

3) Vulnerability Assessment Checklist for Small Wastewater Systems

Assets

Communities have a number of assets in their wastewater system. Some of these assets are physical, such as in the collection system and treatment works. Equally important to the successful operation of the facility are investments made in the knowledge of the system, and people assets, (both personnel and customer) which are necessary to the system. This vulnerability assessment checklist is designed to help you identify potential areas of vulnerability associated with these assets and appropriate actions that can be taken to minimize the vulnerabilities identified.

Complete this assessment in the following way:

- A. Review each question, and mark the appropriate answer. Indicate N/A for questions that aren't applicable to your system. Blank spaces are provided for you to fill in questions, comments, and/or potential corrective actions that apply to your system, but were not included on the checklist.
- B. Review the comments as you respond to each question.
- C. Fill in potential corrective actions in the last column for each case in which you answer "No."

It is important to complete the entire table (A, B, and C) – it will make prioritization much easier in the next step.



Knowledge Assets

Knowledge assets include information on critical records and documents, as well as information technology.

Critical Records and Documents

QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
<i>Example</i> 1) Do you have a written emergency response plan (ERP)?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	It is essential that you have an ERP. There are a number of federal and state regulations that require ERPs. You may contact your State Emergency Response Commission or Local Emergency Planning Committee (LEPC).	a. Obtain sample ERP. Gather and review any plans we have from other requirements. Review inventory to identify specific issues. Gather and review contact lists. b. Meet with local first responders (police, fire, emergency medical service) and LEPC to receive input.

vulnerabilities

QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
1.) Do you have a written emergency response plan (ERP)?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>It is essential that you have an ERP.</p> <p>There are a number of federal and state regulations that require ERPs. You may contact local emergency response professionals, your Local Emergency Planning Committee (LEPC), and/or your State Emergency Response Commission for assistance. You may also contact NETCSC if you cannot find assistance locally. Be certain that the ERP is specifically for your facility, and not a generic one for your community. In addition to responding to an emergency, ERPs should include procedures for inspection and start-up after an event.</p> <p>Your plan should be reviewed at least annually to ensure it is up-to-date and addresses a full range of potential threats, including flooding, other natural disasters, and security breaches such as terrorism and other forms of unauthorized entry. These plans could pose a security risk if posted for public viewing since it gives people</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
		<p>information that could be used against the system.</p> <p>Only share the ERP with those who have a clear need to know what is in it, such as local first responders (police, fire, emergency medical) and your Local Emergency Planning Committee.</p>	<p>d.</p> <p>e.</p> <p>f.</p>
<p>2.) Do you have a detailed emergency contact list?</p>	<p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> N/A</p>	<p>An important step in developing your ERP is to create an Emergency Contact List (Attachment 1). Designate someone to be contacted in case of emergency regardless of the day of the week or time of day. This contact information should be kept up-to-date and made available to wastewater system personnel, local officials, local first responders and the LEPC.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
3.) Do you have a plan to test your ERP and contact list at least annually?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Work with your local first responders to plan an exercise that involves your system. You want to be sure to get to know the first responders before an emergency develops. Consider verifying the contact list at least quarterly.	a. b. c.
4.) Are maps, records, and other information stored in a secure location?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Records, maps, and other information should be stored in a secure location when not in use. Make back-up copies of all data and sensitive documents on a regular basis. Store in a secure off-site location.	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
5.) Do you have a policy for the release of copies of records, drawings, maps, and other sensitive information?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Decision makers need to address how sensitive documents (e.g., schematics, maps, and plans and specifications) will be distributed for construction projects or other uses, and how they will be recorded and recovered after use. Discuss measures to safeguard your documents with bidders for new projects.	a. b. c.
Are there additional vulnerabilities?	6.) <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.
7.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.



Information Technology

Computers and computerized controls like a Supervisory Control and Data Acquisition (SCADA) system are becoming more common in small wastewater systems, and can be vulnerable to all sorts of problems. If computers are used as part of the wastewater system, be certain these protective measures are in place, if applicable.

QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
8.) Is computer access password protected?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	All computer access should be password protected and passwords changed every 90 days and (as needed) following employee turnover. When possible, each individual should have a unique password that they do not share with others.	a. b. c.
9.) Is virus protection installed and software upgraded regularly?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Consider contacting an electronic virus protection company and subscribing to a virus update program to protect your records. Update virus protection weekly.	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
10.) Do you have Internet firewall software installed on your computer?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>If you have Internet access, a firewall protection program should be installed to prevent outside access to your computer. If you have a SCADA system, consider operating it on systems without internet access to reduce the chance of unauthorized access.</p> <p>Be aware that firewall protection software will probably not protect modem connections. If a modem must be used, be certain to have software that will disable the local network connection when the modem is not in use.</p>	a. b. c.
11.) Do you have a plan to back up your computer data?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Backing up data regularly (i.e. daily) will help prevent the loss of data in the event of power outages or damage to the computer.</p> <p>Backup copies of computer data should be made routinely and stored at a secure off-site location.</p> <p>Use of surge protectors can help to reduce damage to computers.</p>	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
12.) Is there information on the Web that can be used to disrupt your system?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Posting detailed information about your wastewater system on a Web site may make the system more vulnerable to attack. Web sites should be examined to determine whether they contain critical information that should be removed.</p>	<p>a. b. c.</p>
13.) If you have a SCADA system, has it been evaluated for weaknesses and hardened?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>SCADA can be vulnerable to potential intruders. The most direct approach to evaluate vulnerabilities is penetration testing. Penetration testing can detect vulnerability and security breaches that could be used to attack and penetrate the entire SCADA system. Hardening is the process of making the system less vulnerable through equipment upgrades, redundancy of components, etc.</p>	<p>a. b. c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
14.) Are your computers and information management systems located in places where they are least likely to be affected by natural disasters (floods, storms, etc.)?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Like many other assets, computers and information systems can be damaged during natural disasters, such as floods and storms. As you make decisions regarding the placement of SCADA system technologies and other information management equipment, consider asset safety as well as convenience of use.	a. b. c.
Are there additional vulnerabilities? 15.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.
16.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
18.) Are facilities appropriately secured or protected from unauthorized entry?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Ideally, all facilities should have a security fence around the perimeter. The fence perimeter should be walked periodically to check for breaches and maintenance needs.</p> <p>Lock all doors and windows. All gates should be locked with chains and a tamper-resistant padlock.</p> <p>Other barriers such as concrete “jersey” barriers can be considered to guard certain critical components from accidental or intentional vehicle intrusion. Systems should ensure that all security measures comply with fire codes.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
19.) Are fill and vent pipes on storage or process tanks secure?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Evaluate access to storage and process tanks to reduce theft of fuel or chemicals, or tampering with treatment processes. This is particularly important on critical components (such as digesters) and remote areas with limited surveillance or perimeter protection.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
<p>20.) Is there external lighting around the critical components of your wastewater system?</p>	<p><input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A</p>	<p>Adequate lighting of the exterior of wastewater systems' critical components is a good deterrent to unauthorized access and may result in the detection or deterrence of trespassers. Motion detectors that activate switches that turn lights on or trigger alarms also enhance security.</p>	<p>a. b. c.</p>
