

THE RISING TIDE

WATERJAM 2019

September 9 - 12, 2019

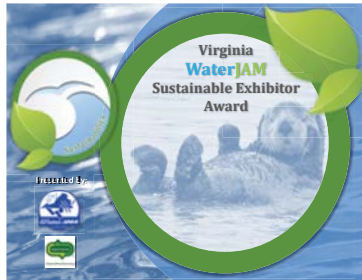
Virginia Beach, VA



SUSTAINABILITY INITIATIVES

The 2019 WaterJAM Committee, along with the Sustainable Utilities Committee, is proud to announce we are continuing our “Going Green” initiative and are seeking to be the greenest WaterJAM conference to date! Be on the lookout for the usual sustainable “green” initiatives such as multiple recycling stations, locally-sourced menu options, and local vendor products. This year we will be promoting plastic reduction since we are seeing the effects of years of plastic usage in our oceans and injuring our wildlife.

This will be the fifth year that our exhibitors can earn “The Tidy Otter” Award for Sustainability! Each exhibitor meeting our Sustainable Exhibitor requirements will receive an award to be posted at their exhibit, and their company name will receive special recognition on all exhibit hall maps. Be on the lookout for “The Tidy Otter” award at participating exhibitors’ booths!



Other continuing initiatives include:

- ♦ Reducing the number of signs and handouts through the use of double-sided printing
- ♦ Printing reusable signs on recyclable material
- ♦ Printing attendee planners and banquet menus on recycled, processed chlorine free paper
- ♦ Continued improvement to the WaterJAM App to reduce the use of paper products
- ♦ Locating offsite events within walking distance or providing group transit options
- ♦ Having water bottle filling stations available during the conference
- ♦ Eliminating use of single-serve condiments, sugar and creamer
- ♦ Reusing lanyards

Please support our efforts by participating in recycling efforts; using the water-fill stations with reusable water bottles; walking, carpooling, or taking mass transit to offsite events; and reducing your usage of materials during the conference. If you still have your lanyard from last year – or from another event – bring it and reuse it. Then be sure to return your lanyard at the end of the conference so that it can be reused next year!

If you have ideas for next year’s conference please contact Andrea Edgerton (aedgerton@hazenandsawyer.com).

WHAT’S INSIDE

From the Conference Chairs	2
Conference Location	3
Conference Logistics	4
Conference Hotels.....	5
Conference Basics	6-7
Registration Packages.....	8
Conference Overview	9-11
Visiting National Officers.....	12-13
Keynote Session: Keynote Speaker	14
Keynote Session: Featured Speaker	15
Conference Highlights.....	16-20
YP & Student Events.....	21-22
Workshops.....	23
Plant Tours	24
Twitter Contest.....	25
Concurrent Technical Sessions	26-46
Technical Session Alternates	47-48
Conference Registration Forms	49-52
Golf Sponsorship Form.....	53

JOIN THE PARTY! BECOME A WATERJAM VOLUNTEER!

It takes hundreds of volunteers to make the WaterJAM conference a success! If you are planning to attend WaterJAM, please consider volunteering a few hours of your time to help with the logistics and on-site aspects of events throughout the conference. (Please note: Volunteers will NOT receive free registration.)

If you are willing to help, please contact Kimberlee Stubbs at STU005@henrico.us or 804-501-7633 to sign up.

WELCOME!

On behalf of the Virginia Section of the American Water Works Association and the Virginia Water Environment Association, we want to extend a warm invitation to the 2019 Joint Annual Meeting in Virginia Beach, Virginia, this September.

As water, wastewater, and stormwater infrastructure challenges fill the headlines more than ever before, water professionals continue to rise and meet these challenges head on! Our theme, The Rising Tide, highlights our industry's commitment to excellence in protection of the public and the environment, and the continued development of breakthrough processes and technologies that will allow us to tackle tomorrow's most daunting problems. The networking and technical education opportunities at WaterJAM are designed to concentrate on these focus areas.

In order to build on our history of successful and growing conferences, the WaterJAM 2019 Committee has been working tirelessly to once again host the premier State Conference for water, wastewater, and stormwater professionals.

As always, WaterJAM 2019 will provide numerous technical growth opportunities (including continuing education credits) covering the latest industrial trends as well as a variety of social activities for all attendees. You can expect outstanding presentations and workshops, along with fun social events that will provide many opportunities for networking with friends and colleagues.

We are extremely excited about this year's conference, which is guaranteed to maintain the standard of excellence you have come to expect from the Virginia WaterJAM!



Adrianna Dimperio



Matt Harrison

Conference Co-Chairs

P.S. Don't forget to follow us on Facebook (facebook.com/VirginiaWaterJAM) and Twitter (@WaterJAM_VA).

LOCATION

THE VIRGINIA BEACH CONVENTION CENTER

1000 19th Street, Virginia Beach, VA, 23451

All conference technical sessions and exhibits will be held at the Virginia Beach Convention Center (VBCC), the nation's first convention center to earn LEED® Gold certification from the U.S. Green Building Council.

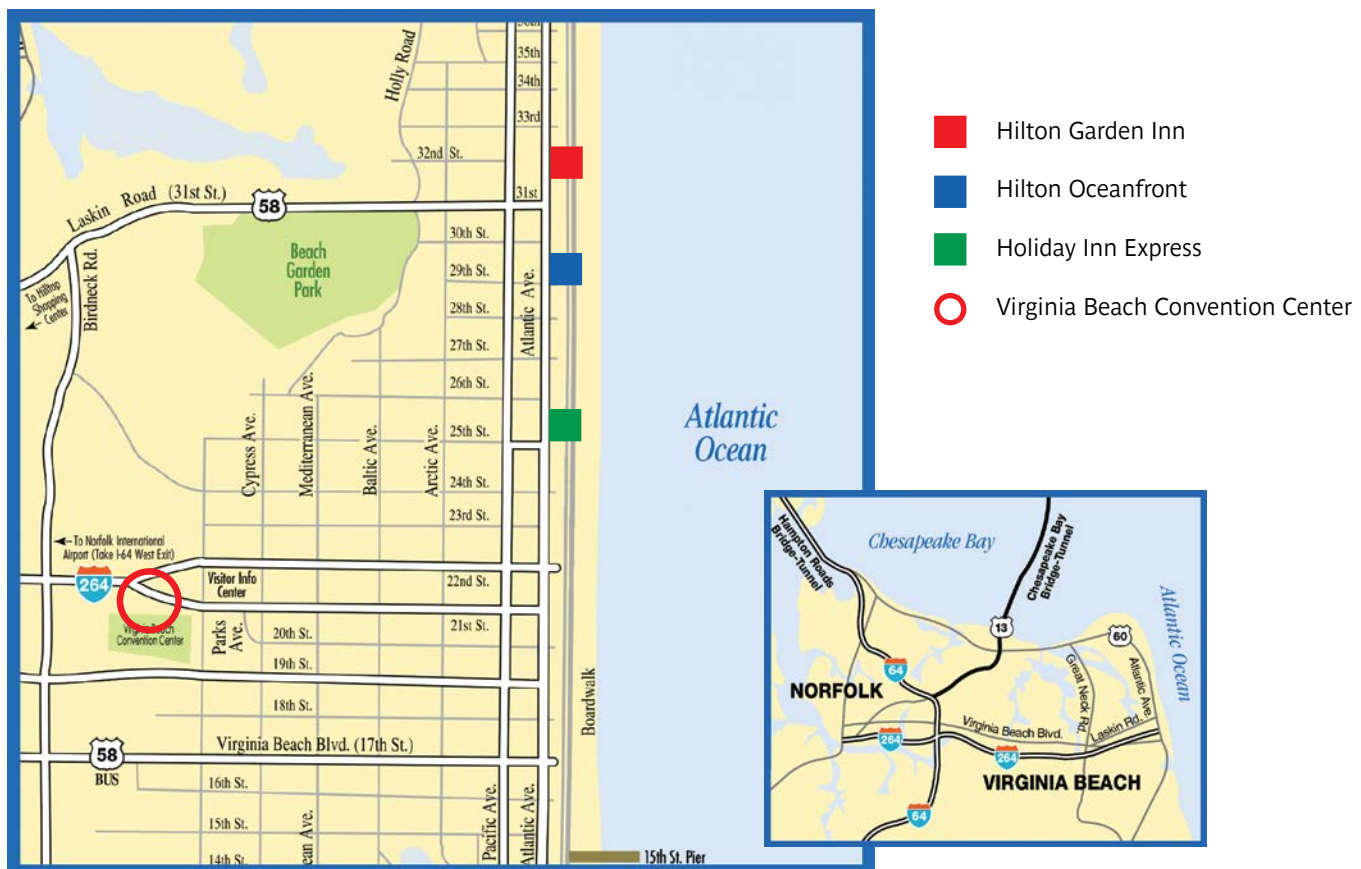
With nearly 29,000 square feet of meeting space, over 150,000 square feet of column-free exhibit space, one of the largest ballrooms on the East Coast, and more than 2,200 free parking spaces, it's the perfect location for WaterJAM 2019!

