WATER TAP

WASHINGTON'S DRINKING WATER NEWSLETTER

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Volume 26, #1 - March 2011

Planning and Funding for Your Water System's Future

It was a dark and stormy night… and your car, we mean, your water system broke down. How can we help you avoid this problem? The answer is planning. Let's break down the most important planning concepts before your water system breaks down.

First things, first. Inventory the system's infrastructure. Element 15 in the Small Water System Management Program (SWSMP) will help you to determine age and estimate replacement costs.

Second, prioritize what's most important to do in this next six-year period. Have your mains reached the end of their useful life? Does your well need rehabilitation? Or would it be better to drill a second well so you have some redundancy? How is the pump? If you burn out your pump and you don't have reserve funds to buy a new one, you may not be delivering water to your customers for a while. You get to decide what's most important. We call that planning. Prepare for the most common problems; it causes less stress in the long run.

Third, create a budget. Element 17 in the SWSMP will help you. Make a budget before you create a rate structure. If you look ahead to the next six years, you can create a picture of your water system's needs. We recommend that your rates fund your annual operating budget, your replacement reserves for the next six years, and an emergency reserve.

Finally, set your rates. Rates need to pay for all the items in your budget. Your rate should not be made up out of thin air or because it's what the neighboring water system charges. It is good to know what the other system charges because we guarantee your customers will ask this question. Make sure you get their whole story because it can help you explain the similarities and differences. Each water system is unique. Your rate structure will reflect the unique needs of your system.

We know that many homeowner associations have an annual, quarterly, or semimonthly rate, and the common practice is to assess when you need to fund a project. Instead, if you think ahead, you can build the cost of needed

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The Director's Column

by Denise Addotta Clifford

How the new Groundwater Rule affects you

Change is never easy, and so it is with the federal Groundwater Rule, which we began implementing on November 1. As some of you already know, the rule is changing the way we do things.

Sanitary surveys

For those of you with community water systems using a groundwater source, all but 10 need to have a sanitary survey every three years instead of every five years.

If you are one of the remaining 2,100-plus community water systems, you must avoid coliform violations and quickly resolve any significant deficiencies to be considered for a five-year cycle.

If your system has a surface water treatment plant, you will continue to have a sanitary survey every three years. Noncommunity systems will continue on a five-year survey cycle.

Coliform monitoring

The Groundwater Rule also comes into play with coliform violations. If your water system has an unsatisfactory routine coliform sample, you must obtain "raw" (untreated water) samples from each groundwater source operating at the time the unsatisfactory routine monitoring sample was collected. This "triggered source water sampling" is required even if the system has continuous disinfection unless you qualify for an exception.

If your water system purchases water from an adjacent system (wholesaler), you must notify the wholesaler within 24 hours of receiving a report of an unsatisfactory routine coliform sample. Wholesalers, in turn, must sample their groundwater sources within 24 hours after receiving this notification.

Most importantly, if your water system receives a report that *E. coli* was present in any triggered source sample, you must notify all of your customers, including consecutive water systems, within 24 hours, and take corrective action or additional sampling as directed by our office.

For more information

Thanks for bearing with us as we take on this new regulation. As with any new rule, it will take some getting used to.

My staff is working to make the public notification process simpler. If you'd like to study up on your own, you can access **Groundwater Rule (331-447), Groundwater Rule: Source Water Sample Taps (331-436)**, and other drinking water publications online at https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm

You can view EPA's groundwater website at http://www.epa.gov/safewater/disinfection/gwr

As always, if you have questions call your regional office.

Eastern Region, Spokane Valley	(509) 329-2100
Northwest Region, Kent	(253) 395-6750
Southwest Region, Tumwater	(360) 236-3030

International World Water Day is March 22. The theme for this year is Water for Cities: Responding to the Urban Challenge. For information, visit the website at http://www.unwater.org/worldwaterday/index.html

Disaster assistance can save the day

From earthquakes to major winter storms and floods, we have our fair share of disasters in Washington State. In times of trouble, the Federal Emergency Management Agency's (FEMA) Public Assistance Program can help utilities get back on their feet.

What would your water utility do if a river changed course by more than 4,000 feet and covered your well water source? How would you cover the cost of new filtration and treatment equipment? Would you be able to afford a $511,000 filter system?

The Grays Harbor Public Development Authority found itself in exactly that situation after the 2006 winter storms. Fortunately, the entire cost of adding wellhead filtration to the damaged water source was covered by the Public Assistance Program.

To date, the program has paid almost $340 million to restore or repair damaged facilities in Washington State. Of that, about $24 million was for drinking water, wastewater, and stormwater repairs.

The assistance program, which is administered in our state by the Washington Emergency Management Division, enables water utilities and other public entities to recover from the immediate and long-term effects of disasters.

For eligible applicants, the program provides funding for a portion of the repair and restoration costs for damaged public facilities. It also reimburses agencies for a portion of the costs associated with emergency work and debris removal.

Public Assistance Program funds are 75 percent federal and 25 percent local. Historically, the Washington State Legislature has appropriated funds to offset the portion covered by local funds. Typically, the 25 percent local match has been shared equally by the state and the local entity (your cost).

Immediately following a disaster, the assistance program works through county emergency managers on a preliminary damage assessment. If warranted, a joint FEMA-state damage assessment is conducted to validate claimed damages. The governor sends a request through FEMA for a presidential disaster declaration.

How to apply

To apply for the Public Assistance Program, you must submit a one-page FEMA Request for Public Assistance within 30 days of the presidential disaster declaration. To find out if your water system would qualify for the program, visit http://www.emd.wa.gov/disaster/WashingtonMilitaryDepartmentEmergencyManagementDivision-DisasterAssistance-PublicAssi.shtml

After you submit your application, you will meet with staff from federal and state agencies to prepare project worksheets for each damaged facility. The worksheets describe in detail the repairs needed to return the facility back to its pre-disaster condition and provide a cost estimate.

If FEMA approves the repair project, funds are disbursed. The agency that owns the damaged public facility is responsible for making the repairs.

For more information about the program, call Gary Urbas, Public Assistance Program manager, at (253) 512-7402, or e-mail g.urbas@emd.wa.gov

For every $100 your utility spends on a disaster, you could recover up to $87.50. You could have recovery and restoration costs of only 12.5 percent.

