

Source Water Protection Tips For Schools that Operate their own Well Water System

New England schools are responsible for providing safe drinking water to their students, staff and visitors. Many school systems do not have access to a nearby public water supplier and provide drinking water by operating their own onsite well water system.

Rain falling on the land near the well water system eventually makes its way to the wells used to provide drinking water. State drinking water programs have designated these lands as drinking water protection areas. Depending on which state you're located in, this area may be called a wellhead protection area, aquifer protection area, drinking watershed area, or source water protection area. As water moves across the land or through the soil, it may pick up pollutants and carry them into the ground water used by the school's wells. For this reason, it is important to keep pollutants off these lands, whenever possible.

1. Investigate your School's Drinking Water Protection Area



- ✓ Call your state drinking water program to find out which lands are in your well's drinking water protection area.

- ✓ **Inspect your school's drinking water protection area** for activities that might release contaminants into the area, such as septic systems, leaking fuel storage tanks and piping, pesticide applications, automobiles, or spills in parking areas.
- ✓ **Find out where all floor drains discharge.** Release of toxic or hazardous materials through spills into floor drains that discharge to the ground or a septic system can lead to contamination. If possible, remove hazardous materials in areas with floor drains unless they are legally permitted to receive these wastes. Contact your state ground water discharge (underground injection control) program for further information.
- ✓ **Check the sanitary seal on drinking water well(s).** If the seal around your school's well has cracked, or is not intact, bacteria and other contaminants can enter into the well water system, potentially making people sick.

2. Plan for Action

- ✓ **Create a drinking water protection program** for your school's drinking water supply. Map the supply's protection area, list all potential sources of contamination in that area, and lessen the threat of contamination or overuse of the supply. Check with your state drinking water program to get a copy of the Source Water Assessment for your system. It will have information about your system's susceptibility to contamination.
- ✓ **Prepare or update an emergency response plan.** Identify potential threats to your drinking water, appropriate response actions, and the responsibilities of all staff during an emergency. Post emergency contact numbers and keep a copy handy at all times. Be sure to involve all the school staff in writing the plan, including teachers, custodians, groundskeepers, the certified water operator, and food preparation staff.
- ✓ **Develop a plan for short-term and long-term water shortages** and identify a back-up water supply (may be a bottled water company), if needed.



3. Limit Activities at the Source (wellhead)

- ✓ **Limit activities around wells.** The most critical area for protection to a well is often called the sanitary radius or Zone I. Contact your state drinking water program to learn what land is in your well's sanitary radius (size usually varies depending on the pumping rate).
- ✓ **Don't use or store pesticides, fertilizers, hazardous or toxic chemicals, and deicing materials in the sanitary radius.**
- ✓ **Direct storm water runoff from parking areas and streets away from the sanitary radius zone.**
- ✓ **Move fuel storage tanks and onsite wastewater systems outside the sanitary radius, when possible.**

4. Handle Chemicals and Fuel with Care

- ✓ **Develop policies and procedures for chemical acceptance, purchasing and inventory.** Use non-toxic cleaning products if possible and don't purchase hazardous materials unless absolutely necessary. Try to buy low waste-low toxicity chemical laboratory materials and art supplies. Assign a staff person who knows about potential chemical risks, and proper storage and disposal practices, to oversee all chemical purchasing. Work with custodians and teachers to be sure they know why hazardous and toxic materials purchases are discouraged.
- ✓ **Inspect and maintain fuel and chemical storage systems** on school grounds. Oversee fuel tank and chemical storage refilling to prevent overflows and avoid refilling near storm drains and unpaved areas. Do regular leak detection testing and keep track of fuel and chemical use so that abnormally high usage is noticed, indicating a possible leak. Try to remove underground storage tanks located in drinking water protection areas and replace them with above ground tanks with spill containment structures.
- ✓ **Avoid pesticide and fertilizer applications** on playing fields and school grounds, especially within drinking water protection areas. Develop an integrated pest management plan, which makes use of natural controls to lessen the need for pesticides on school grounds and facilities.