Located only minutes from the beach and resort area, the VBCC is convenient to a variety of arts and entertainment venues and family-friendly attractions, so you can enjoy new sights, sounds, and culinary delights within a short ride of the conference center.

DRIVING DIRECTIONS

When approaching from the west, routes are I-64, U.S. 460 or U.S. 58. From the north and south, convenient routes include I-85 or I-95, U.S. 17 and U.S. 13 (crossing the world-famous Chesapeake Bay Bridge-Tunnel, a 17-mile span connecting Virginia's Eastern Shore with Virginia Beach). These routes intersect with I-64, which connects with the Virginia Beach-Norfolk Expressway, I-264, and leads directly to the Virginia Beach oceanfront.

When traveling from routes northwest of the Hampton Roads region, motorists are encouraged to use a faster, alternate route via I-664 Monitor Merrimac Memorial Bridge Tunnel (MMMBT), off of I-64 East. While the mileage to reach the beach is greater, I-664 tends to be less congested, and the time spent idling in traffic is statistically reduced. Simply take I-64 East, to I-664 (Exit 264), to I-264 (Exit 15A), which will lead to the oceanfront. When leaving to return home, take I-264 West to I-664 North (Exit 299) to I-64 West (Exit 1A).



AIR TRAVEL

Norfolk International Airport (www.takeorf.com) is 20 minutes from the Virginia Beach oceanfront and is serviced by most major U.S. carriers. The IATA airport code for Norfolk International Airport is ORF.

Allegiant, American, Delta, Frontier, Southwest and United offer convenient access to hundreds of cities worldwide. Airport terminals are open 24 hours a day, 7 days a week. Travelers are encouraged to contact their airline for ticket counter hours and required check-in times. Be sure to also allow extra time to complete the security screening process. In general, the recommended arrival time at the airport is 90 minutes prior to departure time for domestic flights; 2 hours for international flights.

GROUND TRANSPORTATION

SHUTTLE SERVICE

James River Transportation
757-963-0433 or toll-free 866-823-4626

Shuttle service operates between Norfolk International Airport and Coastal Virginia/Northeast North Carolina cities. Reservations are not required for arriving passengers but are recommended. James River Transportation's counter is located in the Arrivals Terminal (baggage claim area) near baggage carousel three (3) and is staffed 24 hours daily.

RENTAL CARS

Rental car reservation desks are located in the Arrivals Terminal on the Level 1. Hours of operation: 4:30 AM - 1:00 AM daily. Rental car pickup located on Level G - Garage A. Rental car return is located on Level 2 - Garage A.

Alamo
800-462-5266

Avis
800-831-2847

Budget
800-527-0700

Dollar
800-800-4000

Enterprise
800-736-8227

Hertz
800-654-3131

National
800-227-7368

Thrifty
800-357-2277

TAXIS

Taxis are located outside Arrivals Terminal Door #4. Five ride for the price of one to the same destination. Drivers accept cash and some credit cards.

Andy's Cab Co.
757-461-8880

Black and White
757-855-4444

City Wide Cabs
757-319-3368

Duke Cab Co.
757-202-3564

East Side Cabs
757-718-0937

Norfolk Checker
757-855-3333

Oceanside Executive
757-455-7602

Southside Cab
757-423-0154

Waterside Taxi
757-531-6430

Yellow Cab of Norfolk
757-857-8888

PUBLIC TRANSPORTATION

Hampton Roads Transit (HRT) provides public transportation in the Virginia Beach area. VB Wave is an easy way to get around the Virginia Beach Oceanfront. Wave trolleys make stops along Atlantic Avenue, at the Virginia Aquarium, Ocean Breeze Water Park, the Holiday Trav-L-Park, the KOA campgrounds on General Booth Boulevard, and the Shops at Hilltop. These hybrid-electric shuttles are also a lot of fun.

For routes, stops, and fares, go to www.gohrt.com/services/vb-wave. To travel further afield, check www.gohrt.com for information about HRT's bus, ferry and light rail services.

RIDE HAILING

Lyft and Uber are permitted to do business at Norfolk International Airport:

HILTON GARDEN INN VIRGINIA BEACH OCEANFRONT

3315 Atlantic Avenue
Virginia Beach, VA 23451
Phone: 757-305-9000
Toll Free Reservations: 1-877-STAY-HGI
www.hiltongardeninnvirginiabeach.com/

Rate: \$149 single and double
(Rates DO NOT include tax.)

Parking Fees: free self-parking; \$16 valet parking

Online Reservations: <http://bit.ly/2K5Mn2x>

Group Name: WaterJAM 2019

Group Code: WAJ

(Use this code to take advantage of the discounted group rate.)

Reservation Deadline: August 8, 2019

HILTON VIRGINIA BEACH OCEANFRONT

3001 Atlantic Avenue
Virginia Beach, VA 23451
Phone: 757-213-3000
Toll Free Reservations: 1-800-HILTONS
www.hilton.com/en/hi/hotels/index.jhtml?ctyhocn=ORFVHHF

Rate: \$159 city view/\$169 ocean view
(Rates DO NOT include tax.)

Parking Fees: \$10/night self-parking; \$16 valet parking

Online Reservations: <http://bit.ly/2VloHIB>

Group Name: WaterJAM 2019

Group Code: WAJ

(Use this code to take advantage of the discounted group rate.)

Reservation Deadline: August 8, 2019

HOLIDAY INN EXPRESS

2607 Atlantic Avenue
Virginia Beach, VA 23451
Phone: 757-491-6900
Toll Free Reservations: 1-800-HOLIDAY
www.hiexpressvb.com

Rate: \$99 single & double
(Rates DO NOT include tax.)

Breakfast included; 1 complimentary parking space/room

Online Reservations: <http://bit.ly/2Kp8lOj>

Group Name: 2019 Annual WaterJAM

Reservations Code: JAM

(Use this code to take advantage of the discounted group rate.)

Reservation Deadline: August 9, 2019

BOOK INSIDE THE BLOCK!

We encourage conference participants to stay at our designated host hotels because our contracts stipulate that the price we pay depends on the number of hotel rooms we say we can fill. We have to make this prediction when we sign the contract — as much as two years before the conference. However, if we fall short of our room block, we have to pay for empty hotel rooms. **Therefore, we respectfully request that you reserve only the rooms you'll actually use.** When you overbook and then cancel your reservations at the last minute, we run the risk of failing to meet our room block. Meanwhile, other participants are forced to stay at non-conference hotels, often at higher rates and/or farther away from the conference venue.

EDUCATION CREDITS

All technical sessions potentially qualify for professional engineer's education credits. Continuing education credit hours (CECs) as defined by Virginia regulation 18 VAC 10-20-683 are offered to professional engineers for attendance at technical presentations during the conference. Each technical presentation will be 25 minutes in length and represents 0.5 CECs. It is the responsibility of the individual seeking the CECs to determine the applicability of the respective technical presentation(s) in meeting their individual licensure continuing education needs and requirements. VA AWWA and VWEA CECs are transferable to professional development hours (PDHs) where 1.0 CEC equals 1.0 PDH.



VA AWWA and VWEA are providing continuing professional education credits (CPE) for waterworks and wastewater operators for attendance at some technical presentations, mobile sessions, and workshops during the WaterJAM conference. Each approved technical presentation or mobile session will be worth 0.5 CPEs. Each technical presentation will be 25 minutes in length. Each mobile session will consist of three hands-on presentations and will be 50 minutes in length. All presentations or sessions listed in the planner that are eligible for credit have a symbol (as shown).

Name badges will be marked with a QR code, and Assistant Moderators will be scanning badges following each presentation. Attendees must have their badge scanned after each presentation in order to receive credit. (Note: All presentations, regardless of whether a symbol is presented, are eligible for Professional Engineering credits.)

