary, the community water supply has/does not have a contractual agreement with XYZ to supply bulk water delivery. Further/However, the water superintendent will reach out to local ESDA for assistance.
	+ see Element 1 - Emergency Services Coordinator
* In the event that the primary source of water for the system becomes inoperable, the water system has 1.5 days of stored water and the capacity to supply adequate quantities of water through secondary sources (e.g., an inter connection with another water supply.
	+ Emergency interconnection contact information: Contact Name and phone number

**ELEMENT 6: LOCAL EMERGENCY PLANNING**

During the development of this ERP and the preceding RRA, water supply officials evaluated the following logistics concerns in the event of an emergency.

**Incident Command Center-** All emergency response personnel will report to the Water Treatment Plant. Should the water treatment plant be inaccessible, emergency personnel should report to city hall. This location will serve as the incident command center where response activities will be coordinated and facilitated.

**Access Control –** Access to the water treatment plant or alternate location will be limited to authorized personnel and the facility will be locked down until which time that the incident commander (generally the water superintendent) determines the facility can be safely operated under routine procedures.

**Equipment -** Equipment that can be used in the event of an emergency as well as personal protective equipment will be staged as needed at the water treatment plant or other designated area. Supplemental and backup equipment available to operational staff and emergency responders is listed below:

|  |  |  |
| --- | --- | --- |
| **Type** | **Comment** | **Location** |
| Electrical Backup | Generator is available at the water treatment plant and will operate the plant and Well #. | At the water treatment plant. |
| Electrical Backup | Water treatment plant has two electric feeds coming into the plant. | At the water treatment plant. |
| Back-up Water Source | Water supply has x wells, any one of which will meet average daily demand. | Near the water treatment plant. |
| Chemical Feed | Chemical feed equipment redundancy is available at the water treatment plant. | At the water treatment plant. |
| Pump/Motors | Pump and motor redundancy is available at the water treatment plant. | At the water treatment plant. |
| Repair clamps, etc. | Repair materials are available at the water treatment plant. | At the water treatment plant. |
| Other equipment | Other equipment necessary to mitigate emergency may be available from the public works/maintenance garage or wastewater treatment plant (e.g., backhoe, etc.) | Public works /maintenance/wastewater plant |

**ELEMENT 7: COORDINATION**

Coordination and communicating with all first responders prior to an emergency may be one of the most important aspects of completing the ERP. As part of this ERP, the utility has identified the parties who will be needed and called upon should an emergency arise. Please refer to the preceding and following pages that identify coordination and relief personnel.

It should be noted that, by contacting and working with these parties, the utility has made each aware of their respective roles and they understand their responsibilities in emergency response. Practicing this ERP with staff, elected officials, first responders, state and federal officials is an important mechanism to increase understanding, responsiveness and responsibility Training can include briefing sessions, classroom sessions, or mock exercises.

During the development of this ERP and the preceding RRA, the water supply evaluated their necessary initial reactions should an emergency arise:

* In the event of a potential **malicious act**, the Local Police Department would be contacted to determine if an event was vandalism/terrorism and be relied upon to evaluate the situation and establish proper crime scene procedures.
* If the incident/location is determined to be a **crime scene**, Local PD will escalate the investigation as necessary. Depending upon the situation, the County Sheriff`s Department who would in turn contact the Illinois State Police, who would in turn contact the FBI/Department of Homeland Security as needed. If local procedures were to fail, water supply officials would reach out to the IEMA hotline and process the incident at the state level.
* Depending on the **nature of an event**, the first individual/Agency to be contacted will depend on the situation. E.G., if the emergency situation is a "routine event" such as a boil order resulting from equipment failure/pressure loss, water supply officials will contact the Illinois EPA. If necessary Illinois EPA may be contacted through the IEMA 24-hour hotline, immediately contacting individuals needed to mitigate the situation. If the event is a result of vandalism or a terrorist act, Illinois EPA will be contacted following the primary contact described previously. In the event of a natural disaster that overwhelms local responders, local ESDA will be contacted followed by contact to the Illinois EPA/IEMA.
* **Name *(Note: this is generally the Water Superintendent)* is responsible** for making decisions regarding first response in the event of an emergency.

