

CONFIDENTIAL

DO NOT COPY

DO NOT RELEASE FOR PUBLIC REVIEW

**Vulnerability Assessment
for**

Public Water System I.D. No.: _____

Population Served: _____

Address: _____

Phone: _____

County: _____

Prepared by: _____

Title: _____

Signature: _____

Date Completed: _____

PAGE LEFT INTENTIONALLY BLANK
(can be used for notes)

Acknowledgments

The New York State Department of Health based this document upon the results of a previous collaboration with the Association of Drinking Water Administrators (ASDWA), the U.S. Environmental Protection Agency (U.S. EPA), the U.S. EPA Drinking Water Academy, and the National Rural Water Association (NRWA). We thank NRWA for the template that was used as the foundation for this project, and for the direct assistance of the New York Rural Water Association.

For Assistance

For questions or assistance in completing this vulnerability assessment, please contact your Local Health Department. Technical assistance is also available from New York Rural Water Association (NYRWA) at:

NYRWA
P.O. Box 487
Claverack, NY 12513
Phone: (518) 828-3155

Fax: (518) 828-0582

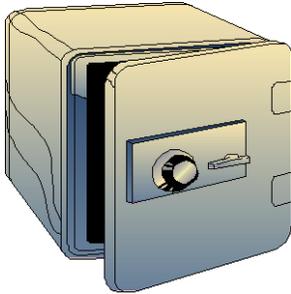
Disclaimer

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

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

Neither the Association of State Drinking Water Administrators, the National Rural Water Association, the U. S. Environmental Protection Agency, nor the Drinking Water Academy, nor its contractor, The Cadmus Group, Inc., assume any liability resulting from the use or reliance upon any information, guidance, suggestions, conclusions, or opinions contained in this document or previous versions.

A Note about Security for this Document



CONFIDENTIAL DOCUMENT

When completed,
DO NOT RELEASE FOR PUBLIC REVIEW,
DO NOT MAKE UNNECESSARY COPIES,
DO NOT TRANSMIT ELECTRONICALLY.

New York State and Federal Requirements for Emergency Response Planning

Due Diligence: State and federal law require all public water systems to exercise due care and diligence to prevent, so far as possible, pollution or depletion of their water supply. This requires reasonable efforts to secure water systems from intentional acts of vandalism or sabotage. (See 10 NYCRR Part 5-1.71.)

Reporting Emergencies: State regulations require water suppliers to notify the State upon any use of emergency water source, or stoppage or alteration of disinfection or other treatment, and when water delivery is disrupted to 25 people, 15 service connections, or a total of 1% of the individuals served or service connections, whichever is larger, for four hours or more. (See 10 NYCRR Part 1-1.23). Notification to the State and the public is also required whenever a condition exists that constitutes a public health hazard. (See 10 NYCRR Part 5-1.77).

Water Supply Emergency Plans: The New York State Public Health Law requires all community water systems serving more than 3,300 people to prepare an emergency plan. Amendments made to State law in August 2002 require that the vulnerability assessment component of the Water Supply Emergency Plan specifically include an analysis of vulnerability to terrorist attack, which shall be made after consultation with local and state law enforcement agencies. Several counties within New York State have extended emergency planning requirements to other systems, so check with your county as well.

Most water suppliers that do not serve more than 3,300 are not required to prepare a formal emergency response plan for submittal to the State. However, the New York State Department of Health strongly recommends that all water suppliers, regardless of size, maintain updated emergency phone numbers, complete a system vulnerability assessment, and use this assessment to enhance their basic security against natural disasters, vandalism, and sabotage.

TABLE OF CONTENTS

SECTION I - INTRODUCTION.....	1
SECTION II - WATER SYSTEM MISSION	2
Table II-1 Mission Identification.....	2
SECTION III – WATER SYSTEM ASSETS	3
Table III-1 Assets - Source, Treatment and Storage	3
Table III-2 Assets - Power, Distribution, Offices, Communications	5
SECTION IV - WATER SYSTEM EMERGENCIES.....	8
Table IV-1 Probability of Emergencies	8
SECTION V – CRITICAL ASSETS ASSESSMENT	9
Table V-1 Impacts to Critical Assets	10
Table V-2 Corrective Actions – Critical Asset Vulnerabilities.....	13
SECTION VI - SECURITY AND OPERATIONS	15
Table VI-1 Security & Operational Vulnerabilities.....	15
Table VI-2 Corrective Actions - Security and Operational Vulnerabilities.....	18

