

Water Tap

Washington's Drinking Water Newsletter

Volume 33, No. 2

Summer 2018

Olympia Corrosion Control Study

By Cheri Reimers, Water Quality Specialist, City of Olympia

IN NOVEMBER 2014, the City of Olympia switched from a surface water source to a well field, which now provides about 80 percent of the city's drinking water. Groundwater from the well field is slightly acidic, so, being a large system, Olympia decided it was time to look at corrosion control (CC) for this source.

We completed a CC study and installed aeration towers, which increases the pH of the water by removing carbon dioxide. With this pH adjustment, our system will have optimized CC treatment and provide the best quality of drinking water possible. Now that the new CC treatment is on line, we must go back to baseline lead and copper sampling and conduct water-quality parameter monitoring in the system. We will collect 60 lead and copper tap samples in September and again in March 2019.

The City of Olympia took this opportunity to write a Lead and Copper Monitoring Plan and review the participating sample homes. The plan consists of:

- ◆ Lead and Copper Rule background.
- ◆ Lead and copper monitoring.
- ◆ Distribution system water quality parameter monitoring.
- ◆ Setting optimization levels.
- ◆ Compliance reporting.
- ◆ Sample site selection and procedure.

We also took a closer look at the homes participating in the sampling event. We used results from the Materials Survey we did in the early 1990s to verify that the pipe material in the single-family homes met Tier 1 criteria.

Tier 1 homes were built between 1983 and 1986 with copper pipes and lead solder. The survey records were incomplete, so we used our GIS system to determine the year the homes were built and service-line material was installed. Based on the information, we found more homes that qualified as Tier 1 and could participate in this sampling event.

After the Department of Health gave us approval to change our sample locations, we sent letters to customers in Tier 1 homes, offering them \$25 for a valid sample. The

response was underwhelming. So, we sent letters to all homes built between 1983 and 1986, offering the \$25, and requiring them to validate they had copper piping in the home. The response was overwhelming. We had our sample pool and started turning customers away at 130 homes.

LESSONS LEARNED

A monitoring plan is a great tool and source of information. It helps guide your work and ensure you comply with current regulation. You should review the plan annually and update as needed.

Take the opportunity to look and verify your sample locations. With all the current attention on lead and copper, it is important to be current with all the regulations.

When asking people to participate in the sampling event, reach out to as many customers as possible and, if feasible, offer a dollar amount to entice them.

Be prepared for customer questions about the process. ◆



New Director, Familiar Face

I AM EXCITED TO BE in my new role as Director for the Office of Drinking Water (ODW)! We have an amazing team here and incredible industry professionals and communities that share in our mission. Together, we continue to work with others to ensure safe and reliable drinking water for the citizens of Washington State!

We experienced many challenges and changes in this past year, which included financial, technological, and internal staff changes.

In the near future, we will look at our programs and align funding with costs. We will continue to ensure safe and reliable drinking water, respond to emergencies,

and provide technical assistance to water systems. We hope to re-integrate that core work with clear program plans, which we will review and improve regularly. There has been uncertainty with our state and federal funding the past couple of years, and we must ensure we can carry out our mission, despite these setbacks.

Another major change comes with our Drinking Water State Revolving Fund (DWSRF) program. As of June 21, all construction loan contracts transitioned from the Department of Commerce to the DWSRF Grants and Loans section. This caps more than two years of work and concludes this large project. We hit a major roadblock when the Legislature did not pass

a 2017 capital budget. With that budget now approved and the transition complete, we can focus our efforts on the 2019 budget. We will also begin executing contracts from the 2016 and 2017 construction loan cycles.



Office Director Mike Means

Thanks to all of you who work with us and support us. Together we will continue to ensure safe and reliable water to the residents of Washington! 💧

PFAS Update

PER- AND POLYFLUOROALKYL substances (PFAS) are an unregulated contaminant. PFAS are a family of chemicals used since the 1950s. Perfluorooctanoic acid (PFOA) and perfluorooctyl sulfonate (PFOS), which are part of the PFAS family, are most commonly found in people and the environment.

