



What Wastewater Utilities Can Do Now to Guard Against Terrorist and Security Threats

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One consequence of the events of September 11th is a heightened concern among citizens in the United States over the security of their critical wastewater infrastructure. The nation's wastewater infrastructure consisting of approximately 16,000 publicly owned wastewater treatment plants, 100,000 major pumping stations, 600,000 miles of sanitary sewers and another 200,000 miles of storm sewers, is one of America's most valuable resources, with treatment and collection systems valued at more than \$2 trillion. Taken together, the sanitary and storm sewers form an extensive network that runs near or beneath key buildings and roads, and is contiguous to many communication and transportation networks. Significant damage to the nation's wastewater facilities or collection systems would result in: loss of life, catastrophic environmental damage to rivers, lakes and wetlands, contamination of drinking water supplies, long term public health impacts, destruction of fish and shellfish production, disruption to commerce, the economy and our normal way of life. Although many wastewater utilities have already taken steps to increase security, the following recommendations provide many straightforward, commonsense actions to increasing security and reducing threats from terrorism. Many of these actions are recommended by the Association of Metropolitan Sewer Agencies, the Water Environment Federation, and other leading professional organizations. The recommendations include:

Guarding Against Unplanned Physical Intrusion

- Lock all doors and set alarms at your office, pumping stations, treatment plants, and vaults, and make it a rule that doors are locked and alarms are set;
- Limit access to facilities and control access to pumping stations, chemical and fuel storage areas, giving close scrutiny to visitors and contractors;
- Post guards at treatment plants, and post "Employee Only" signs in restricted areas;
- Control access to storm sewers;
- Secure hatches, metering vaults, manholes and other access points to the sanitary collection system;
- Increase lighting in parking lots, treatment bays, and other areas with limited staffing;
- Control access to computer networks and control systems, and change the passwords frequently;
- Do not leave keys in equipment or vehicles at any time.



Making Security a Priority for Employees

- Conduct background security checks on employees at hiring and periodically thereafter;
- Develop a security program with written plans and train employees frequently;
- Ensure all employees are aware of communications protocols with relevant law enforcement, public health, environmental protection, and emergency response organizations;
- Ensure that employees are fully aware of the importance of vigilance and the seriousness of breaches in security, and make note of unaccompanied strangers on the site and immediately notify designated security officers or local law enforcement agencies;
- Consider varying the timing of operational procedures if possible so if someone is watching the pattern changes.
- Upon the dismissal of an employee, change passcodes and make sure keys and access cards are returned;
- Provide Customer Service staff with training and checklists of how to handle a threat if it is called in.

Coordinating Actions for Effective Emergency Response

- Review existing emergency response plans, and ensure they are current and relevant;
- Make sure employees have necessary training in emergency operating procedures;
- Develop clear protocols and chains-of-command for reporting and responding to threats along with relevant emergency management, law enforcement, environmental, public health officials, consumers and the media. Practice the emergency protocols regularly;
- Ensure key utility personnel (both on and off duty) have access to crucial telephone numbers and contact information at all times. Keep the call list up to date;
- Develop close relationships with local law enforcement agencies, and make sure they know where critical assets are located. Request they add your facilities to their routine rounds;
- Work with local industries to ensure that their pretreatment facilities are secure;
- Report to county or State health officials any illness among the employees that might be associated with wastewater contamination;
- Report criminal threats, suspicious behavior, or attacks on wastewater utilities immediately to law enforcement officials and the relevant field office of the Federal Bureau of Investigation.



Investing in Security and Infrastructure Improvements

- Assess the vulnerability of collection system, major pumping stations, wastewater treatment plants, chemical and fuel storage areas, outfall pipes, and other key infrastructure elements;
- Assess the vulnerability of the storm water collection system. Determine where large pipes run near or beneath government buildings, banks, commercial districts, industrial facilities, or are contiguous with major communication and transportation networks;
- Move as quickly as possible with the most obvious and cost-effective physical improvements, such as perimeter fences, security lighting, tamper-proofing manhole covers and valve boxes, etc.;
- Improve computer system and remote operational security;
- Use local citizen watches;
- Seek financing for more expensive and comprehensive system improvements.

While wastewater utilities are the key to improving security of our wastewater treatment plants and collection systems, EPA, other Federal agencies, and both industry and managerial trade associations also provide help and support. EPA is working with AMSA and other groups to develop training courses and technical materials for wastewater utilities and State personnel on assessing vulnerabilities and improving security. EPA is working collaboratively with the Association of Metropolitan Water Agencies and other groups to develop an Information Sharing and Analysis Center to bolster coordinated notification and response to threats and vulnerabilities at both water and wastewater facilities. A number of technical projects are underway to help increase security of the nation's critical wastewater infrastructure.

For more information

For more information please visit the following web sites:

EPA Counter-terrorism: <http://www.epa.gov/ebtpages/ecounterterrorism.html>

EPA Alert on Chemical Accident Prevention and Site Security:

<http://www.epa.gov/ceppo/pubs/secale.pdf>

Association of Metropolitan Sewer Agencies: <http://www.amsa-cleanwater.org>

Association of Metropolitan Water Agencies: <http://www.amwa.net/isac/amwacip.html>

Water Environment: <http://www.wef.org>

National League of Cities: http://www.nlc.org/nlc_org/site/newsroom/terrorism_response