

Environmental Laws and Alternative Dispute Resolution: Tools for Environmental Justice

Safe Drinking Water Act

Introduction:

The Safe Drinking Water Act (SDWA) seeks to ensure safe public drinking water and protect underground sources of drinking water. This fact sheet provides background information on drinking water and groundwater pollution. It also explains how community residents can use this law to protect their health and this important natural resource.

Where does drinking water come from?

Drinking water comes from two natural sources. One source is surface water, such as rivers, lakes, and reservoirs. The other source is groundwater. Groundwater comes from rain and melting snow soaking into the ground. Water fills the spaces between rocks and soils, making a water-bearing underground layer, or aquifer.

People rely on these two sources for their drinking water. To get the water, some people use private wells, which consist of pipes drilled into the ground that deliver water to homes or businesses without a regulated system of controls. This source draws exclusively from ground water. Most people get their drinking water through a public water supply system, which is a network of pipes that can be below or above the ground, which deliver water to homes or businesses from systems that may or may not be regulated. Public water supplies are drawn from surface or ground water or both.

What pollutes drinking water?

Drinking water can be polluted by contaminants that are man-made or naturally occurring. Ground water can be polluted by human activities, including the following:

- improper use of fertilizers, animal manures, herbicides, insecticides, and pesticides;
- leaking or abandoned underground storage tanks and piping;

- improperly built or poorly located and/or maintained septic systems for household wastewater;
- improperly routed or managed stormwater systems that take in pollutants (e.g. chemicals, microbial contaminants) that are washed off of streets, parking lots, and other surfaces into the ground water;
- improper disposal or storage of hazardous, industrial, municipal and other wastes; and
- chemical spills at industrial sites.

Suburban growth and sprawl can also contribute to pollution of drinking water. This happens when businesses, industries, residential developments and other activities move into areas that were once rural. Contamination can occur when there are no adequate wastewater treatment facilities or storm-water management systems to address pollution from these new activities.

Also, in rural areas, people often use private wells for drinking water, which pose special challenges. Groundwater may also contain natural contaminants that can cause harm even without human activity. For example, it can contain dissolved elements such as arsenic, selenium or radon.

What law addresses drinking water protection?

The primary law governing drinking water is the Safe Drinking Water Act, which was passed by Congress in 1974 (and amended several times since its passage). This law seeks to protect drinking water by regulating the nation's public water supply and protecting sources of drinking water. It is administered by the US Environmental Protection Agency (EPA) and state environmental or health agencies.

When the law was originally passed and implemented, it focused on treatment as the means to provide safe drinking water at the consumer's point of use (i.e. "the tap"). The 1996 amendments strengthened the existing law by also recognizing original source water protection, training for public water supply system operators, funding for water system improvements, and public information and education as important components of maintaining safe drinking water. Another major provision in the SDWA is the underground injection control program, which regulates the discharge of fluids into, above or below underground sources of drinking water.

The SDWA uses what EPA calls a "multiple barrier" approach to drinking water protection. It is useful to understand these measures because they provide the framework for the SDWA. These measures include:

- determining the location, output and number of drinking water sources, and protecting those sources;
- regulating public water supply systems by:
 - treating water for contaminants;
 - monitoring water to ensure that health-based standards are met;

- making sure water is treated by qualified operators; and
- maintaining equipment and infrastructure, especially the distribution pipes that carry water from the treatment plant to customers.
- protecting wells and collection systems; and
- making information available to the public on the quality of their drinking water.

Who has control over drinking water protection?

While EPA and state governments set and enforce standards, local governments and private water suppliers shoulder the direct responsibility for the quality of water that people use for domestic purposes. Water systems test and treat their water, maintain the distribution systems that deliver water to consumers, and report on their water quality to the state. States and EPA provide technical assistance to water suppliers, and can take legal action against systems failing to provide water that meets state and EPA standards. Protecting drinking water sources usually requires the combined efforts of many partners, such as EPA, state agencies, tribes, communities, resource managers, drinking water utilities, communities, and the public at large.

Are private wells governed by the SDWA?

Some people get their water from private wells that are not subject to EPA standards. As mentioned above, EPA regulates public water systems but it does not have the authority to regulate private drinking water wells. However, some state and local governments set rules to protect the users of these wells. Unlike public drinking water systems, private wells do not have experts regularly checking the water's source and its quality before it is sent to the tap. These households must take special precautions to ensure the protection and maintenance of their drinking water supplies. Proper well construction and continued maintenance are keys to the safety of water supplies for private wells. Sources of information include your state water-well contractor licensing agency, local health department, or local water system professionals.

What is the SDWA framework to provide safe drinking water to consumers?

The SDWA's framework to provide safe drinking water to consumers includes two major programs, drinking water standards and public water supply systems. Both are discussed below.

Drinking water standards

The SDWA gives EPA responsibility for setting national drinking water standards to protect the health of people who get their water from public water systems. It protects against health risks while considering available technology and costs.

Drinking water standards apply to water systems differently based on the system's type and size. For example, states can grant variances from Maximum Contaminant Levels and treatment techniques to systems that serve fewer than 10,000 persons. The variance must still ensure "adequate protection of human health."

There are two categories of drinking water standards:

A [National Primary Drinking Water Regulation](#) (NPDWR or primary standard) is a legally enforceable standard that applies to public water systems. Primary standards protect drinking water quality by limiting levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water. They take the form of “maximum contaminant levels” for particular contaminants or required ways to treat water to remove contaminants.

A [National Secondary Drinking Water Regulation](#) (NSDWR or secondary standard) is a non-enforceable guideline regarding contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. However, states may choose to adopt them as enforceable standards.