PFAS chemicals make some products stain-resistant, water-resistant, grease proof, and non-stick. PFAS are widely used in common consumer products as coatings, on food packaging, outdoor clothing, carpets, leather goods, ski and snowboard waxes, and more. In addition, certain types of firefighting foam—historically used by the U.S. military, local fire departments, and airports—may contain PFAS.

PFAS stay in the environment for a long time and do not break down easily. Once in groundwater, PFAS may remain for many years. Exposure can occur when someone uses certain products that contain PFAS, eats PFAS-contaminated food, or drinks PFAS-contaminated water. When ingested, some PFAS can accumulate in the body. Over time, these PFAS may increase to a level where health effects could occur.

There is no national drinking water standard for PFAS. However, the U.S. Environmental Protection Agency (EPA) established a lifetime health advisory level (HAL) for PFOA and PFOS at 70 parts per trillion.

PFAS IN WASHINGTON

As of April 2018, PFAS have been detected in drinking water above EPA's HAL at or near these locations:

- ◆ City of Issaquah.
- ◆ Joint Base Lewis-McChord.
- ◆ Naval Air Station Whidbey Island and outlying field near Coupeville.
- ◆ Fairchild Air Force Base and City of Airway Heights.

We believe the primary source of groundwater contamination was the historical use of PFAS-based firefighting foam. Over time, the foam ingredients seeped downward through soil and contaminated the groundwater.

ODW'S PFAS SAMPLING PROJECT

We are concerned about PFAS in Washington, and want to learn more to protect and improve public health. This year, we are offering to pay for PFAS testing for some public water systems. Under this voluntary sampling project, participating water systems will test their drinking water for PFAS. Results will determine if PFAS are present, and if PFAS are at levels of public health concern.

We are only focusing on potentially at-risk water systems at this time. A drinking water source—where the water comes from—may be at risk for PFAS contamination if near a:

- ◆ Known PFAS-contaminated site or drinking water source.
- ◆ Fire training facility, military area, or airport that used PFAS-based firefighting foam.

Water systems will begin testing in summer 2018. Testing results will help us understand PFAS occurrence in our state and learn more about this unregulated contaminant. With this information, we can make informed decisions about PFAS. Data received may also help with PFAS rule-making. To learn more about our sampling project or additional resources, please visit our PFAS page at doh.wa.gov/PFAS.

OTHER PFAS ACTIVITIES

The Washington State Board of Health began rulemaking for PFAS in drinking water in late 2017. The process will take about two years to complete. In addition, we are helping Department of Ecology on their Chemical Action Plan, which identifies possible health and environmental impacts of PFAS.

Earlier this year, the Washington Legislature passed two laws to reduce PFAS in food and water:

- ◆ **Engrossed Substitute House Bill 2658:** Prohibits PFAS in food contact paper starting in 2022, if Ecology identifies safer alternatives.
- ◆ **Engrossed Substitute Senate Bill 6413:** Prohibits firefighter training with PFAS foams starting in 2018. Prohibits sale of firefighting foam containing PFAS in 2020 except at the following sites: Military sites, airports, oil refineries, and chemical plants. 💧

Congratulations, 2017 TOP Performers!

By Nancy Feagin, Surface Water Program Engineer

RESULTS FOR 2017 ARE IN!
Four platinum-award winning systems continue their run of excellence with 17 consecutive years of optimization! We also award bronze, silver, and gold certificates to systems the first time they meet the turbidity goals for 3, 5, and 10 consecutive years, respectively. This year, the following systems earned awards.

