ODW Now

MAY 2023

Highlights

Notable Dates

June 5: Next DWAG meeting.

June 15: WFI due for TNC & NTNC.

July 1: Deliver CCR to customers and regional office.

July 1: WUE reports due.

Connections

The Office of Drinking Water Newsletter

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Drinking Water Home Page

Congratulations 2023 Drinking Water Week Winners!

Thanks to all those who sent in nominations, we loved reading so many **amazing** stories! This year, we gave out ten awards in four categories. Read their complete stories on our Drinking Water Week webpage.

Commitment to Excellence

John Anderson, *Water Treatment/ Water Quality Superintendent, Sammamish Plateau, Water and Sewer District.*

Kevin Cook, *Treatment Plant Operator for Lake Whatcom Water and Sewer District, Bellingham.*

Scott Dixon, *General Manager, Dallesport Water District.*

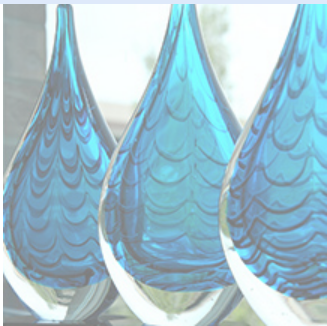
Wyatt Long, *Public Works Manager, City of Rock Island.*

Grace Under Pressure

From left: **Joe Grogan**, *winner, Public Works Director, Town of Coupeville; and presenter Derek Pell, ODW NWRO Manager.*

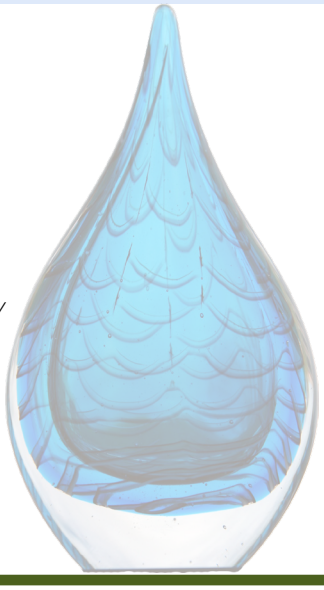
Above and Beyond

Christopher Roblin, *Curlew Water System, Ferry County.*



Lifetime Achievement

John Lovie, *Whidbey Island Water System Association President, retired.*



Mark "Bubba" Scott, *winner, Water System Manager, PUD #1, Pend Oreille County; and presenter Scott Mallery, ODW ERO Assistant Manager.*

Tim McMurrin, *former Water/Waste Water Operator, Klickitat County PUD.*

Sue Kennedy, *Senior Environmental Health Specialist, Water Program, Lewis County Health Department.*

DWSRF Upcoming Loan and Grant Cycles

- **Planning & Engineering Loans**
  Open year round
  No interest, 10-year loan
  $500,000 max
- **Consolidation Feasibility Study Grants**
  August 2023
  $50,000 max
  Cities, towns, counties, PUDs, or water districts
- **Construction Loans**
  October 2 to November 30, 2023
  2.25% interest, 20-year loan
  Up to 10% of funds available
  Possible loan principal forgiveness for disadvantaged communities up to 100%
- **Bipartisan Infrastructure Law (BIL) Emerging Contaminants**
  October 2 to November 30, 2023
  100% loan principal forgiveness
  25% must go to small (serving less than 25,000 people) or disadvantaged communities
  $17 million total available
- **BIL Lead Service Line Loans**
  October 2 to November 30, 2023
  Possible loan principal forgiveness for disadvantaged communities up to 100%
  $25,000 minimum
  Inventory—no interest, 10-year loan
  Replacement—2.25% interest, 10-year loan
  $28 million total available
- **Emergency Loans**
  Open year round
  No interest, 10-year loan
  $500,000 max
  Water systems serving less than 10,000 people

Visit the DWSRF webpage.

Our next DWAG meeting is June 5, from 9 a.m. to noon. Find the Teams meeting link and agenda on our DWAG webpage.

BAT Women's Financial Awards

Are you a woman, or do you know a woman who wants to become a Backflow Assembly Tester (BAT)? Apply now for a BAT Financial Award. Created by Washington Certification Services (WCS), the award supports women's involvement in the BAT field. To be eligible, you must be a woman who holds a high school diploma or GED, is not currently a certified BAT in Washington, and is not currently enrolled in a future BAT certification exam. This award covers the cost of the practical portion of the BAT Certification Exam. In addition, WCS is partnering

with Washington Environmental Training Center for a week-long BAT certification training course to each award recipient. **First review of applications begin June 30, 2022**. Two BAT Financial Awards may be awarded each year.

Fred Delvecchio BAT Certification Award

Workforce Development

Our Operator workforce continues to be one of the biggest challenges of our water utilities.

- We currently have 3,700 Certified Drinking Water Operators (Operators) and 1,750 Backflow Assembly Testers (BAT) in Washington State.
- Nearly 800 operators have failed to renew their certification over the last two years.
- Over 50 percent of our current certified operators have less than five years of experience.

There are many aspects to our workforce challenges; but we can distill them down to three general categories:

- Recruitment (including creating entry level positions)
- Training (including time with experienced operators)
- Retention (including compensation and schedule flexibility)

Some efforts to work through staffing challenges include EPA's Water Sector Workforce webpage and Kitsap County WaterPAK's recruitment video.

Certified waterworks operators are getting harder to find every day. It's vitally important that utilities be forward-thinking in where their next operators are coming from and how they are going to keep them.

