



American Water Works Association
Pacific Northwest Section

SPRING 2019

WATER *matters*

The Official Magazine of the
Pacific Northwest Section – AWWA



2019 PNWS-AWWA ANNUAL CONFERENCE

Vancouver, Washington • May 1-3

- ▶ **Conference Overview and Schedule**
- ▶ **History of Vancouver, WA**
- ▶ **Committee Reports**
- ▶ **Subsection Reports**

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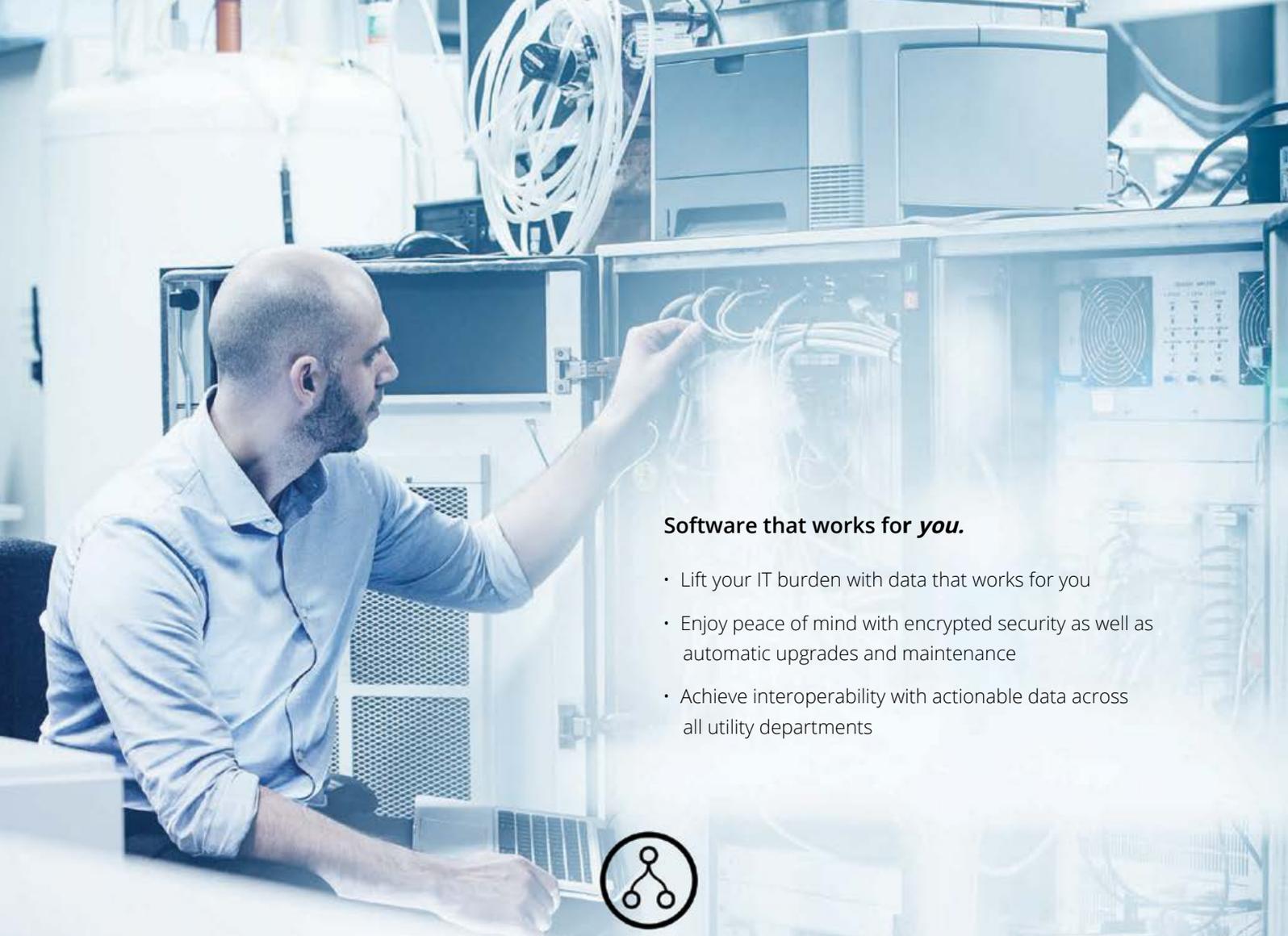
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A Privilege to Serve!

Serving on the PNWS Section Board of Trustees has always been a privilege for me. PNWS is one of best avenues to work with other professionals who, with their varied backgrounds and specific work cultures, bring their best forward to contribute time and talents to serve a greater good. It really gives one a different perspective and insights into work worlds other than your own.

I have a unique perspective in that I served on the Board from 2012 through 2014 as the Oregon/Idaho Trustee, and then through a menagerie of events, I was not able to participate in the PNWS like I had hoped for a few years. Opportunity then struck, the privilege again arose to serve as the Chair Elect and Chair over the past two years. Coming off the bench and back onto the Board was awkward at first. So much had happened with the Board in my gap years, I was simply amazed at how much had changed through the tenure of Jason Canady, Randy Black, and Lacey Gores-Priest, and what good initiatives they and their respective Board of Trustees forwarded during their tenure as Chairs. Initiatives such as the 20/20 Vision, Membership Survey, and other guiding steps have influenced decisions made today and provided an interesting foundation for what the current Board is building upon.

Last year, we focused on the Section Strategic Plan and Business Plans as led by Chair Dan Kegley in light of the past looking into the future. The Board of Trustees worked together to formulate the Strategic Plan, and over this past year, we have been focused on continuity, with Balancing the 2019 Budget,

PNWS is one of best avenues to work with other professionals who, with their varied backgrounds and specific work cultures, bring their best forward to contribute time and talents to serve a greater good.

solidifying our Philanthropic Efforts and Coordination, and continuing our influence to our Association.

This past year, as all Chairs usually state in their Spring *Water Matters* Article, has flown by fast. My experience is no different. There has been some challenges, and some successes. One area of concern that needs to be noted is that the recent fluctuations of the stock market wreaked havoc on our 2018 year end budget vs. actual performance. The great news is our Committees had stepped up significantly in the last quarter of 2018 in providing educational opportunities that provided a huge swing in our final accounting in the year. Although we still ended with a loss, as budgeted for 2018, the efforts of our committees surely helped, and I appreciate all the effort that was conducted. Thank you all!

At our winter meeting in Vancouver, BC, we approved the list of incoming officers that will join the Board in May. They are Michelle Cheek, OR/ID Trustee; Dave England, WA Trustee; and our At Large Trustee is Crystal Jensen. Welcome to the new Trustees! I would also like to thank our outgoing Trustees, Julie

Smitherman and Lynn Williams-Stevens, and Rhonda Farmer who will be our incoming Chair-Elect. Thanks Julie and Lynn for your service and contributions to the Board, your insights and counsel have been invaluable!

Also at the winter meeting, we voted on and announced new members of the Section's Education and Training Endowment Committee, which is charged with managing the investments and disbursement of scholarship funds in conjunction with the Scholarship Committee. Bob Willis was voted by the Board to renew his membership on the committee for another four-year term, and I appointed Joanie Stultz (King County Subsection) as the YP representative, which is a two-year appointment. Thanks to both Joanie and Bob for your service to this vital committee!

As an update to the Section's influence at the Association Level, we have had three appointment of PNWS members as chairs to Association Committees this past fall and winter. Mike Stuhr of the Portland Water Bureau was named Chair of the Standards Committee, Kristin Kihs (RH2) was named Chair

of the Manufacturers Associates Committee (MAC), and Bob Willis was named Chair of the Water Equation philanthropic efforts. This really continues the momentum and influence we have at the Association level and thanks to those who participate with the Association!

There were two significant presentations given at the SAC Training, as well as the Winter Board meeting. First, the Philanthropic Advisory Committee has been formally approved and its structure and purpose was formalized in the Sections Rules of Procedures. A big thanks to Rhonda Farmer, Kristin Kihs, Dave England, and others for your work in formulating the committee and its purpose. We hope that the committees and subsections will use this committee for future coordination and promotion of the philanthropic efforts within the section, which are numerous!

Also, Chris Young presented a reinvigorated Membership

Committee proposal, changing the name to Membership Engagement and Development Committee (MEDC). Chris presented AWWA's 2019 Member Value Survey, and specifically, the PNWS results of that survey. It was very encouraging that those who participated in the survey did find good value in membership, but as Chris mentioned, there is still plenty of work to do in realizing the value of membership. I look forward to see the progress this committee makes in the future!

I would also like to thank the Vancouver Local Arrangement Committee led by Tyler Clary and Tyler Wubbana, T-Squared. It looks to be a good conference brewing up! Our CEUs for water have been obtained for Water in all three states, and we are only awaiting WA Wastewater to approve CEUs. Thanks to Cheryl Capron and Elizabeth Edgar for all your work on the Program Committee. Also, we have sold out our vendor booths, so be

ready to visit a full slate of vendors to see the latest in water industry offerings for our work! Another thanks to Kristin Kihs for her work over the years in organizing the vendors and sponsorships!

As I pass the gavel on to James Dean this coming May, I just want to thank him for covering for me during the opening session this coming conference. As some of you know, my participation at the conference will be limited due to a conflict in important events, as my oldest son will be receiving his Doctorate in Pharmacy the same day as the opening of the conference. I appreciate all those who have supported me over the last year in my role as chair, and together, we have accomplished some good things this past year! Thank you, it has been a privilege to serve the PNWS membership! 🙏

Mel Damewood
Chair

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Is Your Emergency Response Planning an Emergency?

In January, the AWWA (International) Board of Directors met in Vancouver, BC, Canada. Key messages from this meeting include Emergency and Resiliency Planning requirements, AWWA elections results, and the Affiliation Agreement.

In the Portland Metro Region, my favorite water public message is a bus ad put out by the Regional Water Provider's Consortium: www.regionalh2o.org. It's a "get your kit together" ad. I would like to relay a similar message to all water utilities in reference to Resiliency Planning requirements: "Get Your Emergency Plan(s) Together." Last year, *America's Water Infrastructure Act* was passed that includes a requirement for water systems to update their emergency planning. The expectation is that the requirements will closely follow AWWA's J100 guidance for Risk and Resilience Management of Water and Wastewater Systems. AWWA

also has a resource page on Risk and Resiliency planning, please check this guidance out to help prepare for the upcoming requirements: www.awwa.org/resources-tools/resources/risk-resilience.

Elections for AWWA President-Elect, Vice Presidents and Director at Large were held in the January board meeting in Vancouver. Melissa Elliott from the Rocky Mountain Section was elected as the incoming President Elect for AWWA – Congratulations Melissa! Elected to Vice President positions were Elizabeth Carter from the Rocky Mountain Section, Richard Hope-Wisconsin Section, Lee Anne Jones-Ontario Section (OWWA), and Greg Lukasik-Montana Section. Cheryl Porter from the Michigan Section were elected as the Director At-Large.

A key take home message from this AWWA board meeting was to review the Affiliation Agreement with our Sections: www.pnws-awwa.org/about-us/governing-documents.

The Affiliation Agreement is one of the key governing documents of the Section, and it states that we as the PNWS are part of the AWWA umbrella and therefore shall conduct our business in a manner consistent with AWWA's Strategic Plan, Vision, Guiding Principles, and Mission. If you are a subsection or committee officer, or Board Member, please take some time to review the Affiliation Agreement.

Although the winter snow is here as I write this article and it feels like schools around the Pacific Northwest are in a constant snow day, I know that spring is around the corner and I look forward to seeing many of you at the Section Conference in Vancouver, WA, very soon! 🇺🇸

Kari Duncan
PNWS Association Director
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8 | WATER matters Spring 2019

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Our 2019 Section Conference

This edition of *Water Matters* is all about the upcoming Section Conference from May 1-3 in Vancouver, WA. This year, we are honored to host AWWA Vice-President Theresa O'Grady. Theresa is the Water Resources Group Manager for Crawford, Murphy & Tilly, Inc. in Aurora, IL. Theresa has over 24 years of experience in the water industry. She has been an active member of AWWA since joining in 1996.