PLATINUM AWARD (15 or more years)

- ◆ Arlington Water Department (2001-2017)
- ◆ Lake Whatcom Water and Sewer District—South Shore Water System (2001-2017)
- ◆ Pasco Water Department (2001-2017)
- ◆ Skagit County PUD #1—Judy Reservoir System (2001-2017)

GOLD AWARD (10 to 14 years of continuously optimized performance)

- ◆ City of Kelso (2006-2017)
- ◆ Lummi Island Scenic Estates Community Club (2008-2017)*
- ◆ Ryderwood Improvement & Service Association (2008-2017)

SILVER AWARD (5 to 9 years of continuously optimized performance)

- ◆ City of Bellingham (2011-2017)
- ◆ Castle Rock Municipal Water (2012-2017)
- ◆ Eastsound Water Users Association (2011-2017)
- ◆ City of Everett (2009-2017)
- ◆ Island View PUD 9 (2010-2017)
- ◆ Town of Metaline Falls (2012-2017)
- ◆ Olympic View Water and Sewer District (2013-2017)*
- ◆ River Bend Water System (2009-2017)
- ◆ City of Woodland (2009-2017)
- ◆ City of Yakima (2010-2017)

BRONZE AWARD (3 to 4 years of continuously optimized performance)

- ◆ Blakely Island Maintenance Commission (2015-2017)*
- ◆ Carbonado Water Department (2015-2017)*

- ◆ Chehalis Water Department (2014-2017)
- ◆ Department of Energy/200W (2015-2017)*
- ◆ Hoquiam Water Department (2015-2017)*
- ◆ Kalaloch Campground (2015-2017)*
- ◆ Lake Chelan Reclamation District (2015-2017)*
- ◆ Tacoma Water Division (2015-2017)*

*First-time award recipient for 2017.

Congratulations to our award winners! The filtered water turbidity goals we adopted for these systems are not regulatory. Instead, we encourage systems to achieve optimal water quality using existing facilities, which provides a larger margin of safety. The performance of rapid rate filters for turbidity (particle) removal is a key element in protecting consumers from microbial contaminants and maximizing public health.

For assistance improving treatment plant performance, contact our regional surface water staff.

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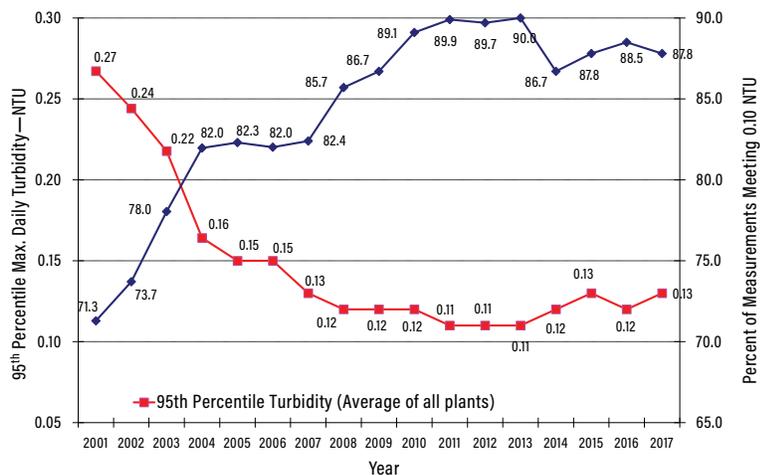
10 years of continuous optimization. Congratulations Lummi Island Scenic Estates Community Club!

Rapid Rate Filtration Plants

MEETING AND BEATING EXPECTATIONS FOR 17 YEARS AND COUNTING!

THE PERFORMANCE OF rapid rate filters for turbidity (particle) removal exceed regulatory standards—and provide better public health protection. odw staff review the turbidity data that systems submit on monthly operations reports to ensure compliance with regulations. In addition, we enter maximum daily turbidity values listed in the reports into the Optimization Assessment Software, where we can rank systems according to their relative performance. ◆

WA State Rapid Rate Plant Performance Trends



Improved performance means improved public health protection. Data points are the average of all included treatment plants for the given year. There are 59 active rapid rate treatment plants in our state.

Lead Testing in Schools

IN 2017, THE LEGISLATURE directed DOH to test for lead in drinking water in public schools. This is an effort to reduce children's overall exposure to lead in the environment. Young children, ages six years old and younger, are the most susceptible to the effects of lead. Even at very low levels of exposure to lead, children may experience effects including:

- ◆ Lower IQ levels.
- ◆ Reduced attention span.

