See "Free Resources for Small Systems" - page 3

Technical Assistance for Public Water Systems

The Idaho Drinking Water Newsletter

Department of Environmental Quality Idaho Drinking Water Program

www.deq.idaho.gov/water/prog_issues.cfm

June 2008, Number 48

Utilities helping utilities – Aid when you need it

IDWARN: Emergency mutual assistance for systems

Idaho disasters such as the 1976 collapse of the Teton Dam, the 1980 Mount St. Helens eruption in Washington spewing volcanic ash over northern Idaho, and the 7.3 Challis earthquake in 1983, along with recent events such as 9/11 and Hurricane Katrina have identified a need for water and wastewater utilities to create an intrastate mutual aid and assistance program. IDWARN (Idaho Water/Wastewater Agency Response Network) was created in response to that need.

What is IDWARN? IDWARN is a mutual aid organization of communities helping communities by allowing water and wastewater utilities to help each other during emergencies. IDWARN participants can access specialized resources to assess and assist water and wastewater systems until such time that the system can return to normal operating conditions. The program is administered by an IDWARN Statewide Committee.

Mutual Aid Agreement. At the core of the IDWARN concept is the Mutual Aid Agreement (MAA). Utilities must sign the MAA allowing them to share resources with other systems in Idaho that have also signed the standard agreement.

IDWARN can provide emergency equipment and crews.

The MAA covers issues such as requesting and giving assistance, reimbursement, workers compensation, insurance, liability, and dispute resolution.

Who can participate? IDWARN is available to all public and private water and wastewater systems in Idaho. Participation is voluntary and is not mandated by any local, state, or federal regulation.

In addition, there are no fees required to participate in the program. Communications can be paper-based or phone-based, and there is no requirement to use the Internet.

When called upon, utilities have the option of responding if they are willing and able to do so, but they are not obligated to respond. Participants in the aid agreement may withdraw from the program at any time.

Benefits of IDWARN members. Some of the advantages of being an IDWARN member are outlined below:

- Agreement relationships and links among utilities are established before an emergency or a time of need;
- There is no wait time for the state or federal government to declare an emergency before you can start receiving IDWARN assistance;
- Issues concerning liability, workers' compensation, tool or equipment damage or loss, housing and feeding, etc. are addressed in the Mutual Aid Agreement; and
- Even if you have an agreement with neighboring systems, IDWARN members can receive assistance from a utility farther away if neighboring systems are experiencing some of the same difficulties that you are.

Interested in IDWARN? DEQ encourages water and wastewater systems to join and participate in this mutual aid network. To quote the old saying – "you never know when you may need it."

For interested systems, you can view or download the state's IDWARN brochure at http://www.idwarn.org/Documents/brochure.pdf. For more in-depth information and to examine a copy of the Mutual Aid Agreement, go to the IDWARN home site at http://www.idwarn.org/.

You can order hard copies of the brochure or the Mutual Aid Agreement by calling 208-373-0409 or by contacting Don Lee at Idaho Department of Environmental Quality, 1410 North Hilton, Boise, ID 83706 / Don.Lee@deq.idaho.gov. ■

Security reminder to public water systems

SCADA patches & upgrades help to protect your system from cyber threats

The November 2006 issue of the *Idaho Drinking Water Newsletter* (# 42)* discussed steps to take to reduce the risk of cyber threats for drinking water systems using a SCADA (Supervisory Control and Data Acquisition) program.

The purpose of this notice is to remind SCADA users to contact their SCADA computer program dealer and ask for the installation of the latest security patches or upgrades.

SCADA (pronounced "scāda") is a computer security program that controls the valves, pumps, and monitoring systems connected to a water system's network of pipes in order to guard against outside intrusions.

SCADA and the Internet

Initially, control systems and SCADA systems operated in isolated environments, which provided a greater degree of water utility security. But gradually many SCADA owners started connecting their control systems to Internet-related networks to improve performance and to increase the number of computer features.

SCADA security systems are vulnerable to hacking and viruses.

