Survey Says Utilities Want More Security Support

U.S. water utilities want more security information, training, and financial assistance to support security initiatives, according to a survey by the U.S. Environmental Protection Agency’s (EPA) inspector general.

Summarizing the results of surveys of 16 mostly large systems in six states, EPA also reveals that water systems received most of their information on threat identification, problem detection, delay barriers, response capabilities, and computer control systems from consultants, EPA, and the American Water Works Association.

The report further indicated that while some systems obtained information from the Water Information Sharing and Analysis Center, several said they want better access to the center, which is only available to paid subscribers.

Other information sources include the Federal Bureau of Investigation, the Department of Homeland Security, the Centers for Disease Control and Prevention, state agencies, local law enforcement officials, the National Rural Water Association, water security consultants and InfraGard, a cooperative public-private source of cybersecurity information.

Surveyed systems emphasized their continuing need for more security information, especially regarding threat identification and incident response. The survey found that 11 of the 16 utilities estimated they would spend more than $100,000 in the next year on security improvements, with four estimating their security expenses would top $1 million.

Also, 11 said they might limit such improvements to those they can afford or budget as capital improvements. Three indicated they would rely on drinking water state revolving fund (DWSRF) loans to help cover the costs and seven said they would need financial assistance to do the work.

Fourteen systems described a need for additional training, ranging from seminars on general topics to specialized training in specialized tasks, such as crime scene preservation. An equal number said they need training in emergency response, including identifying and detecting threats.

A dozen want EPA to fund related research on real-time contaminant detection technology. The 16 systems were split down the middle regarding desire for procedural changes, such as including security matters as part of operator certification, changing DWSRF rules, and establishing security standards.

Finally, the survey outlined utility suggestions for performance indicators to measure security improvements. They include measuring how long utilities can provide safe water during or after a security breach, how long it could take to detect and respond to threats, and utility capacity to detect deadly contaminants and computer system intrusions.

While EPA cautioned that the limited survey “should not be generalized to represent all water utilities nationally,” it nevertheless stated that the results “could help EPA, other agencies, and water utilities focus their efforts on the security issues identified.”

For more information about system security, visit EPA’s Web site at www.epa.gov/safewater/security/index.html.

Trading water for Mexican immigration?

Texas Agricultural Commissioner Susan Combs has suggested that Mexico might bolster chances for U.S. immigration reform if it paid its massive water debt to the U.S., according to an article published by the Cox News Service.

“Given that President Bush has done something very significant on the immigration front, I think it would be helpful to show a similar mood on something about water,” Combs told reporters at U.S. Ambassador Tony Garza’s residence. Bush’s plan is designed to provide legal status to millions of undocumented immigrants working in the U.S.

Combs complimented Mexico for paying its annual water commitment to the U.S. in the current year, which it did by releasing water from northern reservoirs into the Rio Grande River, that the two countries share.

But Combs said Mexico could show the U.S. it is a good neighbor by taking advantage of large amounts of water now stored in reservoirs and offering it to the U.S. to pay off debt accumulated over the last decade.
Restricting growth to solve water problems may lead to economic catastrophe for southern Nevada, according to a report in the *Las Vegas Review-Journal*. The Southern Nevada Water Authority (SNWA) commissioned a study to analyze the potential economic effects of undetermined growth interruptions of varying length and severity. Pat Mulroy, general manager of the SNWA, said that the report was commissioned to determine whether controlling growth would work as a means for drought management.

“Because of growing populations and heightened competition for limited water supplies, the chronic shortages in many of the West’s watersheds are likely to worsen,” Norton said. “The goal of these challenge grants is to support realistic, cooperative approaches and tools that have the most likelihood of successfully addressing water challenges in the basins facing the greatest risk.”

The grants program is being funded under the Western Water Initiative. The initiative was the first step of “Water 2025: Preventing Crisis and Conflict in the West,” a proposal to help communities likely to experience conflicts over water during the next 25 years.

“The world is slipping behind a United Nations (U.N.) 2015 goal of supplying fresh drinking water to more than half a billion people in developing nations who currently lack it, according to Reuters News Service. The U.N. Commission on Sustainable Development Governments had agreed at a 2002 Earth Summit in Johannesburg, South Africa, to work out national plans by next year for halving the proportion of people with no access to fresh water by 2015. Currently, 1.2 billion people, or one in five of the world population, lack fresh drinking water.

“It’s clear that some countries haven’t thought about it so far, and it’s often the countries that are worst off in water,” the commission said. “We must have plans in place, or we don’t have a chance of reaching the 2015 goals.”
EPA Report Targets Potential Disinfection Byproducts

U.S. Environmental Protection Agency (EPA) researchers have quantified the occurrence of more than 200 previously unidentified disinfection by-products (DBPs). The agency also has determined that disinfectants other than chlorine can produce comparable levels of DBPs that may pose health risks.