- ◆ Hyperactivity.
- ◆ Poor classroom performance.
- ◆ Other harmful physical and behavioral effects.

In response to this effort, DOH is offering a voluntary sampling program for Washington elementary schools. Participating schools will test their drinking water for lead. All elementary schools are eligible for testing, but we are giving priority to schools with:

1. The youngest children.
2. The oldest buildings.
3. Those that have not tested for lead comprehensively in the last three years.

Trained staff take water samples based on the EPA's *3 Ts for Reducing the Lead in Drinking Water in Schools*. So far, 209 schools signed up for testing, and 182 have already tested. To see testing results, please visit our Test Results Page, doh.wa.gov/SchoolLeadTestResults. ◆

Governor's Directive on Lead

IN MAY 2016, Governor Inslee issued [Directive 16-06](#) because of increased public concern about lead in drinking water. This directive instructed state agencies to work with partners to address potential sources of lead exposure and ways to minimize its impact. One aspect of this directive was that "*Department of Health (DOH) shall work with each Group A public water system to identify all lead service lines and lead components within two years.*"

In October 2016, we surveyed the state's public water systems about lead service

lines and lead components in their system. More than 680 water systems responded, which serve more than 90 percent of the connections in the state.

Based on information gathered, here is how Washington measures up.

Lead Component	Percent of Connections Served by Responding Utilities
Lead service lines in service	0.02
Unknown number of lead service lines	1.2
No lead service lines	98.8
Lead goosenecks in service	0.21
Unknown number of lead goosenecks	7.6
No lead goosenecks	92.2

We will continue to provide technical assistance to water systems as they identify and replace their lead service lines and/or lead components. As part of Directive 16-06, we are moving toward our goal of removing all lead service lines and lead

components within 15 years. We are also expanding access to our drinking water state revolving fund loans for lead replacement. By 2020, we expect the number of lead service lines in service will decrease to 0.01 percent. ◆

Under Construction: Water System Design Manual

ATENTION WATER SYSTEM MANAGERS and operators, engineering and planning consultants, and local health partners! This fall, we will release a draft revision of our Water System Design Manual ([331-123](#)) for public review and comment.

This is a significant revision with:

- ◆ Additional guidance on water treatment, well pumping tests, and engineering document submittal content.

- ◆ New guidance on estimating water demands, pipeline and reservoir appurtenance design, and cross-connection control.

- ◆ Numerous examples to illustrate how to apply the guidance.

We will use an online survey to ask for your comments. We will post a notice on our Water System Design page at doh.wa.gov/WaterSystemDesign. Stay tuned! ◆

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Certified before January 1, 2016?

DEADLINE APPROACHING FOR OPERATORS

By Peggy Barton, Director of Washington Certification Services

ALL WATERWORKS OPERATORS certified before January 1, 2016, must meet their professional growth requirement by December 31, 2018, to be eligible for 2019 certification renewal. If you were certified after January 1, 2016, you have until December 31, 2021, to meet the professional growth requirement for the first time.

Most waterworks operators meet the requirement by earning at least 3.0 continuing education units (CEU) or college credits for completing relevant training. All training applied toward this requirement must meet state evaluation criteria and you must complete it during your professional-growth reporting period. You can also meet the requirement by passing a certification exam to advance within

the water distribution manager and water treatment plant operator classifications at a level 2 or higher, or by achieving certification in a different DOH-approved classification.

If your deadline is December 31, 2018, and you haven't met the professional growth requirement, Washington Certification Services (wcs) sent you an email reminder in June. When you meet the requirement, you will receive an email completion notice.

wcs Green River College in Auburn administers the waterworks operator professional growth program following criteria DOH established.

CHECK YOUR PROFESSIONAL GROWTH STATUS

You can check your professional growth transcript, confirm your completion status,

and verify your contact information at wacertservices.org. Use the quick link to *View Professional Growth Report*, and follow the instructions to create your username and password. If your contact information or employer information has changed, use the *Waterworks Contact Information Change Form* to submit the changes to DOH and wcs; both will update their records.