EXHIBITOR INFORMATION

With its largest layout EVER, the WaterJAM 2019 Exhibit Hall will host over 200 exhibitors and hands-on demonstration trailers showcasing the latest in water, wastewater, and stormwater technology, equipment, and services. Vendor representatives will be displaying the latest products and services available, providing information to keep you up to date on advances in the industry. There will be utility competitions, the Water for People raffle, the Cornhole Challenge, and the Networking Reception featuring the Water Reach Silent Auction! As always, snacks, refreshments, and meals will be available in the Exhibit Hall.



Once again blending technical programming with the exhibition experience, Mobile Sessions will return to the Exhibit Hall this year. Mobile Sessions offer attendees the opportunity to earn education credits for attending a set of Exhibitor presentations given at their booths. Exhibitors will have the opportunity to volunteer for this program, which has proved very popular since it was introduced in 2017!

The Sewer and Water Art Gallery (SWAG) is also returning this year. SWAG is a "museum" that showcases many of the strange items that Virginia's sewer and water industry professionals have encountered while working in the field. Visitors are allowed to vote for their favorites, with the top three exhibits receiving awards. As in years past, this exhibit is certain to be entertaining, educational, and enlightening!



Continuing our efforts to make WaterJAM a certified Virginia Green sustainable event, every exhibitor who qualifies as part of our going green initiative will receive the Tidy Otter Sustainable Exhibitor Award to be displayed at their booths.

WaterJAM continues to be the largest water, wastewater, and stormwater focused technical exhibit in the Mid-Atlantic region, so don't miss out this year! Find more information about exhibiting at WaterJAM 2019 at www.vaawwa.org or www.vwea.org, or at the following link: <http://bit.ly/2Haxzer>.

RETURNING THIS YEAR

EDDY & NILES ARE BACK!

Eddie and Niles are returning to WaterJAM 2019 for more fun!



Niles is WEF's smiling and friendly Crocodile mascot, and Eddy is AWWA's bright-eyed, tennis shoe-clad water drop mascot.



The two of them will be hanging out in the Exhibit Hall and Registration Area of the conference so stop by, say "Hi," and get your picture taken with them. Don't forget to share your pic on Twitter using #WaterJAM19!

PROFESSIONAL HEADSHOT PHOTOGRAPHY

Do you need a professional photo to include with your bio? Is your current headshot looking a little dated? We have the answer!

The WaterJAM committee is excited to offer the services of a professional photographer to this year's attendees. For the low cost of only \$35, you can have your portrait taken right on site! You will be given a unique hyperlink to a website where you can view & download your high resolution photos.

Only 100 appointments will be scheduled, so register early! Select the Headshot Photography option on the registration form. If you wish to have your photo taken but need to pay for it separately, you can return to the registration site and add it after your initial registration is complete. Alternatively, you can sign up at the registration desk when you arrive at WaterJAM.

UTILITY TRAVEL GRANTS

Each year, VA AWWA's Membership Engagement Committee awards grants to small utility employees to offset the cost of attending the conference. The grant monies are to be used for travel, lodging, and conference-related expenses only. The purpose of the grant is to increase the involvement of small water systems and encourage participation by individuals who may not otherwise have been able to attend.

Applications are available on the VA AWWA website (www.vaawwa.org). For more information or application forms, please contact Geneva Hudgins, (434-386-3190 or Geneva.Hudgins@vaawwa.org).

GET THE WATERJAM APP

Stay connected at WaterJAM 2019 with our mobile app. You can view the full conference schedule and sort/filter Technical Sessions. You can also customize and save your personal schedule right in the app!

Other features include:

- Search capability
- Maps of the Meeting Rooms and Exhibit Hall
- Details about exhibitors and VA AWWA/VWEA sponsors
- Speaker contact information
- Local info (transportation, hotels, & restaurants)

The app will be available for download directly from Apple iTunes or Google Play approximately one month prior to the start of the conference.

registration packages

HOW TO REGISTER

We strongly encourage you to use the online registration system at: <http://bit.ly/2Haxzer>. (Note: The new site cannot handle multiple registrations; therefore, only one registration can be completed at a time.) If paying by check, you can print the forms from the pdf version of this planner found at www.vwea.org or www.vaawwa.org. Please consider the environment and print only the pages you need.

WHAT'S INCLUDED IN YOUR REGISTRATION?

Full Conference Registration

Opening Night Meet & Greet Reception; Keynote Session; All Technical Sessions; Mobile Sessions; Exhibits; Continental Breakfast, Lunch, and Breaks each day; Networking Reception featuring the Water Reach Silent Auction; Awards Banquet Reception or the YP & Student Reception; and the Awards Banquet & Fun Night.

Note: The Exhibitor Rate does not include the Meet & Greet Reception or the Awards Banquet & Fun Night.

Single Day or Half-Day (Thursday) Registration

Technical Sessions; Mobile Sessions; Keynote Session (Tuesday only); Exhibits; Breakfast, Lunch, and Breaks on the day registered

Exhibit Hall Pass (Utility Staff on Wednesday Only)

Exhibits, Breakfast, Lunch, and Breaks

Extras

The Golf Tournament, Clay Shoot, 5K Fun Run, Special Breakfasts, Workshops, and Plant Tours are not included in the conference registration packages and require additional fees.

Extra tickets for the Awards Banquet & Fun Night, Meet & Greet Reception, and Networking Reception may be purchased to supplement single day packages. See registration form on page 51 for details.

Note: The YP Service Project and Orientation Breakfast are free events.

REGISTRATION BASICS

All speakers, volunteers, and individuals attending workshops, technical sessions, exhibits, and social functions are required to be registered, and admission to all events, including receptions, luncheons, and the banquet will require a registration badge. Pre-registered attendees may pick up their name badges and program materials at the registration desk, located near the Box Office B, at the times listed in the conference overview.

Registration Deadlines >>	Early Bird Rate On or before 8/9/2019	Regular Rate After 8/9/2019
Full Conference		
Member	\$410.00	\$480.00
Non-member	\$475.00	\$555.00
Plant, Collection System, Distribution or Maintenance Staff	\$250.00	\$275.00
Exhibitor	\$235.00	\$275.00
Retiree/Guest/Spouse	\$130.00	\$130.00
Student	FREE	FREE
Single Day		
Member	\$255.00	\$280.00
Non-member	\$320.00	\$350.00
Plant, Collection System, Distribution or Maintenance Staff (Full Conference)	\$120.00	\$145.00
Exhibit Hall Pass (Only on Wednesday for Utility Plant, Collection System, Distribution or Maintenance Staff)	\$50.00	N/A
Retiree	\$80.00	\$80.00
Student	FREE	FREE
Half-Day Thursday		
Member	\$125.00	\$145.00
Non-member	\$155.00	\$170.00
Plant, Collection System, Distribution or Maintenance Staff	\$50.00	\$65.00
Retiree	\$50.00	\$50.00
Student	FREE	FREE

Sunday, September 8

1 PM - 4 PM	Water Taste Test	Virginia Beach Boardwalk at 31st Street
2 PM - 4 PM	VWEA Board Meeting.....	Meeting Room 3A
3 PM - 4:30 PM	VA AWWA Board Meeting.....	Meeting Room 3B

Monday, September 9

7 AM - 5 PM	Registration Desk Open	Pre-Function Area (Lobby)
7:30 AM - 3 PM	WaterJAM Golf Outing & Cookout.....	The Signature at West Neck, Virginia Beach, VA
8:45 AM - 2 PM	WaterJAM Clay Shoot	Old Forge Sporting Clays, Providence Forge, VA
11 AM - 3 PM	YP-Sponsored Service Project.....	Virginia Aquarium & Marine Science Center, Virginia Beach, VA
2 PM - 6 PM	Exhibitor Set-Up	Exhibit Hall ABC
7 PM - 10 PM	Meet & Greet Reception	Hilton Virginia Beach Oceanfront, Peacock Ballroom

Pre-Conference Workshops:

8 AM - 5 PM	Laboratory Practices Workshop (Full Day).....	Meeting Room 2CD
1 PM - 5 PM	Wet Weather Storage Solutions (Half Day).....	Meeting Room 2B
1 PM - 5 PM	What Does it Mean to be a Sustainable Utility? (Half Day)	Meeting Room 2A
1 PM - 5 PM	Enhanced Coagulation Strategies - Testing, Operations, and Optimization (Half Day)	Meeting Room 1B