AWWA Source Water Protection Standard

The American Water Works Association (AWWA) adopted a new Source Water Protection Standard (G300) to define the minimum requirements needed to protect drinking water sources.

The standard describes six primary elements of a successful source water protection program. Because AWWA recognizes that every drinking water source faces different issues, threats, and stressors, the standard encourages water systems to tailor each element to meet their specific needs, and incorporate input from key stakeholders. The AWWA standard follows the same principles as Washington's regulatory requirements for Group A water system source protection (WAC 246-290-135).

Six elements of a successful source water protection program

Develop a source water protection vision

All source water protection programs should start with a vision, or policy statement, that declares the utility's commitment to source water protection. To develop a strong vision, it is important to involve stakeholders. Key stakeholders might include your customers, environmental and citizen groups, other nearby water systems, government officials, and commercial, industrial, and agricultural interests. The vision essentially reflects the water system and stakeholder priorities and values.

Characterize the source water protection area

Water systems need a detailed understanding of their drinking water source area to develop a meaningful and successful protection plan. AWWA recommends delineating, or outlining, the area around the source based on geographical and hydrological characteristics. Ways to further characterize the source protection area include:

- Collecting and analyzing water quality and quantity data.
- Conducting an inventory of contaminant sources and land uses that could potentially harm the drinking water source.
- Complying with regulatory requirements.
- Emergency preparedness and response planning.

Set goals

Source water protection goals should relate directly to the vision statement and source water characterization. Goals are broad, over-arching statements you can measure and track over time. Goals also provide the framework or foundation for more specific actions you can implement over time. You should use input from stakeholders to prioritize your goals.

Develop specific actions

Successful source water protection plans include actions that detail specific projects, activities, management practices, regulations, and other approaches to protect source water. You should prioritize and schedule actions so they are carried out. Often, actions need to be carried out by others outside of the water system. Engage these partners early in developing the action plan to ensure greater success.

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Planning and funding... *(Continued from Page 1)*

improvements into your rates and prevent sticker shock when something goes wrong—or you need to replace something.

Rural Community Assistance Corporation has a free rate calculator spreadsheet program available. It is helpful, interactive and has instructions. You will need basic computer skills and Microsoft Excel. You can download the calculator from http://www.rcac.org/doc.aspx?216#WaterAndWaste

Scroll down on this Web page to the heading "Financial and Management Tools for Small Communities." Under this section, you will find the Financial Toolbox v9.5 and many other helpful tools to use. Have a look.

Remember, failure to plan is actually planning to fail.

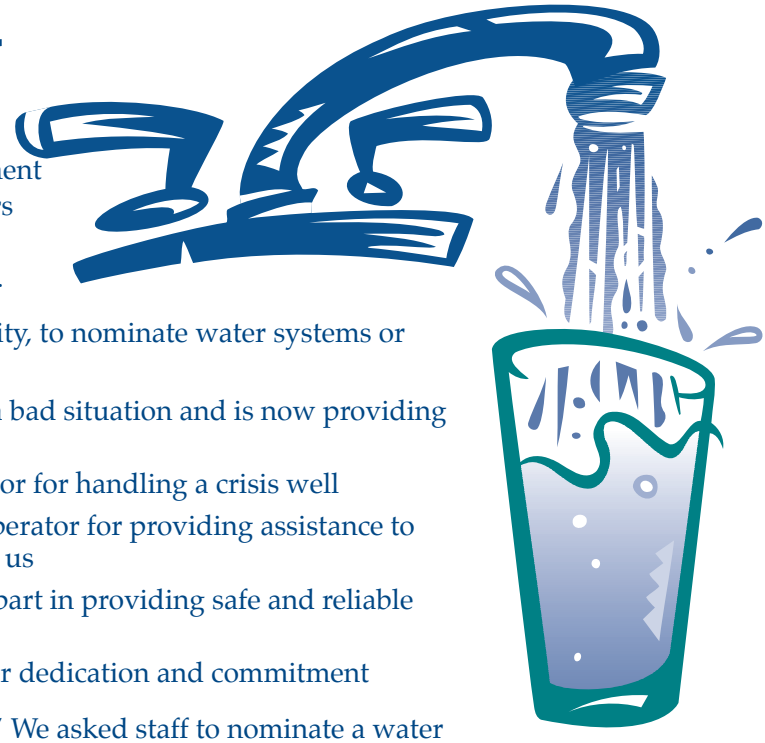
For more information

Download or order the **Small Water System Management Program Guide (331-134)** from our publications database at https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm

Contact your regional office to talk to the planner for your county:

Eastern Region, Spokane Valley	(509) 329-2100
Southwest Region, Tumwater	(360) 236-3030
Northwest Region, Kent	(253) 395-6750

Celebrate Drinking Water Week, May 1-7



During Drinking Water Week, May 1-7, the Department of Health will recognize water systems and operators for their commitment to providing safe, sustainable, and reliable drinking water for today and the future.

We asked our partners, the drinking water community, to nominate water systems or operators for recognition. The categories recognize:

- **Most Improved:** a water system that overcame a bad situation and is now providing excellent service
- **Grace Under Pressure:** a water system or operator for handling a crisis well
- **Going Above and Beyond:** a water system or operator for providing assistance to neighboring water systems, the community, and us
- **Operator of the Year:** an operator for his or her part in providing safe and reliable drinking water
- **Lifetime Achievement:** an operator for his or her dedication and commitment

We will also recognize a "Friend of Drinking Water." We asked staff to nominate a water system, an operator, an individual, a local health jurisdiction, or an organization for supporting safe and reliable drinking water.

Check out our webpage http://www.doh.wa.gov/ehp/dw/Programs/week.htm for more information, past winners, and a link to the American Water Works Association where you can get celebration ideas for this national event. We will announce the winners on our website and in the June 2011 edition of **Water Tap.**

First year for privately owned systems

Be sure to submit WUE Reports on time

In October, the Supreme Court ruled unanimously that the 2003 Municipal Water Law is constitutional. That means all privately owned Group A community water system with 15 or more residential connections, such as homeowners associations, must now comply with the law. The court ruled that privately owned systems are municipal water suppliers. All municipal water suppliers must submit an annual Water Use Efficiency (WUE) report.

Your annual WUE report is due before July 1. Have you collected your annual water use data? Have you established your customer goals for water efficiency? If not, now is the time! Submitting this report tells us you are making an effort to comply with the WUE Rule.