IF YOU DON'T MEET THE REQUIREMENT

If you were certified before January 1, 2016, and you don't complete training or pass an exam that satisfies the professional growth requirement by December 31, 2018, you cannot renew your certification. It will be invalid and you will not be eligible to appeal the inactivation to DOH. 💧

Attention Water Treatment Plant Operators!

IT'S TIME TO RENEW your wastewater discharge permit. The general permit for wastewater discharge from water treatment plants will expire on August 31, 2019, according to the Department of Ecology. **Current permit holders must reapply by March 4, 2019, to avoid a potential break in coverage.**

Ecology's website (ecology.wa.gov/Regulations-Permits/Permits-certifications/Water-treatment-plants), provides a walk-through of the permit re-issuance process and links to the new forms for requesting continuation of permit coverage.

The law requires Ecology to use the 5-year life cycle of this general permit as an opportunity to adjust the requirements specified in the permit to reflect the accumulation of new legislation, the latest science and technology, and changed conditions.

This general permit can cover water treatment plants that:

- ◆ Produce potable or industrial water, where water treatment and distribution are the primary functions of the facility.
- ◆ Have an actual average monthly production rate (of finished water) of at least 35,000 gallons per day.

- ◆ Produce wastewater from filtration treatment processes.
- ◆ Discharge filter backwash effluent to surface water.

For more details, see [Chapter 173-226](#) of the Washington Administrative Code.

If you have questions about the re-issuance of the permit, please contact Jim Maroncelli at Ecology at 360-407-6588 or Jamm461@ecy.wa.gov. 💧



Drinking Water Week Awards

WE CELEBRATE NATIONAL DRINKING WATER WEEK every year during the first full week of May. We recognize individual water systems and operators that do an outstanding job providing safe and reliable drinking water to their customers. This year, we honored six industry professionals for their skill, leadership, achievement, excellence, or perseverance. Learn more on our Drinking Water Week page, doh.wa.gov/DWweek.



GRACE UNDER PRESSURE: MIKE LASCUOLA

In May 2017, Fairchild Air Force Base found significant levels of perfluoroalkyl substances (PFAS) in the City of Airway Heights drinking water wells. Customers received bottled water and were asked to not drink well water. Mike (*far right*), was key in responding to calls from concerned citizens, interacting with the media, and coordinating with ODW. PFAS was later discovered in privately-owned wells. Mike continued working with private well owners, assisting with sampling while coordinating with ODW.



ABOVE AND BEYOND: JENNIFER MCDONNELL-EVANS

Jennifer (*left*) serves as Water System Superintendent for Curlew Kai Home Owners Association Water System. Jennifer led a nearly \$1 million construction project to build two new water tanks, a well, and pumping equipment. During construction, a fire broke out. The HOA Board nominated Jennifer for her help with coordinating the firefighting effort. Thanks to her quick work, she helped save the HOA's newly installed equipment.



LIFETIME ACHIEVEMENT: MARTIN SEBREN

Martin (*center, with award*), Hydrogeologist with Kitsap Public Utilities District, oversees the PUD's hydrologic monitoring network. This network records surface water and groundwater levels throughout the county. Using this information, Martin ensures that more than 50 water systems continue to have safe, reliable drinking water.



COMMITMENT TO EXCELLENCE: CAROL SCHLENDER

Carol (*right*) is the Water Quality Manager for Washington Water Service, which owns and operates about 200 water systems in Western Washington. ODW staff nominated Carol for her attention to detail, dedication to staying on top of drinking water regulations, and meticulous record keeping.



LIFETIME ACHIEVEMENT: MARK WEEKS

During his time with the City of Everett, Mark (*center*) worked his way up from plant operator to Chief Water Treatment Plant Operator. ODW staff nominated Mark for his role in developing many programs and standard operating procedures. In addition, ODW staff noted Mark's work to optimize the plant's water treatment process, and the knowledge he freely shared with other operators and water systems.