**ELEMENT 8: SAFETY AND SAMPLE COLLECTION**

During the development of this ERP and the preceding RRA, water supply officials evaluated worker safety and water quality monitoring procedures. The following information provides information regarding these concerns in an emergency.

**Risk Management Plans and Material Safety Data Sheets (MSDS) -** No additional response procedures or Risk Management Plan (RMP) are available as of the date of this document. Safety precautions that need to be taken while handling chemicals are contained in the MSDS sheets at the water treatment plant. Water supply operational staff and/or fire department responders have access to PPE to ensure worker safety.

* Attach or indicate the location of MSDS
* See Element 3-First Responder and Law Enforcement Contact List

**Sample Collection and Analysis Procedures -** Depending on the suspected contaminant of concern, the guide, summarized in the table below, will be used as a general reference to assess sample collection procedure and identify laboratories with the capability to analyze for particular contaminants. Further, water supply staff will contact the Illinois EPA as needed for technical assistance in determining appropriate actions to return the water system to normal operations, including but not limited to, type and number of samples.

|  |  |  |  |
| --- | --- | --- | --- |
| **Contaminant Type** | **Sample Location** | **Container/Quantity** | **Laboratory (see contact information above)** |
| Pathogen/Microbiological | Distribution System | Provided by laboratory (limited supply on hand at the water treatment plant) | Laboratory NAME |
| Chemical Contaminant- Inorganic (e.g., metals) | Treatment Plant and Distribution System | Provided by laboratory | Laboratory NAME |
| Chemical Contaminant- Organic (e.g., pesticides and solvents) | Treatment Plant and Distribution System | Provided by laboratory | Laboratory NAME |
| Radiological | Treatment Plant and Distribution System | Provided by laboratory | Laboratory NAME |
|  |  |  |  |

In addition to the monitoring described by water supply officials and certified laboratories, water supply officials conduct routine process control monitoring/analyses. Specifically, staff routinely evaluate disinfectant levels (free or total chlorine) for inactivation of pathogens at the treatment facility as well as residual concentrations for pathogen protection in distributed water. Water supply officials also conduct process control monitoring for the removal of hardness, iron, manganese, free ammonia (see attached nitrification action plan targets and actions), other. Review of this data may provide an indication that source or treated water has been altered in some manner.

**SECTION 2: SPECIFIC SCENARIOS**

**ELEMENT 9: PLANS, ACTIONS AND PROCEDURES**

During the development of this ERP and the preceding RRA, water supply officials evaluated specific assets and scenarios that are created based on the threats, and critical equipment that were identified as well as other emergencies such as specific natural disasters (e.g. flood, hurricane, tornado, etc.) that may impede the water supply’s mission of providing safe and adequate supplies of water to consumers.

With respect to **asset-based response planning**, the operational staff notes the following mitigation measures and procedures if a major element (asset) of its treatment or distribution system is damaged:

