

THE

 CONDUIT
 WINTER 2022

THE OFFICIAL PUBLICATION OF THE VIRGINIA WATER ENVIRONMENT ASSOCIATION, INC.

VWEA
 2021
 Annual
 Report



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INSIDE

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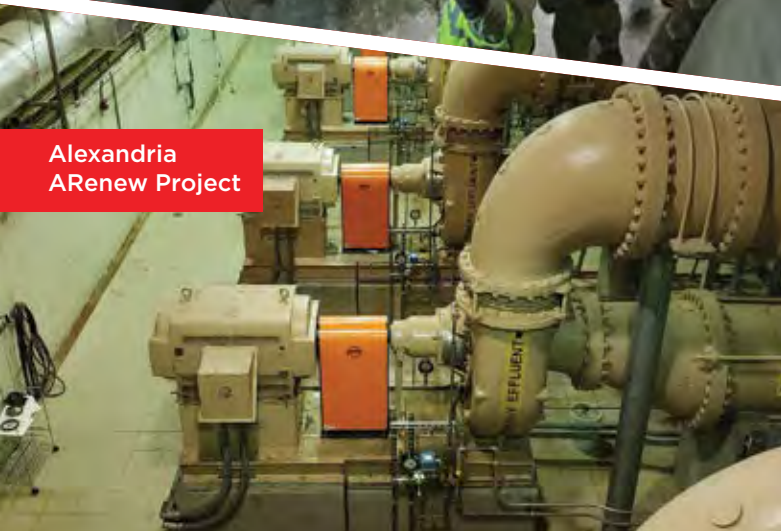
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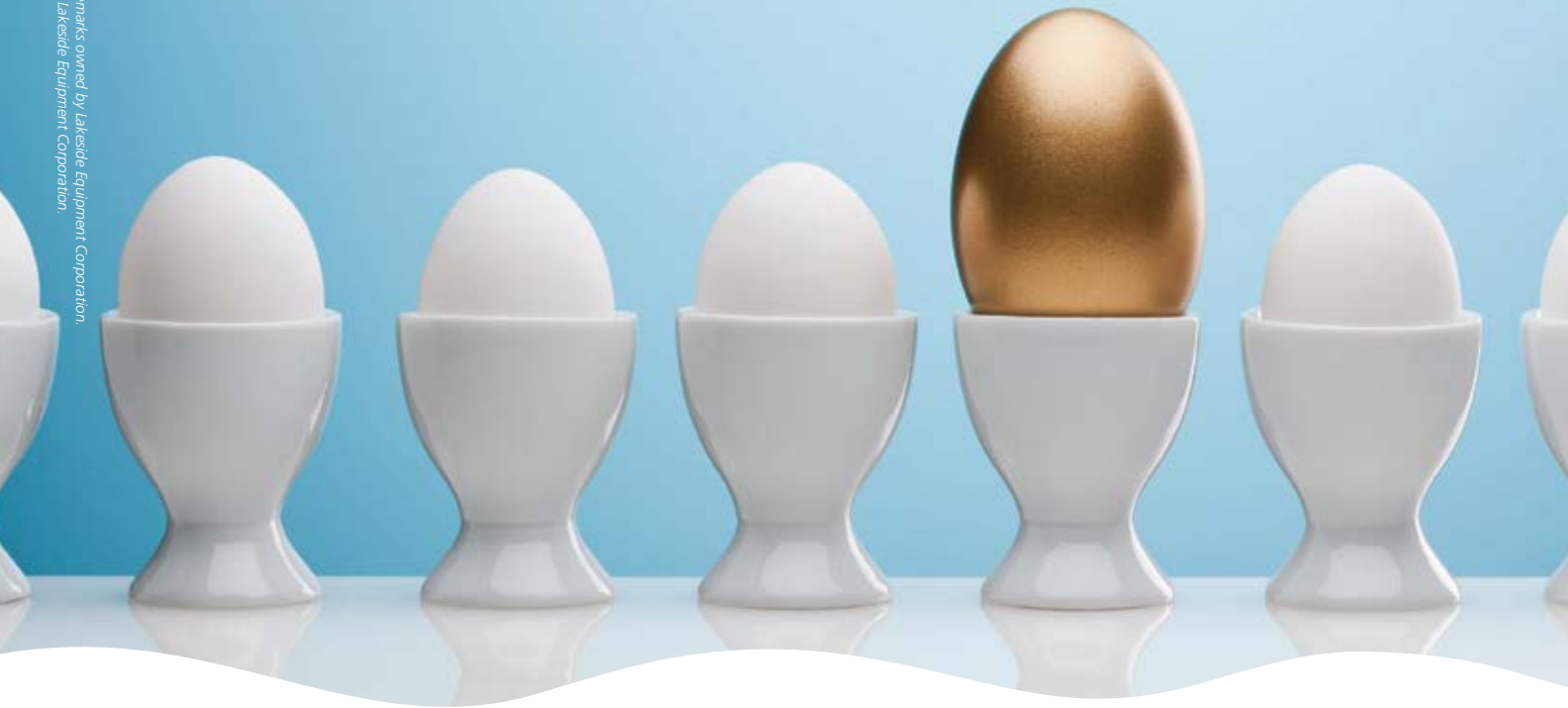
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After a 16-month halt to in-person events, the VWEA Regional Activities Committees (RACs) commenced in-person events in the summer of 2021.

Reclaimed Water Used to Manufacture Pet Care Products **46**

Hampton Roads Sanitation District and Nestle Purina Petcare Company water reuse project is an example of a public utility working with a private industry to ensure the best possible environmental and economic outcomes.

WEF: Connecting the Biosolids Community **50**

In February 2021, WEF released a new communications toolkit to help utilities and biosolids managers build support for biosolids recycling using simple, science-backed messaging.

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VWEA 2021 Annual Report



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THINK GREEN 

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H.D.P.E. Man-hole Inserts

SPECIFICATIONS:

- The dish is made of ultra-high density polyethylene copolymer material that meets ASTM specifications designation D 1248, Class A, Category 5, Type 111 with a minimum impact brittleness temperature of -180°F. The thickness shall be uniform to .187 or greater. This material is composed of MARLEX HXM 50100....extra high molecular weight Hexene copolymer.
- The lift strap is made of 1-inch-wide woven polypropylene web and is attached to the bowl of the dish by a wide head stainless steel 3/16" rivet and a stainless steel 3/4" backup SS washer. All cut edges are seared to insure against raveling. • Ventilation is provided by a 1/8" vent hole and/or a valve, vent hole located on the side wall of the bowl, valve threaded into the side-bottom of the insert. The hole or valve allows maximum release of 5 gallons of water per 24 hours and is not affected by debris that might collect in the bottom of the dish. Sewer gas is vented at one P.S.I. or less.
- The gasket is made of closed cell neoprene and is attached by a pressure sensitive adhesive to the weight bearing surface of the dish.