Tuesday, September 10

6:30 AM - 8 AM	Water For People 5K Fun Run/Walk	Virginia Beach Boardwalk at 31st Street
7 AM - 5 PM	Registration Desk Open	Pre-Function Area (Lobby)
7 AM - 5 PM	Speaker Ready Room	Show Managers' Room
7:30 AM - 9 AM	Keynote Session Continental Breakfast	Outside Meeting Room 1BCD
7:30 AM - 9 AM	Orientation Breakfast.....	Meeting Room 2AB
7:30 AM - 11 AM	Exhibitor Set-Up	Exhibit Hall ABC
9 AM - 11:30 AM	Keynote Session	Meeting Room 1BCD
11:30 AM - Noon	Grand Opening of Exhibits.....	Exhibit Hall ABC
11:30 AM - Noon	VA AWWA 1st Business Meeting	Meeting Room 1BCD
11:30 AM - 6:30 PM	YP Cornhole Challenge.....	Exhibit Hall ABC
11:30 AM - 6:30 PM	Sewer and Water Art Gallery	Exhibit Hall ABC
11:30 AM - 6:30 PM	Committee Meetings	Meeting Rooms 5A & 5B

conference overview

Tuesday, September 10 (continued)

Noon - 1:30 PM	VWEA Membership Appreciation & Awards Luncheon	Ballroom 1
Noon - 1:30 PM	Lunch for Those Not Attending VWEA Luncheon	Exhibit Hall ABC
1 PM - 1:30 PM	Moderator and Assistant Moderator Orientation	Show Managers' Room
1:30 PM - 5 PM	Concurrent Technical Sessions 1-10	Various Meeting Rooms
2 PM - 3 PM	Mobile Session 1	Exhibit Hall (Meet in Registration Area)
2 PM - 6 PM	Water Reach Silent Auction (bidding)	Exhibit Hall ABC
3 PM - 4 PM	PM Break	Exhibit Hall ABC
4 PM - 5 PM	Mobile Session 2	Exhibit Hall (Meet in Registration Area)
5 PM - 6:30 PM	Networking Reception Featuring the Water Reach Silent Auction	Exhibit Hall ABC
7 PM onward	Free Night	

Wednesday, September 11

7 AM - 8 AM	VWEA Golden Rodent Breakfast (<i>VWEA Past Presidents</i>)	Meeting Room 5C
7 AM - 8:30 AM	Utility Managers' Breakfast	Meeting Room 1B
7 AM - 5 PM	Registration Desk Open	Pre-Function Area (Lobby)
7 AM - 5 PM	Speaker Ready Room	Show Managers' Room
7:30 AM - 9 AM	Continental Breakfast	Exhibit Hall ABC
7:30 AM - 4 PM	Exhibition Area Open	Exhibit Hall ABC
7:30 AM - 4 PM	YP Cornhole Challenge & Raffle	Exhibit Hall ABC
7:30 AM - 4 PM	Sewer and Water Art Gallery	Exhibit Hall ABC
8 AM - 8:30 AM	Moderator and Assistant Moderator Orientation	Show Managers' Room
8 AM - Noon	YP Poster Session	Pre-Function Area (Lobby)
8 AM - 2 PM	VA AWWA Student Water Challenge Workrooms	Meeting Rooms 4D, 4E, 5A, 5B
8:30 AM - Noon	Concurrent Technical Sessions 11-20	Various Meeting Rooms
9 AM - 6 PM	Committee Meetings	Meeting Rooms 1B & 5C
9 AM - 10 AM	Mobile Session 3	Exhibit Hall (Meet in Registration Area)
10 AM - 11 AM	VA AWWA 2nd Business Meeting & Section Forum	Meeting Room 3AB
10 AM - 11 AM	AM Break & VWEA Ops Challenge Demonstrations	Exhibit Hall ABC
11 AM - Noon	Mobile Session 4	Exhibit Hall (Meet in Registration Area)

Wednesday, September 11 (continued)

Noon - 1:30 PM	VA AWWA Membership Appreciation & Awards Luncheon	Ballroom 1
Noon - 1:30 PM	Luncheon for Those Not Attending VA AWWA Luncheon	Exhibit Hall ABC
1:00 PM - 1:30 PM	Moderator and Assistant Moderator Orientation	Show Managers' Room
1:30 PM - 5 PM	Concurrent Technical Sessions 21-30.....	Various Meeting Rooms
1:30 PM - 2 PM	WEF Student Design Competition Wastewater Team Presentation	Meeting Room 4AB
2 PM - 2:30 PM	WEF Student Design Competition Environmental Team Presentation	Meeting Room 4AB
2 PM - 3 PM	Mobile Session 5	Exhibit Hall (Meet in Registration Area)
2:30 PM - 5 PM	VA AWWA Student Water Challenge Presentations.....	Meeting Room 4AB
3 PM - 4 PM	PM Break & VA AWWA Distribution Rodeo Demonstrations	Exhibit Hall ABC
3 PM - 4 PM	VWEA Business Meeting	Meeting Room 1D
4 PM - 5 PM	YP Committee Meeting.....	Meeting Room 1B
4 PM - 8 PM	Exhibitor Break Down	Exhibit Hall ABC
5 PM - 6:30 PM	YP & Student Reception.....	Ballroom Foyer
5 PM - 6:30 PM	Awards Banquet Reception	Ballroom Foyer
6:30 PM - 10 PM	Awards Banquet & Fun Night.....	Ballroom 1-2

Thursday, September 12

7 AM - Noon	Registration Desk Open	Box Office B
7 AM - 11 AM	Committee Meetings	Meeting Room 4D & 5C
7 AM - Noon	Speaker Ready Room	Show Managers' Room
7:15 AM - 8:45 AM	5-S Breakfast (5-S Members).....	Meeting Room 5C
7:30 AM - 9 AM	Continental Breakfast	Outside Meeting Room Suite 2-3
8 AM - 8:30 AM	Moderator and Assistant Moderator Orientation	Show Managers' Room
8:30 AM - Noon	Concurrent Technical Sessions 31-40.....	Various Meeting Rooms
10 AM - 10:30 AM	AM Break.....	Outside Meeting Room Suite 2-3
12:45 PM - 4:30 PM	Stormwater Workshop: Pollutant Trading (Half Day)	Meeting Room 1B
12:30 PM - 2:30 PM	WaterJAM Committee Post-WaterJAM Meeting/Lunch.....	Meeting Room 5C
12:30 PM - 2:30 PM	VA AWWA Post-WaterJAM Board Meeting/Lunch	Meeting Room 4D
12:30 PM - 3 PM	Plant Tour.....	HRSD SWIFT Research Center, Suffolk, VA
12:30 PM - 3 PM	Plant Tour.....	City of Chesapeake's Lake Gaston WTP, Chesapeake, VA

visiting national officers

Theresa O'Grady

Vice-President (2018-2020)

American Water Works Association



Theresa is the Water Resources Group Manager for Crawford, Murphy & Tilly, Inc in Aurora, Illinois. With 24 years of experience in the water industry, Theresa has been an active member of AWWA since 1996.

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

Theresa holds a BS degree in Civil Engineering with a Hydraulics & Hydrology Emphasis from the University of Illinois, Champaign-Urbana and is a licensed Professional Engineer (P.E.) in the State of Illinois. She lives in Naperville, Illinois with her husband (Michael) and two kids (Aidan and Riona).



**American Water Works
Association**

Dedicated to the World's Most Important Resource™

The American Water Works Association is an international, nonprofit, scientific and educational society dedicated to providing total water solutions assuring the effective management of water. Founded in 1881, the Association is the largest organization of water supply professionals in the world.

Our membership includes over 3,900 utilities that supply roughly 80 percent of the nation's drinking water and treat almost half of the nation's wastewater. With over 51,000 total members, AWWA represents the full spectrum of the water community: public water and wastewater systems, environmental advocates, scientists, academicians, and others who hold a genuine interest in water, our most important resource.

AWWA also takes great pride in helping establish two preeminent organizations dedicated to safe water, the Water Research Foundation in 1966 and Water for People in 1991.

AWWA unites the diverse water community to advance public health, safety, the economy, and the environment.

Jacqueline A. Jarrell, P.E.

President-elect, WEF Water Environment Federation

Jackie Jarrell, P.E., is the 2018-2019 President-elect of the Water Environment Federation (WEF), an international organization of water quality professionals headquartered in Alexandria, Va.

Jackie has been with Charlotte Water for more than 29 years. For the past 18 years, she has been responsible for the overall management of the operation and maintenance of five wastewater treatment facilities consisting of a total capacity of 123 million gallons per day (MGD), with the largest plant permitted at 64 MGD. She is also responsible for the related Residuals Program, producing more than 90,000 wet tons/year, and the Industrial Pretreatment Program, with more than 60 significant industrial users. Recently, Jackie serves as the Operations Chief responsible for wastewater operations, and includes oversight of regulatory functions, process control, industrial pretreatment and continuous improvement programs within the operations areas.

