

Water Tap

Washington's Drinking Water Newsletter

Fall 2019

Is it Time to Install Intrusion Alarms?

By Steve Deem, Environmental Engineer

AT 11 AM THURSDAY, August 29, the Snohomish County Sheriff's Office called staff at City of Snohomish about a potential breach at the North Zone Water Reservoir. Following a referral, law enforcement alerted city staff to a YouTube video titled "Swimming in a water tower."

The eight-minute video, edited with music, included a montage of activities showing five young men climbing another utility's tank, cutting security locks, climbing the outside tank ladder, entering the storage reservoir through the hatch, and jumping into the city's drinking water.

City staff confirmed the reservoir in the video was indeed one of theirs. The breach took place between 8 AM Monday, August 26 (after the city's weekly visit), and 4 PM Wednesday, August 28.

City staff immediately isolated the North Zone Reservoir from the distribution system Thursday morning. Routine distribution coliform samples collected during the week were all satisfactory. Daily chlorine residual monitoring indicated residuals were within their normal range.

City crews flushed the area; called divers in to inspect the tank; then drained the tank, disinfected it, refilled it, and conducted follow-up sampling for coliform bacteria, chlorine residuals, conductivity, and pH.

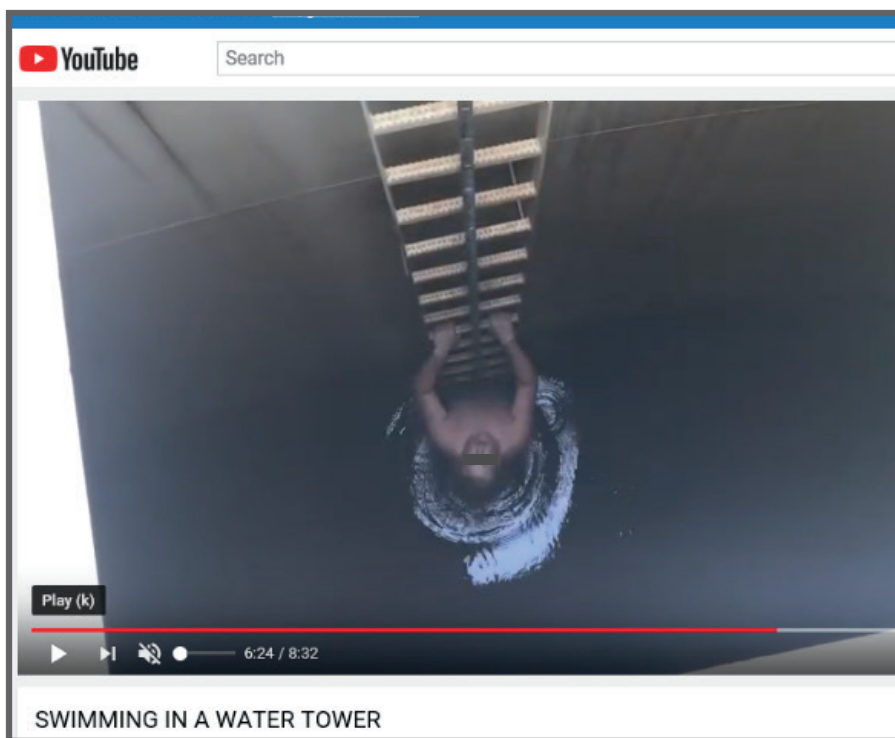
Less than a year ago, another water system tank intrusion incident occurred at Sallal Water Association in North Bend. During that incident, an unidentified intruder bypassed fencing

and locks, disabled the tank level indicator, climbed the storage tank, opened the hatch, and threw things into the tank. Since then, staff at Sallal made a number of security upgrades, including intrusion alarms.

Both incidents presented sufficient water quality risk to warrant removing the reservoirs from service, taking extensive mitigation actions, and notifying customers. Neither storage facility had intrusion alarms on tank hatches. Worse yet, staff at both water systems learned of the incidents days after they happened.

These delays create significant additional fear and stress for water system customers and water system staff. Customers want to know, "How long have we been drinking this potentially contaminated water?"