Involved in the Illinois Section, Theresa has served two terms as Trustee – District 2, Vice-Chair, Chair-Elect, Chair and Past-Chair. On the Association level, she is serving on the Board of Directors as the Illinois Director and Vice President. She is a member of the AWWA Engineering and Modeling Applications Committee (EMAC), and also a member of Mid-Central Waterworks Association and Kane County Water Association. Currently, she is serving as the Resident Representative on the Will County Stormwater Planning Committee.

Theresa holds a Bachelor of Science degree in Civil Engineering with a hydraulics and hydrology emphasis from the University of Illinois, Champaign-Urbana and is a licensed Professional Engineer (P.E.) in the State of Illinois. She lives in Naperville, IL, with her husband Michael and two kids, Aidan and Riona.

You will have several opportunities to meet Theresa over the course of our

conference. She will be attending the Section Trustee Meeting on Tuesday morning, playing golf Wednesday with Washington Trustee Dan



Sleeth and the rest of his foursome, then attending the Opening Session on Thursday morning as well as presenting the Fuller Award at the closing night banquet on Friday. You might even bump into her at any number of technical sessions as well! I know you will give her a warm Pacific Northwest welcome!

If you haven't registered for the conference yet, I encourage you to do so. The headquarters hotel is already filled, but we have many additional hotel rooms reserved and will have a shuttle between the overflow hotel and the Vancouver Convention Center. When you finish registering, make sure that you download the free conference smart phone app (www.pnws-awwa.org/conference/download_app) as it is the only tool that will give you session descriptions in advance of the conference so you will know what sessions you should attend. We are using a new conference app this year and will be very interested in your feedback.

In addition to excellent technical content, we have some great networking events going on throughout the conference. Don't miss the Section Meet and Greet and Competition Night on Wednesday evening beginning at 5pm. An

outdoor, open air market theme is planned with four different food carts brought in to provide a variety of different foods. There will also be three breweries and a winery that will provide drinks. Each attendee will receive vouchers good for a small plate of food from each of the food carts and drinks from the breweries/winery. Non-alcoholic beverages will

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be available and provided by the Hilton. Additional beer and wine will be available for purchase from the breweries and winery. All this while taking in the Tapping, Meter Madness, and Hydrant Hysteria finals to see who will represent our Section at ACE19 in Denver. This of course follows earlier events during the day on Wednesday – preconference sessions and golf.

Thursday kicks off with a 7am First Time Attendees Breakfast led by our Membership Committee. The Conference Opening General Session begins at 8am this year. Don't miss our Keynote Speaker, Steven Eberlein from Tipping Point Resilience, who will be speaking on engaging our communities to prepare for the Cascadia Subduction Zone earthquake. As always, our conference concludes Friday evening with the annual Awards Banquet and the passing of the gavel to incoming Section Chair James Dean – don't miss it! I look forward to seeing everyone in Vancouver. Travel safe!

Section Election Results

This past January, the votes in our most recent Section election were counted and I am happy to introduce you to your new Section officers.

Chair Elect – Ronda Farmer



Ronda is currently finishing up her term as Washington Trustee. A longtime member of the South Sound Subsection and its past president,

Ronda has been active in the Section for many years. The 2012 Subsection Activity Award winner has served as our Section's I.T. expert. If you had a computer issue at any time over the last 10 years, you had Ronda on speed dial. Additionally, she has been active with the Water For People Committee. Ronda and her husband Dwayne both work for Spanaway Water Company.

Washington Trustee – Dave England



A 27-year AWWA member, Dave is a member of the Central Washington Subsection where he serves as their vice president. The 2018 Subsection Activity Award winner

is passionate about Water For People. A current member of our Philanthropy Ad-Hoc committee, Dave has led numerous fundraising events throughout his Subsection. A 13-year member of the Yakima County Water Conservancy Board, Dave's non-profit experience will be a great asset to our Section. Dave and his wife Jennifer live in Yakima and he works for the Knob Hill Water Association as their Assistant Manager.

Oregon/Idaho Trustee – Michelle Cheek



Michelle works for the Portland Water Bureau as Supervising Engineer. She has her hands full at work building a treatment plant, but she is so organized that she still

has time for our Section! Michelle has been active for years in the Section's Treatment Committee. She has given presentations at numerous short schools and past Section Conferences. In 2017, she served as chair of the local host committee for AWWA's Water Quality Technology Conference (WQTC) held in Portland.

Trustee At-Large – Crystal Jensen



Crystal is a GIS Specialist for SPF Water Engineering in Boise. Crystal may be a new face to many in our Section, but within the Southwest Idaho Subsection she is well

known! A member since 2016, Crystal had been active with the Southwest Idaho Subsection YPs, was part of the planning committee for the 2016 Section Conference in Boise, and is the current Vice President of their Subsection.

Looking forward to seeing all of you in Vancouver in May! 📅

Kyle Kihs
Executive Director

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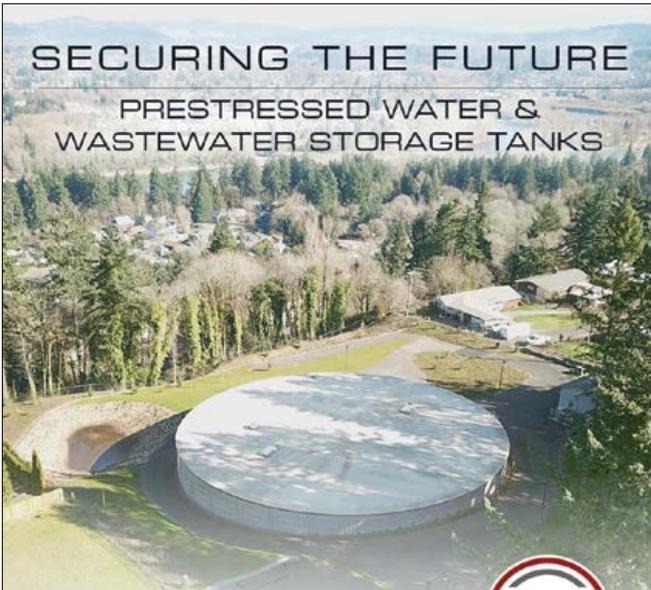
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Customer Service Committee

The PNWS Customer Service Committee has been using the new materials and class format. The new program is more streamlined and only takes a day for each of the three courses. This enables participants to get their certificate in three days versus maybe a year, depending on when the next course was offered and where.

The committee is planning on holding another series of the three courses in the Portland and Wenatchee area in 2019. The dates for Portland are March 11-13 and the Wenatchee dates are September 30-October 2. Registration is open for the Portland training. Check back for the Wenatchee training.

James Dean, Utility Services Manager from the City of Yakima, will be doing the training in both locations. We want to get more trainers

We want to get more trainers added over the next couple of years, which will allow us to better serve the PNWS by offering more locations and scheduling options.

added over the next couple of years, which will allow us to better serve the PNWS by offering more locations and scheduling options.

The PNWS Customer Service Committee website at www.pnws-awwa.org/committees has information regarding trainings. Marika Thomas, Committee Vice

Chair, is working on updating our site. She has great ideas for it so keep checking back for information.

If you are interested in finding out more about a course or scheduling the Customer Service Series in your area please contact Cathy Middleton, Committee Chair, cmiddleton@rwpud.org or 503-674-4502. 



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Engineering Committee

2019 Excellence in Engineering Awards

The Engineering Committee is proud to announce the winners of the 2019 Excellence in Engineering Awards. Excellence can take many forms, and the awards acknowledge creativity and innovation in overcoming difficult project challenges.

Nominations were accepted across three project categories:

- Best Engineering Planning Project
- Best Small Engineering Works Project (construction cost of less than \$5,000,000)
- Best Large Engineering Works Project (construction cost of \$5,000,000 or more)

Eight Engineering Works Projects were submitted in early 2019 for consideration: five large projects and three small projects. An independent panel of reviewers ranked the projects by their representation of excellence in engineering, considering the following criteria:

- Incorporation of innovative technologies or approaches
- Difficulty of the challenges overcome
- Inclusion of sustainability elements (includes resource sustainability or cost effectiveness)
- Considerations for system or project resiliency (seismic, flood, system redundancy, etc.)

All of the nominated projects are highlighted below and the winners will have posters available to share additional project details at the Section conference. Please join us for the official announcement at the beginning of the Best Tasting Water Contest on May 3. Check your conference schedule for timing.

Thank you to all of the nominees who submitted such worthy projects and congratulations to our two winners!

Small Engineering Works Project WINNER!

C4 Tap and Transmission Main Project

Owner: Covington Water District
Engineering Team: Gray and Osborne, Inc., McKinstry Essention, LLC.
Contractor: McKinstry Essention, LLC.

Recognizing the potential to capture the energy traditionally lost in pressure regulating devices, Covington Water District led a multifaceted infrastructure project to install a water turbine in its new C-4 intertie. The District now generates electricity to offset its own use and continues to plan for the future, leaving space for a second turbine, which will be installed as District water demands grow. The District pursued grant funds and creative agreements to reduce the capital cost of the project and ensure that excess power generated can be sent to the grid and credited against utility costs.



Small Engineering Works Project Nominations

Chase Water Treatment Plant

Owner: Rainbow Water District
Engineering Team: RH2 Engineering
Contractor: Pacific Excavation



Faced with new well classifications for two wells as groundwater under the direct influence of surface water, and with one of the two a primary production well, Rainbow Water District needed a new water treatment plant (WTP) to meet Long Term 2 Enhanced Surface Water Treatment Rule requirements. Working under tight timelines, site constraints, and literally the public eye (the WTP site is publicly accessible and adjacent to the McKenzie River), the engineering team designed a cartridge filter plant that now economically and efficiently treats surface water in a plant so well

designed that the filter manufacturer extended its warranty a year beyond the specified requirements.

Greenleaf Pump Station

Owner: Portland Water Bureau
Engineering Team:
Portland Water Bureau and ABHT Structural Engineers
Contractor: TEK Construction



Portland Water Bureau (PWB) executed its first ever, in-house designed pump station project in the Penridge service area located in NW Portland and adjacent to Forest Park. The existing main, storage tanks, and pump station were insufficient to meet preferred residential water pressures and current fire flow demands. The PWB utilized its many years of in-house engineering expertise and developed a design (with support from ABHT Structural Engineers) that required few change orders during

Large Engineering Works Project **WINNER!**

Hannah Mason Pump Station

Owner: Portland Water Bureau
Engineering Team: Murraysmith, Inc.
Contractor: James W. Fowler, Co.



The 100-year-old, 12 MGD, Fulton Pump Station provided water to over 36,000 people in Southwest Portland, while also supplying wholesale water to multiple municipal agencies. With little room for growth on its existing site, PWB looked elsewhere for nearby sites to construct a sustainable facility that would allow it to take advantage of existing water infrastructure and achieve its goals of maximum energy efficiency, high reliability, and improved redundancy for years to come. A city-owned site in Willamette Park met those important criteria, but also posed significant challenges, including designing a pump station to operate efficiently on two very different suction pressures, floodplain development regulations, constraints to PWB operation practices due to city park rules, a complex land use approval process, concerns by an active and engaged neighborhood, and a review by the Portland Design Commission.

PWB's design team, managed and led by Murraysmith, successfully navigated these obstacles with the design of a highly-efficient and versatile pumping station housed in a distinctive yet unobtrusive building, while reducing wire-to-water energy consumption by almost 50% compared to the old station. The facility was built on land owned by Hannah Mason in the late 1800s and was named in honor of her philanthropic deeds to the City of Portland. Upon completion, the project demonstrated it met PWB's efficiency targets and earned a \$500,000 incentive check from Energy Trust of Oregon.

construction. PWB staff demonstrated creative and solution-oriented thinking, enhanced communication and coordination, and a team building mentality to successfully complete an in-house pump station design that had never been done before at the PWB.

Large Engineering Works Project Nominations

Bolton Reservoir Replacement

Owner: City of West Linn
Engineering Team: Murraysmith, Inc.
Contractor: Rotschy, Inc.



The Bolton Reservoir is the only gravity supply reservoir for the main pressure zone in West Linn and the 100-year-old structure, transmission mains, and pump station were overdue for upgrades and replacement. Because of the potential cost savings to utilize the existing site, the design team developed

a seismically resilient reservoir design that incorporated ground improvements, inlet/outlet improvements to maximize mixing, and detailed construction sequencing to maintain water flow through the system while upgrading the pump station and replacing the transmission mains and reservoir. The cost savings were used to provide community improvements in the area, including sidewalks along a busy road, replacing the pump station roof, and beautifying the reservoir and site fencing that better fit the neighborhood.