* Water supply and local government officials will assess the nature and severity of the damaged asset. Through their combined experience, determinations will be made regarding the need for contractor or technical assistance to return the water supply to normal operation. Ultimately, the **responsible operator in charge** of the water system will make a determination of the measures necessary to respond to the situation in the most timely manner possible.
* The need for outside assistance, in part, will depend on the availability of **redundant equipment and repair materials**. These materials are generally located at the water treatment plant and public works facility.
* To allow the necessary time to affect a repair on the water supply treatment or distribution system asset(s), the water system has over one day of stored water at any time. Further, process and distribution controls will be utilized to isolate and repair the compromised asset.
	+ See Element 7 for additional discussion
* In the event of a **physical breach** of water supply infrastructure, local officials will contact local, county and state law enforcement assets for control of the potential crime scene. The water system will be secured to the extent necessary to provide for the protection of distributed water while allowing for prosecution of responsible parties to the full extent of the law.
	+ See Element 3 – law enforcement contact information
* In the event of a **cyber-attack** on one of the system assets, compromised computers will be disconnected, and breached components will be isolated to prevent further damage or the spreading of malware. Notification of the incident will be made to the United States Cybersecurity and Infrastructure Security Agency (CISA), the Illinois Emergency Management Agency (IEMA), the local Federal Bureau of Investigation (FBI) and the appropriate Illinois EPA Regional Office.
	+ CISA 888-282-0870
	+ IEMA 217-782-7860
	+ See Element 3 - First Responder and Law Enforcement Contact List, FBI Contact Information
	+ See Element 3 - State Contact List, Illinois EPA Contact Information
	+ See Element 3 - Service Provider List

Attached to this Emergency Response Plan, water supply officials have identified cybersecurity mitigation actions through the use of **U.S. EPA’s Checklist of Priority Cybersecurity Practices for Water Systems,** see Appendix C. In the event the water system has somehow been compromised, water supply customers will be alerted and kept updated (see Element 4 – Communication Procedures). All necessary actions will be taken, and consultants will be retained as needed, to return the water supply to normal operation. Detailed records of damages and actions will be kept making sure that key information regarding the incident will be available for future review/evaluation. The information retained will include, but not be limited to, suspicious calls, emails, or messages before, during or after the incident, damage to the utility systems, and steps taken to mitigate the incident (including dates and times).

* In the event of a **power failure**, the system has a backup generator as well as dual power feeds from the electrical grid. The backup generator can supply electricity to the water treatment plant and wells in the event of an electrical outage. Upon activation of backup power systems, water supply officials should make the necessary contacts to assess the duration of the outage to the main electrical grid. If the fuel inventory does not exceed the anticipated return to the grid, water supply officials will not county and state ESDA to request assistance. (Note: Backup generators are tested under load on a monthly basis to ensure water supply officials are prepared for a power outage.)
	+ See Element 1 - Local Emergency Services Coordinator
	+ See Element 3 – State Contact Information
* Should a water system asset be damaged such that the **system is rendered unable to supply water** to its customers, operational staff will contact City, County and State Officials to ensure critical customers are notified of the emergency situation and contingencies are provided for potable water sources.
	+ See Elements 1 and 3 for notification information
* Should an emergency occur that **goes beyond the ability of local response**, water supply officials will contact local and state ESDA. Additionally, contact will be made to the Illinois EPA and IEMA to corroborate the need for state relief efforts.
	+ See Elements 1 and 3 for notification information
* During the emergency, water supply staff will **monitor the situation through treatment plant and distribution system** controls. E.g., process control testing, chemical usage, tower elevations, system pressures and disinfectant residuals will give an indication of the status of the safety and capacity of the water system. The water system maintains adequate testing equipment to evaluate these areas of concern and the safety of the water supply.
	+ See Element 3 - Laboratory & National Response Information
* Throughout the emergency, **communication** with local, county and state officials will be of the utmost concern. The water supply will use Illinois EPA (and IEMA) as the focal point in disseminating status reports and seek their advice on the necessary action to return the system to normal operations. The water system does not require specialized equipment for this communication and recognizes that its contractual laboratory can report necessary information in an electronic form for state regulatory purposes.
	+ See Element 3 – State Contact List
* Upon **resolution of the emergency condition** and repair to the affected asset(s), the responsible operator in charge will conduct an evaluation of the water system. Should water quality monitoring be necessary, the operational staff will coordinate with the Illinois EPA and County Health Department as well as its contractual laboratory to ensure the safety of the water.
	+ See Element 3 – County and State Contact Lists

With respect to **scenario response planning**, the operational staff notes the following mitigation measures and procedures if a natural disaster (e.g., tornado, flood, etc.) impedes the normal operation of the water system:

