

# CDC's Safe Water Program

Clean and safe water is critical to protect human health and life.

**CDC's Safe Water Program** protects public health through non-regulatory actions that decrease environmental threats to water systems and reduce people's exposures to waterborne contaminants.

State, territorial, local, and tribal (STLT) health officials rely on CDC for specialized expertise and resources that would otherwise not be available to address water contamination and/or waterborne illness.

## What does CDC's Safe Water Program Do?

**CDC's Safe Water Program provides expertise and resources STLT health officials rely on to:**

- Investigate the environmental causes of waterborne illness outbreaks;
- Respond to toxic contamination and natural disasters that affect drinking water;
- Assess exposures in unregulated drinking water sources; and
- Put prevention into practice through CDC guidance, tools, and training.

**CDC and its partners are:**

- Creating and enhancing surveillance and tracking systems to ensure data is readily available to assess vulnerability and impacts of contamination and to target interventions;
- Conducting environmental investigations to improve scientific understanding of water borne contaminants and related health effects;
- Funding STLT drinking water programs to implement evidence-based interventions, programs, and policies; and
- Promoting safe water guidance and recommendations.

**CDC's Safe Water Program's expertise addresses water-related issues from "source to tap":**

- Unregulated drinking water systems such as private drinking water wells and other sources not covered under the Safe Drinking Water Act (SDWA);
- Impacts to drinking water from public health emergencies;
- Drinking water issues facing vulnerable populations, such as underserved rural communities without access to public drinking water supplies;
- Waterborne toxic exposures, such as heavy metals;
- Waterborne illnesses through CDC-wide access to chemical, radiologic, and infectious disease experts and programs; and
- Recreational water threats at public pools such as waterborne outbreaks, drowning, and pool-chemical poisoning.



## Get the facts!

- About 15% of the U.S. population (approximately 43 million people) obtain drinking water from private wells.
- Total water-related illnesses, including *Giardia*, *Cryptosporidium*, and *Legionella*, result in an estimated 40,000 hospitalizations each year and cost \$970 million annually.
- Arsenic contamination alone, which is associated with conditions like heart disease and several types of cancer, contributes to approximately 1,000 deaths and \$9.7 billion dollars in economic impacts.
- Americans make 300 million trips to pools and other places to swim every year; however, recent CDC studies found that 1 in 8 public pools were closed during routine inspections because of health hazards.

Program Funding: Safe Water Programs	
Year	Funding Level
FY 2013	\$6,485,000
FY 2014	\$8,601,000
FY 2015	\$8,601,000

## Funding at Work

### Harmful Algal Bloom in Ohio

During a harmful algal bloom that affected Lake Erie, public health officials from Toledo, Ohio, contacted CDC for guidance to protect the 500,000 people who get their drinking water from the lake. Harmful algal blooms may result in sore throat, gastrointestinal disturbance, and neurological damage at high concentrations. CDC provided the state with tools to support their response, including reference cards for physicians and veterinarians, a poster about protecting animal health, and a frequently asked questions (FAQ) document about cyanobacteria. CDC also provided data collection forms and an event-specific FAQ, which helped the city improve their response to and minimize the potential health impact from the bloom.

### Changing Policy in Iowa to Prevent Arsenic Exposure in Drinking Water from Private Wells

Iowa's Cerro Gordo County Department of Public Health has been working with CDC for the last 5 years to protect the health of residents who may be exposed to arsenic in private well water. Ingesting very high levels of arsenic can result in death. Arsenic is associated with health effects such as heart disease and lung, bladder, and skin cancer. Local officials tested water and rock chip samples from more than 60 wells and determined the arsenic source was pyrite. Local environmental health supervisors then classified the entire county as an arsenic zone and approved an ordinance to require well testing to reduce risk for exposure to high arsenic levels in wells. They also worked with well drillers to change well construction practices to prevent arsenic exposure. Additionally, the state updated rules contained in the Grants-To-Counties Program to reimburse residents for arsenic testing in private wells. These efforts benefit 450,000 private well users in Iowa.

### Reducing Hazards at Public Pools through the Model Aquatic Health Code

There is no federal regulatory authority for public pools, waterparks, and interactive fountains. Yet significant hazards exist. Drowning is a leading cause of unintentional injury-related death for children, pool chemicals cause 5,000 emergency department visits each year, and outbreaks associated with public pools have increased dramatically from an average of 12 a year (1991–1995) to 41 (2006–2010).

State and/or local officials develop codes for these facilities, and inspecting them is the third most-common inspection service provided by local health departments. Maintaining and updating codes requires a great deal of time and resources, so health departments and industry asked CDC to create a model code based on best practices and latest scientific research.

In response, CDC worked with academia, public health, and industry to create the Model Aquatic Health Code (MAHC). The MAHC is a voluntary set of guidelines agencies can use to create or update existing pool codes and reduce outbreaks, drownings, and chemical poisoning at public aquatic facilities. It is not a federal law and only becomes law if adopted by a state or locality. Agencies can use all, none, or some of the MAHC and can modify it to fit their local needs.



**For More Information**

**National Center for Environmental Health**  
[www.cdc.gov/nceh](http://www.cdc.gov/nceh)

**Environmental Health Services - Water**  
[www.cdc.gov/nceh/ehs/activities/water.html](http://www.cdc.gov/nceh/ehs/activities/water.html)

**Health Studies Branch**  
[www.cdc.gov/nceh/hsb/cwh](http://www.cdc.gov/nceh/hsb/cwh)

**Model Aquatic Health Code**  
[www.cdc.gov/mahc](http://www.cdc.gov/mahc)

CDC's National Center for Environmental Health (NCEH) is committed to protecting people from environmental hazards. NCEH responds to disasters and toxic exposures, educates communities on how to stay safe and healthy, and collects and leverages environmental data to improve public health. NCEH maximizes the impact of every dollar by investing in illness prevention.