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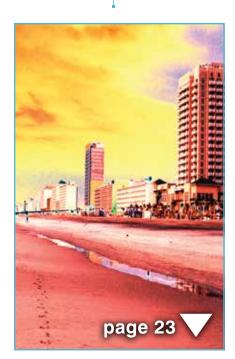
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WaterJAM 2018, held in Virginia Beach on September 10-13, set a new registration record and continues to demonstrate the value of the services our industry provides.

▼ FEATURES

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New WWEA President Shawn Heselton highlights the Association's successes over the past year and shares his dynamic vision with members.

Sustainable Utilities Committee – A Year in Review

The Sustainable Utilities Committee's achievements this year include earning Virginia Green certification for WaterJAM for the fourth consecutive year, developing the Sustainable Event Checklist, and touring the Hardywood West Creek Brewery.

Service Authority Making "Smart" Decisions

Kipp Hanley explains how the Prince William County Service Authority's use of electronic manhole cover sensors allowed it to remotely monitor two of its critical sanitary sewer lift stations during a power outage.

▼ WEF FEATURES

Women in Water: Thriving Despite Low Numbers

Women account for 14.9% of the water workforce. Despite their lower numbers, they are leaders in their sector. Female operators and utility leaders train new employees, support innovations and technologies, manage facilities, and support the environment and public health in their communities.

Water Workforce Development

Despite the long-term economic and educational opportunities available in the water sector, finding and retaining talent is a challenge.



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Captaining the SHIPS of VWEA

las, another successful year is behind us and with every passing event, I become more invigorated and prouder to be a part of VWEA. As the Association's president, I am humbled to serve as your captain in the coming year.

President's Corner

This year's VWEA/VA AWWA Joint Annual Meeting (WaterJAM) was interesting, to say the least. While the number of registrants increased nearly 10% to 1,795 from last vear, all eves were on Hurricane Florence as it barreled toward the East Coast, making emergency preparation and the safety of the attendees a priority. Even though a full day's worth of presentations, events, tours, and such had to be cancelled, the WaterJAM Committee did an outstanding job of planning, communicating, and rearranging on the fly. A huge "thank you" to Evan Bowles and Chris Johnson, WaterJAM Co-Chairs, and the WaterJAM Committee for their work on this showcase event. As an aside, both associations are looking at ways for the presenters to give their cancelled sessions. . . stay tuned!

Before setting sail on this coming year's initiatives, I'd like to highlight some of the fantastic successes from 2018:

 WWEA hosted the 2018 WEF Collections Systems Conference in Virginia Beach on April 8-11, 2018. The national conference brought approximately 400 attendees together to share information on topics like asset management and sustainability, integrated wet weather planning, and utilities of the future. WEF put on a wonderful social event at the Virginia Aquarium and Marine Science Center.

- Membership hit an all-time high: the VWEA includes 1,692 members, 103 of which are state-only. The state-only membership initiative helped fuel faster growth in VWEA during the two years it has been offered. This membership option gives public entities an avenue to enjoy the benefits of VWEA at a much-reduced cost in comparison to WEF membership.
- The Association continues to add to the scholarship fund; we have approximately \$200,000 in the fund. This year we were able to award a little over \$21,000 in scholarships.
- VWEA is on the verge of completing its Strategic Plan update, which is done every five years. Dana Hargrove and Ryan Nagel have been instrumental in the update. It focuses on six goals: Leadership and Advocacy, Membership Value, Education and Training, Collaboration and Outreach, Technology Optimization, and Organizational Stewardship. Like a compass is used in nautical navigation, the update will help guide the Association toward its objectives.

In the 13th century, Saint Thomas Aquinas, an influential theologian, philosopher, and priest, said, "If the highest aim of a captain were to preserve his ship, he would keep it in port forever." The quote illustrates that without being dynamic and deliberate, one will become complacent. VWEA is always at the top of the *crow's nest*, looking to provide new offerings and opportunities to its members. That brings me to the topic of SHIPS. . . no, not the ones you set sail in; instead, ones that are at the core of the Association.

"Education, training, recognition, service, and networking are just a few of the superb benefits that members enjoy." **MemberSHIP:** Focusing on our membership through quality events and innovative programs is important not only in order to keep members, but to gain new members as well. Education, training, recognition, service, and networking are just a few of the superb benefits that members enjoy.

VWEA is looking into an exciting way to broadcast our top-notch water and wastewater presentations to a larger audience. The E-JAM concept will video teleconference the presentations to host sites throughout Virginia and will also be eligible for CECs.

With the success of the annual National Utility Management Conference comes an opportunity to hold a similar event in Virginia. Discussions around topics like asset management, alternative project delivery, and effective utility management are essential to the water and wastewater industry. The joint Utility Management Committee is looking to collaborate with other committees to bring this event to fruition.

LeaderSHIP: VWEA's Past President, Eddie Abisaab, once said, "As leaders, we have a duty to encourage and motivate

"A key component of VWEA's strategic plan is organizational stewardship, which involves using our resources effectively and efficiently to serve our members and unify the water community."

those who show passion and commitment in followership to lead." Identifying and fostering strong leadership is crucial to the Association's success. VWEA is in the process of developing a Leadership Academy that will educate, train, and provide opportunities to emerging leaders in the water industry. Participants will develop the skills needed to effect change and become helmsmen within their organizations.

ScholarSHIP: VWEA is always looking for ways to increase its scholarship fund so that it can, in turn, provide deserving undergraduates financial assistance in a time of rising tuition costs. The Association is also dedicated to providing scholarships to select

Virginia wastewater treatment operators to cover the cost of the Wastewater Operator Short School.

StewardSHIP: A key component of VWEA's strategic plan is organizational stewardship, which involves using our resources effectively and efficiently to serve our members and unify the water community. This is done by maintaining financial stability while serving as a premier water quality association.

I look forward to serving as your president in the coming year. Without you, our faithful members, there wouldn't be a ship or a captain. Thank you for your support, participation, and volunteerism in VWEA. Θ

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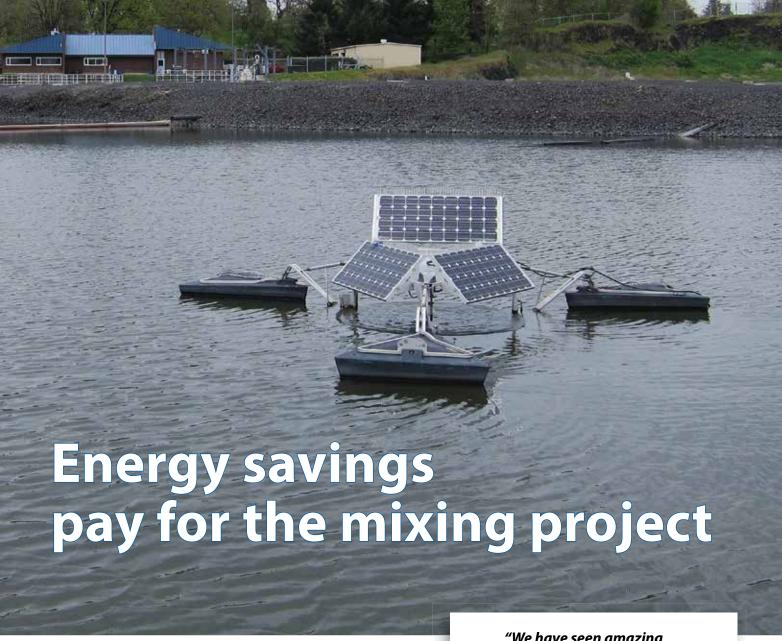
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VWEA Recognizes the 2018 AWARD WINNERS

Each year at WaterJAM, VWEA honors and recognizes our members for their successes and contributions to VWEA, WEF, and the water environment field. Below is a list of 2018 awardees. Congratulations to all of our 2018 award winners! If you are interested in nominating an individual for an award for 2019, visit our website: https://vwea.site-ym.com/page/Awards.