Be prepared before the July 1 deadline

- Collect data from your meters.
- Set up a meeting to talk with your customers about the WUE requirements.
- Develop a meter installation plan.
- Establish water use efficiency goals for your customers.

When you're ready to submit your WUE report

Go to our WUE reporting database online at https://fortress.wa.gov/doh/eh/portal/odw/wue/default.aspx Click on "Print a WUE Annual Reporting Worksheet." Print the blank worksheet, and use it to gather your WUE information. When you have all the information, return to the WUE reporting database and click "Submit WUE report." Next, enter your water system identification number, fill in the WUE information from your worksheet, and click the "submit" button. It's that easy.

After you successfully submit your annual report, you will receive a confirmation e-mail. Then your information, along with every other WUE report, will be available online. Don't forget to report to your customers as well.

Important notes about the WUE database:

1. You must submit your annual WUE report through the database. We will not accept mail, e-mail, or faxed reports. Submitting your report online saves paper and reduces data transfer errors.

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Congratulations to Cascade Water Alliance!

2010 EPA WaterSense Promotional Partner of the Year

With only one full-time staff member overseeing water conservation programs, Cascade Water Alliance successfully used its WaterSense partnership to stretch limited resources and expand into an even more comprehensive water conservation program for its eight member agencies in King County. Collaborating with local retailers and professionals, Cascade was able to promote WaterSense and the importance of water efficiency, to the 400,000 residents and 22,000 businesses it serves, without breaking the bank.

CASCADE WATER ALLIANCE

Cascade worked with nearly 100 plumbers and prominent retailers to help make WaterSense a permanent fixture in more than 2,000 households and local businesses. Cascade promoted its toilet rebate program by working closely with these organizations and creating a video to educate residents about the benefits of WaterSense-labeled toilets.

Cascade also recognized the importance of point-of-purchase education for consumers, provided free training for retailer staff, and conducted regular in-store visits, which helped establish strong relationships and encouraged promotion of the WaterSense label. According to sales staff, some retailers estimated that thanks to Cascade's rebate program, 75 to 90 percent of their toilet sales are WaterSense-labeled toilets—up from virtually zero a couple of years ago. Ninety-four percent of customers surveyed by Cascade said their new toilets perform as well as or better than their previous models, affirming EPA's performance criteria for WaterSense-labeled products. Cascade also collaborated with Seattle Public Utilities to achieve water savings outdoors, offering $50 rebates to consumers hiring WaterSense irrigation partners to install rain sensors.

Cascade also used the WaterSense Road Show—a traveling display that visits public events distributing free water-saving plumbing fixtures and educating residents about using less with WaterSense. During WaterSense's Fix a Leak Week, Cascade distributed more than 100,000 toilet leak detection kits by mail to encourage families to check for leaks and look for the WaterSense label when considering new fixtures. The leak detection kit won the Pacific Northwest Section of the American Water Works Association's Excellence in Communications and Best in Show awards.

What is WaterSense?

The U.S. Environmental Protection Agency (EPA) sponsors WaterSense. Much like the ENERGY STAR symbol for energy-efficient products and practices, WaterSense is the symbol for water efficient products, services, and practices.

WaterSense helps your customers identify products that meet EPA's criteria for water efficiency and performance. WaterSense-labeled products use 20 percent less water than standard products. Best of all, they work without sacrificing performance! Many "low-flow" toilets from the 1990s performed terribly. Today's WaterSense-labeled water-saving products are tested to ensure water efficiency and performance.

Why You Should Join WaterSense

First, it's free! Second, your customers probably don't know that WaterSense-certified fixtures and appliances are guaranteed to save them water. Third, it's an easy way to help you achieve your Water Use Efficiency (WUE) goals.

Remember, the WUE Rule says you must educate your customers. As a Water Sense partner, you'll receive a free educational tool kit to help you inform your customers about the WaterSense program. Use these free resources to meet the WUE educational requirement!

How to Become a WaterSense Partner

For more information and instructions about joining WaterSense, visit http://www.epa.gov/watersense/partners/promotional.html

More than 100 partners from Washington have already joined with EPA to promote the WaterSense program. From small mobile home parks to large water utilities, joining WaterSense makes sense.

Check out our latest educational brochure, **Stop Water Waste - It's easier than you think! (331-450)** at http://www.doh.wa.gov/ehp/dw/Publications/331-450.htm. It's another great educational tool to introduce your customers to the WaterSense program.

Receivership solves headaches for Vader

The City of Vader in south Lewis County was plagued with chronic water outages from broken pipes in its aging water system. The community was insolvent and could not pay for replacement parts, pipes and chemicals. Loans were out of the question. There were no easy answers in sight.

When a water system fails to provide safe and reliable water, the state Department of Health uses a variety of tools to bring it back into compliance. These include informal actions—phone calls, letters, site visits and technical assistance—and formal enforcement actions, such as issuing orders and penalties.

In most cases, by the time formal enforcement action occurs, the water system has exhausted all reasonable justification for not meeting state requirements. As a last resort, if the system fails to respond, we may petition the court to appoint a receiver to operate the water system on a temporary basis until a final plan for ownership is approved.

During the past year, the state departments of Health and Commerce worked with Vader and Lewis County staffs and residents to identify potential solutions. Ultimately, the city asked us to petition Lewis County Superior Court to temporarily transfer ownership of its water system to Lewis County. The court approved the plan on October 29, 2010, and it went into effect January 1.

The voluntary receivership arrangement—the first of its kind in Washington—is solving a significant public health threat for the 920 Vader area residents.

Besides the frequent line breaks and outages—at press time there had been 17 since 2007—the city has seen money go down the drain, almost literally. The community loses about 40 percent of its treated water to leaking pipes.

"With the current economic downturn and with no capacity to grow, we felt this partnership with Lewis County and the Department of Health provided our citizens with the best option for moving forward," Vader Mayor Ken Smith said of the agreement. "Once these repairs are complete, our community will be able to grow again."

A technical team organized under the state's Small Communities Initiative helped the city and county through the process. The Small Communities Initiative is a collaborative effort among the departments of Commerce, Health and Ecology. It helps small, rural communities struggling with economic viability, let alone complying with health and environmental regulations.

