

Drinking Water Supply Facility Operators Consumer Fact Sheet

Board of Registration of Drinking Water Supply Facility Operators

Operators of Drinking Water Supply Facilities are employed by local water distribution and treatment facilities. They are responsible for chemically treating and then distributing our drinking water.

The Board of Registration of Operators of Drinking Water Supply Facilities regulates and licenses all operators of these facilities to ensure that the highest safety standards are adhered to in the treatment and distribution of drinking water.

The Board encourages licensees to maintain a high level of competence in the industry and assists them in enrolling in seminars and training programs. The Board holds high standards of quality and service in the industry for the protection of the public's health and safety. The Board offers nine levels of licensure - from basic employment to management in Drinking Water Facilities.

Each board of registration administers and enforces its regulations regarding licensing requirements. The boards receive, investigate and adjudicate complaints against the respective licensed practitioners.

Where Does Drinking Water Come From?

Drinking water comes from surface water and ground water. Large-scale water supply systems tend to rely on surface water resources, and smaller water systems tend to use ground water. Including the approximately 23 million Americans who use ground water as a private drinking water source, slightly more than half of the population receives its drinking water from ground water sources.

Surface water includes rivers, lakes, and reservoirs. Ground water is pumped from wells that are drilled into aquifers. Aquifers are geologic formations that contain water. The quantity of water in an aquifer and the water produced by a well depend on the nature of the rock, sand, or soil in the aquifer where the well withdraws water. Drinking water wells may be shallow (50 feet or less) or deep (more than 1,000 feet). Your water utility or your public works department can tell you the source of your public drinking water supply.

For more information on drinking water in your area contact the Massachusetts Department of Environmental Protection.

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Making Water Safe

Water suppliers use a variety of treatment processes to remove contaminants from drinking water. These individual processes may be arranged in a "treatment train" to remove undesirable contaminants from the water. The most commonly used processes include filtration, flocculation and sedimentation, and disinfection. Some treatment trains also include ion exchange and adsorption. A typical water treatment plant would have only the combination of processes needed to treat the contaminants in the source water used by the facility. If you want to know what types of treatment are used for your water supply, contact your local water supplier or public works department.

Flocculation/Sedimentation

Flocculation refers to water treatment processes that combine small particles into larger particles, which settle out of the water as sediment. Alum and iron salts or synthetic organic polymers (alone, or in combination with metal salts) are generally used to promote coagulation. Settling or sedimentation is simply a gravity process that removes flocculated particles from the water.

Filtration

Many water treatment facilities use filtration to remove remaining particles from the water supply. Those particles include clays and silts, natural organic matter, precipitants from other treatment processes in the facility, iron and manganese, and microorganisms. Filtration clarifies water and enhances the effectiveness of disinfection.

Ion Exchange

Ion exchange processes are used to remove inorganic constituents if they cannot be removed adequately by filtration or sedimentation. Ion exchange can be used to treat hard water. It can also be used to remove arsenic, chromium, excess fluoride, nitrates, radium, and uranium.

Adsorption

Organic contaminants, color, and taste- and odor-causing compounds can stick to the surface of granular or powdered activated carbon (GAC or PAC). GAC is generally more effective than PAC in removing these contaminants. Adsorption is not commonly used in public water supplies.

Disinfection (chlorination, ozonation)

Water is often disinfected before it enters the distribution system to ensure that dangerous microbes are killed. Chlorine, chloramines, or chlorine dioxide most often are used because they are very effective disinfectants, and residual concentrations can be maintained to guard against biological contamination in the water distribution system. Ozone is a powerful disinfectant, but it is not effective in controlling biological contaminants in the distribution pipes.

Public Water Systems

The Safe Drinking Water Act (SDWA) defines a public water system as one that serves piped water to at least 25 persons or 15 service connections for at least 60 days per year. Such systems may be owned by homeowner associations, investor-owned water companies, local governments, and others. Water that does not come from a public water supply, and which serves one or only a few homes, is called a private supply.

Community water systems are public systems that serve people year-round in their homes. EPA also regulates other kinds of public water systems-such as those at schools, factories, campgrounds, or restaurants-that have their own water supply. The data shown in this report cover only community water systems because they are the source of most drinking water.

How Does Water Get To My Faucet?

In a typical community water supply system, water is transported under pressure through a distribution network of buried pipes. Smaller pipes, called house service lines, are attached to the main water lines to bring water from the distribution network to your house.

In many community water supply systems, water pressure is provided by pumping water up into storage tanks that store water at higher elevations than the houses they serve. The force of gravity then "pushes" the water into your home when you open your tap.

