



American Water Works Association  
**Pacific Northwest** Section

SUMMER 2018

# WATER *matters*

The Official Magazine of the  
Pacific Northwest Section – AWWA

## 2018 ANNUAL CONFERENCE *Recap*

- ▶ **Social Attitudes Towards Water Conservation**
- ▶ **Committee Reports**
- ▶ **Subsection Reports**

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Message from the Chair • History Committee • Message from the Executive Director

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# Moving Forward With Our Strategic Plan

*Incoming Chair Speech | Tacoma, Washington | April 27, 2018*



**F**irst, I would like to say thanks to Dan Kegley and Lacey Goeres-Priest, our past chairs who have done an outstanding job of guiding the Board of Trustees and our Section over the last two years. Your dedication, leadership, and hard work for the Section and its members is appreciated.

One thing that I have learned from my time as a board member, there is a lot that goes on in the background to operate the Pacific Northwest Section (PNWS). To our volunteer members who lead and support all of the

activities of the Section Committees and Subsections, most often giving up their own free time, thank you for all that you do, we would not be here without you.

The membership is once again at a crossroads. As the push to engage our Young Professionals (YPs) over the last decade and with the implementation of Past Chair Randy Black's 2020 Vision, the growing and future leadership amongst our utilities and within the PNWS is becoming self-evident. As our keynote speaker Elisa Webb-Hill pointed out, the

Millennials have indeed arrived, and they are looking for opportunities to contribute. I also look at the diversity of our membership, and with our Board of Trustees, I have seen the shift over the last 30 years, it is one of the best things that has happened over that time-span. We still have a ways to go, so that every member, regardless of gender, ancestry, or other God-given attribute, is treated with dignity as professionals with equal opportunity

*Continued on page 8*



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to succeed and follow their passions within their careers. Let's not forget our Veterans either. We are connected with the Association's Veterans Initiative, an initiative that our President, Brenda Lennox has forwarded over the last year, with the goal to find, recruit, hire and retain veterans in the water and wastewater industry.

Two years ago the board started in setting forth the member survey to learn more about the concerns and needs of our members. Last year, looking into the data provided by the survey, the Trustee Team translated the information and began formulating a strategic plan and lean business plan based on the information provided via the survey. This was hard work by the entire Board of Trustees, and I hope that these strategic plans, and we as a board, have responded to the needs of our membership, and that these plans will move forth with fruition.

**As I enter this coming year as chair my main focus is to maintain continuity with past chairs in forwarding the Strategic Plan, to complete and implement the Business Plan and to implement a new board organizational structure for Section Committees.**

In forwarding the Strategic Plan, let me summarize: The Strategic Plan contains three strategic initiatives, each with three or four objective goals to move each initiative forward. Being practical, I have chosen to focus on one objective from each initiative to accomplish over this next year, simply stated – we cannot do everything in one year.

### **1st Strategic Initiative - Focus on Member Engagement/ Education and Training**

**Objective** – *Increase Subsection and Committee Outreach and Integration*

We would like to promote more coordination between Subsections and committees in getting them to team up to provide combined educational opportunities. Many Subsections provide the venue through their meetings and short schools. Many committees have had a difficult time drawing attendees to their education opportunities. We are missing a big opportunity in not integrating

the committee specialization with the Subsection opportunities. In order to accommodate greater coordination, we have arranged like committees into divisions in the new Section organization structure. With this, each trustee liaison who helps guide the committee divisions will set routine communications with the divisional committee chairs to encourage discussions of how integration of educational opportunities can occur. If we can foster the committees and Subsections to join forces in education, it should bear more fruit.

Another educational opportunity that is in the works is a Leadership Symposium in the fall of 2019. This ad-hoc committee is being led by Chris Wanner & Jill Hoyenga, who are doing an excellent job in coordinating with committees to set up a symposium that will help those who to learn that leadership occurs at all levels, and we want to help those who are curious about supervision and management within their utilities, to help guide them through the maze of competencies and skills needed to be successful. We look forward to this symposium developing further over the next year.

### **2nd Strategic Initiative - Ensure Organizational Stewardship**

**Objective** – *Provide Financial Accountability*

There are two areas in financial accountability that we will focus on. First, is to submit a balanced budget for 2019 and to have it approved at the fall 2018 trustee meeting. Second, we are asking committees to submit their budgets in June and are asking our budget committee to have the proposed budget to the board to review by our July board workshop. This will give the board and the budget committee up to two months to work to a balanced budget and get it approved by fall. This won't be easy, the board will need to prioritize and make some difficult decisions to move forward. But, we cannot sustain deficit budgets over several years without the consequences eventually catching up with us.

The second area of financial accountability is to continue to strive for transparency in our financial

status as we go through the year. We will provide a balanced budget, and report regularly on the progress of the budget's income and expenditures through the year. Summaries of the Section's quarterly financial statements will be available to the membership on the website, which is a small beginning to shifting to a culture of financial transparency within the Section.

### **3rd Strategic Initiative - Increase Advocacy and Philanthropy**

**Objective** – *Increase involvement with the Association*

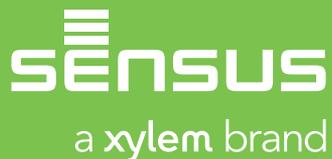
The PNWS currently deeply involved at the Association level. We need to continue this momentum for the future, and now is the time to ensure our involvement with the Association will stay strong. I find it ironic that one of our goals is to increase involvement, as we have from our Section the Association President and two directors on the Association board. We need to continue planning how our Section will continue to have such influence at the Association, and not rest on our laurels at this time.

I conducted a quick review of all of the committees at the Association level, and we have a lot of members in our Section who participate on national committees, but many of them live in the shadows, conducting volunteer work for the Association in a silent way. We need to tap into that talent and find those silent leaders who have influence at the committee levels; perhaps they are our future leaders from our Section at the Association level. Our goal is to seek the talent now for our future leadership, if you are interested, please let us know!

**In closing, I would like to thank the Eugene Water & Electric Board for letting me serve this Section, and for letting me participate at different levels of the Section over the years.**

Lastly, thanks to my wife Kathy, who has supported me unconditionally throughout my career.

With that the 2018 Pacific Northwest Section Conference and Board Meeting is now adjourned. See you in Vancouver next year! Go Beavs! 



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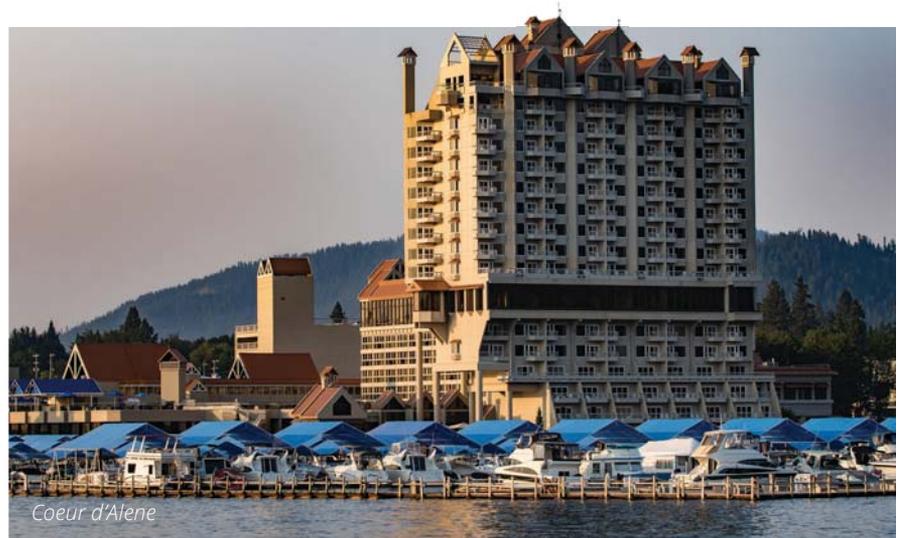


## Tacoma 1000!

One thousand people attended our Section Conference in Tacoma at the end of April! Hopefully you had a chance to attend the conference, if not you missed some fantastic technical sessions, great networking opportunities and some intense competitions at our Wednesday evening competition night. **Our Keynote Speaker was Elisa Webb Hill** from XYZ University and she gave a great presentation on aging in the workplace and how to engage future generations.



### New Section Board of Trustees



At our Section Conference we see a changing of the guard... committee officers rotate on and off, many Subsection officers change positions and your Section Board of Trustees change as well. This year's Board of Trustees is headed by Chair Mel Damewod (his column can be found on pages 7 and 8), Past Chair Dan Kegley, Chair Elect James Dean, Association Director Kari Duncan, Treasurer Bob Ward, Oregon/Idaho Trustee's Suzanne DeLorenzo and Julie Smitherman; Washington Trustee's Dan Sleeth and Ronda Farmer; and Trustees At Large Alex Mofidi and Lynn Williams-Stephens.

### Some Future Dates to Remember

**July 31 – Abstracts are due for the 2019 Section Conference in Vancouver May 1-3.** Complete the abstract submittal form on the Program Committee's webpage on our website.

**October 10-12 – The Committee Officer Training and Fall Budget Meeting at The Coeur d'Alene Resort.** If you are a committee officer

or an active volunteer on a committee you are invited to attend this annual training. You will learn the skills and tools needed to keep your committee engaged and working towards a common goal, get up to speed on Section and AWWA new programs and policies, and of course network with some amazing water professionals from around the Section.

Our basic meeting agenda, subject to change, is:

- Wednesday, October 10 – Meet and Greet Reception and Dinner
- Thursday, October 11 – Committee Officers Division Meetings with your Trustee Liaison's in the morning followed by lunch and Committee Officer Training in the afternoon.
- Friday, October 12 – Trustee Meeting (some committees will be asked to present)

Looking forward to seeing many of you in Coeur d'Alene, until then have a great summer! 🌊

Kyle Kihs  
Executive Director



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## Our Progress Over The Past Two Years

**I**t's hard to believe that this month marks the third and last year that I have the honor to be your Association Director! As I look back on events of the past two years, it is clear that we have made much progress as a Section and as an Association.

### PNWS Section Bylaws

The PNWS Board passed the revised Section bylaws in February, AWWA Executive Committee at their spring meeting, and the PNWS membership at the Tacoma Conference. Thanks to great work by our Section Board, members and Bylaws Committee for completing these much needed updates!