As a WEF member, Jackie has held multiple leadership and committee roles, including serving as the chair of the Utility Management Program Symposia and the first vice chair of the Utility Management Committee.

Also an active member of the North Carolina Water Environment Association (NCWEA), Jackie helped develop NCWEA's strategic plan in 2013 and is the current chair of the Nominating Committee. She has also chaired the Public Education Committee, the Annual Conference Committee, and the Program Committee. In 2013, Jackie served as the MA chair and worked on related subcommittees such as Water for People (including a trip to Bolivia in 2011), the Wastewater Schools Committee, the Endowment Committee, and the Plant Operations Committee. She is actively involved with the North Carolina Water Quality Association, a regulatory advocacy organization of utilities in North Carolina, and is a past chair and a current board member.

Jackie is a registered professional engineer in the state of North Carolina and holds a Biological Wastewater Grade II OIT. She received a B.S. in engineering from the University of North Carolina-Charlotte. Jackie is the 2014 recipient of the Arthur Sidney Bedell Award. In 2015, Jackie, along with her colleagues, was awarded the Gascoigne Wastewater Treatment Plant Operational Improvement Medal.



The Water Environment Federation (WEF) is a not-for-profit technical and educational organization of 34,000 individual members and 75 affiliated Member Associations representing water quality professionals around the world. Since 1928, WEF and its members have protected public health and the environment. As a global water sector

leader, our mission is to connect water professionals; enrich the expertise of water professionals; increase the awareness of the impact and value of water; and provide a platform for water sector innovation.

Previously called the Federation of Sewage Works Associations (1928), the Federation of Sewage and Industrial Wastes Associations (1950), and the Water Pollution Control Federation (1960); the name was changed to the Water Environment Federation in 1991 to reflect an expanded focus of non-point and point sources of pollution.

WEF and its global network of members and Member Associations provide water quality professionals around the world with the latest in water quality education, training, and business opportunities. WEF's diverse membership includes scientists, engineers, regulators, academics, utility managers, plant operators, and other professionals. WEF uses this collective knowledge to further a shared goal of improving water quality around the world.

KEYNOTE SPEAKER

TUESDAY, SEPTEMBER 10 ~ 9 AM - 11:30 AM
MEETING ROOM 1BCD



REAR ADMIRAL ANN C. PHILLIPS, US NAVY (RETIRED)

Special Assistant to the Governor for Coastal Adaptation and Protection for the State of Virginia

Ann C. Phillips is the Special Assistant to the Governor for Coastal Adaptation and Protection for the State of Virginia. Prior to joining the administration, she worked to address sea level rise and climate impact on national security at the regional, national and international level, and chaired the Infrastructure Working Group for the Old Dominion University-convened Hampton Roads Sea Level Rise Preparedness and Resilience Intergovernmental Pilot Planning Project.

Preceding her work on climate impact and sea level rise, Ann served nearly 31 years on active duty. She had the honor to commission and command USS MUSTIN (DDG 89) and to command Destroyer Squadron 28. Her final Flag command was as Commander, Expeditionary Strike Group TWO, including all the Amphibious Expeditionary Forces on the East Coast of the United States.

Ann earned a Master of Business Administration from The College of William and Mary – Mason School of Business, in 2016. She is a 1983 graduate of the University of North Carolina at Chapel Hill. In addition, she is a certified Chesapeake Bay Landscape Professional, Level 2.

THE RISING TIDE: COASTAL ADAPTATION AND PROTECTION IN VIRGINIA

Virginia is experiencing an increase in extreme weather events and natural disasters that threaten public health and safety, the environment, and the economic wellbeing of the Commonwealth, including ports, military installations, transportation infrastructure, tourism assets, farms, and forests. To make Virginia resilient requires a comprehensive, collaborative, whole of society approach – engaging the federal and state government, localities, businesses, non-profits, and most of all, citizens.

On November 2nd, 2018, Governor Ralph Northam signed Executive Order 24, “*Virginia’s roadmap to make our built environment more resilient to floods, hurricanes, fires, and other extreme weather events.*” ~ Governor Ralph Northam, November 2, 2018.

Executive Order 24 will set statewide standards, create and implement the Virginia Coastal Resilience Master Plan, and align statewide communication, collaboration, and coordination efforts to protect and adapt our coastline and State. Virginia will lead, but we need “All hands on deck.”



FEATURED SPEAKER

TUESDAY, SEPTEMBER 10 ~ 9 AM - 11:30 AM
MEETING ROOM 1BCD

PETER COLOHAN

Executive Director, Internet of Water

Peter Colohan is the Executive Director of the Internet of Water (IoW), a project based at Duke University's Nicholas Institute for Environmental Policy Solutions.

Peter comes to the IoW after nearly a decade of Federal service with the National Oceanic and Atmospheric Administration (NOAA). At NOAA, Peter was a key advocate for the development of the National Water Model and the creation of the NOAA Water Initiative. He also served as a Federal Coordinating Lead Author for the Water Chapter of the Fourth National Climate Assessment, published in November 2018. Peter was an enthusiastic participant in the 2017 Aspen Dialogue Series on Water Data, co-led by the Nicholas Institute, which led to the creation of the Internet of Water.

From 2012-2014, Peter served as the Assistant Director for Environmental Information within the White House Office of Science and Technology Policy under President Barack Obama, on assignment from NOAA, where he worked closely with all Federal agencies responsible for climate, water and environmental science and technology. Prior to his federal service, Peter advised NOAA as a consultant on the development of the Group on Earth Observations (GEO), an intergovernmental body dedicated to the global exchange of environmental data and information. He served as that body's Executive Officer from 2003 to 2005.



INTRODUCING THE INTERNET OF WATER

The Internet of Water (IoW) is a vast yet simple idea: water challenges are large and growing, and everyone can benefit from better access to water data. Why is it easier to find a video of kittens going down a slide than it is to find out about your local stream? The challenge is first societal, then technical. People and institutions have to agree to share, exchange, and manage water data in a more open, modern way before meaningful technical investments can be made. The IoW intends to demonstrate the value of open, FAIR (Findable, Accessible, Interoperable [does it work with my stuff], and Reusable) water data to help communities address water problems, gain new insights about their water resources, and ultimately, for both communities and ecosystems to thrive through sustainable water resource management and stewardship.

In 2017, the Aspen Institute collaborated with Duke University's Nicholas Institute for Environmental Policy Solutions and Redstone Strategy Group to convene a dialogue with diverse stakeholders (utility managers, agricultural producers, software developers, and representatives of public sector agencies and nongovernmental organizations) to discuss what barriers exist and what steps are needed to improve the nation's water data infrastructure. That dialogue led to the 2017 report, "Internet of Water: Sharing and Integrating Water Data for Sustainability," a bold vision for how to improve water data infrastructure nationwide to fundamentally transform water management. This idea sparked the imaginations of several philanthropic foundations, which stepped in to fund the Internet of Water project beginning in 2018. The IoW is managed by a small Duke start-up team working to realize the project's vision and mission. By 2021, the IoW aims to be a self-sustaining network supported by an independent organization.



Internet
of Water

PRE-CONFERENCE EVENTS

WATER TASTE TEST

Sunday, September 8 ~ 1 PM - 4 PM

Virginia Beach Boardwalk at 31st St (the Neptune Statue)

The Water Taste Test/Education Booth is returning once again to WaterJAM. This year, the event will be held at the Virginia Beach Oceanfront on the Boardwalk at 31st Street. Located next to Neptune's Park, the 34-foot statue of King Neptune will overlook our efforts to educate the public. The purpose of the Water Taste Test is to allow the public an opportunity to compare Virginia Beach tap water with bottled water in a blind, side-by-side taste test. In addition to the taste test, we will show the public the difference in cost between bottled water and tap water. We'll also provide brochures presenting fun facts about water and sewer systems for public education purposes.

Come join the fun! The water will be refreshing and free! If you have any questions or want to volunteer to help, please contact Chris Graves (757-385-4967 or ChGraves@vbgov.com).

WATERJAM 2019 GOLF OUTING & COOKOUT

Monday, September 9 ~ 7:30 AM - 3 PM

The Signature at West Neck

3100 Arnold Palmer Drive, Virginia Beach, VA 23456

www.signatureatwestneck.com ~ 757-721-2900

Cost: \$95/person

Registration starts and range opens at 7:30 AM

Registration includes: continental breakfast, green fee, cart, range balls, lunch, and prizes! Shotgun start is at 9 AM. The format will be four-person captain's choice. Individuals may also sign up for the tournament. Registration will be limited to 144 golfers, so register early. Lunch, served after the tournament, will feature a raffle and prizes. Proceeds from the raffle will be donated to Water for People.