The report, *The Occurrence of Disinfection By-Products (DBPs) of Health Concern in Drinking Water: Results of a Nationwide DBP Occurrence Study*, was conducted by the agency’s Ecosystems Research Division.

EPA conducted a nationwide study of more than 50 unregulated DBPs determined to be of health concern from among some 500 DBPs that have been reported in scientific literature.

The agency team sampled drinking water across the U.S. from a dozen utilities in six regions using water from different sources and quality, including sources with elevated levels of bromide, and disinfecting with chlorine and alternatives, such as ozone, chlorine dioxide, and chloramines.

They discovered that while alternative disinfectants lowered the levels of regulated trihalomethanes and haloacetic acids compared to chlorine, such disinfectants formed many of the high priority DBPs at higher levels.

According to the report:
- the highest levels of iodinated DBPs were found in chloraminated drinking water;
- the highest levels of trihalonitromethanes were found in pre-ozonated drinking water;
- MX (a potent chemical or physical agent that causes mutations) and brominated MX analogs were highest at a plant using chlorine dioxide (followed by chloramines), and
dihaloaldehydes were highest at a plant using chloramines and ozone.

Follow-up work, they noted, will include obtaining occurrence data on the iodinated DBPs in chloraminated waters, where levels are expected to be highest, and applying a toxicity-based approach (using mammalian cell and medaka fish assays) to ensure identification of “toxicologically important” DBPs.

A study expected to begin this year will strive to identify target DBPs in concentrated drinking water samples through testing in a battery of in vivo and in vitro toxicity assays, with an emphasis on newer reproductive and developmental health effects.

The work will also try to determine how toxicologically significant bromonitromethane DBPs, which are more genotoxic and cytotoxic to mammalian cells than most of the currently regulated DBPs, are formed.

For more information about this report, visit EPA’s Web site at www.epa.gov/athens/publications/DBP.html.

RUS Loans: Poverty Rate Unchanged; Others Down

Interest rates for Rural Utilities Service (RUS) water and wastewater loans have been announced. The market and intermediate rates are down slightly, while the poverty rate is unchanged.

RUS interest rates are issued quarterly at three different levels: the poverty line rate, the intermediate rate, and the market rate. The rate applied to a particular project depends on community income and the type of project being funded.

To qualify for the **poverty line rate**, two criteria must be met. First, the loan must primarily be used for facilities required to meet health and sanitary standards. Second, the median household income of the area being served must be below 80 percent of the state’s non-metropolitan median income or fall below the federal poverty level. As of April 1, 2004, the federal poverty level was $18,850 for a family of four.

To qualify for the **intermediate rate**, the service area’s median household income cannot exceed 100 percent of the state’s non-metropolitan median income.

The **market rate** is applied to projects that don’t qualify for either the poverty or intermediate rates. The **market rate** is based on the average of the Bond Buyer index.

The rates, which apply to all loans issued from April 1 through June 30, 2004, are:

- **poverty line** 4.5 percent (unchanged from the previous quarter);
- **intermediate** 4.375 percent (down 0.125 percent from the previous quarter); and
- **market** 4.375 percent (down 0.25 percent from the previous quarter).

For this quarter, all loans may be obligated and closed at the market rate. RUS loans are administered through state Rural Development offices, which can provide specific information concerning RUS loan requirements and applications procedures.

For the **phone number of your state Rural Development office**, contact the National Drinking Water Clearinghouse at (800) 624-8301 or (304) 293-4191. The list is also available on the RUS Web site at www.usda.gov/rus/water/states/usamap.htm.
A new report urges Americans to drastically cut back on salt in their diet but eases the rules on water intake. The report, issued by the Institute of Medicine of the National Academies, says that most healthy Americans typically allow their thirst to guide them, rather than following the old “eight to nine glasses a day” rule.

The report doesn’t specify exact requirements for water intake, but it does make general recommendations of 91 ounces per day for women and 125 ounces for men of total water per day, which actually translates to a few glasses more than eight glasses a day.

But in a change from the past, the panel loosened the requirements on how people can meet those recommendations, allowing caffeinated beverages, such as soda and coffee, as well as food to count toward total water intake. Although caffeine has been thought to have a diuretic effect, researchers say studies show that effect is only temporary.

They say that although low intake of water has been associated with some chronic diseases, there is not enough evidence to establish water intake recommendations as a means to reduce the risks of chronic disease.

