

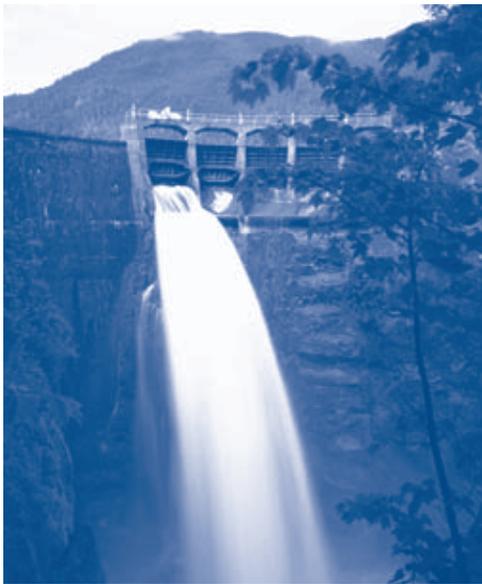


WATER TAP

WASHINGTON'S DRINKING WATER NEWSLETTER

Dam demolition marks new chapter of NW history

Two of the nation's largest dam removal projects will begin this fall—right here in Washington State. In all, three dams will be demolished in an effort to restore once-plentiful salmon runs.



Water cascades down a spillway on the Glines Canyon Dam. The dam and hydropower project, built in 1927, supplemented the power produced at the Elwha Dam. Photo by Scott Church.

The Elwha River restoration project, which includes demolition of the Elwha and nearby Glines Canyon dams in Olympic National Park, will begin Sept. 17. A few weeks later, removal work will begin on the Condit Dam in south central Washington.

The Elwha project reached a major milestone in early 2010, with construction of two water treatment plants. They will protect the City of Port Angeles' municipal and industrial water supplies from excess turbidity before, during, and after removal of the two dams.

The project also required relocating wells for public water systems, such as the Dry Creek Water Association. Hundreds of single-family homes,

most with private wells, also exist in this river valley. The solution for the Dry Creek Water Association was to drill a new well on land owned by Green Crow Timber LLC.

Elwha and Glines Canyon

The Elwha Dam was built in 1913 to supply electricity to Port Angeles, Port Townsend, Poulsbo, and the Puget Sound Naval Shipyard in Bremerton. The Glines Canyon Dam and hydropower project, eight miles upstream from the Elwha Dam, was built in 1927. Together, the dams produced enough electricity to power 1,700 homes, according to the Bureau of Reclamation.

In 1992, Congress passed the Elwha River Ecosystem and Fisheries Restoration Act. The law directed the Department of the Interior to evaluate alternatives and determine the best way to restore native fisheries. The dam removals are expected to take up to three years to complete.

(Continued on Page 14)



Volume 26, #3 - September 2011

Beware!

Record-high prices drove copper thefts up at least 50 percent in 2010. Increase your security. Notify law enforcement if you see suspicious activity.

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THE DIRECTOR'S COLUMN

BY DENISE ADDOTTA CLIFFORD



10 years of going above and beyond: Now THAT'S commitment to excellence!

Four Washington surface water treatment plants have gone where no Washington surface water treatment plant has gone before. They have met or exceeded treatment optimization goals for 10 consecutive years!

Let us raise a glass of clean, sparkling drinking water to toast the accomplishments of:

- Arlington Water Department
- Lake Whatcom Water and Sewer District – South Shore Water System
- Pasco Water Department
- Skagit County Public Utility District 1 – Judy Reservoir System

These water systems are the first to receive the highest award—the gold award—from our Treatment Optimization Program (TOP). See story on Page 8.

We started the TOP to improve the performance of rapid-rate filtration treatment. Doing so maximizes public health protection because surface water is more vulnerable to natural and manmade contaminants than groundwater.

Water treatment plants that participate in the program commit to work toward meeting treatment optimization goals for particle removal and disinfection that are more stringent than current regulatory requirements:

- Achieve a combined filter effluent turbidity of 0.10 nephelometric turbidity units (NTU) or less in 95 percent of maximum daily measurements each year.
- Never exceed a maximum filtered water turbidity of 0.30 NTU.

TOP is a demanding program that requires training, practice, dedication, vigilance, consistency, and management support.

So what would motivate a water system to make this kind of commitment? I have to believe these systems led the way because they care about protecting the health of their customers. And, they take pride in delivering the best drinking water possible.

In a belt-tightening economy where every penny is precious, that makes their accomplishment all the more remarkable.

Congratulations, TOP plant operators and system managers! Your commitment to excellence and public health is inspiring.

Denise A. Clifford

Washington Certification Services has moved

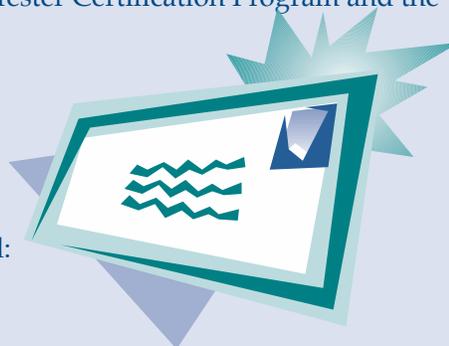
Washington Certification Services moved to offices at Green River Community College's Auburn Center location in June. Large construction projects on the college's main campus and a vacancy at Auburn Center created an opportunity to relocate all staff and services to downtown Auburn.

The new address for all correspondence to the Backflow Assembly Tester Certification Program and the Waterworks Professional Growth Program is:

Washington Certification Services
Green River Community College
110 2nd Street S.W., Suite 135
Auburn, WA 98001-5208

Phone numbers for Washington Certification Services' programs did not change. For a directory of staff and services you can still call:

(253) 288-3357
Toll-free (877) 780-2444



Water main break!