* Water supply and local government officials will assess the nature and severity of the damage to the wells, water treatment plant or distribution system. Through their combined experience, determinations will be made regarding the need for contractor or technical assistance to return the water supply to normal operation. Ultimately, the **responsible operator in charge** of the water system will make a determination of the measures necessary to respond to the situation in the most timely manner possible.
* The need for outside assistance, in part, will depend on the availability of redundant equipment and repair materials. These materials are generally located at the water treatment plant and public works facility.
* To allow the necessary time to affect a repair on the water supply treatment or distribution system asset(s), the water system has over one day of stored water at any time. Further, process and distribution controls will be utilized to isolate and repair the wells, water treatment plant or distribution system.
* In the event of a power failure, the system has a backup generator as well as dual power feeds from the electrical grid. The backup generator can supply electricity to the water treatment plant and wells in the event of an electrical outage.
* Should a water system be damaged such that the it is rendered unable to supply water to its customers, operational staff will contact City, County and State Officials to ensure critical customers are notified of the emergency situation and contingencies are provided for potable water sources.
* Should damage to the wells, water treatment plant or distribution system occur that goes beyond the ability of local response, water supply officials will contact local and state ESDA. Additionally, contact will be made to the Illinois EPA and IEMA to corroborate the need for state relief efforts.
* During the emergency, water supply staff will monitor the situation through treatment plant and distribution system controls. E.g., process control testing, chemical usage, tower elevations, system pressures and disinfectant residuals will give an indication of the status of the safety and capacity of the water system. The water system maintains adequate testing equipment to evaluate these areas of concern and the safety of the water supply.
* Upon resolution of the emergency condition(s) and repair(s) to the affected portion of the water system, the responsible operator in charge will conduct an evaluation of the water supply. Should water quality monitoring be necessary, the operational staff will coordinate with the Illinois EPA and County Health Department as well as its contractual laboratory to ensure the safety of the water.
* Throughout the emergency, communication with local, county and state officials will be of the utmost concern. The water supply will use Illinois EPA (and IEMA) as the focal point in disseminating status reports and seeking advice on the necessary action to return the system to normal operations. The water system does not require specialized equipment for this communication and recognizes that its contractual laboratory can report necessary information in an electronic form for state regulatory purposes.

In addition to the noted scenario response planning, water supply officials note that a scenario presented by depletion of operational staff resources, such as a pandemic, can present a substantial challenge to the continued safe operation of water treatment facilities. The following mitigation measures provide a baseline plan for such a risk:

* Communicate the assessment of the situation to all staff and individuals identified in Element 2.
* Coordinate activities with local Emergency Action Team members and local Emergency Service Coordinator identified in Element 1.
* Be prepared to provide personnel to other communities related to local and state mutual aid agreements (e.g., ILWARN).
* Close the water treatment facilities to customers, vendors and suppliers.
	+ Post notices at offices, water treatment plant and other public areas and change messages on answering machines to define situation and available emergency support for customers.
	+ Continue receiving payments via on-line credit card, drop box and U.S. Postal Service mail.
	+ Cash payments accepted & receipts provided only by pre-arranged telephonic arrangements.
	+ Make payments to suppliers as timely as possible.
	+ Maintain security at water facilities while continuing operations.
* Evaluate the availability and need to acquire critical supplies including but not limited to:
	+ Treatment plant supplies and chemicals needed to treat water for 30 days
	+ Hand sanitizer and soap
	+ N95 Masks
	+ Nitrile or latex gloves
	+ Isopropyl alcohol
	+ Paper towels and toilette paper
	+ First aid kits
	+ Spray bottles for bleach water
	+ Emergency Food
	+ Emergency Generator Fuel & Supplies
* Limit service calls to emergencies (e.g., leaks, etc.).
* Suspend water service shut offs due to overdue account payments.
* Establish a staff rotation schedule for office and treatment facilities:
	+ Minimize potential disease exposure to all employees at one time.
	+ Allow employee absences due to personal or family illness, quarantines, school closings, etc.
	+ Consider enlisting and training/cross training all applicable staff and board members to assist either office or plant/distribution system needs.
	+ Consider and implement multiple shifts as needed.
	+ Continue weekend plant operational duties.
* Continually evaluate employee access to emergency/first aid healthcare services during disease outbreak.
* Continually evaluate the effectiveness of safety precautions including engineered solution administrative controls and procedures and personal protective equipment until the employee risk has been deemed to be alleviated.

