WaterTap
Washington's Drinking Water Newsletter
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Change on the horizon: The Revised Total Coliform Rule

On April 1, 2016, the Revised Total Coliform Rule (RTCR) will replace the Total Coliform Rule. RTCR will better protect water users against waterborne illness. It requires water systems to do an assessment to "find" and then "fix" any sanitary defects that could provide a pathway for microbial contaminants to enter the distribution system.

Water systems will collect the same number of routine samples as they do now. All water systems will be required to collect three repeat samples for every total-coliform-positive routine sample.

The month following a total-coliform-positive routine sample, systems that collect routine samples every month will collect their normal number of routine samples. Systems that don't collect samples every month will be required to collect at least three routine samples.

There will be two ways to develop a Coliform Monitoring Plan. One, continue to collect repeat samples at the site of the total-coliform-positive routine sample, within five active connections upstream and five active connections downstream. Two, develop a Standard Operating Procedure with alternative repeat sample locations that could be pathways of contamination into the distribution system.

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Christine Hartman, microbiologist at Dragon Analytical Lab, examines the telltale yellow sign of a coliform-positive water sample. The lab confirms the sample is E. coli absent, because it doesn't glow next to a control sample under a UV light.

There's a whole lot of rule making going on

By Clark Halvorson, Director

With apologies to Elvis Presley, there's a whole lot of rule making going on! Some proposed rule changes have been years in the making; others reflect current events, such as wildfires. The new rules will make our program even stronger.

Emergency loan program: This rule allows us to tap the Drinking Water State Revolving Fund to provide low-cost loans to water systems during emergencies, so they can restore water service as soon as possible.

"An extremely low snowpack could lead to a destructive wildfire season and a devastating drought," said Joe Crossland, our financial manager. "We'll be able to award loans to systems that find themselves in dire straits due to an emergency."

Lab certification: Changes to this rule would remove duplicate requirements for accrediting environmental labs and add reporting requirements to ensure consistent, reliable data reporting.

"This has been in the works for several years, in part due to a state moratorium on rules during the recession," said Derrick Dennis, Water Quality and Data Management Section manager. "We're working with the lab community to ensure the rule is clear so all labs submit complete, legible, accurate water quality data to us and their customers."

Fluoridation of drinking water: The U.S. Department of Health and Human Services now recommends 0.7 milligram per liter (mg/L) of water as the optimal fluoride level to prevent tooth decay. The new guidance replaces a range of 0.7 to 1.2 mg/L.

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Washington State Department of Health
Environmental Public Health
Office of Drinking Water
DOH 331-200

Partnership for Safe Water® recognizes City of Everett

Barb Martin, CWP – AWWA/Partnership for Safe Water

The City of Everett Water Filtration Plant received the Partnership for Safe Water's 15-Year Directors Award at the 2015 AWWA Annual Conference and Exhibition in Anaheim, Calif., in June. The plant joins 77 treatment plants to reach this milestone. The City of Everett was one of the first 20 utilities to join the Partnership for Safe Water. It has participated in the Partnership's Treatment Plant Optimization Program since it started in 1995.

The Everett Water Filtration Plant originally received the Directors Award in 1999. It has maintained this level of performance for 15 years. The utility also participates in the state's Treatment Optimization Program (see page 7).

The Partnership presents the Directors Award to utilities that complete a comprehensive self-assessment of treatment plant or distribution system performance and operations. Partnership utilities, like the City of Everett, receive recognition as they reach optimization milestones, demonstrating their commitment to water quality and public health.

More than 450 water treatment plants participate in the Partnership's Treatment Plant Optimization Program. The Partnership established the program to encourage surface water treatment plants to voluntarily improve performance. For information, visit www.awwa.org/partnership

AWWA Vice President Lela Perkins, left, presents the 15-Year Directors Award to Mark Weeks, Process Analyst at the City of Everett.

Updated treatment plant ratings

When we finalized the Waterworks Operator Certification Rule in 2014, we updated our treatment-plant rating system to reflect current drinking water treatment processes and technologies. We now use a newer version of the Associated Boards of Certification's (ABC's) Purification Plant Criteria to evaluate drinking water treatment facilities.