How ready are you?

An automated alarm suddenly takes you away from your after-hours routine into the hyperactive environment of the unexpected.

A large and important water main is broken, storage is depleted, water pressure is low or nonexistent, and everyone from public safety officials to elected leaders demands to know how long it will take to get the water main fixed and water service restored.

What do you do now?

Did we mention that a giant lake is forming over the road and threatening to damage nearby property?



An asbestos cement water distribution main failed in the Browns Point area of Northeast Tacoma in 2011, leaving about 16 homes without service and damaging the roadway. *Photo courtesy of Tacoma Water*

Breaks happen. They happen to small and large water utilities alike. Over the past two years very large utilities had to issue boil-water advisories because of broken water mains in Washington, D.C., Boston, and Prince George's County, Md. Each affected hundreds of thousands of customers for days at a time.

During the same period in Washington State, water main breaks that led to loss of pressure in the distribution system accounted for nearly 40 percent of all health advisories (80 of 208).

Call your regional office right away if:

- You suspect a water main break has resulted or will result in loss of pressure to part or all of your distribution system.
- Repairing a break will require you to depressurize part of your distribution system.
- You suspect that a water main break may affect drinking water quality.

No utility is immune to a break. While all utilities risk a break to an important water main, some are better prepared than others. The better prepared you are, the faster and more effectively you'll be able to respond and restore service.

Preparation is key. Know your distribution system. If you don't have accurate maps showing where the pipes are, how big they are, what they're made of, and the location of your distribution system valves, hydrants, and blow-offs, start collecting that information now.

Establish the chain of command for decision-making, and create a communications plan. How will you

communicate with key stakeholders, such as elected officials, police, fire, other utilities (sewer, storm, electrical), the Office of Drinking Water, and the public? You don't want to figure this out on the fly, while the lake in the street grows larger.

Responding to a significant water main break without this information and prior planning is like flying a plane in a storm at night with all your instruments turned off. You're headed for a hard landing.

Secure your resources and identify partners.

If your utility doesn't have the necessary technical skills, equipment, and materials to repair and replace parts of your distribution system on short notice, begin securing those resources now. Start with your staff by establishing standard specifications and procedures, and assigning roles and responsibilities. Make sure the people who will respond to a break—small or large—know and practice the standards.

Next, make sure you have ready access to the following materials and equipment:

- Appropriately sized excavation equipment
- Portable generator
- Pipe and fittings
- Pump
- Pipe repair clamps, sleeves, and couplings
- Hand tools
- Chlorine test kits and chlorine
- Shoring
- Lights
- Traffic control

(Continued on Page 15)

Setting Water Rates

No community water system *wants* to raise rates. However, the goal of every public water system is to provide customers an uninterrupted supply of safe, reliable, fairly priced water now and in the future. To do that, your system needs to be financially viable. A key to financial viability is the amount of revenue coming through your door. And, of course, your system's rates determine your income.

Tips for developing a sound rate structure

1. **Rates must cover the full cost of producing, treating, storing, and distributing water to customers.** This includes debt service, financial reserves, operation, maintenance, all regulatory compliance costs, and inflation.
2. **Rates must be adequate and fair.** *Adequate* means the rate is high enough to cover all system costs. *Fair* means each customer type or class pays its fair share of the costs.
3. **Do not use water system revenues to pay for other municipal services.** Using water revenues for other purposes, and not maintaining adequate financial reserves for future expenditures, will increase your long-term operating costs.
4. **Customers should know what the rates are.** This information should be in your annual Consumer Confidence Report and water bill.
5. **Your rate structure should be easy to understand.** In general, the rate structure for a system with fewer than 5,000 connections should have no more than three user classifications and no more than five consumption blocks.
6. **Examine your rate structure once a year** as part of your budget development process. Water rates have a short life span.
7. **Use good budgeting practices and customer records to support your rates.** It's tough to develop a fair and adequate rate structure if you don't know expenses and revenues from previous years or how much water you're selling to each customer.
8. **Your rate structure should be easy to administer.** Customers need to understand their rates to support them. Make careful, thoughtful decisions that balance the needs of both small and large users in your service area.

9. **Consider the need to conserve.** Washington's Water Use Efficiency (WUE) Rule requires municipal systems to set water saving goals, implement water saving measures, and report progress to us each year. Conservation can help maintain storage levels and help you avoid paying peak power rates that some electrical companies charge during "heavy use" times.
10. **Calibrate and replace meters as needed.** Meters are the cash registers of your utility. If the meters are inaccurate, you may be losing revenue! The WUE Rule requires you to calibrate and replace your meters periodically. Make sure you have a plan and budget to calibrate or replace them.

Rates and water use efficiency

We often hear water systems say they can't conserve water because it negatively affects their revenue. When your rates encourage conservation, people generally use less, which results in less revenue. However, it is possible to encourage conservation and generate the revenue your system needs—take another look at the tips above.

With the exception of mobile home parks, the WUE Rule requires you to install meters for all of your customers by January 2017. After you install service meters, how will you charge for water? Will you continue to use a flat rate, allowing customers to use as much as they want for one price? Or, will you adopt a rate structure that charges customers based on what they actually use?

Choosing a conservation rate structure that charges customers for what they use counts as a WUE measure that supports your customer goals. It also shows you are dedicated to carrying out the intent of the WUE requirements, and being a good steward of Washington's water resources.

