Water Waterworks Name

WATER EMERGENCY RESPONSE PLAN

PWSID:

Version:

Date:

Author:

SECURITY AND PRIVACY STATEMENT

Public disclosure of this document would have a reasonable likelihood of threatening public safety by exposing vulnerabilities at critical infrastructure water systems. It contains sensitive and confidential information that is not subject to FOIA under Virginia Code §2.2-3705.2. Accordingly, The Virginia Department of Health – Office of Drinking Water and the waterworks is withholding this plan from full public disclosure. Refer any request for a copy of this document to the Office of the Attorney General or the waterworks legal counsel.

TABLE OF CONTENTS

PROMULGATION STATEMENT

The Virginia Department of Health Office of Drinking Water mission is to protect public health by ensuring that all people in Virginia have access to an adequate supply of clean, safe drinking water that meets federal and state drinking water standards. To accomplish this mission, (Waterworks Name) must ensure its operations are performed with minimal disruption during all-hazards emergencies or other situations that disrupt normal operations. This document provides planning and program guidance for implementing the (Waterworks Name) Emergency Response Plan to ensure the waterworks is capable of conducting its mission under all threats and conditions. The (Waterworks Name) is committed to the safety and protection of its personnel, contractors, operations, and facilities. This emergency response plan is a companion plan with the Extended Power Outage Plan and provides a framework to minimize potential impact and allow for rapid recovery from an incident that disrupts operations. This plan encompasses the magnitude of operations and services performed by (Waterworks Name) and is tailored to the agency's unique operations and missions. This plan was developed through a formal planning process involving agency stakeholders.

_____

Signature (Waterworks Director)

_____

Print (Waterworks Director)

(Waterworks Name)

_____

Date

RECORD OF CHANGES

Change Number	Section and/or Page Number	Description of Change	Date of Change	Posted By

PUBLICATION AND DISSEMINATION

The emergency response plan will be distributed to executive leadership and key personnel within (insert County, City, or Company Name) and to others as deemed appropriate.

Distribution List

Name	Title	Agency or Organization	Date Issued	Date Returned	Number of Copies

INTRODUCTION

Operating and maintaining a water supply, treatment and distribution system is a responsibility that involves consideration for routine functions, planning and responding to emergency situations. The purpose of this plan is to assist the (Waterworks Name) in preparing for and responding to emergency situations within their potable water system. For the purposes of this plan, an emergency is defined as the occurrence of any event that causes the water system to pose a threat to public health and safety or to the environment.

PURPOSE

There are several components that make up an emergency response: gaining an understanding of the emergency, emergency response, contacting appropriate parties and the follow up action. Every Waterworks employee should be aware of these components, given that anyone may be the first to be notified or come upon an emergency situation. Being familiar with an organized approach may save precious time.

The purpose of this Emergency Response Plan (ERP) is to outline the preparedness and response activities to the various hazards that exist and could potentially affect the drinking water supply, intake system, filtration, or distribution system of (Waterworks Name). It is written to clarify expectations for an effective response and the seamlessly integrate the processes and procedures outlined in the National Response Framework (NRF) and (County or Company) Emergency Operations Plan.

SCOPE AND APPLICABILITY

This document contains contacts, procedures, a water system map, and other information required to effectively respond to a set of pre-identified emergencies. The emergencies have been grouped into common categories. All questions or comments regarding this plan should be directed to the Waterworks Owner and/or Operator.

Emergency procedures have been prepared for 17 potential situations (not a required number but you should strive to identify at least this many). These situations cover most emergencies that will be encountered. In situations where other emergencies arise, the general approach and principals illustrated here within should be adapted to address the situation.

WATER SYSTEM BACKGROUND

Appendix A contains a schematic of the distribution system and a schematic of the water treatment process.

A. Supply System

1. This section should contain an analysis of the water supply that feeds the waterworks. This information should include supply source name and how this supply source is fed. It should also not how much storage is maintained in any reservoirs that are utilized. There should also be travel distances from raw water source to treatment plant.

   Example:

   The source of Dawson Creek's drinking water is the Kiskatinaw River, which drains from Bearhole Lake and is fed by numerous springs. From the intake at Arras, raw water is pumped through a series of reservoirs that serve a dual purpose of reserving water for drought conditions as well as lowering the turbidity levels of the raw water. As such, raw water is pumped through the Hansen, Hart and Trail reservoirs which collectively provide 200 million gallons of storage capacity. Raw water travels a distance of 16.5 km from the Arras pump house to the Dawson Creek Water Treatment Plant

B. Treatment and Distribution System

1. This section should contain a description of the Treatment and Distribution System.

   Example:

   The Dawson Creek Water Treatment plant is a Class IV treatment plant which includes coagulation, filtration, chlorine disinfection and granular activated carbon filtration. Current capacity of the plant is 126 L/s (2000 US gpm). Raw water, filtered water and finished water are regularly tested in the treatment plant lab for pH, turbidity, chlorine residual, alkalinity and hardness.