Appendix A:

|  |
| --- |
| **\*\*PRESS RELEASE\*\*** |
|  | Insert Logo/Seal Here if Desired |
| Contact Name: | Name Here |  |  |
| Contact Title: | Title Here |  |  |
| Phone: | Phone Here |  |  |
| Email: | Email Here |  |  |
| Web Address: | URL Here |  |  |
|  |  |  |  |
| **[NEWSWORTHY HEADLINE INCORPORATING NAME OF YOUR CITY/SYSTEM (70 Characters)]** |
|  |
|  |
|  |  |
| [CITY, STATE, DATE] — [INTRO PARAGRAPH] [Set the stage with two or three short sentences about the current situation that makes your press release relevant to readers.]. |  |
|  |
|  |
|  |
|  |  |
| [SECOND PARAGRAPH] [Give additional information by using the Five W’s of Journalism: Who was involved? What happened? Where did it happen? When did it happen? Why did that happen? Add calls to action and links.]. |  |
|  |
|  |
|  |
|  |  |
| [THIRD PARAGRAPH] [Offer information as to which customers are affected and what population may be at more risk.]. |  |
|  |
|  |
|  |
|  |  |
| [FOURTH PARAGRAPH] [Insert Instructions telling customers what they should be doing during the event (conserving water, boiling water, etc.).] |  |
|  |
|  |
|  |
|  |  |
| [BOILERPLATE PARAGRAPH] [If any health hazards exist, insert the boilerplate language in this space.]. |  |
|  |
|  |
|  |

Appendix B:

|  |
| --- |
| **\*\*FACILITY NAME\*\*\*****DO NOT USE THE WATER** |
|  |
| **Date: Date Here** |  |  |
| **From: Name Here** |  |  |
|  |
| Describe what happened (main break, low disinfection levels, high turbidity levels, etc. here) Include if repairs have already been made or an estimate when repairs will be completed. |
|  |
|  |
|  |
|  |
|  |  |
| Include a description of the affected area and that customers should boil their water until further notice. |  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |  |
| Use bottled water or bring tap water to a rolling boil for one minute, and cool before using. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and preparing food until further notice. |  |
|  |
|  |
|  |  |
| The BOIL ORDER will remain in effect until laboratory sampling confirms that water that water quality has been fully restored. [Insert an estimated time such as: This will be Tuesday afternoon at the earliest.]. You will receive notification at that time. |  |
|  |
|  |
|  |
|  |  |
| If you should have any questions or need further information please call our public works office at [Insert Phone Number Here.]. |  |
|  |

Appendix B (continued):