The team helped Lewis County secure about $1.3 million in grants and low-interest loans to pay for the repairs. Lewis County Commissioner Lee Grose noted that the arrangement places no financial burden on Lewis County taxpayers.

"This is a great example of what can be done with a creative team of willing partners," said Secretary of Health Mary Selecky. "I commend Vader's mayor and council for their courage in taking this step, and Lewis County for its willingness to step up to deliver a workable solution that protects the health of Vader residents."

Since 1999, the Department of Commerce's Small Communities Initiative staff has helped Washington communities secure more than $75 million in state and federal funding. On average, the program helps bring at least two communities a year into regulatory compliance through improved water or wastewater systems.

What is receivership?

A receiver is an entity appointed by the court to manage a water system. Receivership is temporary, until a permanent solution is found.

Receivers must know how to comply with applicable drinking water regulations; evaluate the system to determine needed improvements; coordinate repairs, capital improvements, and water quality testing; communicate with customers; and work with other agencies with jurisdiction over the system.

The court can grant powers to receivers: Operate and maintain the system in compliance with drinking water requirements; make needed improvements; impose reasonable assessments on customers; and receive reasonable compensation for the cost of services, improvements, and system operations.

For more information, see the publication, **Receivership (331-299)**, online at https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm

Contaminant of the Quarter

Blue-green algae

Algae are present in all types of surface water. Excessive algae growths can cause taste and odor problems, create difficulties for water filtration, and pose potential health risks. There are different types of algae. The ones of greatest concern are blue-green algae, because they can produce toxins that may be harmful to human health.

Blue-green algae, also known as cyanobacteria, are bacteria that have some of the characteristics of plants. They contain photosynthetic pigments similar to those found in algae and plants. Most blue-green algae blooms occur during warm summer months. However, toxic blooms can also occur during the colder winter months.

Although many cyanobacterial blooms are not toxic, numerous species can produce several types of toxins. These toxins can be lethal to animals in relatively small amounts, so you should take caution when a bloom occurs.

Health risks from blue-green algae

Blue-green algae produce three types of cyanotoxins:

- Neurotoxins affect the nervous system.
- Hepatotoxins affect the liver.
- Dermatoxins irritate the skin.

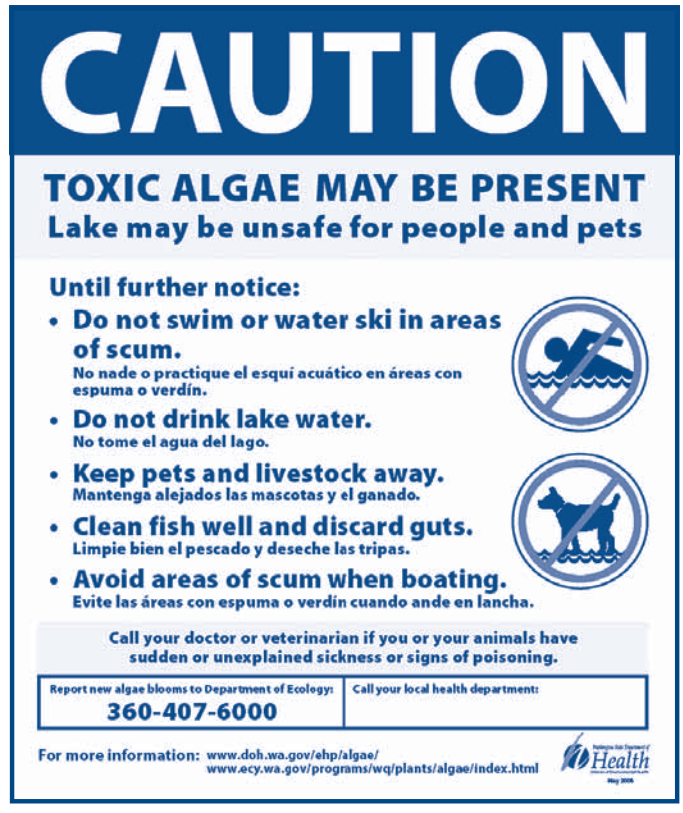
Public health became concerned about cyanotoxins a long time ago. The first waterborne disease outbreak linked to cyanotoxins in the U.S. occurred in Charleston, West Virginia, in 1931. Since then there have been multiple cases of acute poisoning from cyanotoxins throughout the world, including well-documented studies in Australia and Brazil.

In Washington, 75 percent of the lakes analyzed for cyanotoxins in 2008 tested positive. The following year in Oregon, there were 18 human cases and 10 animal cases of adverse health effects associated with cyanotoxin exposure in recreational water.

Algal toxins are on the U.S. Environmental Protection Agency's Contaminant Candidate List to be considered for future regulation. Australia, Canada, Brazil, France and several other countries have health-based drinking water guidelines for cyanotoxins.

Washington's Freshwater Algal Identification and Toxicity Testing Program

The Washington State Department of Ecology has a freshwater algal identification and toxicity testing program. By establishing this program, Washington became a national leader in recognizing cyanobacteria and their toxins as a serious problem.



Ecology's program focuses on blue-green algae because cyanotoxins pose a health risk to humans and animals, and cyanobacterial blooms affect lake recreational activities and create economic losses.

The program funds the analysis of two families of toxins:

1. Microcystins: toxins that affect the liver.
2. Anatoxin-a: a nervous system toxin.

You can find additional information and resources on cyanotoxins on our website at http://www.doh.wa.gov/ehp/algae/default.htm

How the algal identification and testing program works

The process starts when a lake resident, Ecology staff, or health professional who believes a lake is experiencing an algal bloom, contacts Ecology.

Ecology personnel ask them to describe the bloom and may direct them to a website with bloom photographs http://www.ecy.wa.gov/programs/wq/plants/algae/monitoring/AlgaeBlooms.html

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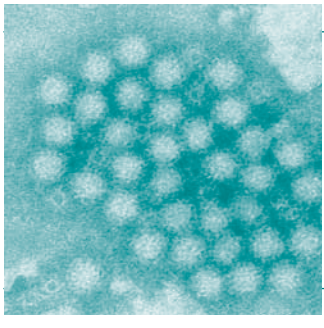
Viruses: Small but mighty pathogens

Viruses are the smallest and simplest pathogens. There are more than 140 types of viruses known to cause gastrointestinal illness in humans. These viruses, found in the guts and feces of humans, are relatively small, 20-100 nanometers, or about 5-10 times smaller than *Giardia lamblia*. As a result, they can travel rapidly in water through soil. They can also survive for long periods of time (See the table at right).

