Understanding the Safe Drinking Water Act

SAFE DRINKING WATER ACT • 1974-2004 • PROTECT OUR HEALTH FROM SOURCE TO TAP

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply.

The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources—rivers, lakes, reservoirs, springs, and ground water wells. (SDWA does not regulate private wells which serve fewer than 25 individuals.)

SDWA authorizes the United States Environmental Protection Agency (US EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. US EPA, states, and water systems then work together to make sure that these standards are met.

Millions of Americans receive high quality drinking water every day from their public water systems, (which may be publicly or privately owned). Nonetheless, drinking water safety cannot be taken for granted.

There are a number of threats to drinking water: improperly disposed of chemicals; animal wastes; pesticides; human threats; wastes injected underground; and naturally-occurring substances can all contaminate drinking water.

Likewise, drinking water that is not properly treated or disinfected, or which travels through an improperly maintained distribution system, may also pose a health risk.

Originally, SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

All public water systems must have at least 15 service connections or serve at least 25 people per day for 60 days of the year.

Drinking water standards apply to water systems differently based on their type and size:

Community Water System (there are approximately 54,000) - A public water system that serves the same people year-round. Most residences including homes, apartments, and condominiums in cities, small towns, and mobile home parks are served by Community Water Systems.

Non-Community Water System - A public water system that serves the public but does not serve the same people year-round. There are two types of non-community systems:

Non-Transient Non-Community Water System (there are approximately 20,000) - A noncommunity water system that serves the same people more than six months per year, but not year-round, for example, a school with its own water supply is considered a non-transient system.

Transient non-community water system (there are approximately 89,000) - A non-community water system that serves the public but not the same individuals for more than six months, for example, a rest area or campground may be considered a transient water system.

1996 SDWA Amendment Highlights:

Consumer Confidence Reports All community water systems must prepare and distribute annual reports about the water they provide, including information on detected contaminants, possible health effects, and the water's source.

Cost-Benefit Analysis US EPA must conduct a thorough cost-benefit analysis for every new standard to determine whether the benefits of a drinking water standard justify the costs.

Drinking Water State Revolving Fund States can use this fund to help water systems make infrastructure or management improvements or to help systems assess and protect their source water.

Microbial Contaminants and Disinfection Byproducts US EPA is required to strengthen protection for microbial contaminants, including Cryptosporidium, while strengthening control over the byproducts of chemical disinfection. The Stage 1 Disinfectants and Disinfection Byproducts Rule and the Interim Enhanced Surface Water Treatment Rule together address these risks.

Operator Certification Water system operators must be certified to ensure that systems are operated safely. US EPA issued guidelines in February 1999 specifying minimum standards for the certification and recertification of the operators of community and non-transient, noncommunity water systems. These guidelines apply to state Operator Certification Programs. All states are currently implementing EPA-approved operator certification programs.

Public Information & Consultation SDWA emphasizes that consumers have a right to know what is in their drinking water, where it comes from, how it is treated, and how to help protect it. US EPA distributes public information materials (through its Safe Drinking Water Hotline, Safewater web site, and Water Resource Center) and holds public meetings, working with states, tribes, water systems, and environmental and civic groups, to encourage public involvement.

Small Water Systems Small water systems are given special consideration and resources under SDWA, to make sure they have the managerial, financial, and technical ability to comply with drinking water standards.

Source Water Assessment Programs Every state must conduct an assessment of its sources of drinking water (rivers, lakes, reservoirs, springs, and ground water wells) to identify significant potential sources of contamination and to determine how susceptible the sources are to these threats.

Roles and Responsibilities:

SDWA applies to every public water system in the United States. There are currently more than 170,000 public water systems providing water to almost all Americans at some time in their lives. The responsibility for making sure these public water systems provide safe drinking water is divided among US EPA, states, tribes, water systems, and the public. SDWA provides a framework in which these parties work together to protect this valuable resource.

US EPA sets national standards for drinking water based on sound science to protect against health risks, considering available technology and costs. These National Primary Drinking Water Regulations set enforceable maximum contaminant levels for particular contaminants in drinking water or required ways to treat water to remove contaminants. Each standard also includes requirements for water systems to test for contaminants in the water 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 data, and oversees state drinking water programs.

The most direct oversight of water systems is conducted by state drinking water programs. States can apply to US EPA for "primacy," the authority to implement SDWA within their jurisdictions, if they can show that they will adopt standards at least as stringent as US EPA's and make sure water systems meet these standards. All states and territories, except Wyoming and the District of Columbia, have received primacy. While no Indian tribe has yet applied for and received primacy, four tribes currently receive "treatment as a state" status, and are eligible for

primacy. States, or US EPA acting as a primacy agent, make sure water systems test for contaminants, review plans for water system improvements, conduct on-site inspections and sanitary surveys, provide training and technical assistance, and take action against water systems not meeting standards.