For more information

If you need help setting rates, call your regional planner:

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

You can also attend rate training at the Infrastructure Assistance Coordinating Council conference October 18-21, 2011, in Wenatchee.

For more information, call Karen Klocke, infrastructure finance lead, at (360) 236-3116 or e-mail karen.klocke@doh.wa.gov

Online capacity assessment coming soon!

What is water system capacity?

It's a system's technical, managerial, and financial ability to meet local, state and federal drinking water requirements and expectations.

In other words, a system has the knowledge, tools, and resources it needs to ensure it can provide safe and reliable drinking water now and into the future.

Is your Group A community water system taking steps today so you can continue to provide safe and reliable drinking water tomorrow? We created a tool to help you find out. The tool is an online

assessment with 20 questions to help determine the managerial and financial health of your water system. When you complete the assessment, you'll get immediate feedback that highlights your strengths and provides tips and resources for improvement.

What are the benefits of taking the assessment?

We developed this tool to help determine which systems need our assistance and identify what types of help they need. We won't use this tool for enforcement activities.

The benefits of participating include:

- Instant, customized feedback to help you build your system's managerial and financial capacity.

The feedback includes links to resources that can help you along the way.

- You'll help us use our limited resources more efficiently. This allows us to focus our assistance on your areas of greatest need.
- You'll help us manage our performance. By telling us what you need, we can respond to your needs and better evaluate our progress.

Who should participate?

We designed this assessment for Group A community water systems with 100 to 1,000 connections. Smaller Group A community systems can also take the assessment, and may find the process helpful. The assessment is not open to Group A noncommunity and Group B systems.

Water system operators and representatives from their governing body should work together to answer the questions. We recommend printing the questions to help you gather your information before filling out the online assessment.

How do I participate?

The assessment will begin this fall. Systems with e-mail addresses on file will get notice when the assessment is ready. If you don't get an e-mail, check our website for a worksheet and a link to the assessment at <http://www.doh.wa.gov/ehp/dw/Programs/capacity2.htm>

Report to the governor: Water system capacity

This month, we'll submit our 2011 report to the governor on our progress helping small systems build their technical, managerial and financial capacity.

The 1996 amendments to the Safe Drinking Water Act require each state to develop and carry out a strategy to ensure water systems meet local, state, and federal drinking water requirements and expectations. Every three years, we must report our progress to the governor, the public, and the U.S. Environmental Protection Agency.

In our 2008 report, we said we were evaluating our capacity development program and our compliance strategies as part of a legislative directive to study and report on small water system issues. We submitted that report to the Legislature in 2009.

This year's report to the governor highlights our progress and next steps on recommendations and commitments we made in 2009. Topics include:

- Encouraging strong management for small systems.
- Improving our ability to assess system capacity needs.
- Helping more small systems plan for their future.
- Expanding financial technical assistance provided by third parties.
- Modifying our State Revolving Fund loan program to support restructuring and consolidation projects and disadvantaged communities.
- Collaborating with local, state, and national partners.

You can get a copy of our **Report to the governor: Water system capacity** online at <http://www4.doh.wa.gov/dw/publications/publications.cfm>

Funding supports restructuring evaluation

For Group A water system owners struggling to achieve and maintain technical, managerial, or financial capacity, there may be help.

We support feasibility studies to develop long-term solutions to difficult water system issues. We do so by providing small grants to public entities that want to study and evaluate restructuring options, such as regionalization, consolidation, or transferring ownership of a water system.

We are looking for opportunities to fill a funding gap where:

- There are few or no other grant funding opportunities for this type of study.
- Without the grant, the involved parties would be unwilling or unable to pay the full cost of assessing the feasibility of restructuring.

Taking on the nitrate challenge in North Whatcom County

We funded two feasibility studies designed to help 12 water systems in North Whatcom County find viable mitigation options for their drinking water. Serving a combined population of more than 1,600 people, these systems exceed the drinking water standard for nitrate. One system cannot use a groundwater source that exceeds the ethylene dibromide standard.

Nitrate is a chemical found in most fertilizers, manure, and liquid waste discharged from septic tanks. Prior to 1983, ethylene dibromide (EDB) was registered in Washington State as a soil fumigant for nematodes on berries and potatoes. In Washington, copper does not commonly occur in surface water or groundwater. Instead, most copper in drinking water results when household plumbing, faucets, and water fixtures corrode.

Nitrate in drinking water can cause immediate illness to infants and pregnant women who ingest it. Long-term exposure to EDB in drinking water may result in an increased risk of cancer. Drinking water with elevated copper can cause gastrointestinal distress from short-term exposure. Long-term exposure to too much copper can result in liver or kidney damage.

In addition to source contamination, some of these utilities exceed the copper action level.

The City of Lynden conducted the first study in 2007. It concluded that the most economically viable solution would be to provide an alternate source of supply to these 12 water systems through interties with the city. Regretfully, after more than 10 years of sorting through water right issues, constraints and uncertainties remain. Because the water right issues remain unresolved, the City of Lynden can't provide water to these neighboring utilities.

Whatcom County PUD 1 conducted the second study in 2010. That study evaluated the possibility of transferring safe drinking water from the City of Sumas, through adjacent utilities, to one or more of the water systems with contaminated water. The study researched water rights, governance, water main hydraulics, and preliminary costs.

Questions remain about the cost to each utility; answers depend on the number of utilities that participate. The next step requires that the individual utilities work together and develop the cost-sharing agreements needed to move forward.

Funding requirements

Grant funds are limited, and we make funding decisions on a first-come, first-served basis.