VWEA 2018 AWARD PRESENTATIONS

WEF Life Membership Award Robert Forgione

Upper Occoquan Service Authority

VWEA Facility Safety Award (2017)

Arlington County Water Pollution Control Plant

WEF Laboratory Analyst Award

Hannah Thompson HRSD

WEF William D. Hatfield Award

Ed Hayner Stafford County

WEF Delegate

Andy LandrumWhitman, Requardt and
Associates

VWEA Stormwater Splash Award

Chris Pomeroy AquaLaw

Golden Manhole Award TJ Johnson

Delta Systems Environmental

VWEA Public Official Award

Congressman Robert J. Wittman

A.H. Paessler Award

Dr. Charles Bott

HRSD

Quarter Century Operator Club Award

Jewel Minor Barbara Jackson City of Richmond

President's Award Scott Shirley

Western Virginia Water Authority

VWEA Student Design Competition

George Mason University

Enslow-Hedgepeth Award

Karen Pallansch

Alex Renew

WEF Arthur Sidney Bedell Award

Stacie Crandall

HRSD

5-S Society

Dana Hargrove Ryan Hendrix Jewel Minor



Robert Forgione of the Upper Occoquan Service Authority receiving the WEF Life Membership Award.



An Arlington County representative receiving the VWEA Facility Safety Award.



Hannah Thompson of HRSD receiving the WEF Laboratory Analyst Award.



Ed Hayner of Stafford County receiving the WEF William D. Hatfield Award.



Chris Pomeroy of AquaLaw receiving the inaugural VWEA Stormwater Splash Award.



Dr. Charles Bott of HRSD receiving the A.H. Paessler Award.



Barbara Jackson of the City of Richmond receiving the Quarter Century Operator Club Award.



Stacie Crandall of HRSD receiving the WEF Arthur Sidney Bedell Award.



Timothy "TJ" Johnson of Delta Systems Environmental receiving the Golden Manhole Award.



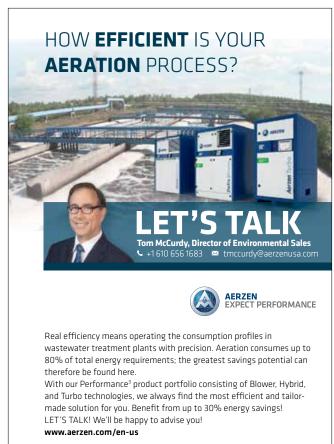
Jewel Minor of the City of Richmond receiving the Quarter Century Operator Club Award.

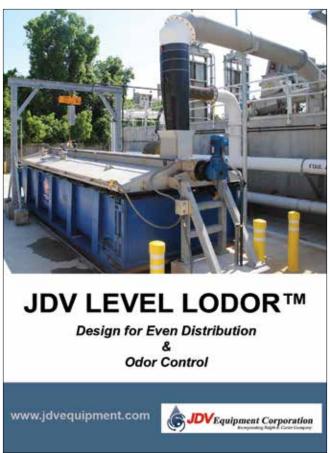


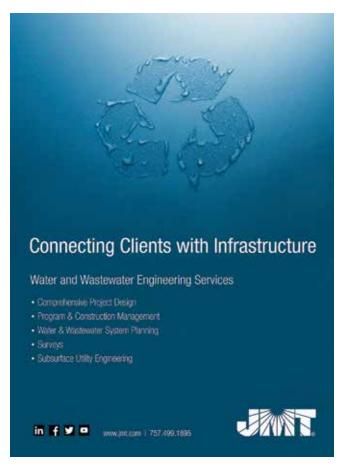
Past VWEA President Scott Shirley receiving the President's Award.













By Katherine Saltzman

Women in Water: Thriving Despite Low Numbers

Women are Underrepresented in Water Sector, Data Say



The water sector employs significantly fewer women than the national average of all workers, according to the report Renewing the Water Workforce: Improving Water Infrastructure and Creating a Pipeline to Opportunity, published in June 2018 by the Brookings Institute (Washington, D.C.).

According to the report, 46.8% of workers across the U.S. are women, though women "only account for 14.9% of the water workforce." Furthermore, the occupational breakdown of women in water is skewed. "While women make up a majority of water workers in certain administrative positions – including 95% of secretaries – they only

account for a fraction of employment in some of the largest water occupations overall, including plumbers (1.4%) and water treatment operators (5.2%)," the report says.

Successful women on the job

Joanna Healy, a Grade 4 certification operator at the McDowell Creek Wastewater Treatment Plant, which is operated by Charlotte Water in North Carolina, began her career in the mailroom at the Hoover Dam in Nevada. Soon a position testing water and wastewater samples opened and she took it. Later she moved into compliance reporting. Healy then transferred to a community

college, where she received an associate degree in Applied Science in Wastewater Treatment before moving to North Carolina.

"Usually there aren't a whole lot of us in the classes," Healy said. "In the maintenance tech class there were over 60 students and I was one of two females."

Healy attained her Grade 4 certification in 2.5 years by earning her associate degree. She also received a Pretreatment and Maintenance Tech 1 certification and plans to get a Pretreatment and Maintenance Tech 2 certification.

Despite few women in her classes, Healy said that she has received support and



mentorship from trainers and colleagues throughout her training and career in the water sector.

"I think it's really neat that women can do anything men can do," Healy said. "That's what I tell my daughter. You can do all the things the guys can do, but you don't have to prove yourself to anyone."

Tara Romine started working at Charlotte Water in October 1990 as a laborer. An operator position later became available and she received on-the-job training to

become qualified; more formal training was not readily available then, Romine said. By July 1998 she had received her Grade 4 certification and in 2000 took on the responsibility of first chief operator at the Mallard Creek Water Reclamation Facility for Charlotte Water. When the facility became the first ISO-certified plant in Charlotte Water, she assisted with the development and creation of the ISO program. In her role, Romine helps implement standard operating

procedures and create work instructions and procedures for new operators, among many other responsibilities.

Romine said her career in water has been filled with strong relationships and rewarding opportunities.

"I was always treated well," Romine said. "The gentlemen that I train have given me the utmost respect. It has been a very good working environment for me. I feel like I have really been given a gift to serve the community."

Barriers to entry

The Brookings report includes overall recommendations on improving gender and racial diversity in the water sector. These include:

- Increasing the visibility of the sector for younger students.
- Creating more opportunities for workforce training.
- Expanding career paths for professionals in the water workforce.

However, the report stops short of forming conclusions on why so few women are in the water workforce.

Kalpna Solanki, CEO of the Environmental Operators Certification Program, suggests that Canada faces similar obstacles to the U.S. in terms of recruitment, training, and retention, especially for female employees. Solanki's non-profit organization classifies water and wastewater facilities in British Columbia and Yukon and certifies the operators who work in those regions.

"Very often people literally fall into the career. It wasn't necessarily a planned path. It would be better if it was proactive rather than reactive." Solanki said.

Often information on these water jobs are heard about at the Canadian equivalent of city or state parks and recreation or sanitation departments with majority male staff, she said.

"[Men] get into the [water/wastewater] workforce because they happen to be there," she said. "There are not many women [here], so the result is fewer women going into the field from that point."

Solanki echoed the Brookings report's message that women's job descriptions within the water sector are skewed. While things are changing and most female operators love their jobs, she said that she is aware of some situations of discrimination and harassment in the workforce.

If 10% of the water workforce is female, they are not spread evenly among the four major area specialties: water treatment,



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"The gentlemen that I train have given me the utmost respect. It has been a very good working environment for me. I feel like I have really been given a gift to serve the community."

water distribution, wastewater collection, and wastewater treatment, she said.

"I would be surprised if more than 1% is female in wastewater collection and 1% to 2% of women in water distribution," Solanki said. "Within that 10% of female operators, there are some specialties that have almost no women at all."

Overcoming entrenched attitudes

Even though Canada has workforce standards in place at public utilities, each employer at the utility must reinforce rules and guide employees on proper workplace behaviors. This is especially true if women have historically been underrepresented in the specialty area. Solanki explained.

"Some of the feedback I have received from women, especially in water distribution and wastewater collection, [is that] the problem often lies at the employer level," she said. "The support mechanisms are not in place [and] women are just parachuted into the workforce. The men are not prepared for this change [and] are not educated with regards to workplace harassment. The women are not properly trained in terms of what is acceptable and what is not acceptable behavior and what resources are available to them," Solanki said.