Check Out Our New Videos Explaining PFAS

- PFAS Basics 1: What are PFAS?
- PFAS Basics 2: Why are PFAS a Health Concern?
- PFAS Basics 3: Lowering your Exposure to PFAS in Drinking Water

The More You Know . . .

ODW Now may be the *best* Newsletter; but it's not the *only* newsletter for drinking water professionals. Here are some recent industry information publications.

- Value of Water Index 2023 Fact Sheet (PDF)
- AWWA Polling Presentation (PDF)
- Willamette Partnership Summary of Workforce Development Programs (PDF)

Check out these other resources.

- AWWA Opflow
- US Water Alliance
- Water Online Newsletter
- BC Water News—All of the Latest Water News Personalized for You
- WEF SmartBrief | Subscribe Page

Ammonia in Drinking Water Sources—Alternative Mitigation Strategies

Kelly Evans, PE; Davido Consulting Group, Inc. Mount Vernon, WA

OVERVIEW

Ammonia is found in groundwater throughout the country. Levels usually range from 1 to 5 mg/L, but concentrations can fluctuate, which complicates management efforts. Ammonia can form naturally from the mineralization of organic material present from when the aquifer developed. It can also be present due to overuse of fertilizers or improper handling of manure and urine waste at operations where cattle, chickens, or other animals are housed in concentrated areas.

If ammonia is an issue for your water system, you may wish to first consider non-treatment options such as developing a new source or connecting to a neighboring approved public water system. Installing and operating treatment can be costly and time intensive. If non-treatment options are not feasible, then treatment alternatives include breakpoint chlorination and biological removal.

BREAKPOINT CHLORINATION METHOD

Many systems employ breakpoint chlorination tactics to remove all ammonia and then further treat their water. This requires adding a minimum of 10-12 mg/L of chlorine for every 1 mg/L of ammonia that is present in the water. In systems that have high ammonia, this can be a large operational cost in chemical supply, as well as lead to other issues including disinfection by-product (DBP) formation and taste or odor complaints.

You must frequently monitor ammonia levels in untreated water because it may fluctuate. If the chlorine dose is not adjusted to account for ammonia level changes, then chloramines and/or free ammonia may enter the distribution system and allow biological growth to develop. Nitrification of the chloramines and ammonia can produce increased nitrate and nitrite concentrations, taste and odor complaints, increased DBP formation potential, and a decrease in pH and alkalinity.

> “You must frequently monitor ammonia levels in untreated water because it may fluctuate.”

BIOLOGICAL REMOVAL METHOD

EPA first piloted a project in Palo, Iowa over ten years ago to demonstrate the feasibility of biological removal of ammonia. Since that time, many biological ammonia removal systems have been built and put into operation. Methods vary based on the incoming ammonia concentration, but typically, anything under 2 mg/L is likely to be feasible to implement, particularly if filters already exist. Major factors in developing a suitable condition for biological ammonia treatment include filtration rate, pH, temperature, alkalinity, and dissolved oxygen (DO).

Full establishment of the needed biological growth on the filter media takes roughly 12 weeks but the process can potentially be expedited. Chlorine should not be present in raw water or in backwash water to protect the biological growth in the filters. Addition of permanganate to the raw water is acceptable if a pre-oxidant is needed. As biological growth begins to develop and consume ammonia, you will see a decrease in post-filter chlorine demand. This reduced chlorine feed saves operational costs and reduces the potential for DBP formation. You can readily maintain a free chlorine residual once the biological growth has developed to the point that all ammonia is removed.

What You Need to Know about the New Water Shut Off Legislation

ESHB 1329 limits water shut-offs and requires service reconnection to residential customers during extreme heat events and is effective on July 23, 2023. The bill applies to water utilities owned by a city, town, water or irrigation district, public utility district (PUD), or entity regulated by UTC that serves residential customers. The bill states water utilities regulated under the bill may not shut off water service involuntarily due to lack of payment; and must reconnect a residential customer if requested on any day for which the national weather service has issued or has announced that it intends to issue a heat-related alert, such as an excessive heat warning, a heat advisory, an excessive heat watch, or a similar alert, for the area in which the residential user's address is located.

If a residential customer requests reconnection during a heat event, the water utility must promptly make a reasonable attempt to reconnect the home. The water utility can require the residential user to enter into a payment plan prior to the reconnection. The repayment plan should be structured to pay the past due bill by May 15 of the following year or as soon as possible thereafter. The payment plan may not require payments greater than 6 percent of the customer's monthly income.

The bill requires all disconnection notices to use language informing customers of their ability to seek reconnection during heat events and to have clear and specific language on how to seek reconnection. The bill also requires affected water systems with more than 2,500 customers, and all UTC-regulated utilities, to submit a report to the Department of Commerce (Commerce) that includes the total number of disconnections that occurred on each day that the national weather service issued, or announced that it intended to issue, a heat-related alert. Water utilities with 2,500 or fewer water customers must provide similar information upon request by Commerce.

Be Safe!

We're already seeing unseasonably warm weather this year. We want each and every Waterworks Operator to be safe and stay protected from the dangers of extreme heat conditions. Please review your utility's health and safety protocols and, while you're stuck inside, take the opportunity to update your emergency response plan. Here are some helpful links to get you started.

- Heat Overview: Working in Outdoor and Indoor Heat Environments | osha.gov
- Emergency Response Planning Guide for Public Drinking Water Systems 331-211 (PDF)

Please share this newsletter with anyone who might be interested. Sign up for future issues.

Read ODW Now online.

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email civil.rights@doh.wa.gov.