The grant recipient must be a public entity, such as a county, city, town, or special purpose district. Study participants may be privately owned, such as homeowners associations, mobile home parks, or investor-owned utilities. There is no deadline for submitting a proposal. We have funded more than 30 feasibility studies to date.

For more information

Contact your regional office:

Eastern Region,
Spokane Valley
(509) 329-2100

Northwest Region,
Kent
(253) 395-6750

Southwest Region,
Tumwater
(360) 236-3030



Funding for Source Water Protection

During the last year, we ran two articles about source water protection. Last September we explained how to avoid contaminants and in March we explained how to prevent loss of supply over the long-term. This is the first of two articles that describe funding for source water protection and how to apply.

The key to successful source water protection is developing a simple plan with achievable actions or projects, such as public and business education, and monitoring. Ideally, you should include source water protection projects in your six-year water system budget and charge appropriate rates to meet your water system's needs (See Page 4). However, given tight budgets, water systems may find that they need outside funding for high-priority source water protection projects or activities.

Below are some available grants and loans for certain source water protection activities. In most cases, you must meet specific eligibility criteria to apply.

Plans and studies

The Community Development Block Grant (CDBG) Program has a planning-only grant that can help you prepare a Water System Plan or Small Water System Management Program, including the source water protection planning element. To be eligible, the plan must benefit low- to moderate-income people in non-entitlement cities and counties (those that don't get their own CDBG funds directly from the federal government). City population must be below 50,000, and county population must be below 200,000.

If your source water protection plan includes conducting water quality monitoring or studies, the Office of Drinking Water has a **Source Water Protection Studies** grant program that offers up to \$30,000 for cities, counties, towns, and special purpose districts. Studies must benefit more than one Group A public water system.

Local governments struggling with hazardous waste contamination may be eligible for **Remedial Action Grants** for study and cleanup of contaminated sites. Department of Ecology manages this program. You can learn more at <http://www.ecy.wa.gov/> (Search for "Remedial Action Grants.")

Septic system remedies

Failing septic systems are a major cause of drinking water contamination nationwide. In Washington State, many septic systems are aging, deteriorating, or not properly maintained. This problem represents a source water protection opportunity for water systems, particularly in areas where septic systems are common.

Several organizations offer grants or loans to homeowners to repair or replace failing septic systems:

- The U.S. Department of Agriculture operates the **Section 504 Home Repair Loan and Grant Program**, which includes assistance for repairing or replacing failing septic systems that may pose a threat to drinking water. For information, visit USDA online at <http://www.rurdev.usda.gov/wa/sfh504lg.htm>
- Enterprise Cascadia offers **loans** to homeowners in Jefferson, Kitsap, Mason, and Pacific counties to repair or replace failing septic systems. For information, go to <http://www.sbpac.com/> and click on "products," then "loans."
- Department of Ecology's **Centennial Grants** and **Clean Water Section 319 Grants** provide funding for septic system repair and replacement, as well as education and outreach to businesses and the public about how to prevent other water pollution problems. You can learn more at <http://www.ecy.wa.gov/> (Search for the names of the grants listed above.)

For more information

For information about source water protection, call Kitty Weisman at (360) 236-3114 or e-mail kitty.weisman@doh.wa.gov

For more information about block grants, call Phyllis Cole at (360) 725-4001 or e-mail phyllis.cole@commerce.wa.gov

Part two of this series will describe funding for land acquisition, land protection, and best management practices for agriculture and other businesses.

Surface water treatment plants Four earn gold for TOP performance

In July, for the first time, we presented gold awards to four surface water systems that met or exceeded the Treatment Optimization Program (TOP) turbidity goals for 10 consecutive years.

TOP encourages and assists systems that treat surface water using direct, conventional, or in-line rapid-rate filtration to meet more challenging filter effluent turbidity goals:

- Achieve a combined filter effluent turbidity of 0.10 nephelometric turbidity units (NTU) or less in 95 percent of maximum daily measurements each year.
- Never exceed a maximum filtered water turbidity of 0.30 NTU.

These goals exceed surface water regulatory standards. Plants that meet TOP goals provide better public health protection to consumers. We believe all properly designed and diligently operated treatment plants can achieve these goals, but it takes extra work and commitment.

This year, we also recognized seven silver award winners who met or exceeded the goals for five or more years, and three bronze award winners who met or exceeded the goals for three or more years.

Besides meeting the goals, the award winners had to remain free of any drinking water violations during the evaluation period.



Don Smith, left, treatment plant operator at Arlington Water Department, accepts his Gold Certificate from Bob James, northwest regional manager.

We started the TOP in 2001 to improve drinking water quality for the citizens of the state. To recognize water systems that succeed in reaching the goals, we created TOP awards in 2009. The U.S. Environmental Protection Agency endorses these goals, which are similar to goals now established in some other states.

For more information

Read about treatment optimization and some of the tools we use to help systems in **Water Tap**: June 2006 (Page 18), March 2007 (Page 8), and September 2007 (Page 14) online at http://www.doh.wa.gov/ehp/dw/our_main_pages/watertap.htm

Visit our surface water website at http://www.doh.wa.gov/ehp/dw/Programs/surface_water_2.htm