### Association Updates

As I have discussed in past articles, the Association is implementing changes in governance that impacts how the Board of Directors and the Executive Committee of AWWA functions. The full 60 member Board of Directors that includes directors from each Section, at large directors, chairs of each of the four AWWA Councils, presidential officers and treasurer meet just twice a year. The smaller executive committee composed of the council chairs, five vice presidents, three presidential officers, and treasurer meets more frequently and as part of the governance changes will take on more of the routine business actions of the Association. The Board of Directors will continue to elect the vice presidents and presidential officers to represent the board on the executive committee, approve Bylaws, and set strategic goals. One example of the change in governance is the process that our own PNWS Section Bylaws took for final approval by AWWA. Once approved by the PNWS Board, our Bylaws were then brought to the AWWA Executive

## ORWARN members mobilized immediately the day the notice was released.

Committee for approval this spring and not to the full 60 member Board of Directors as would be typical under the previous governance structure. Other changes include the Executive Committee approval of AWWA Standards and Budget.

### AWWA Annual Conference and Exposition (ACE)

ACE took place in Las Vegas from June 11-14. At this meeting, Brenda Lennox, President of AWWA passed on the gavel to David Raeger from Cincinnati, Ohio. The Board will welcome the incoming class of directors and our own Michael Stuhr of the Portland Water Bureau is now the incoming standards council chair and will serve a three-year term on the Board of Directors and the Executive Committee of AWWA! Mike will join myself, Marshall Thomson, Director at Large and Brenda Lennox, all members of the Pacific Northwest Section! It is exciting to serve on the Board during a time that the PNWS has such strong representation in the Association.

On the agenda for the meeting was the Bylaws approval to implement the governance changes discussed above. Other special topics at the board meeting included the Veterans Initiative, water affordability, and a continued to focus on the Water Equation.

### WARN to the Rescue!

Once again, we have an excellent example of how important it is for utilities to be members of the Water

and Wastewater Agency Response Network (WARN). This month Salem experienced detections of harmful cyanotoxins in the finished water and declared a 'Do Not Drink' notice for children and immunocompromised water customers. Kate Brown, the Governor of Oregon declared a State of Emergency for the incident. ORWARN members mobilized immediately the day the notice was released, sending several emergency water distribution systems and other equipment and support down to Salem to help distribute emergency water to the community. WARN is effective by the speed and simplicity with which utilities can provide aid in an emergency. ORWARN is holding their annual workshop at the Skamania Lodge September 17-19 [www.orwarn.org/news/save-date-2018-orwarn-conference-wake-disaster-continuity-planning-and-recovery-all-hazard-even](http://www.orwarn.org/news/save-date-2018-orwarn-conference-wake-disaster-continuity-planning-and-recovery-all-hazard-even). AWWA has highlighted the importance of WARN to the water community throughout the United States and over and over again we see just how effective the mutual aid agreements are during emergencies. I want to extend a personal thank you to all those utilities and individuals that have provided mutual aid this year under the WARN system. This is the type of support that keeps the drinking water industry in America the best and most reliable public works service. 

Kari Duncan  
PNWS Association Director  
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2018 TACOMA PNWS-AWWA



# Conference Recap





*Hydrant Hysteria Competition*



*Fun Night – Stilt Walker*



*Tapping Competition*

Tacoma was excited to host another fantastic conference! The mountain was out to welcome a little over a thousand attendees who took advantage of our beautiful city, local talents, networking activities, and great technical sessions.

### **WEDNESDAY**

The Golf Tournament was held at the Fircrest Golf Club, and did not disappoint! The course was beautiful and the sun was shining. The preconference 'train the trainer' technical sessions on water storage and emergency preparedness were well attended as were the tracks on emergency management, smart utility, water audits, and conservation. The technical sessions were followed by a field trip to discuss the 'customer's side of the meter.'

Singer-songwriter Chloey Wilson inspired us with the National Anthem to kick off Fun Night festivities. The 'Under the Big Top' theme set the stage for an evening of entertainment, which included fast paced competitions, fun circus entertainers such as a juggler, stilt walker, a magician and more! Winners of the competitions headed to ACE18 in Las Vegas include Tacoma Men's Tapping, Tacoma Women's Tapping, Covington Water for Hydrant Hysteria, and Carlos Camacho from Tacoma Water in Meter Madness – best of luck to all of the teams!



Opening Session – Lincoln High School Drum line



Opening Session – Stadium High School JROTC



Vendor Hall/Lunch



Banquet – Dan Kegley and Mel Damewood



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### THURSDAY

Opening Sessions were kicked off by an impressive performance from the Lincoln High School Drum Line, followed by the presentation of the flags by Stadium High School's JROTC. PNWS Chair Dan Kegley welcomed the attendees, presented awards, and helped us welcome our visiting dignitary, AWWA Vice President Stephen Blankenship. The keynote speaker, Elisa Hill from XYZ University, delivered an engaging speech on generations in the workplace, a topic that is very relevant to the water industry. The afternoon provided time for attendees to take advantage of the fantastic technical sessions, visit the 111 vendors, and also take advantage of exhibitor education sessions at several of the booths.

### FRIDAY

Friday offered the last technical sessions with the opportunity to earn up to 1.7 CEU's for water and wastewater over the three-day conference. The Water For People Silent Auction, which concluded at the reception just prior to the banquet, raised \$7500 to continue its efforts to help provide clean water and sanitation around the world. Alderwood Water and Wastewater District won the Best Tasting Water Contest Friday evening and will be represented PNWS AWWA at ACE18. The banquet closed out the conference with outgoing Chair Dan Kegley passing the gavel to incoming Chair Mel Damewood.

Thank you to the Tacoma Local Arrangements Committee who worked hard to put on yet another great conference in the PNWS. Looking forward to seeing you all in Vancouver for 2019! 📍

## Educate, Share and Inform the Public

Written by Randy Black

How well does your utility take advantage of the opportunities to inform and educate your customers as to the many facets it takes to deliver safe, reliable drinking water to their taps and the employees behind those efforts?

Time and time again, utilities share with me that, when they host an open house or an event at which they invite the public to come in and see how the utilities provide safe, reliable drinking water, the most constantly made comment by the public is, "I never realized what all goes into providing drinking water." I think part of the reason our customers often make these types of comments is somewhat our fault. As an industry, I believe we need to do a better job of educating, sharing, and informing the public as to all the many facets that go into the daily functions necessary to provide safe, reliable drinking water. We should never shy away – time to time – from bragging about the work we do and the staff that performs all the necessary functions that go into making our customers feel confident in the service that utilities provide; we should all be very proud of all of the points above.

I have taken the opportunity to share and remind our staff of an article that was first published in 2010 in *Reader's Digest Magazine* on the 10 Jobs Americans Can't Live Without. While some companies are hiring, many continue to lay off workers, causing an overwhelming sense of job insecurity. However, certain workers may have less to worry about than others. That's because they are in professions Americans can't live without...24/7. Wall Street identified that crucial lineup. They are as follows:

- 10) Corrections Officers and Jailers
- 9) Electrical Powerline Repairers
- 8) Police and Sheriff Patrol Officers
- 7) Nuclear Power Reactor Operators
- 6) Air Traffic Controllers
- 5) Telecommunications Equipment Installers and Repairers
- 4) Railroad Conductors and Yardmasters
- 3) Firefighters
- 2) *Water/Wastewater Treatment Plant and System Operators*
- 1) Registered Nurses

I think this is very significant information to share with customers and, especially, with staff, to show/remind them where they fit in with all of these different jobs that are critical to our society and promote the well-being and health in our daily lives and those we serve. To have *Reader's Digest Magazine* promote that, the second most important job Americans cannot live without is water and wastewater operators, is truly significant.

As we all know, water is essential to life; people can survive without power, telephone, cable, and gas, but you can only survive three days without water.

It's important to take all opportunities to emphasize to our customers the importance of this life-essential natural resource and the safe, reliable manner in which

it is delivered to their taps every moment of every day. Similarly, it is important to remind our staff of the important role they play in providing this essential service to their community. Our employees today continue to take advantage of opportunities to increase their education, sharing and promoting technologies that have application in their jobs and how they may be applied in better serving their utility with the result of benefitting its customers, being more efficient, getting more done, better, in less time, and, therefore, reducing costs and rates.

So, I encourage you to take the time to share this with your customers and emphasize the value of the dedicated staff at your utility that is ready to answer their calls 24/7 and works to ensure operations, repairs, water quality, and customer service meets or exceeds our customers' expectations each day!

There are many ways to better inform our customers of the work that goes into providing their drinking water.

How many can you think of? 🏠

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## Water Conservation Committee



The Water Conservation Committee hosted a successful education track at the 2018 PNWS Conference in Tacoma, Washington. Topics included preparing for climate change, understanding Oregon's Water Management & Conservation Plan, drought response, efficiency

partnerships, achieving measurable results, outdoor conservation, and a full day dedicated to using end-user audits to control inefficiencies.

The passing of another spring conference also means passing of the committee chair. Shelley Searle (Beaverton, Oregon) officially took over as chair of the conservation committee. Amy Meaut (Geerling) (Hillsboro, Oregon) will serve as past chair. Thank you Amy for your year as chair and your continued mentorship to this committee. Mark Taratoot (Corvallis, OR) will continue providing his expertise as secretary. The vice chair position is currently unoccupied. Please contact the chair if you, or someone you know would like to learn more about the position.

The conservation committee looks forward to another year of information sharing, collaboration and partnership across the Pacific Northwest Section. The committee will meet in person on August 9, location to be determined. Last year's meeting in Camas, Washington included a presentation from Maddaus Water Management on their tablet-based assessment tool, and a tour of the Camas Wastewater Treatment Plant from Bob Busch, WWTP Operations Supervisor, City of Camas, Washington.

The water conservation committee continues to look for new topics, new members and new ways to increase the value of participation in our committee. Please contact a conservation committee officer if you know of someone that could benefit from being included in our regular communications, meetings and annual conferences.

We are now calling for abstracts for the 2019 PNWS-AWWA Annual Conference, the theme is "A River Runs Through It," and the conference will be held May 1-3, 2019 at the Vancouver, Washington. To submit an abstract, please visit: [www.pnws-awwa.org](http://www.pnws-awwa.org).

2018 AWWA-PNWS Water Conservation Committee Officers:

- Shelley Searle – Chair, [ssearle@pnws-awwa.org](mailto:ssearle@pnws-awwa.org)
- Vacant – Vice-Chair
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### Small Systems Committee

The Small Systems Committee met at the 2018 PNWS Tacoma Conference. From that discussion, a class is being formed for Sand Filtration, to be offered for free in Bonner's Ferry. The City of Bonner's Ferry has a facility that can hold up to 40 attendees. There will be no cost, and we hope to have a vendor step forth, and help us with lunch expenses. We hope to collect emails from attendees that reside in Small Systems. From there, we're looking to see what other things they are looking for, and hoping we can either connect them to resources, or bring them more specific classes. We have had some great results so far by listening to the people that reach out to us. Our Co-Chair, Lance Peterson, says our current goal is to help those that come to us... so that more might want to come to us! It's a pretty simple idea, and we hope it works.