These two incidents highlight the importance of having intrusion alarms on all critical facilities. **All storage tank hatches should have functioning intrusion alarms.** Intrusion alarms not only detect unsanctioned access, they also detect when tank hatches are accidentally left open. 💧



Director's Column

HELLO EVERYONE,

This has been a terrific spring and summer. I hope you all took time to get out and enjoy living in the Great Northwest!

You may recall that I mentioned some budget challenges in my last column. During the last three years, we experienced some hurdles in our operational and capital budgets. These hurdles resulted from our aggressive attempts to meet the infrastructure funding needs of our utilities, and congressional mandates on EPA to set expectations for a more rapid turnover of the grant funding we use to support staffing and special projects.

We worked hard coordinating with our partners at the federal, state, and local levels to resolve these issues in an organized and timely manner. Now, our operating budget and our capital loan fund are solvent—almost an entire year ahead of our anticipated schedule.

We appreciate the patience and support we received from our partners and customers as we navigated

through our funding challenges. We still have hard choices to make as our operating funds are tighter than historic values and we are managing them conservatively. In 2020, we plan to move forward with increased capital loan-cycle amounts, and continue working again to secure funding for more expansive priority infrastructure and consolidation efforts.

As I write this, we are preparing to release the fourth edition of the Water System Design Manual (WSDM). Completion of this 400+ page document is a significant accomplishment with contributions from dozens of people inside and outside ODW. In particular, I acknowledge Scott Torpie, PE, who recently retired from our program. The improvements embodied in the fourth edition are a testimony to his openness and tenacity. We hope you will find the WSDM an even more useful document than previous editions, and continue to offer suggestions for improvement.

Finally, we are seeing and feeling

the effects of the "Silver Tsunami." Our Waterworks Operator Certification Program

recently noticed that, although the number of certified operators remained consistent over the last 20 years, the population you serve in our state grew by 20 percent during that time. When considering emerging contaminants, aging infrastructure, and the rate of retiring baby boomers, we all have a tremendous task ahead of us.

We have a history of taking on these issues with our partners, and we are at our best when working with all of you to support utilities and their ability to provide safe and reliable drinking water.

Have a wonderful fall and winter!



Mike



Drought 2019 By Sheryl Howe, Hydrogeologist

SNOWPACK IN PARTS of Washington were below normal this past winter and forecasts indicated summer flows in many rivers would be less than 75 percent of average. Due to the combination of forecast low runoff and the likelihood that deficits would cause undue hardship to water users, Governor Inslee issued two drought declarations. The first included three watersheds in north central Washington. The second added 24 watersheds predominantly on the west side of the state.

Above average temperatures and dry conditions did not materialize. Though many rivers on the Olympic Peninsula reached record lows, most systems were able to meet demand by issuing conservation messaging. Several systems obtained drought money to fund system improvements, becoming more resilient to future water shortages.

Reservoir levels across the state remain lower than average for this time of year. Winter snowpack will be crucial to filling reservoirs next spring

and summer in order to meet both drinking water and irrigation demand. We participate in the monthly Water Supply Availability Committee meetings held during the winter and spring and will continue to provide information to you as appropriate.

Governor Inslee's drought declaration

The drought declarations released \$2 million in state funds to address hardships from water shortages for eligible entities. This year, trucking water when a municipal supply has been exhausted was eligible for reimbursement. Other eligible projects included:

- ◆ Developing new source(s) of water supply, or mitigating use of existing emergency sources to supplement an insufficient source.
- ◆ Transportation of emergency water supplies for public health and sanitation.
- ◆ Implementing water conservation strategies.
- ◆ Water-use reduction programs and activities, including leak detection

or other water conservation actions that can lead to demonstrable reduction in water demand or increased availability.

We contacted stakeholders and local health jurisdictions to have drought-related conversations and provided technical and messaging information as requested. We also joined Ecology in hosting a webinar in June to describe funding opportunities available during a drought emergency. ◆

Winter snowpack will be crucial to filling reservoirs next spring and summer in order to meet both drinking water and irrigation demand.