|  |
| --- |
| **\*\*\*FACILITY NAME\*\*\*** |
| **DO NOT USE THE WATER** |
|   |
| On [DATE] it was reported that the [Water Sytem's Name] has been or may be contaminated with [Insert Contaminant Here] |
|  |
|   |  |
| The [Water System's Name] is providing an alternate source of water at [Insert Location Here] |  |
|  |
|   |   |   |   |   |   |   |   |   |  |
| **Additional Information For Your Safety** |  |
|   |  |
|   | • **DO NOT USE THE WATER**. You should **Not** use the water for drinking, making ice, brushing teeth, washing dishes, washing clothes, bathing, or food preparation. The alternative source of water should be used for all of the above necessities until further notice. |  |
|  |
|  |
|  |
|   |  |
|   | • [Insert contaminant name here along with what it is primarily used for. Also list its health effects on humans (most of this information can be found in your CCR).]. |  |
|  |
|  |
|  |
|  |
|   |  |
|   | • 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 [Insert Local Health Departmet Number Here.]. |  |
|  |
|  |
|   |  |
|   | • The water distribution system was contaminated or is suspected to be contaminated with. We are working with law enforcement and the public health officials to investigate/resolve this issue. We have tested and continue to test the water in various parts of the distribution system to verify the extent of the contamination.  |  |
|  |
|  |
|  |
|  |
|   |   |   |   |   |   |   |   |   |  |
| If you should have any questions or need further information please call our public works office at [Insert Phone Number Here.]. |  |
|  |
|   |  |
|  |
|  |
|  |
|  |
|  |