COMMITMENT TO EXCELLENCE: DOUG QUINN

Under Doug's (*center, holding award*) direction as Director of Water Services, Clark Public Utilities serves more than 80,000 customers. Because of Doug's leadership, Clark Public Utilities won the J.D. Power Award for Customer Satisfaction in each of the last ten years.

Be Social With Us!



FOLLOW US ON Twitter at @WADeptHealth or like us on Facebook at Washington State Department of Health. Search for #WAH2O and share our posts. For quick

access to our tweets and Facebook messages, visit doh.wa.gov and scroll down to the social media section.

We create awareness through our posts about the need for infrastruc-

ture investment and the many little-known ways that water touches our lives. If you have ideas for social media, send your suggestions to dwinfo@doh.wa.gov. ♦

PUBLICATIONS UPDATE

WANT TO BE IN the know about new and revised ODW publications? Join our Publications email list! Go to doh.wa.gov/DrinkingWater, and scroll to the "Join our Email Lists" section near the bottom. ♦

DWSRF Program Updates: Online Application, Webinar

THE DRINKING WATER STATE REVOLVING FUND (DWSRF) will accept construction loan applications from October 1 to November 30, 2018. We have a new online application this year.

To learn more about the construction loan cycle and how to use the online application, please join us for a webinar August 8 or August 15.

To register for the webinar, visit DWSRF at doh.wa.gov/DWSRF. ♦



Getting Safe Drinking Water After an Emergency

WHEN A BIG EARTHQUAKE HITS, many may lose access to drinking water for a long time. The risk of illness increases as people seek water from untreated sources.

We have three publications tailored to small and large water systems, as well as private citizens, on making water safe to drink after an emergency:

[Treating Drinking Water for Emergency Use \(331-115\)](#): Available in brochure format

or a double-sided paper, this publication is geared toward citizens. It covers how people can secure safe drinking water during an emergency. You might consider encouraging your customers to read it and keep a copy in their emergency kit.

[Emergency Disinfection of Small Systems \(331-242\)](#): This publication details how a small water system can disinfect wells, pressure tanks, storage tanks, and distribution system.

[Emergency Response Planning Guide for Public Drinking Water Systems \(331-211\)](#): The guide discusses emergency response planning considerations and includes a template for creating the required emergency response plan.

It's not a matter of if, but when, the "big one" will strike. Take some time now to prepare by keeping these publications handy in the event of emergency. They're available at doh.wa.gov/odwpubs. ♦

Income Survey Helps Brewster Get New Source

THE CITY OF BREWSTER experienced issues with manganese and struggled to get funding. The most recent census showed the city's median income was too high; and that made the city ineligible for grant funds.

City officials contested the income findings. ODW worked with partners to complete an income survey. A low response rate to a mailed survey led to a door-to-

door survey. Members of the community, including a local soccer team and church, encouraged residents to respond to the second survey.

Survey results showed a lower median income in the city. As a result, the city received more than \$9 million in USDA grants and loans and \$752,000 from the state capital budget to replace Brewster's source and transmission line. ♦





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2019 Waterworks Certification Renewal

ONLINE RENEWAL SYSTEM OPENS IN NOVEMBER

WASHINGTON CERTIFICATION SERVICES (WCS) administers renewals of waterworks operator certificates for the Department of Health. Visit WCS at wacertservices.org to update your contact information, check your professional growth report, and renew your certification.

In the first two months of the 2018 renewal period, almost 80 percent of operators had already renewed their certifications online by paying with a credit or debit card. In November, our online system to renew 2019 certifications will open again.

You no longer need a renewal notice in this process; however, eligible operators

will still receive several reminders by email. Please be sure to give us a valid email address and update us when there's a change.

Operators with a professional growth completion deadline of December 31, 2018, must meet that requirement to be eligible to renew for 2019. Instead of an email renewal notice, Department of Health will mail a notice to operators that haven't met their professional growth requirement. These letters will go to home addresses, so make sure we have your updated contact information.

The online certification renewal system will not allow operators to renew if they have not met the professional growth requirement. Do not wait until the deadline to check your professional growth report and schedule your needed training. ♦