Stainless Steel Man-hole Inserts

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- **INSERT-** The manhole insert is manufactured of 16 gauge 304 or 316 Stainless Steel. Tile insert shall have a bowl size large enough to receive the design of the underside of the manhole lid. The bowl size shall also be designed to allow easy removal from the manhole frame. The insert shall have a load test greater than 3000 pounds.
- **GASKET-** The gasket is made of closed cell neoprene and is attached by a pressure sensitive adhesive to the weight bearing surface of the dish.
- **HANDLE-** The handle, cable terminal, and cable eye end are manufactured from stainless steel. The handle is manufactured from 3/16" plastic-coated stainless-steel cable and is attached with a #66 stainless steel rivet and a 1" diameter SS washer. The cable is braided in a manner which resists cutting with bolt cutters.
- **TETHER-** Tile tether is manufactured from 3/16" braided stainless steel and is attached to the insert using #66 stainless steel rivet. The cable terminal end and eye are manufactured from stainless steel.
- **RELIEF VALVE-** The gas relief valve is designed to, release at a pressure of .5 to 1.5 PSI and release less than 5 gallons of water in 24 hours. The valve is threaded and screwed into a hole drilled in the bottom of the insert. The valve is made from material that is inert against Sulfuric Acid, Hydrogen Sulfide and other substances found in the sanitary sewer systems.



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- The lift strap is made of 1-inch-wide woven polypropylene web and is attached to the bowl of the dish by a wide head stainless steel 3/16" rivet and a stainless steel 3/4" backup SS washer. All cut edges are seared to insure against raveling.





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Enthusiasm for 2022 - Not '2020 Too'!



Evan Bowles,
VWEA President

The new year brings an opportunity to look at things with a fresh perspective, and often with a clean slate. While VWEA reflects on its many successes in 2021, I suspect that many of our members would like to put last year in the rearview mirror and begin looking toward the new opportunities that 2022 will bring. I am certainly excited to see what possibilities this year will bring us!

VWEA committee leaders began discussing what we'd like this year to look like during our annual Joint Leadership Retreat, which was held in person in Charlottesville this past November. We brainstormed new ideas, and worked with other committee leaders to identify new ways of working together to make VWEA a more cohesive and integrated group. We also heard from multiple VWEA members who continue to innovate and bring new ideas to us for increasing engagement and continuously propelling us forward. We reviewed some of the beneficial things that the virtual environment brought us in the past two years, along with the practices we'd like to leave behind. You can expect your Committee leadership to bring new ideas and thought-provoking questions to your upcoming meetings, and we hope that you'll be prepared to assist in our continued success.

We are also excited to share that VWEA has created a brand-new Diversity, Equity, and Inclusion (DE&I) Committee. The VWEA DE&I Committee was established in November with the overarching goals of exploring initiatives to promote DE&I within VWEA, integrate DE&I into VWEA Committee discussions and membership, and consider ways to include DE&I in future VWEA events. The call for Committee membership was issued in December, and will remain open to anyone with an interest in the topic. The DE&I Committee leadership currently includes Shawn Heselton (HRSD) and Dorissa Pitts-Paige (HRSD), both of whom are extremely enthusiastic, and will bring greater perspective to this important topic. Please read on in this issue of the *Conduit* to learn more about the new DE&I Committee.

As your President, I have an overall goal of increasing engagement across the entire spectrum of our industry. While VWEA has stellar Membership engagement, we want you to know that there are lots of empty seats at the table! There are numerous opportunities to expand our membership and engagement across Virginia's geography, job market, and the multitude of underrepresented groups. You will see our Board working hard this coming year to increase this engagement and find new ways to build opportunities for both current and new members.

So, what will 2022 look like? We have some great ideas to kick things off, but it is up to YOU to truly make this a great year! There are so many ways to get involved, and this is the year to start! If you are interested in kickstarting YOUR engagement, please check out the Committees page on the VWEA website to see where your talents can shine. I can personally attest to the fact that getting involved with VWEA will elevate both your career and your network. I hope to see each of you soon! ☺

“So, what will 2022 look like? We have some great ideas to kick things off, but it is up to YOU to truly make this a great year! There are so many ways to get involved, and this is the year to start!”

VWEA Board of Directors Approves Formation of DE&I Committee

In November 2020, the Joint Task for VWEA and VA AWWA approved the formation of a Diversity, Equity and Inclusion (DE&I) Task Force to look at the current practices of both organizations, evaluate what others in the sector are doing, and make recommendations for improvement. Members of the task force reported back in October and recommended the need for a permanent committee to ensure that there is a focused effort on DE&I within the associations. On November 4, 2021, the VWEA Board of Directors approved the formation of a VWEA DE&I Committee. The overarching goals of the committee are to:

- Explore initiatives to promote DE&I within VWEA;
- Integrate DE&I into VWEA Committee discussions and membership; and
- Consider ways to include DE&I in VWEA events.

An initial call for volunteers went out to members in December. There was an extraordinary response to the request and the inaugural meeting was held in January. The Committee will work in focus groups to address a variety of initiatives.

If you have questions, or are interested in joining the Committee, please contact Shawn Heselton, sheselton@hrsd.com and Dorissa Pitts-Paige, DPittsPaige@hrsd.com.

To learn more about the initiative, check out the DE&I Episode on VWEA's *The Straight Flush* podcast, and visit the Committee page on our website. [e](#)



Shawn Heselton,
Committee Chair



Dorissa Pitts-Paige,
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Call for Papers & Workshops

28th Annual Good Laboratory Practice Technical Conference 2022

Sponsored by VWEA/VA AWWA Laboratory Practice Committee

The Laboratory Practice Committee (LPC) hereby invites the submission of abstracts for papers and workshops for the 28th Annual GLP Conference, to be held in-person on **Monday, July 25 and Tuesday, July 26, 2022** in Charlottesville, Virginia at the Omni Charlottesville Hotel. Workshops will be held on July 25, and technical presentations will be given on the afternoon of July 26, after the morning keynote session.

This conference is designed to provide the latest information regarding analytical method development/updates, 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 laboratory analysis.

We encourage you to submit an abstract and participate in discussions which 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
- Method Update Rule (MUR)
- Water and Wastewater Analytical Methods
- LIMS, Laboratory software applications
- Laboratory Practices
- Laboratory Ethics

- QA/QC Issues
- Regulatory Issues
- Emerging Instrumental Technology
- Analytical Instrument Troubleshooting
- The NELAC Institute (TNI) standards
- Nutrient Screening Methods

Workshop proposal submission – Monday, July 25, 2022

Submit a one-page workshop outline, which should also include information on the subject matter, name(s), a brief biography, email address, and phone number of workshop instructors. Workshops are three-hour long sessions designed to be interactive.

Abstract proposal submission for keynote/technical presentation – Tuesday, July 26, 2022

Submit an abstract of 300 words or less with the title, author(s), a brief biography, phone number, and email address included. The morning session keynote presentations are 40 minutes long. Afternoon technical session presentations are 25 minutes long with a five-minute Q&A.

Exhibitors

Exhibitor reception will be held on the evening of Monday, July 25. Exhibits will open on Tuesday, July 26.

Please contact Chris Griffin to secure your spot at cgriffin@hach.com.

Submit abstracts ASAP to:

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ONE WATER

Riding the Wave of the Future

Submitted by Mary Roman (GHD), Tom Frederick (Pennoni), and James Grandstaff (Henrico County), One Water Focus Group Members

At WaterJAM 2020, the VA AWWA/WWEA Utility Management Committee (UMC) organized and held a One Water Workshop. The panelists, representing Los Angeles, Denver, Atlanta, and Virginia (HRSD), spurred great insights into the drivers, benefits, challenges and successes of their One Water programs and approaches. As a result of this well-attended and successful workshop, the VA AWWA/WWEA UMC felt there was enough interest and opportunity to explore and share One Water approaches and opportunities in Virginia with our membership. As a result, the One Water Focus Group (Focus Group), led by Beate Wright (Carollo Engineers), and supported by a handful of inaugural professionals, was initiated. The Focus Group, which includes professionals in the water, wastewater, reuse, stormwater, and resiliency technical areas representing public agencies, nonprofits, contractors, regulators, legal, and consultants, has grown in one year from a handful of volunteers, to 24 diverse professionals. The mission statement captures the essence of the group: "To promote holistic thinking, awareness, and collaboration to become a One Water resource for the Virginia WVEA and VA AWWA membership."