<p>21.) Are warning signs (against tampering, unauthorized access, etc.) posted on all critical components of your wastewater system?</p>	<p><input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A</p>	<p>Warning signs can be an effective means to deter unauthorized access. Examples include the following: "Warning - Tampering with this facility is prohibited" ; "Keep Out", "Authorized Personnel Only," "Unauthorized Access Prohibited," and "Employees Only".</p> <p>Check regularly to be certain signs are present and legible.</p>	<p>a. b. c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
22.) Do you regularly visit all buildings, lift stations, equipment, and other critical components?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Frequent and random patrolling of the wastewater system by utility staff may discourage potential tampering. It may also help identify problems that may have arisen since the previous patrol.</p> <p>Consider asking your local law enforcement agencies to conduct patrols of your wastewater system. Advise them of your critical components and explain why they are important.</p>	a. b. c.
23.) Is the area around the critical components of your wastewater system free of objects that may be used for breaking and entering?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>When assessing the area around your wastewater system's critical components, look for objects that could be used to gain entry (e.g., large rocks, cement blocks, pieces of wood, ladders, valve keys, and other tools) and remove if possible.</p>	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
24.) Are potential entry points to your wastewater system easily seen?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>You should clear fence lines of all vegetation. Overhanging or nearby trees may also provide easy access. Avoid landscaping that will permit trespassers to hide or conduct unnoticed suspicious activities. Trim trees and shrubs to enhance the visibility of your wastewater system's critical components. If possible, park vehicles and equipment in places where they do not block view of your wastewater system's critical components.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
25.) Do you have an alarm system that will detect unauthorized entry or attempted entry at critical components?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Consider installing an alarm system that notifies the proper authorities or your wastewater system's designated contact for emergencies when there has been a breach of security. Consider an alarm system whenever possible for tanks, pump houses, and treatment facilities.</p> <p>Also consider having an audible alarm at the site as a deterrent and to notify neighbors of a potential threat.</p> <p>Alarms can also be incorporated for use with SCADA systems. You may want to consult with the local law enforcement agency about selecting an alarm system.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
26.) Do you have a key control and accountability policy?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Keep a record of locks and associated keys, and to whom the keys have been assigned. This record will facilitate lock replacement and key management (e.g., after employee turnover or loss of keys). Vehicle and building keys should be kept in a lockbox when not in use.</p> <p>Have all keys stamped (engraved) "DO NOT DUPLICATE."</p>	<p>a.</p> <p>b.</p> <p>c.</p>
27.) Are entry codes and keys limited to authorized personnel only?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Suppliers and personnel from co-located organizations should be denied access to codes and/or keys. Change codes frequently if possible. Entry into buildings should be under the direct control of wastewater system personnel.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
28.) Do you have a neighborhood watch program for your wastewater system?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Watchful neighbors can be very helpful to a security program.</p> <p>Make sure they know whom to call in the event of an emergency or suspicious activity. Work with your local law enforcement agency to establish such a program.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
29.) Are vehicles locked and secured when unattended?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Wastewater system vehicles should be locked when they are not in use or left unattended. Remove any critical information about the system before parking vehicles for the night or leaving them unattended. Vehicles usually contain tools that could be used to access critical components of your wastewater system. Secure and account for tools daily.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
Are there additional vulnerabilities?			
30.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.
31.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.