Here are some more simple ideas we'd like to share. Bob Cunningham, our other Co-Chair, does a lot of networking with Lance Peterson. Lance is with North Spokane Irrigation District #8, serving 850 connections, and Bob is with Irvin Water District #6, serving 1100 water connections. They are almost at opposite ends of a map, but they act like neighbors, and they've found things that work for them. They jokingly call their combined workforce, District #86.

One example is in reading meters. Bob used to take seven to ten days. He has one field employee, and his connections are pretty spread out. Lance also has one field employee, and it usually took three days to read meters. Every month.

They decided to work together, and found that to read the 850 connections, with four of them working together as a team, they could do the 850 connections in less than a day. The 1100 connections, being more spread out, are still cut in half at three to five days. This is a huge savings, in cost, time and labor.

They also work together on main breaks. Through the Washington Wastewater Agency Response Network

agreement (WARN), which they were introduced to through AWWA, they have signed paperwork with the state that allows an agreement between their boards to allow them to assist and help each other on breaks, digs, and emergency responses. The agreement contains indemnification and workers' compensation provisions to protect them and their utilities and also provides reimbursement for costs as needed during such emergencies. This allows them access to shared resources without pre-contractual limitations or retainer fees. It's also consistent with the National Incident Management System, and allows for faster response and faster repairs because it's allowing them to work together again, as a team. They've found this type of resource invaluable in time and headaches. Response time is as quick as a phone call. Bob comes and helps Lance, Bob brings his field guy to hand off tools, Lance has his field guy working the backhoe, and Bob and Lance work in the ditch fixing the broken main.

Customers are inconvenienced for shorter periods, and everyone's happier. Lance brought up that with Washington digging and trench rules, the state doesn't allow two people to do any kind of digging with heavy machinery. So under normal circumstances, he wouldn't even be able to conduct repairs in his own district, due to safety regulations. This networking between the two districts has been a win-win, and meets the state requirements on digging regulations.

Would your utility be able to function quickly in an emergency? Are you a utility with limited employees? There is no cost to become a member of WAWARN. It's simply utilities helping utilities. For the complete list of benefits, search [wawarn.org](http://wawarn.org). These benefits are also available to Oregon and Idaho under ORWARN and IDWARN.

For further questions or comments, contact Lance Peterson at [lpetersonnsid8@gmail.com](mailto:lpetersonnsid8@gmail.com). 

### Education & Training Endowment Fund

#### E&T Scholarships Increased for 2018

The sole purpose of the PNWS Education & Training Endowment is to provide funding for scholarships to operators and students at colleges and universities, community colleges and tech schools. For 2018 the E&T Fund was able to provide \$30,000 to the scholarship committee. This was a 50% increase over 2017 and was due to a very good year for the endowment in the stock market and increases in several dedicated funds.

Other E&T Fund Highlights:

- Initiated PNWS named scholarship fund currently providing a \$2,000/year scholarship.
- Established a "One Water" named scholarship fund to provide money for the One Water AWWA scholarship match.

- Established guidance for distribution of Fund retained earnings.
- SW Idaho and Inland Empire Subsections dedicated funds reached the minimum level and generated annual scholarships.
- Over \$1,700 was donated to the E&T Fund by individuals at the Tacoma Conference and \$10,700 was donated by the vendors.

Four of our twelve subsections now have named scholarships. There are 10 other scholarships representing memorials, honoring current members, companies and the past chairs. Those scholarships ranged from \$500 to \$4,667. These funds make a big difference in lives of the recipients.

For more information about the E&T Fund or to find a way to contribute, contact Bob Willis, E&T Chair at [bwillis@rh2.com](mailto:bwillis@rh2.com). 

# The Oregon Water Utilities Council

The Oregon Water Utilities Council 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 to issues. 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 Legislative Session

OWUC closely monitored legislation during the 2018 Legislative Session, which began February 5 and ended March 3.

### Public Contracting - Qualifications-Based Selection

HB 4127 would have created an alternative process that contracting agencies could use for the procurement of architectural, engineering, photogrammetric, land surveying and transportation planning services. The bill passed the House and had a public hearing in the Senate but did not advance further. Stakeholders, including OWUC members, are participating in an interim work group on this issue, which will likely result in legislation during the 2019 session.

### Carbon Cap and Invest

SB 1507 and HB 4001 proposed to update existing state greenhouse gas reduction targets and require the Oregon Environmental Quality Commission to establish an overall statewide cap on greenhouse gas emissions. The bills would have required regulated entities to obtain an allowance for every metric ton of carbon produced and provide a system for entities to trade allowances by establishing a market. Though both bills failed to advance, the policy remains a priority for both the Governor's Office and the House leadership, and it is expected that similar legislation will be introduced again in the 2019 session.

### Water Rights Transfers

SB 1558, which was introduced to address specific concerns of the Tumalo Irrigation District in Central Oregon, proposed several changes to the ways in which water can be transferred. Several stakeholders, including the League of Oregon Cities and Special Districts Association of Oregon, met in the weeks before the session to address concerns with the proposed bill, including a significant concern about unintended consequences for existing transfer statutes. The concerns were unable to be resolved and the bill did not receive a public hearing. However, the bill did result in an OWRD handout stating they do not have the authority to approve transfers of stored water. Because of this handout, OWUC engaged a water rights attorney for a legal analysis of the issues raised by the handout. OWRD has proposed

legislation to fix the perceived issue, and OWUC continues to work with other concerned parties and its contract attorney to work on finding a solution to this important issue. Further discussion on water rights transfers is expected during the interim session.

### Subcommittee Business

#### *Willamette Basin Reallocation Study*

In November 2017, the United States Army Corps of Engineers (USACE) released its Tentatively Select Plan (TSP). Unfortunately, the TSP cut in half the USACE's own analysis that the projected municipal and industrial (M&I) need for stored water, allocates over 60 percent of the storage space to fish and wildlife use, and retains a joint use pool of almost 20 percent of the total storage space. The TSP does not provide water providers with the certainty they need to invest in large, regional water supply solutions and infrastructure needed to meet future demands over the next 50+ years. Members of the subcommittee went back to USACE and OWRD and asked them to reconsider the proposed allocations in the TSP. They were successful in getting the allocations for each use increased by splitting up the joint use pool, but not back to the levels originally requested. Therefore, work continues in advocating for appropriate reallocation levels and tracking movement on this plan.

### Water Matters! Fly-In



Sara Petrocine & Karen Kelley, OWUC



Sara Petrocine (OWUC), Senator Merkley, Karen Kelley (OWUC) & Bob Baumgartner (PNCWA)

The Chair and Vice-Chair of OWUC attended the 2018 AWWA Water Matters! Fly-In in Washington D.C. April 18-19. The officers managed to meet with staff from all seven of Oregon's delegation to discuss the Willamette Reallocation Project, infrastructure funding, and the conservation title of the Farm Bill involving source water protection efforts.

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](mailto:karen.kelley@cityofalbany.net).

## ORWARN Committee

### ORWARN 2018 Conference – Save the Date!

ORWARN is sponsoring a conference to be held September 17-19, 2018 at Skamania Lodge in Stevenson, Washington. The conference theme is "In the Wake of a Disaster" Continuity Planning and Recovery for All-Hazard Events. The conference organizing committee anticipates water and wastewater CEU's will be awarded for both Oregon and Washington. We hope to see you there!

### Operational Plan Training and Field Training Exercise

ORWARN will be sponsoring a water field training exercise some time in 2018. The committee is working with members to find a location on the east side of the state to hold the exercise. More information will follow.

### ORWARN Website Upgrades

ORWARN is currently developing ideas on how to update the ORWARN website to make it more useful as a tool for members to request aid and respond to requests. The Board would like to hear any ideas from the membership regarding website improvements to make the website more user friendly. 



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# Subsection Advisory Council

### Transitions

With the passing of the Section Chair's gavel during 2018 Spring Conference, we also observed similar transitions. After serving three years on the Subsection Advisory Council (SAC), Doug Schlepp from RH2 Engineering has conferred the Chair to Pat Van Duser from Jacobs. Brian Wilson from the City of Washougal assumed the role of vice chair and Loren Searl of Spokane secretary. Dan Sleeth from the Covington Water District was elected to the board and left the SAC together with Tonya Reiss who served as past chair. Tonya served in all roles of leadership and Dan during his two-year stretch developed the new Hydrant Hysteria program during his tenure as secretary and vice chair. Max Woody after serving three years as an officer and most recently as the Western Oregon State Coordinator, will be stepping down. Elizabeth Edgar from Sunrise Water Authority will join the SAC in this position. Lastly, Ed Height, who completing his term as the Western Washington State Coordinator, has served on the SAC for so long that there is no readily available written record of when he began. Tom Keown from the Covington Water District will take over Ed's position.

We look forward to a great year working together for the advancement of the Section goals, missions, visions and Strategic Plan; and are so thankful to Ed, Max, Dan and Tonya for their years of dedication and service.

### Winter Conference Follow Up

With emphasis on greater engagement between the SAC and Subsections, we have completed the winter conference "Challenge Card" review and response. Please look for a consolidated summary of the questions and response on the SAC webpage. We appreciate the honest and sometimes "challenging" questions and comments we received. It is imperative to continue this open communication so that we are able to better serve you.

### Spring Conference

The Spring Conference Subsection participation at this year's competitions was at an all time high. Six teams, both women and men competed in Tapping and no less than eight competed in Hydrant Hysteria, Meter Madness and the Best Tasting Water competitions. Three teams competed in Top Ops and three submissions were received for Gimmicks and Gadgets. Competitions must begin locally and it was evident that subsections across the PNWS advanced with enthusiasm the best and brightest to the PNWS Conference in Tacoma!

### Gimmicks & Gadgets



Mike Blake explains the benefits of his night light meter reading device

Mike McClenathan of Central Point, Oregon hosted the Gimmicks and Gadgets Competition. Judging this year was Jim Doane from the Tualatin Valley Water District, Marshall Thompson from Suez and Doug Schlepp from RH2 Engineering. Central Point's Mike Blake took first place, for both simplicity and utility, with his night light meter reading device. Brian Gumke from the Northshore Utility District took second with the portable construction meter assembly, and Seth MacIntosh from Spokane took third with the mobile booster pump station.