ONE WATER – DEFINED

There are many signs that water management in the U.S. is entering an era of change and innovation. All around the country, we are seeing silo-busting examples of integrated and inclusive approaches to water resource management. For example, we are seeing a vast array of innovative wastewater treatment technologies being developed to produce water for a wide range of end-uses (e.g., HRSD's Sustainable Water Initiative for Tomorrow program); stormwater approaches that promote infiltration and recharge of groundwater/drinking water aquifers (e.g., bioretention, grassed swales, etc.); drinking water supplies being optimized through conservation (e.g., increase in the use of rain barrels/cisterns and recycling of greywater for non-potable uses); and water reuse (e.g., Upper Occoquan Sewer Authority indirect potable water reuse).

These approaches exemplify the view that all water has value and should be managed in a sustainable manner. And while the focus is "water", the group believes that a One Water approach will result in thriving local economies, community vitality, and healthy ecosystems.

We believe that One Water is really about One Environment and One Community.

The Water Research Foundation defines One Water as "an integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs." In a sense, One Water considers the full hydrologic cycle in the context of a given community/region/state, and looks to synergistically manage shared water resources in perpetuity. The Focus Group intends to expand conversations about water to facilitate integration, adaptive planning, innovation, and inclusion of ideas, people, and opportunities. The topic can be relevant to all types of water initiatives – rainwater, stormwater, groundwater, wastewater, recycled water, drinking water, and water reuse.

A One Water approach will help us find common interests and synergistic opportunities, and it will facilitate success in meeting a range of water challenges for improving this critical resource for communities throughout Virginia. The US Water Alliance captures this sentiment well: "Solving today's water problems requires breaking down



"There are many signs that water management in the U.S. is entering an era of change and innovation. All around the country, we are seeing silo-busting examples of integrated and inclusive approaches to water resource management."

barriers, not only within the water industry, but also among all stakeholders who influence, and are influenced by, the management of water resources. This includes community and business leaders, industries, farmers, environmental advocates, conservationists, policymakers, academics, and many others.”

The idea of an integrated systems approach to water is not new. Its full-scale implementation, however, has yet to be realized. Our One Water Focus Group seeks to promote thinking about and working towards optimal long-term water management strategies. Consistent with the US Water Alliance’s quote, our group’s goals are to provide educational opportunities and technical resources for Virginia water professionals to work towards achieving full-scale integrated water implementation.

RECENT ACTIVITIES

Our Focus Group has been quite busy. After developing vision and mission statements, the Focus Group set about to find where VA AWWA/VWEA members stand on their One Water journey. The group crafted a survey that was emailed to membership. Eighty-two responses were received, with over half of the responses from personnel within water and/or wastewater utilities, about one-quarter from the consulting industry, and the remaining consisting of contractors and regulators. Interestingly, most survey respondents indicated that their organization does not have and is not considering a One Water policy and they are not presently pursuing “One Water opportunities”. Yet the respondents indicated a strong interest in learning more, especially via webinars and presentations at WaterJAM. Barriers in developing a One Water program included regulatory, organizational, and stakeholder interests, as well as public perception. Survey respondents believed overwhelmingly (80%) that the audience most needed to be reached in promoting One Water was utility leadership.

John J. Dano (HRSD) led the group’s development of an introductory One Water slide deck illustrating what One Water is all about. This resource can be referenced by anyone interested in understanding and discussing One Water, and can be found on the UMC One Water Focus Group section of the VA AWWA and VWEA websites. Utility Management - Virginia Water Environment Association ([vwea.org](https://www.vwea.org/page/UtilityManagement)) (<https://www.vwea.org/page/UtilityManagement>).

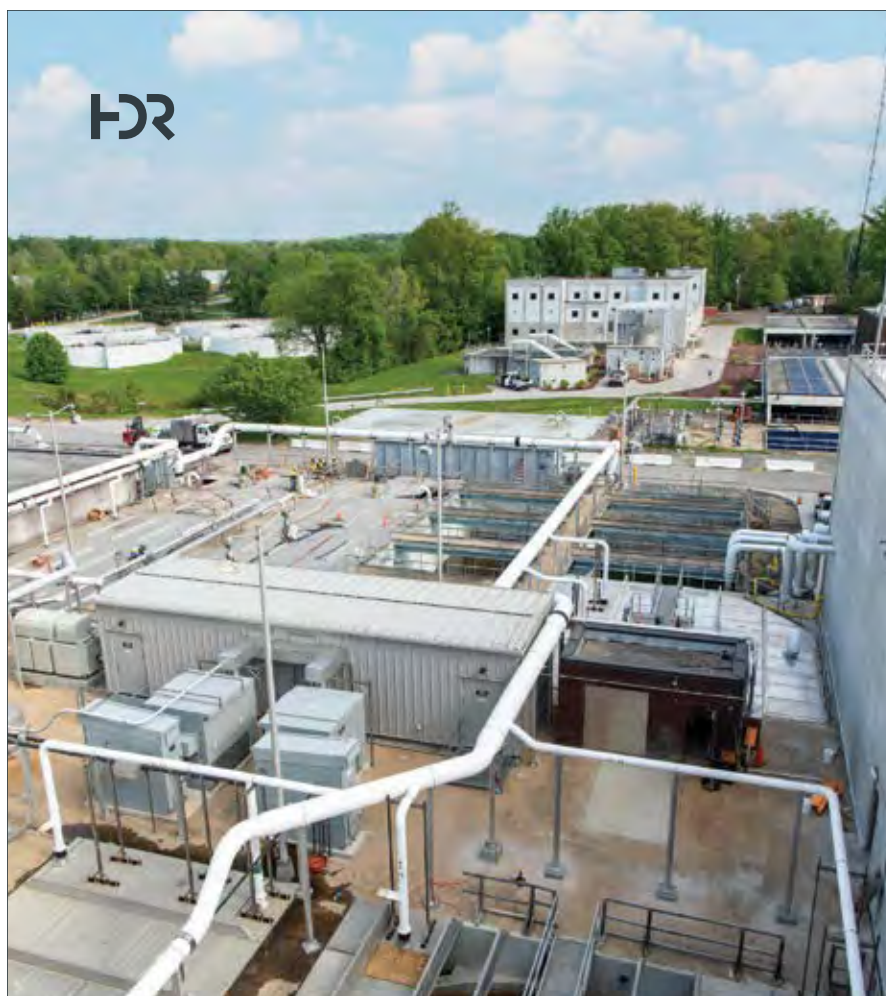
In mid-October, *The Straight Flush* published our group’s first podcast: “One Water Series, An Introduction”, featuring Focus Group members, Ryan Nagle (Hazen), Wright, and Dano. The podcast provided commentary

and an overview of One Water and our group’s vision and mission. The podcast can be accessed at: *The Straight Flush* ([buzzsprout.com](https://www.buzzsprout.com)) (<https://www.buzzsprout.com/1817695>).