Houses on a private supply usually get their water from a private well. A pump brings the water out of the ground and into a small tank within the home, where the water is stored under pressure.

Safe Drinking Water Act

President Clinton signed the Safe Drinking Water Act (SDWA) Amendments of 1996 on August 6, 1996. The 1996 SDWA amendments require that consumers receive more information about the quality of their drinking water supplies and what is being done to protect them. The amendments also provide new opportunities for public involvement and provide an increased emphasis on protecting the sources of local drinking water.

Water suppliers must promptly tell you if your water has become contaminated by something that can cause immediate illness. The 1996 SDWA Amendments specified new time frames for notification of violations. Water systems now have 24 hours to inform their customers of violations of EPA standards "that have the potential to have serious adverse effects on human health as a result of short-term exposure." If such a violation occurs, the system will announce it through the media and provide information about:

- The potential adverse effects on human health,
- The steps that the system is taking to correct the violation, and
- The need to use alternative water supplies (such as boiled water or bottled water) until the problem is corrected.

Systems will inform customers about violations of less immediate concern in the first water bill sent out after the violation, in an annual report, or by mail within a year. *The SDWA Amendments stress efforts to protect source water.* Beginning in 1998, your state will compile information from individual systems so that you can evaluate the overall quality of drinking water in your state. EPA must compile and summarize the state reports into an annual report on the condition of the nation's drinking water.

The SDWA amendments also require EPA to publish regulations that will require systems to prepare consumer confidence reports. These consumer confidence reports at a minimum will provide:

- Information about where your drinking water comes from,
- Results of monitoring that the system performed during the year, and
- Information on health concerns associated with violations that occurred during the year

Beginning in 1999, systems will have to prepare and distribute the reports annually. Systems serving fewer than 10,000 persons will, at the Governors option, be able to make the reports available to the public in ways other than mailing them.

Consumer Tips

Keeping Your Drinking Water Clean

Following these simple instructions will keep your drinking water clean and safe to drink.

Septic Systems

1. **DO NOT** use commercial septic tank cleaners.
2. **DO NOT** pour hazardous materials such as paint, paint thinner, solvents, industrial cleaners, disinfectants, pesticides, or waste oil down toilets or sinks.
3. **DO NOT** pour grease or cooking oil down the drain. It will clog the soil and leaching system.
4. **DO NOT** overload your system with food waste from the garbage disposal.
5. **DO NOT** dispose of nonbiodegradable objects such as disposable diapers down the toilet. They do not decompose.
6. **DO NOT** use chlorine bleach.
7. **DO** pump out the septic tank every two or three years.
8. **DO** keep records of septic system maintenance.
9. **DO** be alert to signs of a failing system such as the presence of wet areas above the leaching field and backing up of wastewater following periods of heavy water use.

Hazardous Materials/Wastes Storage & Use

1. **DO NOT** dispose of hazardous materials or wastes such as solvents, degreasers, waste oil, commercial cleaners, pesticides, paint thinner, or radiator fluid by pouring them down a floordrain, sink, or toilet.
2. **DO NOT** dispose of such materials or wastes by pouring them on or burying them in the ground or by pouring them down storm drains.

3. **DO NOT** use pesticides or herbicides near the well. Minimize the use of fertilizers near the well.
4. **DO NOT** park cars near the well or next to storm drains that empty to a dry well.
5. **DO** dispose of toxic and hazardous materials or waste properly. For household hazardous waste, contact your community for information on collection days.
6. **DO** practice good "housekeeping" in automobile/shop maintenance areas. Pick up spills with absorbent material and dispose of properly.
7. **DO** conduct regular employee training sessions on "best management practices" for handling and disposing of toxic or hazardous materials or washes.

Fuel Storage Tanks

1. **DO NOT** locate new fuel storage tanks in the recharge area of the well. Existing above - ground storage tanks should have containment structures and be protected from the weather. Existing underground storage tanks should be regularly tested and carefully monitored for leaks.
2. **DO** check with your local fire marshal for regulations pertaining to testing leak detection devices and other requirements for fuel storage tanks.
3. **DO** remove deteriorating fuel storage tanks.

Filing a Complaint

While the majority of licensees conduct themselves as true professionals, the Division of Professional Licensure will take action against those who fail to maintain acceptable standards of competence and integrity.

In many cases, complaints are made by dissatisfied consumers - but, dissatisfaction alone is not proof of incompetence or sufficient grounds for disciplinary action.

If you have a serious complaint against a licensed drinking water facilities operator, call or write the Division's Office of Investigations and ask for a complaint form. Or download a copy of the [complaint form](#)  .

Division of Professional Licensure
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