Several waterborne disease outbreaks in recent years were attributed to viruses. In 2006, the most recent year for which the Centers for Disease Control and Prevention summarized waterborne disease outbreaks, viruses caused the three largest waterborne disease outbreaks in the U.S. These waterborne disease outbreaks included one in Oregon that sickened at least 48 people, one in Wyoming that sickened 139, and one in Maryland that sickened 148. In each case, the pathogen implicated was norovirus G1. In 2006, hepatitis A caused a smaller waterborne disease outbreak that sickened 16 people in North Carolina.



Norovirus is the most common cause of acute gastroenteritis in the U.S. The most common symptoms are diarrhea, vomiting, and stomach pain. Photo by Charles D. Humphrey, Centers for Disease Control and Prevention

Waterborne Pathogens: Bacteria and Viruses

Bacteria	Health Significance	Persistence in Water Supplies	Relative Infectivity
Campylobacter jejuni	High	Moderate	Moderate
Escherichia coli	High	Moderate	Low
Viruses	**Health Significance**	**Persistence in Water Supplies**	**Relative Infectivity**
Adenoviruses	High	Long	High
Enteroviruses	High	Long	High
Hepatitis A	High	Long	High
Hepatitis E	High	Long	High
Noroviruses	High	Long	High
Rotavirus	High	Long	High

Source: World Health Organization, 2004

In Washington State, viruses were implicated in the largest waterborne disease outbreaks in the past 20 years, including ones that affected hundreds of swimmers in 1994 and 1998. More recently, in 2007, a waterborne outbreak associated with a contaminated well sickened at least 32 people.

The Groundwater Rule helps

The U.S. Environmental Protection Agency (EPA) passed the Ground Water Rule in 2006 to target water systems vulnerable to source water contamination, especially from viruses. Many provisions of this rule went into effect December 1, 2009, including a requirement that water systems install treatment on contaminated sources that provides at least a 99.99 percent reduction in the risk from viruses.

We formally adopted rule changes to incorporate EPA's Ground Water Rule requirements and began direct implementation of the rule in November 2010. For information about our Groundwater Rule, see the Director's Column on Page 2.

Global Weirding and Climate Crazies

Is your utility climate-ready?

In the spring issue of **Water Tap** we usually write about El Niños and La Niñas. We talk about low snow pack, risk of drought, recap recent flooding, and warn you to prepare for dry summers and low water levels. This year, we're trying something different. Instead of telling you things you already know, we offer a few questions and a challenge: Is your utility climate-ready? Is it vulnerable to climate craziness? What about rising sea levels or long-term changes in groundwater recharge? It still rains and snows in Washington, but not always when or where we expect it.

The challenge… Do you know what you need to know about climate and your water system? The first step in becoming a climate-ready utility is to inform yourself and your customers about how weather patterns in your area affect your water supply. To help you with this challenge, here are links to websites that provide straight talk about water and climate. Over the next year we will look at the issues in more detail, identify tools designed to help water systems like yours evaluate your risks, and help you develop contingency plans.

Office of the Washington State Climatologist http://www.climate.washington.edu/ Check out their newsletter.

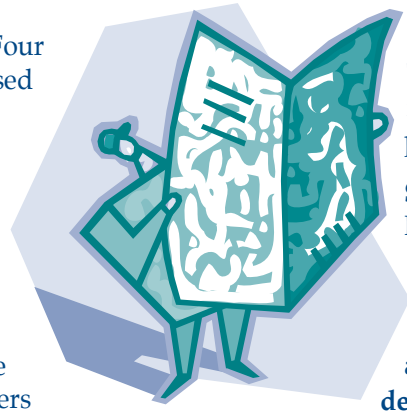
Drought Monitor for Washington, updated monthly http://www.drought.unl.edu/dm/DM_state.htm?WA,W

Washington Snow Pack and Snow Water Equivalent Maps ftp://ftp.wcc.nrcs.usda.gov/data/water/wcs/gis/maps/wa_swepctnormal_update.pdf
What do snow conditions look like right now?

National Oceanic and Atmospheric Administration (NOAA) Climate website offers all things weather and climate, lots of pictures and stories http://www.climate.gov

New & Revised Publications

Computer-based testing for waterworks certification (331-424). Revised Jan. 2011. Four pages explain the benefits of computer-based exams for operator certification and how operators can apply to take them.



Fulfilling WUE Requirements (331-456). Revised Jan. 2011. Two-page Q&A on the October 2010 Supreme Court ruling that the 2003 Municipal Water Law is constitutional. Privately-owned Group A community water systems with 15 or more residential connections, such as homeowners associations, are once again considered municipal water suppliers. Online only.

Public Notification Helps Protect Public Health (331-239). Revised Jan. 2011. Two-page fact sheet describes how and when water systems must notify their customers whenever a situation poses a risk to public health.

Emergency Disinfection of Small Systems (331-242). Revised Jan. 2011. Four pages explain when emergency disinfection is needed and how to do it. Tables show how much chlorine bleach to use for disinfecting wells and storage reservoirs.

Water Use Efficiency Guidebook (331-375). Revised Jan. 2011. This 161-page guidebook provides basic information for any water system developing a water use efficiency program. Online only.

Group A Public Water Supplies: Chapter 246-290 WAC (331-010). Revised Dec. 2010. 237 pages. Rule requirements for Group A public water systems in Washington. Online only.

How to Hire an Engineer (331-044). Revised Dec. 2010. Four-page brochure with information to help small public water systems hire an engineer when improvements are needed. Online only.

The Office of Drinking Water (331-287). Revised Dec. 2010. Two-page fact sheet describing our mission, functions and services. Online only.

Simple Fixes for Wellhead Openings (331-232). Revised Nov. 2010. Two-page illustrated tech tip explains how to fix common problems small drinking water systems encounter when protecting wellheads from contamination. Also available in Spanish **Arreglos simples para las aperturas de la cabeza del pozo (331-232s).** New! Nov. 2010.

Operating Permits for Drinking Water Systems (331-168). Revised Dec. 2010. Two-page fact sheet on water system requirements for annual operating permits.