Contact: **Stephen Baker** (360) 236-3138
stephen.baker@doh.wa.gov

Ethan Moseng (253) 395-6770
ethan.moseng@doh.wa.gov

In recognition of excellent performance ~ 2011 TOP Award Recipients

Congratulations, plant operators and system administrators!	
Gold Award Recipients	
Ten years of continuously optimized performance, 2001-2010 <ul style="list-style-type: none"> • Arlington Water Department* • Lake Whatcom Water and Sewer District – South Shore Water System* • Pasco Water Department* • Skagit County PUD 1 – Judy Reservoir System* 	
Silver Award Recipients	Bronze Award Recipients
Five or more years of continuously optimized performance, 2006-2010 <ul style="list-style-type: none"> • City of Chelan Water Department* • City of Cusick* • City of Ferndale • Hoquiam Water Department • City of Kelso* • Lake Chelan Reclamation District • Stevens Pass Water System 	Three or more years of continuously optimized performance, 2008-2010 <ul style="list-style-type: none"> • Blakely Island Maintenance Commission* • Department of Energy 200W • Lummi Island Scenic Estates Community Club*

* First-time award recipient at this level for 2011

Shut-down tips for seasonal water systems

As summer draws to a close, it's time to think about shutting down seasonal water systems for the winter. You'll want to protect your water system from freezing, vandalism, vermin, flooding, heavy rains, and other potential threats.

You can save yourself some headaches and expense next spring by performing a few simple shut-down tasks this fall:

As you close down for the season

- **Evaluate the system:** List problems needing repair in the off-season. Obtain a final source-meter reading for the system and record it on a start-up shut-down checklist.
- **Drain and repair the storage tank:** Inspect for cracks and repair as needed, clean and disinfect the tank with a bleach solution.
- **Pressure tanks:** If freezing is a concern, drain your pressure tanks when they're not in use. If you aren't sure how to do this, contact the manufacturer for instructions. If freezing is not an issue and you decide to leave the pressure tanks full, you must chlorinate the stagnant water inside prior to start-up in the spring.
- **Shut down the water source:** If your system's water source is groundwater, you should turn off the supply for the winter. Be sure to insulate to protect the system components. Use Styrofoam, if possible. Don't use shredded paper or fiberglass insulation because they may attract vermin. Check for openings that could allow rodents, insects or contaminants to enter and repair as needed.

- **Shut down treatment:** Turn off power to all treatment systems and safely dispose of unused chemical solutions and chemical stock, such as chlorine. Refer to advice from your chemical supplier as needed.
- **Protect the distribution system:** Don't leave taps open in the off-season, and never add anti-freeze to your water system—it's a health hazard. Operate all valves to ensure they're in good repair.

During your closed season

- Compile your operations and water quality records for the year. Note periods of peak water use, any water quality problems, and unexpected events. Use this information to plan for next year.
- Review your coliform monitoring plan and update it if needed. Ensure sample locations are representative of the system.
- Tackle your list of problems needing repair.
- This is the time to make large-scale improvements to your system, if needed. Work other than repair and replacement usually requires Office of Drinking Water approval prior to the start of work. Contact your regional engineer for guidance.

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

For more information

Download **Start-up and Shut-down Assistance for Seasonal Noncommunity Water Systems** (331-314) at <https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm>

Online BAT Certification Status Report Now features new professional growth data

Washington Certification Services recently added new information to the Backflow Assembly Tester (BAT) Certification Status Report online at <http://www.wacertservices.org>

Testers, employers, and water systems can access the report from a link on the BAT home page. After reviewing a description of the information in the report, users can search for a BAT by certification number or name.

The report always verified whether someone holds a valid BAT certification in Washington. Now users can review a certified tester's professional growth reporting dates and see whether he or she passed the professional growth exam for that period. Access to this information will help BATs and their employers monitor deadlines and schedule professional growth exams.

As a key new feature, the report identifies whether a certified BAT most recently took an exam based on the 9th or the 10th edition of the University of Southern California (USC) field test procedures. Users will find this information helpful during our implementation of the test procedures published in USC's **Manual of Cross Connection Control 10th Edition**.

Why it's important to update your WFI

Your Water Facilities Inventory form (WFI) provides the Department of Health with a profile of your water system. We use your WFI data to determine your water system classification, which then establishes the regulations that apply to your water system.

We send WFIs to Group A water systems for annual review and update as we prepare to generate operating permit fee statements. But the information on your WFI also shapes other facets of your water system management, such as your:

- Coliform monitoring schedule
- Source monitoring requirements
- Operator certification program
- Operating permit annual fee
- Sanitary survey program
- Planning program
- State Revolving Fund application
- Compliance program

That's why you must review and update your water system information—and submit an updated WFI within 30 days of any changes.

Source information greatly affects your source monitoring requirements. Start by evaluating and accurately listing all your water system sources. Is the source permanent, seasonal, or emergency? Have you inactivated a source? Have you converted a source to

irrigation only? We can only remove a source from the WFI if you decommissioned it properly. The pumping capacity should reflect the normal operating gallons per minute, not the pump's maximum capacity.

Our joint mission is to protect public health by ensuring safe and reliable drinking water. Our success relies on good communication. Whether for routine correspondence and reminders, or critical events such as a water system emergency, it is important that you keep all your primary contact information current.

If a water emergency occurs, you need accurate information in Section 12, Water System Characteristics, so you can notify any vulnerable populations quickly. Section 7, Owner of Record, lists who is responsible for the water system; therefore, it is essential that you contact your regional WFI coordinator as soon as possible about any transfer of ownership. If a Satellite Management Agency owns the system, Section 11, Satellite Management Agency, should reflect that.

Now that you know what an important role your WFI plays in our office and the management of your water system, be sure to update your WFI whenever changes occur.

Your regional WFI coordinators

Eastern Region	George Simon (509) 329-2135 george.simon@doh.wa.gov
Northwest Region	Aniela Sidorska (253) 395-6751 aniela.sidorska@doh.wa.gov
Southwest Region	Brad Brooks (360) 236-3049 brad.brooks@doh.wa.gov

Moved recently? Changed employers? Don't lose your waterworks certification!