In June 2018, Solanki participated in a panel discussion during a workplace diversity workshop at the Canadian Water Summit. Topics included how to promote the field in general as well as to women; it also dealt with how to better recruit and integrate women in water sector areas in which they are currently underrepresented.

"Most of the women that I meet like the work, are good at it, and like the variability of the job – there are no two days that are the same," Solanki said. "We do hear of a few women who face harassment but, in general, most of the women are happy and really enjoy being in the field."

Amanda Schuffels serves as an example of a happy newcomer to the water sector. In January 2018, she took on the role of full-time grade 1 wastewater operator at the Kelowna Wastewater Treatment Facility in British Columbia, Canada. Previously she

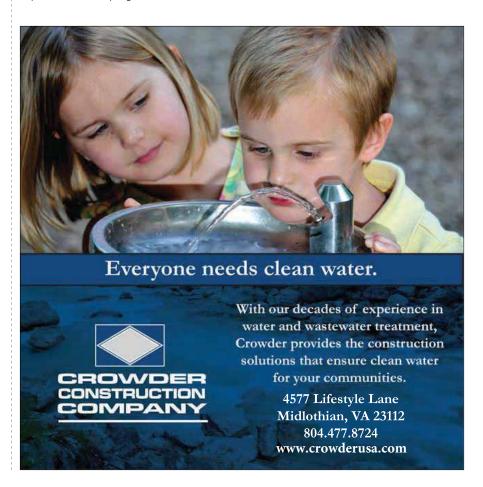
had worked in co-op training positions and part-time roles at the utility.

"A lot of men and women have taken me under their wing and have taught me what I needed to learn so that I can strive in my position," she said. "I love the job and industry."

Despite their lower numbers, female operators and utility leaders are at the forefront of the sector. These women prepare and train new employees, support innovations and technologies, manage the day-to-day operations of their facilities, and support the environment and public health of communities across the world.

Katherine Saltzman is Publishing Assistant at the Water Environment Federation (Alexandria, VA), where she works on WEF's Operator Initiative programs.

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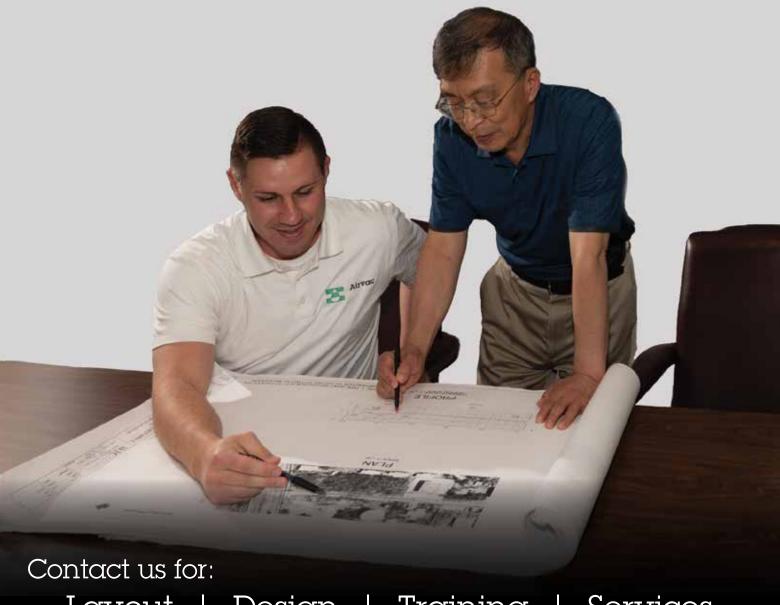
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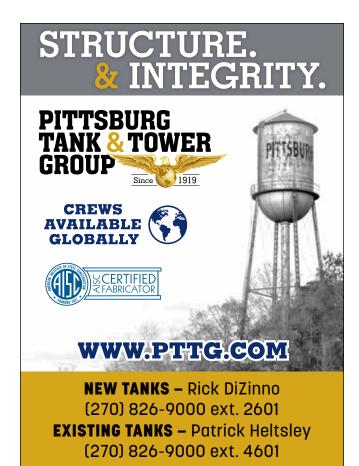


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By Katherine Saltzman

Water Workforce Development

Newly Released Policy Report on Water Workforce Development Focuses on Obstacles, Innovations, and Plans



Researchers at the Brookings Institute (Washington, D.C.), a bipartisan policy think tank, published a report focusing on establishing robust water workforce development programs to accommodate today's water infrastructure needs.

The report, Renewing the Water Workforce: Improving Water Infrastructure and Creating a Pipeline to Opportunity, addresses the unique employment opportunities available to the American worker in water sector jobs and the simultaneous high and urgent demand for these employees across the U.S.

The report highlights the diverse opportunities and employment options in the water sector. In 2016, the water sector included 212 different occupations ranging from operators and construction workers to administrative and managerial roles. Employees in water occupations, on average, earn higher wages compared to all workers nationally; water employees may earn up to 50% more compared to workers at lower ends of the income scale. In the tenth and twenty-fifth income percentile, water workers earn hourly wages of \$14.01 and \$17.67, respectively,

"compared to the hourly wages of \$9.27 and \$11.60 earned by all workers at these percentiles across the country," according to the Brookings report.

As income inequality in the U.S. continues to rise – especially between populations with university degrees and those without, researchers note – the water sector can offer good-paying jobs. Water sector jobs require rigorous hands-on training and application of STEM skills and project management; this flexibility offers individuals with otherwise limited formal education sustainable incomes.



"Water utility leaders, municipalities, and associations are finding innovative ways to engage and attract young people to opportunities available in the water sector."

Finding the Right Fit

Despite the long-term economic and educational opportunities available in the water sector, there are obstacles with finding and retaining talent. In 2016, research showed that employees in "water occupations are significantly older than the national median (42.2 years), including water treatment operators (46.4 years old)," the report says. Utilities and municipalities across the country are concerned about high retirement rates and limited pools of trained candidates to enter the water sector.

Water utility leaders, municipalities, and associations are finding innovative ways to engage and attract young people to opportunities available in the water sector.

Pipeline to the Water Sector

Researchers found the water sector lacks the public visibility needed to attract individuals to the water workforce. Despite lower education barriers and stable, good-paying jobs, there are not enough people pursuing water jobs or gaining the necessary skills or training to obtain careers in the water sector.

According to researchers, though internships or apprenticeships are being used to recruit younger and more diverse employees, these programs may be limited by budget shortages and/or the need to retrain students in basic math, science, and English skills, which are not necessarily taught in high school. It is also important to note that inadequate newcomers to the water sector also may be part of a "general"

shift away from the skilled trades and vocational education among students, which is compounded by the many existing water workers nearing or eligible for retirement," according to the Brookings report.

Based on communication with utility managers and other stakeholders, researchers recommended a more collaborative effort among utilities, municipalities, government agencies, and policymakers to invest in and prioritize water workforce development programs to enhance the visibility and attractiveness of the sector. Plans to increase water workforce outreach programs include hiring and training diverse mentors. These mentors can connect with younger individuals, revitalize the recruiting process, and serve as long-term guidance counselors for students in water-related internship or fellowship programs.

Other ideas include acquiring funding from federal and state policymakers to establish "bridge programs" and educational initiatives to provide opportunities for younger workers or adult students to explore water careers and gain experience.

Retention and Long-term Employees

There are financial and programmatic obstacles to developing workforce programs when water utilities also must finance infrastructure repair and investment. Utilities also face budget cutbacks and need to remain conscious of ratepayers' bills. In these cases, utilities may prioritize infrastructure improvements rather than workforce development

programs. Though infrastructure investment is critical to maintaining water quality, limited funding for workforce development can lead to shortcomings in career advancement and earnings for water sector employees.

Some smaller utilities, for example, may have one or two employees with no supervisory role. In this situation, workers who have held the same role at a utility for several decades may seek other opportunities at a larger utility or consulting group. Meanwhile, trends indicate that younger workers prefer opportunities to diversify and have mobility in their careers. This leaves a significant gap in skilled workers available to run the critical daily operations at the utility.