Start Succession Planning, Get an Apprentice

By Ernie Klimek, Training Apprenticeship Supervisor, Evergreen Rural Water of Washington

ARE YOU TIRED of robbing operators from neighboring utilities? You should consider hiring an apprentice to work with your journey level operator. What? Yes, an apprentice!

As part of asset management, we study the premise of a proactive vs. a reactive workforce. We try to look ahead of the curve and plan our actions; at least we should be doing that. If you attended my Asset Inventory Class, you know that I mention our employees are the most important asset our water systems have. Their daily operational success rests with these people. One of the requirements for managing this critical asset is proper staffing and succession planning.

At Evergreen Rural Water of Washington (ERWoW) we offer water and wastewater utilities help with succession planning through our two-year apprenticeship programs in the water distribution manager, water treatment plant operator, and wastewater treatment plant operator career paths. We registered all three programs with state Department of Labor and Industries' (L&I) apprenticeship programs and the U.S. Department of Labor.

The Washington State Apprenticeship Council approved our apprenticeship programs in January 2019, and we now have two water distribution managers and two wastewater treatment-plant operators in the program. Apprentices progress from operator-in-training levels through their Level 1 certifications and onto their Level 2 certifications with 4,000 hours of on-the-job training and 288 hours of related supplemental

instruction in the classroom.

Our programs are employer select. That means you, the employer (aka, training agents), hire and present the apprentice to us (sponsor) to begin the training. We document all hours with L&I whether on-the-job or in the classroom. We receive guidance from L&I, our official program standards, and our Apprenticeship Committee of operators and managers from the water and wastewater field here in Washington. They meet monthly and take action on program business.

Funding available to help

Right now, Workforce Innovative and Opportunity Act (WIOA) funding may be available through your local WorkSource Office to reduce the costs to the employer for hiring an apprentice. Our programs also received Veteran's Administration benefit approval, so hiring a veteran as an apprentice could benefit the veteran as well as the employer when done in conjunction with WIOA.

Also, if you have an existing employee that is interested in moving into the



Learning what it means to be a certified wastewater operator.

water or wastewater department, there is funding available for "upskilling." This is the term used when an employer looks to train up a workforce. Apprenticeship, whether new hire or through upskilling, is an excellent path for succession planning.

There are many paths forward to proactive succession planning. However, each path requires that first step. We should be taking that first step and owning it as responsible stewards of the resources we manage. At ERWoW we are ready to help your utility take those steps and keep you on the path to success either through our apprenticeship program or our new Quality, Utility, Education and Specialized Training (QUEST) one-year program for smaller systems.

See you in the classroom! 💧

Rapid Rate Filtration Plants

MEETING AND BEATING EXPECTATIONS FOR 18 YEARS, AND COUNTING

THE PERFORMANCE OF rapid rate filters for turbidity (particle) removal is a key element in protecting consumers from microbial contaminants and maximizing public health. Office of Drinking Water staff review the turbidity data that systems submit on their 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 computer program, where we can rank systems according to their relative performance.

The graph on page 5, [Washington State Rapid Rate Treatment Plant Performance Trends 2001–2018](#), illustrates turbidity performance

improvement by all rapid rate treatment plants in Washington as a group. There are now 59 active rapid rate treatment plants in our state. Improved performance means improved public health protection and increased system resiliency. Data points are the average of all active treatment plants for the given year. 💧



Waterworks Certification Renewal

ONLINE RENEWAL SYSTEM OPENS IN NOVEMBER

By Deborah Diggins, Waterworks Professional Growth Program Manager,
Washington Certification Services

THESE
CRISPER
MORNINGS

mean fall is here. With each fall come annual renewals. Online waterworks certification renewals begin in November. We are proud to say that last year, 70 percent of operators paid their renewal fees during the first two months of the renewal period, and 215 operators paid on the very first day.

Luckily, they knew how simple the process is—just log on and pay with a debit or credit card. You don't even need a renewal notice anymore. Remember, when November is here, renewals are open. A good tip would be to set it as a reoccurring task on your calendar.

We will still send email notifications to remind operators to renew.

Check your records

In the meantime, log on to wacertservices.org, check your professional growth report, and make sure your contact information is up-to-date. If something changed, please take a second to complete the [Contact Information Form](#) and submit it to us.