Ridgewood View Park Reservoir and Pump Station

Owner: Tualatin Valley Water District
Engineering Team: AECOM
Contractor: Stellar J Corporation



The Ridgewood View Park Reservoir and Pump Station Project was completed to replacing aging and failing infrastructure

with seismically resilient infrastructure to bring drinking water to customers and a nearby hospital. The engineering team developed innovative solutions to maximize the use of the site (including increasing the total reservoir storage volume from 7 million gallons (MG) to 8 MG) and provide park amenities (trails, tennis courts on the reservoir roof, and many more features) for the many residential neighbors. Despite the challenging geotechnical conditions, adjacent Oregon DOT retaining wall, existing park setting, and limited residential neighborhood access, the project received an Envision Gold certification from the Institute for Sustainable Infrastructure. This is the first gold certification awarded in Oregon.

Water Station 1, Tower Booster Pump Station and Electrical Improvements

Owner: City of Vancouver, Water Department
Engineering Team: Jacobs Engineering Group
Contractor: not provided



The City of Vancouver serves water to over 253,000 people utilizing 40 wells at nine wellfield locations. The Water Station 1, the City's largest wellfield and the site of this work, was originally built by a private developer and then acquired by the City – developing an ongoing "as-built" was essential for working on this historical site. The improvements included replacing pumps, electrical equipment, adding on-site hypochlorite generation to replace the gaseous chlorine system, upgrading the SCADA system, a new diesel-powered backup generator tied into the utility grid, and incorporation of a resilient and secure Emergency Operations Center – essential improvements for the City's flagship water supply.

All improvements were completed while the system was under operations.

Whatcom Falls Water Treatment Plant Pretreatment Project

Owner: City of Bellingham
Engineering Team: Jacobs
Contractor: Stellar J Corporation



The Whatcom Falls WTP draws water from Lake Whatcom, which has been threatened lately by a recurring algae issue. Treatment improvements were necessary to protect water quality and the selected technologies were high-rate dissolved air floatation (DAF) to remove algae and conversion from uncontained gas chlorine to on-site sodium hypochlorite generation. These WTP improvements balanced cost-effectiveness with challenging site conditions (the WTP is in a popular park), requirements to keep the plant operational during construction, higher than usually used DAF rates to save space, and utilizing existing spaces to avoid new buildings – multiple evaluations were performed using the triple bottom line plus approach.

Congratulations to the nominees and winners! Please come and hear more about the winning projects at the Section Conference. 📍



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Oregon Water Utilities Council

The Oregon Water Utilities Council (OWUC) monitors legislation, regulations, and court actions that could impact the water industry, giving members the ability to engage in and help shape these kinds of issues. In addition, it provides its members with the ability to network with other water utilities of all sizes across the state to share information, discuss issues of importance to drinking water providers, and to engage in solutions. The legislative activities are closely coordinated with policies of the AWWA when applicable. Here is an update of what OWUC has accomplished over the past few months:

State Legislature

The legislature opened January 22, 2019. OWUC members are actively tracking and providing testimony on bills affecting utilities. These bills address agency budget requests, system development charges, laboratory analysis of cyanotoxins, qualifications-based selection of professional services, transfers of stored water rights, resiliency planning, carbon cap and trade, and much more.

The OWUC provides its members with the ability to network with other water utilities of all sizes across the state to share information, discuss issues of importance to drinking water providers, and to engage in solutions.

Rule Making

OWUC members provided feedback in both the Oregon Health Authority's Cyanotoxin Monitoring Rules and the Oregon Water Resources Department Water Management and Conservation Plan Rules. This feedback was a collaborative effort that resulted in more effective rules.

Committee Business

OWUC hosted the Tri-State WUC meeting in November and included a visit from Tommy Holmes, AWWA Legislative Director. OWUC also held the biennial Legislative Symposium

in February to bring members together with natural resource agency leaders, policy makers, and legislators. The symposium included an educational program in the morning, followed by an opportunity for personal visits with legislators in the afternoon. Both events helped to keep members informed of policy and legislation impacting utilities.

To find out more about how you can get involved with the Oregon Water Utilities Council, please contact Karen Kelley, OWUC Chair, at karen.kelley@cityofalbany.net.

Public Information Committee

We hope you can join us in Vancouver. The Public Information Committee will sponsor two technical tracks at this year's annual conference. All of the sessions have earned CEUs!

May 2, 2019 – 2:30-4:15pm: Decision Maker Outreach

Hilton Room: Discovery E

- What Do Your People Really Know? Public Knowledge and Understanding of Drinking Water Issues in Today's Information Rich World – Sean Thompson

- Communicating about risk – Jaymee Cuti
- The Power of "We" – Nicki Pozos

May 3, 2019 – 8:30-11:30am: Emergency Preparedness

Hilton Room: Pine

- Get Your Kit Together – Bonny Cushman
- Disaster Sanitation: What Can Water Utilities Do? – Libby Barg
- Using Planned Events to Normalize ICS Activation – Jill Hoyenga and Jeannine Parisi

- Excellence in Communication Awards

– award winners to be announced
We will hold our committee meeting in Pine at 11:30am in the same room as the Excellence in Communication Awards presentation. All award entries will be on display to spark ideas for your next great project. Please plan to stay with us for an extra half hour as we celebrate our hard working colleagues, share some bubbly (juice), and pass the leadership gavel to our incoming Chair, Robin Pederson and Vice-Chair Kerry Aden.

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Small Systems Committee

The Small Systems Committee is interested in hearing from rural water operators and small systems! We'd like to hear from YOU on what YOU need from us.

Reach out and tell us what you're looking for. We would love the challenge and the opportunity to help you succeed! Please contact Lance Peterson at lpetersonnsid8@gmail.com.

In the meantime, if you are already a member of AWWA, we would love for you to reach out to neighboring utilities that might not know about us.

We are building a membership database to spread information, and reach out.

We'd like to welcome and thank the following people for taking the initiative to reach out to us in the past year: Bob Danner from Post Falls, Michael Smith from City of Moscow, Brenda Morris, Patty Anderson from Cheney, Tami Eckstine from Row River Valley, Dan Messier from North Kootenai Water, Doug Ladely and John Griffith from Bonner's Ferry, and the many small utilities involved in Blue Mountain and the Inland Empire Subsection. We'd also like to shout out to Dorothy Tibbits from DOH, Anna Moody from DEQ, Michael Grimm from Portland, OR, and Greg Lukasik from Billings, MT, who have been great resources to us.

Be sure to check out our Small Systems Committee page on www.pnws-awwa.org for updates, and resources. We've broken it down to information regarding all three states. Follow the top of the header and click on Member Groups, then Committees, then scroll down to Small Systems. Check out our information, and let us know if you have any suggestions. We are still looking for regulation information from Oregon, and would appreciate any contacts you can suggest.

Our goal is to help make your life easier, provide training, and connect you to resources that help your day go smoother, because *Water Matters!* 

Training Coordination Committee

The PNWS Training Coordination Committee remains active in developing new Training-In-A-Box workshop material and updating existing packages. Several are currently available for subsection use in local training. Any seasoned water professional (operator, engineer, or manager) who has an interest in being an instructor can be quickly oriented and trained on the material and certified to present.

Packages currently ready include:

- Arc Flash & Electrical – 0.6 CEUs (need to be an electrician or electrical engineer for this package)
- Basic Waterworks - 0.6 or 0.7 CEUs depending on whether a tour is included)
- Emergency Preparedness - 0.7 CEUs
- Water Storage Basics – 0.7 CEUs

Two new packages will be available soon and Train-the-Trainer workshops will be held as part of the Vancouver Pre-Conference Workshops. If you are interested, sign up, there is no charge!

- Math for Operators – 0.3 CEUs
- Reading Process & Instrumentation Diagrams – 0.3 CEUs

Packages under development include:

- Groundwater Basics – 0.6 CEUs
- Pump Station Operations & Maintenance – 0.6 CEUs

If you are interested in being a TIAB trainer, or in helping develop material for another

training package, contact Loren Searl at 509-625-7851 or lsearl@spokanecity.org. We are looking for a variety of topics to have available to suit the diverse needs of our operators so most any idea for training will be welcomed. 

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Utility Management Committee

“Building Resilience in your Organization” was the theme of the 2019 winter workshop that was organized by the Utility Management Committee and held on January 23 at the Alderwood Water & Wastewater District offices in Lynnwood, Washington. Forty participants included commissioners, managers, human resources staff, operators, and engineers from special purpose districts, consultants, cities, public utility districts, and a contract utility operation. Participants came from both Oregon and Washington.

The day kicked off with opening remarks from Diana Landry, IT Manager with Alderwood, who summarized resiliency challenges including an aging workforce, knowledge transfer, and emergency management. Two presentations during the day were from small water systems with two to four staff in areas of high tourist activities. Clinton Water District (Lauren Coleman and Mike Helland) talked about transitioning from a full-time manager to two part-time managers and Snoqualmie Pass Utility District (Tom Hastings) shared the challenges in regaining the public trust after overcoming fraud by the previous manager.

Aleksandra Gancheva and Shannon Wennblom with the City of Bellevue, spoke about their unique program of knowledge capture detailing the process of



Attendees at Shannon Wennblom presentation.

interviewing staff to document critical institutional knowledge.

Expanding on the theme of resilience, “What would happen if your IT systems were hacked with ransomware?” This happened to Alderwood just before Thanksgiving, 2018. Krista Bautista described how they were prepared through good practices, but it still took 10 days before critical systems were back online and 19 days until Wi-Fi was restored. They did not pay the ransom.

Tammy Whipple with Sammamish Plateau Water described how they are using Reliability Centered Maintenance (RCM), to build resiliency through cross training and documentation. Kevin Presler with Snohomish PUD presented their use of SAP software and stressed the importance of involving everyone, including the end user, when making software decisions.

Team building inspiration was gained from Dan Sleeth and Sally Mohr with the Covington Water District. Their talk of leadership training led into a presentation by Randy Black with the Lakewood Water District about his life experiences and steps to becoming a successful manager and leader.

Focus on communication and planning, especially across disciplines and job titles, were the takeaways for the day. Thanks to all of the presenters, Diane Pottinger with the North City Water District and Utility Management Committee chairperson, Ann Hajnosz with Harris & Associates, Theresa Jurotich with CDM Smith, Andy Tuchscherer, Sammamish Plateau Water, and hosts Alderwood Water & Wastewater! We look forward to planning next year’s event based on feedback from the attendees. [A](#)



Kevin Presler, Krista Bautista, and Tammy Whipple.

We look forward to planning next year’s event based on feedback from the attendees.



Water For People Committee

Water For People fundraising is off to a fantastic start, with 2019 donations to date from October to December 2018 of \$31,474.07.

Committee Officers Update

Leadership on the Water For People Committee has changed in the past year and our new team is as follows: Camille Cegnar – Chair
Shantel Shepard – Vice Chair
Erin Nishikawa – Secretary
Katie Dillion – Conference Auction
Brinlee Finzel – Social Media Coordinator
Kristin Young – Past Chair

Kenneth J. Miller Award

The committee is in the process of soliciting nominees for the Kenneth J. Miller Award. Nominations were due on February 1, 2019. The committee is updating its selection process for the Kenneth J. Miller Award recipient. Each year, the committee will contact the PNWS Board, committee chairs, and SAC officers requesting nominations. Nominations will be accepted through an online form developed by the committee. Once nomination period has closed, a

team of five members will score the nominations to determine the recipient of the Kenneth J. Miller Award.

Section Conference Auction

The 2019 WFP Auction Committee will soon start soliciting donations. We look forward to seeing you at the silent auction!

Upcoming Events for 2019

- April 13, Water for Life, Seattle Mountaineers Club, Seattle, WA.
- May, Lower Columbia 2nd Annual beer for Water, Doomsday Brewing, Washougal, WA.
- May, SW Idaho Beer for Water, Payette Brewing, Boise, ID.
- July 19, South Sound Golf Tournament, Oakbrook Golf Course
- July, Cascade to Coast Wine for Water, Sweet Cheeks Winery, Eugene, OR.
- July, NW Oregon 23rd Annual Golf Tournament, Gresham Golf Club, Gresham, OR.
- July, Inland Empire Golf Tournament, Indian Canyon Golf Course, Spokane, WA.