SECTION I - INTRODUCTION

**This assessment contains sensitive information
that must be secured from unauthorized disclosure**

This self-assessment template will help water systems identify vulnerabilities to emergencies caused by non-intentional events such as floods and power outages, and vulnerabilities to intentional events such as vandalism and terrorism. Complete the tables provided in Sections II through VII. When completed this document will identify:

- critical missions and assets of the water system
- system components that are likely to fail during emergencies
- corrective actions that can address security and operational vulnerabilities and reduce potential impacts from the following anticipated emergencies:
 1. Power Outage
 2. Prolonged Water Outage
 3. Transmission & Distribution System Failure
 4. Treatment Equipment Failure
 5. Pump Failure
 6. Loss of SCADA or Other Automated Controls
 7. Contamination of Supply
 8. Chemical Incident In Facility
 9. Drought
 10. Flood
 11. Severe Weather
 12. Earthquake
 13. Fire (at water supply facility)
 14. Fire (in community)
 15. Hazardous Material Release (spill affecting water sources)
 16. Terrorism
 17. Vandalism
 18. Other (please specify) _____
 19. Other (please specify) _____

A vulnerability assessment is a required component of a water supply emergency response plan as defined in New York State Public Health Law §1125, but it is not a complete emergency response plan. For security reasons, the vulnerability assessment must be kept physically separate from the rest of the emergency response plan.

In the process of completing this vulnerability self-assessment, the following law enforcement agencies were consulted (as required by Public Health Law §1125):

SECTION II - WATER SYSTEM MISSION

A systematic Vulnerability Assessment requires recognition of your drinking water system's missions, and identification of the most critical mission. Critical missions are those needed to ensure the safety of your community and continue vital community services. Complete Table II-1 to identify your missions and to select the missions that are most critical. Your list of critical missions will then help you identify critical assets and prioritize actions needed to improve your system's resiliency.

Some water systems may only have some of the listed missions to meet; other systems may have to meet all of them or more on a daily basis.

Table II-1 Mission Identification

Water System Mission	System Mission?	Critical Mission?
	Check If Yes	
Provide Continuous Supply of Raw Water	<input type="checkbox"/>	<input type="checkbox"/>
Treat Unfinished Water	<input type="checkbox"/>	<input type="checkbox"/>
Provide Minimum Treated Flow Rate of (fill in) _____ gallons/day	<input type="checkbox"/>	<input type="checkbox"/>
Provide Minimum Fire Flow Rate of (fill in) _____ gallons/day	<input type="checkbox"/>	<input type="checkbox"/>
Store Treated Water	<input type="checkbox"/>	<input type="checkbox"/>
Distribute to Residential Customers	<input type="checkbox"/>	<input type="checkbox"/>
Distribute to Industrial Customers ¹	<input type="checkbox"/>	<input type="checkbox"/>
Distribute to Interconnected System ¹	<input type="checkbox"/>	<input type="checkbox"/>
Provide Water for Power Generation ¹	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring system operations and water quality	<input type="checkbox"/>	<input type="checkbox"/>
Business Functions - public notification, billing, payroll, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Other -	<input type="checkbox"/>	<input type="checkbox"/>
Other -	<input type="checkbox"/>	<input type="checkbox"/>

¹ Consider interdependencies when identifying critical missions. The safety of the community may rely on a third party, such as a power facility or a hospital that must have your water service to operate.

SECTION III – WATER SYSTEM ASSETS

Complete Table III-1 to help characterize and identify your critical system assets. Once you have identified and prioritized assets that are essential to system operation you can develop an effective preparedness strategy.

Critical assets are components that are necessary for your system to meet its critical missions. A single point of failure is a particularly vulnerable component that if debilitated, could result in significant disruption to one or more critical missions. Single points of failure typically exist where there is inadequate or no redundancy. Single points of failure are always critical assets. Add or remove rows from the table to reflect your system components.