   In addition to supplying water to Dawson Creek, the water system also supplies water to the community of Pouce Coupe and too many other rural users through three major water dispensing stations. One station is located at 3rd and 116th Avenue and the other two are located at 21st Street and Alaska Avenue. Bi-weekly distribution sampling and analysis, conducted at eight locations throughout the City, ensures compliance with the Drinking Water Protection Act.

HAZARD ANALYSIS

This section should contain a list of hazards that could impact the waterworks. It is best to list these hazards based on highest degree of probability of occurrence. Below is an example of how this should look.

A. Hazards - EXAMPLES

1. Winter Weather
    a. High Probability with a low to moderate impact. Expectations for winter weather are power and communication outages that may affect computer operations and telephone service to customers. In addition, hazardous road conditions may prevent staff from getting to the office.
2. Hurricanes
3. Criminal Actions
4. Tornadoes
5. Flooding
6. Man-Made disasters and Hazards
7. Terrorism
    a. Very Low Probability with a high impact. Headquarters offices located amongst other government offices present a higher profile than those located away from other government buildings. The remote locations of water treatment plants and water towers also present a higher profile due to their remote locations and accessibility.
8. Earthquakes
9. Dam Failures

CONCEPT OF OPERATIONS

COMPONENTS OF EMERGENCY RESPONSE

There are several components that make up an emergency response: gaining an understanding of the emergency, emergency response, contacting appropriate parties and the follow up action. Every Waterworks employee should be aware of these components, given that anyone may be the first to be notified or come upon an emergency situation. Being familiar with an organized approach may save precious time.

A. Gaining an Understanding of the Emergency

The County/City (depends on where your waterworks is located) will most likely be made aware of a potential emergency situation through phone calls from concerned citizens or from staff. The Waterworks staff member who becomes aware of a potential emergency should make a primary assessment of the situation. The assessment is not to determine a remedy, but rather to determine the magnitude of the problem. A decision can then be made as to whether an emergency response or routine maintenance is required.

B. Emergency Response

Once an emergency has been triggered, the emergency plan for the specific situation should be implemented. All personnel should be familiar with their responsibilities and required actions during an emergency.

C. Contact Appropriate Parties

One of the first steps, should an emergency event occur, is to re-affirm the roles and establish clear lines of communication. In an emergency various people and organizations need to be contacted. Appendix B includes emergency contact information.

D. Follow Up Actions

1. Following control of the emergency, the clean up or repair may begin. Because the possible causes and thus remedies of an emergency are numerous, it is beyond the scope of the manual to describe specific repair procedures. It is likely that most repair procedures required of Waterworks staff will be within the scope of their regular training. Depending on the cause and extent of the emergency, advice and direction from appropriately qualified specialists should be obtained.
2. There are, however, important actions that should be taken that are dependent on the type of emergency event. These actions may involve:
    a. Conducting appropriate reporting to the oversight agency and in some occurrences to regulatory agencies;
    b. Updating maintenance records;
    c. Determining cause of failure and taking steps to preclude a similar emergency from happening;
    d. Preservation of evidence if law enforcement assistance is required.

ROLES AND RESPONSIBILITIES

A. Order of Succession

1. This section should contain a list of who would be in charge should the waterworks leadership be unreachable in the event of an emergency. This needs to be done by title and not by name. This helps eliminate issues when there is turnover within the waterworks.

B. Delegation of Authority

1. This section should contain the delegation of authority for the waterworks. (Who has signatory authority, who is authorized to use purchase cards, etc.) This should be done by title and not by name. This helps eliminate issues when there is turnover within the waterworks.

C. Responsibilities

1. This section should contain the responsibilities of each position, within the waterworks, during an emergency. These responsibilities should be listed by position and not by name. This helps eliminate issues when there is turnover within the waterworks.

EMERGENCY SITUATIONS AND ACTION PLANS

These are suggestions of Emergency Situations that most waterworks face. If you have additional or one of those in the list do not apply, then situations can be added or subtracted by the waterworks as needed.

A. Water Supply

1. Reduction or Loss of Water Sector:

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

    d. Discretionary Actions:

    e. Mandatory Contacts:

    f. Optional Contacts:

    g. Follow up Actions Required:

2. Increased Turbidity Levels (Source Water)

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

    d. Discretionary Actions:

    e. Mandatory Contacts:

    f. Optional Contacts:

    g. Follow up Actions Required:

3. Failure or Loss of Raw Water Reservoir (If no reservoir is used then this section can be deleted, but working with your wholesaler on their plan would also be recommended)

    a. Emergency Triggers:

    b. Risks:

c. Actions Required:

d. Discretionary Actions:

e. Mandatory Contacts:

f. Optional Contacts:

g. Follow up Actions Required:

4. Major Fire Flow Condition

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

    d. Discretionary Actions:

    e. Mandatory Contacts:

    f. Optional Contacts:

    g. Follow up Actions Required:

5. Raw Water Supply Main Break

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

    d. Discretionary Actions:

    e. Mandatory Contacts:

    f. Optional Contacts:

    g. Follow up Actions Required:

6. Distribution Water Main Break

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

d. Discretionary Actions:

e. Mandatory Contacts:

f. Optional Contacts:

g. Follow up Actions Required:

B. Water Quality

1. Failed Water Test

a. Emergency Triggers:

b. Risks:

c. Actions Required

d. Discretionary Actions:

e. Mandatory Contacts:

f. Optional Contacts:

g. Follow up Actions Required:

2. Suspected Contaminated Water - (name of water supply) Source Water Supply

a. Emergency Triggers:

b. Risks:

c. Actions Required:

d. Discretionary Actions:

e. Mandatory Contacts:

f. Optional Contacts:

g. Follow up Actions Required:

3. Suspected Contaminated Water – Distribution System

a. Emergency Triggers:

b. Risks:

c. Actions Required:

d. Discretionary Actions:

e. Mandatory Contacts:

f. Optional Contacts:

g. Follow up Actions Required:

4. Vandalism of Water System

a. Emergency Triggers:

b. Risks:

c. Actions Required:

d. Discretionary Actions:

e. Mandatory Contacts:

f. Optional Contacts:

g. Follow up Actions Required:

5. Hazardous Waste Spill

a. Emergency Triggers:

b. Risks:

c. Actions Required:

d. Discretionary Actions:

e. Mandatory Contacts:

f. Optional Contacts:

g. Follow up Actions Required:

C. Equipment Failure

1. Supply Pumping Failure (Pump location names in the parenthesis)

a. Emergency Triggers:

b. Risks:

c. Actions Required:

d. Discretionary Actions:

e. Mandatory Contacts:

f. Optional Contacts:

g. Follow up Actions Required:

2. Loss or Reduction of Water Treatment Capacity

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

    d. Discretionary Actions:

    e. Mandatory Contacts:

    f. Optional Contacts:

    g. Follow up Actions Required:

3. Inaccessible Water Treatment Plant

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

    d. Discretionary Actions:

    e. Mandatory Contacts:

    f. Optional Contacts:

    g. Follow up Actions Required:

4. Distribution Pumping Failure

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

    d. Discretionary Actions:

e. Mandatory Contacts:

f. Optional Contacts:

g. Follow up Actions Required:

5. Backflow Preventer Failure

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

    d. Discretionary Actions:

    e. Mandatory Contacts:

    f. Optional Contacts:

    g. Follow up Actions Required:

6. SCADA System Failure

    a. Emergency Triggers:

    b. Risks:

    c. Actions Required:

    d. Discretionary Actions:

    e. Mandatory Contacts:

    f. Optional Contacts:

    g. Follow up Actions Required:

APPENDIX A

WATER SYSTEM SCHEMATIC AND TREATMENT PROCESS

These sections should contain a schematic of your waterworks system and the water treatment process.

APPENDIX B

EMERGENCY CONTACT INFORMATION

Key Points of Contact

Virginia Department of Health - Office of Drinking Water

1. ODW Field Office Name:
2. Inspector/District Engineer Name:
    a. Phone Number:
3. Field Office Director Name:
    a. Phone Number:
4. Emergency Services Coordinator: Jessica Coughlin
    a. Phone Number: 804-340-9759
5. 24/7/365 Emergency VDH Answering Service:
    a. 866-531-3068 ASK FOR DRINKING WATER
6. Local Health District Name:
    a. Phone Number:

Your County Emergency Manager

1. Name of Emergency Manager:
    a. Phone Number:

Virginia Department of Emergency Management

1. 24/7/365 Phone Number ask for the regional staff on call for your county
    a. 804-674-2400

Waterworks

1. Emergency Contact Name:
    a. Phone Number:
2. Designated Operator Name:
    a. Phone Number:

Utility Providers

- **Electricity**
    - Company Name:

        - Account Number:
        - Phone Number:
- **Natural Gas**
    - Company Name:
        - Account Number:
        - Phone Number:

- **Propane**
    - Company Name:
        - Account Number:
        - Phone Number:
- **Fuel**
    - Company Name:
        - Account Number:
        - Phone Number:
- **Electrician**
    - Company Name:
        - Account Number:
        - Phone Number:
- **Bulk Water Supplier**
    - Company Name:
        - Account Number:
        - Phone Number:
- **Emergency Generator Supplier**
    - Company Name:
        - Account Number:
        - Phone Number:
- **Local Media Contacts**

APPENDIX C

WATER ADVISORY SAMPLES, PROCEDURES, AND SIGNS

This section should contain samples of Boil Water Advisories, Do Not Use Notices, Instructions on how they are to be distributed (electronically, flyers, media, etc), and any pertinent signs that are used by the waterworks during emergencies.

APPENDIX D

SCHEMATICS OF WATER SYSTEM COMPONENTS

This section should contain schematics of all the water system components that are utilized by the waterworks. This would be things like pump house schematics, booster schematics, reservoirs, and other important components of the water system.