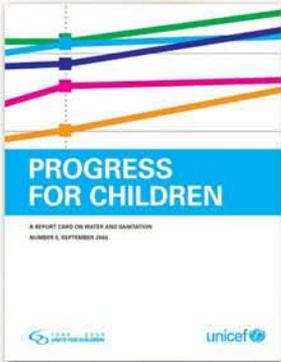


# UNICEF Report Says One Billion Lack Safe Drinking Water



The statistics are mind-boggling: of the more than six billion people in the world today, more than one billion have no access to improved drinking water—a basic necessity for human life—and about 2.6 billion people do not have access to improved sanitation.

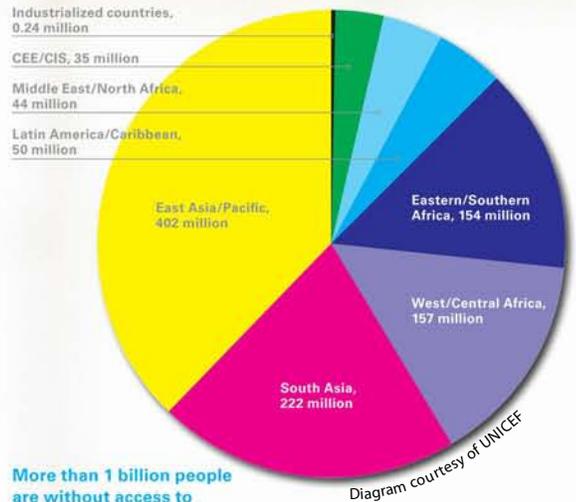
And according to the U.N. children’s agency UNICEF, polluted water and lack of basic sanitation claim the lives of more than 1.5 million children every year, mostly from waterborne diseases.

“Despite commendable progress,” says Ann Veneman, UNICEF executive director, “an estimated 425 million children under 18 still do not have access to an improved water supply, and more than 980 million do not have access to adequate sanitation.”

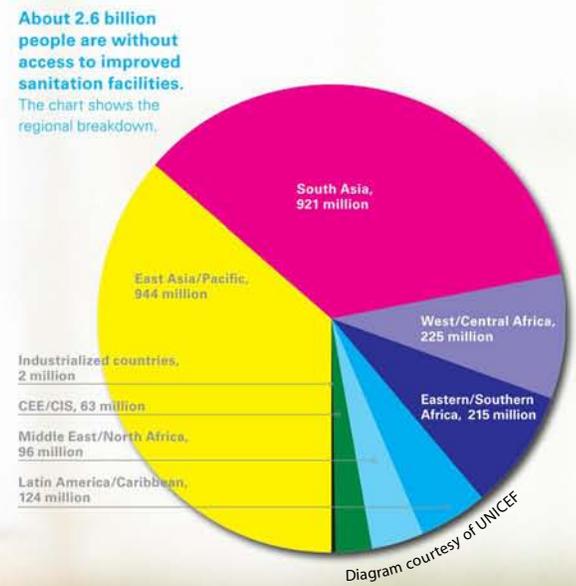
She said those who die are by no means the only children affected. “Many millions more have their development disrupted and their health undermined by diarrhoeal or water-related diseases.”

In a 33-page report titled “Progress for Children: A Report Card on Water and Sanitation,” UNICEF says these “tragic statistics” underscore the need for the world to meet its commitment to halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation.

More information about the report can be found at: [www.unicef.org/publications/](http://www.unicef.org/publications/)



**More than 1 billion people are without access to improved drinking-water sources.**  
The chart shows the regional breakdown.



**About 2.6 billion people are without access to improved sanitation facilities.**  
The chart shows the regional breakdown.



# Maine Earthquake Lowers Groundwater

A minor earthquake that shook Maine in October caused the water level in a U.S. Geological Survey (USGS) monitoring well to drop more than 2.5 feet. Nearly 17 hours later, the groundwater level was still dropping, according to scientists at the USGS Maine Water Science Center in Augusta. Hydrologists call the change in the well “dramatic” and note that well-water users may have noticed changes in their drinking water.

The preliminary magnitude 3.9 earthquake was the third such event to shake up residents in Maine in a two week period. This event was centered about four miles south-southeast of Bar Harbor, or 45 miles southeast of Bangor, Maine. A magnitude 2.5 earthquake on September 28 and a magnitude 3.4 on September 22 were centered in the same location.

“It isn’t unusual for earthquakes to cause minor changes in water levels in wells, but this is the most memorable in Maine in the last decade,” said USGS hydrologist Gregory Stewart. “Users of well water could notice cloudy water and possibly a change in availability of water,” said Stewart, who notes that the region’s fractured bedrock means it is difficult to predict whether or not other wells will be affected. “Water-level responses can occur over time periods of a few minutes to several months.”