### Top Ops

Sagacious, Doug Priest of Salem Oregon orchestrated the Top Ops proceedings with the help of the stately

Dan Kegley, in the traditional role for the outgoing Section Chair. Two rival teams were looking to oust the other. Former defending champions of Rivergrove Water District: DJ Ezell, Rick Ezell and Brian Faist had their eyes on the revamped Lower Columbia Subsection team that competed last year at ACE in Philadelphia. Mike McClenathan of Central Point subbing for John Roth, Andrew Holmes and Dillon Leach from Clark County PUD were eliminated in the highly competitive first round. The upstart team from Skagit PUD out the NW Washington Subsection, which started slowly in the first round, ultimately prevailed over Rivergrove in the second and final round, with a score of 26 to 13. Emilia Blake, Riley Smith and Gary Tollefson of the Skagit PUD have booked their tickets to Vegas to represent the PNWS at this year's ACE18 Competition.



The winning Top Ops team from Skagit PUD (foreground) await the final instructions to Judges Lacey Goeres-Priest, Randy Black and Bill Carr

### Hydrant Hysteria

After a first-year demonstration, Hydrant Hysteria was literally center stage, flanked by Tapping and Meter Madness. These three competitions



Cam Hermsen raises his hands in triumph while Steve Butcher gazes at their masterpiece

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were continuous and fast-paced at Fun Night. Beginning with the head to head three-person competition, nine teams had two opportunities to see how quickly they could assemble a fire hydrant. In a down to the wire effort, the Covington Water District team comprised of Steve Butcher, Cam Hermsen and coach Jeff Greer prevailed with a time of 1:37.89. Suez and Hillsboro took 2nd and 3rd with respective times of 1:40.40 and 1.41.17. Cam who was part of the team who travelled traveled to the City of Brotherly Love last year will be accompanied by Steve and Jeff in their venture to Sin City representing the PNWS at ACE.

### Meter Madness



Greg Hunter from the City of Ashland representing Southern Oregon meticulously assembles the bucket of water meter parts

Gerald Arredondo of Salem, Oregon again guided the irrepressible Meter Madness event. With a total of eight competitors, Carlos Camcho of Tacoma Water came from behind to take First-Place with a time of 45.01 seconds, beating Ryan Treffry of Spokane Water and Nate Bell of Kelso with times of 47.15 and 57.63 seconds respectively – Carlos will be joined by the tapping teams from Tacoma Water as they travel to the brightly lit “City that Never Sleeps.”

### Women and Men's Tapping

Loren Searl of Spokane Washington again orchestrated the wildly competitive Tapping Contest. The hometown boys Tacoma Water Men's Team of Philip Gause (Copper),

Mike McCaffery (Setter), Geff Yotter (Cranker) and Ken Young (Coach) flipped the table on last year's winner. Suez's Brian Tucker (Copper), Chase Coles (Setter), Phil Canoy (Cranker) and Pat Hoskins (Coach) with a second-place score of 1:16.20 were beat by a low score of 1:10.88. The City of Spokane and Kennewick rounded out the field with times of 2:01.51 and 2:04.47, respectively. Tacoma Water and Spokane both fielded Women Teams, the former comprised of Shantel Shepard (Copper), Jennifer Routh (Setter), Kim Edwards (Cranker) and Julie LaVergne (Coach) and the latter comprised of Hailey Watson (Copper), Gaylene Haugen (Setter), Heather Berger (Cranker) and Jeremy Coulter (Coach) posting a scores of 2:36.30 and 3:10.61. Both the men and women teams from Tacoma Water together with the Suez men will compete at ACE18 in Vegas to represent the PNWS!



The Tacoma men's Tapping Team upends Suez in this year's highly competitive competition; afterwards Mike McCaffery from Tacoma Water pokes fun at Suez's Pat Hoskins. Suez will get another shot at Tacoma in Vegas.

### Best Tasting Water



Lyndsi Stickles accepts this year's Best of the Pacific Northwest award, congratulations to the AWWD

In the final competition of the conference, water samples from across the PNWS were judged in a blind taste test by an esteemed panel of adjudicators. After taking second place last year, the Alderwood Water and Wastewater District's (AWWD) artesian well beat the North Spokane Irrigation District 8 and City of Nampa, Oregon. The AWWD will represent the PNWS-AWWA at the national ACE18 conference in Vegas in the “Best of the Best” tap water taste test this year.

We would like to thank the employers of each competitor and team, for without your support and encouragement these competitions would not be possible. For those interested in competing next year, please visit the SAC website for more information. Hydrants and meters will change and be available to order in the fall.

### Activity Awards

Each year we acknowledge those who are outstanding the promotion of activities in the local Subsections and exemplary effort in the water works industry. Evidence of the hard work and dedication across the PNWS with the Subsections is the honor of the Activity Award. The three recipients this year were Julie Smitherman from the City of Ashland, out of the Southern Oregon Subsection; Dave England from the Nob Hill Water District out of the Central Washington Subsection; and Terry Pickel from the City of Coeur d'Alene, out of the Inland Empire Subsection.



Julie Smitherman accepts her richly deserved Activity Award

Julie has served in all leadership roles the Southern Oregon Subsection, while at the same time acting as a committee officer and chair. She inspires young professionals and encourages the involvement of local university students. In recent memory there is not an activity or event that she has not helped to develop or promote, or a cause that she has not led or inspired. Currently she serves on the Board of Trustees.



Terry Pickel

Terry is the current chair of the Inland Empire Subsection, has over 35 years of experience in the water industry, and has taught many classes at Subsection trainings. He is the Water Superintendent at the City of Coeur

d' Alene Idaho. While Terry was not able to be present at the conference, we want to thank him for his years of service to the PNWS.



Maura Kegley accepts on behalf of Terry Pickel - this award is for you!

Dave has worked in the water industry for over 26 years and is the Assistant Manager of the Nob Hill Water Association. He uses his experience to encourage and elevate Young Professionals. He has served six years as a Central Washington Subsection officer, ensuring that the Section Principals are followed. He has coordinated and helps to sustain the annual golf tournament and Water For People events.

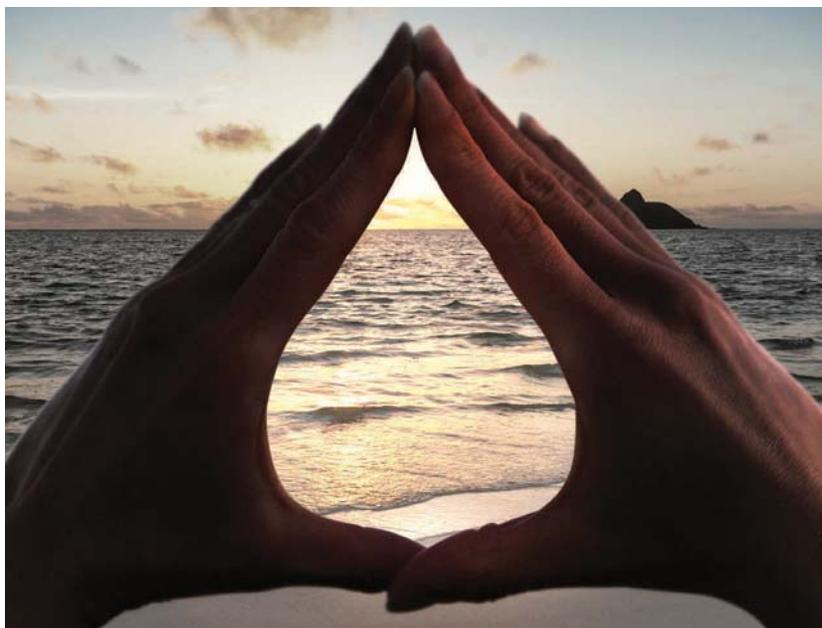


Dave England receives his well-earned Activity Award

This year like in years past, we struggled to select from the praiseworthy candidates who served their Subsection with the values that validate our Section and industry. All should be commended.

If you have any questions about the SAC or the Subsection, please contact any of the SAC officers.

- Pat Van Duser, Chair  
[pat.vanduser@ch2m.com](mailto:pat.vanduser@ch2m.com)
- Brian Wilson, Vice Chair  
[brian.wilson@cityofwashingtonal.us](mailto:brian.wilson@cityofwashingtonal.us)
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### Scholarship Committee

The Pacific Northwest Section began providing scholarships in 1971. The Section Board formally established the Education and Training fund (E&T) in 1985 to help provide a stable funding base for these scholarships. Since 1995, the Section has awarded just over a half million dollars in scholarships to 206 students. We also recognize the increasing participation by Subsections in the E&T program. The Inland Empire Subsection established a new named scholarship this year, joining the NW Washington Subsection, Southwest Idaho Subsection and the Southern Oregon Subsection named scholarships established in recent years.

This year E&T proceeds, direct contributions from Ameron, the NW Washington Subsection, Kelman & Associates (our *Water Matters* magazine publisher), and the Section Board enabled us to award a total of \$43,200 for eleven scholarships. Several awardees were able to join us at this year's Section Conference.

The water industry faces a critical shortage of water operators and the need is expected to increase by 6% in the next decade. The One AWWA Operator Scholarship was created to address the present and future need for operators by providing training and educational funding. The matching dollars from the American Water Works Association and our Northwest Washington Subsection provide the funding for the operator scholarship.

In addition to the One AWWA Operator Scholarship total of \$2,000, a first ever Walla Walla Operator Fundraiser sponsored by the Central Washington Subsection added \$1,800 to this scholarship that was awarded to **Daniel Isenberger**, who is currently working on his Associates Degree in Civil Engineering (Water Quality Focus) at Umpqua Community College.

**Micheal McClenathan** was awarded the Al Alsing Scholarship for \$4,700. Micheal is an active member of the Southern Oregon Subsection, is employed as a



professional water operator and is pursuing a Bachelor's Degree in Emergency and Disaster Management at American Military University.

**Bashar Al Daomi** was awarded the Northwest Washington Subsection Named & Direct Scholarships totaling \$4,200. Bashar is pursuing a PhD in Aquatic/Environmental Chemistry at Portland State University.

**Holly Terrill** is working on her Bachelor's Degree in Civil Engineering at the University of Idaho, and was awarded the Ameron Scholarships totaling \$4,000.

**Tyler Oshiro** was awarded the PNWS, Cynthia Driscoll, and the Wubbena Family Scholarships totaling \$3,600. Tyler is pursuing a Bachelor's Degree in Environmental Engineering at the University of Washington.

**Emily Heleva-Ponaski** was awarded the Chris Uber Memorial Scholarship totaling \$4,200. She is attending Portland State University pursuing her Ph.D. in Civil and Environmental Engineering.

**Julia Reece** was awarded the Skiles/Pettie, SW Idaho Subsection and James Doane Family Scholarships totaling \$3,600. Julia is a student at the University of Idaho in the Civil Engineering program.

