

Highlighting Drinking Water Week 2019

By Joan Rose, PhD

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Next week, May 5–11, is the American Water Works Association’s (AWWA) [Drinking Water Week](#)—a time when water professionals and the communities they serve join together to recognize the essential public health role of safe drinking water. With just the turn of a tap, most Americans have unlimited access to safe, high quality, and inexpensive (pennies per treated gallon) drinking water. Established in 1988, this year’s theme is [Protect the Source](#) of our drinking water.

AWWA’s Drinking Water Week provides a variety of [social media and kid-friendly, downloadable resources](#) like coloring sheets, mazes, and

an artwork contest to support an increased understanding and appreciation of tap water in our daily lives—not just for the water we drink, but also for food preparation, bathing and clothes washing, community fire protection, and more.



As an active member of AWWA for decades, and on behalf of the entire Water Quality & Health Council, I’m pleased to highlight and show our support for Drinking Water Week and its 2019 theme.

Drinking Water Basics

Providing [safe \(finished\) drinking water](#) requires a multi-barrier approach that includes:

- **protecting source water** from contamination;
- **appropriately treating the water** (removing contaminants from the source water), typically by filtering, treating, and disinfecting “raw water”; and
- **protecting the water as it travels from the plant to your home** by maintaining a chlorine-based residual in the distribution system.

Surface water (streams, rivers, and lakes), groundwater aquifers, or a combination of the two are the most common sources of drinking water. Less commonly, yet increasingly, [desalinated](#) sea and other salty waters as well as highly-treated wastewater ([water reuse](#)) are used as sources for drinking in the United States.

More about Source Water Protection

The susceptibility of source water for a particular public water system (PWS) to contamination depends on both the natural (particularly climatic) conditions as well as anthropogenic (human-related) activities in the watershed. Increasingly, non-point sources of microbial and chemical pollution such as animal manure and fertilizer application practices are threatening the quality of U.S. source waters. Septic tanks have also been shown to be a risk to both ground and surface waters. The 1996 Amendments to the Safe Drinking Water Act required states to complete [source water assessments](#) for drinking water facilities (see box below), which were tailored to each state’s water resources and drinking water needs.

U.S. Environmental Protection Agency (EPA) [Source Water Assessment Steps](#)

Step 1 – Delineate the source water protection area, which shows the area to be protected based on the area from which the PWS draws its drinking water supplies.

Step 2 – Inventory known and potential sources of contamination or activities of concern that may pose threats to drinking water supplies.

Step 3 – Determine the susceptibility of the PWS to inventoried contaminant sources or activities, and relate the nature and severity of the threat to the likelihood of source water contamination.

Step 4 – Notify the public about threats identified in the contaminant source inventory and what they mean to the PWS. Effective programs ensure public access to information that can help prevent contamination.

Step 5 – Implement management measures to prevent, reduce, or eliminate risks to a drinking water supply.

Step 6 – Develop contingency planning and water replacement strategies that address water supply contamination and short- and long-term service interruption emergencies.

Source water assessments should be periodically [updated and enhanced](#) as they provide utilities, community governments and organizations, and others with information needed to participate in source water protection planning, prioritization, and management activities. One of the key tools available as part of this assessment is [microbial source tracking](#), which allows the identification of the cause of source water impairment. In addition, diagnostic methods are available that can help address specific microbial hazards such as *Cryptosporidium* intestinal parasites or viruses.

Source water protection programs and resources can take [many forms](#), such as spill prevention and response planning, stakeholder outreach and education materials, and enhanced coordination with “upstream” point source dischargers (e.g., permitted wastewater treatment outfalls). Source water protection plans can reduce treatment costs and increase efficiency, and can also reduce potential risks to public health from exposures to contaminated water. Further, preventing source water contamination can be less costly than remedying its effects, such as supplying alternative or emergency drinking water supplies, adding more water treatment, and developing new water sources.

We Are All Stakeholders for Safe Drinking Water

Protecting source water is everyone’s responsibility, including EPA and the U.S. Department of Agriculture, which provide funding and encourage partnerships for source water protection planning. This collective responsibility extends down to states, local governments, businesses and industries, community groups, drinking water systems, and us as individuals. We can all do our part to get to know and protect our source waters from pollution. Please join us in supporting AWWA’s Drinking Water Week 2019, which provides several [fun, easy, and positive ways](#) to do all of the above—particularly for children, many of whom will become our future water scientists, engineers, and decision-makers.

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