"To have a team manage the water infrastructure in water emergencies but also day-to-day operations is really vital," said Kishia Powell, Commissioner of the Department of Watershed Management for the City of Atlanta, during a panel discussion following the release of the Brookings report. "We have reached 130 water main breaks in the month of January and are facing a 55% eligibility retirement rate. Further, it is difficult to recruit young talent."

Researchers and stakeholders concluded that by increasing training for supervisory roles, developing income tiers for more experienced employees, and creating more established career paths, utilities could better retain skilled employees and create workforce advancement opportunities in the water sector.

Programs Related to Workforce Development and Training

Several utilities, national agencies, municipalities, and non-profit organizations are taking on the task of providing tools and programing to enhance recruitment and training.

National Green Infrastructure Certification Program. This spring, WEF, in collaboration with DC Water, launched the National Green Infrastructure Certification Program (NGICP). This program is a national certification standard for green infrastructure construction, inspection, and maintenance employees. To earn the certification, students with a high school degree must complete 35 hours of course material and



pass an exam. NGICP supports the development of proficient green workforces and establishes a career path for skilled green infrastructure workers.

PowerCorpsPHL. This 2013 initiative by the City of Philadelphia AmeriCorps engages at-risk young adults and returning, formerly incarcerated citizens to enroll fulltime in the program and work to support Philadelphia's environmental stewardship, youth violence prevention, and workforce development priorities. PowerCorpsPHL student crews work with Philadelphia Parks & Recreation as well as the Philadelphia Water Department to improve stormwater management and revitalize public lands and parks. Students spend five months working and one month dedicated to career training. Students also can apply to a fellowship program that matches them with an external partner to gain additional environmental career experiences.

Baywork. In 2008, amid concerns in the San Francisco Bay area regarding lack of water workforce development programs at local utilities, several water and wastewater

utilities collaborated to develop Baywork. This program's mission is to "develop and implement programs and strategies that support development of high-performance workforces." Baywork's resources are open to all Bay-area water and wastewater utilities. The program also provides opportunities for utilities to share research, ideas, programs, and concerns related to workforce issues. Baywork also provides extensive job and internship listings and training schedules for those interested in the water sector.

These initiatives are some examples of the workforce development training necessary to bring public visibility to the water sector and green infrastructure jobs while also offering critical preparation and training for diverse and skilled individuals to enter and find long-term careers in the water workforce. As highlighted in the Brookings report, continued collaborative workforce development programs can address the needs of water infrastructure and the water sector while also supporting greater and more stable economic opportunities for U.S. communities.

Katherine Saltzman is Publishing Assistant at the Water Environment Federation (Alexandria, VA), where she works on WEF's Operator Initiative programs.

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LEARNING, FELLOWSHIP, AND OUTREACH AT WATERJAM 2018 IN VIRGINIA BEACH

his year's WaterJAM theme, Waves of Innovation, perfectly reflected the environment of learning, fellowship, and outreach experienced in and around the Virginia Beach Convention Center. Many call WaterJAM a family reunion, and we're happy to report that we set a new record at 1,795 registrants, including 284 first-time registrants. We've got a big family, and it's growing every year!

Although the conference officially started on Monday, we held our annual Water Taste Test on Sunday afternoon in Neptune's Park along the Boardwalk. The majority of participants preferred the taste of Virginia Beach's tap water to bottled water. This type

of outreach helps demonstrate the value of the services our industry provides to the public every day of every year.

Monday offered numerous opportunities for education, networking, and outreach. The morning kicked off with two WaterJAM favorites: the golf outing and the clay shoot. This year's golf outing was held at The Signature at West Neck in Virginia Beach. Over 160 golfers duked it out on the links, then enjoyed a cookout and a Water For People raffle. The clay shoot was held at Old Forge Sporting Clays in Providence Forge and hosted a record number of 84 shooters. Following a morning of skeet, the attendees enjoyed a hearty barbeque lunch. The Young

Professionals Committee's Community Service Event was held in conjunction with Lynnhaven River Now in Beach Garden Park. 17 volunteers put on their boots and waders and removed over 100 pounds of trash from the park and river marsh to help reduce sources of contamination in Virginia's waterways. We also hosted three workshops (Lab Practices, Water Reuse, and Filter Detectives), as well as a WEF/WRF Lift Innovation Training Session. Following a full day of activities, we brought everyone together for the Meet and Greet, held at the Hilton Oceanfront. Participants networked late into the night with food, drinks, and plenty of laughs and set the perfect tone for the remainder of the conference.



WaterJAM Committee Leadership.



Monday night networking event.

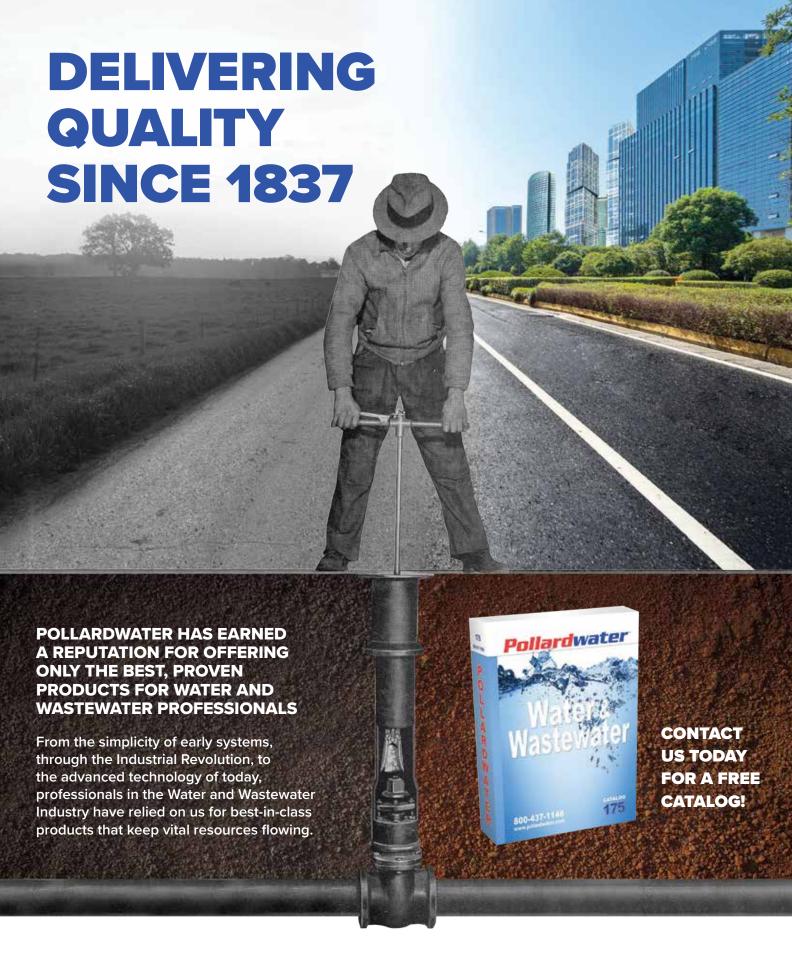


Young professionals at the Meet and Greet.



Young professionals at the Meet and Greet.





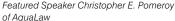


Tuesday morning kicked off early with our annual Water For People 5K Fun Run/ Walk. Set against the perfect oceanfront backdrop, 28 participants enjoyed a brisk run along the Boardwalk while watching the sun rise over the Atlantic Ocean. The Orientation Breakfast helped first-time attendees become more acquainted with all the opportunities WaterJAM has to offer with a fun trivia game that got everyone thinking! The Orientation Breakfast was followed by an eventful Opening Session, with attendance so large that the room required expansion! The Opening Session started with an address and proclamation by the Mayor of Virginia Beach, Mr. Louis R. Jones. The Featured Speaker, Mr. Christopher E. Pomeroy of AquaLaw, provided an enlightening discussion of the current and upcoming state and national regulatory landscape. The Keynote Speaker, Ms. Emily Simonson of the U.S. Water Alliance, provided a rousing discussion on each of our roles as advocates for the value of water to our communities. These speakers were followed up with national activity and initiative updates by the national WEF and AWWA representatives, Ms. Ifetayo Venner and Ms. Mary Gugliuzza, respectively.