- August, Southern Oregon Golf Tournament, Stone Ridge Golf Course, Eagle Point, OR.
- August, NW Oregon Wine for Water, Plum Hill Vineyards, Gaston, OR.
- August, Central Washington Golf Tournament, Apple Tree Resort, Yakima, WA.
- August, King County and South Sound Bowling Tournament, Tukwila, WA.
- September, Lower Columbia Golf Tournament, Tri-Mountain Golf Course, Ridgefield, WA.
- September, Northwest Washington Wine for Water, Mount Vernon, WA.
- September, SW Idaho Wine for Water, Telaya Winery, Boise, ID.
- King County Golf Tournament
- November, South Sound Wheels for Water, Tacoma, WA.

Thank you for your support and we look forward to seeing you at many events this year. 📅

Camille Cegnar,
Chair



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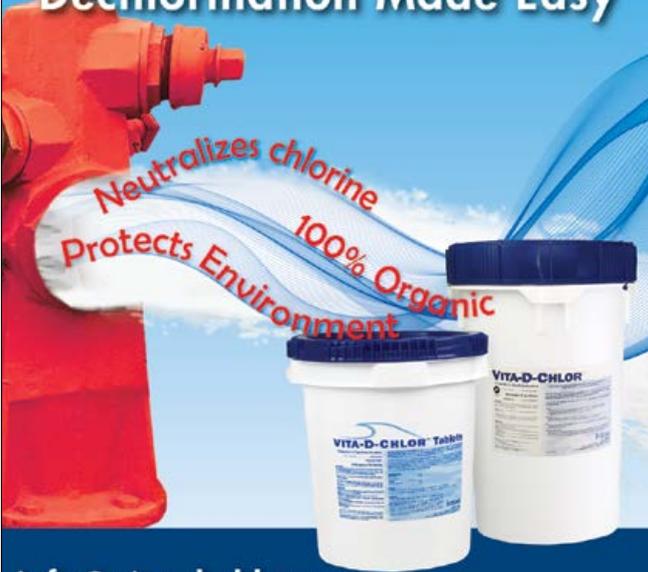
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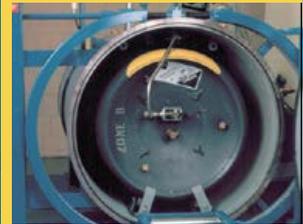
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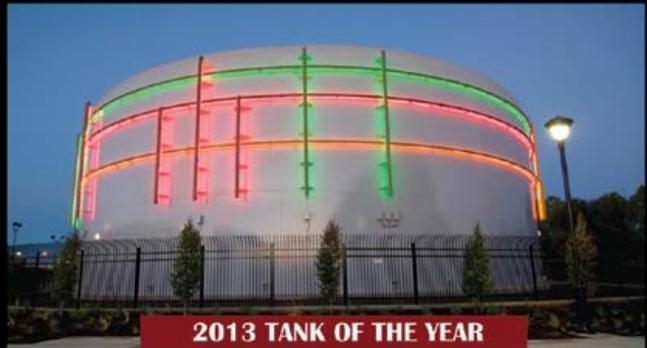
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Women in Leadership Planning Committee

2019 Women in Leadership Symposium – “Unleashing Limits”

A record breaking 190 women braved the snowy conditions to convene at the Community Life Center in Lynwood, WA, for the Women in Leadership Symposium; a unique tradition that has been inspiring professional women in the water industry for the past six years. This year's

theme focused on “Unleashing Limits” to encourage women to step up and take action as stewards of our lives, communities, and world.

While the water industry has a reputation for being heavily male dominated, the incredible women who attended the event proved that the female professionals in our industry are both accomplished leaders to learn from, and emerging leaders to carry the next generation. The morning speakers shared their knowledge and wisdom through personal anecdotes and pragmatic approaches to leadership. Mami Hara, CEO, Seattle Public Utilities kicked off the morning by sharing her passion for equitable



2019 WIL Planning Committee.

infrastructure and her admiration for a mentor who opened up space along the way for her career. Neha Chachra, Engineering Manager, Facebook shared actionable tips for how to

navigate the daily grind as a global citizen in a global world and Marilyn Strickland, CEO, Seattle Metropolitan Chamber of Commerce encouraged us to leverage our diversity to find



Mami Hara speaking.



personal leadership styles that work for us. The afternoon continued with skill building breakout sessions focused on career development, technical skills, and mentoring.

As with most conferences, this event focused on networking, mentoring, leadership, and learning; important buzzwords for any aspiring professional. But, what makes this day an event to look

forward to each year is its unique ability to create an atmosphere that is open and authentic; key ingredients to foster professional growth and development. At the end of the day, it is this atmosphere that helps us walk back to our everyday lives a bit more inspired and empowered.

And the inspiration continues! This year we added a “call to action”

for World Water Day: March 22, 2019, where we will be planting trees at Hamm Creek – Point Rediscovery. Everyone feels like they should be doing something to give back to their community. Throw out your excuses, put on some boots, and help us reach our goal of planting 300 trees to help restore a forested wetland.

Thank you to all who made the 6th annual WIL Symposium a success! 

This year we added a “call to action” for World Water Day: March 22, 2019, where we will be planting trees at Hamm Creek – Point Rediscovery.



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Water Resources Committee

Current Activities

Committee members are reaching out to Subsections in WA, OR, and ID to coordinate training opportunities for 2019, and share information about the WRC's plans for upcoming meetings and activities. In particular, we are looking to tailor some of our 2019 and 2020 efforts to align with Subsection needs and interests.

Our monthly committee meetings have returned in March after being on hiatus since December (check our webpage for meeting details). The purpose of the hiatus was to coordinate and develop new initiatives, and to help everyone get through the holidays while navigating their day-to-day commitments. Our committee officers have also been

working on new ways to delegate work and encourage committee members to take on new tasks, leaning on some of the great training provided at the Fall 2018 Trustee meeting in Coeur d'Alene.

2019 Section Conference Program

The WRC is looking forward to presenting our technical program at the Section conference in Vancouver. All of our planned session topics have been scheduled by the Program Committee (thanks team!), which include:

- Trans-Boundary Water Resources and Aquifer Management (3 hrs.)
- Reclaimed Water and "Wet" Water Mitigation Strategies (2 hrs.)

- Source Water Protection Strategies and Outreach (2 hrs.)

We are also planning a mixer and/or committee meeting during the conference. Check the WRC webpage for details.

Committee Business

Current committee officers are DeEtta Fosbury (chair), Andrew Austreng (vice-chair), and Jacob Krall (secretary). Please reach out to our officers if you are interested in getting involved, especially if you have a great idea for 2019 and 2020 activities! We will be looking to coordinate on initiatives at the Spring Conference and during our monthly meetings, so look for us there. [🔗](#)



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2020 Vision Committee

The **2020 Vision** is to align with AWWA's strategic initiative for a sustainable future by bridging young talent with the water industry.

The **2020 Mission** is to seamlessly unite multiple generations of water industry professionals by helping employers attract and retain talent and to support students and YPs in finding fulfilling work.

The 2020 Vision Committee, in partnership with the YP Committee and Membership Committee, is gearing up for the busiest season of the PNWS calendar with the upcoming conference in Vancouver, WA!

Conference Student and YP Scholarships Due

The Section is offering student and YP scholarships to attend the conference in Vancouver, May 2-3. If you know of a deserving student or YP or you are hoping to attend the two-day event and need support, reach out to this link for the application, due **April 5**. The conference is a great opportunity to make connections with industry professionals and learn about the water industry. www.sites.google.com/a/pnws-awwa.org/young-professionals/pnws-awwa-conference/scholarships

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The 2020 Mission is to seamlessly unite multiple generations of water industry professionals by helping employers attract and retain talent and to support students and YPs in finding fulfilling work.

your next event. Giveaways help leave students with something to hold onto to remember AWWA as they consider future opportunities.

- PNWS Event Toolbox with "how-to" instructions and resources for event planning: www.sites.google.com/a/pnws-awwa.org/2020-vision-initiative-committee/events
- Membership Video to share the PNWS story: www.pnws-awwa.org/member-groups/awwa-membership

Mentorship Program 2018-2019

We're into the second year of the PNWS mentorship program, with **19 new mentor/protégé pairs**. Mentor/protégé pairs were matched in December. To learn about the program, please see the Mentorship Guide at www.pnws-awwa.org/mentorship. Don't hesitate to reach out to our mentorship program

coordinator Kevin Wyckoff with questions, kwyckoff@pnws-awwa.org.

Featured Event: Reaching out to Student Chapters

The KC Subsection partnered with PNWCA to host a panel discussion with the University of Washington (UW) AWWA-WEF Student Chapter on January 17 to share experience on navigating the transition from school to career, and how to make important career connections.

Stay Connected on YP and 2020 Activities by attending the monthly YP Committee calls. Email YP Co-Chair, Erica Rodriguez at erica.rodriguez@murraysmith.us to get on the listserv.

Have ideas on how to reach out to students and YPs in your Subsection but don't know where to start? Contact Committee Chair Joanie Stultz at jstultz@brwncald.com. 



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Forty-Five Years in 700 Words

By Mark Knudson

I will be retiring this year. My first job in water was in 1974, while I was still in college. I provided engineering support for a contractor on a tertiary "sewage treatment plant." Since then, I finished college, obtained a P.E. (Civil and Environmental) and became a certified operator (WD4 and WT3). I have had many jobs – nearly all in drinking water – and relatively few employers. As I look back on my career in the water industry, I am struck by the many changes that have occurred.

In an interesting coincidence, the *Safe Drinking Water Act* (SDWA) was first adopted in 1974. It occurs to me that many of the changes that have occurred during my career were the direct or indirect result of the SDWA of 1974 and its subsequent amendments. Congress doesn't always get it right, but the SDWA of 1974 set into motion changes that have completely transformed the very nature of water supply in the United States and the world.

Some of the many changes I have seen in the past 45 years include:

- Regulations – There have been tremendous advances in public health protection associated with acute illnesses caused by microbial contaminants (giardia, cryptosporidium, E. coli, and viruses). There have been similar advances in protection from organic contaminants (SOCs and IOCs), inorganic contaminants (lead, copper, arsenic) and disinfection byproducts (THMs and HAAs). I am

confident that future regulations will be no less beneficial.

- Treatment – Given the increasing stringent regulatory environment, we have seen the application of new treatment technologies and modifications to proven technologies (such as flocculation, filtration, corrosion control, GAC, membranes, UV, and ozone) that have enhanced our ability to reliably produce safe, high-quality drinking water.
- Operator Certification – Operator certification wasn't mandatory in Oregon three decades ago. Mandatory certification has helped bring about improved education, experience and professionalism of operators, and transformed operators into guardians of public health.
- Analytical Methods – In 1974, contaminants were often measured in parts per million (10-6). Now we can measure previously unknown contaminants at levels approaching parts per quadrillion (10-15). While we can measure them, we have yet to understand the public health significance of contaminants at such levels.
- Public Communication – The requirement for consumer confidence reports was a good start. I am encouraged that the art and science of public communication continues to evolve and contribute to a better-informed public, which is our greatest ally.
- Research – Drinking water regulations are founded on technical research conducted by regulators, academics,

utilities, and the industry itself. Today, research topics include more than just water quality. Contemporary research considers utility management, resource management, infrastructure, resiliency, communications, economics, and public policy. Research has contributed to improved public health protection, better planning, and more efficient utilities. Research will continue to serve as the foundation for future advances in the water industry.

- One Water – For nearly all of my career, drinking water, wastewater, storm water, and reuse industries stayed in their own silos. Fortunately, the past few years have seen greater recognition and acceptance of the interdependence of these vital resources. One community's outfall can be another community's intake... and it's time to start taking comprehensive approaches to this relationship.
- Informed Decision-Making – Today, water utility managers and water agencies must make profoundly complex decisions that require balancing competing objectives such as regulations, a changing environment, public expectations, and costs. The complexity of these decisions has led to better planning, monitoring, asset management, utility management, and public outreach. It has also resulted in better tools and technology that are now at our disposal to build the utilities of the future.