To ensure that drinking water is safe, SDWA sets up multiple barriers against pollution. These barriers include: source water protection, treatment, distribution system integrity, and public information. Public water systems are responsible for ensuring that contaminants in tap water do not exceed the standards. Water systems treat the water, and must test their water frequently for specified contaminants and report the results to states. If a water system is not meeting these standards, it is the water supplier's responsibility to notify its customers. Many water suppliers now are also required to prepare annual reports for their customers. The public is responsible for helping local water suppliers to set priorities, make decisions on funding and system improvements, and establish programs to protect drinking water sources. Water systems across the nation rely on citizen advisory committees, rate boards, volunteers, and civic leaders to actively protect this resource in every community in America.

Protection & Prevention:

Essential components of safe drinking water include protection and prevention. States and water suppliers must conduct assessments of water sources to see where they may be vulnerable to contamination. Water systems may also voluntarily adopt programs to protect their watershed or wellhead, and states can use legal authorities from other laws to prevent pollution. SDWA mandates that states have programs to certify water system operators and make sure that new water systems have the technical, financial, and managerial capacity to provide safe drinking water. SDWA also sets a framework for the Underground Injection Control (UIC) program to control the injection of wastes into ground water. US EPA and states implement the UIC program, which sets standards for safe waste injection practices and bans certain types of injection altogether. All of these programs help prevent the contamination of drinking water.

US EPA sets primary drinking water standards through a three-step process:

First, US EPA identifies contaminants that may adversely affect public health and occur in drinking water with a frequency and at levels that pose a threat to public health. US EPA identifies these contaminants for further study, and determines contaminants to potentially regulate. Second, US EPA determines a maximum contaminant level goal for contaminants it decides to regulate. This goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. These goals allow for a margin of safety . Third, US EPA specifies a maximum contaminant level, the maximum permissible level of a contaminant in drinking water which is delivered to any user of a public water system. These levels are enforceable standards, and are set as close to the goals as feasible. SDWA defines feasible as the level that may be achieved with the use of the best technology, treatment techniques, and other means which US EPA finds (after examination for efficiency under field conditions) are available, taking cost into consideration. When it is not economically or technically feasible to set a maximum level, or when there is no reliable or economic method to detect contaminants in the water, US EPA instead sets a required Treatment Technique which specifies a way to treat the water to remove contaminants.

Setting National Drinking Water Standards:

US EPA sets national standards for tap water which help ensure consistent quality in our nation's water supply. US EPA prioritizes contaminants for potential regulation based on risk and how often they occur in water supplies. (To aid in this effort, certain water systems monitor for the presence of contaminants for which no national standards currently exist and collect information on their occurrence). US EPA sets a health goal based on risk (including risks to the most sensitive people, e.g., infants, children, pregnant women, the elderly, and the immuno-compromised). US EPA then sets a legal limit for the contaminant in drinking water or a required treatment technique—this limit or treatment technique is set to be as close to the health goal as

feasible. US EPA also performs a cost-benefit analysis and obtains input from interested parties when setting standards. US EPA is currently evaluating the risks from several specific health concerns, including: microbial contaminants (e.g., *Cryptosporidium*); the byproducts of drinking water disinfection; radon; arsenic; and water systems that don't currently disinfect their water but get it from a potentially vulnerable ground water source.

Funding and Assistance:

US EPA provides grants to implement state drinking water programs, and to help each state set up a special fund to assist public water systems in financing the costs of improvements (called the drinking water state revolving fund). Small water systems are given special consideration, since small systems may have a more difficult time paying for system improvements due to their smaller customer base. Accordingly, US EPA and states provide them with extra assistance (including training and funding) as well as allowing, on a caseby- case basis, alternate water treatments that are less expensive, but still protective of public health.

Compliance and Enforcement:

National drinking water standards are legally enforceable, which means that both US EPA and states can take enforcement actions against water systems not meeting safety standards. US EPA and states may issue administrative orders, take legal actions, or fine utilities. US EPA and states also work to increase water systems. understanding of, and compliance with, standards.

Public Information:

SDWA recognizes that since everyone drinks water, everyone has the right to know what's in it and where it comes from. All water suppliers must notify consumers quickly when there is a serious problem with water quality. Water systems serving the same people year-round must provide annual consumer confidence reports on the source and quality of their tap water. States and US EPA must prepare annual summary reports of water system compliance with drinking water safety standards and make these reports available to the public. The public must have a chance to be involved in developing source water assessment programs, state plans to use drinking water state revolving loan funds, state capacity development plans, and state operator certification programs.

For More Information:

To learn more about the Safe Drinking Water Act or drinking water in general, call the Safe Drinking Water Hotline at 1-800-426-4791, or visit US EPA's Office of Ground Water and Drinking Water web site: *www.epa.gov/safewater*.