Sanitary Protection of Reservoirs: Hatches (331-249). Revised Dec. 2010. Two-page illustrated guide with tips to help small water system operators deal with storage reservoir hatches. Also available in Spanish **Protección sanitaria de depósitos de agua: La escotilla (331-249s)**. New! Feb. 2011.

Sanitary Protection of Reservoirs: Vents (331-250). Revised Dec. 2010. One-page illustrated guide explains how to prevent contamination from entering the water supply through vents or overflow drain pipes. Also available in Spanish **Protección sanitaria de depósitos de agua y conductos de ventilación (331-250s).** New! Feb. 2011.

Planning Requirements for Public Water Systems (331-202). Revised Dec. 2010. Two-page fact sheet to help you determine the appropriate level of planning for your water system. Clarifies when you must submit additional information to meet financial viability requirements for Drinking Water State Revolving Fund (DWSRF) applications.

Drinking Water State Revolving Fund Loan Program: 2011 Guidelines (331-196). Revised Nov. 2010. This 27-page booklet explains the requirements and process for water systems receiving financial assistance from the DWSRF. Online only.

Troubleshooting Bladder Pressure Tanks (331-342). Revised Nov. 2010. Two-page tech tip explains what a bladder tank is, how it works, the functions it serves, and how to troubleshoot problems. Also available in Spanish **Solución de Problemas de los Tanques de Presión de Vejiga (331-342s).** New! Dec. 2010.

For copies of our publications, visit us online at https://fortress.wa.gov/doh/eh/dw/ publications/publications.cfm or call (800) 521-0323.

Get e-mail copies of new and revised publications. Sign up at http://listserv.wa.gov/cgi-bin/wa?SUBED1=wa-drinkingwaterpub&A=1

Training for waterworks operators

Some of the organizations that offer training in Washington are listed below. Before you sign up for training to meet the professional growth requirement, be sure to confirm with the sponsor that the class has been evaluated and approved for continuing education units (CEU) in Washington. Many courses offer CEU or college credit and may be relevant to other professions, but not to waterworks certification. If in doubt, call Washington Certification Services at (253) 288-3357 or toll-free (877) 780-2444.

Washington Environmental Training Center (WETRC), Green River Community College
http://www.wetrc.org/pdf/training-calendar.pdf

Evergreen Rural Water of Washington (ERWOW)
http://www.erwow.org/training/index.htm

American Water Works Association
http://www.awwa.org/index.cfm

American Water Works Association Pacific Northwest Section
http://www.pnws-awwa.org/files/index.html

Professional Growth Requirements

All certified operators and backflow assembly testers must meet a professional growth requirement to remain certified. We assign all certified operators and backflow assembly testers to a professional growth reporting period based on their original certification date.

Certified waterworks operators: There are several ways to meet the professional growth requirement. Most certified operators do so by earning at least three CEU or college credits in coursework relevant to drinking water. Each operator has at least three years to meet the requirement.

Professional Growth Reporting Periods

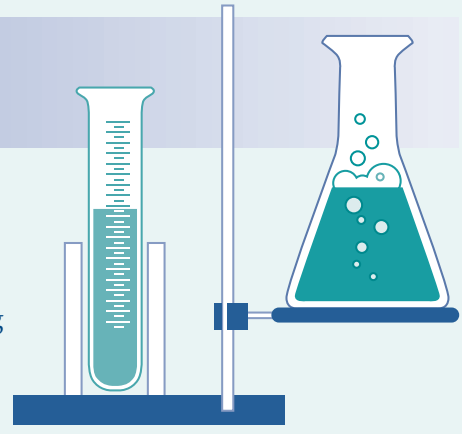
If your original certification date is:	You must meet the professional growth requirement between:
Before 1/1/2007	1/1/2010 and 12/31/2012 and in each 3-year reporting period thereafter.
Between 1/1/2007 and 12/31/2009	Your original certification date and 12/31/2012 and in each 3-year reporting period thereafter.
Between 1/1/2010 and 12/31/2012	Your original certification date and 12/31/2015 and in each 3-year reporting period thereafter.

Backflow assembly testers: BATs must demonstrate professional growth by passing the Department of Health's BAT Professional Growth Exam. Each BAT has at least three years to pass the required exam. You may take the exam at any time during the reporting period; you must pass the exam by the reporting period deadline. Washington Certification Services schedules and administers the professional growth exam.

Visit Washington Certification Services online at http://www.wacertservices.org for:

- Searchable list of approved classroom training
- List of approved distance education courses, instructions and forms
- Information about the waterworks professional growth requirement
- Viewing and printing your professional growth transcript
- Information about the BAT professional growth requirement and exams

LAB CORNER



State reporting levels change on your water sample slips

Technology is always changing, and the methods we use to analyze drinking water are no different. The U.S. Environmental Protection Agency (EPA) actually lowered some of the detection levels a laboratory must achieve and report to help protect public health. To accommodate these changes in the federal rule, we gave laboratories new water sample templates that indicate a new state reporting level (SRL) for detections.

For example, on the Pest 1 test panel, endrin had an SRL of 0.05 micrograms per liter (µg/L) and the new mandate now sets the SRL to 0.01 µg/L. On your old water slip, if you had a non-detect, the result might have said "< 0.05 µg/L" or "ND." On the new sample slip, your non-detect sample result will say "<0.01 µg/L" or "ND."

Even though there was a possible trace of endrin in the sample, it was below the SRL so the water system is correct in stating there was no detection. Laboratories are always welcome to report values lower than the SRL.

We also updated the coliform lab reporting slips to accommodate Groundwater Rule reporting requirements. See the article on Page 13 for more information.

Hexavalent Chromium in the News

Some laboratories have informed us that water systems are asking them about their ability to analyze hexavalent chromium in response to recent guidance from EPA. The guidance is online at http://water.epa.gov/drink/info/chromium/guidance.cfm.

We'd like to hear from you!

We are working on hexavalent chromium sampling guidance for water systems in Washington State. We would like to hear from labs interested in developing the capacity to run samples using the methodology cited by EPA. Call Richard Pedlar at (360) 236-3115 or e-mail richard.pedlar@doh.wa.gov

Consumer Confidence Report due July 1, 2011

Time to prepare your 2010 Consumer Confidence Report (CCR)!

Drinking water rules require all Group A community water systems to provide a CCR to their customers and the Office of Drinking Water by July 1 each year. Your system's 2010 CCR must include:

- Results from samples collected between January 1 and December 31, 2010.
- Sampling results from previous monitoring periods for specific contaminants that did not need to be monitored in 2010.