We will mail waterworks operator certification annual renewals in mid-November. Do we have your current home mailing address? It's your responsibility to let us know in writing when you move or change employers.

Every year operators pay late fees or lose their certification because they failed to report address changes. The **Waterworks Operator Certification Program Guideline** (331-109) states:

"Failure to notify the Waterworks Operator Certification Program of a change of address in writing does not constitute a reasonable excuse for failure to renew a certificate prior to assessment of the renewal late fee. The Department of Health will not consider appeals from

operators assessed the late fee or [who] failed to renew due to an unreported address change."

There are several ways to update your information. Be sure to include your operator certification number on all correspondence.

Write us:

Waterworks Operator Certification Program
P.O. Box 47822
Olympia WA 98504-7822

Use the online form:

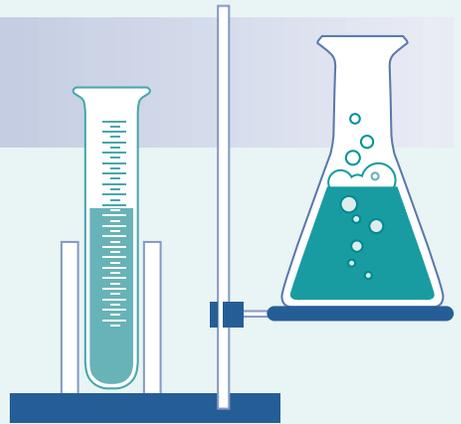
http://static.doh.wa.gov/ehp/dw/operatorcertification/op_form.htm

E-mail: larry.granish@doh.wa.gov

Fax: Larry Granish at (360) 236-2252

Questions? Call Larry Granish at (360) 236-3141 or (800) 525-2536, Ext. 1.

LAB CORNER



Laboratory data details

This is the first in a series of articles we'll publish to highlight data challenges we encounter when we receive laboratory data. We hope the articles will help you understand the information we need to record results from you and your water system customers correctly.

We expect water systems to provide a lot of information to us. You can help your water system customers—and us—by understanding the correct codes on the lab slip.

For example, it is important to know why you are running the sample. Therefore, you will want your customer to enter the code into the "Sample Purpose" field correctly. Sample purposes include:

- Compliance
- Investigative
- Other

Sample Purpose

Compliance: Most water systems collect samples because they are required as part of routine monitoring. When you want samples to count for compliance purposes, mark them "C" in the "Sample Purpose" field. Some labs use "RC" instead of "C" for routine compliance. "C" and "RC" mean the same thing.

Investigative: An "I" in the "Sample Purpose" field means you're running an investigative sample. Use "I" when your customer is only interested in the water quality and doesn't want us to count the result toward its monitoring requirements. The data can go into the computer this way without creating any triggers or exceedances against the system. For example, if a system recently recoated a tank and wants to ensure no leaching is occurring prior to placing the tank back online, the sample would be marked "I."

Other: An "O" or "other" in the "Sample Purpose" field usually means the sample is for new source approval or another purpose not directly related to compliance or an investigative need. For example, a system may use an "O" sample for finance purposes. Even though a sample marked "O" will not count toward meeting a compliance requirement, we can easily sort through the sample list to identify results needed for new source approvals.

Please help us help your customers by filling out these fields correctly.



The Five Essentials

Remember to put these five basic items on your lab slip when you submit samples to a lab. They could keep you in compliance.

1. Correct System Name
2. Correct System ID number
3. Correct Source Number
4. Correct Sample Purpose
5. Collection Date

The five essentials are items every water system should put on their lab slips, and every lab should include with the results they send to us. Without this critical information, we can't enter your compliance samples into Sentry, our online water system database.

Take a clue from the Mountaineers. Just as hikers and campers check their gear for the "10 Essentials" before heading out, you should check your lab slip to ensure the five essentials are there!

Public Hearing: Drinking Water State Revolving Fund Loan Program Rule



We developed proposed rule language for the Drinking Water State Revolving Fund (DWSRF) Loan Program rule, chapter 246-296 of the Washington Administrative

Code. The rule revision will include new federal criteria for water systems to get a loan. The changes include:

- Subsidies to eligible recipients in the form of principal forgiveness.
- Eligibility requirements for “green” projects, including green infrastructure, water or energy efficiency improvements, and other environmentally innovative activities.
- Subsidies for disadvantaged communities, even if they’re located in non-distressed counties.
- Changing system ownership (also known as “restructuring”).
- Requirements to address a new federal sustainability policy included in the federal fiscal year 2011 appropriations bill.
- Updates to the rule to clarify and simplify language.



Congress created the DWSRF in 1996 when it reauthorized the Safe Drinking Water Act. The DWSRF Loan Program provides low-interest loans to water systems for capital improvements that increase public health protection and compliance with drinking water regulations.

Information about the timeline, public hearing, how you can comment on the proposed rule, and supporting documents will be online in October at http://www.doh.wa.gov/ehp/dw/our_main_pages/regula.htm

Current rules under revision and other information



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

- Group B Public Water Supplies, chapter 246-291 WAC
- Water Works Operator Certification, chapter 246-292 WAC
- Rule publications
- Basic information on the rulemaking process
- Rulemaking moratorium
- Links to the Department of Health and Division of Environmental Health rulemaking websites

Get automatic up-to-date rulemaking information

We use a special e-mail list to send rulemaking notices. To subscribe, go to our home page at <http://www.doh.wa.gov/ehp/dw/> Scroll down to “Join our E-mail Lists” at the bottom of the page and click “Drinking Water Rules.”