**Casey Bryant** received the RH2 Engineering, Kelman & Associates and Alan Jones Scholarships totaling \$3,600. Casey attends the University of Idaho and is pursuing a degree in Civil Engineering and Spanish.

**Rachael Yonamine** was awarded the Southern Oregon Subsection Scholarship of \$3,600. She is a student at Oregon State University studying Civil Engineering.

**Catherine Feistner** was awarded the Past Chairs Scholarship of \$3,500. Cat is a proud Vandal studying at the University of Idaho. Her focus is in Civil Engineering and Spanish.

**Sarah Knue** received the Archie Rice, Inland Empire Subsection and Legacy Scholarships totaling \$3,500. Sarah is a Boise State University student studying Civil Engineering.

Now for the commercial... Colleagues, friends, associates and guests, if you would like to make a tax-deductible contribution to the Education and Training Endowment Fund, please contact Bob Willis-E&T Chair, or Kyle Khis, Section Executive Director.

Thank you for supporting the future of our organization, our communities and in particular, these outstanding students. 🇺🇸

### 2020 Committee

With the April conference behind us, the 2020 Committee is gearing up for another year of career fairs, student outreach, and continuing to develop our new mentorship program. The 2020 Committee is also celebrating a successful year led by Chair Kevin Wycoff and Co-Chair Kristen Zimmer. The conference also is the time when we welcome new leadership to the board. This coming year, Joanie Stultz will be stepping in as Chair. She is an active member of the King County Subsection as the YP Liaison.

**2020 Vision:** To those not familiar with the 2020 Committee, it was formed in 2015, with the vision, "To develop a sustainable model by year 2020 that helps employers attract and retain talent and helps students and Young Professionals find fulfilling work." The activities we plan to focus on in the upcoming quarter to continue to work towards our vision are as follows:

- Reflection on past accomplishments and greatest impact
- Develop priority projects for the upcoming year
- Focus on Subsection engagement and outreach to YP/2020 Liaisons

#### 2020 YP Spotlight: Kevin Wycoff

We'd like to take a moment to recognize the past 2020 Chair Kevin Wycoff, as the winner of the 2018 PNWS Pioneer Award! The Pioneer Award is presented annually to the young professional exemplifying the most outstanding leadership, technical expertise and dedication to community service. Kevin went above and beyond expectations and started the new mentorship program, developing the program from scratch and launching the first round of protégé and mentor matches. He developed a new YP track for the conference and supported the development of the Career-Fair-In-A-Box tool kit that has been a vital resource for section members over the past two years. Thank you Kevin for all that you do!

#### Mentorship Program

A big thanks to all that participated in the pilot cohort of the Mentorship Program. We received great feedback about the program at the Tacoma conference, and we are busy putting those ideas into action. We will be putting out our Mentorship Program Guide 2.0 this summer, and start accepting applications on our new forms in June. Please consider signing up as a mentor, a protégé, or both for the coming year.

#### Staying Connected

We've initiated joint monthly calls with the YP Committee to discuss activities and planning efforts that are open to anyone interested in getting

involved. Contact the YP Committee Communications Coordinator to get on the YP list for call invites *Amie.Batham@cityofmedford.org*.

#### Career Fair Supplies

The 2020 Committee has a supply of giveaways (pens, keychain flashlights, etc.) for use at career fairs and promotional events. Contact the committee if you need some supplies at *jstultz@brwncaled.com*.

Check our new **Membership Video** here: [www.pnws-awwa.org/member-groups/awwa-membership](http://www.pnws-awwa.org/member-groups/awwa-membership).

For more information about the 2020 committee, contact Joanie Stultz and [jstultz@brwncaled.com](mailto:jstultz@brwncaled.com). 

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## Water Treatment Committee

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### Tolt Water Treatment Facility Media Eductor

Hopper eductors are used to mix granular solids with liquid for conveyance to a desired location. Hopper eductors are commonly used at a water treatment plants for media replacement in the filters. Larry Wilt, project manager for the Tolt Water Treatment Plant, has worked with his team to develop a media hopper eductor to do the media replacement in-house.

Previously, the plant hired a contractor which would do the media replacement for \$134,000 for three filters, or about \$45,000 per filter. After watching the contractor the plant staff decided to make their own hopper and purchase an eductor to do this in house. The fabrication of the hopper, eductor, and hoses cost about \$10,000. During the following media replacement the plant staff were able to do all 6 filters for only \$45,000. In the future the staff will only need to purchase the media and rent a forklift to lift the media onto the hopper. It takes only 5-10 minutes to empty a super sack of media onto the filters, depending on how many hoses the media slurry had to travel through.

Larry is currently letting the Pasco Water Treatment Plant try out the hopper eductor for media replacement at the Butterfield Water Treatment Plant. Please reach out to Larry Wilt if you have questions.

“Sharing this practice of saving money helps all facilities and employees.” – Larry 



## Water For People

### Meet the People Behind the Water

*Behind every pump and pipe is a person – a person whose life is changed by having access to safe water and sanitation. A person whose determination and leadership helped make water a reality for their community.*

### Meet Jorge

When Jorge Arnez gets an idea in his head, nothing can stop him. A silver-haired farmer, Jorge talks a mile a minute. His passion and energy for taking care of his tiny community of Saca Sirca in the district of San Benito, Bolivia is clear. The homes in Saca Sirca are spread out. Slow-moving cows like to block the deeply rutted dirt road. To the right empty brown fields await the next planting season, and on the left green lines of carrots sit in their marshy fields – the only color in the dusty dry seasons' faded landscape. Plains stretch from Saca Sirca to the

far-off mountains that surround this valley. The people who live here don't have much. They live simply on these plains and they like it that way.

Two years ago, Jorge got an idea in his head to improve life for Saca Sirca: he wanted to build a well that would provide safe water. The problem with this idea was that the people didn't want a new well and water system. Most of them already had wells at their house. They were shallow wells that provided water that was often contaminated by families' pit latrines, but they were still wells. Most community members didn't want to invest in a new water system, even if it would bring them safe water.

"People were saying, 'We don't need a water system, we have our own wells,'" said Jorge.

Leaders from the district told Jorge he would never convince the people. Saca Sirca was too poor, too far away,

too set in its ways. Even so, nothing could stop Jorge.

"Give me the opportunity," Jorge told the district. "I will convince them."

He went home-to-home and organized community meetings. He told families how they could have water coming out of a tap – water they wouldn't have to boil to remove bacteria. Little by little, the community's resistance lowered and they saw Jorge's perspective. When everyone was in favor, Jorge worked with the district of San Benito and Water For People to make plans. All 31 families in the community pitched in to help with the construction, but they quickly ran into a problem.

"The soil was not strong enough for a water tower, so we couldn't do a gravity-fed system," says Jorge. "The families were so disappointed."

Jorge figured out they could do a different kind of system that didn't need a water tower. But first they needed a power connection, and the nearest connection was 100 meters away from the well. Jorge refused to give up.

"I traveled several hours and found a high-level manager in an electrical company," says Jorge. "I did everything I could. I talked with him and a week later they were digging holes for electric poles. We got the electricity for the system."

After two months of construction and solving the electricity issue, the water system was finished, and the community threw a big party.

"It's unbelievable that now we just open the tap and have water," said Jorge. "Seeing water come out of pipes in your own backyard...who could have imagined that?"

The community members are already seeing the benefits of investing in their new water system.

"There has been so much change," says Jorge. "The children are cleaner, they are able to go to school more, people can even have showers in their home. Now I have more water to irrigate my crops."



Although he's too humble to admit it, Jorge is a hero of Saca Sirca. All he wanted was for the families in this little farming community to have the good life they deserve – and he knew it started with water.

"Someday I will be able to die at peace," he says. "Because I'll know all the families here have water."

### Regional Conference Silent Auction

Thank you to everyone for your continuous support of the annual Water For People Silent Auction at the regional conference! This year was another success and together we raised \$7,533 and we couldn't have done it without you! Our initial investment of \$7,533 increases by \$2,335\* with dedicated support from local governments, businesses, and community organizations to \$9,868. As we all know time equals money and because of that our contribution grows even more because women and girls no longer spend much of their day hauling water. Instead, they can go to school, grow more food, join the workforce, and get involved with their community. That is why investments in water have an average of 8X\*\* the economic benefit per dollar invested. All that productivity equals a huge boost to the local and global economy. With that being said **that turns our \$7,000 into \$78,946!**

\* Based on Water For People 2013 Global co-finance investments.

\*\*Based on figures from the World Health Organization.

### Kenneth J. Miller Award



*Congratulations Justin Ford on receiving the Kenneth J. Miller Award!*

Justin Ford has been involved in the NW Oregon Subsection Water For People Committee for the last 8+ years and has been an instrumental member and leader of our Committee. He currently Co-Chairs the Committee. Justin has organized over 20 events in NW Oregon, including our most recent golf tournament in Gresham, Oregon in July of 2017. Justin has also volunteered to speak or volunteer at several Water For People events in other Subsections across the Pacific Northwest. He has travelled on an impact tour, given countless hours of his time, and has been a faithful donor at each event. Justin has even pulled almost his entire family into our efforts, too. His wife Julia has catered numerous NW Oregon Subsection Water For People events, including Gala dinners in 2014, 2015, and 2016. Justin's Mom has provided art and donated a portion of her sales to Water For People. She has also attended several events. Justin's brother-in-law, Samuel, and cousin, Will have provided their musical talents for Gala events, Hops For H<sub>2</sub>O, and Wine For Water. Lastly, Justin's dad has been a faithful donor at our events for years; in 2016 he rallied the doctors at his hospital to sponsor a table at the Water For People Gala, and in 2017 he donated his 50/50 raffle winnings back to the cause.

Justin and his family go above and beyond to help raise funds for Water For People, and they've also greatly blessed our local community. In 2014, the NW Oregon Subsection Water For People Gala was cancelled due to a snowstorm. Julia Ford, Justin's wife, was catering, and after donating all of her time making our food and then having the event cancelled last minute, Julia and Justin called numerous homeless shelters in Portland until they found one that would accept all of our unused food. They packed it up in their van and braved the roads to drive it downtown so it wouldn't go to waste. They did not charge us. I have been honored to get to know Justin and his family. Their tireless service and passion is inspiring. Justin is a true example of everything the Kenneth J. Miller Award represents.

When I think of Justin and his family, and the heart behind why they do what they do, this quote by Rita Zahara sums it up perfectly: "One of the greatest things you can do to help others is not just to share and give what you have, but to help them discover what they have within themselves to help themselves."