Table III-1 Assets - Source, Treatment and Storage

Component	Number/ Size /Location (if applicable)	Description	Critical Asset	Single Point of Failure
Source Water Type			Check If Yes	
Ground Water			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>
Surface Water			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Purchased			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Sold			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

Treatment			Check If Yes	
Buildings			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Pumps			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Treatment Equipment (e.g., flocculator, basin, filter, disinfection, fluoridation, clearwell)			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Process Controls			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Treatment Chemicals and Storage			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Laboratory Chemicals and Storage			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Storage of Spare Equipment and Parts			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

Storage			Check If Yes	
Ground Storage Tanks			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Pressure Tanks or Elevated Storage Tanks			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

Table III-2 Assets - Power, Distribution, Offices, Communications

Component	Number/ Size /Location (if applicable)	Description	Critical Asset	Single Point of Failure
Power			Check If Yes	
Primary Power			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Auxiliary Power			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Distribution System			Check If Yes	
Pumps / Pump Stations			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Transmission Mains (including exposed crossings)			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Valves			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

Distribution System - Continued			Check If Yes	
Booster Chlorination Stations			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Interconnections to Other Water Systems			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Important Service Connections (e.g. feeds to critical customers such as hospitals, power plant, etc.)			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Appurtenances (e.g. air relief, hydrants, backflow preventers, meters, monitoring points)			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Offices and Personnel			Check If Yes	
Buildings			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Computers			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

Offices and Personnel - Continued			Check If Yes	
Files			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Transportation/ Work Vehicles			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Personnel			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Communications			Check If Yes	
Telephone			<input type="checkbox"/>	<input type="checkbox"/>
Cell Phone			<input type="checkbox"/>	<input type="checkbox"/>
Radio			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Computer Control Systems (SCADA)			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

SECTION IV - WATER SYSTEM EMERGENCIES

To fully estimate the potential impacts from emergency events it is necessary to know the relative probability of the emergency condition. Complete [Table IV-1](#) using your judgment as to probability of occurrence. Generally, emergencies known to commonly occur in the water sector will have a high probability (power outages, floods, drought, vandalism, etc.) and emergencies known to occur but less commonly will have a moderate probability (chemical incident at facility, hazardous material release, etc.).

Table IV-1 Probability of Emergencies

Place an x in the appropriate column below.

Type of Emergency	Probability of Occurrence		
	High	Moderate	Low
Power Outage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prolonged Water Outage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transmission or Distribution System Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Treatment Equipment Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pump Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of SCADA or Automated Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contamination of Supply	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chemical Incident at Facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Severe Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Earthquake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire (at water supply system facility)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire (major fire in community)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous Material Release (contaminant spill affecting sources)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Terrorism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vandalism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Other (specify)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION V – CRITICAL ASSETS ASSESSMENT

The tables in this section will help you identify vulnerabilities of your critical assets and evaluate and prioritize potential corrective actions.

Instructions for Table V-1:

Complete [Table V-1](#) to assess the vulnerability of your critical assets to specific emergency conditions, and to rank the severity of potential impacts from these emergency conditions. For this table, do not worry about the probability of each emergency, just assess what the potential impact would be if the emergency condition ever happens. You will be able to factor in the lower probability of some emergencies (like earthquakes) when you complete [Table V-2](#).

To complete [Table V-1](#) list your critical assets (from [Table III-1](#) and [III-2](#)), one at the top of each column and then assign a level for severity of impact to each asset caused by the listed emergencies. Use extra copies of this table for additional critical assets. For each critical asset listed, add up the total number of severe and intermediate impacts and record this at the bottom of the table. This will give you one indication of the overall vulnerability of that critical asset.

The severity of impact from an event is relative, and can be dependent on many factors. For the purpose of this analysis, assume the impact on critical assets occurs on a high demand day. To rank the severity: use S for Severe, I for Intermediate, and a simple mark through (e.g. “---”) to show a determination for Low or No impact.

S - Severe Impacts: A severe impact would leave you unable to meet your demand. As example: loss of water source, or ability to pump finished water into distribution.

I - Intermediate Impacts: An intermediate impact would force you to operate in a compromised manner, but still be able to meet demand for an extended period. As example: loss of redundancy that gives you no margin of error, such as loss of your backup source.

Table V-1 Impacts to Critical Assets

In the appropriate square enter an S (severe), I (intermediate), or mark as “---” if low or no impact.