If you sell water to a Group A community water system, you must give that system the source information and sample results it needs to include in its CCR. The due date for this information is April 1, 2011.

If you buy water from another system, you need to get their source information and 2010 sampling results in time to prepare your CCR for the July 1, 2011 submittal date.

(Continued on Page 16)

Coliform Lab Forms revised for the Groundwater Rule

We revised the 4" x 11" and 5" x 8" coliform lab forms in November 2010. All laboratories in the state that are certified to process coliform samples should be using the revised forms soon. The revised forms have information needed for the Groundwater Rule.

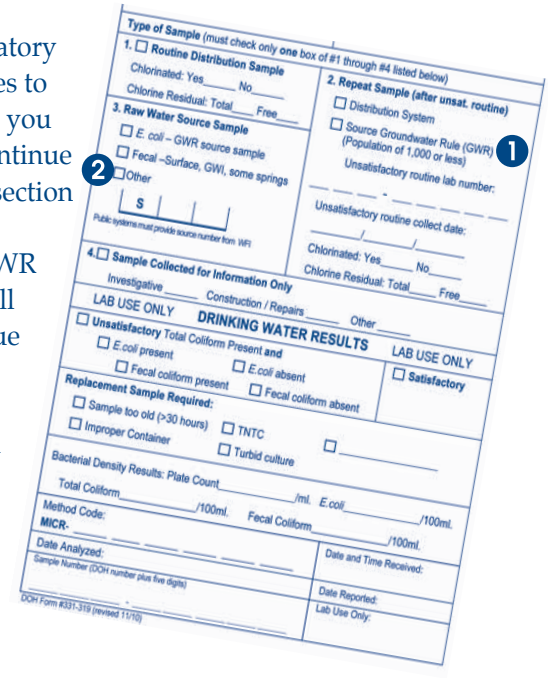
1. **There are now two types of repeat samples:** Distribution System and Source Groundwater Rule (population of 1,000 or less).
2. **There are now three types of raw water samples:** *E. coli* Groundwater Rule, Fecal – Surface, GWI, some springs, and Other.

We provided additional room for information such as sample collect date, name of water system, and laboratory and sample numbers.

We changed the placement of coliform sample results so it will no longer look like fecal and *E. coli* are both marked. These changes also standardize the location of information for our data entry staff, so they can enter results more quickly.

Water system operators and laboratory staff should find it much easier to complete the new forms. You will no longer have to write Groundwater Rule information in the comment field to let the laboratory and the Office of Drinking Water know that the samples are repeat or raw water source samples required for the Groundwater Rule.

Until the laboratory you use changes to the new forms, you will need to continue writing in the section for remarks or comments: "GWR *E. coli*." You will need to continue to do this so your samples can be credited for compliance with the Groundwater Rule.



RULEMAKING

For up-to-date rulemaking information

We use a special e-mail list to send rulemaking notices. To subscribe, go to our main Web page at http://www.doh.wa.gov/ehp/dw/default.htm. See "Join our E-mail Lists" at the bottom of the page.

Waterworks Operator Certification Rule - Informal draft review

The Office of Drinking Water developed draft rule language for the Waterworks Operator Certification Rule, chapter 246-292 WAC.

We would like your feedback now on the informal draft rule. Please send us your comments by May 16, 2011.

To download the draft rule and supporting documents visit http://www.doh.wa.gov/ehp/dw/our_main_pages/regula.htm#opcert

Current rulemaking activities

- Drinking Water State Revolving Fund Loan Program, chapter 246-296 WAC
- Federal Lead & Copper Rule – Short-term Revisions, chapter 246-290 WAC
- Group B Public Water Supplies, chapter 246-291 WAC

For more information about our rulemaking activities, please visit our Rules Web page at http://www.doh.wa.gov/ehp/dw/our_main_pages/regula.htm.

Information available on our Rules Web page includes:

- Rule publications
- Update on the Governor's Rulemaking Moratorium
- Link to the Department of Health's Rules website

Questions or comments? Call Theresa Phillips, rules coordinator, at (360) 236-3147 or e-mail theresa.phillips@doh.wa.gov.

Tech Tip: How to improve a sample tap location

Sometimes a sample tap or its location can cause an unsatisfactory coliform sample. For example, some sample taps are very close to the floor or ground. When the tap is flushed, water that was in contact with the floor or ground can splash upwards and contaminate the tap.

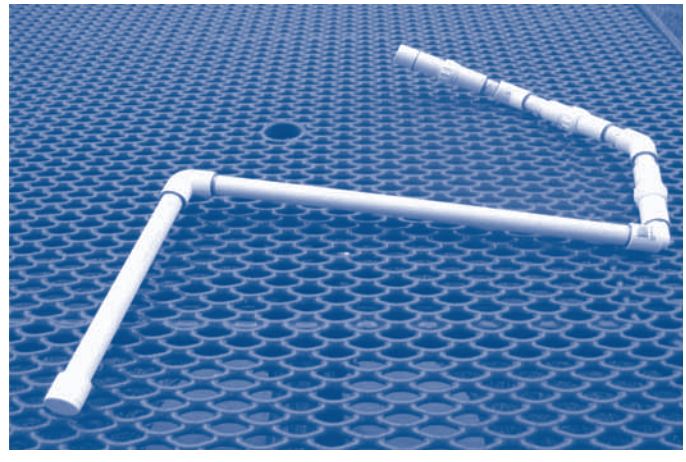
Other sample taps are located in a valve box and the valve box fills with water when the tap is flushed. A tap can also face upwards or sideways, or the valve stem packing may be leaking. All of these situations can increase the chances of having an unsatisfactory coliform sample.

Use a tap extender as a simple fix

There is a simple and inexpensive way to improve a sample tap when you can't easily replace or relocate it. Anyone that can cut and glue PVC pipe can easily build a tap extender. At right is a picture of an example of a tap extender. You can make an extender any length you need and incorporate adjustable elbows to easily change the extender to a different length or position.

One end of the extender is a threaded fitting you can screw onto an existing threaded tap. At the other end is a threaded adapter with an unthreaded end. Make sure you keep both ends of the extender capped when not in use to prevent possible contamination. Before using the extender, remove the caps and disinfect both ends of the extender or flush the entire extender with a disinfectant, such as chlorine, to disinfect the interior of the extender. Be sure to flush all the disinfectant out before you collect a sample.