Connecting to the Internet introduced new vulnerabilities to the systems on top of existing ones and, in turn, created complex connections that opened backdoors to security threats from the outside. Today the majority of SCADA water system problems and incidents are coming from the Internet.

With Internet connections, SCADA security systems (like all computer networks) are vulnerable to hacking, intrusions, viruses, data loss, data alteration, and the like. Moreover, a firewall protecting your system network offers little protection against internally released viruses, such as mobile laptops connected to the control network and the Internet.

Contact your vendor

In order to protect your system, it is important that SCADA owners contact their vendors periodically and request that the dealer install the latest security features in the form of product patches or upgrades.

"Today the majority of SCADA water system problems and incidents are coming from the Internet."

You should not assume that someone is automatically taking care of this important step for you. If you are not able to identify the list of patches that have been released for your system, as well as the date those patches were installed, it is likely your system may not be secure from outside influence.

Without the latest SCADA installations, you are leaving your system open to cyber attacks and endangering the health of your drinking water customers.

An additional impact could include a decreased ability to supply an adequate quantity of water for fire fighting purposes for those public water systems that supply water to fire hydrants.

Applying patches

Most patches are released in response to publicly identified vulnerabilities. However, the application of patches is not risk free – there is a chance that the patch might cause a system to operate incorrectly. Close coordination with vendors is needed to ensure compatibility of security patches and the operating system with your control system servers and workstations.

Prior to implementing a patch or upgrade, it is important to work with the dealer to identify strategies to protect your system.

Where possible systems should be designed for ease of patching, for example, use of dual servers so one server can be patched while another maintains operations, or the provision of test or backup servers where patches can be tested before connecting them to a live system. ■

*Issue 42 lists five major steps that SCADA systems can take to protect their control systems - http://www.deq.idaho.gov/water/assist_business/pws/H2O_newsletter_42.pdf.

Free Resources for Small Systems

Listed below are free resources available from the U.S. Environmental Protection Agency aimed especially at small systems with populations of 3,300 or less.

■ CUPSS: Giving Small Water Systems a Free Check Up

EPA's *Check Up Program for Small Systems* (CUPSS) is a management tool for small drinking water and wastewater systems. This computer-based program assists owners and operators in developing and using plans for maintaining their systems and providing service to their customers.

The free CUPSS program and all supporting materials are available for immediate download. Kits including the material are also available. For more information on CUPSS, including program downloads and ordering information, visit http://www.epa.gov/cupss.

■ Asset Management

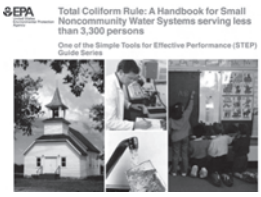
Separate, but related to the CUPSS program are two brief EPA handouts (see below) regarding Asset Management. Asset management programs support informed budget discussions, boost efficiency of the utility, and improve customer service by ensuring clean and safe water at competitive prices.
(1) "Asset Management for Local Officials" at http://www.epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_assetmanagement_localofficials.pdf and
(2) "Asset Management: A Best Practices Guide" at http://www.epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_assetmanagement_bestpractices.pdf.

■ Sanitary Survey Fundamentals Prep Course

This free CD contains an interactive course with the basics of small public water system operations. The course provides a good foundation to prepare for taking sanitary survey training. Although the course is aimed at staff that will be conducting sanitary surveys, system owners may find some useful information as to what inspectors will be looking for.

A zip file may be downloaded from Montana State University's Water Center web site (http://water.montana.edu/training/ssf/default.htm) or you may order a CD, at no charge, from the National Drinking Water Clearinghouse at 1-800-624-8301. Refer to the "Sanitary Survey Fundamentals Prep Course," product #DWCDTR19.

■ Total Coliform Rule: A Handbook for Small Noncommunity Water Systems serving less than 3,300 persons



This useful handbook will help owners and operators of small water systems, and state and health district staff, to better understand the provisions of the Safe Drinking Water Act's Total Coliform Rule (TCR).