It is extremely important to maintain current contact information, so that you get adequate notices and information about your certification.

Mark your calendar

Please don't wait until the last minute! On January 1, certifications issued in 2019, will become temporarily valid for two months. If an operator doesn't renew by January 21, the system will assess a \$35 late fee, which no one wants to pay.

Last renewal cycle, 130 operators waited too long and had to pay the late fee. Don't let that happen to you. Pay as soon as possible.

With the leap year, the final deadline for 2020 renewal is February 29. If an operator fails to pay by then, the system will inactivate their certification March 1 for failure to pay. We need certified and active operators to continue doing the amazing work that you do, so please keep your certificate active by paying your renewal fee on time.

With adequate reminders and an easy online process, this year should go smoothly. Let the cool morning breeze serve as a reminder as November steadily approaches. Why not make it a record year and get all renewals paid in the first two months without any late fees.

Thank you, waterworks operators, for all the work you do to provide Washington state with safe and reliable drinking water. 💧

College Place Connection: A Win for Everyone!

A "CONNECTION EVENT" August 28 celebrated Christ Community Fellowship's successful connection to a City of College Place water main. The event marked the end of years when, due to high nitrate levels in its well, Christ Community Fellowship had to depend on bottled water for its congregation and for students at Liberty Christian School.

Faced with the complete failure of one of the city's three wells, and with a second operationally unreliable well, the need to drill a new municipal well was also a priority for the city.

The Drinking Water State Revolving Fund (DWSRF) makes funds available for water systems to build, repair, and redesign infrastructure. Consolidation projects, where small failing water systems like Christ Community Fellowship join larger water systems, are a priority for the state.

The city received two DWSRF loans, a state legislative appropriation, and a financial contribution and well site dedication from the church. The joint

funding package financed a project to extend an existing City of College Place water main to Christ Community Fellowship and to drill a new municipal well. This allowed the church to abandon its high-nitrate well and the city to replace its failed well.

Connecting to city water before students returned from summer break was an important milestone of the project; ensuring long-term water supplies for the City of College Place was an overriding necessity.

"This was a win for everyone," said city administrator Mike Rizzitiello.

"For the members of the church and the children who will be returning to school, for the Department of Health as they successfully shepherded the parties towards a successful project, and for the City of College Place whose residents will be drinking from a new well come 2020."

The DWSRF loan program recognizes that improvements to public water systems are critical to the long-term health and economic vitality of Washington's communities. 💧



L-R: Kevin Tapani, Fred Sweet, Dennis Hewitt, Scott Mallory, Representative Bill Jenkin, Eric Schneider, Tanya Martinez, Senator Maureen Walsh, Sunee Jones, Mike Rizzitiello.

Congratulations, 2018 TOP Performers!

By Nancy Feagin, Surface Water Program Engineer

RESULTS FOR 2018 are in! Turbidity monitoring data show that our conventional and direct filtration surface water treatment plants continue to perform above regulatory standards—and provide better public health protection.

Four platinum-award winning systems continue their run of excellence with 18 consecutive years of optimization. We award bronze, silver, gold, and platinum certificates to systems the first time they meet the turbidity goals for 3-, 5-, 10-, and 15-consecutive years, respectively.

This year, two systems earned a gold award, one earned a silver award, and four earned bronze awards. Congratulations!

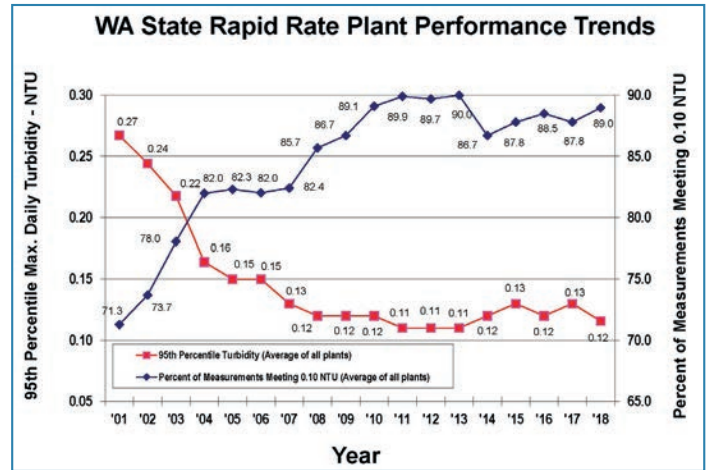
The filtered water turbidity goals we adopted for these systems are not regulatory. Instead, we encourage systems to achieve optimal water quality using existing facilities, which provides a larger margin of safety and improved system resiliency. The performance of rapid rate filters for turbidity (particle)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

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

Eastern Region,
Russell Mau
509-329-2116.