Networking during lunch.







Keynote Speaker Emily Simonson of the U.S. Water Alliance

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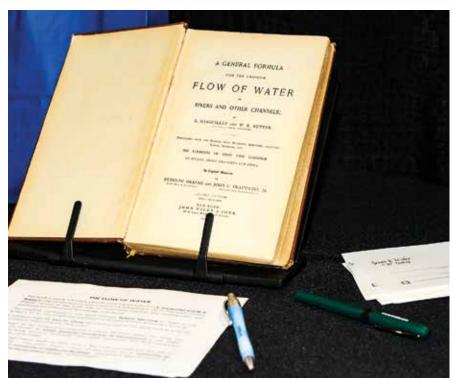
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The Opening Session was followed by the opening of the Exhibit Hall, which set a record of 212 booth registrations! The exhibitors shared cutting-edge information with the attendees about products and services that help drive innovation in our industry. The Exhibit Hall also included a number of networking and educational events to help diversify the day's offerings. Once again, the Sewer and Water Art Gallery showcased unusual field artifacts provided by utilities, engineers, and contractors. These artifacts were displayed in a gallery throughout the conference and attendees voted on the most interesting artifact. The most interesting artifact, a rare 1901 book titled A General Formula for the Uniform Flow of Water, came from the Fairfax County Department of Public Works and Environmental Services. The Young Professionals Committee hosted a Cornhole Challenge and tables with electrical and phone chargers as a fun way to take a break from the conference. The day closed out with the Water Reach Silent Auction, where attendees bid on a diverse collection of donated and handmade items that helped raise money for a great cause.



Sewer and Water Art Gallery artifact: a rare 1901 book titled A General Formula for the Uniform Flow of Water from the Fairfax County Department of Public Works and Environmental Services.



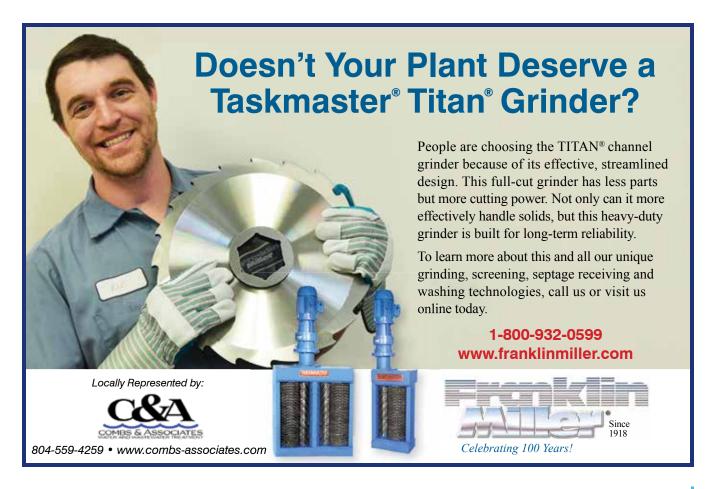


The Young Professionals Committee's Cornhole Challenge.

Both Tuesday and Wednesday included a multitude of educational opportunities for students, young professionals, and seasoned professionals alike! The technical sessions allowed our presenters to share valuable educational information on forward thinking and practical topics. Mobile Sessions returned for a second year, offering multiple opportunities for attendees to engage in enhanced learning interactions with exhibitors, all while obtaining CECs! Students and young professionals contributed to an excellent Poster Session and Digital Knowledge Presentation, enabling them to engage and network with water professionals and teach them about cutting-edge research and practices.

Unfortunately, a portion of this year's WaterJAM was cut short due to the forecasted effects of Hurricane Florence. We hope you enjoyed your time at WaterJAM and Virginia Beach this year. On behalf of the entire WaterJAM Committee, we'd like to thank all attendees for coming to contribute to our Waves of Innovation. We look forward to seeing everyone in 2019 again in Virginia Beach!

□



Water For People

WaterJAM 5K Fun Run/Walk

By Jamie Bondurant, Water For People Committee Chair

Twenty-eight runners met at King Neptune on the Virginia Beach Boardwalk to enjoy a sunrise on the beach and a scenic 5 km run. The 2018 Water For People WaterJAM 5K Fun Run/Walk was made possible by volunteers Andrew King (Fairfax Water), John Millspaugh (Arcadis), Jamie Bondurant (Hazen and Sawyer), Dan Horne (Virginia Department of Health), and Chip England (Henrico County Public Utilities). Prior to the run, the participants stretched and enjoyed the good weather, refreshments, and free reusable water bottles.

The runners started the race at 31st Street on the Boardwalk, ran south for a mile and a half, turned at 9th Street, and finished back under King Neptune's trident. Alayna Bigalbal (Dewberry) finished first overall with a time of 19:28 and Mark Titcomb (Newport News Waterworks) was a close second with a time of 20:01.

The first- and second-place winners took home \$25 Running Etc. gift certificates and celebratory drinkware. Two other runners were lucky raffle winners of the \$50 Amazon gift cards. All the runners that registered by the WaterJAM early registration deadline took home custom race technical shirts. Those that registered later were able to choose from the vintage race shirts still available. All finishers also received finishers' flags to display on their name badges for the conference.

The 5K Fun Run/Walk was a fundraiser for Water For People, which works to share the vision of a world where all people have access to clean water, adequate sanitation, and basic health services.

Water For People works with people and partners to develop innovative and long-lasting solutions to the water, sanitation, and hygiene problems in developing nations all over the world. The Virginia chapter of Water For People hosts many events throughout the year to promote awareness and work together toward a common goal of clean water for all. To learn more about Water For People and its Virginia chapter activities, please visit www. waterforpeople.org or email Jamie Bondurant at jbondurant@hazenandsawyer.com.

Thank you so much to all volunteers, sponsors, and participants of this year's 5K Fun Run. We couldn't have done it without you! We are looking forward to seeing you at next year's WaterJAM 5K back in Virginia Beach.



The Water For People 5K Fun Run/Walk participants.







Fun Run winners.

Virginia Beach Tap Water Wins the Water Taste Test

Which do you prefer: the taste of tap water or bottled water? On Sunday, September 9, Virginia Beach Public Utilities asked visitors to the Virginia Beach Boardwalk that very question during a double-blind WaterJAM Taste Test* at the 31st Street Park. The result: 20 people preferred tap water, 15 people preferred bottled water, and four people had no preference. While participation may seem low (tap water reined in the votes, but the weather rained out the event), we were thrilled to see the results favor Virginia Beach's great-tasting water!

*The WaterJAM Taste Test is a kickoff event to the VWEA/VA AWWA Joint Annual Meeting. Each year, WaterJAM provides numerous professional growth opportunities for hundreds of water industry professionals from the Mid-Atlantic region and beyond. \odot



Water Taste Test community outreach event.



Pictured left to right: Dr. Matthias Wittenberg (CDM Smith), Laura Tworek (Virginia Beach Public Utilities), Don Piron (Virginia Beach Public Utilities), and Susan Sadowski (Virginia Beach Public Utilities).



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WaterJAM 2018

Clay Shoot

By Greg Everhart, Secretary/Treasurer

Eighty-four VWEA and VA AWWA members participated in the WaterJAM 2018 clay shoot held at Old Forge Sporting Clays in Providence Forge on September 10. This is the finest sporting clays facility in Virginia and we were once again treated to 100 challenging targets, delicious food, and an overall great time together.

Team Champion honors were grabbed by Southern Corrosion (Brett Woodruff, Pam Baughman, Tom Delbridge, and Bryant Francisco) in a repeat performance from last year. CHA Consulting, Inc. (Doug Hudgins, Steve Clary, Justin Pruitt, and Michael Ward) claimed second-place honors, moving up a slot from last year. The third-place team was Combs & Associates, Inc. (Bryce Carter, Greg Everhart, Sergio Gomez, Jonathan Taylor, and Alexander Kraemer).

Bryce Carter was the Shoot Champion with a score of 87. Max Chance and Greg Everhart shared second-place honors by both breaking 81 of 100 targets. Unlike golf, the highest score wins in sporting clays.