Hazardous Material Control

Chlorine and other hazardous materials create vulnerabilities that can affect personnel, the public, and the environment.

QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
32.) Are material safety data sheets (MSDS) available for each chemical?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Establish a plan for maintaining MSDS information for every chemical/material used throughout the system. Employees should have immediate access to this information, and be trained in using MSDSs.	a. b. c.
33.) Are all hazards from chemicals used identified and labeled?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Use the National Fire Protection Association (NFPA) labeling system or other suitable system for labeling hazards. Consult each MSDS for hazard information, and conduct inspections of chemicals, containers, and hazardous material storage areas regularly to identify potential problems. Proper management of hazardous chemicals can often be accomplished with little additional expense, and add an essential level of safety.	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
34.) Has the local fire department and LEPC been informed about the nature and location of hazardous materials on site?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Provide the local fire department and the local emergency planning committee with information about the types and locations of hazardous materials used in your wastewater system. Updates should be provided annually, but if there is a significant change, notify the authorities immediately.</p>	<p>a. b. c.</p>
35.) Are hazardous materials used by commercial customers and industrial facilities identified?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Treatment plant personnel and processes may be impacted by hazardous materials released by sabotage or accidents. Contact your LEPC and/or commercial and industrial customers for information regarding hazardous materials used by local industries. Emergency response plans should include actions necessary to protect personnel, the public and the environment from such releases.</p>	<p>a. b. c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
36.) Have you reviewed your pretreatment ordinance this past year?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Pretreatment ordinances enable the system to regulate the inputs from commercial and industrial users.</p> <p>High strength organic wastes, oil, grease, heavy metals and hazardous materials can have negative effects on your system. Users with such wastes should pretreat or implement waste minimization techniques.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
37.) Are employees properly trained and equipped to respond to a hazardous materials release into the collection system?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Evaluate all procedures for training and response to hazardous materials released to the collection system or treatment works. Consider protection of personnel and community, and mitigation procedures.</p> <p>Equipment and procedures necessary to respond to a release may be found in the MSDS information.</p> <p>NEVER RESPOND to a release for which you are not properly trained or equipped. Coordinate training with local emergency response personnel.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
38.) Are deliveries of chemicals and other supplies made in the presence of wastewater system personnel?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Establish a policy that an authorized person, designated by the wastewater system, must accompany all deliveries. Verify the credentials of all drivers. This prevents unauthorized personnel from having access to the wastewater system.</p>	<p>a. b. c.</p>
39.) Have you discussed with your supplier(s) procedures to ensure the security of their products?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Chain of custody procedures for delivery of chemicals should be reviewed. Inspect chemicals and other supplies at the time of delivery to verify they are sealed and in unopened containers. Match all delivered goods with purchase orders to ensure that they were, in fact, ordered by your wastewater system.</p> <p>Keep a log or journal of deliveries. It should include the driver's name (taken from the driver's photo I.D.), date, time, material delivered, and the supplier's name.</p>	<p>a. b. c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
40.) Are chemicals, particularly those that are potentially hazardous or flammable, properly stored in a secure area?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>All chemicals are to be stored in an appropriate area. Check the MSDS for storage guidelines. The area should be secure with access restricted to authorized employees. Be certain that the area is properly ventilated for the materials being stored.</p> <p>Maintain appropriate tools and equipment on site (properly rated fire extinguisher, chlorine kit, etc.) to take immediate actions in response to an emergency. Check the MSDS for guidance on the proper equipment and response.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
Are there additional vulnerabilities?			
41.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.
42.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.



Treatment Facilities

The treatment systems in small communities range from one-cell lagoons to relatively complex mechanical systems. More complex systems may require additional measures to ensure protection of their components.

QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
43.) Do you monitor raw and treated wastewater so that you can detect changes in water quality?	<input type="radio"/> Yes	Monitoring of raw and treated wastewater can establish a baseline that may allow you to know if there has been a contamination incident. Personnel should be trained to notice any abnormal odor or color of the wastewater entering the plant. It may be appropriate to monitor raw wastewater for pH, DO, COD. These parameters can help identify indicators of excessive organic loading or toxic inputs to the system. Routine parameters for monitoring treated wastewater include chlorine residual, fecal coliform, and pH.	a.
	<input type="radio"/> No		b.
	<input type="radio"/> N/A		c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
44.) Are there procedures in place to control septage dumps?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Septage haulers should only be allowed to dump when regular personnel are on duty. Septage must be sampled and tested for compatibility. Record all septage dumps, including: amount, sample results, company/hauler, date, time and location of dump.	a. b. c.
45.) Are personnel identified and available who can operate all critical components during an emergency?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Be certain that all backup personnel are familiar with the controls of all critical components, in the event that regular operators are unavailable. Also consider other potential routes of access to the facility(s) if regular access roads are unavailable during an emergency.	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
46.) Are fire extinguishers and other emergency equipment adequate and up to date?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Appropriate fire extinguishers should be located throughout your facility. Check material safety data sheets to determine the most appropriate fire extinguisher. Contact your local fire department for consultation on local standards. Be certain that all personnel are familiar with their use. Life preservers and any other appropriate flotation devices should also be available for use in an emergency.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
47. Is personal safety equipment available for all necessary jobs?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>There are many types of safety equipment that may be necessary for the treatment facility and collection system. Confined space entry equipment (winches, gas monitors, etc.), respirators, and protection for eyes, ears, hands, and feet are essential for safely completing some tasks.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
48.) Are emergency power supplies available to operate critical processes during an emergency?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Emergency back-up generators should be available and tested under load each month to verify operation. Whenever possible, power supplies should be located in places where they are least likely to be affected by natural disasters (floods, storms, etc.).</p>	<p>a.</p> <p>b.</p> <p>c.</p>
49.) Do you have a preventive maintenance program?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Good equipment maintenance is essential to protecting system resources. Be sure that generators, emergency pumps, valves, etc. are maintained regularly. Proper polarity and grounding of electrical systems should be verified regularly.</p> <p>There are simple computer programs available to help you develop a preventative maintenance program.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
Are there additional vulnerabilities?			
50.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.
51.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.