ABC based its scoring criteria on treatment process type, complexity, and several other system-specific factors. A treatment plant's score determines the certification level required for the mandatory treatment plant operators. For example, a treatment plant with a rating of 56 to 75 would be a Class 3 treatment facility. A system at that level must designate a water treatment plant operator 3 (WTPO 3) and shift operators certified at no less than water treatment plant operator 2 (WTPO 2).

These changes will help us to ensure that water systems and their certified operators continue to provide safe and reliable drinking water to their water users.

If your facility's treatment classification increases

Evaluate the level of certification your treatment operators need to have. Your certified operator may already have the higher certification required to match your facility's new treatment classification. If not, contact us to discuss options you have to remain in compliance with the Operator Certification Rule.

For up-to-date information on treatment plant reclassifications, visit "Opcert SPLASH" at www.doh.wa.gov/OpCertSPLASH If you have questions, call us toll-free at 1-800-525-2536, or email dwopcert@doh.wa.gov

Revised Total Coliform Rule *continued from page 1*

There will be a new type of noncommunity water system called a "seasonal water system." It will start up at the beginning of the season and then shut down and depressurize the distribution system at the end of the season.

One of the biggest changes is the water system assessment requirement. RTCR will require systems to "find" and "fix" sanitary defects. Systems will have to fix sanitary defects immediately or submit a Corrective Action Plan to us within 30 days with a schedule for fixing any uncorrected sanitary defects.

Watch *Water Tap* and *H_2Ops* for more information on the RTCR.

2 kinds of assessments

- Level 1: A basic water system evaluation by an owner, manager, or designated water system representative.
- Level 2: A comprehensive water system evaluation by a person with required credentials.

Harmful algae blooms

In May 2015, the U.S. Environmental Protection Agency (EPA) proposed health advisory values that states and water systems can use to protect citizens from elevated levels of algal toxins in drinking water. Blue-green algae occur naturally in freshwater lakes, ponds, and river impoundments. Some algae blooms generate toxins (cyanotoxins).

Washington hasn't documented many toxic algae blooms in surface water sources used for drinking water, but this problem does occur. EPA estimates that between 30 and 48 million people use drinking water from lakes and reservoirs that may be vulnerable to algal toxin contamination.

In August 2014, Toledo, Ohio, city officials issued a "Do Not Drink, Do Not Boil" notice to nearly 500,000 drinking water customers after detecting harmful levels of algae-related toxins in their treated water. The event followed a harmful algal bloom that occurred on Lake Erie, the water source for the Toledo water system.

People and pets that play, wade, swim, or water ski in lakes with toxic blooms—or drink water containing cyanotoxins—may suffer adverse health effects. Symptoms include skin rashes, gastroenteritis, headaches, and eye, ear or throat irritation. More severe symptoms affect the liver or the nervous system.

Based on the best available science, EPA developed guidelines for algal toxin levels in tap water that are protective of human health. Because young children are more sensitive to the short-term effects of these toxins, EPA developed two health advisory levels:

Microcystin

- 0.3 micrograms per liter: Infants and preschool-aged children should not drink the water.
- 1.6 micrograms per liter. No one should drink the water.

Cylindrospermopsin

- 0.7 micrograms per liter: Infants and preschool-aged children should not drink the water.
- 3.0 micrograms per liter: No one should drink the water.

Blue-green algae reproduce very quickly in warm, shallow, undisturbed water that receives a lot of sunlight. This rapid growth, called a "bloom," can discolor the water or produce floating scum, especially along shorelines.

Photo by Clara Hard

Resources

- *Harmful Algal Blooms: Water System Guidance* (DOH Pub. 331-531; March 2015) www.doh.wa.gov/Portals/1/Documents/Pubs/331-531.pdf
- *Cyanotoxins and Cyanobacteria: Information for Drinking Water Systems* (EPA, Sept. 2014) http://www2.epa.gov/sites/production/files/2014-08/documents/cyanobacteria_factsheet.pdf
- *A Water Utility Manager's Guide to Cyanotoxins* (AWWA and WRF, 2015) www.waterrf.org/PublicReportLibrary/4548a.pdf

If you have questions or concerns about harmful algal blooms, call Joan Hardy, toxicologist, at 360-236-3173 or Sam Perry, water treatment engineer, at 253-395-6755.