I am tremendously grateful for the many opportunities I have had during my career. I have worked with incredible people and made life-long friends. I have witnessed profound changes that have improved public health, enhanced public safety, helped protect the environment and contributed to the quality of life of our communities. It has been an amazing and rewarding journey.

As one drinking water professional to another, I truly appreciate your commitment to the water industry and to public service. I am optimistic about the future and anxiously look forward to the next phase of the journey. 

I am encouraged that the art and science of public communication continues to evolve and contribute to a better-informed public, which is our greatest ally.


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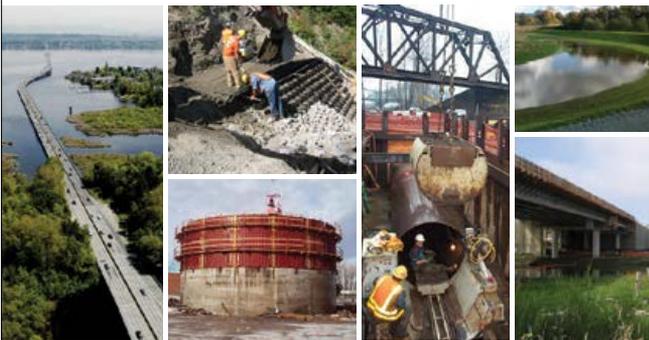
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Inland Empire Subsection

We are gearing up for our 15th Annual Service Truck Rodeo happening on March 13 at CenterPlace in Spokane Valley. This year, under the direction of Terry Pickel, we are making some major changes. We have two educational tracks we are offering this year, both for CEUs, but one is geared for field operators, and one is geared towards board members and administrators.

Think about it. When a customer calls your utility who answers that phone? How much better can your utility function if the person answering the phones can field some of the questions and give out the right information? Inland Empire believes knowledge is power, and the more knowledge we can spread and make available, the happier we make our customers. But just in case, we also have a non CEU class, being taught by the Sheriff Department, advice on dealing with hostile customers, just to cover our bases. This customer service track was put together by our newest Board Member, Sara Broderius, from Vera Water and Power. Speaking of, we're currently in search of our next Board Director. You must be an AWWA member, and live/work in our Inland Empire boundaries. We have also been pushing our Muddy Boots Nomination, awarded at the Truck Rodeo to that water operator that goes above and beyond the call of duty. Past recipients have been Ryan Neal from Model Irrigation, Glenn Talmadge from Irvin Water District, Steve McGoldrick from the Spokane Water Department, our past president, Lance Peterson, and last year's winner, Holt Ayles from Spokane Water District #3.

Some sad news for the month of January, we lost Roy Butts, January 1, 2019, 84 years of age. Roy was the co-founder and past president of the Inland Empire Subsection. He and Dennie Byram attended an AWWA conference back in the early 70s, and saw the importance and the comradery of water operators, and decided that would be a valuable

How much better can your utility function if the person answering the phones can field some of the questions and give out the right information?

thing to bring back home. Roy was an employee of the City of Spokane Water from 1958 to 2014. He put a lot of time and effort to something he believed in deeply.

Another loss to our water community was Dennis Lopp, the former superintendent for Modern Electric. He was 79. He was an integral part in SRC4, and gained national fame with his article on "Temperature and Pressure Valves" in *Domestic Engineering* magazine. He was integral in a lot of positive changes in cross connection and backflow organizations throughout the Pacific Northwest.

And we just got word another water great passed away early in February, Ralph Capaul, former superintendent for the City of Coeur D'Alene Water Department.

We are hoping to announce our 4th Annual IESS Golf Tournament the last Friday in July. We're just waiting for the golf course to open up!

We will be hosting the 2020 PNWS Conference in Spokane, so the board will start getting busy with that, and be sure to check out our page for classes being offered for the spring and fall schedules. We just started up a former board training class with an attorney on record retention, we have our flagging class nearly full, we have a ductile iron pipe class that is getting lots of interest, and we hope to be scheduling a water technology class sometime in April.

Moving and shaking! Keep an eye out for our new board shirts that we'll be wearing proudly at Vancouver's upcoming conference.

Any questions, comments, please send to current President Loren Searl, lsearl@spokanecity.org or join us at our monthly meetings at 11:30am every second Thursday of the month at Conley's, 12622 E. Sprague Ave, Spokane Valley. 



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King County Subsection

As spring approaches, the King County Subsection is actively looking for ways to serve our members. From socials to educational opportunities, we encourage you to go out there and meet the amazing people who make up this industry. This is the year where many of our operators are in need of CEUs. Please let us know what type of education topics would best fit your needs.

Transitions – Goodbye and Hello!

This past year, we had to say goodbye to Scott Rickert, Seattle Public Utilities. As the Subsection's associate program director, Scott helped with facilitating training by coordinating SPU's Joint Training Facility. Kevin Fuhrer, City of Auburn, also stepped down as treasurer. Edward Martinez, graduate of University of Merced, filled the secretary role but stepped down because of his move back to California. Dan Sleeth relinquished his role as competitions coordinator to focus on his PNWS-AWWA WA Trustee role. We thank you all for your significant contributions to the Subsection, membership, association, and industry!

With these moves, we welcomed Tammy Whipple, Sammamish Plateau Water, as the Subsection's new treasurer.

Ted Stonebridge, Sallal Water Association, became our competitions coordinator. Joanie Stultz will be moving into the secretary role with Edward's departure. Steven Neubauer with Northeast Sammamish Sewer and Water District, joins us as the new Young Professionals/Student Liaison. Welcome new officers! We thank you for stepping up and volunteering your time and efforts!

Busy As Ever for YPs

UW AWWA-WEF Career Fair Prep and Resume Night, January 15, 2019 – KC YPs held a resume review night on Tuesday, January 15, 2019,

with the University of Washington AWWA-WEF student chapter to help students prepare for the UW Civil and Environmental Engineering Career Fair. The event consisted of an informal session where YPs worked one on one with students to review their resumes and/or advise them on their elevator speeches.

UW AWWA-WEF Panel Discussion and Networking, January 17, 2019 – King County YPs partnered with PNCWA to host a panel discussion and networking night with the UW AWWA-WEF student chapter at the University of Washington. The event provided an opportunity to develop communication between professionals and students in the water and environmental sectors. In addition, this was a special opportunity to meet members of the Pacific Northwest Clean Water Association (PNCWA) board along with representatives from the King County AWWA Subsection. The panel discussion focused on lessons learned about the transition from school to career and the benefits of involvement with professional organizations (i.e. making connections for one's future job). Food was sponsored by the PNWCA and AWWA 2020 Vision Committee.

Events Springing Up

King County Water Olympics, March 14, 2019, at Brightwater Center – If you've been to the last few competitions, you'll know that we have outgrown the space for the King County Water Olympics! This year, with more than 80+ competition participants, sponsors and audience showing up to support their colleagues, we've changed the location of the event to the Brightwater Education Center in Woodinville, WA. Winners of each contest will move on the PNWS-AWWA Section Conference held in Vancouver, WA (May 1-3) and will

be announced in the *Water Matters* Summer Update.

Annual King County Charity Golf Tournament September 13, 2019 at Druid's Glen, Covington, WA – Last year, every hole was sponsored (18) and every registered play spot (25 teams) was accounted for on the day of the tournament! We had 100% participation this year. What a great achievement! Join us again this year for a fun-filled event that will raise monies for great causes. Interested in playing? Would you like to be a sponsor? Register here: www.conta.cc/2E8s5QQ or contact Bill Reynolds at 425-827-2014 or billr@paceengrs.com with questions!

Save the Date

For 2019, the Subsection plans on offering classes to help our members meet their CEU requirements and events to provide opportunities for networking and relationship building. Below are some classes and social events we plan on providing this upcoming year. Check the website, www.sites.google.com/a/pnws-awwa.org/king-county-subsection/events, for current and future offerings.

- Water Quality/Technology Offering (Education)
- King County Water Olympics – Best Tasting Water, Meter Madness and Hydrant Hysteria (Social)
- Future Meter Technology Class (Education)
- 24th Annual Golf Tournament (Social)
- YP Summer Social (Social)
- YP Tour and Social (Education and Social)

To sponsor an event, suggest future educational/networking offerings or to sign up for email notification for any upcoming King County Subsection events, please contact, King County Subsection's Program Director, Jim Konigsfeld at jim.konigsfeld@spwater.org. 

Northwest Washington Subsection

The Northwest Washington Subsection will be sponsoring training for operators, engineers, and managers in the spring and fall of 2019. To reach all corners of the Subsection, workshops will be offered in Snohomish, Skagit, and Whatcom Counties, the Olympic Peninsula, and the San Juan Islands.

Workshops and events scheduled so far include:

A Day with DOH, Part 3

April 17, 2019, Mount Vernon.
0.6 Water CEUs.

Water Storage Basics Workshop

April 1, 2019, Burlington.
0.7 Water CEUs.

Emergency Preparedness

May 7, 2018, Everett. 0.7 Water/
Wastewater CEUs.

Basic Waterworks

May 2019, Coupeville.
0.6 Water CEUs.

Pump Station O&M

May 22, 2019, Port Townsend.
0.6 Water/Wastewater CEUs.

2019 Western Washington Short School & Trade Show

June 4-5, 2019, Lynnwood Convention Center, Lynnwood, WA. 1.2 Water/
Wastewater CEUs for full time attendees.

Water Treatment

September 26, 2019, Lynnwood.
0.6 Water CEUs.



Water System Operators Workshop

(program TBD)
September 2019,
Friday Harbor. 0.7 Water CEUs.

Pump Station O&M

October 30, 2019, Port Angeles.
0.6 Water CEUs.

Ground Water Basics

October 2019, Mt Vernon or
Bellingham. 0.6 Water CEUs.

For additional information or to sign up for email notification for these or any Northwest Washington Subsection workshops go to the subsection webpage on the Section's website www.pnws-awwa.org or contact Jeff Lundt at jeff.lundt@kingcounty.gov or 260-477-5582.  



South Sound Subsection

This past year, 2018, was a busy year for the South Sound Subsection, and 2019 is not going to be any quieter. We have tons of trainings and events planned for this year! There is enough variety that there should be something for everyone. Take a look below at some of the events we are planning for you.

2019 Training and Events

Our annual **Best Tasting Water** competition is scheduled for March 22 in Puyallup (Parametrix's Puyallup Office). This is a great event where we host the Subsection qualifiers and see who will represent our Subsection at the annual Section Conference for both best tasting water and meter madness.

In April, we plan to host our annual **Waterworks 101** workshop in Lacey. This is a great training for both new water professionals and public officials (board members, commissioners, etc.). The material covers everything from principals of water quality to regulatory requirements.

This May we will be hosting our annual **YP Social**. Don't be fooled by the title – our Subsection young

professional designees organize the YP Social but the event is for ALL to participate! So, keep an eye out for the event and a great opportunity to mingle and meet other water professionals around the South Sound.

Last year, we shook things up by moving our annual **LASA Charity Golf Tournament** to the Oak Brook Golf Course. We had so much fun that we are keeping the tournament there this year! Living Access Support Alliance (LASA) is a community supported agency committed to the prevention of both homelessness and recurrent homelessness by providing assistance to families in need with anything from medical emergencies to helping keep the water running at the tap. Mark your calendars for July 19 to join us for a day of fun, sun, and a new pair of "South Sound Sunnies." Play golf and support a great cause!

The last several years, we've partnered with the King County Subsection to arrange a **Facility Tour** for our members. We are planning to host another this year, but the planning is still in the works and the details have not yet been locked-in. We'll be sure to send out an email announcement as soon as the details are in place.

Be on the lookout for two more training workshops later this year. We received such great feedback from those who attended the **Corrosion Control Workshop** in 2017, that we are bringing it back this fall. This training covers the ins and outs (literally!) of the role corrosion plays in water systems. We are also working on a brand-new training to debut this fall. We aren't ready to give the juicy details away just yet, so keep an eye on our Subsection training page and stay tuned.