	List Critical Assets, one per column			
Emergency Condition				
Power Outage				
Prolonged Water Outage				
Transmission or Distribution System Failure				
Treatment Equipment Failure				
Pump Failure				
Loss of SCADA or Automated Controls				
Contamination of Supply				
Chemical Incident at Facility				
Hazardous Material Release (affecting source)				
Earthquake				
Drought				
Flood				
Severe Weather				
Fire (at water system facility)				
Fire (in community)				
Terrorism				
Vandalism				
<i>Other (specify)</i>				
Total I level Impacts				
Total S level impacts				

Table V-1 Impacts to Critical Assets (continued)

In the appropriate square enter an S (severe), I (intermediate), or mark as “---” if low or no impact.

	List Critical Assets, one per column			
Emergency Condition				
Power Outage				
Prolonged Water Outage				
Transmission or Distribution System Failure				
Treatment Equipment Failure				
Pump Failure				
Loss of SCADA or Automated Controls				
Contamination of Supply				
Chemical Incident at Facility				
Hazardous Material Release (affecting source)				
Earthquake				
Drought				
Flood				
Severe Weather				
Fire (at water system facility)				
Fire (in community)				
Terrorism				
Vandalism				
<i>Other (specify)</i>				
Total I level Impacts				
Total S level impacts				

Instructions for Table V-2:

Complete [Table V-2](#) to develop and prioritize corrective actions. Refer back to [Table IV-1](#) (Probability of Emergencies) and to [Table V-1](#) (Impacts to Critical Assets) to help identify and prioritize corrective actions. Use your judgment on the critical nature of your assets, the vulnerability of the assets to specific emergencies, and the probability of the emergency event.

Corrective actions must be developed for critical assets with potentially severe impacts from any identified emergency condition. It is also recommended that corrective actions be developed for any critical asset with potentially intermediate level impacts from high probability emergency conditions.

Once corrective actions are identified, prioritize corrective actions for implementation.

H – Highest Priority: First consideration for high priority corrective actions must be for critical assets that could be severely impacted under high probability emergency conditions. Consider also assigning a high priority to corrective actions for critical assets that may be severely impacted by emergencies of moderate probability. Critical assets that could receive intermediate level impacts during high probability emergency conditions (i.e. impacts that could force you to operate in a compromised manner) should also be considered for a high priority.

M - Medium Priority: Medium priority should generally be considered for corrective actions for critical assets that would experience intermediate level impacts from an identified emergency condition. Also consider at least a medium priority for assets that could be severely impacted under low probability events.

L – Low Priority: Everything not high or medium priority.

Set reasonable implementation expectations, focus first on the highest priority corrective actions and easy wins. Longer term completion dates for corrective actions are expected for more complex or capital intensive projects. Not all corrective actions listed will be expected to be completed. Some may simply be too costly, or ineffective. When this is the case, indicate so in [Table VI-2](#), do not leave this conclusion unrecorded. Conversely, some critical assets may warrant more than one possible corrective action to address vulnerabilities to specific emergency conditions.

Creating and maintaining robust sustainable infrastructure requires continual assessment and improvements. If there are no highest priority corrective actions to assign, consider implementing medium level corrective actions. If resources permit, also consider corrective actions to address impacts from low probability events since these may occur during the long service life of a water system.

SECTION VI - SECURITY AND OPERATIONS

The tables in this section will help you identify potential security and operational vulnerabilities. Answer all of the questions in [Table VI-1](#) and then complete [Table VI-2](#) to identify and evaluate potential corrective actions.

To help you protect all your customers and assets from possible intentional harm, do not limit your considerations in this section to your critical assets. Include all of your potentially vulnerable infrastructure even if it has not been designated a critical asset or single point of failure.

Table VI-1 Security & Operational Vulnerabilities

QUESTION		ANSWER
1	Has your emergency response plan been updated within the last 12 months?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
2	Is access to all components of your water system restricted to authorized personnel only?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
3	Are warning signs (tampering, unauthorized access, etc.) posted on all components of your water system? (For example, well houses and storage tanks.)	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
4	Do you have emergency contact information posted at all water system components?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
5	Are facilities (water plant, pump house, storage tanks, etc) fenced, and are well heads, manholes, hatches, and gates locked and routinely checked where appropriate?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
6	Are all doors, windows, and other points of human access kept closed and locked?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
7	Are tank hatches, vents, roof hatches, etc, all locked or otherwise secured from intrusion?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
8	Is the area around the components of your water system free of objects that may be used for breaking and entering?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
9	Is there external lighting around the key components of your water system?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
10	Are all entries to your water system easily observable by system personnel?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
11	Is your surface water source secured with fences or gates?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
12	Do water system personnel visit the surface water source regularly?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
13	Do you routinely inspect your source intake, buildings, storage tanks, equipment, and other critical components?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
14	Do you have an alarm system that will detect unauthorized entry or attempted entry at critical components?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
15	Are fire/smoke alarms provided within all structures?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
16	Are your wellheads sealed properly?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