Questions?

For more information, call Theresa Phillips, rules coordinator, at (360) 236-3147 or e-mail theresa.phillips@doh.wa.gov

Publication update: Group A public water supplies

We are updating the publication **Group A Public Water Supplies, chapter 246-290 WAC** (331-010) to include the new federal Lead and Copper Rule Short-Term Revisions. This publication will be available mid-October, online only.

You can download the publication from our website at <http://www.doh.wa.gov/ehp/dw/publications/331-010.pdf>

New & Revised Publications

Completing your annual WUE Report: Answers to commonly asked questions (331-459): New! June 2011. Two pages of questions and answers that clarify how to submit your Water Use Efficiency Report online.

Válvulas de Alivio de Presión en los Tanques de Presión (331-429s): New! May 2011. One-page illustrated Tech Tip explains how pressure relief valves protect pressure tanks, design requirements, and how to ensure pressure relief valves are approved and properly installed. Also available in English **Pressure Relief Valves on Pressure Tanks (331-429):** Updated May 2011.

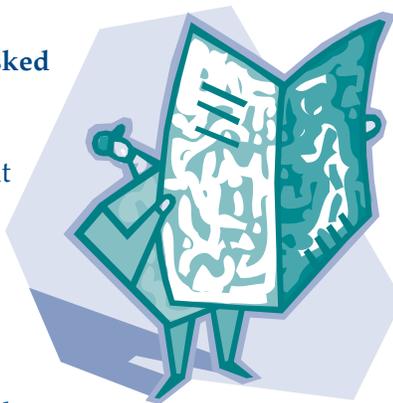
Radionuclides in drinking water (331-056): Revised. June 2011. Two-page fact sheet designed for owners of private wells in Northeast Washington counties known to have high potential for uranium and radon gas.

Arsenic in Drinking Water (331-167): Revised. May 2011. Two pages of questions and answers on sources of arsenic in drinking water, health effects, standards, geographic distribution, and what can be done about it.

Follow-up to an Unsatisfactory Coliform Sample (331-187): Revised. June 2011. Two-page fact sheet describes actions for water systems to take when coliform bacteria are detected in a drinking water sample.

How to Complete a Coliform Lab Slip (331-247): Revised. June 2011. Two pages explain the correct way to fill out the lab slip water systems submit with coliform samples.

Coliform Public Health Advisory Packet (331-260): Revised. March 2011. This online information packet will help you manage fecal contamination in your water supply. It includes publications and public notification templates and forms.



Water System Capacity (331-283): Revised. April 2011. Five-page publication defines water system capacity, explains the benefits of reaching full capacity, and shows how to get there.

Preparing Water Shortage Response Plans (331-301): Revised July 2011. A 54-page guidance document on how to develop short-term water shortage response plans in case of an emergency.

Top Ten Reasons for Health Advisories (331-348): Revised. June 2011. Four-page publication on the top reasons Washington water systems issued health advisories.

Long Term 2 Enhanced Surface Water Treatment Rule (331-369): Revised. June 2011. One-page fact sheet explains how the Long Term 2 Enhanced Surface Water Treatment Rule is affecting public water systems that use surface water, or groundwater under the influence of surface water.

Chlorination Controls (331-398): Revised. June 2011. Four-page illustrated Tech Tip explains how fixed-rate and variable-rate chlorine injection systems provide consistent, minimum free-chlorine residual when a water system is operating.

Truck Transportation: Emergency water supply for public use (331-063): Revised. July 2011. Two-page brochure with guidelines for water systems that truck or receive potable water for the public during emergencies.

Coliform Bacteria and Drinking Water (331-181): Revised. August 2011. Two-page fact sheet for consumers on the nature of coliform and what can be done about it.

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

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

Go green to get green for your infrastructure projects

What's up with the "green" requirements for projects financed with Drinking Water State Revolving Fund (DWSRF) loans?

The short answer: Green projects that conserve water and energy are the wave of the future.

The longer answer: Congress introduced the concept in the 2009 American Recovery and Reinvestment Act (ARRA), which directed \$2 billion to create and save jobs while addressing drinking water infrastructure investment needs. The money was channeled through the existing DWSRF program. In Washington, we administered about \$38.5 million in ARRA funds.

The Recovery Act required states administering the funds to use 20 percent of the money on projects that offered water or energy efficiency improvements, environmentally innovative activities, or other "green" benefits. It also required projects financed

by ARRA to meet other conditions, including paying prevailing wage and using American-made products.

Projects receiving stimulus funds could be entirely "green" or have green components, such as installing high-efficiency pumps, replacing or repairing leaky pipes, or installing alternative energy sources on site.

Improvements that reduce energy consumption and water use will save you money and resources. They also help ensure reliable long-term water supplies as well as efficient operation and management of water systems.

EPA recently gave the City of Rockville, Md., the Sustainable Public Health Protection Award, for leadership and innovation in upgrading its drinking water treatment plant. Improvements included:

- Installing motion sensors to control power usage.
- Restoring service pumps.
- Retrofitting the entire air-conditioning system.
- Enhancing the plant's capacity to dewater solids by 40 percent.

(Continued on Page 15)

Dam demolition... (Continued from Page 1)

The \$327 million project will return the Elwha River to its natural flow after nearly 100 years and restore more than 70 miles of salmon habitat. The Lower Elwha Klallam Tribe, whose members lived and fished along the river for centuries, will once again have access to sacred sites now under water. Moreover, salmon populations are expected to grow from about 3,000 to nearly 400,000 by 2039, as all five species of Pacific salmon return to the river.