Please indicate on the registration form if you are interested in donating a raffle prize (merchandise, gift certificates, etc.). Sponsorship opportunities for breakfast, lunch, hole-in-one prizes, and tee boxes are also available. Register to play in and/or sponsor this event at <http://bit.ly/2Haxzer> or use the forms in this booklet. For info, contact Paul Delphos (757-779-7083 or Paul.Delphos@aeacom.com) or Thom Lipinski (571-291-7792 or tlipinski@loudounwater.org).

WATERJAM 2019 CLAY SHOOT

Monday, September 9 ~ 8:45 AM - 2 PM

Old Forge Sporting Clays

7945 Long Reach Road, Providence Forge, VA 23140

www.oldforgesportingclays.com ~ 804-966-2955

The WaterJAM 2019 Clay Shoot will be held at Old Forge Sporting Clays in Providence Forge, 90 minutes west of Virginia Beach Convention Center/30 minutes east of Richmond International Airport.



Mandatory safety instruction begins at 8:45 AM with a shotgun start (pun intended) at 9 AM. The entry fee is \$80/person and includes 100 targets, lunch, and door prizes. You will need to bring hearing protection, safety glasses, and a minimum of five (5) boxes of #7.5, 8, or 9 light field load shotgun shells of the appropriate gauge for your shotgun. This is sure to be a fun time for everyone! Due to the recent popularity of this event, we're limiting registration to the first 85 shooters.

Register for this event on the main conference registration form at <http://bit.ly/2Haxzer>. Please note that sponsorships are available for \$75. The sponsorships are used to enhance our door prizes. Everyone goes home with a door prize!

Questions? Contact Taylor Turner (804-665-1075 or taylor.turner@arcadis.com) or Greg Everhart (804-559-4259 or gregeverhart@combs-associates.com).

SPECIAL EVENTS

WATER FOR PEOPLE 5K FUN RUN/WALK

Tuesday, September 10 ~ 6:30 AM - 8 AM
Virginia Beach Boardwalk at 31st St (the Neptune Statue)

Add a little fun to your morning, and head to the oceanfront for a scenic run or walk for an extremely worthwhile cause. The Water for People Committee is hosting a 5K Fun Run/Walk (an event for all levels of fitness). Enjoy the beautiful boardwalk and earn some bragging rights with a "5K Finisher" ribbon to attach to your name badge. Check-in begins at 6:30 AM, and the event starts at 7 AM.



The registration fee is \$40 and includes refreshments and a T-shirt. If you register by August 9 you will receive a custom race T-shirt, after that time you will receive a Water for People shirt. Sponsorships are available for \$120. If you sponsor by August 9, your sponsorship will include your company logo on the T-shirt and recognition on Twitter. All proceeds from this event will be donated to Water for People, an international nonprofit committed to building a world where all people have access to safe drinking water and sanitation and no one suffers or dies from water- or sanitation-related diseases. Learn more at www.waterforpeople.org. Questions may be directed to Jamie Bondurant (jbondurant@hazenandsawyer.com).

FREE NIGHT

Tuesday, September 10 ~ 7 PM onward

No WaterJAM activities are planned for this night. You're free to explore the area or experience a night on the town with friends and colleagues. There are many great places to enjoy in Virginia Beach. Be sure to check the WaterJAM app for a list of local restaurants. Brochures and informational literature will also be available at the VBCC and in hotel lobbies to help you decide how to spend your evening. (Note: If you schedule a private event, please respect the Networking Reception and allow time for attendees to leave the conference at 6:30 PM to change for and/or travel to your event.)

RECEPTIONS

OPENING NIGHT MEET & GREET RECEPTION

Monday, September 9 ~ 7 PM - 10 PM
Hilton Virginia Beach Oceanfront - Peacock Ballroom
3001 Atlantic Ave. at 31st St., Virginia Beach, VA 23451

Please join us on Monday night at 7 PM at the Hilton Virginia Beach Oceanfront to kick off this year's WaterJAM with great hors d'oeuvres, your favorite beverages, and the best of company.

Note: If you're not a guest of the Hilton Virginia Beach Oceanfront, complimentary valet parking will be provided (tips are appreciated). Please be aware that the valet serves all hotel guests, as well as guests of the hotel's two restaurants, so it's possible there will be a wait to get your vehicle returned after the event. Self-parking is \$2 per hour in the city garage attached to the hotel's second level.



NETWORKING RECEPTION FEATURING THE WATER REACH SILENT AUCTION

Tuesday, September 10 ~ Reception: 5 PM - 6:30 PM
Auction begins at 2 PM ~ Final bids at 6 PM
Exhibit Hall ABC

Come join us for light hors d'oeuvres and drinks at the Networking Reception featuring the Annual Water Reach Silent Auction! Mingle with friends and colleagues as you place bids on a great selection of artwork and other items donated by Virginia businesses. Credit/debit card payments are now accepted, so bid high and bid often!

Auction proceeds will be donated to the Water Reach Committee, which assists small water systems throughout Virginia. Don't miss this opportunity to take home some unique items while supporting one of VWEA and VA AWWA's key initiatives to bring safe water and proper sanitation to people in Virginia who are without.

If you are an artist, craftsperson, or company that wishes to donate an item for the auction, contact Jeff Kapinos at jkapinos@rkk.com to make donation arrangements.

SPECIAL BREAKFASTS

ORIENTATION BREAKFAST

Tuesday, September 10 ~ 7:30 AM - 9 AM
Meeting Room 2AB

If this is your first time at WaterJAM, please join us on Tuesday morning for the Orientation Breakfast with a game show-style competition. The game, starting at 8 AM, will focus on how to get the most out of your WaterJAM experience while providing some laughs. No matter who has the most points at the end, YOU will be the winner! Please indicate on the registration form if this is your first WaterJAM and whether you plan to attend this free event. For more information, contact Kelli Stamm at kstamm@precision-measurements.com.



VWEA GOLDEN RODENT BREAKFAST

Wednesday, September 11 ~ 7 AM - 8 AM
Meeting Room 5C

This breakfast is for VWEA Past Presidents only. Please indicate on the registration form if you plan to attend.

UTILITY MANAGERS' BREAKFAST

Wednesday, September 11 ~ 7 AM - 8:30 AM
Meeting Room 1B

This breakfast is an excellent opportunity for managers, directors, and senior staff from wastewater and drinking water utilities to share ideas, discuss trends, and address critical issues. A brief overview on current topics will be presented. Please indicate on the registration form if you plan to attend.

5-S BREAKFAST

Thursday, September 12 ~ 7:15 AM - 8:45 AM
Meeting Room 5C

This breakfast is for 5-S members only. Please indicate on the registration form if you plan to attend.

SECTION FORUM

VA AWWA 2ND BUSINESS MEETING & SECTION FORUM

Wednesday, September 11 ~ 10 AM - 11 AM
Meeting Room 3AB

Theresa O'Grady, Vice-President of the American Water Works Association, will be hosting a Town Hall Meeting for all AWWA members. The session will start with a very brief presentation and then shift to a discussion forum.

BANQUET

AWARDS BANQUET & FUN NIGHT

Wednesday, September 11
Reception: 5 PM - 6:30 PM ~ Ballroom Foyer
Dinner: 6:30 PM - 8 PM ~ Ballroom 1-2
Fun Night: 8 PM - 10 PM ~ Ballroom 1-2

The fun begins at 5 PM with light hors d'oeuvres and cocktails in the foyer outside the Grand Ballroom. The Awards Banquet, beginning at 6:30, will feature the presentation of awards to distinguished recipients.

Immediately following dinner, a sumptuous dessert bar will be awaiting you at the Fun Night.

There will be plenty of excitement, laughs, good music, dancing, and fun. Activities will include air hockey, foosball, pool, darts, dual shooting game, giant Jenga, virtual reality games and an interactive game show. This will be a great time for everyone!



EXHIBIT HALL EVENTS

SCAVENGER HUNT

Tuesday, September 10 ~ 11:30 AM - 6 PM
Wednesday, September 11 ~ 7:30 AM - 4 PM
Exhibit Hall ABC

This is a fun way to meet and support our exhibitors! Pick up a Scavenger Hunt clue tally sheet and bag in the Exhibit Hall at the Scavenger Hunt booth. Spend time Tuesday and Wednesday in the Exhibit Hall, tracking down exhibitors by following clues. When you successfully identify an exhibitor, they'll affix a stamp to your clue tally sheet. Turn in your tally sheet to the designated collection station by 4:30 PM on Wednesday to determine if you are one of the two winning individuals who have correctly identified the most exhibitors.