The standards address different types of contaminants, including *disinfectants*, *disinfection byproducts*, *inorganic chemicals*, *organic chemicals*, and *radionuclides*.

The process used by EPA to set drinking water standards was strengthened by the 1996 Amendments to the SDWA. This law requires EPA to go through several steps to determine whether setting a standard is appropriate for a particular contaminant, and if so, what the standard should be. The steps include: (1) identify drinking water problems; (2) establish priorities; and (3) propose and finalize a National Primary Drinking Water Regulation. EPA considers many factors, including occurrence in the environment; human exposure and risks of adverse health effects in the general population and sensitive subpopulations; analytical methods of detection; technical feasibility; and impacts of regulation on water systems, the economy and public health. EPA must also consider public input throughout the process.

Public Water Supply Systems

A public water system (PWS) is specifically defined in the SDWA as a system that serves at least fifteen service connections or regularly serves at least twenty-five individuals with public water for human consumption through pipes or other constructed conveyances. Human consumption includes drinking, bathing, showering, cooking, dishwashing, and maintaining oral hygiene.

The SDWA does not regulate PWS through a permitting process; rather, it uses the national primary drinking water standards. In addition to the requirements above, each standard includes requirements that water systems be tested for contaminants to make sure standards are achieved. In addition to setting these standards, US EPA provides guidance, assistance, and public information about drinking water, collects drinking water quality data, and oversees state drinking water programs.

National drinking water standards are legally enforceable. Both EPA and states can take enforcement actions against water systems that are not meeting standards. They may issue administrative orders, take legal actions, or fine utility companies. And they may also work to increase a water system’s administrative understanding of and compliance with standards.

Environmental Justice Hooks

Consumer Confidence Reports: The Consumer Confidence Rule requires public water suppliers that serve the same people year round (community water systems) to provide consumer confidence reports (CCR) to their customers. Community water systems are public water systems that have at least 15 service connections or regularly serve at least 25 year-round residents. The CCR summarizes information regarding sources used (i.e., rivers, lakes, reservoirs, or aquifers) any detected contaminants, compliance and educational information. The reports are due to customers by July 1st of each year. More specifically, the CCR must provide consumers with the following fundamental information about their drinking water:

- the lake, river, aquifer, or other source of the drinking water;
- a brief summary of the susceptibility to contamination of the local drinking water source, based on the source water assessments by states;
- how to get a copy of the water system's complete source water assessment;
- the level (or range of levels) of any contaminant found in local drinking water, as well as EPA's health-based standard (maximum contaminant level) for comparison;
- the likely source of that contaminant in the local drinking water supply;
- the potential health effects of any contaminant detected in violation of an EPA health standard, and an accounting of the system's actions to restore safe drinking water;
- the water system's compliance with other drinking water-related rules;
- an educational statement for vulnerable populations about avoiding *Cryptosporidium*; and
- educational information on nitrate, arsenic, or lead in areas where these contaminant may be a concern.

Additional sources of information include EPA's Safe Drinking Water Hotline (800-426-4791) and website: <http://water.epa.gov/drink/local>

Source Water Protection: Protecting water at the source is a vitally important step in drinking water protection. The 1996 amendments to the Safe Drinking Water Act address this need by requiring source water assessments. For purposes of this law, *source water* is defined as untreated water that comes from streams, rivers, lakes or underground aquifers that is used for drinking water. This water may be used to provide public drinking water through public water supply systems or to supply private wells used for human consumption.

The SDWA requires that the states develop EPA-approved programs to carry out assessments of all source waters in the state. The law requires that states ensure that a source water assessment is completed for every public water system. A *source water assessment* is a study and report that applies specifically to each water system. The assessment provides basic information about the water used as drinking water, such as:

- where drinking water comes from;
- potential sources of contamination that could pose a threat to drinking water quality;
- land area contributing water to each public water system; and
- how susceptible the public water supply is to potential contamination.

The assessments are available to the public, and can usually be obtained from the state or public water system administrator. This information gives water utilities, community members, and government the information they need to decide how to protect their drinking water sources and to take actions to reduce potential sources of contamination.

Wellhead Protection: The SDWA Amendments of 1996 established a new program to protect underground sources of drinking water through pollution prevention and management. This program is called the Wellhead Protection Program (WHPP). A wellhead is the area or part of an area surrounding a well, from which the well's ground water is drawn. The SDWA requires states to prepare a WHPP, which must be approved by EPA prior to implementation. Program activities to be included are delineation, contaminant source inventory, contingency planning and source management. All states have EPA-approved state WHPPs, but methods to implement the plan vary between states. Tools used include: management plans, education, technical assistance, and mandatory requirements for wellhead protection at the local level.

Public Notification: Another important tool to ensure the safety of drinking water recognized by the SDWA Amendments of 1996 is public notification. This requirement helps ensure that consumers will always know if there is a problem with their drinking water. Public water systems must notify their customers when they violate EPA or state drinking water standards (including monitoring requirements), or otherwise provide drinking water that may pose a risk to consumers' health. Information that must be included in a notice includes:

- a description of the violation that occurred, including the potential health effects;
- the population at risk, and whether alternate water supplies need to be used;
- what the water system is doing to correct the problem;
- actions consumers can take;
- when the violation occurred, and when the system expects it to be resolved;
- how to contact the water system for more information; and
- language encouraging broader distribution of the notice.

The length of time that a water supplier has to notify the public depends on the severity of the situation, and ranges from 24 hours to one year. EPA identifies three categories or tiers for this notice. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency). For less serious problems (e.g., a missed water test), water suppliers must notify consumers in a "timely manner."