17	Are well vents and caps screened and securely attached?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
18	Are all observation/test and abandoned wells properly secured to prevent tampering?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
19	Do you monitor raw and treated water so that you can detect changes in water quality?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
20	Are all tank ladders, access hatches, and entry points properly secured?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
21	Are all vents and overflow pipes properly protected with screens and/or grates?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
22	Can you isolate and drain to waste your water storage tanks without using any of the distribution system?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
23	Do you control the use of hydrants and valves by other parties?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
24	Does your system secure areas of the water system that are exposed or vulnerable during repair or construction activities?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
25	Does your system monitor for, and maintain, positive distribution pressure?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
26	Has your system implemented a backflow prevention program?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
27	Are all existing emergency interconnections to other water systems functional and exercised on a regular basis?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
28	Do you have an updated Operations and Maintenance (O&M) manual?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
29	Does your O&M manual include periodic, routine evaluation of security systems?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
30	Do you have Standard Operating Procedures (SOPs) available so that unfamiliar staff or outside support could help run your system?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
31	Are deliveries of chemicals and other supplies made in the presence of water system personnel?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
32	Have you discussed with your supplier(s) procedures to ensure the security and availability of their products?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
33	Are chemicals, particularly those that are potentially hazardous or flammable, properly stored in a secure area?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
34	When hiring personnel, do you request local police to perform a criminal background check, and do you verify employment eligibility (as required by the Immigration and Naturalization Service, Form I-9)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
35	Are your personnel issued photo-identification cards?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
36	Do you have a key control and accountability policy?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
37	Are entry codes and keys limited to current water system personnel only?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

38	When terminating employment, do you require employees to turn in photo IDs, keys, access codes, and other security-related items?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
39	Do you use uniforms and vehicles with your water system with a name prominently displayed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
40	Are vehicles and facilities locked and secured at all times?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
41	Have water system personnel been advised to report security concerns and to report suspicious activity?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
42	Do your personnel (including those who answer phones) have a checklist to use for threats or suspicious calls or to report suspicious activity?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
43	Do your computers have restricted Internet access?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
44	Is computer access "password protected?"	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
45	Is virus protection installed and operating and is your operating software upgraded regularly?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
46	Do you implement back up procedures for your computers?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
47	Can water system operate without SCADA or computers?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
48	Do you regularly review your utility, local community, and other web sites for security sensitive information related to your system that could be used to disrupt your system or contaminate your water?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
49	Are copies of records, maps, and other sensitive information labeled "CONFIDENTIAL"?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
50	Are maps, records, and other sensitive information stored in a secure location?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
51	Are all copies of records, maps, and other sensitive information controlled and returned to the water system upon completion of construction projects?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
52	Do you have a neighborhood watch program?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
53	Do you have a program to educate and encourage the public to be vigilant and report suspicious activity to assist in the protection of your water system?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
54	Does your water system have a procedure to deal with public information requests, and to restrict distribution of sensitive information?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
55	Do you have a procedure in place to receive notification of a suspected outbreak of a disease immediately after discovery by local health agencies?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
56	Do you have a procedure in place to advise the community of contamination immediately after discovery?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
57	Do you have procedures in place to respond immediately to a customer complaint about a new taste, odor, color, or other physical change (oily, filmy, burns on contact, etc.)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

Table VI-2 Corrective Actions - Security and Operational Vulnerabilities

Questions in [Table VI-1](#) with a “No” answer suggest a security or operational vulnerability and corrective actions should be considered to reduce or eliminate the vulnerability. Complete [Table VI-2](#) for all “No” answers from [Table VI-1](#) and assign a priority.

High priority actions would be those needed to address obvious vulnerabilities associated with a key operational activity or security weakness. If you conclude that corrective action would not be economically realistic or not possible, still list the question number and indicate that conclusion.

Q #	Anticipated Corrective Actions	Priority ¹	Target Completion Date

¹ H = Highest Priority M = Medium Priority L = Lower Priority