The TCR is the federal regulation that sets maximum contaminant levels (MCLs) and monitoring requirements for certain biological contaminants. The rule requires every PWS to periodically collect samples and analyze them for bacteria called coliforms. The number of routine samples required each month, quarter, or year depends on the system size and source water.

The guidebook discusses the required sampling in some detail and covers the following items: the Total Coliform Rule itself; types of drinking water samples; sampling requirements; how to develop a sample siting plan; what to do if a sample tests positive for coliform bacteria; and provides a Total Coliform Rule compliance flow chart.

This 50-page document is available on EPA's website at http://www.epa.gov/ogwdw/disinfection/tcr/pdfs/stepguide_tcr_smallsys-3300.pdf. ■

Safe Drinking Water Hotline

For general information on drinking water call:

1-800-426-4791

Monday - Friday, 9am - 5pm EST
(excluding Federal holidays)

or contact EPA's Safe Drinking Water Hotline web site at:

www.epa.gov/safewater/hotline/

Training Schedule

Class/Sponsor	Location/Date
Water I-II Licensure Review (BE) - W	Rigby, 7/8-9/08
Troubleshooting (BE) - W	Blackfoot, 7/10/08
Chemical Feed Basics, Chlorinate/Dechlorinate (IRWA) - W/WW	Coeur d'Alene, 7/10/08
Chemical Feed Basics, Chlorinate/Dechlorinate (IRWA) - W/WW	Lewiston, 7/11/08
Wastewater I-II Licensure Review (BE) - WW	Nampa, 7/15-16/08
Troubleshooting Wastewater Lagoon Systems (IRWA) - WW	Bonners Ferry, 7/15/08
Troubleshooting Wastewater Lagoon Systems (IRWA) - WW	Coeur d'Alene, 7/16/08
Troubleshooting Wastewater Lagoon Systems (IRWA) - WW	Lewiston, 7/17/08
Troubleshooting Wastewater Lagoon Systems (IRWA) - WW	Grangeville, 7/18/08
Pumps and Motors (BE) - W/WW	Moscow, 8/6-7/08
Management and Leadership (BE) - W/WW	Nampa, 8/13-14/08
Water Tank Maintenance (BE) - W	Cottonwood, 8/19/08
Odor Control (BE) - W/WW	Lewiston, 8/20/08
Water Tank Maintenance (BE) - W	Coeur d'Alene, 8/21/08
Sampling/Distribution Monitoring (BE) - W	Meridian, 8/26/08
Coliforms and Chlorine (BE) - W/WW	Pocatello, 8/28/08
Wastewater III-IV Licensure Review (BE) - WW	Nampa, 9/9-10/08
Membrane Technologies (BE) - W/WW	Star, 9/16/08
VSWS Licensure Review (BE) - W	Nampa, 9/18/08

Water Conservation Tips

■ Water conservation tips for your water system's customers are available on DEQ's web site at http://www.deq.idaho.gov/water/assist_citizen_comm/res_water_conserve_fs.pdf.

Remember - water conservation is an important step in managing and stretching your system's water supply through the upcoming dry season.

DEQ also maintains a list of certified water haulers for your emergency needs at http://www.deq.idaho.gov/water/assist_business/pws/haulers_certified_2007.pdf.

(BE) = Brown Environmental, Inc.
(IRWA) = Idaho Rural Water Association,

For further information, contact the following:

Brown Environmental, Inc. 1-800-543-4358
or for the Boise area, 1-208-465-5725.
Web site: www.idahooperatortraining.com/
Register for classes at www.idahooperatortraining.com/workshopapp.htm

Idaho Rural Water Association 1-800-962-3257
or 1-208-343-7001 Fax: 1-208-343-1866.
E-mail: shammons@idahoruralwater.com.
Web site: www.idahoruralwater.com

Costs associated with this publication are available from the Department of Environmental Quality. Cost per unit: $0.21 Printed on recycled paper.