Opportunities

We are an energetic Subsection with a lot of great volunteers, but we are always looking for new helping hands. If you have any interest beginning your leadership journey with the South Sound Subsection or would just like to help plan, organize, or present at any event in the future, we'd love to hear from you. We meet monthly and our doors are always open! 🏠

Michael Lubovich,
Subsection President
michaellubovich@kennedyjenks.com

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2019 PNWS-AWWA ANNUAL CONFERENCE

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- Pipeline Design and Rehab

Treatment

- Iron and Manganese
- Arsenic
- Hydrogen Sulfide
- Ammonia
- Volatile Organic Compounds
- PFAS
- Surface Water Treatment
- Groundwater Treatment
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- Disinfection
- Taste and Odor Evaluations/
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2019 PNWS-AWWA ANNUAL CONFERENCE



Conference at a Glance

Tuesday, April 30

Registration and Information	3:00pm - 6:00pm	Convention Center Lobby
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Wednesday, May 1

Registration and Information	7:30am - 6:00pm	Convention Center Lobby
Breakfast	7:30am - 8:30am	Convention Center
Golf Tournament	8:00am - 2:00pm	Camas Meadows Golf Club
Pre-Conference Seminars	8:30am - 4:30pm	Convention Center
Lunch	12:00pm - 1:00pm	Convention Center
Conference Meet and Greet with Competition Finals	5:00pm - 9:00pm	Esther Short Park

Thursday, May 2

Registration and Information	7:00am - 6:00pm	Convention Center Lobby
Breakfast	6:30am - 8:00am	Convention Center
First Time Attendees Meet and Greet and Breakfast	7:00am - 8:00am	Convention Center Birch Room
Early Bird Sessions	7:00am - 8:00am	Convention Center
Opening Ceremony with Keynote Speaker	8:00am - 9:30 am	Convention Center
Water For People Auction	8:00am - 5:00pm	Convention Center
Vendor Exhibits	9:30am - 5:00pm	Convention Center
Technical Sessions	9:45am - 12:00pm	Convention Center
Fresh Ideas Poster Contest	9:45am - 12:00pm	Convention Center Willow Room
Vendor Visit and Lunch	11:30am - 1:30pm	Convention Center
Technical Sessions	1:30pm - 4:45pm	Convention Center
Women-in-Leadership Networking Reception	4:45pm - 5:45 pm	Convention Center
Young Professionals Scavenger Hunt	6:00pm - 9:00pm	Convention Center

Friday, May 3

Registration and Information	7:00am - 4:00pm	Convention Center Lobby
Breakfast	7:30am - 8:30am	Convention Center Lobby
Technical Sessions	8:30am - 4:30pm	Convention Center
Vendor Visit and Lunch	10:30am - 1:00pm	Convention Center
Gimmicks and Gadgets	1:00pm - 2:00pm	Convention Center
Top Ops	2:15pm - 3:15pm	Convention Center

Vancouver, WA, welcomes you to the Pacific Northwest Section American Water Works Association Conference taking place May 1-3, 2019. The conference was last held in Vancouver in 2008 and we are excited to have the conference back. The Local Arrangements Committee has been busy planning the conference, which is sure to have something for everyone.



Conference Highlights

Venue

This year's conference takes place at the Vancouver Hilton Hotel and Convention Center located in the heart of Downtown Vancouver. From the convention center, guests can walk to area shops, restaurants, and businesses. A short stroll will take you down to the Columbia River promenade and the new waterfront development and park. The park includes a new cable stay pedestrian pier suspended 90 feet above the Columbia River.

Opening Ceremony

Join us on Thursday morning for an inspiring opening ceremony presided over by our Vice Chair, James Dean and attended by visiting dignitary and AWWA Vice-President, Theresa O'Grady. Our keynote speaker will be Steve Eberlein of Tipping Point Resiliency. Steve is wholly dedicated to educating communities and companies on the risk of West Coast earthquakes, including those caused by the San Andreas Fault, the Cascadia Subduction Zone, the Seattle Fault and the Aleutian Trench. His efforts include the delivery of more than 120 90-minute presentations to more than 17,000 audience members in nearly 30 distinct communities.

Technical Program

The technical committee has been working with numerous section committees to develop interesting technical sessions for attendees. This year's technical program aims to have something for everyone with 1.7 CEUs available to attendees. The pre-conference trainings include five tracts with sessions sponsored by the Water Information Technology, Water Treatment, Engineering, Distribution and Training Coordination Committees. **Register early for these sessions.**

2019 PNWS-AWWA ANNUAL CONFERENCE



Five tracts will be offered for both the early bird session prior to opening ceremonies and the Thursday morning session following opening ceremonies. Seven concurrent tracts will be offered Thursday afternoon and Friday. An all-day wastewater tract will also be offered on Friday again this year.

Don't forget to stop by the vendor hall to visit with the knowledgeable vendors and check out all the new products and services available to water professionals.

Activities and Competitions

Competition Night

Competition Night will take place across the street from the convention center at Esther Short Park, the oldest public square in the State of Washington.

Competition night will be an outdoor market theme that includes four food trucks with various food options, three breweries, and a winery. Come and sample food from each food truck and beer from local breweries.

Competitions will include pipe tapping, hydrant hysteria, and meter madness – cheer on your favorite team and socialize with fellow water professionals while you enjoy food and beverages.

New this year is the opportunity for sponsorship of the food and beverage vendors with tent space provided next to the sponsored vendor.

Gimmicks and Gadgets will be held Friday afternoon followed by Top Ops as part of the technical session. For those of you that have never been to a Top Ops competition, you should plan to attend. This competition is a great way

to test your knowledge while you watch some of the most knowledgeable water utility staff members in the Section pit it out against each other for Top Ops bragging rights and a trip to compete at the national conference.

Golf

Camas Meadows will be the location of this year's golf tournament, located 14 miles east of the hotel and convention. Check-in begins at 6:30am with a shotgun start at 8:00am. The lunch and awards ceremony will follow the tournament. Come out and enjoy this beautiful course.

YP Scavenger Hunt

The Young Professional Scavenger Hunt is a great way for someone new to the Northwest Section to meet people. Take part in a fun-filled scavenger hunt through downtown Vancouver while you interact with many of the not-so-young professionals at downtown Vancouver venues.

If you are too seasoned to partake in the scavenger hunt, enjoy your time walking to local restaurants and bars with your favorite co-worker or vendor.

Water For People Silent Auction

Visit the Water For People Silent Auction and bid on your favorite items throughout the conference. Don't forget to be there for the Water For People Auction Reception Friday evening when the auction closes to make sure you aren't outbid. The Best Tasting Water Competition will take place during the auction reception and an entertaining band from Portland known as the Ukeladies will provide music.

Banquet

The conference will conclude Friday evening with the banquet event. Numerous volunteer awards take place during the banquet culminating with the Fuller Award, the Association's highest honor. During the banquet, outgoing Chair Mel Damewood will pass the gavel to incoming chair James Dean.

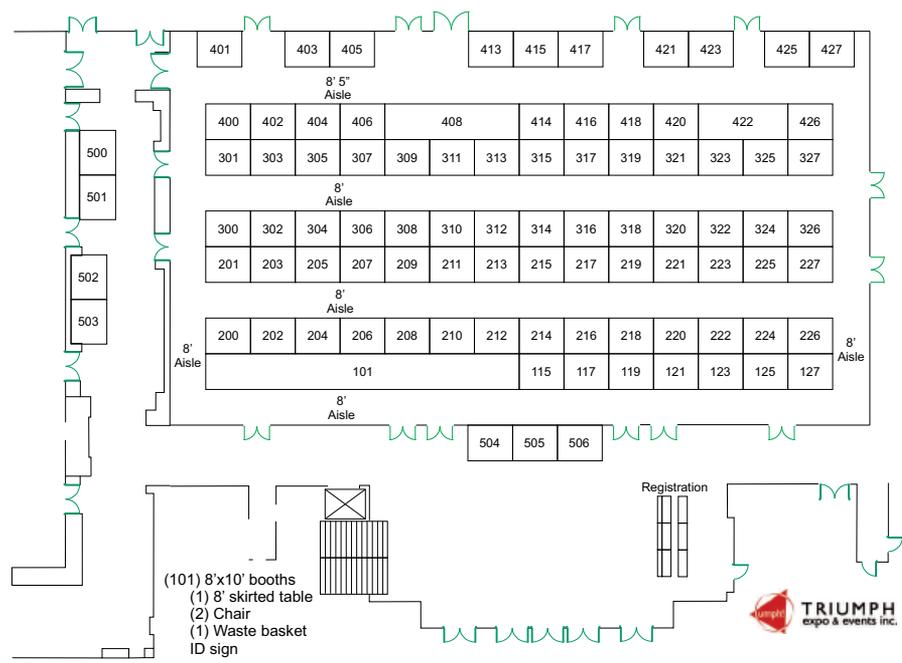




2019 PNWS AWWA Exhibitors

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- American Leak Detection
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- Armorcast Products Company
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- Bainbridge Associates, Inc.
- Baker Silo, LLC
- Beaver Equipment
- Blue-White Industries
- Building Crafts, Inc.
- Calgon Carbon Corporation
- Century West Engineering
- ChlorTainer
- Cityworks
- Consolidated Supply Co.
- Core and Main
- Correct Equipment
- CST Industries
- Diehl Metering, LLC
- DN Tanks, Inc.
- Ductile Iron Pipe Research Association (DIPRA)
- Energy Smart Industrial
- Enviro-Clean Equipment
- Environmental Site Solutions – WaterSurplus
- Ferguson Waterworks
- Ferguson Waterworks Meter & Automation Group
- Fracta, Inc.
- General Pacific
- GeoEngineers, Inc.
- GF-Urecon
- GRI
- Gutermann, Inc.
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EXHIBITOR MAP



- Kamstrup Water Metering
- Keller Associates
- Lakeside Industries – EZ Street Asphalt
- Lane Community College Energy Water Programs
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- PumpTech, Inc.
- Pure Technologies U.S., Inc.
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- RH2 Engineering
- Rosemount
- RPS Industries
- Schneider Water Services
- Seattle Pump

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A Note from the Program Committee

Cheryl Capron and Elizabeth Edgar want to thank all the committee chairs, speakers and moderators for assistance in putting together the Vancouver technical program and keeping it on track. It's a big chore, and two people couldn't pull it all together if all the rest of the people hadn't done the hard work.

This year, we are offering up to 1.7 CEUs of drinking water credit, and, depending upon the state, between 0.6 and 1.65 CEUs of wastewater credit. A copy of the technical program is included here and on the Program Committee page of the PNWS-AWWA website.

This year the technical program is in two formats. Thanks to the success we've had in obtaining wastewater credit for drinking water content, it's become increasingly difficult to note in the original format which states have granted which type of credit for each presentation. We now offer the traditional calendar format, but without CEU details; this format allows one to easily determine which sessions are happening at the same time. The CEU detail format is organized by day, then by room, and details exactly which agency has granted credit for each presentation. The CEU version is online at the program committee webpage, and a copy will be posted at the program committee table in the lobby. Please note that we will NOT be offering printed programs at the conference; so if you'd like a paper copy to carry with you, please save

this copy of *Water Matters* and bring it along with you to the conference.

And finally, a word from our Spokane vice-chair:

Hello! My name is Maura Kegley. I am co-chairing the PNWS Spokane 2020 Conference Program Committee. The theme will be *Your Vision, Our Future* and this conference is all about you!

Some know me through the Inland Empire Subsection, and Facebook page. I am very excited to be helping with the call for abstracts and educational program in my hometown. Though we are focused on the success of Vancouver at the moment, I want you to start thinking about our 2020 conference and what direction you'd like to take it. Seek out speakers now! Some themes can overlap with other committees, so think about the possibility of co-hosting a track. Start working on your vision for a program and finding speakers when your committees meet in Vancouver.

The more we prepare ahead, the brighter our future looks for 2020.

I look forward to working with you. Stop me and say hey – I'll be shadowing Elizabeth Edgar, current co-chair, and Cheryl at the Vancouver conference. Thanks so much!

