



New England:

What Your Business Can Do To



**Help Protect & Secure
Drinking Water Sources!**



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An Introduction

New England businesses and communities have always depended on safe water supplies for drinking water, fire protection, power, and commercial uses. Your business and employees all enjoy plentiful drinking water.

That is why EPA New England encourages your business to help protect and secure public drinking water supplies by working with your water supplier, promoting water efficiency, and reducing potential impacts from commercial operations.

There are many opportunities to assist your local water supplier by improving security and protection near your community's surface water supply or groundwater supplies (also called drinking water protection areas). During source water assessments completed by the state drinking water programs, the top threats to New England drinking water supplies



identified included stormwater runoff, storage tanks (both underground and aboveground tanks), automotive related activities, and lawn or herbicide practices.

This brochure shows businesses how to determine if they are located within a drinking water source protection area and includes common sense tips on how to protect those sources. There are also easy steps businesses can take to enhance the security of water supplies.

Regional drinking water demand and population growth will significantly increase in the years to come. At the same time it is also predicted that climate change will adversely affect water resources. EPA New England believes that now is the time for businesses to do their part to promote water and energy efficiency. After all, saving water means saving energy which leads to saving costs.

EPA recognizes the challenges New England faces in providing safe drinking water to the business and their communities. We hope that your business will review how to reduce the risks to public drinking water supplies and serve to protect them.



What Steps

Have Been Taken by State and Local Government
to Assess Threats to Drinking Water Supplies?

Programs to Secure &
Protect Drinking Water Systems

Security Program

Security vulnerabilities of community water systems have been identified. The Bioterrorism Act of 2002 required community water systems (serving over 3,300 customers) to take the following security-related steps:

1. Identify the system's vulnerabilities to terrorist or other intentional acts;
2. Develop a prioritized plan of action to enhance security; and
3. Prepare an emergency response plan.



Source Water Assessment Program

Your State Drinking Water Program located and mapped potential threats to your community's public drinking water supplies. For each assessment, the following steps were taken:

1. Determine where the public water system gets its water and identify the land area that if polluted, could affect the water source. This is called a drinking water protection area.
2. Inventory potential sources of contaminants within that land area using existing data or other information, as needed, from the water supplier, community groups, municipal boards, and businesses.
3. Use geographic conditions and the list of potential sources of contamination to determine how susceptible the drinking water source is to being contaminated in the future.
4. Provide a written source water assessment report (and usually a map) describing potential sources of contamination for each drinking water system and distribute to the water supplier, municipal officials, and the public.



What Can You Do If Your Business Is Located in a Drinking Water Protection Area?

1. Your business may have been identified as one of the potential sources of contamination in the source water assessment. Check with your water supplier to see if your business is located in a drinking water protection area. Talk to your local water supplier about precautionary measures you should take to protect the drinking water source. You may also want to let your customers know what you are doing to protect their water.
2. You can demonstrate your business's commitment to the community's safe drinking water by carrying out practices that minimize the risk of contamination and by working on local emergency planning efforts.
3. If your business manages its own public water system (restaurant, convenience store, gas station, mobile home park) your business will want to reduce any threat to its own water supply. Your business can show its commitment to protecting the public by taking steps today to reduce the likelihood of a release of contaminants.
4. Make security and your water system a priority within your business.



Did you know that...

- Estimated total current U.S. water-related energy use is more than 300 billion kWhs per year;
- A hot water faucet uses as much energy in 5 minutes as a 60 watt bulb uses in 14 hours;
- High efficiency faucets can reduce water usage by 30% or more without sacrificing performance. If we cut our water use in half, we cut our water-related energy use in half.

In the business sector, there are many opportunities for energy and water savings.

Businesses can:

- Promote campaigns to conserve water at work and at home;
- Work locally to build public awareness and (when necessary) implement drought management;
- Support and participate in water conservation programs including retrofits and rebate programs;
- Conduct a water use audit and institute water saving measures such as rain and soil moisture sensors for lawn irrigation;
- Join EPA's WaterSense program as a promotional partner.