SWAP mapping tool gets a facelift

We recently launched a new and improved Source Water Assessment Program (SWAP) GIS mapping tool. Major upgrades included a new street-based map, updated watershed protection areas, and modified search tools. Behind the scenes, we are improving data and ensuring that the information in the SWAP tool is the same information we have in Sentry. The GIS tool will automatically update weekly and reflect changes made in Sentry. One thing that didn't change is the Web location: https://fortress.wa.gov/doh/eh/dw/swap/maps/

2015 Drinking Water Week

And the winners are...

Washington has some of the safest, best-tasting tap water in the world, and that's due in large part to the drinking water professionals who have the training, vigilance, and the wherewithal to take extraordinary efforts to keep it that way.

Every year, the first full week of May is a time to celebrate national Drinking Water Week. It's also a time when we honor the round-the-clock hard work and dedication of water system operators and others who keep safe, reliable drinking water flowing from taps throughout Washington.

Operating a water system is a demanding job involving planning, engineering, construction, maintenance, water quality monitoring, budget management, and excellent customer service. This year, we presented eight awards to recognize efforts ranging from emergency response to long, stellar careers in the drinking water industry.

"It takes an incredible amount of knowledge, dedication and hard work to keep water systems running well," said Clark Halvorson, director of the Office of Drinking Water.

This year's winners, nominated by their supervisors, peers, and Office of Drinking Water staff are featured here.

John Wesely, Cedar Water Treatment Facility—"Above and Beyond" *As plant and project manager at the Cedar Water Treatment Facility, Wesely and his eight-member staff oversee a 180-million-gallons-per-day plant for Seattle Public Utilities. Wesely (left), a CH2M Hill employee, had double-duty being a manager and shift operator for several months. His nomination cites his ability to "keep the greater Seattle area water taps running full and clean." Clark Halvorson, our director, presented the award.*

City of Colville Water System—"Pursuit of Excellence" *The city, recognizing the need to replace a deteriorating water system, formed a committee of city officials and local residents to create a long-term financial plan. The plan, adopted in 2010, included an unpopular rate increase of 4.5 percent for five years. During this time, the city replaced three wells, improved water reservoirs, repaired leaks (saving about 2 million gallons a year), and replaced old meters and several thousand feet of water mains. Pictured above (from left) are Eric Durpos, municipal services administrator, Maryanne Guichard, assistant secretary for our Environmental Public Health Division, and Colville Mayor Lou Janke.*

Steve Prather, Water Services, Clark Public Utilities—"Lifetime Achievement" *Prather, who is retiring, implemented Clark Public Utilities' state-of-the-art computer structure that enables high-level monitoring and control of a complex water system. His efforts help operators respond to system concerns from remote facilities, which improves response times, minimizes damage and water loss, and improves service to customers. Dan Alexanian, right, from the Office of Drinking Water presented the award.*

Tacoma Water—"Commitment to Excellence" *The Green River Filtration Facility celebrated the opening of the new, 150-million-gallons-per-day filtration treatment plant—the largest in our state. When water systems use surface water, such as rivers and lakes, particles in the water must be removed to meet drinking water standards. The $197.5 million dollar project serves more than 600,000 customers in Pierce and King counties. Secretary John Wiesman (left) presented the award to Linda McCrea, Tacoma Water superintendent.*

Phil Gady and Melissa Young—"Going Above and Beyond" *When windstorms result in power outages, it can put water systems at risk. Last summer, systems in northern Spokane County were hard hit. At the same time, we were focused on the North Central Cascades wildfires. Director Halvorson recognized Gady (right) and Young (center), both certified water system operators, for quickly assessing damage, mitigating threats, and restoring service to affected systems. They also became the ears and eyes to help us prioritize response and recovery assistance efforts.*

Cheryl Capron, Seattle Public Utilities—"Operator of the Year" *Capron's nomination described her as a "working example of 'Operator of the Year' every year!" Her accomplishments include a shutdown block analysis of the Seattle Public Utilities distribution system that identified fire-flow and low-pressure deficiencies. Steve Deem (left), engineer from our Northwest Region, presented the award.*