Collection

Collection systems are usually the most expensive portion of a treatment system, and are vulnerable to a variety of problems. Proper maintenance is essential to help protect this resource.

QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
52.) Are access points in critical areas (i.e., industry, commerce districts, schools) protected?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Disruption of services to critical customers can cause serious problems within the community. Access to collection systems from points nearby or within these facilities should be protected. Tamper-resistant bolts or other methods may be used to secure manhole covers to rims. Protection of the collection system should also be considered in your ERP.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
53.) Are lift stations secured to prevent unauthorized access?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Disabled lift stations can create many problems in the wastewater system. Secure access points and control panels at lift stations with tamper-resistant locks. Protect structures from collision with concrete ballards or jersey barriers. Install alarms on lift stations that lack them. Test alarms regularly.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
54.) Are storm sewer outfalls secured?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Combined sewer and storm-water sewer outfalls may provide access to other portions of the collection system. When possible and appropriate, access to these components should be restricted in ways that do not disrupt flow from the outfall.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
55.) Do you routinely clean and maintain your collection system?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Regular maintenance of the collection system will reduce blockages and emergency call-outs, and increase the life of collection system components. Water jet and vacuum debris from lines.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
56.) Do you have a collection system inspection program?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Periodically inspect collection systems by video camera or smoke testing. Inspect manholes and clean-outs annually.</p> <p>Repair inflow and infiltration problems as much as possible.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
57.) Have you identified sources for obtaining emergency pumps or cleaning equipment?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Identify alternate sources for obtaining emergency equipment from a neighboring community or contractor. Be certain to maintain and periodically test equipment owned by the community.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
58.) Are tributary collection systems from neighboring entities secure?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Coordinate with other jurisdictions whose collection systems connect with your system. Vulnerabilities in neighboring systems can be vulnerabilities in your system.	a. b. c.
59.) Are employees trained to recognize vulnerable points in the collection system?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	All wastewater system employees should be trained to recognize abnormalities in wastewater characteristics, vulnerable access points, inflow, infiltration, or other areas of concern.	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
Are there additional vulnerabilities?			
60.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.
61.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.



Customer/People Assets

Personnel

Personnel are the greatest asset to a community's wastewater system. Personnel policies are essential to protect both the interests of employees and the community.

QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
62.) When hiring personnel do you request that appropriate authorities perform a criminal background check, and do you verify employment eligibility as required by the Immigration and Naturalization Service, or other government authorities	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	It is good practice to have all job candidates fill out an employment application. Always verify professional references. Background checks conducted during the hiring process may prevent potential employee-related security issues.	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
63.) When terminating employment, do you require employees to turn in photo IDs, keys, access codes, and other security-related items?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Former or disgruntled employees have knowledge about the operation of your wastewater system, and could have both the intent and physical capability to harm your system and its related assets.</p> <p>Requiring employees who will no longer be working at your wastewater system to turn in their IDs, keys, and access codes helps limit these types of security breaches.</p> <p>Regularly update key distribution log.</p> <p>Electronic “swipe” card systems can be an effective way to regulate access, even in small communities.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
64.) Do you use uniforms and vehicles with your wastewater system name prominently displayed?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Requiring personnel to wear uniforms, and requiring that all vehicles prominently display the wastewater system name, helps inform the public when wastewater system staff are working on the system.</p> <p>Any observed activity by personnel without uniforms should be regarded as suspicious. The public should be encouraged to report suspicious activity to law enforcement authorities.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
65.) Have wastewater system personnel been advised to report security/vulnerability concerns and to report suspicious activity?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Your personnel should be trained and knowledgeable about security issues at your facility, what to look for, and how to report any suspicious events or activity.</p> <p>Periodic meetings of authorized personnel should be held to discuss security issues.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
66.) Do your personnel have an incident report form available for use?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>An incident report form is a valuable tool to gather information about emergencies, and it may also provide guidance on appropriate responses. Everyone who answers the telephone, works at your wastewater facilities, or works at city hall needs to be trained in its use and have ready access to the form. Personnel should also know whom to contact in the event of an emergency. Incident reports are also used to document the response and record the number of events. This can be used as an important tool when planning maintenance and repairs. (A sample form is included as Attachment 2).</p>	<p>a.</p> <p>b.</p> <p>c.</p>
		<p>Also consider installing caller ID on your telephone system to keep a record of incoming calls.</p>	