As always, there is more work to be done. Our Focus Group believes that the One Water approach is the most holistic, strategic, and sustainable one in solving today’s water issues in our practice. We join with many other water professionals across the globe in embracing One Water to the extent that Virginia water professionals in all phases of their careers, and all phases of their work (whether public, private, nonprofit), see an integrated

One Water approach as the preferred method in tackling water issues.

Our Focus Group has lots of energy and we have ambitious plans. As this article was being written, a second podcast was already in the works for early 2022 to share the results of the One Water survey. Since 70% of our survey respondents want to get information about One Water through webinars, the group is also discussing creating a webinar. Creating a One Water approach toolkit on the VWEA website is in progress. Send us your suggestions, your One Water success stories, or join our active and robust group! [👉](#)



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VWEA/VA AWWA Laboratory Practices Committee Seeks Candidates for 2022 Laboratory Analyst Award

One of the best ways to acknowledge an exceptional performer is by nominating them for an award. For laboratory analysts, WEF offers the Laboratory Analyst Award. Eligibility and criteria requirements for the award are listed below.

ELIGIBILITY

- **MEMBERSHIP** — The candidate does not have to be a member of the Water Environment Federation at the time of nomination. The association will award a membership to the winner if the awardee is not a current member.
- **EMPLOYMENT** — Employed at an educational facility laboratory, industrial, commercial, or municipal laboratory which performs water and wastewater-related analysis and must have direct analytical responsibilities.
- **RESPONSIBILITIES** — The candidate must have direct responsibilities for analytical bench testing and/or field- testing of water or wastewater samples.
- **RECOGNITION** — Only those who have not been recognized by this award before are eligible. Non-winning nominees may be nominated again. One nominee per facility per year.

CRITERIA

- **INITIATIVE** — The nominee must have shown initiative in pursuing innovative bench or field technique improvements.
- **PERFORMANCE** —
 - The nominee must have performed duties consistently as outlined by laboratory or field sampling/analytical methods.
 - The nominee's performance must demonstrate a commitment to high quality control standards.
 - The nominee must be conscientious about laboratory or field safety requirements.
- **ABILITY** — The nominee's abilities must include problem solving.
- **PERSPECTIVE** — The nominee's perspective should be dutiful and conscientious.
- **PERSONAL DEVELOPMENT** — The nominee's actions should demonstrate a commitment to professional development, e.g., by maintaining active membership in professional associations and/or through continuing education.

The deadline for nomination packages is **March 31, 2022**. It's never too early to nominate, so don't let this recognition opportunity pass you by!

For more information and nomination forms, please contact:

Lea Brooks

Chesterfield County, Proctors Creek WWTP
1200 Coxendale Road, Chester, Va., 23836.
Phone: 804-768-7351 | Fax: (804) 748-4692
Email: brooksdl@chesterfield.gov

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Collaborative Project Delivery in Virginia

By Bruce W. Husselbee, PhD, PE, DBIA

The Virginia Utility Management Committee created the Collaborative Project Delivery Focus Group to promote the use of techniques to improve the implementation of capital improvement projects. The traditional project delivery method (Design-Bid-Build) has been used for many years in Virginia and across the U.S. In recent years, project delivery methods such as Construction Management at Risk, Design-Build, and Public-Private Partnerships have become more common. These project delivery methods are focused on ways to improve the relationships between Owners, Engineers and Contractors. Through the use of more collaborative processes better outcomes are often the result.

To further promote these methods, the Collaborative Project Delivery Focus Group has created a web-based map and associated database to provide information on completed water related projects using collaborative project delivery in the Commonwealth of Virginia.

These projects can be water-, wastewater- or stormwater-focused efforts. Only information provided by the Owner of the specific project will be considered. To provide new projects, or updated information, use the following link to complete the form: <https://www.vwea.org/page/VACOLLABORATIVEPROJECTDELIVERY>.

We look forward to learning more about your projects and to sharing them with others across Virginia! [e](#)

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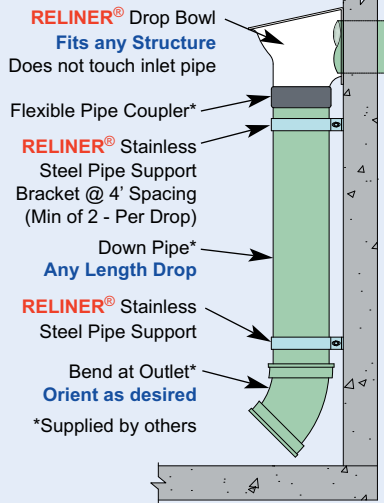
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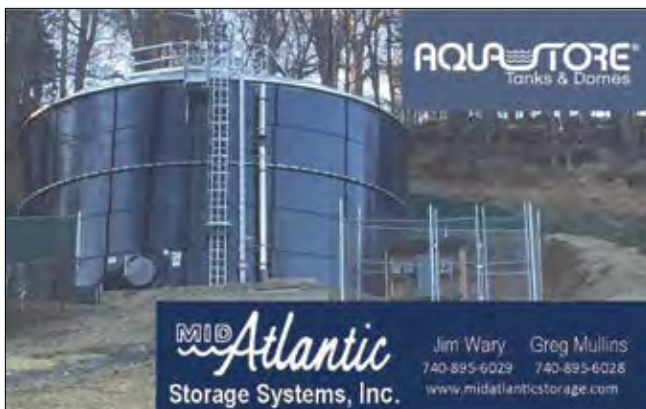
WWEA COLLECTION SYSTEMS SEMINAR: Innovations in Collection Project Funding and Delivery

The WWEA Collections Systems Committee hereby invites you to the Spring Seminar on March 23, 2022, to be held at the Lewis Ginter Botanical Garden Auditorium in Richmond, Virginia. This seminar is designed to provide the latest information on the "Innovations in Collection Project Funding and Delivery" such as design-build, Construction Management at-Risk, grant funding, etc.

The tentative schedule is as follows:

8:00-8:50 a.m.	Registration and Networking Breakfast
8:50-9:00 a.m.	Opening Remarks Sara Ferrance, P.E., WWEA Collections Committee Chair, Fairfax County DPWES
9:00-9:45 a.m.	Keynote Speaker Karen Pallansch, P.E., Alexandria Renew Enterprises
9:45-9:50 a.m.	TBD Technology Vendor
9:50-10:20 a.m.	Strategically Employing CMAR to Deliver \$44 Million in Pump Station Work Chip Votava, P.E., Kimley-Horn Lauren Kirkwood, P.E., HRSD
10:25-10:40 a.m.	Networking/Exhibitor Break
10:40-11:20 a.m.	Leveraging Alternative Delivery for Linear Infrastructure Paul Longo, P.E., Dewberry Engineers
11:20-11:25 a.m.	TBD Technology Vendor
11:35-11:55 a.m.	Why PDB and How DC Water Selected the Right Team for a Complex Linear Project Pubudu Ranasinghe, P.E., P.M.P, DC Water William Elledge, P.E., P.M.P, DC Water Robert J. Dudley, P.E., Ramboll
11:55 a.m.-1:00 p.m.	Lunch/networking
1:00-1:30 p.m.	Martinsville Large Diameter Industrial Sewer Rehabilitation: Funding and Project Delivery Success Story Leslie Mantiply, P.E., Dewberry Engineers
1:30-1:35 p.m.	TBD Technology Vendor
1:35-2:05 p.m.	Trends in Infrastructure Funding Robert Ryall, P.E., Arcadis Rachel Bradley, P.E., Arcadis
2:05-2:20 p.m.	Networking/Exhibitor Break
2:20-2:25 p.m.	TBD Technology Vendor
2:25-2:55 p.m.	CMAR Delivery – The Best Balance of Risk, Price and Collaborative Success
2:55-3:00 p.m.	TBD Technology Vendor
3:00-3:45 p.m.	CSO Panel Discussion
3:45-3:50 p.m.	Closing Remarks Sara Ferrance, P.E., WWEA Collections Committee Chair, Fairfax County DPWES

For more information, visit: <https://www.wwea.org/event/CollectionSystems2022> ☺





Applications Now Available for 2022 VWEA Scholarships

Each year, VWEA awards scholarships to students pursuing a degree in a field that advances the Association's mission. Additionally, Operators are supported through scholarships to Virginia Tech's Wastewater Short School. Below is a list of scholarships for 2022 and who is invited to apply. Full details and a link to the applications can be found on the website at <https://www.vwea.org/page/Scholarships>.