Kitsap Public Utility District—"Commitment to Excellence" *Healthy water systems, long-time employees, and happy customers all describe the Kitsap Public Utility District (PUD). The PUD, which owns and operates about 150 water systems, is committed to helping struggling systems in Kitsap County. The PUD is a valuable partner in providing safe and reliable drinking water. Director Halvorson presented the award to Bob Hunter (right), Kitsap PUD general manager.*

Carrolls Water Association: The hunt for a sustainable water source

By Cathi Read, Program Manager, Small Communities Initiative, Department of Commerce

Following several years of water supply challenges, board members at the Carrolls Water Association have their sights set on a potential solution. They used a $30,000 source water protection grant from the Department of Health to fund a hydrogeologic assessment and feasibility study to find a sustainable drinking water source.

Situated on the eastern bank of the Columbia River just south of Kelso-Longview, Carrolls serves 170 residences, a school, and a store. With three primary wells and two supplemental wells, the association can provide only marginally adequate service under sustained high demand, even after it implements customer water restrictions. The aquifer that feeds all of the wells is fractured bedrock, which is highly susceptible to over-pumping and takes extended periods of rest to recharge.

Despite several system improvements, the association experienced severe water shortages in 2012 and 2013. One well was depleted and fecal coliform was discovered in another. The contaminated well supplied a third of their water, so they installed disinfection. However, the well and well house are in a landslide-prone area.

The board members knew they needed to provide a more reliable water supply to their customers, but they weren't sure where to focus their limited resources: How can we operate the existing wells better to reduce the chance of over-pumping? Should we attempt to rehabilitate the existing wells to increase capacity? Should we try to locate and buy an existing well? Should we look for a new well site? If so, where is the most likely area to drill?

Carrolls Water Association President Everett Timmreck (left) and Boardmember Ed Hughes examine a map showing potential areas for a new well.

The answers came in November 2014, when the consultant they hired presented the study results, which suggested:

- Two wells are not amenable to rehabilitation. A slow landslide is affecting one of the wells and the site's pump house. Fecal contamination of the aquifer at the site appears to be permanent.
- They can most likely establish safe and dependable source wells in Columbia River sediments. Although water might be high in iron and manganese, there are advantages to such a well. It should be immune to fractured rock-type depletions, be relatively unaffected by changes in precipitation, provide increased resistance to some contaminants by sediment filtering, and have access to more extensive groundwater.

"We were very pleased with the report and felt the process was worthwhile," said Board Treasurer Velia Horrocks after the presentation. At the end of May 2015, a site for a new well was identified and preconstruction activities were underway.

In addition, the hydrogeologists' advice about anticipating problems with water shortages in the existing wells was put to use. Carrolls' consulting engineer, Scott Pollock of Arrowhead Engineering, reported, "I've found the hydrogeologists' advice very helpful."

The Office of Drinking Water publishes *Water Tap* twice a year in January and July. You can find electronic versions of the newsletter online at www.doh.wa.gov/drinkingwater

If you have questions or story ideas, contact Linda Waring, editor, or Donna Lynch, designer, at 360-236-3100 or watertap@doh.wa.gov

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

Congratulations, 2015 TOP performers!

In Washington, surface water systems using conventional or direct filtration consistently perform above regulatory standards and provide better public health protection. We award bronze, silver, and gold certificates to systems that meet or exceed our Treatment Optimization Program (TOP) goals for 3 years, 5 years, and 10 years, respectively. Award winners must meet the goals and remain free of any drinking water violations during the evaluation period.