Northwest
Region, Jolyn Leslie
253-395-6762.

Southwest Region,
Teresa Walker
360-236-3032.



Platinum Award (15 or more years)

- ◆ Arlington Water Department (2001-2018)
- ◆ Lake Whatcom Water and Sewer District – South Shore Water System (2001-2018)
- ◆ Pasco Water Department (2001-2018)
- ◆ Skagit County PUD #1 – Judy Reservoir System (2001-2018)

Gold Award (10 to 14 years)

- ◆ City of Kelso (2006-2018)
- ◆ Ryderwood Improvement & Service

- ◆ Association (2008-2018)
- ◆ River Bend Water System (2009-2018)*
- ◆ City of Everett (2009-2018)*

Silver Award (Five to nine years)

- ◆ City of Woodland (2009-2018)
- ◆ Island View LUD 9 (2010-2018)
- ◆ City of Yakima (2010-2018)
- ◆ City of Bellingham (2011-2018)
- ◆ Eastsound Water Users Association (2011-2018)
- ◆ Castle Rock Municipal Water (2012-2018)
- ◆ Town of Metaline Falls (2012-2018)
- ◆ Olympic View Water and Sewer District (2013-2018)
- ◆ Chehalis Water Department (2014-2018)*

Bronze Award (Three or four years)

- ◆ Department of Energy/200W (2015-2018)
- ◆ Hoquiam Water Department (2015-2018)
- ◆ Kalaloch Campground (2015-2018)
- ◆ Lake Chelan Reclamation District (2015-2018)
- ◆ Tacoma Water Division (2015-2018)
- ◆ City of Anacortes (2016-2018)*
- ◆ Carson (2016-2018)*
- ◆ Richland (2016-2018)*
- ◆ Thunderbird Terrace (2016-2018)*

*First-time award recipient for 2018. 💧



Congratulations River Bend! Nathan Ikehara, eastern regional engineer, presents a gold award to Russell "Rusty" Gill, treatment plant operator, and Mark "Bubba" Scott, PUD water systems manager, for 10 years of optimized performance.

2019 Drinking Water Week Awards

EVERY YEAR, during National Drinking Water Week, the Office of Drinking Water (ODW) honors the hard-working individuals who ensure the water coming out of our faucets is safe. This year, May 5-11, we honored five individuals and two water systems for their dedication to the demanding job of owning or operating a water system. They were nominated by supervisors, peers, and ODW staff for several different awards.

Emilia Blake—"Commitment to Excellence"

Emilia, water quality coordinator for Skagit PUD and drinking water laboratory head, is responsible for water quality at the water treatment plant and distribution system, where she performs at an exemplary level. She is responsible for lab accreditations and procedural efficiencies, such as upgrading and maintaining instrumentation equipment. She conducts extra research to enhance water treatment plant operation and optimization projects. Emilia also spearheaded a proactive effort in preventing water quality issues with the PUD's reservoir. She earned this award through her dedication, attention to details, and going above and beyond her job duties.



L-R: Ergon Berg, Emilia Blake, Bob James, Al Littlefield, Joe Lindquist.



L-R: Jeff Marrs, Bob James, Laurie Gere, Fred Buckenmeyer.

City of Anacortes—"Most Innovative"

When the city water department was tasked with updating its telemetry to fiber optics, options were limited. They discovered a method used in Europe installing micro-duct into active water lines. After research and design adjustments, Brent Christensen, water distribution lead, along with his crew, were able to deploy roughly 15 miles of micro-duct efficiently. It was an extensive process that included installing breakouts and handhelds to divert around existing valves and elbows. They were able to improve on the original idea, saving time and money, while ensuring continually high water quality.