EPA Launched the new WaterSense Program in June 2006:

- Voluntary partnership-based labeling program sponsored by US EPA;
- The goal of WaterSense is to protect the nation's water supply by promoting and enhancing the market for water-efficient products and services;
- Water and wastewater infrastructure costs can be reduced, saving water and energy resources;
- Using WaterSense labels helps consumers differentiate among products and services that use less water without sacrificing performance;
- Supports state and local water efficiency efforts;
- Projected savings potential for initial WaterSense product areas – toilets, faucets and irrigation controllers – based on a 10% replacement of existing fixtures, is estimated to be 120 billion gallons or enough to supply water to 33 million people for a year. For every million gallons saved, approximately 1,500kW hours are saved.
- For partnership sign-up forms and more information go to www.epa.gov/watersense



What Can We Do To Conserve Drinking Water Supplies?

Many states in New England have issued drought advisories. Many communities, businesses and residents struggled under water use restrictions. Water demand and population in New England will significantly increase in the decades to come. In addition, climate change provides new challenges.

In the Northeast, models have shown climate is projected to adversely affect water resources. Projected impacts include:

- Flooding of water sources and infrastructure;
- Short-term droughts;
- Increased water demand;
- Water quality problems such as greater risk of waterborne diseases; and
- Risk of saltwater intrusion.

Water Conservation presents a significant opportunity to offset some of these projected impacts. Water savings means energy savings which leads to cost savings.



Did You Know that New England Businesses Have Already Stepped Forward to Protect and Conserve Drinking Water Resources?

Case Studies:

Genzyme Corp Massachusetts

The Genzyme Corp has built a new 12-story headquarters in Cambridge, MA that will reduce energy use by 42%, saving the company an estimated \$460,000 a year. The building's sustainable design also includes waterless urinals and low-flow fixtures that will reduce potable water use by nearly a third, or about 500,000 gallons, and a vegetative roof and rainwater collection system that will reduce stormwater runoff impacts.

Gillette Stadium Massachusetts

The owners of Gillette Stadium and the Foxborough Water Department reduced the projected water consumption by 60% by designing a water reuse system to reduce the amount of water needed for toilet flushing. This partnership resulted in saving an estimated 250,000 gallons per day of the Town of Foxborough's water supply.

Bath Water District Maine

The water district replaced throttling valves with variable frequency drives on two 75 HP raw water pumps and three 150 HP treated water distribution pumps. These pumps will save the utility 375,940kWh hours per year and \$30,074 in operating costs. With incentives, the total cost of the project will be paid back in 1.5 years.

Common Sense Tips

To Protect and Secure Drinking Water Sources



- The Basics
- Train employees to reduce use of toxic chemicals and practice spill control and containment
 - Use the least hazardous chemicals available
 - Use as few lawn chemicals as possible
 - Pump your septic system regularly

- Security
- If you have your own water source: assess your system's vulnerabilities, prepare an emergency response plan, and conduct security drills
 - Contact your water supplier to exchange emergency contact lists and support or get involved in water security efforts such as neighborhood watch programs
 - Become an active player on your local emergency planning committees
 - Inform law enforcement about any suspicious activities involving potentially harmful substances or equipment

- Storage
- Store potentially harmful substances on a paved surface
 - Use secondary containment structures around storage containers for extra protection
 - Label containers clearly and visibly
 - Cover containers stored outside
 - Secure storage areas against unauthorized entry and inspect weekly
 - Keep aboveground and underground storage tanks in good working order

- Chemical Handling
- Keep containers closed and sealed
 - Use drip pans under spigots, valves, and pumps
 - Use funnels and drip pans when transferring harmful substances
 - Recycle chemicals instead of discharging them
 - Do not discharge harmful substances or waste products into floor drains or work sinks that lead into or onto the ground

- Accident Preparedness & Disposal
- Post information on what to do in the event of a spill. Coordinate with and post phone numbers for your fire chief, hazardous spill response hotline and water supplier.

- Vehicles
- Inspect your vehicles regularly to be sure that they aren't leaking fluids like oil or antifreeze

If your business is not connected to a municipal sewer, you may need to know more about complying with Class V Underground Injection Well Control Regulations.



Underground Injection Control Well Regulations

How Does Your Business Dispose of Wastewater?