MOBILE SESSIONS

Tuesday September 10 ~ 2 PM - 3 PM and 4 PM - 5 PM
Wednesday September 11 ~ 9 AM - 10 AM, 11 AM – Noon, and 2 PM - 3 PM
Exhibit Hall ABC (Meet in Registration Area in Lobby)

Mobile sessions are back by popular demand to WaterJAM 2019. Five mobile sessions will be offered in the Exhibit Hall this year. For each complete Mobile Session attended, attendees will have the opportunity to earn continuing professional education credits (CPE) for waterworks and wastewater operators and continuing education credit hours (CECs).

Mobile Sessions will meet in the Registration Area, and will travel as a group to a series of exhibitor booths, led by the Mobile Session Moderator. At each stop, the group will receive a brief presentation from the exhibitor to provide context for their product, as well as an explanation about what their equipment does and a description of how it works. Mobile Sessions will give attendees a unique opportunity to start a dialogue with vendors and gain firsthand experience with the equipment. The Mobile Session Moderator will scan attendees' nametags following each completed session. Attendees must attend the entire session and have their badges scanned in order to receive credit.

We'll share more information this summer via newsletters and social media as the Mobile Session themes are developed! There's sure to be something to interest everyone who would like to earn credits while exploring the latest industry technology, equipment, and services in the Exhibit Hall.

CORNHOLE CHALLENGE

Tuesday, September 10 ~ 11:30 AM - 6:30 PM
Wednesday, September 11 ~ 7:30 AM - 4 PM
Raffle: Wednesday, September 11 ~ 4 PM
Exhibit Hall ABC

Have a little time between sessions? Or just been sitting for too long? Check out the Cornhole Challenge in the Exhibit Hall, where you can show off your skills or try playing for the first time. It's FUN & EASY TO LEARN! Team up with coworkers, colleagues, and supervisors. You can play as many times as you like, with as many different teammates as you wish! The more times you participate, the more times your name will be entered in the raffle to win your very own custom cornhole set! Stop by the WaterJAM Cornhole Challenge and give it a try!



SEWER AND WATER ART GALLERY

Tuesday, September 10 ~ 11:30 AM – 6:30 PM
Wednesday, September 11 ~ 7:30 AM - 4 PM
(Voting ends at 1 PM Wednesday; Winners posted at 2 PM)
Exhibit Hall ABC

The Sewer and Water Art Gallery is BACK! The exhibit is a "museum" of things that Virginia sanitary sewer, stormwater, and drinking water industry professionals have encountered in the field and found to be interesting, confusing, or down right CRAZY! Items from municipalities across Virginia will be on display with the goal of providing entertainment, education and enlightenment about some of the unique challenges faced by our industry professionals.

Gallery visitors will get to vote for their favorite items, and awards will be given on Wednesday afternoon to the top three exhibits based on visitor voting. So, make sure to get your vote in early! You can also try to guess what the mystery item thing is to be entered in a raffle for a chance to win an awesome prize!

PROFESSIONAL DEMONSTRATIONS

VWEA OPERATIONS CHALLENGE EVENTS

Wednesday, September 11 ~ 10 AM - 11 AM
Exhibit Hall ABC

The VWEA Operations Challenge recognizes excellence and professionalism in the operations and maintenance, laboratory, safety, and collection systems aspects of wastewater treatment. Operations Challenge teams will be demonstrating the following events:

Pump Maintenance: The purpose of this event is to test the skills of maintenance/operating teams to respond to trouble at a sanitary sewer lift station that has resulted in an alarm. The scenario: A pump trouble alarm was received via the SCADA system at the Operations Control Center. A crew has been dispatched to trouble shoot the alarm. The team will need to troubleshoot the electrical control panel, troubleshoot and perform routine maintenance on the KSB submersible pump, and restore the pump station to normal operating condition.



Collections System: This event simulates connecting a 4-inch PVC sewer lateral to an existing 8-inch PVC sewer pipe while in service (a “wet” pipe). Programming of a Hach A5950 Sampler will be also required. The purpose of this procedure is to create a sampling program for a composite sample (1 bottle).

Don't forget to stop by the Operations Challenge table in the Exhibit Hall to watch the DVD and see pictures of past VWEA and WEF competitions featuring Division I & II national winners and other participating Virginia teams, as well as a display chart of invitational competitions. Printed brochures, and information for event coordinators and new teams will be available for anyone interested in participating with the Operations Challenge.

VA AWWA DISTRIBUTION RODEO DEMONSTRATIONS

Wednesday, September 11 ~ 3 PM - 4 PM
Exhibit Hall ABC

Rapid Tappin': This demonstration is wet and wild as teams race against the clock to install a ¾-inch water service. A ¾-inch corporation is installed in the pipe. Copper tubing is attached to the corporation and to a meter yoke with a curb stop. This is a timed event with penalties assessed for leaks, safety violations, and quality of the service installation. Come and see the state's finest teams demonstrate this exciting event.



Hydrant Hysteria: Hydrant Hysteria is the newest, fast-paced, head-to-head competition to see how quickly a team can assemble a fire hydrant. This competition is a measure of a three-person team's skill at assembling a hydrant quickly, totally and accurately. All parts are to be assembled in the proper manner and the reassembled hydrant shall be tested by the judges for ability to operate correctly. Penalties are assessed for safety and procedural violations, for parts not assembled correctly and for missing parts.

YP-SPONSORED SERVICE PROJECT

Monday, September 9 ~ 9 AM - 11 AM
Virginia Aquarium & Marine Science Center
717 General Booth Boulevard, Virginia Beach, VA 23451

The volunteer event this year will be a "Clean the Creek" event with the Virginia Aquarium. Volunteers will help support the Aquarium grounds including Owls Creek, surrounding nature trails, and parking lots.



Upon arrival, the volunteers will register with the aquarium and receive all required materials. The aquarium will provide trash bags, gloves and trash grabbers; however, volunteers should bring work gloves. Since the event is outside, volunteers should wear long pants, socks, and closed toed shoes.

Please consider volunteering and bringing a friend or co-worker! Volunteer T-shirts and lunch will be provided. Sign up when you register for WaterJAM and include your desired T-shirt size. For information, contact Pearl Ashitey (PAshitey@vbgov.com), Kayla Yingst (kayla.yingst@alexrenew.com) or Rachel Schwaab (22rschwaab@gmail.com).

We look forward to seeing you there!

YP WORKSHOP 2019

Tuesday, September 10 ~ 1:30 PM - 5 PM
Meeting Room 4AB

Growing with Industry: Where Water Can Take You

The water industry provides infinite opportunities for all professionals, especially young professionals. What are the various career pathways? How can young professionals determine their path while realizing their full potential? How can all professionals develop their networking circles? What skills and continued education have current project managers and industry leaders found useful in achieving their goals?

This session will answer these questions and more during three 30-minute presentations and a 60-minute panel discussion focused on the theme of career growth. The presentations will be delivered by leaders in the water industry from around the Commonwealth. The panel discussion, including audience Q/A, will provide the opportunity to delve deeper into specific topics regarding carving your path within the industry.

The speakers and panelists will provide a variety of insights from across the public and private sectors. Potential topics include how to choose your path in the industry, networking, continuing education, how to be the most efficient and effective in leaving your mark, and more!

Contact Stephanie Acosta (SAcosta@Dewberry.com), Kelsey Kenel (Kelsey.Kenel@hdrinc.com), or Ashly Thomas (AThomas@hazenandsawyer.com) for additional information.

VA AWWA STUDENT WATER CHALLENGE & VWEA STUDENT DESIGN COMPETITION WINNERS' PRESENTATIONS

Wednesday, September 11 ~ 1:30 PM - 5:00 PM
VWEA Student Design Competition Presentations: Wastewater Team Presentation - 1:30 PM / Environmental Team Presentation - 2 PM
VA AWWA Student Water Challenge Presentations - 2:30 PM
Meeting Room 4AB

The Annual VA AWWA Student Water Challenge is for science, engineering, and environmental majors from Virginia colleges and universities. It will focus on using a combination of engineering and science to address a real-world water quality issue. Student teams from competing schools will be given a water quality/water treatment problem on the competition day and will be allowed approximately five hours to develop a proposed solution. The winning team will receive a traveling trophy, a plaque, and a \$1,200 first-place prize. The second-place team will receive a plaque and \$500 cash prize. Come cheer on your alma mater! The winners will be announced on Wednesday evening at the Awards Banquet.