The well, located in Acadia National Park in Bar Harbor, is a drilled bedrock well that is 98 feet deep. On a normal day, water-level changes are generally three to four inches at this well. One other well near the epicenter also showed a drop in water level from this event. Other local earthquakes in the previous two weeks were not detected at water level monitoring wells in the state.

The earthquake was widely felt in coastal and central Maine. More than a thousand people reported light to moderate shaking on the USGS “Did You Feel It?” Web site: [pasadena.wr.usgs.gov/shake/STORE/Xtib1\\_06/ciim\\_display.html](http://pasadena.wr.usgs.gov/shake/STORE/Xtib1_06/ciim_display.html)

Although this series of felt earthquakes is notable for this area, Maine has been shaken by stronger events. Several minor earthquakes centered in Maine are recorded each year; many are too small to be felt.

The largest earthquake centered in Maine occurred March 21, 1904. Its magnitude was 5.1. This event toppled chimneys and was widely felt throughout New England. Historic earthquakes centered outside Maine have been large enough to cause damage in the state. The largest historic earthquake to shake the region was a magnitude 7.0 earthquake in 1663, centered in Quebec along the St. Lawrence River. It toppled chimneys in eastern Massachusetts. In 1755, a magnitude 6.0 earthquake off Cape Ann, Massachusetts, shook down chimneys and several brick buildings in eastern Massachusetts.

More information on the earthquake history of Maine can be found at: [earthquake.usgs.gov/regional/states.php?regionID=19&region=Maine](http://earthquake.usgs.gov/regional/states.php?regionID=19&region=Maine)

View the Acadia National Park well level at: [waterdata.usgs.gov/me/nwis/uv/?site\\_no=442238068154101&PARAMeter\\_cd=72019](http://waterdata.usgs.gov/me/nwis/uv/?site_no=442238068154101&PARAMeter_cd=72019)



Photo courtesy of Wm. Henderson / FEMA

## Updated Advice for Emergency Disinfection of Drinking Water

The U.S. Environmental Protection Agency (EPA) has updated and improved its advice for how to disinfect drinking water in situations where tap water may be unsafe to drink due to an emergency. The updated version of *Emergency Disinfection of Drinking Water* includes metric measurements and line drawings that clearly illustrate different disinfection methods.

*Emergency Disinfection* also highlights four crucial steps to take when the water supply may be contaminated. Agreement on these steps is the result of collaboration between EPA, other U.S. federal agencies and the Red Cross.

EPA is also making translations of the publication available in French, Spanish, Vietnamese, and Standard Arabic in PDF form on the Safewater Web site at [epa.gov/safewater/faq/emerg.html](http://epa.gov/safewater/faq/emerg.html).



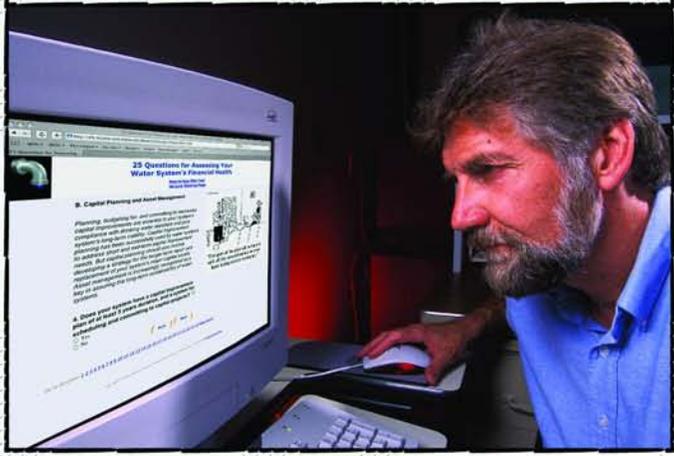


Photo by Peggy Greb, www.ars.usda.gov

## New Financial Capacity Self-Assessment Tool Available

The U.S. Environmental Protection Agency's (EPA) Region 1 Environmental Finance Center (EFC) in Maine has developed a new tool to help public water systems and those who provide assistance to them better evaluate financial capacity. The tool, *25 Questions for Evaluating Your Public Water System's Financial Health*, provides small systems with an instrument to give themselves a quick "checkup" to see how they're doing and where they need to improve.

This tool focuses solely on a system's self-assessment of financial issues. It then provides users with immediate feedback and is fun to use. The tool is designed to be self-explanatory, but a frequently asked questions (FAQ) link provides additional information and instruction. The tool is not New England-specific and may be helpful in other respective regions.