Undergraduate Student Scholarship

Students enrolled at Virginia universities in a civil or environmental engineering or physical/environmental science undergraduate program.

\$2,500 award

Rising Freshman Scholarship

Students graduating from high school in 2022, and planning to enroll at a Virginia college or university in a civil or environmental engineering or physical/environmental science undergraduate program.

\$2,500 award

Sonny Roden Memorial Graduate Student Scholarship

Students enrolled at Virginia universities in civil or environmental engineering or science graduate program.

\$2,500 award



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Whatever the project scope, Crowder can help.



Operators Scholarship

Operators employed in the wastewater treatment field at a utility in Virginia. The award will be up to a total of \$2,500 applied to sending a total of three operators to the Wastewater Treatment Plant Operators Short Course scheduled for August 2022 at Virginia Tech.

Member Dependent Scholarship

Students enrolled at Virginia universities in a civil or environmental engineering or physical/environmental science undergraduate program who are children of current VWEA members.

\$2,500 award

Volunteers are needed to review and rank scholarship applications in late May and June 2022. Interested members should email Allison Lee, alee@hazenandsawyer.com, or Kathy Rabalais, Kathy.rabalais@vwea.org.

VWEA's Regional Activities Committees Plan Events Across the State

Submitted by Kim Stubbs, Henrico County Water Reclamation Facility

After a 16-month halt to in-person events, the VWEA Regional Activities Committees (RACs) commenced in-person events in the summer of 2021. The Northern VA RAC held its Annual NVRAC Classic with approximately 80 golfers. The Central VA RAC held the Annual Family Night at the Flying Squirrels game at the Diamond in July with over 100 members in attendance, and followed it up with the Annual Scorcher Golf Tournament, which was held in late August with eight teams playing for the coveted trophy. In October, CVRAC coordinated a sold-out facility tour of the City of Richmond's UV Disinfection Facilities. The tour highlighted the recently completed expansion of the City's wet weather treatment capacity to 140 MGD. After the completion of the tour, an Afterhours event was held at Veil Brewing Forest Hill. Holiday Afterhours were hosted by RACs in December in Roanoke, Richmond, and Virginia Beach. The events were well attended and were a great opportunity to connect with colleagues during the holiday season.

As we move into 2022, plans are underway for events across the state. In honor of Earth Day, the RACs are coordinating a Service Across Virginia Day with each region planning a service project for Saturday, April 9. Check the VWEA website for details on the event in your region and for other activities being planned throughout the year.

Interested in volunteering? The RACs are a great way to get involved. Reach out to Kim Stubbs, VWEA Association Representative, at STU005@henrico.us.



Holiday Afterhours in Roanoke, Virginia



Ed Edmondson with the City of Richmond leading the tour of the UV Disinfection Facilities.



Attendees at the Eastern VA Holiday Day Afterhours



Attendees networking at an Afterhours in Richmond

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Please visit our website at <https://www.vwea.org/donations> to learn more about our program.

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38th Annual Industrial Waste & Pretreatment Conference

Date: February 28-March 1, 2022

Location: Omni Charlottesville,
212 Ridge McIntire Road
Charlottesville, VA 22903



VWEA's Industrial Waste & Pretreatment Committee cordially invites all wastewater professionals to attend the 38th Annual Industrial Waste & Pretreatment Conference on **February 28-March 1, 2022**, at the Omni Hotel in Charlottesville, VA. Come join and network with clean water agencies, industry experts, peers, consultants, equipment suppliers, state and federal officials to receive the latest information and to discuss **Emerging Concerns in Pretreatment**.

There will be a variety of topics covered such as hauled waste, source tracking, brewery wastewater, FOG, PFAS, and audit strategies. Featured speakers include representatives from the U.S. Environmental Protection Agency, AquaLaw, and the Virginia Department of Environmental Quality. Awards for outstanding Virginia industrial facilities will also be presented. In addition, a room full

of industry-related exhibitors will be on hand to display the latest technology in the field of industrial waste and pretreatment. Operator CPE's and engineering CEC's will be available to all registered attendees.

Please visit the VWEA website at <https://www.vwea.org/event/38thIWP> for the detailed flyer, agenda, and registration information. Register before February 15, 2022, to take advantage of the reduced registration price and hotel room block.

If you would like to become more involved, please consider joining the Committee by contacting Ashley Tatge at 815-904-5033, or send email to ashley.tatge@erg.com.

We look forward to seeing you in person at the Omni!

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- Support VWEA Scholarships



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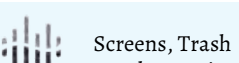

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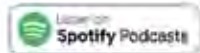
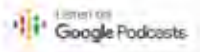
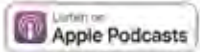
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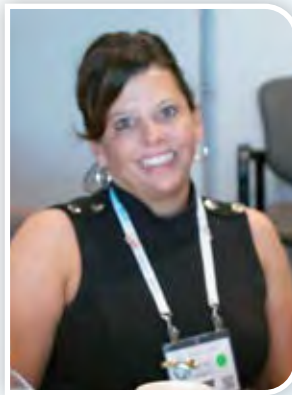


2021

Annual Report



I am certain that I am not alone in stating that 2021 wasn't the year that I had envisioned. As we entered last year, I had hoped that the pandemic would soon be in our rearview mirror, and that we could begin moving forward taking with us some of the valuable new tools and programs that had emerged over the prior year. As we know, that wasn't the case. However, the resilience of our members didn't let the events of 2021 impact our ability to offer top-notch training, to support our students, or to recognize our members and share timely information essential to our industry.



VWEA's Annual Specialty Conferences were offered virtually in 2021. We were able to build on our experiences from 2020, and provided opportunities for our vendors to participate virtually. Additional education was offered via webinars on topics of importance to our members. The ability to reach members across the state and provide valuable continuing education credits during the challenges of the pandemic stands out as a positive of the last year.

The launch of VWEA's Podcast, *The Straight Flush*, was received with great enthusiasm, and was followed by an influx of ideas for future episodes. Regular episode releases are planned for 2022. We look forward to reaching more individuals with this new pathway to connect and share.

“As we move into 2022, my goal is for members to feel as if they are part of a connected and innovative community; one that is welcoming and open to all.”

As we move into 2022, my goal is for members to feel as if they are part of a connected and innovative community; one that is welcoming and open to all. If you aren't engaged in some aspect of the Association, take a moment to visit our website and check out the various committees and complete the volunteer interest form. I assure you that you will be happy you did!

