

Protecting Florida's Drinking Water Systems

Bureau of Water Programs Florida Department of Health

The Florida Department of Environmental Protection (FDEP) and the Florida Department of Health (FDOH) are partners in the protection of drinking water.



Over 12 million Floridians are connected and served by large public water systems regulated under the Florida Safe Drinking Water Act (FSDWA). Additionally, over 40 million annual visitors use these water systems. The Florida SDWA is implemented primarily by the FDEP, but has been delegated to ten FDOH County Health Departments (CHDs). It covers public water systems serving 15 or more service connections or 25 or more people daily at least 60 days out of the year. Over three million Floridians are served by smaller water systems not regulated by the FSDWA. These systems are regulated by the FDOH.

The CHDs conduct investigations of complaints related to public water systems. In the event of an emergency threat to public health resulting from contamination of a public water system, the CHDs assist the FDEP in the notification of potentially affected consumers.

The FDEP (in coordination with the FDOH) may take such actions as it may deem necessary in order to protect the public health, upon receipt of information that a contaminant is in, or is likely to enter, drinking water supplies.

The State Health Officer at the FDOH is responsible for declaring public health emergencies and issuing public health advisories. The advisory is issued in consultation with any state or local agency that may be affected, and with prior notification of each CHD within the area which is affected by the advisory. The State Health Officer is authorized to take any action appropriate to enforce any health advisory.

Terrorism and Security Concerns

Destruction

A water system might physically be attacked with intent to destroy its infrastructure. Water systems often have redundancy built into the system to minimize such disruption.

Contamination

A water system might be attacked with a chemical or biological agent intended to harm water system consumers. Systems are vulnerable at four general locations in the treatment process: at the source, during the treatment, at the storage locations, and in the distribution systems.

Biological Weapons

There are a number of biological agents that are a threat to drinking water, and could be used as biological weapons.

Protecting the Water Infrastructure

Two federal partners are particularly involved in assisting FDEP and FDOH in drinking water protection:

CDC funds

Florida will be receiving \$32.4 million in Centers for Disease Control and Prevention (CDC) funds for state and local public health preparedness. This funding is in addition to \$8.1 million allocated in January 2002 for planning and addressing immediate needs. The FDOH Plan calls for the following upgrades:

- Public health preparedness infrastructure
- Epidemiological surveillance for potential bioterrorist agents
- Laboratory capacity for detecting biological agents
- Health alert network and communications systems, by which the department can rapidly notify health and medical communities of disease outbreaks
- Public information dissemination, and
- Education and training of health partners throughout the state.

Areas of Actions by the EPA

Financial Assistance

- the United States Environmental Protection Agency (EPA) will provide grants directly to large water systems for vulnerability assessments, emergency plan development, or remediation planning.
- Monies will be made available via the State Revolving Loan Fund
- FDEP will receive \$187,700 to assist small systems with assessments and plans.

Water System Protection Preparation

Federal law was recently enacted, entitled the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, which requires the public water systems regulated under the FSDWA to:

- Perform vulnerability assessments
- Develop emergency response plans
- Plan and design security enhancements, and
- Obtain funding and install security upgrades.

Water systems should evaluate four factors to help toughen themselves against threats: security, redundancy, robustness, and resilience.

Security – All measures that monitor or restrict access to the system, such as locks, surveillance cameras, guards, fences, and entry control systems.

Redundancy – Having another option for running the plant if something goes wrong. Adding pipelines, storage tanks, or alternate energy sources may eliminate these vulnerabilities and improve operational capabilities as well.

Robustness – A water system can produce and store more water than its customers demand. That typically means that a system can provide its customers with water, even if it can't produce water. Alternative water supplies can enhance a system's robustness.

Resilience – The system can bounce right back into service after an unexpected event does occur. An emergency preparedness plan enhances resilience.

Health & Environmental Terrorism Coalition

The FDEP and FDOH have established a coalition to address the terrorism threat, that includes four workgroups:

Response Work Group

- Integrate planning efforts of both agencies to deal with the range of potential terrorist actions, including, but not limited to chemical, biological and hazardous materials incidents
- Support criminal investigations of potential terrorist incidents, and
- Support response efforts of FDEP Environmental Terrorism Response Team

Drinking Water Safety Work Group

- Assess vulnerabilities of Florida's water supply system
- Conduct scenario planning on range of vulnerabilities, and
- Review or develop public education material

Laboratory Coordination Work Group

- Review capabilities of State Lab System
- Assess testing procedures
- Recommend sampling needed for various incident types and prepare sampling protocols as needed
- Provide guidance on transportation of samples, and

- Evaluate disposal options for samples

Communications Work Group

- Develop improved systems of public information assimilation and dissemination
- Coordination of public information/media releases of events involving FDOH and FDEP

Health & Environmental Terrorism Response Procedures

- Someone reports an environmental health terrorism incident - Contact Local Law Enforcement
- Local Law Enforcement should contact the Emergency Operations Center (EOC)
- EOC will contact FDEP Law Enforcement - Both investigate the incident
- Local Law Enforcement/FDEP Law Enforcement determine if the Florida Department of Law Enforcement (FDLE) or the FBI should become involved in the investigation
- Local Law Enforcement/FDEP Law Enforcement determine if Emergency Operations Center (EOC) should notify FDEP/FDOH Health & Environmental Coalition
- If yes, EOC notifies both FDEP and FDOH staff at both the local level and state headquarters level, including the FDEP and FDOH Drinking Water Program staff, Lab staff, and the Communications staff
- FDEP and FDOH Laboratory staff will determine:
 - What should be tested for in the field.
 - Who should sample.
 - What parameters should be sampled for.
 - Ensure that proper sampling techniques are used, and sample volumes taken.
 - Which lab should analyze for each parameter.

REMEMBER

Time is of the essence in the investigation and response to potential terrorism incidents involving drinking water and public health.

Contacting the Emergency Operations Center ensures that all agency resources are expeditiously available to assist in the investigation and response.

Bart Bibler, P.E., Chief
Bureau of Water Programs (HSEW)
Division of Environmental Health
Florida Department of Health
4052 Bald Cypress Way, Bin #C-22
Tallahassee, FL 32399-1742

Phone: (850) 245-4241
Fax: (850) 921-0298
E-mail: Bart_Bibler@doh.state.fl.us