Everyone enjoyed a fine lunch of barbecue sandwiches and vegetable soup, followed by the awards ceremony. As always, each shooter went home with a door prize for participating.

Due to the generosity of our sponsors, we were able to include two grand prize

drawings this year. Jessica Hou was the lucky winner of a RTIC cooler and Frank Haltom took home a DeWalt drill package.

This was a record-setting year for the annual clay shoot: 84 shooters surpassed the previous high mark of 64 and 23 sponsors

outpaced the previous high of nine. Thank you to our participants and sponsors for a successful and safe event.

We are already making plans for next year's shoot at WaterJAM 2019 and hope you can join us for another great day of shooting.

Output

Description:



From left to right: Lauren Glose, Jordan Combs, Lori Crossland, and George Hayes.



Jeremy Harrison



WaterJAM Golf Outing Provided Plenty of Energy, Excitement, and Fun

By Thomas Lipinski, Loudoun Water

It was early September, not long before one of the world's biggest golf events. The nation's golf world was consumed with one big question - who were going to be the final teams? It would be an understatement to just say this golf event is a big deal. The atmosphere at an event like this, where premier golfers are pitted against each other, creates riveting theater. If you're lucky enough to be on the grounds during the tournament, you can feel the energy. It radiates from the players and it can be infectious, passed on from one to all. That's why the golf world just wanted to know one simple thing - who? What big names would be there? Dustin? Phil? Jordan? Of course, we are talking about the 2018 WaterJAM Golf Outing and not the Ryder Cup. Sorry if you were misled and feel a little disappointed. While the Ryder Cup has huge television ratings and decades of storied history, that's where the differences end. Well, maybe talent level as well. We suggest that you – if you haven't already – attend a WaterJAM Golf Outing and it will all make sense. The energy. The excitement. The fun.

Once again, the scene was The Signature at West Neck golf course in Virginia Beach. The source of energy was the record-setting 138 golfers that started their WaterJAM experience with a great round of golf on a beautiful, sunny late summer day. Thanks to this great group, as well as our volunteers, the golf tournament raised nearly \$5,500 for Water For People.

History and tradition are always key elements to the making of a great event. As is customary, the fun started early with a relaxed continental breakfast, some time for practice, and some time for strategy. The heavy rains of the night before influenced plans on how to best approach the soggy Signature. Undoubtedly the kegs of beer and games on the course also influenced the strategy for the day. Successful mulligan and mug management were no doubt hallmarks of the winning teams. Almost all, winners or not, managed a new hairstyle with a pink or gold wig and a new outfit with a hula skirt or a tutu. Photographs taken on the course reveal that successful management of hair and apparel decisions were mixed – some chose well, others did not

Though not yet a longstanding tradition, the marshmallow drive contest was back once again and history repeated itself – tee it up and see how far you could smack a marshmallow! All players lined up and swung for the Stay Puft Marshmallow Man and the chance of long-distance pride over all others. The secret was exceptional concentration, timing, and self-control in not eating your marshmallow before – or after – hitting it.

The field was a complete mix of foursomes with great golfers and duffers alike, and after the golf ended, the energy, excitement, fun, and friendly competition continued through lunch, which was the perfect time to present the day's awards. No matter their skill level, many took home awards and prizes, either from course competitions or from the fundraising prize raffle benefitting Water For People. The course contests included awards for the lowest team score in each of three flights and individual awards for hitting it closest to the pin on the par-3 holes and bombing the longest and straightest drives on different par-5 holes.

A big thank you goes out to all of the very generous corporate sponsors that donated many of the raffle prizes and to the volunteers who made the day's events fun, including a hole-in-one prize trip to Pebble Beach that once again went unclaimed. The WaterJAM Water For People Golf Outing is a perennial favorite of all participants, and this year was no different.

Next year, if you want to be a part of the energy and experience the excitement and the fun, we suggest you join us! That way, if someone says they just want to know one thing – "What big name is going to be there?" – you will have a simple answer. You.

Output

Description:



From left to right: Jeff Angiel (Loudoun Water), Matt Van Horne (Hazen and Sawyer), and Phill Yi (Hazen and Sawyer).



From left to right: Ron Milke (Eurofins Eaton Analytical), Hollie Scott (AWI), and Dixon Tucker (Virginia Department of Health).



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WaterJAM 2018

Young Professionals Community Service Event



Young Professionals Community Service Event participants.



Young Professionals participating in the Lynnhaven

In early 2018, Kelsey Kenel, Ryan Muncy, and Bianca Pinto volunteered to lead the Young Professionals Committee community service event for the 2018 WaterJAM conference. The group reached out to different organizations in Southeastern Virginia whose mission focuses on improving water quality. The Committee partnered with Lynnhaven River Now, a local organization in Virginia Beach that focuses on restoring and protecting the Lynnhaven River and other Virginia Beach waterways.

The community service event took place at the Beach Garden Park on September 10, the first day of the WaterJAM conference, and consisted of a park and river marsh clean-up. 17 volunteers attended the event in their waders and boots and worked to clean up a total of 100 pounds of trash. Volunteers found both large and small pieces of trash that were removed with trash grabbers and nets.

One objective of Lynnhaven River Now is to identify and reduce sources of contamination in Virginia Beach's waterways; at the event, volunteers were asked to record every piece of trash picked up in an effort to better track and identify existing contaminant

sources. Lynnhaven River Now has over 8,000 members that work together to help educate the community on restoring and protecting the Virginia Beach waterways.

It holds clean-up events similar to the Young Professionals Committee's community service event on a monthly basis, helping support the organization's mission.



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The Sustainable Utilities Committee

A YEAR IN REVIEW

By Christel Dyer, Past Committee Chair

he WWEA/VA AWWA Sustainable Utilities Committee (SUC) had another great year! Notable successes include: achieving four straight years of certification for WaterJAM as a Virginia Green event, developing the Sustainable Event Checklist, and touring the Hardywood West Creek Brewery.

Virginia Green

Through continued focus on sustainability and by reducing the conference's net environmental impact, the 2018 WaterJAM Conference was certified a Virginia Green event for the fourth year in a row! The 2018 WaterJAM Planning Committee continued to partner with the SUC to make this initiative a success. Items incorporated into WaterJAM that supported the certification included:

- A user-friendly WaterJAM app that reduced the number of printed planners.
- Online registration.
- Use of recycled paper products throughout the conference to include the planner and board inserts.
- Use of water- or soy-based ink in printed materials.
- Conference boards are designed for reuse each year.
- Conference attendees were encouraged to turn in the lanyards and plastic nametag holders at the end of the conference for reuse at future conferences.
- The Virginia Beach Convention Center provided:
 - Recycling receptacles throughout the venue.
 - · Reusable water bottle filling stations.
 - Bulk packaging of condiments, where applicable.
 - Restroom paper products made from recycled paper.
- Onation or composting of food waste. This year, there were five recipients of the Tidy Otter Exhibitor Award to acknowledge their efforts in sustainability. The exhibitors who met the award requirements and contributed to the green event include:
- 1. CPower Energy Management (first-time awardee)
- 2. Gannett Fleming (four consecutive years of receiving the award)



A photo of the display highlighting the Tidy Otter Award recipients.

- 3. OBG (three consecutive years of receiving the award)
- 4. The Perkinson Co. (four consecutive years of receiving the award)
- 5. Wendel (four consecutive years of receiving the award)

Thank you for your participation, awardees, and for reducing your impact on the environment! We hope to see more exhibitors participate in this effort at upcoming conferences.

Sustainable Event Checklist

Given our success in making WaterJAM a sustainable event for four consecutive years, the SUC decided to develop a Sustainable Event Checklist for other committees to use when planning for a wide range of events: anything from community outreach, golf tournaments, tours, or lunch-and-learns all the way up to a full-scale conference. The SUC presented the Checklist at the annual committee leadership training in October 2018 and the document will be available on both the VWEA and VA AWWA websites. Be on the lookout for more information on the

Sustainable Event Checklist and be sure to use it in your event planning!