2019 Conference Contacts:

Cheryl Capron – ccapron.po@gmail.com

Elizabeth Edgar – eedgar@sunrisewater.com





Wednesday, May 1

Technical Program

Oregon – 1.7 DW CEUs, 0.6 WW CEUs	Idaho – 1.7 DW CEUs, 1.65 WW CEUs	WDOH – 1.7 CEUs, WDOE CEUs pending
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Morning

WEDNESDAY MORNING PRE-CONFERENCE SEMINARS

Room	Spruce	Pine	Oak	Hemlock	Cedar
Hosting Committee Moderator	Water Information Technology Rob Barrett <i>(Full Day Seminar)</i>	Water Treatment Matthew Hewitt <i>(Full Day Seminar)</i>	Engineering Carmen Brown	Distribution Brooke Barry	Training Coordination Jeff Lundt
Seminar	Using Excel to Perform Functions and Calculations for the Drinking Water Industry	Water Treatment Classroom	Utilizing Advanced Engineering Tools to Increase Value/Improve Delivery	Efficiency and Water Loss	Train the Trainer: Math for Operators
8:30	Overview of Best Practices and Interpreting Operator Records to Determine System Supply Patterns – Jason Van Gilder, Kevin Wyckoff	Groundwater Treatment: Overview of Constituents and Technologies – Lee Odell	Covington Water District's Hydro-turbine and Grant Success in Western Washington – Tom Keown, Andrew Williamson	Cherry-Picking Pump Stations: Consolidating System Assets for Operational Flexibility – Nathan Rostad, Jay Hummel	Train the Trainer: Math for Operators – Jeff Lundt, Eric Schey
9:00				Developments on Water Demand Projects From WRF – Michael Dirks	
<i>9:30 - 9:45 Break</i>					
9:45	Water Industry Spreadsheet Calculators	Treatment for Iron and Manganese and Related Constituents – Milt Larsen	A Rock in the River: Navigating Obstacles in the Quest for Energy Efficiency at Hannah Mason Pump Station, Portland Water Bureau – Mike Carr, Kate Conrad, Keith Walker	Washington State Water Audit Pilot Results and the Future of Water Loss Tracking – Lucy Andrews, Reinhard Sturm, Will Jernigan	Train the Trainer: Math for Operators (continued)
10:15		Formation, Degradation, and Treatment: Addressing Water Quality Challenges in Salem's ASR Wells – Ali Leeds, DeEtta Fosbury	Knowledge Development and Transfer: Sustainable Documentation – Alena Thurman, Allie Leeds, Gary Tollefson	Pioneering Water Loss Control: Groundbreaking Statewide Technical Assistance Programs – Reinhard Sturm, Will Jernigan, Lucy Andrews	
<i>10:45 - 11:00 Break</i>					
11:00	Writing Water Industry Procedures, Tutorials, and Training Documents	Vancouver Water Station No. 1 – Michelle Henry	How to Simulate Operation of a 320-MGD Conventional Water Treatment Plant – Qianru Deng	The Non Revenue Water Journey to Capturing More Revenue and Saving Costs – Travis Smith	Train the Trainer: Math for Operators (continued)
11:30		Carol Curtis Water Treatment Plant – Lee Odell, Russ Knutson	The EchoWater Project: Leveraging Technology to Enhance Project Delivery/ Leveraging BIM and 4D/5D Tools to Manage Multiple Construction Projects at an Operating Treatment Plant – Christina Brown, Ron Perkins, Vick Kyotani		

Afternoon

WEDNESDAY AFTERNOON PRE-CONFERENCE SEMINARS

Room	Spruce	Pine	Oak	Hemlock	Cedar
Hosting Committee Moderator	Water Information Technology Rob Barrett <i>(Full Day Seminar)</i>	Water Treatment Matthew Hewitt <i>(Full Day Seminar)</i>	Engineering Patrick Weber	Distribution Aurelie Nabannond	Training Coordination Jeff Lundt
Seminar	Using Excel to Perform Functions and Calculations for the Drinking Water Industry	Treatment Plant Tours	Case Studies and Lessons Learned	Planning and Modeling	Train the Trainer: Reading P&IDs
1:00	Lab	Travel to Carol Curtis Water Treatment Plant (1:00 - 1:30)	City of Vancouver Water Station 1 Upgrade Project: Site Electrical, Pump Station, Treatment, and Control System Replacement – Michelle Henry, Brittany Hughes	The Office Side of Water Main Flushing: How to Ensure Data is Collected and Distributed Efficiently During Annual Maintenance – Kevin Wyckoff	Train the Trainer: Reading Process and Instrumentation Diagrams – Jeff Lundt, Butch Perry
1:30		Tour of Carol Curtis Water Treatment Plant – Russ Knutson (1:30 - 2:30)	Water System Disinfectant Conversion: Chlorine Gas to On-Site Sodium Hypochlorite Generation – Patrick Craney	Lessons From the Field: Design Improvements for Increased Sanitary Protection – Jolyn Leslie	
<i>2:00 - 2:15 Break</i>					
2:15	Lab	Travel (2:30 - 3:00)	How to Decide? The \$500M Question – David Peters	Drones Need Water, Too: Meeting Industrial Water System Demands in Pendleton's Airport Area – Lael Alderman, Bob Patterson, Brian Ginter	Train the Trainer: Reading Process and Instrumentation Diagrams (continued)
2:45			A Tale of Two Tanks: Construction and Assessment of a New and an Existing Steel Reservoir – Pat Van Duser, Casey Ferguson, Jeff Fuchs, Wes Bleisner	Adding Transmission Capacity Without Bigger Pipes: Camas Downtown Supply Operational Improvements – Daniel Reisinger, Sam Adams	
<i>3:15 - 3:30 Break</i>					
3:30	Lab	Tour of Water Station No. 1 – Michelle Henry (3:00 - 4:00)	Keep It Down Out There! Pump Station Facility Noise Issues and Mitigation Design – Alan Burt, Joe Foote	Using GIS and Hydraulic Modeling to Save Time and Add Value – Doug Lane	Train the Trainer: Reading Process and Instrumentation Diagrams (continued)
4:00		Travel to Conference Center (4:00 - 4:30)	Balancing Safety, Process Performance, and Costs in Design, Construction, and Operations – Kim Ervin	Combining Two Water Systems Into One – Matt Huang, Adam Bjornstedt	

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2019 PNWS-AWWA ANNUAL CONFERENCE

Thursday, May 2

Early Morning

THURSDAY EARLY BIRD SESSIONS

Room	Spruce	Pine	Oak
Hosting Committee Moderator	History Catherine Howells	Public Officials Len Englund	Engineering Adam Donald
7:00	History of NW Utilities: Portland and Vancouver – Catherine Howells, Tyler Clary	Public Engagement Provides Valuable Community Input in Milestone Bull Run Water Treatment Decisions – Libby Barg, David Peters	A Tale of Two Tanks: Water Facility Planning and Design in Idaho Falls – Dennis Galinato
7:30		Cross Connections We All Should Be Making Within Our Communities – Rich McConaghy, Suzanne Hebert	Fire and Water Unite: Providing Water System Improvements and Firefighter Training With a 103-Foot-Tall Reservoir – Marshall Meyer
8:00 - 9:30	Opening General Session – Discovery Ballroom		

Late Morning

THURSDAY MORNING TECHNICAL SESSIONS

Room	Spruce	Pine	Oak
Hosting Committee Moderator	Young Professionals Josh Miner	Water Resources Kim Swan	Engineering Doug Lane
9:45	Cover Letter and Resumes: How To Stand Out in a Crowded Job Market – Kevin Wyckoff	Source Water Protection Basics 101 – Kimberly Swan	How Taking a Holistic Approach to Master Planning Can Provide Added Value – David Stangel
10:15		Developing a Source Water Protection Program in the Rogue River Basin – Craig Harper	Leveraging Industry Experience to Anticipate the Trade-offs of Alternative Water Supplies – Joanie Stultz, Lynn Stephens
10:45 - 11:00 Break			
11:00	Tapping into a Network: How to Make the Right Connections – Chris Young	The Path to Healthy Headwaters – Kimery Wiltshire	Feeding the Machine: Water Facilities to Keep Up With Development – Dennis Galinato
11:30	Capitalizing on Generational Strengths: A MurraySmith Case Study – Shelby Asato	How to Communicate to Ratepayers and Build Capacity for Source Water Protection – Cathy Kellon	Waterline Alignment Modification for Land Use and Seismic Constraints – Joelle Bennett, Faride Abzade

Afternoon

THURSDAY AFTERNOON TECHNICAL SESSIONS

Room	Spruce	Pine	Oak
Hosting Committee Moderator	Young Professionals Mike Pleasants	Water Resources Andrew Austreng	Water Information Technology Rob Barrett
2:30	Women in Leadership: Learning to Lead – Erika Schuyler	Reclaimed Water: New Water Solutions for Washington – Jacqueline Klug	Replacement of Legacy SCADA, Telemetry, and Control Systems: Planning, Budgeting, and Implementation – Rob Barrett
3:00	Self-Guided Leadership: Blaze Your Own Trail – Michael Lubovich	Siting, Characterization, and Preliminary Design for Groundwater Recharge and Watershed Augmentation: Kitsap County and Suquamish Tribe, Kingston Facility – Jonathan Turk, Tadd Geisbrecht, Barbara Zaroff, Bob Gatz	Assessing Maturity of GIS Programs with the SLIM GIM Model – Kevin Wyckoff
3:30 - 3:45 Break			
3:45	Keep Flowing, Don't Be Stagnant: Motivation Tools for Lifelong Success – Joanie Stultz, Kyle Wong	Domestic and Instream Flow Mitigation Strategies in Mission Creek – Mike Kaputa	Effective SCADA Graphics: Enable Situational Awareness – Michael Karl
4:15	How Saying Yes Can Derail Success – Lael Alderman	Evaluation of Municipal Residential Stormwater Reuse With Aquifer Storage and Recovery – Jason Melady	

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Technical Program

THURSDAY EARLY BIRD SESSIONS

Early Morning

Hemlock	Cedar	Discovery D	Discovery E	Room
Distribution Jenna Mariano	Research/Water Quality Tom Bell-Games	(Set Up General Session)		Hosting Committee Moderator
Water Well Rehabilitation & Asset Management: Maintaining Well Performance and Water Quality – Michael Judkins	Lessons Learned From Salem's 2018 Algal Toxin Event – Jude Grounds, Tim Sherman			7:00
Well Rehabilitation in Alaska Bush Country: Techniques to Improve Wellfield Productivity – Ida Fischer, John Koreny				7:30
Opening General Session – Discovery Ballroom				8:00 - 9:30

THURSDAY MORNING TECHNICAL SESSIONS

Late Morning

Hemlock	Cedar	Discovery D	Discovery E	Room
Cross Connection Tonya Reiss	Water Quality/Water Treatment Matt Maring	(Strike General Session, Set Up Tech Sessions)		Hosting Committee Moderator
Nightmare on Worthen Street and Other Backflow Incidents – Jessica Shaw	Regulatory Perspective of Cyanotoxins in Oregon – Gregg Baird			9:45
Small Public Water System Cross Connection Control Program Development – Terry Pickel, Mary Howell	Blue-Green Algae Control From Source to Tap – Lee Odell			10:15
10:45 - 11:00 Break				10:45 - 11:00
Test Fraud: How to Find Bad Testers and What Should/Can Be Done About Them – Scott Hallenberg	Combatting Algae: Startup of the Bellingham Dissolved Air Flotation Facility – Joshua Kennedy			11:00
	A Bacteria That Acts Like a Plant? Demystifying Cyanobacteria and Their Toxins – Bryan Black			11:30

THURSDAY AFTERNOON TECHNICAL SESSIONS

Afternoon

Hemlock	Cedar	Discovery D	Discovery E	Room
Distribution Doug Schleppe	Water Treatment Mac Gifford	Cross Connection Tonya Reiss	Public Information Robin Pederson	Hosting Committee Moderator
Seismic Facility Updates and Operational Planning – Mike Britch	Comparison of GAC vs PAC for DBP Reduction at Two WTPs with the Same Source Water – Todd Reynolds	State Regulations: Updates, Incidents, Differences – Bill Bernier (WA), Molly Keller and Scott Ruyle (OR), Anna Moody (ID)	What Do Your People Really Know? Summarizing Public Knowledge and Understanding of Drinking Water Issues in Today's Information-Rich World – Sean Thomson	2:30
Water Industry Seismic Guidelines and Practice Updates – Mike Britch	Treatment Considerations for Surface Water T&O Issues – Kim Ervin		Communicating About Risk – Jaymee Cuti	3:00
3:30 - 3:45 Break				
Seismic Resilience of Two Water Lines: Case Studies in Everett, WA – Jeff Blakely, Richard Hefti	Preliminary Results of Portland's Treatment Pilot Study – Kimberly Gupta	How to Do a Site Survey and Obsolete Things to Look For – Dale Baxmann	The Power of 'We' – Nicki Pozos	3:45
Existing Steel Reservoirs: Retrofit or Build New? – Myron Basden	Portland Water Bureau's Improved Corrosion Control Treatment Project – Michelle Cheek	A Fully Web-Based Cross Connection Control Program: How TWWD Made the Leap – Joel Cary		4:15