Reducing the chances of having an unsatisfactory coliform sample can reduce your operating costs. Using a tap extender can also increase an operator's confidence that, if a coliform sample does have an unsatisfactory result, the result is due to a condition in the water system and not the tap or its location.



AWWA... *(Continued from Page 4)*

Basic actions might include those related to public and business education. More advanced actions might include protective ordinances or resolutions. Actions should be realistic and achievable. For small water systems, it is always best to start small and work your way up to more advanced actions over time.

Implement source water protection plan

Planning without implementation will not protect your drinking water source. Follow your action plan according to your priorities and schedule to ensure you are always moving forward, taking proactive steps to protect your source. Program implementation should also include adaptive management, or being flexible in the face of realities, barriers, and challenges. You may have to adjust your actions and schedule to be successful.

Evaluation and revision

Every few years, you should revisit the plan's vision, characterization, goals, actions and implementation schedule. It's best to conduct this exercise with your partners and key stakeholders to ensure their future participation and buy-in. This step also includes measuring and reporting your successes to date. Evaluating and revising your source water protection plan enables the plan to evolve over time and continue making progress.

Available assistance

For more information about the AWWA Source Water Protection Standard or Department of Health's Source Water Protection Program, please call Kitty Weisman at (360) 236-3114 or e-mail kitty.weisman@doh.wa.gov

Free technical assistance specifically for source water protection planning is available from Evergreen Rural Water of Washington. You can contact:

- Charlie Brown, EPA Source Water Specialist (360) 880-3365, cbrown@erwow.org
- David Tysz, USDA Source Water Specialist (360) 981-1516, dtysz@erwow.org

WUE reporting... *(Continued from Page 5)*

2. Make sure you have the information you need before you begin. After 30 minutes of inactivity, the database will automatically close and any data you entered will be lost. You can't save partially completed reports.
3. You must complete all required fields. The database won't allow you to submit the annual report unless you complete the required fields, such as annual total production (water pumped and purchased), authorized consumption for the year, and your customer goal.
4. You can save and print the report after you submit it. Print copies for your own records after you successfully submit it for the year.

Benefits of the WUE reporting database

The database will make WUE information more accessible by:

- Making it easier for you to submit your annual WUE report.
- Showing your historical WUE performance.
- Giving the public access to your efforts to achieve water efficiency.
- Allowing you to view WUE reports from neighboring water systems. Now you can see what they're doing to protect our most valuable resource: water!

Resources to help you comply with the rule

Look for the following publications online at https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm

- **Water Use Efficiency Guidebook (331-375)** 3rd edition. Contains up-to-date information, examples of WUE programs, and other useful resources to help you get your WUE program up and running. Please recycle older editions of this guidebook.
- **Stop Water Waste - It's easier than you think! (331-450).** For help educating your customers.
- **Setting Goals to Use Water Efficiently (331-402).** For help setting goals.

You can post your goal-setting public forum to our website at https://fortress.wa.gov/doh/opinio/s?s=1502

If you have questions about the WUE requirements, call Mike Dexel at (360) 236-3154 or e-mail michael.dexel@doh.wa.gov

Blue-green algae... *(Continued from Page 8)*

If Ecology personnel decide that a bloom is likely, they explain how to collect and mail samples to the laboratory. Residents receive a sampling kit from Ecology or the local heath agency. The sampling kit includes sampling instructions, a 250 ml amber glass bottle, an ice pack, mailing labels, and a Styrofoam shipping container.

If the bloom is toxic—or potentially toxin-producing cyanobacteria are present—Ecology asks samplers to collect additional samples (generally on a weekly basis) for toxicity testing. Some toxins, such as microcystins, are very stable and can remain in the water for days or weeks after the bloom disappears. In some lakes, sample collection may continue for months!

Within days of receiving the information, Ecology posts all results to a searchable on-line database. You can view the freshwater algae database at https://fortress.wa.gov/ecy/toxicalgae/InternetDefault.aspx

Ecology also posts all toxic cyanobacterial and algal identification results to its freshwater algae e-mail list. To join the e-mail list, go to http://www.ecy.wa.gov/PROGRAMS/wq/plants/algae/ListServe.html

The Oregon Department of Human Services also has a good sampling guide for algae and cyanotoxins online at http://oregon.gov/DHS/ph/hab/docs/bgaguidancesampling_v1.1.pdf

Program Limitations

Washington's Freshwater Algal Identification and Toxicity Testing Program depends on volunteers to collect and ship samples. Relying on volunteers for sample collection does not allow a systematic look at every bloom in Washington. While Ecology pays for algal identification and toxin analysis, it does not pay for shipping costs.

Additional Resources for Water System Operators

The Oregon Department of Human Services developed a useful handout specifically for water system operators. You can download it at http://www.oregon.gov/DHS/ph/hab/docs/operatorsfastfact2010rev.pdf?ga=t

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Kathy Hamel with Ecology and Dr. Joan Hardy with DOH provided much of the information in this article.

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To Do List!

- ☑ *Review draft Waterworks Operator Rule (Pg. 13)*
- ☑ *Consumer Confidence Report due (Pg. 12)*
- ☑ *WUE Reports due (Pg. 5)*

Visit the Office of Drinking Water online at <http://www.doh.wa.gov/ehp/dw/>

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CCR... *(Continued from Page 12)*

Your certification form is also due to us. It verifies that you prepared and distributed your annual Consumer Confidence Report. You can download the certification form at http://www.doh.wa.gov/ehp/dw/forms/331-203-F.pdf or call (800) 521-0323 to order a copy.

Resources

The U.S. Environmental Protection Agency (EPA) has software applications to help community water systems quickly create their consumer confidence reports. They take users through all the sections of a CCR, convert lab results into "CCR units" and allow users to insert and edit EPA's recommended text. You can access the software at http://water.epa.gov/lawsregs/rulesregs/sdwa/ccr/index.cfm Click on Tools for Systems.

For more information, visit us online at http://www.doh.wa.gov/ehp/dw/default.htm or call our regional office:

Eastern Region, Spokane Valley	(509) 329-2100
Northwest Region, Kent	(253) 395-6750
Southwest Region, Tumwater	(360) 236-3030

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