### Upcoming Events

- July 26 - Cascade to Coast Wine for Water, Sweet Cheeks Winery, Eugene, OR
- July 27 - NW Oregon 25th Annual Golf Tournament, Gresham Golf Course, Gresham, OR
- July 27 - Inland Empire Golf Tournament, Indian Canyon Golf Course, Spokane, WA
- August 11 - Southern Oregon Golf Tournament, Stone Ridge Golf Course, Eagle Point, OR
- August 17 - Central Washington Golf Tournament, Apple Tree Resort, Yakima, WA
- August 17 - NW Oregon Wine for Water, Plumb Hill Vineyards, Gaston, OR
- August 23 - King County & South Sound 1st Annual Bowling Tournament, ACME Bowl, Tukwila, WA
- September 7 - Lower Columbia Golf Tournament, Mount Vernon, WA
- September 14 - NW Washington Wine for Water, Bertelsen Winery, Mount Vernon, WA
- September 25 - SW Idaho Wine for Water
- November 3 - South Sound Wheels for Water, LeMay Car Museum, Tacoma, WA

Interested in starting a Water for People event? Or want to get involved and join the committee? We'd love to have you! Feel free to contact one of the committee officers:

- Camille Cegnar, Chair, [Camille.Cegnar@suez-na.com](mailto:Camille.Cegnar@suez-na.com)
- Shantel Shepard, Auction Vice Chair, [Sshepard@cityoftacoma.org](mailto:Sshepard@cityoftacoma.org)
- Erin Nishikawa, Secretary, [Enishikawa@aesgeo.com](mailto:Enishikawa@aesgeo.com)
- Katie Dillion, Auction Chair, [katie@dillonmarketingconsulting.com](mailto:katie@dillonmarketingconsulting.com)
- Brinlee Finzel, Technical Liaison, [Jgibson2@cityoftacoma.org](mailto:Jgibson2@cityoftacoma.org)
- Kristin Young, Past Chair, [Sshepard@cityoftacoma.org](mailto:Sshepard@cityoftacoma.org) 



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## Inland Empire Subsection

Terry Pickel would like to thank his Board of 2017-2018 consisting of Loren Searl, Michelle Johnson, Bijay Adams, Dion Holton, Bob Cunningham, and Seth McIntosh. These members made a series of classes happen throughout the year, produced yet another successful Truck Rodeo, and committed to two networking events that continue to grow. One of those events, started by Past IESS President, Joe Foote, is No Water No Beer that has raised money for Water for People, and helped raise money for the IESS Scholarship. Originally in May, it is being moved to a fall date this year, with assistance from Director Seth McIntosh.

The other event, now in its third consecutive year, that has started back up and was chaired by Past IESS President and Past PNWS Chair, Dan Kegley, is the Annual Inland Empire Subsection Golf Tournament. The past IESS Secretary, Sharron Kimball, who was recognized in 2002 with the Subsection Activity Award from PNWS for her work, formerly ran this tournament. This event has almost raised \$10,000 in its first two years of renewed operation. Great turnout and attendance has

## Our Third Annual Golf Tournament happens at Indian Canyon Golf Course, Friday, July 27, 2018.

helped raise and recognize IESS as a contributor to a scholarship fund that got its first debut this year at the Tacoma PNWS Conference.

The first recipient of this scholarship went to Sara Knue, who is a student at Boise State. She was awarded \$500 towards her studies. The great thing about this \$10,000 scholarship is that it is currently combined with other scholarship funds in the Section that earn a sizable interest, so the initial amount remains as the principle, and the scholarship is given at 5 % interest of the invested \$10,000. The IESS Board hopes that with the annual golf tournament, we'll continue to grow these funds, and offer more sizable scholarships over time. That's just one of the great accomplishments from this year's Board.

On May 23, at the IESS annual Spring Banquet at Darcy's, in Spokane Valley, Terry handed the reigns over to Incoming President, Loren Searl, who is superintendent for the City of Spokane Water Department. Loren also serves on the AWWA Water Training and Educational Resource Exchange, is tapping coordinator for the PNWS Section Subsection Advisory Council, and also chair's the PNWS Section's Training Coordination Committee. Loren

in turn, got to recognize our newest incoming Director #5, Sara Broderius, from Vera Water and Power. She's busy raising three boys, and working full time as the account manager, board clerk and wellness coordinator. She had a huge part in helping organize the 2013 PNWS-AWWA Spokane Conference. We are happy to have her join us!

Also, our Third Annual Golf Tournament happens at Indian Canyon Golf Course, Friday, July 27, 2018, with a shotgun start at 7AM. We're setting our sites on 100 golfers this year. Registration closed early last year with 80 when we accidentally told the golf club we'd only have 60! We're excited to tee up again!

Lastly, we are planning for our August picnic start up, with one of our favorite grill masters at the helm, and past IESS President, Doug Babin, from Whitworth Water District. It will be potluck style, with IESS supplying burgers, hotdogs, and pop. Always a great opportunity for members to show off their families, and have a fun evening – thank you all for your continued support! We look forward to serving our membership during another great year.

Questions or comments, contact [lsearl@spokanecity.org](mailto:lsearl@spokanecity.org). 

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### King County Subsection

The King County Subsection of PNWS-AWWA is actively looking for ways to serve our members. From socials to educational opportunities, we encourage folks to get out there, meet the amazing people who make up this industry and get involved! Reach out to one of our Subsection officers with any questions or suggestions.

#### Competitions

The King County Water Olympics was held on March 9 at ACME Bowl in Tukwila, WA.

#### Meter Madness

In its third year, Meter Madness continued to add excitement during the water judging event. It was the dexterity skill set from years of knitting that prevailed when Brinlee Finzel with Brown and Caldwell beating out all the other fifteen contenders with a time of 37.58 seconds with Jolyn Leslie in a close second with 37.88 seconds. Thank you Brinlee for representing King County at the Tacoma Regional Conference!

#### Best Tasting Water

A total of seven cities and special purpose districts located within King County participated in the 7th Annual KCSS Best Tasting Water Competition. Kyle Kihs, PNWS-AWWA's Executive Director, Steve Hulsman with Department of Health - NW Drinking Water Operations, and Dave Griner, Brewer and Market Manager for Mac & Jack's Brewery represented various parts of the water industry, judging samples of water from each contestant's distribution system.

Covington Water District walked away with the honor for Treated Water Systems. Highest honors went to the Union Hill Water Association (UHWA) for the second year in a row where their water beat the out seven other local King County water purveyor contestants.

#### Hydrant Hysteria

The Hydrant Hysteria competition closed out the evening at the ACME Bowl.

Four teams competed, two from the Northshore Utility District and one from the Covington Water District competed for the King County Subsection and Tacoma Water competed for the South Sound Subsection. Covington Water District (1:45:33) and Tacoma Water (2:16:53) had times which propelled them to the Regional Conference competition in Tacoma. The Covington Water District team made up of Cameron Hermesen, Jeff Greer, & Steve Butcher will go on to represent the PNWS-AWWA at ACE Las Vegas.

Thank you all for participating and attending! Thank you to all of our sponsors who made the event possible. They wouldn't happen without your support. For questions related to King County Subsection competitions, please contact Ted Stonebridge at [ted.stonebridge@bothellwa.gov](mailto:ted.stonebridge@bothellwa.gov) or 425-806-6855.

#### Events and Classes

##### KC Subsection

##### Member Appreciation Mixer

The King County Subsection would like to thank the Pacific Northwest Section Membership Committee for hosting an AWWA Member mixer at Two Beers Brewing on May 9. Free beer, free food, no agenda and an opportunity celebrate and hang out with Cheryl Capron before her retirement was a treat!

##### 23rd Annual Charity Golf Tournament

The 2018 Annual Charity Golf Tournament will be on Friday, September 28 at Druid's Glen Golf Course in Covington, WA. We are completing the planning details and will send out a notice soon for golfer and sponsor registrations! Please contact Bill Reynolds at 425-827-2014 or [billr@paceengrs.com](mailto:billr@paceengrs.com) for sponsorship opportunities or questions that you may have!

##### Asset Management for Utilities Workshop

CEUs have been approved for this one-day Asset Management

class happening on July 18, 2018. The workshop will provide an in-depth look at asset management philosophies used by many water/wastewater agencies across the country. The system is known as reliability-centered maintenance (RCM), and provides strategies for managing maintenance priorities. Get a jump on managing your facility's assets by learning the latest trends and techniques and listening to real-world case studies. After attending this workshop, participants will be able to describe RCM and comprehensive asset management; develop procedures for your facility including: asset register, asset management planning, and risk based O&M; and know what steps to take when a failure occurs.

##### Control Valve Service Training Class with GC Systems, Inc.

On Thursday, October 4, 2018, King County Subsection will be hosting Control Valve Service Training offered by GC Systems at the City of Seattle Joint Training Facility. This class will provide a complete review of the valves offered by Cla-Val Inc, explain the hydraulics, operation, maintenance and repair of the different valves, including their controls and accessories. Space is limited. Visit this link to register.

[www.sites.google.com/a/pnws-awwa.org/king-county-subsection/events/training](http://www.sites.google.com/a/pnws-awwa.org/king-county-subsection/events/training). For questions related to classes, please contact Jim Konigsfeld at [jim.konigsfeld@spwater.org](mailto:jim.konigsfeld@spwater.org) or 425-295-3217.

##### Transitions

Spring has brought with it some transformation to the KCSS leadership. Thank you to Dan Sleeth for your efforts into bringing participation and excitement to the competitions as our Competitions Coordinator and Kevin Fuhrer in your role as Treasurer. Your attention to detail and continuous support

If you are interested in volunteering or have any questions, (there is an officer vacancy!) please reach out to Charlie Sovacool or Sally Mohr.

with events and activities have been greatly appreciated! We look forward to seeing you at future King County PNWS-AWWA events!

Please join us in welcoming our new volunteers/slate of officers!

- President – Charlie Sovacool, Consolidated Supply Co.
- Vice President – Sally Mohr, Covington Water District
- Treasurer – Tammy Whipple, Sammamish Plateau Water
- Secretary – Vacant

- Program Director – Jim Konigsfeld, Sammamish Plateau Water
- Program Director 1 – Scott Rickert, Seattle Public Utilities
- Program Director 2 – Michael Norton, Seattle Public Utilities
- Young Professionals and Student Liaison – Joanie Stultz, Brown and Caldwell
- 1-Year Director (Water For People) – Brinlee Finzel, Brown and Caldwell
- 2-Year Director (Competitions) – Ted Stonebridge, City of Bothell

- 3-Year Director (Golf Chair) – Bill Reynolds, PACE Engineers, Inc.
- Website Coordinator – Edward Martinez, New College Graduate
- Past President – Thomas Keown, Covington Water District

If you are interested in volunteering (there is an officer vacancy!) or have any questions, please reach out to Charlie Sovacool at [charlie.sovacool@consolidatedsupply.com](mailto:charlie.sovacool@consolidatedsupply.com) or Sally Mohr at [sally.mohr@covingtonwater.com](mailto:sally.mohr@covingtonwater.com). 