*For more information about the tool, contact Will Johnston, water program manager, New England Environmental Finance Center, Edmund S. Muskie School of Public Service, University of Southern Maine, 96 Falmouth Street, Box 9300, 617, Law Building, Portland, Maine 04104-9300. You also may call (207) 228-8356 or e-mail [wjohnston@usm.maine.edu](mailto:wjohnston@usm.maine.edu). The tool can be downloaded at [efc.muskie.usm.maine.edu/Water%20Survey/25questions.htm](http://efc.muskie.usm.maine.edu/Water%20Survey/25questions.htm).*

## EPA Revises Goals

U.S. Environmental Protection Agency (EPA) water officials say that too many obstacles stand in the way of its attaining the 2008 target of having 95 percent of people served by community water systems (CWSs) receive water that meets all health-based standards.

EPA's Office of Water proposes to replace what they termed the "ideal" of 95 percent by 2008 with the "more realistic level" of 91 percent by 2011. The agency says, however, that its current performance against the goal "remains high at 88.4 percent," but did note that it was falling short of its 2006 goal of 90.9 percent.

EPA cites "significant annual population impacts from the largest systems" such as turbidity violations by Puerto Rico's largest water utility and New York City's "failure to filter" its Croton watershed supply, as reasons for the shortfall.

In addition, systems serving fewer than 500,000 people suffered from "sporadic violations of microbial requirements that are hard to eliminate." EPA also referenced challenges facing small systems, which it says "can be magnified in Indian Country."

The agency does recognize that it has made "substantial strides forward" in meeting its goals for getting water that meets all standards to a higher percent of the population. EPA says that the percent has risen from 79 percent in 1993 "to current levels that are in the 90 percent range and include even more requirements to protect public health."

*For more information about EPA's performance and future plans, get the agency's Mid-Year Report at [www.epa.gov/water/waterplan/documents/FY06\\_midyear\\_report.pdf](http://www.epa.gov/water/waterplan/documents/FY06_midyear_report.pdf) or read its strategic plan at [www.epa.gov/water/waterplan/index.html](http://www.epa.gov/water/waterplan/index.html).*



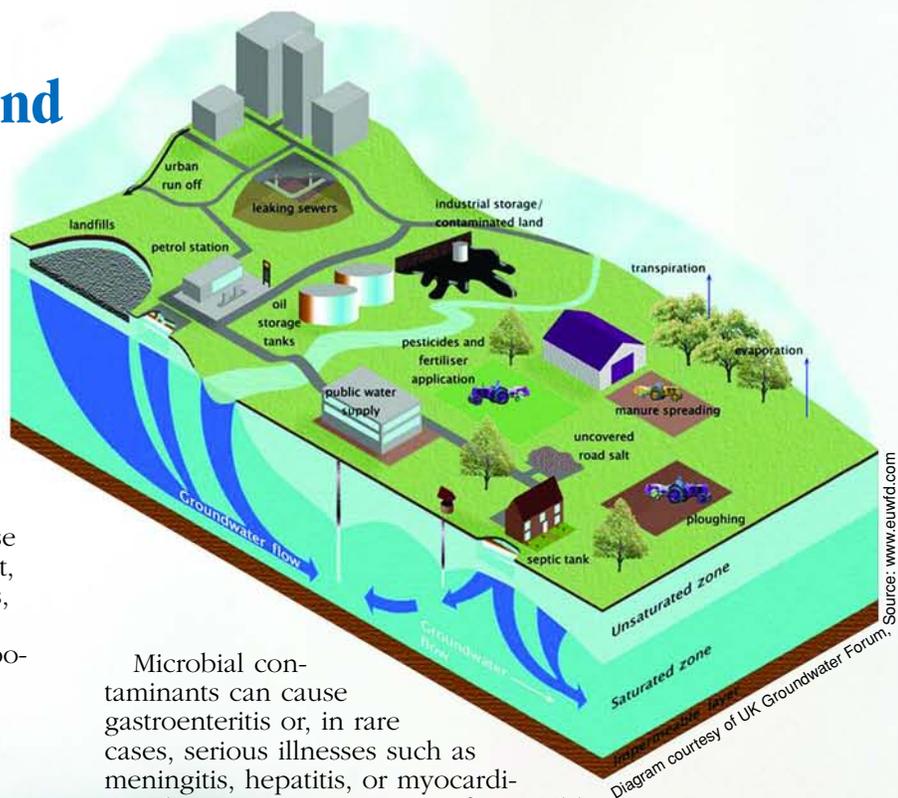
# New Rule Boosts Protection of Underground Drinking Water

More than 100 million Americans will enjoy greater protection of their drinking water under a new rule issued by the U.S. Environmental Protection Agency (EPA). The rule targets utilities that provide water from underground sources and requires greater vigilance for potential contamination by disease-causing microorganisms. "The Bush Administration's Ground Water Rule boosts drinking water purity and public health security," said Benjamin H. Grumbles, assistant administrator for water. "These first-ever standards will help communities prevent, detect, and correct tainted groundwater problems, so citizens continue to have clean and affordable drinking water." The risk-targeting strategy incorporated in the rule provides for:

- regular sanitary surveys of public water systems to look for significant deficiencies in key operational areas;
- triggered source-water monitoring when a system that does not sufficiently disinfect drinking water identifies a positive sample during its regular monitoring to comply with existing rules;
- implementation of corrective actions by groundwater systems with a significant deficiency or evidence of source-water fecal contamination; and
- compliance monitoring for systems that are sufficiently treating drinking water to ensure effective removal of pathogens.