Kathy Rabalais

Kathy Rabalais, Executive Director



Hear from Our Members...



VWEA offers a forum for me and my peers to learn and better serve the public. VWEA accomplishes this by providing a vast number of opportunities, not only for continuing education in the form of conferences and seminars, but also by providing a community of likeminded individuals committed to serving the public, where together we can work to protect the environment now and for future generations.

Allen Shue

Greeley and Hansen, Chair of the VWEA Education Committee



As a young professional, volunteering with VWEA has opened many doors for me. Through my involvement in multiple committees, I have been able to network with many professionals that work in various roles in the industry. This has given me exposure to different perspectives, and provided me with an opportunity to learn about new technical topics and make new friends! Furthermore, I have had numerous opportunities to develop

my leadership and team-building skills by taking on leadership roles on committees, and by working with others to organize events. I have also been able to impact my local community through volunteer efforts. I strongly advocate for all young professionals in the industry to get involved with a VWEA committee, as this organization has added great value to my professional career and personal life.

Nicole Dean

Dewberry, Vice-Chair of the Sustainable Utilities Committee



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The Virginia Water Environment Association (VWEA) is a worthwhile and fulfilling organization that affords its members leadership opportunities, technical expertise, and a strong professional network, while staying true to its purpose "to preserve and enhance Virginia's water environment now and for future generations". Through the VWEA, I have gained guidance from experienced water resources professionals, which has been

crucial to my development as a young professional. The VWEA's leadership workshops gave me the confidence to volunteer as the Chair of the Industrial Waste and Pretreatment Committee, which has given me new skills and resources to foster future success in the years to come.

Ashley Tatge

ERG, Chair of the Industrial Waste & Pretreatment Committee

VWEA Training in 2021

The challenges of the pandemic didn't cease the offering of education content that is vital for the maintenance of licenses and valuable knowledge transfer needed in today's ever-changing environment. Specialty Conferences were held virtually in 2021 and included the addition of a Utility Management Workshop Series and a Collection Systems Seminar. Eleven webinars were also offered throughout the year on a variety of topics of interest to members. A total of **49 CECs for Professional Engineers and 33.5 CPEs for Wastewater Operators** were offered **virtually** in 2021.



Industrial Waste & Pretreatment Conference

- Two half days of technical presentations and a virtual exhibit hall.
95 participants

Collection Systems Seminar

- Half-day seminar with technical and vendor presentations.
80 participants

Utility Management Workshop Series

- Three two-hour workshops.
77 participants

Stormwater Seminar

- Two half days of technical sessions and virtual exhibit hall.
147 participants

Education Webinar Series

- Five two-hour sessions.
98 participants

Lab Practices Virtual Conference

- Two half days of technical and vendor presentations.
72 participants

Webinars Offered in 2021

- Staff Management in the Post-Pandemic: What Will the New Normal Look Like? | Successful Water Reuse in Virginia
- PE Exam Panel Discussion | Keep it Clean: Henrico's Bacteria Outreach Efforts
- Grant Program Implementation – A Local Perspective | Owners' Agent Webinar
- VOSH COVID-19 Permanent Standard Made Simple | A Life Cycle Cost Approach - What Does that Mean?
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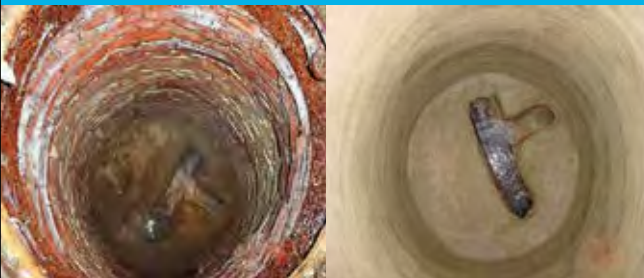


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'A Better World Through Better Water'

WaterJAM is truly a highlight for me each year. The annual event brings two amazing organizations together: WWEA and VA AWWA, with the goal of creating "a better world through better water" for current and future generations. Our annual gathering allows all of us to connect, collaborate and truly have fun with amazing people who have the same

goal in mind. The professional sessions offered are not only an excellent place to learn about ways to address our challenges, but also allows us to share what we have learned through the challenges we have faced personally. WaterJAM gives us the opportunity to recognize those who have truly made a positive impact on the world around us, as well as honor students who are our future. I leave WaterJAM each year with renewed energy to continue tackling the challenges I face each day – personally and professionally. It reminds me that what we do matters! Water is our most "vital resource" ... let's continue to protect it!

Larado Robinson
Director, City of Salem



Connecting with Peers in the Water Community

The opportunity to network and build relationships with other industry professionals has always been a wonderful aspect of involvement in WEA. In 2021, sporting events, facility tours, virtual trivia, and afterhours events were held, which provided opportunities for many to reconnect.

Events included:

- Family Night at the Flying Squirrels
- Annual Norfolk Tides Game
- CVRAC & NVRAC Golf Tournaments
- YP Facility Tour at Henrico WRF
- Tour of Richmond UV Disinfection Facilities
- Two Virtual Trivia for Charity Events
- Five Afterhours Events



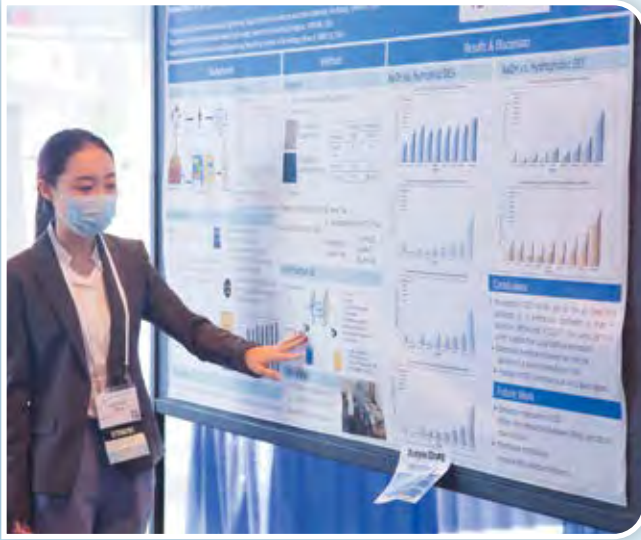
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2021 Donations and Financial Awards



WWEA continued to support individuals and organizations in 2021 through donations, competition awards, and travel support to WEFTEC.

Contributions included:

- 8 Regional Science Fair Awards – 1st and 2nd place
- Stockholm Junior Water Prize State Award
- Student Design Competition Awards
- WEFTEC Student Design Competition Travel Support
- WaterJAM Wastewater Poster Contest Award
- WEFTEC Ops Challenge Competition Travel Support
- Central Virginia Food Bank (Trivia for Charity)
- Foodbank of Southeastern Virginia (Trivia for Charity)

Total Donations and
Financial Awards: **\$22,075**



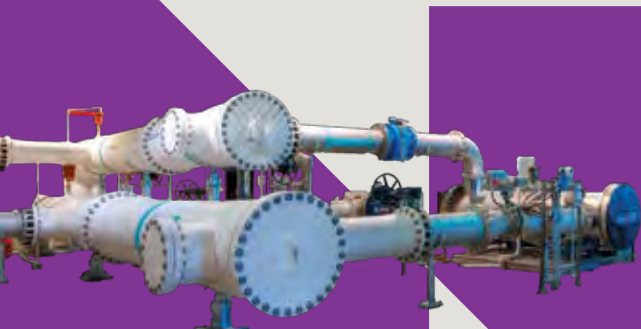
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2020 Initiatives Evolve in 2021



In 2020, VWEA moved forward with two new initiatives **that grew and evolved in 2021.**

The **Diversity, Equity, and Inclusion Task Force** was approved as a **VWEA Committee.** The Board of Directors felt it was vital to ensure that there is a focused effort on DE&I throughout VWEA.