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### Northwest Washington Subsection

#### Spring 2018 Event Highlights

**Meter Madness Competition** – Hosted by HB Jaeger on March 8 in Burlington. Congratulations to the City of Anacortes who went on to represent the NWWA at the PNWS Conference.

#### A Day with DOH Part 2 Workshop

Held on March 21, 2018 in Mount Vernon, WA. The workshop covered regulator updates, hands-on training with a digital colorimeter and top-ops competition. The workshop also included a panel discussion on the role of DOH and governing body to support certified operators, E.coli response planning, treatment performance partnerships, emerging issues, and a Q&A session. A total of 83 attendees earned 0.6 Water CEUs.

#### Best Tasting Water Contest

Held on March 21, 2018 at the Skagit River Brewery in Mount Vernon, WA. Congratulations to the Alderwood Water & Wastewater District for taking home the first place prize with their artesian source sample! AWWD went on to represent NWWA at the PNWS Conference and took home first place! A big thank you to our volunteer judges and Northwest Corrosion Engineering for sponsoring the event!

#### Basic Waterworks Workshop & WTP Tour

Held on March 27, 2018 at the Sunnyside Water Treatment Plant in Marysville, WA. The workshop provided an orientation to water utilities and water quality protection for new employees to the utility including treatment plant staff, distribution crews, office staff, engineers and others. The workshop included a tour of the Sunnyside Water Treatment Plant. Attendees earned 0.7 Water CEUs.

#### Water Storage Basics Workshops

Two workshops were held on April 4, 2018 in Everett, WA and May 24, 2018 in Port Townsend. The workshops included 12 modules providing an overview of all aspects of water system storage including storage

basics, soils, seismic & structural considerations, post seismic, piping, inspection, surveys, corrosion, storage tanks, water quality and reservoirs. A total of 46 attendees between the two workshops earned 0.7 Water CEUs.

**Pumps Workshop** – Held on April 10, 2018 in Woodinville, WA. The workshop covered pump safety concerns, an overview of pumps and their applications, pump curves and speed control, maintenance, hands-on maintenances of: centrifugal, turbine/booster, metering and solids handling pumps. As well as a round table discussion aimed at passing along on-the-job knowledge from seasoned to younger operators. A total of 83 attendees earned 0.6 Water/Wastewater CEUs.

#### Emergency Preparedness

**Workshop** – Held on May 15, 2018 in Blaine, WA. The workshop included 12 sections, covering a variety of topics in emergency preparedness, including: impacts of emergencies on water utilities, development of emergency action plans, risk, resilience and response, public outreach during emergencies, overview of available emergency preparedness training programs, cyber security, facility security and an introduction to the Federal Emergency Management Agency Incident Command System. Attendees earned 0.7 Water/Wastewater CEUs.

#### Math for Operators, Fire Hydrant Maintenance and Valve Exercising

**Workshop** – Held on May 23, 2018 in Port Townsend. The presentation at the workshop covered topics on math for operators, fire hydrant design, operation and typical maintenance, and valve exercising covering the importance of valve exercising and elements of a valve-exercising program. Attendees earned 0.6 Water CEUs/0.4 Wastewater CEUs.

**2018 Western Washington Short School & Trade Show** – Held on June 5-6, 2018 at the Lynnwood Convention Center in Lynnwood, WA.

The Northwest Washington Subsection and the Pacific Northwest Clean Water Association jointly sponsored the two-day conference. The Short School offered six concurrent sessions on Tuesday and five on Wednesday, totaling 66 hours of presentations that covered a variety of topics relative to both water and wastewater operators, including water and wastewater treatment, water quality, water storage, operations and maintenance, pumps, odor control, instrumentation, control valves, disinfection, and aeration and mixing.

The 2nd Annual Young Professionals gathering was held following Tuesday's presentations and Wednesday's Trade Show included 34 vendors. Full-time attendees earned up to 1.2 Water/Wastewater CEUs.

To sign up for email notification for future Northwest Washington Subsection workshops go to the subsection webpage on the Section's website ([www.pnws-awwa.org](http://www.pnws-awwa.org)) or contact Jeff Lundt at - [jeff.lundt@kingcounty.gov](mailto:jeff.lundt@kingcounty.gov) or 260-477-5582.

#### 2018 Training & Event Schedule

The Northwest Washington Subsection will be sponsoring training for operators, engineers and managers in the summer/fall of 2018. 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:

#### Water Storage Basics Workshop

– September 12, 2018, Anacortes. 0.7 Water CEUs.

#### Water Treatment Workshop

– September 20, 2018, Alderwood Water & Wastewater District, Lynnwood. 0.6 Water CEUs.

### **Wine (and Beer) for Water –**

September 14, 2018, Bertlesen Winery, Mount Vernon. Save the date for the 7th Annual Wine (and Beer) for Water. Enjoy a fun evening of wine and beer tasting, live music, silent auction and networking!

### **Emergency Preparedness**

**Workshop** – October 4, 2018, Sunset Point Fire Station Training Room, Friday Harbor. 0.7 Water/ Wastewater CEUs.

### **O&M Pump Station Workshop –**

October 16, 2018, Skagit PUD, Mount Vernon. 0.6 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](http://www.pnws-awwa.org)) or contact Jeff Lundt at - [jeff.lundt@kingcounty.gov](mailto:jeff.lundt@kingcounty.gov) or 260-477-5582. 

## South Sound Subsection

### **G-O-L-F**

Our Subsection is gearing toward a fun summer and our biggest event will be, of course, our Annual Golf Tournament! This year's 7th Annual Charity Golf Tournament will be happening on July 20, 2018. It's never too late to sign up and even to sponsor this awesome event!

Registration and sponsorship is available through this link: [bit.ly/SSSGolf2018](http://bit.ly/SSSGolf2018)

This year we have a location change. Our tournament will take place in Lakewood, WA at the beautiful Oakbrook Golf Club.

We hope to see you there! If you prefer to contact our golf liaison directly, please reach out to Nate Mozer at [nate@kpg.com](mailto:nate@kpg.com).

### **Social Events**

We held our Spring Social at the Hub Brewery in Tacoma this past May. It was a great turnout even with a little hiccup in logistics, but our great communication skills and teamwork got us back on track in no time.

Our Subsection will be having at least one social event per season, so be on the lookout for our summer, fall, and winter social event.

### **Upcoming Training**

We have a couple of trainings scheduled for the fall. Our training class will be on Emergency Management and it's happening in September, followed by a Basic Waterworks class. Stay tuned and make sure you have your CEU's for the year!



### **Subsection Officers**

Our Subsection has elected new officers since this past Section conference. Thank you to Mike Pleasants from City of Port Orchard for his service for the past year, and we welcome Michael Lubovich from Kennedy/Jenks Consultants as the

new President for the Subsection. Matthew Hubbard from Tacoma Water serves as Vice-President, with Jeremy Djajadi from SYBIS as Secretary, Tim Wells from Spanaway Water Company will continue as Treasurer. We also welcome Clara Olson from Parametrix as our newest board member. 

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# Social Attitudes Towards Water Conservation

By Julie Gillens, Washington County Water Conservancy District



**I**t's the age-old question, can people really change? A parable sheds some light beginning with a Scorpion asking a Frog for a ride across the river. The Frog responds, "Are you kidding? Of course not! I know you, Scorpion, and you would sting me and I'd die.

No way will I carry you on my back!" The Scorpion challenges the Frog, "Why would I do that? If I sting you and you die, we both drown. You have nothing to fear by carrying me across the river." The Frog decides that what the Scorpion said makes sense, so he agrees to the request.

Midway across the river, the Scorpion stings the Frog. As the Frog gasps his last breath before drowning, he implores the Scorpion, "Why? Why did you sting me, knowing we will both drown?" The Scorpion replies, "It's my nature."

## Introduction

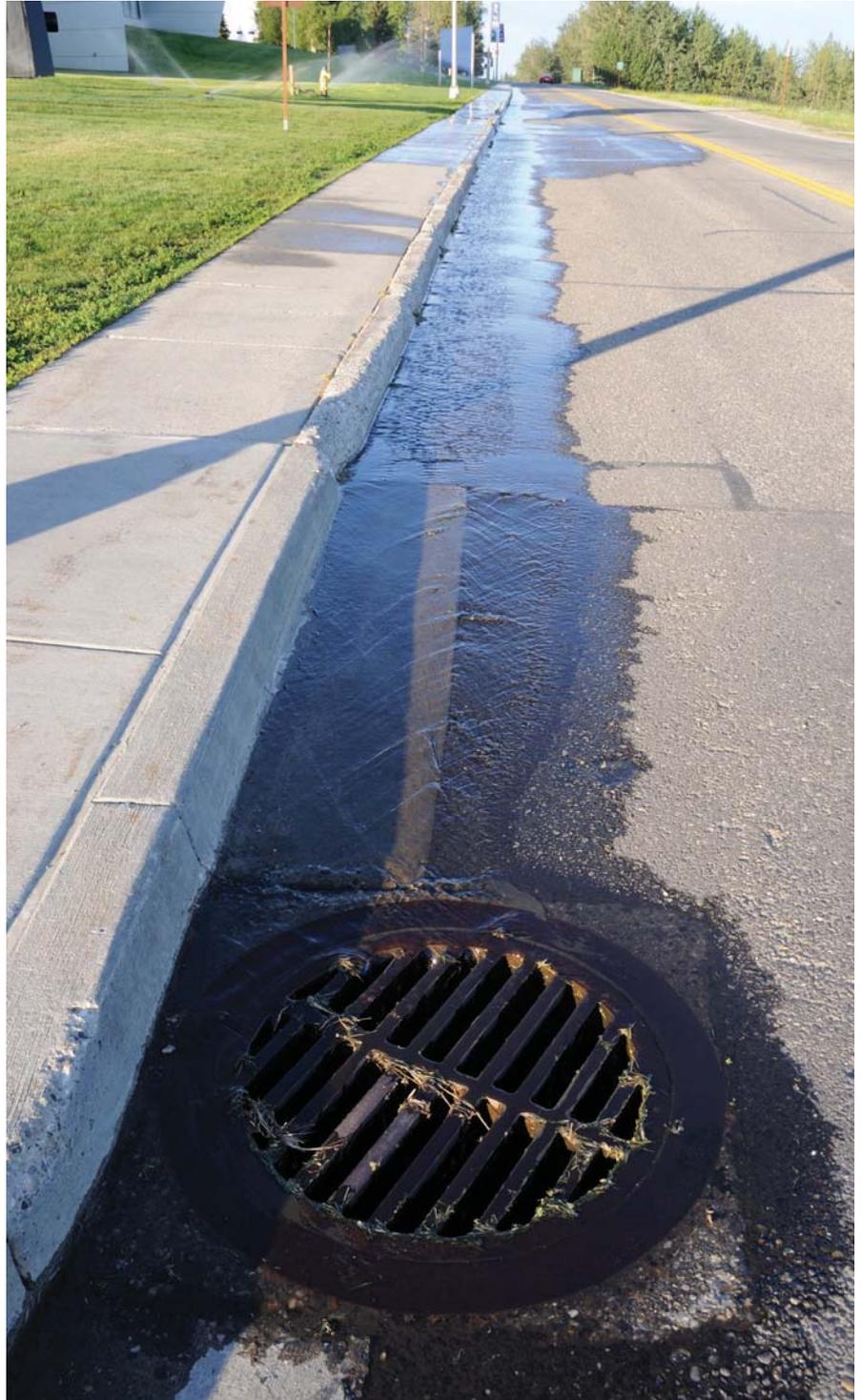
It's hard to change our nature or behavior, especially the daily, repetitious, mindless tasks we perform. And what task is performed more daily, repetitious, and mindless than water use? Is it possible to change this behavior? If so, what factors affect these behavioral changes. A recent study\* found something to consider. It's not what you think!