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2019 PNWS-AWWA ANNUAL CONFERENCE

Friday, May 3

Morning

FRIDAY MORNING TECHNICAL SESSIONS

Room	Spruce	Pine	Oak
Hosting Committee Moderator	Water Resources DeEtta Fosbury	Public Information Robin Pederson	Engineering Greg Loscher
8:30	Managing Alluvial and Confined Aquifers Across the Washington-Oregon State Boundary in the Walla Walla Subbasin – John Warinner	Get Your Kit Together – Bonny Cushman	Is Alternate Project Delivery Appropriate for My Project? – Dick Talley
9:00	Know No Boundaries: Creative Use of Storage for Trans-Boundary Water Management in the Klamath Basin – Ronan Igloria, Jason Melady	Disaster Sanitation: What Can Water Utilities Do? – Libby Barg, Eric Frank	Part 1 of 2: Progressive Design Build for a 5 MG Water Tank? TVWD's Unique Approach for Replacing a 5 MG Water Tank – Nicholas Augustus, Andrew Barrett, Corie Moolenkamp
10:00 - 10:15 Break			
9:45	IWAC: Collaborative Management of a Shared Resource – Daniel Kegley	Using Planned Events to Normalize Utility ICS Activation – Jill Hoyenga, Jeannine Parisi	Part 2 of 2: Progressive Design Build for a 5 MG Water Tank? TVWD's Unique Approach for Replacing a 5 MG Water Tank – Nicholas Augustus, Andrew Barrett, Arin Atiyeh, James Bledsoe
10:15	A Look Beneath the Surface: Developing a Transboundary Groundwater Governance Framework and Agreement for the Memphis Sand Aquifer – Holly Mondo		How to Use Design/Build For Your Next Project – Tom Paul
10:45 - 11:00 Break			
11:00	Portland's Multi-Faceted Approach to Groundwater Protection – Douglas Wise	Excellence in Communications Awards	CM/GC: Using Qualifications, Experience, and Price to Select the Best Contractor – Erika Murphy
11:30	Taming the Wild: Understanding Risks and Responses to Water Supplies from Wildfires – Glen Leverich, Rodrigo Prugue		Alternate Project Delivery: Panel Discussion With Local Contractors: Advantages and Disadvantages of CM/GC, Progressive Design Build, and Design-Bid-Build – Erika Murphy, Steve Flett, Mark Bertolero, Tom Paul, TBD

Afternoon

FRIDAY AFTERNOON TECHNICAL SESSIONS

Room	Spruce	Pine	Oak
Hosting Committee Moderator	Research/Water Treatment Jenn Minton	Conservation Shelley Searle	Engineering Faride Abzade
1:30	A Comparison of Treatment Technologies to Treat Algae Through Pilot Testing of a New Surface Water Source – Lynn Stephens, Ben Watson, Bill Persich, Joanie Stultz	A Look At Portland's Residential and Commercial Water Conservation Efforts – Jeff Sandberg, Penny Milton	The Challenge of Water on Guam: Balancing Supply, Demand, and Water Resource Policy – Michelle Sorensen
2:00	Treating Cyanotoxins with Activated Carbon – Ben Goecke		Cocktail Napkin or Four-Inch Binder? Rightsizing Your Project Management Plan – Mark Graham
2:30 - 2:45 Break			
2:45	Using GAC and Ion Exchange Resins to Remove PFAS and Similar Compounds From Drinking Water – Ben Goecke	Love Your Graywater: Reuse and Communicating the Value of Water – Julie Smitherman	Smart Utility as a Technology Platform: From Design to Utility Management – Kevin Stively
3:15	Development of Technologies for Effective PFAS Removal and Destruction – YuJung Chang	Making the Case for Non-Potable On-Site Water Systems – Chris Wanner	Building a Framework to Optimize CIP Delivery for Honolulu Board of Water Supply – Chris Cleveland
3:45 - 4:00 Break			
4:00	Pacific Northwest Case Studies in Biofiltration – Austin Peters, Kari Duncan	Making System Improvements Through Tracking and Validating Non-Revenue Water – Jeanne Finger, Andrew Chastain-Howley	Construction: Expect the Unexpected – Matthew Perkins
4:30	Biofiltration – Lynn Stephens	Hassalo on 8th: Wastewater Reuse – Thomas Puttman	Owner Implementation of New Technology – John Bowen

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Technical Program

FRIDAY MORNING TECHNICAL SESSIONS

Morning

Hemlock	Cedar	Discovery D	Discovery E	Room
Distribution Bill Reynolds	Water Quality Jessica Dorsey	Utility Management Kim Reid	Wastewater Treatment Eric Schey	Hosting Committee Moderator
Storage Facility Inspection and Maintenance: Tools and Tips – Alex Chen, Joe Herold	Proactive Treatment Solutions for PFAS Drinking Water Contamination: Coupeville/Navy Fort Casey WTP Improvements – Esther Chang, Andrew Ryder	Transitional Leadership in the Electronic Age – Timothy Murrell	How to Optimize Polymer Efficiency for Better Sludge Dewatering: Two Case Studies – Yong Kim	8:30
Concrete Tank Rehabilitation: Why Coat Concrete Structures in Water and Wastewater Systems – Jeff Austin	PFOS/PFOA Contamination of Groundwater at the City of Airway Heights – Kevin Anderson	How to Attract and Keep a Younger Workforce – Catherine Howells, Bob Andersen	Low Cost, Rapid Nitrogen Removal in Wastewater – Kirsten Sims	9:00
10:00 - 10:15 Break				
Leveraging AMI Data for Distribution System Modeling – Aurelie Nabonnand, Katie Nolan, Ed Wicklein	Part 1 of 2: Corrosion Control Studies in the Pacific Northwest: Use of Spreadsheet Tools to Understand Corrosion Control and Metals Release – Danbi Won	Retool Your Communications Program Utilizing Public Opinion Research – Marlys Mock, Libby Barg, Andrea Watson	Coordinating Equipment Manufacturer Package Control Systems and Existing Plant Control Systems – Richard Pearson	9:45
Improving Utility Operations Through AMI Data Analytics – Robert Gustin	Part 2 of 2: Corrosion Control Studies in the Pacific Northwest: Corrosion Control Studies: Putting the Tools to Use – Virpi Salo-Zieman			10:15
10:45 - 11:00 Break				
Navigating AMI: Central Point's Path to Selection – Micheal McClenathan, Nicole Kaiser, Steven Farabaugh	The Role of Contaminants of Emerging Concern in Aquifer Recharge Projects Using Reclaimed Water – John Koreny	Where Do Good Ideas Come From? – Nicki Pozos, Katney Baird	Best Practices for Sodium Hypochlorite Storage and Metering Systems – Jeffrey Zahler	11:00
Advanced Metering Infrastructure in Tacoma – Matt Hubbard	Operating Data and Lessons Learned From Sunny Slope Water Company's Microvri Nitrate Removal System – Kirsten Sims	Top 10 Public Works Leader Recipient: How, What, When, Where, and Why! – Bob Patterson		11:30

FRIDAY AFTERNOON TECHNICAL SESSIONS

Afternoon

Hemlock	Cedar	Discovery D	Discovery E	Room
Distribution Erica Rodriguez	SAC Competitions	Utility Management Andy Tuchscherer	Wastewater Treatment Eric Schey	Hosting Committee Moderator
Lessons Learned in Using CIPP for Water Main Rehabilitation – Michelle Henry, Nathan Meuler	Gimmicks and Gadgets	The Next Generation of Seismic Vulnerability Analysis – Doug Lane	Headworks: Screening – Butch Perry	1:30
Returning Water System Confidence with CIPP – Brendan O'Sullivan, Michael Linn, Rob Lee		In-Place Pipe Rehabilitation Utilizing Advanced 100% Solid High MIL Epoxy Lining Systems – Jeff Austin		2:00
2:30 - 2:45 Break				
30-Inch Water Main Rehabilitation Design Case Study – Daniel Buonadonna	Top Ops	Larger Facility Needs, Constrained Site, Oh My! – Jenna Anderson, Jay Hummel	Headworks: Grit Removal – Butch Perry	2:45
Ice Pigging: Advanced Pipe Cleaning Technology – Jeff Austin		Navigating a Boom: How Lakewood Water District Provides Information to External Stakeholders – Kevin Wyckoff		3:15
3:45 - 4:00 Break				
Cutting In a 16-Inch Tee During a Water Advisory – Don Lovas	Subsection Advisory Council Meeting	Strategic Asset Planning at the City of Vancouver – Elaine Huber	Considerations in Monitoring and Pre-Treating Brewery Waste – Ryan Salem	4:00
Practical Guide to Locating Water Pipes – Brian Moss		Using GIS to Assess Water Pipe Assets and Help Prioritize Capital Projects – Eugene Durshpek		4:30

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History of Vancouver, WA

By Tyler Clary

In 1825, the Hudson's Bay Company established Fort Vancouver to the east of what is currently downtown Vancouver. The fort was located along the banks of the Columbia River, which was known as Nchi-Wana, or "the big river" to the Native Americans. The fort served as the headquarters of the Company's interior fur trade. The land surrounding the fort developed as people moved to the area to support the fur trade, and in 1849 a US Military post was established adjacent to Fort Vancouver. In 1857, the City of Vancouver was incorporated as one of the first cities in the Washington Territory. As was the case with all growing communities, a clean reliable supply of water was imperative to the community's growth and well-being.

The early water supply for the area came from the Columbia River using water wagons. In 1868, the Vancouver Water Company developed a spring collection system five miles to the east of downtown Vancouver known as Ellsworth Springs. The Vancouver Water Company provided this clean, reliable supply of water via a wooden flume to Vancouver's residents.



An 1870, a Surgeon General's Report for the US Army stated that this spring source of water "is sufficient for 10,000 people and is pure, cool and well aerated." In 1890, the US Army drilled wells and constructed reservoirs to supply army personnel with a system independent of the civilian water supply. At this time,

the civilian supply was provided by two competing water companies, the Vancouver Water Company supplied by Ellsworth Springs and the Columbia Land and Improvement Company with a well supply and storage adjacent to the Army's wells. The two companies joined forces in 1901 and formed the Vancouver



The City water system currently serves approximately 253,000 people from 40 groundwater wells through a transmission and distribution system consisting of over 1,000 miles of water mains.

Water Works Company. Ownership of the civilian water system changed hands numerous times until the mid-1930s, when poor management led to failing infrastructure and inadequate water service.

On June 1, 1937, the City purchased the failing water system for \$610,000 and took over ownership. Immediately after assuming ownership of the water utility, the City utilized Work Progress Administration (WPA) labor and municipal bonds to build new wells, a new four million gallon

reservoir, a new 0.25 million gallon elevated tank, and five miles of water main to improve supply from Ellsworth Springs.

Population exploded in Vancouver in 1942 when Henry Kaiser built the Kaiser shipyard in support of the World War II effort. Workers flooded to the area seeking jobs and the population exploded from 25,000 to 95,000 over a two-year period. The City expanded its water system significantly during this time and has continued to invest in water utility infrastructure to support the



ABOVE: Old pump house at receiving basin gives way to new high efficiency equipment. Honored in building at right.

RIGHT: Mayor A. N. Stanley and Councilman J. J. Padden help on last link of new main from springs.

BELOW: I. e. f. U. Mayor and WPA crew start work on four mile line from springs. Right: 20 inch fire pipe is being in place.

growing community throughout the last 80 years. The City water system currently serves approximately 253,000 people from 40 groundwater wells through a transmission and distribution system consisting of over 1,000 miles of water mains. 

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