Class V Injection Wells are commonly called
“Shallow Subsurface Wastewater Disposal Systems.”

You may have one if your business’s wastewater does not go to a municipal sewer, holding tank, surface water or land surface. Shallow subsurface wastewater disposal systems include: septic systems, leach fields, leaching pits and trenches, drywells, cesspools and disposal wells. Common waste fluids discharged underground include: sewage, waste fluids, process wastewater, non-contact cooling water, snow melt water, wash water, boiler water, and stormwater. These waste streams usually contain non-hazardous waste. However, they are often susceptible to contamination by hazardous wastes and hazardous materials.

An Endangering Class V Injection Well Example:

Subsurface wastewater disposal systems at motor vehicle service-related businesses often contaminate underground drinking water sources.

Motor vehicle waste fluids are generated when servicing motor vehicles like automobiles, motorcycles, buses, trucks, trains, farm machinery, airplanes, recreational vehicles, and boats. Motor vehicle wastewater disposal systems commonly receive waste fluids from floor drains, shop sinks, and areas where vehicles are serviced or stored. The waste from these disposal systems endangers drinking water sources since they often contain contaminants like solvents, fuels, lubricants or coolants. Poor waste fluid management practices may also create an environmental liability problem.



What are you required by law to do?

- Subsurface wastewater disposal systems must be registered with or permitted by your state. If you do not have permission to discharge commercial or industrial wastewater or sewage to your business's wastewater disposal system, call your state contact listed below.
- Federal and state law prohibit the discharge of hazardous wastes to a subsurface wastewater disposal system. Report any hazardous substances discharged to your business's wastewater disposal system to your state contact listed below.
- Federal law prohibits the construction of new subsurface wastewater disposal systems used to discharge motor vehicle wastes. All existing motor vehicle wastewater disposal systems must be permitted or closed.
- Federal law prohibits the construction of new cesspools that have the capacity to serve 20 or more people per day. The law also requires that all existing regulated cesspools must be closed.

Why Are Class V Injection Wells a New England Drinking Water Concern?

In New England, these disposal systems pose potential risk to underground sources of drinking water because:

- They are often located near public and private drinking water supplies
- They are sometimes used to dispose of a wide range of non-hazardous and hazardous wastes
- Fluid wastes discharged underground can contaminate drinking water sources



Who Regulates These Systems and Whom Should You Contact?

Each New England State is authorized to regulate subsurface wastewater disposal systems.

Contact State Programs at:

CT DEP

(860) 424-3000

NH DES

(603) 271-2975

ME DEP

(207) 287-3901

RI DEM

(401) 222-6800

MA DEP

(617) 292-5500

VT DEC

(802) 241-3808



For More Information on Drinking Water
Protection Contact Your State Drinking Water
Source Protection Program:

**Connecticut Dept. of
Public Health**

Lori Mathieu
(860) 424-3020

**New Hampshire Dept. of
Environmental Services**

Paul Susca
(603) 271-7061

**Massachusetts Dept. of
Environmental Protection**

Kathleen Romero
(617) 292-5727

**Rhode Island Dept. of
Environmental Management**

Ernie Panciera
(401) 222-4700

**Maine Center for Disease
Control and Prevention**

Andrews Tolman
(207) 287-6196

**Vermont Dept. of
Environmental Conservation**

Rodney Pingree
(802) 241-3418



For more information contact EPA New England:

Ted Lavery

(617) 918-1683

lavery.ted@epa.gov

Videos and workbooks

which include case studies about businesses working to protect drinking water sources are available at:

www.epa.gov/ne/eco/drinkwater/h2o_supplierbiz.html

To request assistance from EPA New England's Pollution Prevention Program contact:

Thomas D'Avanzo

(617) 918-1801

davanzo.thomas@epa.gov

www.epa.gov/ne/assistance

Special Incentives for Small Businesses

Small businesses can avoid costly penalties while protecting drinking water by identifying, promptly reporting and correcting any environmental violations found during on-site compliance assistance or a self-audit.

For more information contact:

Dwight Peavey

(617) 918-1829

peavey.dwight@epa.gov