- ✓ **Limit road salting** in drinking water protection areas to the extent practical, but don't compromise safety.

5. Train Staff on Chemical and Emergency Procedures

- ✓ **Train staff to be sure they know how to properly use, store and dispose of hazardous materials.** Be sure to train students that will use these materials too. Post signs to announce responsibilities and procedures for collection of hazardous wastes from shops, storage areas, laboratories, cafeterias and art rooms. Label areas where hazardous materials are kept.
- ✓ **Be sure staff are trained so they know how to respond in an emergency.** Carry out a mock drill of your emergency response plan, and involve all staff and the local fire and police department too.



6. Secure Water System Facilities and Hazardous Materials

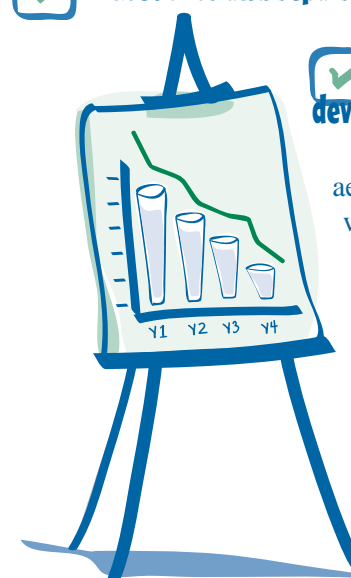
- ✓ **Prevent access to all wells and water supply facilities.** Lock entrances and well caps, put up gates, and post signs to keep students and unauthorized people away from the water system. Cap and secure all vents, access ports and other openings. Inspect backflow devices and replace them as needed.
- ✓ **Keep all hazardous and toxic materials locked up** when not used to keep them away from students and unauthorized users.
- ✓ **Close down any wells that are no longer used or needed** in the foreseeable future according to state guidelines. Be sure all wells used for drinking water or monitoring are locked against vandalism.

7. Communicate with Staff, Students and Neighbors

- ✓ **Get students involved as customers of the school's drinking water supply** by asking for their help in its protection.
- ✓ **Locate storm water drainage catch basins and work with students** to stencil "do not dump, flows to..." messages at the drain to discourage dumping of hazardous materials.
- ✓ **Speak with any neighbor whose property is in the school's drinking water protection area** about ways they can help to keep the school's water supply safe. Ask your town for help with protecting the school's drinking water source.
- ✓ **Post signs announcing that this is a drinking water protection area,** prohibit dumping of hazardous or toxic materials down drains, and remind staff and students about the need to conserve water.

8. Save Water and Money

- ✓ **Conserve water to maintain the school's water quality and lower long-term costs** for water, wastewater, and energy.
- ✓ **Use a master meter** to track water use in the school.
- ✓ **Check for and repair water leaks.**
- ✓ **Install water-saving lawn irrigation devices,** and low flow plumbing fixtures and faucet aerators. Water lawns wisely, usually about one inch of water a week. It is best to water once a week deeply and thoroughly.
- ✓ **Teach students and staff about ways they can save water at the school.**



9. Pay Attention to Drinking Water when the School Expands

- ✓ **Locate new parking areas, fuel tanks, septic systems and playing fields** outside the drinking water protection area, or as far as possible from the school's wells.
- ✓ **Install new wells away from storm water collection devices (such as catch basins), pesticide and fertilizer application areas, fuel storage systems, and hazardous material storage areas,** including toxic art supplies and classroom chemicals.
- ✓ **Don't install floor drains that drain to the ground in areas where hazardous or toxic chemicals are used** (ex. boiler rooms, fuel storage tanks, chemical supplies).

10. Change Plans and Procedures over Time

- ✓ **Continue to make changes to improve the school's protection program and be sure to tell all staff about these changes.** As you carry out actions to protect your school's drinking water supply, you'll learn about new, better ways to get the job done.