VWEA Podcast, The Straight Flush released 11 episodes in 2021.

The Straight Flush podcast launched with an initial four episodes in July, and with the goal of releasing monthly episodes thereafter. However, due to great interest and enthusiasm, the schedule was moved up to release an episode every three weeks with the possibility for releases every two weeks should interest continue to grow in 2022.





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‘Leadership Academy is for you’

The Leadership Academy is an excellent growth and networking opportunity for current and aspiring leaders. The personalized emotional intelligence (EI) evaluation and coaching session were excellent for highlighting existing strengths and identifying tactics to help strengthen all facets of one’s EI. In addition to personal focus topics like EI, training on how to have difficult conversations, and recognizing how those around you best receive communication will be valuable for years to come, both in work and personal settings. If you are looking to understand, develop and grow your leadership style, the Leadership Academy is for you.

Michele Siminari

VWEA Awards

VWEA recognized **eight organizations** at the Annual Industrial Waste & Pretreatment Conference for Environmental Excellence related to their pretreatment permit.

During WaterJAM, **13 individuals** were honored for their outstanding contributions to the water environment profession and/or VWEA.

Learn more about our awards at www.vwea.org/awards.



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VWEA Scholarships

The Virginia Tech Wastewater Operator Short School was held virtually in August with VWEA **funding the tuition of five operators.**

Scholarships in the amount of \$2,500 were awarded in the following categories:

- Graduate
- Undergraduate
- Rising Freshman
- Member Dependent

In the past five years, VWEA has awarded over \$66,000 in scholarships to students preparing for a career in the water industry.

Total Scholarships Awarded in 2021:
\$12,500



Amanda Darling –
Roden Grad



Jason Jabbour



Kathryn Parnell –
Rising Freshman



Sarah Stephan
– Member Dependent

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Recognition at WEFTEC 2021

VWEA was honored to be recognized at WEFTEC with the **2021 Member Association Achievement Award**. The award is testament to the countless hours our volunteers spend meeting the needs of the industry.

The VWEA-sponsored Environmental Student Design Competition Team from George Mason University was awarded 2nd place in the competition at WEFTEC. This was the highest-ever finish of a team from Virginia.



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Financial Standing

WWEA continues to maintain a strong financial standing while increasing investment into programs and services which are of value to our members. Over the past year, the WWEA website was upgraded to improve functionality. Investment was also made in equipment to produce *The Straight Flush* podcast to ensure the Association delivers a high-quality, professional product for members and others to highlight the water industry and careers.

As we move into 2022, the Board of Directors will be evaluating opportunities to further provide members value, including the expansion of the scholarship program. ☺

Virginia Water Environment Association	
Balance Sheet	
As of December 31, 2021	
ASSETS	TOTAL
Bank Accounts	
Charles Schwab General Investment	349,276.00
Charles Schwab Scholarship Investment	402,329.00
Suntrust Scholarship Account	34,062.79
Suntrust Business Checking	266,790.24
Total Bank Accounts	1,052,458.03
TOTAL ASSETS	1,052,458.03



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Reclaimed Water

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By Kevin Parker, HRSD, Environmental Scientist, kparker@hrsd.com
Sam Conners, Nestle Purina Petcare Company, Environmental Coordinator, sam.conners@purina.nestle.com
John J. Dano, HRSD, Chief of Planning and Analysis, jdano@hrsd.com

Introduction

In April 2016, Hampton Roads Sanitation District (HRSD) began conveying reclaimed water to Nestle Purina Petcare Company (NPPC) to supplement a stressed groundwater supply. Both HRSD and NPPC have made capital investments and have committed assets to encourage beneficial water reuse and conserve valuable groundwater resources. The success of this reuse project is an example of a public utility working with a private industry to ensure the best possible environmental and economic outcomes.

Win/Win #1: Reuse, the Solution to Environmental and Permit Challenges

The HRSD King William Treatment Plant, located in King William County, Virginia, treats approximately 60,000 gallons of wastewater each day, utilizing membrane bioreactor technology. This highly treated water is permitted to discharge into a small, low-volume creek, which creates a challenge for HRSD. Low-volume receiving waters

typically have less mixing and less flow, which can produce more stringent regulatory limits. HRSD was able to minimize surface water discharges by utilizing the effluent from the King William Treatment Plant for a beneficial reuse at NPPC. NPPC can use the entire plant flow from HRSD, so discharges to surface water are scheduled and rare, making future “zero discharge” to local waterways a real possibility.

NPPC is located approximately two miles from the HRSD King William Treatment Plant. NPPC is permitted to withdraw 31,449,600 gallons of groundwater per year to manufacture cat litter with plans for expansion and the subsequent need for more water. NPPC currently needs about 80,000 gallons of water per day for its operation, and will need more water for future expansion to meet consumer demand. NPPC found a solution to its increased demand for water by receiving reclaimed water from the HRSD King William Treatment Plant, which also significantly reduces stress on the groundwater aquifer.

The high quality of treated water enables cat litter production, while meeting all safety and quality requirements. This partnership aligns with NPPC’s strategic goal to promote sustainability by preserving environmental resources for the future.

Win/Win #2: One Water

In 2020, NPPC was planning an expansion of its cat litter manufacturing operation, and HRSD was considering how to provide additional wastewater treatment capacity to King William County. HRSD found the lifecycle cost of an expansion to the King William Treatment Plant to be higher than sending the flow to a much larger, existing treatment plant. HRSD began preliminary studies to identify how to provide the additional wastewater treatment capacity King William County would need, and shut down the King William Treatment Plant. However, NPPC needed the reuse water for the planned expansion, and insisted, along with county officials and state regulators, that HRSD consider other

Figure 1: HRSD King William Treatment Plant conveys ~60,000 gallons of reclaimed water per day to Nestle Purina Petcare Company. Approximately two miles of six-inch pipe was installed during project construction in 2015-2016.



Figure 2: Nestle Purina Petcare Company manufactures cat litter using reclaimed water from the HRSD King William Treatment Plant.



options, and continue the beneficial reuse. Subsequently, HRSD and NPPC reached an agreement satisfactory to all parties wherein the treatment plant would remain open and be expanded. Further, NPPC will pay HRSD for the reclaimed water conveyed. The expansions of the wastewater facility and litter factory will continue to benefit the community by providing increased employment and local tax revenue, as well as preserving the shared groundwater resources for the community.

Conclusion

All parties were able to see the value of water and come together for a true “One Water” solution. By collaborating and placing value on the water, King William County, NPPC, and HRSD were able to find a solution that reuses the water, supports local jobs and the economy, while preserving Virginia’s groundwater resources. ○



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CONNECTING THE BIOSOLIDS COMMUNITY

New talent and resources affirm WEF's commitment to sustainable biosolids management

By Justin Jacques, WE&T Departments Editor, jjacques@wef.org

This article originally appeared in the April 2021 issue of *Water Environment & Technology* magazine. Reprinted with permission from the Water Environment Federation. All rights reserved.