Gold Award 10 or more years of continuously optimized performance	Silver Award 5 to 9 years of continuously optimized performance	Bronze Award 3 or 4 years of continuously optimized performance
Arlington Water Department (2001-2014)	Blakely Island Maintenance Commission (2008-2014)	Castle Rock Municipal Water (2012-2014)*
Lake Whatcom Water and Sewer District – South Shore Water System (2001-2014)	City of Everett (2009-2014)	Eastsound Water Users Association (2011-2014)
Pasco Water Department (2001-2014)	Island View LUD 9 (2010-2014)*	City of Lynden (2011-2014)
Skagit County PUD #1 – Judy Reservoir System (2001-2014)	City of Kelso (2006-2014)	Town of Metaline Falls (2012-2014)*
TOP Goals Meet 0.1 nephelometric turbidity units (NTU) or less in 95% of the maximum daily combined filter effluent (CFE) measurements taken during the year. Never exceed 0.3 NTU in any CFE measurement. By contrast, the state standard requires 95 percent of samples in a month to be 0.3 or less NTU and never above 1 NTU.	City of Leavenworth (2009-2014)	City of Richland (2012-2014)*
	Lummi Island Scenic Estates Community Club (2008-2014)	Rosario Water System (2012-2014)*
	River Bend Water System (2009-2014)	
	Ryderwood Improvement & Service Association (2008-2014)	
	Stevens Pass Water System (2007-2014)	
	City of Woodland (2009-2014)	
	City of Yakima (2010-2014)*	

*First-time award recipient for 2015

A whole lot of rule making... *continued from page 1*

"We're aligning our community water fluoridation rule with the new federal guidance," said Theresa Phillips, our rules coordinator. "This will be a minor, yet important, change. The availability of fluoride in toothpastes and rinses and advances in science show we can reduce the amount of fluoride in drinking water and still help protect teeth from decay."

Group A public water supplies: We're revising water system planning, disinfection, and emergency source requirements and incorporating the Revised Total Coliform Rule.

Revised Total Coliform Rule: This rule will increase health protection by reducing opportunities for fecal contamination to get into Group A public water systems. "The rule will challenge water systems to conduct timely assessments and challenge us to review them consistently," said Bob James, manager of our Northwest Regional Office.

Disinfection Rule: The rule clarifies disinfection installation and reporting requirements, and reduces monitoring requirements for systems that use a disinfectant for purposes other than disinfection. It also defines detectable disinfectant concentrations, and outlines treatment techniques, and monitoring and reporting violations.

"There are potentially big changes afoot for groundwater disinfection," said Arlene Hyatt, sanitarian in our Southwest Regional Office. "Stay tuned!"

Planning Rule: Our revisions would reduce water system costs and add flexibility in designating emergency sources. For example, some water systems must submit plan updates to us every six years. But, for many, the public health benefit may not justify the cost of producing these plans.

"We're narrowing the types of systems that must submit water system plans and extending the plan submittal requirement from six years to ten years," said Linda Kildahl, policy and rules specialist. "The changes will allow water systems to focus their planning resources in a meaningful way that works for them."

Learn more about our rule-making activities at http://www.doh.wa.gov/ODWRuleMaking

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

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In May, Gov. Inslee declared a statewide drought emergency. Our weather is warmer than normal, and many rivers are at or near record lows. For drought information or resources, visit http://www.doh.wa.gov/drought

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Waterworks operators and backflow assembly testers

Your professional growth deadline is approaching fast!

All waterworks operators and backflow assembly testers certified before January 1, 2013, must meet the professional growth requirement by December 31, 2015, to be eligible to renew their certification for 2016. If you achieved certification after January 1, 2013, you have until December 31, 2018, to meet the requirement.

If you don't complete training or pass an exam that satisfies the professional growth requirement by December 31, 2015, you cannot renew your certification. It will be invalid and you will not be eligible to appeal your inactivation. You will have to apply, pay fees, and pass an exam to achieve certification again.

Waterworks operators can meet the professional growth requirement two ways:

- Earn at least three continuing education units (CEU) or college credits for completing relevant training.
- Pass an exam to advance within the WDM and WTPO classifications (at level 2, 3, or 4) or achieve certification in a different approved classification.

If a waterworks operator in a mandatory position at a public water system loses certification, the system may be out of compliance with state certification requirements.

Backflow assembly testers must pass the professional growth (hands-on) exam by December 31, 2015. Exam dates are filling quickly, so apply soon to get your choice of exam dates.

Washington Certification Services at Green River College administers the waterworks operator and backflow assembly tester professional growth programs using our criteria. You can check your professional growth status, get information about the professional growth exam, view exam schedules, and download applications at www.wacertservices.org