“We don’t offer any rule of thumb based on how many glasses of water people should drink each day because our hydration needs can be met through a variety of sources in addition to drinking water,” says panel chairman Lawrence Appel, M.D., M.P.H., in a news release. “While drinking water is a frequent choice for hydration, people also get water from juice, milk, coffee, tea, soda, fruits, vegetables, and other foods and beverages.

Moreover, we concluded that on a daily basis, people get adequate amounts of water from normal drinking behavior—consumption of beverages at meals and in other social situations—and by letting their thirst guide them.”

Following your thirst may work for healthy, sedentary adults, but experts say there are also important exceptions to that rule.

“If you’re active, participating in exercise, living in an environment that’s a little bit warmer or drier, then I think you’ll have to look at more physiological signs as opposed to looking at thirst,” says Jackie Berning, Ph.D., R.D., spokeswoman for the American Dietetic Association.

“We have to look at the color of your urine,” says Berning, who is associate professor of nutrition at the University of Colorado at Colorado Springs. “If it’s that dark apple juice color, then despite the fact that you’re not thirsty, you’ve got to put more fluids in.”

Berning says that among active people, dehydration is the number one danger she sees. If people are not optimally hydrated, any type of stress, such as a change in altitude, activity, or temperature, could put their health at risk.

For more information about this report, visit the Institute of Medicine of the National Academies Web site www4.nas.edu/news.nsf.
Aging U.S. Sewer Systems Threaten Public Health

Sewage pollution costs Americans billions of dollars every year in medical treatment, lost productivity, and property damage, according to a report issued today by the Natural Resources Defense Council (NRDC) and Environmental Integrity Project (EIP).

The report, *Swimming in Sewage*, describes an emerging environmental and public health crisis resulting from our nation’s failure to effectively treat sewage. It found that sewage from homes, businesses, and factories often never reaches a treatment plant and, when it does, too often it is not treated adequately to protect public health.

“We have a looming public health crisis on our hands that will take billions of dollars to fix,” said Nancy Stoner, director of NRDC’s Clean Water Project. “Fortunately we do have the technological know-how to deal with this sewage problem. What we don’t have is political will.”

Without political will, Stoner added, there would be more beach closings, more contaminated shellfish beds, more polluted drinking water supplies, and more waterborne disease, which now sickens nearly 8 million Americans every year.

“Waterborne disease outbreaks are on the rise across the country,” said Michele Merkel of EIP. “Most often, Americans get diarrhea, skin rashes, or respiratory infections, but waterborne illness can threaten the lives of seniors, young children, cancer patients, and others with impaired immune systems. Now is the time to boost funding to protect Americans, not cut it.”

The report features seven case studies from around the country that illustrate how exposure to sewage pollution has killed or seriously injured people and harmed local economies. The case studies are from California, Florida, Indiana, Michigan, Ohio, Wisconsin, and Washington, D.C.

The U.S. Environmental Protection Agency calls this latest proposal “blending” because it involves mixing treated and untreated sewage. NRDC and EIP say it is a radical departure from current treatment standards, which require full treatment for sewage except in emergency conditions such as hurricanes, and would violate the Clean Water Act. It also would threaten the health of millions of Americans.

According to a recent study by Joan Rose, a microbiologist at Michigan State University, the risk of contracting giardiasis from untreated parasites in blended wastewater is a thousand times higher than from fully treated wastewater.

The report concludes with recommendations to address America’s sewage problem. NRDC and EIP urge administrators to drop their new blending policy, establish a national clean water trust fund to assist communities to provide effective sewage treatment, set standards for Cryptosporidium and Giardia and other currently unregulated water pollutants that make people sick, and enforce Clean Water Act requirements that would prevent raw sewage discharges.


NSFC Celebrates 25 Years Of Service

The National Small Flows Clearinghouse (NSFC) is celebrating 25 years of environmental service to small communities. Founded in 1979, the NSFC is part of the National Environmental Services Center at West Virginia University. For the past 25 years, the NSFC has provided objective information about onsite wastewater collection and treatment systems for communities of less than 10,000 people. The NSFC is the only national resource of its type dealing with small community wastewater infrastructure.

For more information call the NSFC at (800) 624-8301 or (304) 293-4191 or visit their Web site at [www.nsfc.wvu.edu](http://www.nsfc.wvu.edu).

“We are valued because we don’t have an agenda, and because we’re only interested in what is going to work in the community and that is a commodity that is rare.”

John Mori, Ph.D.
Director of the National Environmental Services Center, which oversees the NSFC

“I think that the history of the clearinghouse has been one of making a major contribution to the quality of living in rural communities across the U.S.”

M. Dayne Aldridge, Ph. D.
Former director of the National Research Center for Coal and Energy at West Virginia University, who helped establish the NSFC program in 1979.