Dave Brown—"Commitment to Excellence"

Yakima Assistant Public Works Director Dave began his career as a water treatment plant supervisor and worked his way up to his present position. He teaches certification training and is invested in his staff's advancement and career goals. He provides steady, reliable leadership in times of crisis. In addition, he chairs the Yakima Basin Integrated Plan Water Use subgroup and is a board member of several other entities and boards. Dave played a key role recently in assisting two failing water systems overcome adverse conditions and find a safe, reliable water source.



L-R: Dorothy Tibbetts, Dave Brown, Andres Cervantes.

City of Spokane—“Commitment to Excellence”

Spokane Water Department serves about 230,000 customers, including some who had lead service lines. The city completed removal of all lead service lines ahead of the schedule in the Governor’s Directive on Lead, at no cost to homeowners, even for portions of lead service lines located on private property. They are also good neighbors to the City of Airway Heights, where primary wells were contaminated with PFOS/PFOA. Dan Kegley, director of Water/Wastewater, and his staff initiated a temporary intertie, providing safe drinking water, and helped with fill stations and other needs until the crisis was past.



L-R: Kevin Anderson, Dan Kegley, Ed Parry.



L-R: Kay Rottell, Paul Robischon, Chris McCord.

Paul Robischon—“Lifetime Achievement”

Paul retired from Washington Water Services. During his tenure, Paul initiated and developed many new, efficient ideas to solve existing challenges and also made it safer for personnel. One of his ideas changed the way a tank manufacturer sealed the topmost joint between the tank wall and roof. Paul’s resourcefulness brought him to the attention of regulators and he was asked to serve on several DOH committees. He also taught at DOH-sponsored trainings. His career was marked by service, teaching, and mentoring others in the water industry.

Kathleen Cahall—“Lifetime Achievement”

Kathleen retired as Bremerton Water Resources Manager. During her tenure, Bremerton’s drinking water system received multiple state and federal awards for excellence. She was proactive in protecting the city’s source water, initiating many measures to ensure safety and security. She improved the distribution system and maintained regulatory compliance. Kathleen was a proven leader and the utility’s public face, which serves over 55,000 people, as well as Puget Sound Navy Shipyard. She was an outstanding mentor and cared about customer concerns, public outreach, and education.



L-R: Greg Wheeler, Richard Huddy, Andy Anderson, Lori Wheat, Kathleen Cahall, Eric Younger, Mike Means, Kevin Gorman, Jocelyn Gray, Leslie Daugis.



L-R: Peggy Barton, Chris McCord.

Peggy Barton—“Lifetime Achievement”

Peggy retired as director of Washington Certification Services at Green River College in Auburn. Peggy oversaw administration of the Department of Health’s professional growth program for certified waterworks operators, its annual renewal program, and backflow assembly testers’ certification program. For more than 35 years, her commitment, high standards, and dedication to contemporary training programs, with clear and relevant instruction resulted in highly trained, exceptionally competent waterworks operators for Washington state. 💧



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Drinking Water State Revolving Fund Updates

THE DRINKING WATER STATE REVOLVING FUND (DWSRF) program will accept construction loan applications October 1 to November 30, 2019. We have about \$20 million available to award, plus \$1.5 million in grant money for consolidation construction projects. New this year, DWSRF is making up to \$3 million available for water main replacement projects that coincide with a transportation improvement project or fish passage barrier removal project.

The maximum award is \$3 million per jurisdiction, unless consolidating two or more systems and then the maximum award is \$6 million. Eligible entities are Group A community water systems (publicly owned, privately owned, and for-profit), Group A nonprofit noncommunity water systems, Group B systems that become Group A systems, and tribal systems not receiving other DWSRF set-aside funding for the project.

To be eligible, you must have an approved Water System Plan that is current through November 30, 2019, or an approved Small Water System Management Program with the proposed project included in the approved planning document. You also must be able to obtain required water rights (if needed for the project) and have legal control of the project site.

Additional information is available at doh.wa.gov/dwsrf.