Appendix C: Checklist of Priority Cybersecurity Practices for Water Systems

Note: Any items marked no should include an explanation

|  | **Question**Does the CWS… | **Answer**Mark the appropriate check box (“Yes”, “No”, “In progress”, “Not applicable”) to answer each cybersecurity assessment question. |
| --- | --- | --- |
|  | **Reduce Exposure to Public-Facing Internet** |
| 1. | Ensure assets connected to the public Internet expose no unnecessary exploitable services (e.g., remote desktop protocol) and eliminates connections between OT assets and the Internet? | [ ] Yes[ ] No [ ] In progress[ ] Not applicable*If “No”, EPA recommends that the CWS take the following action: Eliminate unnecessary exposed ports and services on public-facing assets with regular review and eliminate OT asset connections to the public Internet unless explicitly required for operations.* |
|  | **Conduct Regular Cybersecurity Assessments** |
| 2. | Conduct regular cybersecurity assessments? | [ ] Yes[ ] No ☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Conduct a cybersecurity assessment on a regular basis to understand the existing vulnerabilities within OT and IT systems. Assessments enable you to identify, assess, and prioritize mitigating vulnerabilities in both OT and IT networks.* |
| 3. | Have a named role/position/title that is responsible for planning, resourcing, and executing cybersecurity activities within the CWS? | ☐Yes☐No☐In progress☐Not applicable  *If “No”, EPA recommends that the CWS take the following action: Identify one role/position/title responsible for cybersecurity within the CWS. Whoever fills this role/position/title is then in charge of all CWS cybersecurity activities.* |
|  | **Change Default Passwords Immediately** |
| 4.  | Change default passwords and require a minimum length for passwords? | ☐Yes☐No☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Change all default manufacturer or vendor passwords before equipment or software is put into service and implement a minimum length requirement for passwords through a policy and/or administrative controls set in the system.* |
| 5. | Require multi-factor authentication (MFA) wherever possible, but at a minimum to remotely access CWS/OT/IT networks? | ☐Yes☐No☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Deploy MFA as widely as possible for both operational technology (OT) and information technology (IT) networks. At a minimum, MFA should be used for remote access to the OT network.* |
|  | **Conduct Inventory of OT/IT Assets** |
| 6. | Maintain an updated inventory of all OT and IT network assets? | [ ] Yes[ ] No☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Regularly review (no less than monthly) and maintain a list of all Operational Technology (OT) and IT assets with an IP address. This includes third-party and legacy (i.e., older) equipment. Create an inventory of software and hardware assets to help understand what you need to protect. Focus initial efforts on internet-connected devices and devices where manual operations are not possible. Use monitoring to identify the devices communicating on your network.* |
| 7. | Maintain current documentation detailing the set-up and settings (i.e., configuration) of critical OT and IT assets?  | [ ] Yes[ ] No ☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Maintain accurate documentation of the original and current configuration of OT and IT assets, including software and firmware version* |
|  | **Develop & Exercise Cybersecurity Incident Response & Recovery Plans** |
| 8. | Have a written cybersecurity incident response (IR) plan for critical threat scenarios (e.g., disabled or manipulated process control systems, the loss or theft of operational or financial data, exposure of sensitive information), which is regularly reviewed, practiced, and updated? | ☐YesDate of last IR plan review/update: *[insert month/day/year]*☐No☐In progress☐Not applicable  *If “No”, EPA recommends that the CWS take the following action: Develop, practice, review, and update an IR plan for cybersecurity incidents that could impact CWS operations. Participate in discussion-based (ex. TTX) and operations-based exercises (ex. Drill) to improve responses to potential cyber incidents.* |
| 9. | Have a written procedure for reporting cybersecurity incidents, including how and to whom? (e.g., phone call, internet submission) and to whom (e.g., FBI or other law enforcement, CISA, state regulators, Water Information Sharing & Analysis Center - WaterISAC, cyber insurance provider)? | ☐Yes☐No☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Document the procedure for reporting cybersecurity incidents to better aid law enforcement, receive assistance with response and recovery, and to promote water sector awareness of cybersecurity threats. (See OW factsheet)* |
|  | **Backup OT/IT Systems** |
| 10. | Backup systems necessary for operations (e.g., network configurations, PLC logic, engineering drawings, personnel records) on a regular schedule, store backups separately from the source systems, and test backups on a regular basis? | ☐Yes☐No☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Regularly backup OT/IT systems so you can recover to a known and safe state in the event of a compromise. Test backup procedures and isolate backups from network connections. Implement the NIST 3-2-1 rule:* *3) Keep three copies: one primary and two backups* *2) Keep the backups on two different media type* *1) Store one copy offsite.* |
|  | **Reduce Exposure to Vulnerabilities** |
| 11. | Patch or otherwise mitigate known vulnerabilities within the recommended time frame?  | ☐Yes☐No☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Identify and patch vulnerabilities in a risk-informed manner (e.g., critical assets first) as quickly as possible* |
| 12. | Require unique and separate credentials for users to access OT and IT networks and separate user and privileged (e.g., System Administrator) accounts? | ☐Yes☐No ☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Require a single user to have two different usernames and passwords; one account to access the IT network, and the other account to access the OT network to reduce the risk of an attacker being able to move between both networks using a single login and restrict System Administrator privileges to separate user accounts for administrative actions only and evaluate administrative privileges on a recurring basis to ensure accurate information for the individuals who have these privileges.*  |
| 13. | Prohibit the connection of unauthorized hardware (e.g., USB devices, removable media, laptops brought in by others) to OT and IT assets? | ☐Yes☐No ☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: When feasible, remove, disable, or otherwise secure physical ports (e.g., USB ports on a laptop) to prevent unauthorized assets from connecting.* |
| 14. | Immediately disable access to an account or network when access is no longer required due to retirement, change of role, termination, or other factors? | ☐Yes☐No ☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Terminate access immediately to accounts or networks upon a change in an individual’s status making access unnecessary (i.e., retirement, change in position, etc.).* |
|  | **Conduct Cybersecurity Awareness Training** |
| 15. | Provide/conduct annual cybersecurity awareness training for all CWS personnel that covers basic cybersecurity concepts? | ☐Yes☐No ☐In progress☐Not applicable *If “No”, EPA recommends that the CWS take the following action: Conduct cybersecurity awareness training annually, at a minimum, to help all employees understand the importance of cybersecurity and how to prevent and respond to cyberattacks.* |

***(Note the ones that are applicable and delete the rest)***

* Service area map with pressure zones (if more than one)
* Process flow diagram
* As constructed plans with source, treatment, pumping and storage facilities
	+ Including wells/intake locations, chemical storage locations, ground storage locations, elevated storage locations, high and low service pumping locations, pressure regulating valves (altitude valves)
* Distribution system map illustrating valve location 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 (radio) operation instructions
* Most recent Illinois EPA Inspection Report (and response) with inventory
* Nitrification Action Plan (trigger levels and actions/responses to limit nitrification)