A groundwater system is subject to triggered source-water monitoring if its treatment methods don't already remove 99.99 percent of viruses. Systems must begin to comply with the new requirements by December 1, 2009.

Contaminants in question are pathogenic viruses—such as rotavirus, echoviruses, and noroviruses—and pathogenic bacteria, including *E. coli*, salmonella, and shigella. Utilities will be required to look for and correct deficiencies in their operations to prevent contamination from these pathogens.



Microbial contaminants can cause gastroenteritis or, in rare cases, serious illnesses such as meningitis, hepatitis, or myocarditis. The symptoms can range from mild to moderate cases lasting only a few days to more severe infections that can last several weeks and may result in death for those with weakened immune systems. The new groundwater rule will reduce the risk of these illnesses.

Fecal contamination can reach groundwater sources, including drinking water wells, from failed septic systems, leaking sewer lines, and by passing through the soil and large cracks in the ground. Fecal contamination from the surface may also get into a drinking-water well along its casing or through cracks if the well is not properly constructed, protected, or maintained.

The Centers for Disease Control and Prevention reports that, between 1991 and 2000, groundwater systems were associated with 68 outbreaks that caused 10,926 illnesses. Contaminated source water was the cause of 79 percent of the outbreaks in groundwater systems.

*For more information, visit EPA's site at [epa.gov/safewater/disinfection/gwr](http://epa.gov/safewater/disinfection/gwr).*

# EPA Program Sparks Consumer Water Efficiency Awareness

“Every drop counts.” That’s the motto of a new partnership program called WaterSense that the U.S. Environmental Protection Agency (EPA) recently launched to stimulate more efficient use of water in homes and businesses.

Growing demands for water and the need to protect water sources have prompted water and wastewater utilities, along with agriculture and industry, to rely on water efficiency as a low-cost approach to meeting customer and business needs.

A recent U.S. Government Accountability Office survey underscored the need to develop a national ethic of water efficiency. The survey reported that 36 states anticipate local, regional, or statewide water shortages by 2013, even without drought conditions. Managing the nation’s water supply is a rising concern for communities across the country.

In response, EPA announced the WaterSense program. This voluntary partnership promotes water efficiency and primes market demand for water-efficient products and services. WaterSense takes its cue from the successful ENERGY STAR program that promotes energy-efficient products.

WaterSense program goals are to raise awareness of the importance of efficient water use and to ensure that consumers can easily identify high-performance products that will meet EPA standards. WaterSense-labeled products will be at least 20 percent more efficient than their counterparts.

Efficient water use doesn’t mean asking consumers to make sacrifices, just to be smarter about how they use water. For example, water leaks cost consumers an additional eight percent on their water bill annually. By sealing leaks and adopting water efficient products and practices, the average family can save money and 30,000 gallons of water per year.

By saving water, you can save money and help ensure there is enough water to satisfy the needs of future generations.

*For more information about the WaterSense program, visit EPA’s Web site at [www.epa.gov/watersense/](http://www.epa.gov/watersense/).*



## NEWS & NOTES

### RDUS Loans: Poverty Rate Unchanged; Others Down

The Rural Development Utilities Service (RDUS) recently announced interest rates for water and wastewater loans. RDUS interest rates are issued quarterly at three different levels: the poverty line rate, the intermediate rate, and the market rate. Each has specific qualification criteria.

The rates, which apply to all loans issued from January 1 through March 31, 2007, are:

▶ **poverty line:** 4.5 percent (unchanged from the previous quarter);

▶ **intermediate:** 4.25 percent (down 0.125 from the previous quarter); and

▶ **market:** 4.125 percent (down 0.125 percent from the previous quarter).

For this quarter, all loans will be obligated at the lower (4.175) rate. RDUS loans are administered through state Rural Development offices, which can provide specific information concerning RDUS loan requirements and applications procedures.

*For the phone number of your state Rural Development office, contact the National Environmental Services Center at (800) 624-8301 or (304) 293-4191. The list is also available on the Rural Development Web site at [www.rurdev.usda.gov/recd\\_map.html](http://www.rurdev.usda.gov/recd_map.html).*