Hardywood West Creek Brewery

On June 8, 2018, the SUC met up at the Hardywood West Creek Brewery. Following the Committee meeting, those in attendance received a behind-the-scenes tour of the Virginia Green-certified venue. Hardywood's beers – and business practices – have earned local, national, and international acclaim. With a focus on sustainability, Hardywood utilized the Envision rating system when designing the new facility. The project incorporated new opportunities for development to the existing community by increasing regional productivity and community attractiveness for compatible businesses, collaborating with the University of Richmond on the Beer Brewer Professional Certificate to improve the local skill base, and creating a new venue with natural outdoor features and views.

Construction and operation of the brewery preserve resources by using:

- Low-maintenance and long-life materials.
- · Recycled-content steel.

- · Reclaimed wood.
- · Local sourcing.
- Efficient mechanical systems.
- · LED and natural lighting.
- · Green power purchasing.
- · Waterless urinals.

Impacts to the site were minimized by avoiding development on steep slopes, selective tree removal and harvesting, and establishing low-maintenance native plantings to minimize the use of pesticides, fertilizers, and potable water for irrigation. For the areas disturbed during construction, reforestation and/or warm season meadows are being installed to stitch nature back together while creating habitat. This facility is leading the way in sustainable design and the SUC hopes to provide both VWEA and VA AWWA with future educational opportunities on the Envision rating system.

The SUC is looking forward to another great year of finding ways to advance sustainable practices in the utilities industry through communication and educational opportunities among VWEA and VA AWWA members and Virginia water professionals. If you are interested in joining the SUC, please contact our newest Chair, Matthias Wittenberg: WittenbergM@cdmsmith.com.

Output

Description:



Committee members pause for a photo op during the tour of the Virginia Green-certified Hardywood West Creek Brewery.







The Lab Practices Committee

A LITTLE HISTORY

By Mignonne Wint, Committee Chair

or those of you not familiar with the Laboratory Practices Committee (LPC), the LPC has been a joint VA AWWA/VWEA committee since 1995. The LPC was formed to identify and address laboratory-related concerns of the Associations' membership. Its mission also includes the review of standards and practices and to educate and promote professionalism in the water and wastewater community.

Committee Structure, Benefits, and Meetings

The LPC membership, seasoned and novice, young and old, is represented by a variety of municipal wastewater and drinking water laboratories, commercial laboratories, regulatory agencies, and vendors. The LPC provides a professional, friendly, and relaxed venue where members can network, share information, and collaborate on important issues. LPC meetings are held throughout the year for discussions, subcommittee projects, and technical presentations (which include lunch). Items of interest include regulatory concerns, state laboratory accreditation/certification, methods and technologies, sustainability, quality assurance requirements, and management issues. LPC meetings are typically structured to contain time for both subcommittee and full committee discussions. Subcommittee meetings start at 10 am and full committee meetings start at 11 am.

Notable Annual Events

The LPC exemplifies the meaning of teamwork through its subcommittees and projects. Each year, LPC subcommittees work to create the annual Good Laboratory Practices Conference to addresses current issues faced by the environmental laboratory community. This event consists of several half-day workshops and a technical program with a vendor exhibit and presents the opportunity to earn CPEs for wastewater/water operators and CECs. Hands-on workshops designed to address the analytical concerns of both operators and analysts provide practical training that analysts can use in their

daily activities. Technical session topics range from specific analytical issues to laboratory management interests. Each year, LPC subcommittees also work to create workshops and presentations for the VA AWWA/VWEA Joint Annual Meeting (WaterJAM). Information on these worthwhile events, as well as organizational contact information, can be found on the VWEA and VA AWWA websites.

LPC Members in Action

Besides the previously mentioned committee activities, LPC members participate in many other aspects of VWEA and VA AWWA. They also participate in several state and national activities and/or organizations, either through membership and/or representation. Member participation in other activities and events include but is not limited to:

- The Board of Directors for both VA AWWA and VWEA
- Various committees for WaterJAM
- The National Water Environment Federation LPC
- The Department of Environmental Quality Laboratory Stakeholders Workgroup

- The ad hoc Committee for VA's Development of Rules & Regulations for Environmental Laboratory Certification
- · The ASTM Committee D19 for water
- The NELAC Institute Proficiency Testing Committee
- Coordinator and judges for the State and National Operation Challenge Laboratory Event sponsored by VWEA and WEF
- The Detection & Quantitation stakeholder workgroup
- The National Association of Clean Water Agencies Mercury workgroup
- Science fair judges at the middle school and high school levels.
- U.S. Environmental Protection Agency Method Development Studies

With the ever-changing regulatory concerns and workforce economics, we encourage everyone interested to join and participate. There is great value to be gained from the vast amount of knowledge and experience that is shared within the LPC. For further information on how to be a part of this amazing committee, please contact Mignonne Wint: mignonne.wint@norfolk.gov.

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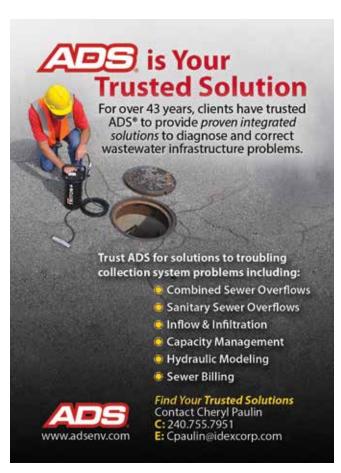
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Scholarship Committee

SCHOLARSHIP WINNERS

By Stacie Crandall, Committee Chair

he VWEA Scholarship Committee is excited to announce the winners of this year's scholarships.

Virginia Tech Short School Operator Scholarships

Two awards covering tuition and room and board were awarded. This year's winners are **William Cleary** of Chesterfield County and **Randall Sullivan** of the Town of Abingdon.

Sonny Roden Memorial Graduate Student Scholarship

One award in the amount of \$2,500 was given to a graduate student in Virginia. This year's winner is **Jigme Tenzin**. He is a graduate student at George Mason University studying Water Resources and Environmental Engineering.

VWEA Undergraduate Scholarship

Two awards in the amount of \$2,500 were given to undergraduate students in Virginia. This year's winners are **Michael Schindler** and **Sarah Shay**. Both major in Civil and Infrastructure Engineering at George Mason University.

VWEA Rising Freshman Scholarship

One award in the amount of \$2,500 was given to a rising freshman in Virginia. This year's winner is **Anika Lyer**. She majors in Environmental Science at the University of Virginia.

VWEA Member Dependent Scholarship

One award in the amount of \$2,500 was given to a VWEA member's student who majors in a water environment field and studies in Virginia. This year's winner is **Grant Rabalais**. He majors in Integrated Science and Technology with a focus on Environmental Science at James Madison University.

Thank you to all the volunteers who scored the applications for these scholarships, and to those who helped with outreach to increase the number of applications submitted this year. The Scholarship Program not only provides students with financial assistance, it also fosters involvement in VWEA and, hopefully, builds the water industry's future leadership.

The 2019 scholarship applications will be available on VWEA's website in late January, with a mid-May deadline. ⊖





35th Annual Industrial Waste & Pretreatment Conference Something's Always Brewing in the Pretreatment World

By Beau Dodge, Committee Chair



We invite you to come and check out what's brewing in the pretreatment world at the 35th Annual Industrial Waste & Pretreatment Conference, which will be held at the Omni Hotel in Charlottesville, VA on March 4-5, 2019.

Join us and attend the workshop and technical sessions to learn what's brewing from the U.S. Environmental Protection Agency, the Virginia Department of Environmental Quality, pretreatment professionals, and consultants as they present on several topics, including microbrewery, brewery waste treatment, dental amalgam separators, and hauled waste, just to name a few.

Stay tuned as we brew up our agenda for this year's workshop and seminars. The agenda and brochure will be available as of December 2018 and registration will open in January 2019.

Registered attendees can earn wastewater operator and professional engineer continuing education credits.

Exhibitors are always the highlight of the conference: there is plenty of time for learning about new products and networking with like-minded professionals. Bring your questions and/ or challenges to the conference. It is likely that somebody in attendance has dealt with that same concern or issue.