## Why is behavior important?

The frustrated resident calls as they see water running down the gutter asking why aren't there regulations with heavy fines to prevent water waste or commenting, if water rates were high, people would be forced to conserve. Technologies, also, have made great advances with smart irrigation controllers, high-efficiency fixtures, and the product list keeps increasing. Yet, behaviors are needed to abide by regulations, stay within budgets, and implement technology. This leaves behavioral change critical when implementing these strategies.

## A Look at Behavior – is change really possible?

In a nutshell, there are two behavior classifications, personal and environmental. Environmental behaviors benefit the community and are found to be quite different from changing behaviors for personal gain. For example, a goal of losing weight, the personal behavior changes (such as eating less calories) are seen more immediate and up-close; as clothes fit better, energy increases, and received compliments of "looking good." Behavioral changes benefiting the environment (such as recycling or saving water) are difficult to change because the sacrifices to achieve these goals aren't immediately seen and doubts arise about whether the community is really making



the same sacrifices. This makes motivation to adopt and continue these environmental behaviors less predictable and difficult to maintain.

**What Brings About Behavioral Changes?**

Since awareness does not always lead to compliance or action, there was a need to find the correlation between knowledge and the factors that significantly influence action. With this understanding, a message could be created to bridge the gap between knowledge and behavior.

The results could bring together water-efficient technologies with conservation measures and align them with water efficient behavior for long-term results in water use reduction.

Research looked at customers' attitudes about water, their perceptions on their ability to use water efficiently, their belief in the community to conserve, and also if customers felt conserving was an acceptable behavior among their peers. These factors were used to see how they influenced the behavioral intention to use water efficiently. It was hypothesized, all four factors would be favorable in promoting water efficient behavior. An optimistic attitude about water conservation will positively affect behavioral intention to conserve water. A belief is that if family

and friends used their water efficiently it will positively affect personal behavior to conserve water. A personal belief that one can use water efficiently will positively affect behavioral intent to conserve water. And finally, believing their community conserves water will also positively affect behavioral intent to use water efficiently.

A survey revealed the main factor predicting behavioral intention on adopting efficient use of water was self-efficacy. The findings were significant\*\*; predicting behavioral intent to use water efficiently 50 percent of the time. Attitude about water came in second, showing 31 percent in predictability of this behavior. Further evaluation of the survey revealed self-efficacy and attitude significance in predicting the behavior of water efficiency. Again, the research showed a significant relationship between self-efficacy and attitude in influencing the behavioral intentions to conserve water.

How could this bridge of self-efficacy be applied to behavior change? Using the work of Albert Bandura on forming self-efficacy, his research identified four areas:

- Experience – the individual must have practiced and completed the task.
- Observation – the individual must watch someone participating in the task.

- Persuasion – a well-respected person influences performance of the task.
- Non-stressing – present the task as non-stressing, not a problem to perform, 'easy peasy', removing all perceived stress associated with the task.

Then, constructing messages to promote water-efficient behavior must have one or more of these characteristics to form self-efficacy in the individual to perform the task of conserving water. So, developing strategic messages with one of the following will help in bridging knowledge with action:

- Give them opportunities to perform the task. Hands-on workshops and demonstration gardens are great avenues to give someone an opportunity to work through a behavior.
- Visually show the desired behavior/task, film/record someone performing the task.
- Use someone respected in the community to persuade the desired behavior.
- Eliminate the stressors to perform the task. Sometimes simply prefacing the task with the word "easy" in front of it can help motivate the individual to accept it.

**Conclusion**

In summary, self-efficacy along with attitude plays a significant role in predicting behavioral intentions to use water efficiently. Self-efficacy is formed in four areas: experience, observation, persuasion, and eliminating any stress associated to the desired activity. Using these factors, a message can be created to bridge the gap between knowledge and behavior. The results can bring together water-efficient technologies with conservation measures and align them with water-efficient behavior for long term results in water use reduction. 

\* Gillins, J. (2015). *Bridging the Gap Between Knowledge and Behavior: Understanding What Factor Promotes Water Conservation*. Master's Thesis, Southern Utah University, Department of Communication.

\*\*Study participation numbers met the confidence level of 95%.

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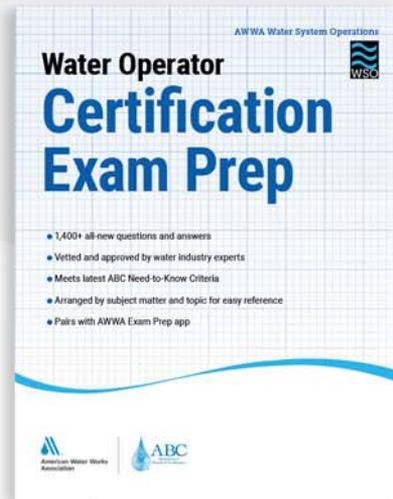
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## Honoring A Small Water Utility

The PNWS annual conference is always an opportunity to learn from each other and challenge ourselves to be the best. It provides surprises, insights and “ah-ha” moments that put what we do in a broader perspective. I am continually inspired by the large urban water utilities – their challenges and dedication to delivering water 24/7 to millions of people. This Spring in Tacoma I was humbled by a very small utility that keeps delivering safe drinking water to its community with volunteer help.

During the History Session of the conference, we had the honor of learning the story of Carbonado, a town in Pierce County, Washington with a population of 670. Carbonado is located near the Carbon River in northern Pierce County, approximately 50 miles (80 km) southeast of Seattle and in the shadow of Mt. Rainier. Carbonado served as an important coal mining community in the late nineteenth and early twentieth centuries, when the town was the largest producer of coal in the State of Washington. The Carbonado Hill Coal Company closed in 1937 but some residents stayed and have maintained their town and water system, but it hasn't been easy.

The coal mines in the watershed for the town have created many challenges. The water can disappear into a mine, and the abandoned mines are polluted and still produce gas. Source water protection has its own

Carbonado served as an important coal mining community in the late nineteenth and early twentieth centuries.



You can see the photos of their system on the PNWS website in the 2018 Tacoma conference presentations (Historian).

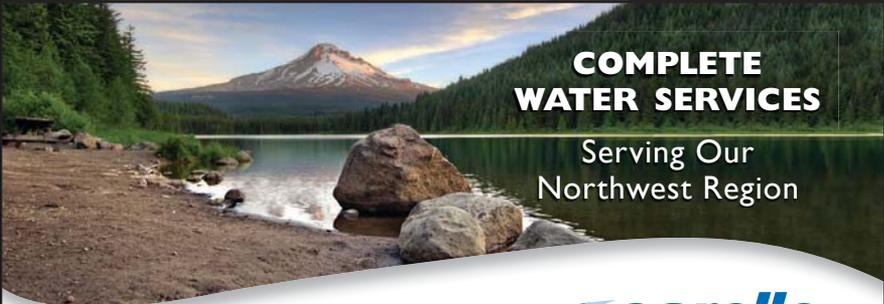
challenges with logging and spraying and even a plan to spread biosolids in the watershed, which they fought and won. The Town has long-established water-rights, ownership of all water infrastructure and limited right of way easements, but they don't own the watershed, although they keep trying.

Because of the abandoned mines, little groundwater is available, so they protect their simple and effective surface

water system. This surface water system consists of very small streams – some with a width of no more than 15 inches – and springs that are guided to a central reservoir and treatment facility. Seems simple, right? Well, during the presentation at the conference, we were given a visual tour of the streams and springs and I was stunned. The community of Carbonado cleans and shepherds these streams *by hand* every Spring. They have a 50 gallon drum for a settling tank along the way and even wooden pipe that is used to channel water around a mine shaft that had opened. Here is a community that intimately knows its water sources. They also have the same issues the urban utilities have: aging infrastructure, source protection, and funding.

Anyone want to share their story of a small water system? Let me know. 

Catherine Howells, PhD  
Chair, History Committee  
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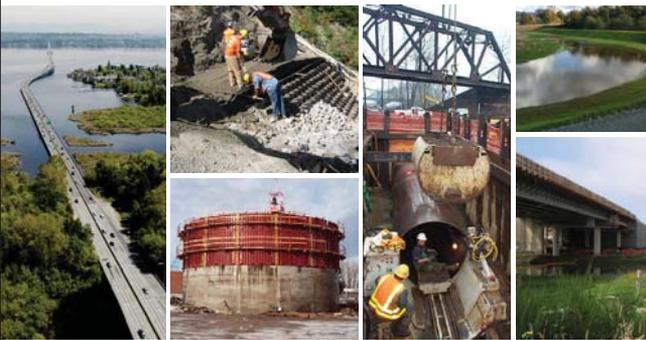
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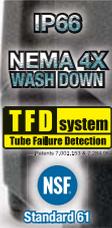
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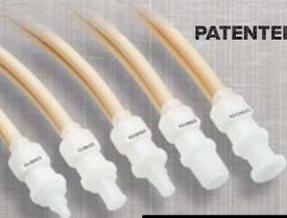
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