Water resource recovery professionals have long understood that when processed correctly, fertilizers made by repurposing wastewater biosolids can often represent a safer, cheaper, and more sustainable soil amendment compared to manure or chemical-based fertilizers. However, while biosolids reuse in the U.S. has become more common in recent decades, its adoption has been sluggish because of inconsistent regulatory guidelines, gaps in research, and the social stigma of recycling human waste.

The Water Environment Federation (WEF; Alexandria, Virginia) is taking several new steps to help overcome these obstacles. In February, WEF released a new communications toolkit to help utilities and biosolids managers build support for biosolids recycling using simple, science-backed messaging. The organization also established a new staff position, hiring former Northwest Biosolids (Gig Harbor, Washington) Executive Director Maile Lono-Batura as its first Director of Sustainable Biosolids Programs.

"Biosolids are a central product of the wastewater treatment process, a vital part of resource recovery and circular economy, and beneficial for communities in many ways," said WEF President Lynn Broaddus. "WEF is increasing our investment in biosolids programs and is thrilled to add Maile's expertise and experience to our team."

A UNIFIED VOICE

With more than 20 years of experience leading a multi-state biosolids association, Lono-Batura is uniquely suited for her new role, which will involve unifying biosolids recycling practices and regulations that vary by region and state. In a February 16 Words on Water podcast interview, Lono-Batura described her goal to create a "collective platform" for biosolids research, advocacy, and knowledge-sharing at the national level. Much of her work will center on sharing resources between biosolids-management groups to reduce redundancies and amplify messaging, she said.

"For those of us in the field of biosolids, we know how important it is to have a unified



Image courtesy of Maile Lono-Batura

The Water Environment Federation (WEF; Alexandria, Virginia) has hired Maile Lono-Batura, former executive director of Northwest Biosolids (Gig Harbor, Washington), as its inaugural Director of Sustainable Biosolids Programs. The new position, along with other recent biosolids programs, signal WEF's growing focus on promoting biosolids recycling.

voice around biosolids so that we're all singing from the same sheet," Lono-Batura said. "It's going to be a challenge, for sure. But it is such a worthy challenge to me."

WEF's new Biosolids Communications Toolkit, accessible at bit.ly/WEF-biosolids, will help jumpstart Lono-Batura's work by providing customizable bill inserts, fact sheets, social media infographics, and other materials that convey key messages about biosolids in simple, accessible terms. Each resource available in the free toolkit works from cited, peer-reviewed sources and aim to reach different stakeholder groups, including those both inside and outside the wastewater sector. For example, some resources cover strategies for managing media coverage of biosolids programs, while others tout the benefits of biosolids-based fertilizers for farmers.

"We 'geek out,' and that's not a bad thing within our circle," Lono-Batura said. "But we lose people pretty quickly if we cannot relay the importance of what the research has found, whether it be favorable or unfavorable."

Although much of WEF's existing activity in sustainable biosolids has been technical in nature, Lono-Batura's new role indicates a growing focus on the social and logistical aspects of the biosolids challenge. Lono-Batura will not only work alongside biosolids professionals among WEF's membership, but also with regulators, environmentalists, the media, and others.

"There are a whole team of people not just within WEF but within and beyond the biosolids community that we can be aligning with – that part is what really excites me," Lono-Batura said. "That we can speak beyond our sector and connect with people beyond the people we normally connect with to see what common ground we have and how we can join forces on soil building, climate change, and producer responsibility."

REGULATION AND RESEARCH

WEF's new Director of Sustainable Biosolids position and communications toolkit promise to advance national coordination on biosolids recycling, but they are only the latest actions.

In November 2019, for example, WEF invited leading biosolids experts from across North America to its headquarters for a strategic conversation that identified ways to improve biosolids programs and better promote their adoption. Among other recommendations, meeting attendees described needs for better risk assessment methods for contaminants of emerging concern, new training and certification programs, and more robust communication between producers, farmers, and researchers.

Experts also called for an update to federal government guidance on biosolids use, as most U.S. states currently implement their own biosolids regulations. The U.S. Environmental

Protection Agency (EPA) Part 503 Rule, established in 1993, remains the only federal regulation governing land application of biosolids. Despite advancements in treatment technology that result in cleaner, safer, and more viable biosolids, the Part 503 Rule has never undergone a substantial update. Read more about the meeting's outcomes at <http://bit.ly/WEF-biosolids-report>.

WEF also published five new technical resources in 2020 that deal exclusively with biosolids management. Covered topics include the financial costs of managing

per- and polyfluoroalkyl substances (PFAS), measuring and managing greenhouse-gas emissions during the synthesis process, bioenergy focused public-private partnerships, and more. Access these technical resources at <https://www.wef.org/biosolids>.

WEF hosted its annual Residuals and Biosolids conference in a virtual format from May 11 to 13, 2021. The event offered access to the latest research in biosolids management, perspectives from biosolids-sector changemakers, and one-of-a-kind networking opportunities. ☺




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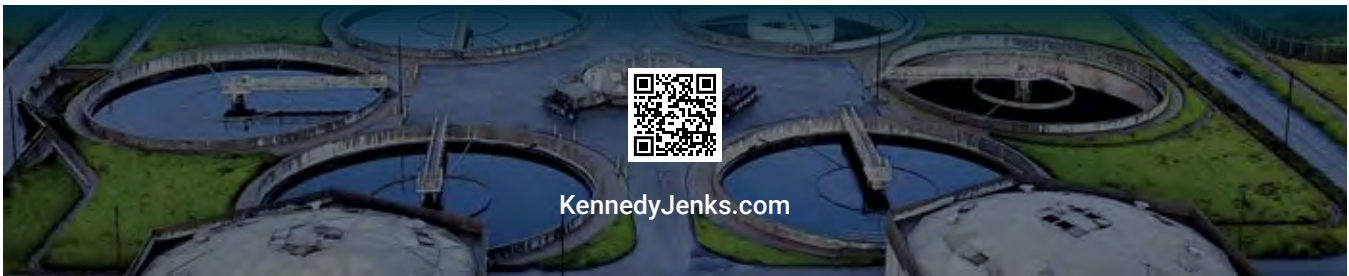
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Member Spotlight



Name
SAM FORSTER

How long have you been a member of VWEA?
Since July 2020

What is your hometown?
Buffalo, New York

What company do you work for?
Dewberry

How many years of experience do you have? 7

What kind of projects do you work on?
Any kind of distribution project, master planning and hydraulic modeling.

Why did you join VWEA?

I joined VWEA after moving from North Carolina to Virginia to get a sense of the market in Virginia and to network with other professionals in the area. Now that I'm entering my second year here, I'm looking forward to taking a more active role in VWEA and continuing to meet people with similar interests.

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

I'm an avid golfer, hockey player, and CrossFit enthusiast. My wife and I enjoy the outdoors, including running, hiking and biking whenever we get the chance. I'm a die-hard Buffalo Bills, Buffalo Sabres, and Boston Red Sox fan, so if I'm inside, I'm usually watching a game. I'm also a huge history nerd and I enjoy taking my wife to museums and walks around DC whenever I can.

Any fun facts that you would like to share?

Even though I'm an engineer, I appreciate good architecture and I have tattoos of my favorite buildings and landmarks from each place I've lived, including Buffalo, Rochester, Durham and Raleigh. ☺



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