If you have a desire to get more involved in your industrial waste and pretreatment profession, there is room for you on VWEA's Industrial Waste & Pretreatment Committee! Contact Beau Dodge at 703-228-6881 or by email: wrdodge@arlingtonva.us. ⊖

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Service Authority Making **"Smart"** Decisions

By Kipp Hanley, Prince William County Service Authority

he Prince William County Service
Authority's Supervisory Control
and Data Acquisition (SCADA)
system lost connection to a dozen
of its field assets in early May 2018
due to a failing underground cable line. This
could have left the utility "flying blind" for the
better part of three days.

However, by using electronic manhole cover sensors called SmartCovers, the Service Authority was able to remotely monitor two of its critical sanitary sewer lift stations affected by the outage. The devices were affixed to extra manhole lids and those manholes were placed on top of two-by-fours spanning the width of the channel leading into the wet wells. The sensors electronically monitored the level of flow coming into the stations.

For the other ten lift and booster stations impacted by the outage, field personnel did spot checks every six hours to ensure that those facilities were operating correctly until the SCADA connection was restored, said Water & Wastewater Facilities Manager Robert Jenkins.

"Sometimes you have to make quick decisions to mitigate risks to your infrastructure and your customers," said Operations & Maintenance Director Don Pannell. "Our investment in technology made a real difference in how we handled this situation while saving our workers time."

Since 2013, the Service Authority has placed ten SmartCovers on manholes located in flood-prone areas across Prince William County. When sewage flow reaches a certain

point, the sensors automatically trigger an alarm that prompts Service Authority staff to respond. This technology also displays a graph of the sewage flow level in a sewer main that can be viewed remotely on a laptop in near real-time.

While it required quick thinking, the temporary loss of SCADA connectivity didn't fluster Jenkins. After more than 30 years in the industry, he's seen dramatic changes in technology that have made the Service Authority a more agile, cost-effective utility.

"Years ago, before we had this system, we checked every single facility every single day, seven days a week," said Jenkins. "Now, we have facilities that we have to check in person just one day a week because we have SCADA to tell us what's going on." Θ



SmartCover installation

Member Spotlight

ach year VWEA recruits, attracts, and adds new members to its ranks. Our diverse membership includes students, academics, and professionals (working and retired) from the public and private water industry and beyond. 72 people joined VWEA between mid-June and mid-October 2018. We formally extend a warm "Welcome!" to our new additions. If you see these folks around, please say hello and introduce yourself.

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Sean Poling



Name: TODD WILLIAMS, PE

(New Member!) Company/Profession: Senior Project Manager, Gannett Fleming, Inc. Years of Experience: 29 Hometown: Langhorne, PA

What kind of projects do you work on? With 29 years of experience, I have worked on a wide range of projects from wastewater and water process optimization to planning studies, with an emphasis on design, to construction and operation of municipal water distribution and wastewater collection systems. I enjoy working on projects related to sanitary sewer rehabilitation. The sewer rehabilitation industry is continuously changing, and I'm excited to have the opportunity to use new condition assessment and trenchless construction technologies to solve problems that may have been insurmountable just a few short years ago. Sometimes my wife is embarrassed when we are out running errands and I stop at random construction sites to ask questions when I see them using cuttingedge technology.

What drew you into joining VWEA? At a local level, many of the condition assessment and trenchless technologies that I use on my projects are well represented within VWEA, including the Collection Systems Committee. By joining the Collection Systems Committee, I have the opportunity to build relationships with state-of-the-art service providers and other engineering professionals. The Committee provides many educational opportunities in the areas of the collection system industry that are of interest to me. I hope to take a more active role in support of these opportunities.

What is your favorite thing to do outside of the office?

I like to do most anything outdoors, including waterfowl hunting, camping, fishing, and training Labrador Retrievers for field trials. This past year, I focused on moving my children out of the house following their graduations from the University of Virginia, Virginia Tech, and James Madison University, and adjusting to the culture of being an empty nester.

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Call for Abstracts VWEA OPERATIONS CONFERENCE

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- Wet weather operations
- · Maintenance of pumps and other wastewater equipment
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- Asset management



- · Approaches to dealing with aging infrastructure
- · Laboratory methods, sampling, etc.
- Math for operators (budgeting, process control, troubleshooting, etc.)
- · Regulatory updates
- Wastewater treatment and troubleshooting

Final date to submit abstracts is December 31, 2018

Please submit your abstract to: Jeff Coyne, Hazen and Sawyer Email: jcoyne@hazenandsawyer.com



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Call for Papers & Workshops

25th ANNUAL GOOD LABORATORY PRACTICE TECHNICAL CONFERENCE 2019

Sponsored by: VA AWWA/VWEA Laboratory Practice Committee

The Laboratory Practice Committee hereby invites the submission of abstracts for papers and workshops for the 25th Annual GLP Conference, to be held in Charlottesville, Virginia on July 29 and 30, 2019 at the Omni Charlottesville Hotel. This conference is designed to provide the latest information on major issues such as analytical method updates and development; laboratory accreditation; regulatory updates, particularly those impacting laboratory staff and utilities; and emerging technologies and analytical instrumentation. This is a great opportunity to present new information related to water and wastewater issues. Workshops will be held on the 29th and the technical presentations will be given on the 30th.

We encourage you to submit an abstract and participate in discussions that are important to the advancement of our laboratory professionals. Conference topics may include but are not limited to the following:

- Natural Water Monitoring
- Environmental Research
- Treatment Plant Monitoring
- Drinking Water Distribution
- Bacteriological Techniques
- Drinking Water Disinfection
- Laboratory Accreditation
- Laboratory Management
- · Security Issues

- Water and Wastewater Analytical Methods
- LIMS and Laboratory Software Applications
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Abstract and Paper submissions for technical presentation:

Submit an abstract of 300 words or less that lists the title, author(s), affiliation, phone number, and email address. Morning session presentations are 40 minutes. Afternoon technical session presentations are 25 minutes with a five-minute Q&A.

Workshop Proposal submission:

Submit a one-page workshop outline that includes information on the subject matter and name(s), affiliation, email address, and phone number of workshop instructors. Workshops are three-hour sessions.

Deadline for Presentations and Workshops is February 15, 2019.

Please submit your **technical presentations and workshop proposals** to or for further information contact: **Alicia Connelly**, Lab Manager, Newport News Shipbuilding – *Alicia.A. Connelly@hii-nns.com*



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Aluminum Covers (Dome & Flat)

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Digester Gas

Emergency Vapor Scrubbers

Packed Tower

Disinfection/Chemical Feed

Chemical Metering Pump

Chlorine Dioxide Systems

Dry Chemical Feed Systems

Gas Chlorination

Hypochlorite Generation

Lime Silo Systems

Lime Slackers

Metering Pumps & Controls

Polymer Feed Systems

Ultra-Violet Disinfection

Potable Water Treatment

Analyzers & Controllers

Arsenic Treatment

Filter Underdrains

Flocculators—Vert/Horiz

FRP Weirs & Baffles

GAC Carbon Systems

Groundwater Treatment

Iron/Manganese Filters

Packaged Treatment Plants

Passive Intake Screens

Pressure Filters & Softeners

Rapid Mixers

Residual Control Systems

Sand and Anthracite Filter Media

SST & FRP Washtroughs & Launders

Tank Mixers

TOC Reduction

Traveling Water Screens

UltraFiltration Membranes

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Manufacturers

Aerisa

Anua

Arch Water Products

ASA Analytics

BioGill

Borger

Cambi

Cornell Pumps

CST Conservatek & Temcor

Denora—TETRA

Ekoton

Evoqua Water Technologies

Force Flow

Ford Hall

Gardner Denver

GNA

Howden Turblex

Huber Technologies

Inovair

Jim Myers & Sons

Johnson Screens

Komline-Sanderson

Kubota

Marcab

Marley

Nefco, Incorporated

Newterra

Onewater

Ostara

Parkson Corporation

PAX Water Technologies

ProMinent Fluid Controls

Putzmeister America

Robuschi

Salsnes

Trojan UV Technologies

UGSI

Vaughan Company

Virtual Polymer Compounds

Westfalia Separator

Westfall

World Water Works

WSG & Solutions