Condit Dam

In south central Washington, the Condit Dam also is being removed to restore fish habitat. The 125-foot-high dam was completed in 1913. It is situated on the White Salmon River about three miles upstream from its confluence with the Columbia River.

The Condit Dam played an important role in developing the Lower Columbia River Valley, particularly the Camas-Washougal area, by providing electricity to homes and businesses. PacifiCorp Electric Operations (PacifiCorp) acquired it in 1947.

Considered an engineering marvel in its day, the concrete dam diverted water from the natural river channel. Although fish ladders were part of the original design, floods destroyed them the year

after the dam was completed, and they were never successfully replaced. The dam also obstructed downstream navigation.

In 1999, after two years of negotiations, PacifiCorp, state and federal agencies, American Whitewater, and 13 other organizations agreed to remove the dam. They deemed it less expensive to take out the dam—about \$32 million—than to retrofit it for fish passage.

It took about 10 years to plan for the dam removal. The dam's reservoir will be breached and drained in October. Next spring, the remaining portion of the dam is scheduled to be demolished. Restoration work throughout the former reservoir area is planned to be done by the end of 2012.

Virgil Lewis of the Yakama Nation Tribal Council hailed the dam removal as "a momentous and long-awaited day."

"This is an essential step in restoring the ecosystem's resources and rebuilding the natural balance that supported the Yakama people and a significant tribal fishery for millennia," Lewis said in a statement. "We are excited to welcome home the salmon, steelhead and lamprey that have been absent from the White Salmon River over the last century."

Water main break... (Continued from Page 3)

Make sure you, your suppliers, contractors, and any nearby utility you have a mutual aid agreement with properly inventory and safely maintain those resources, so they're available the moment you need them.

Know your greatest risks. Track the age and condition of your distribution system as part of your asset management program. Record the location, date, pipe age and material, bedding condition and depth of each break, and prioritize replacement of water mains with the highest risk of failure.

Begin addressing problems associated with your inability to isolate segments of the distribution system properly. If you know you need to install or replace valves in the distribution system, put this into your maintenance or capital improvement budget.

Avoid future problems. When installing new or replacement water mains, make sure you follow your consulting engineer's design or your utility's adopted standard design details and specifications. Designs must be appropriate for the condition of service (flow rate, pressure, frost depth, traffic loading, soil conditions, and pipe material compatibility).

Design standards also must make it possible to isolate segments of the distribution system. For example, appropriately placed gate valves can isolate a break and route water around trouble spots to maintain service to as many customers as possible.

State requirements. The drinking water rule says *...when the integrity of the main is lost resulting in a significant loss of pressure that places the main at risk to cross-connection contamination, the purveyor shall use standard industry practices such as flushing, disinfection,*

and/or bacteriological sampling to ensure adequate and safe water quality prior to the return of the line to service (WAC 246-290-451(1)(b)).

The following publications describe standard industry practices for repair, disinfection, testing, and resumption of water service:

- **C651-05: Standard for Disinfecting Water Mains** by the American Water Works Association. Available for purchase at <http://apps.awwa.org/ebusmain/OnlineStore.aspx>
- **Standard Specifications for Road, Bridge, and Municipal Construction**, Sections 7-08 through 7-15, by the Washington State Department of Transportation. Available online at <http://www.wsdot.wa.gov/publications/manuals/M41-10.htm>

For more information

Call your regional office:

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

The following publications are online at <https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm>

Drinking Water After-Hours Emergency Hotline (331-133)

Emergency Response Planning Guide for public drinking water systems (331-211)

Asset Management for Small Water Systems (331-445)

Asset management: A handbook for small water systems (816-R-03-016)

Go green... (Continued from Page 14)

The total cost of the project was \$3.7 million. Of that, \$1.7 million came through ARRA "green project" funding. The city contributed \$2 million to the project.

"Green infrastructure projects help to clean our waterways and protect our drinking water, but they also do a lot more," said Robert M. Summers, secretary of the Maryland Department of the Environment. "They promote innovation and create jobs, and they help us conserve energy and improve air quality. They are, quite simply, an investment in healthier communities."

Starting in 2012, as part of Governor Gregoire's Energy Savings Performance Contracting (ESPC), DWSRF recipients will be eligible for investment-grade energy audits. This is a way to identify, implement, and finance energy and utility efficiency projects at public facilities.

We will provide more information on ESPC in future editions of **Water Tap**.

To Do List!

- Update your WFI - Page 10
- Report your new address - Page 10
- Check your Water Quality Monitoring Report to ensure all 2011 samples were taken

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



DOH PUB. 331-200
printed on recycled paper

Systems tackle online WUE reporting

July 1 was the reporting deadline for water use efficiency (WUE) reports and, thanks to your efforts, we achieved a 74 percent submittal rate by the deadline.

This is good news, especially because this was the first year of required reporting for privately owned water systems. In fact, in previous years we never achieved such a high submittal rate by the July 1 deadline.

This year we received 1,601 online submittals from the 2,166 municipal water systems required to report. Mike Dixel, our WUE program lead, will review this year's data and share his findings in the December **Water Tap**.

This high rate of success is encouraging. Our goal is to offer more online opportunities, such as the upcoming water system capacity assessment described on Page 5.



Contributors

The following people contributed to this issue of **Water Tap**:

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The Department of Health Office of Drinking Water publishes **Water Tap** quarterly to provide information to water system owners, water works operators and others interested in drinking water.

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Past issues are available by contacting the editor or visiting the website at http://www.doh.wa.gov/ehp/dw/our_main_pages/watertap.htm