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
67.) Have employees been encouraged to develop a family emergency plan?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	A family emergency plan for each employee is appropriate to help employees relieve concerns about the well being of their family when they are called into service during an emergency. The Red Cross has information for such planning.	a. b. c.
68.) Does your community have a human resource or personnel policy?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Human resource or personnel policies need to cover a broad range of issues, including: drug and alcohol abuse, sexual harassment, discrimination, firearms, disciplinary actions, evaluations and promotions. These policies will serve to protect the human assets of your system.	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
69.) Do your personnel receive regular training that relates directly to their job function?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Training is essential for the development of a well prepared operations and support staff. Training needs to be meaningful and appropriate for each individual's responsibilities. Whenever possible, conduct emergency training exercises with other local emergency responders.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
Are there additional vulnerabilities? 70.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		<p>a.</p> <p>b.</p> <p>c.</p>
71.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		<p>a.</p> <p>b.</p> <p>c.</p>



Customer Assets

You should educate your customers about your system. Encourage them to be alert and to report any suspicious activity to law enforcement authorities.

QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
72.) Is there a community outreach program to educate and inform your community about their wastewater system?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	Be proactive in educating your community about your wastewater system. Regularly send out information with bills to explain ways users can help protect the community's investment. One of your greatest assets is an informed community.	a. b. c.



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
73.) Does your wastewater system have a procedure to deal with public information requests, and to restrict distribution of sensitive information?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Develop a procedure for personnel to follow when you receive an inquiry about the wastewater system or its operation from the press, customers, or the general public.</p> <p>Your personnel should be advised not to speak to the media on behalf of the wastewater system. Only one person should be designated as the spokesperson for the wastewater system. Only that person should respond to media inquiries.</p> <p>Establish a process for responding to inquiries from your customers and the general public.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
74.) Do you have a procedure in place to advise users of health risks caused by disruption of the wastewater system?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>It is critical to be able to get the word out as soon as possible after discovering a health hazard. Notifications may include contacting downstream drinking water systems and making announcements via radio or television, door-to-door notification, a phone tree, or posting notices in public places. The announcement should include identification of the hazard and information on proper precautions. Prioritize notification to customers who are at greatest risk. Enlist the support of local emergency response personnel to assist in the effort, as appropriate.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
75.) Do you have a procedure in place to respond immediately to customer complaints about sewage backups, odors, or other emergency situations?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>It is critical to be able to respond to and quickly identify potential problems reported by customers.</p> <p>Procedures should be developed in advance to investigate and identify the cause of the problem and take appropriate corrective action.</p>	<p>a.</p> <p>b.</p> <p>c.</p>
76.) Are users, local first responders and the LEPC clear about the need to communicate with wastewater system personnel about the entry of hazardous materials into the collection system?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	<p>Communicate with emergency management personnel and industrial customers to ensure an immediate notification of hazardous materials entering the wastewater system.</p>	<p>a.</p> <p>b.</p> <p>c.</p>



QUESTION	ANSWER	COMMENT	POTENTIAL CORRECTIVE ACTIONS
77.) Are there set-aside funds available to replace critical equipment?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	There should be operational funds in reserve for emergency equipment replacement, or continuing operations in the event of some disruption, to keep the operation going.	a. b. c.
78.) Are there additional vulnerabilities?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.
79.)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		a. b. c.