Prior to the presentations for the Student Water Challenge, the winning teams in the 2019 VWEA Student Design Competition (George Mason University/Wastewater and Old Dominion University/Environmental) will give their presentations. This will be their final opportunity to practice before competing in the National Student Design Competition at WEFTEC 2019. Please attend and give them your best critique and support, so that they represent Virginia well at WEFTEC!

DIGITAL KNOWLEDGE COMPETITION

The Student Activities Committee (SAC) and Young Professionals (YP) Committee are pleased to be hosting the Digital Knowledge Competition. This is an open platform for students and YPs to share their work in a creative way at WaterJAM! This competition provides students (undergrad, graduate, post graduate) and YPs an opportunity to present their research and/or design projects utilizing video to engage, educate, and interact with local and remote audiences. These presentations can showcase recent or ongoing research, innovative solutions, or novel ideas related to the fields of water and wastewater.

During WaterJAM, all Digital Presentations will be presented on a dedicated monitor in the Exhibit Hall for the region's industry professionals to enjoy! Submissions will also be available on YouTube.

Student and YP winners will be selected. First and second place will be awarded \$500 and \$250, respectively. The winning videos will be played at the WaterJAM Banquet.

Please check out the monitor located near the exhibit hall entrance to view the videos at WaterJAM or go to <http://www.vwea.org/?page=DigitalKnowledge> to view these videos at any time.

Contact Rebecca Holgate (reholgate@hazenandsawyer.com) for additional information.

YP COMMITTEE MEETING

Wednesday, September 11 ~ 4 PM - 5 PM
Meeting Room 1B

Come meet your fellow Young Professionals, find out what is going on around the state, and learn how to get more involved! The YP committee is a great way to network and build relationships that will last a lifetime! Check your attendee planner or the WaterJAM app for location information after you arrive.

YP & STUDENT RECEPTION

Wednesday, September 11 ~ 5 PM - 6:30 PM
Ballroom Foyer

The YP & Student Reception is a great time to network with young colleagues in a relaxed setting. Come out and meet other young professionals and students who represent the future of the industry. The reception will be held prior to the Awards Banquet, and light appetizers will be available. Drink tickets will be provided, as well as a cash bar. If you have any questions, please contact Allison Lee (alee@hazenandsawyer.com).

YP FRESH IDEAS POSTER CONTEST

Tuesday, September 10 ~ Noon - 5 PM (Set Up) and Wednesday, September 11 ~ 8 AM – Noon (Judging)
Pre-Function Area (Lobby)



The Fresh Ideas Poster Contest is available to both students and YPs, and is a great opportunity to display and present your work at WaterJAM 2019.

A poster displaying your work will be available for all WaterJAM attendees to view as they enter the conference. A panel of industry experts will judge the posters. The creator of the top drinking water-related poster will receive a \$1,000 cash prize from VA AWWA and be invited to represent the Virginia Section at the 2020 AWWA Annual Conference and Exposition (ACE). Assistance with travel expenses is available. The top wastewater, stormwater, or other environmental-related topic will receive a \$1,000 cash prize from VWEA.

For more information on the Poster Contest, or to submit an abstract, please contact Jack Lee (jjlee@dewberry.com), Hanna Montoro (Hanna.Montoro@arcadis.com) or Daniel Edgell (Daniel.Edgell@hydromaxusa.com).

MONDAY WORKSHOPS

FULL DAY WORKSHOP

Laboratory Practices

Monday, September 9 ~ 8 AM - 5 PM ~ Credits Pending
Meeting Room 2CD

This workshop will help provide managers and leaders tools to develop or update risk assessments and emergency response plans (ERPs). It will discuss the regulatory updates and research on the management of drinking water, wastewater, and reuse, with the end goal of ensuring water quality.

HALF-DAY WORKSHOPS

Wet Weather Storage Solutions: From CIP Planning and Capacity Management to Construction, Operations and Maintenance

Monday, September 9 ~ 1 PM - 5 PM
Meeting Room 2B

This workshop will focus on the conceptualization and implementation of wet weather storage projects for collection systems. Emphasis will be placed on data analysis needed to site and properly size a wet weather storage facility. Comparisons will be made between wet weather storage and traditional conveyance and treatment alternatives in a collection system, whether big or small. The workshop will also include hands-on exercises to give all attendees an opportunity to explore the benefits of wet weather storage solutions or refine their understanding of such facilities. Lastly, we will address other planning and design considerations, including the fundamentals of storage tank construction, operation, and maintenance using real project case studies.

Enhanced Coagulation Strategies - Testing, Operations, and Optimization

Monday, September 9 ~ 1 PM - 5 PM ~ Credits Pending
Northwest River Water Treatment Plant
3550 S Battlefield Blvd, Chesapeake, VA 23322

A key focus of the workshop will be how to balance multiple treatment objectives with optimal coagulation, including turbidity removal, control of DBP formation, iron/manganese removal from source water, corrosion control, and residuals production. This workshop will describe hands-on training for testing to optimize the coagulation process and present utility case studies of coagulant selection and optimization.

Note: Attendees are responsible for their own transportation.

What Does it Mean to be a Sustainable Utility?

Monday, September 9 ~ 1 PM - 5 PM
Meeting Room 2A

Many water utilities and municipal agencies have made commitments to “sustainability,” but folks often struggle to understand what that really means. How are utilities actually sustainable? What does that mean? How can my utility be more sustainable?

The VWEA / VA AWWA Sustainable Utilities Committee has organized this workshop to help you answer these

questions. Our invited workshop speakers will include leaders within Virginia utilities and municipalities who will discuss how they’ve engrained sustainability within the culture and actions of their organizations. Speakers will also include subject matter experts who will discuss trends and case studies that contribute to overall sustainability as high as the utility management level, all the way down to individual pieces of water infrastructure.



THURSDAY WORKSHOP

HALF DAY WORKSHOP

Pollutant Trading - How It's Done, Who's Doing It and Why

Thursday, September 12 ~ 1:00 PM - 5:00 PM
Meeting Room 1B

This half-day workshop will review the legal framework for pollutant trading in Virginia, examine the formats and mechanisms available for trading (including cross-sector trading), discuss the factors influencing decisions to buy and sell credits and examine current municipal trading operations for meeting stormwater pollutant reduction requirements. Speakers will include legal experts, nutrient bankers, and municipal buyers and sellers

CITY OF CHESAPEAKE'S LAKE GASTON WATER TREATMENT PLANT

Thursday, September 12 ~ 12:30 PM - 3 PM
5416 West Military Highway, Chesapeake, VA



Chesapeake's Lake Gaston Water Treatment Plant (LGWTP) is an 8 MGD surface water treatment plant that has been in operation since 2006. The treatment plant is a direct membrane filtration facility that includes strainers, aluminum chlorohydrate coagulation, submerged ultrafiltration membranes, manganese contactors and disinfection. The tour will also include discussions on their Aquifer Storage and Recovery facility, a highly successful coagulant evaluation study, and a visit to their nearby raw water storage lakes which employ the use of floating pump stations.

The cost is \$20 and includes a boxed lunch. Please note on your registration form if you plan to attend. Please note: Transportation between the VBCC and the LGWTP will not be provided.

HRSD SWIFT RESEARCH CENTER

Thursday, September 12 ~ 12:30 PM - 3 PM
6909 Armstead Road, Suffolk, VA

HRSD, the regional wastewater collection and treatment utility, has recently embarked on a transformational program that affects all aspects of the region's water supply and quality. Currently, HRSD meets all of its permitted effluent discharge parameters for nutrients and sediment to the Chesapeake Bay; however, this still includes discharges of nearly 4 million pounds per year of nutrients and 15 million pounds of sediment. Groundwater use in the region has significantly lowered subsurface aquifer levels and has contributed to ground subsidence across the region. The Hampton Roads area is sinking each year. It has been identified as the second most vulnerable region in the country for sea level rise and higher levels of recurring flooding.

The Sustainable Water Initiative for Tomorrow (SWIFT) Program was conceived as an idea to assist with many of these challenges. Rather than discharging more than 120 MGD into the Chesapeake Bay, HRSD is proposing to implement an advanced water treatment system at the end of the treatment process at several of its plants. The highly treated water, which meets primary drinking water standards and is compatible with the receiving aquifer, will be used to recharge the Potomac Aquifer. This year, HRSD completed construction of the SWIFT Research Center at its Nansemond Treatment Plant in Suffolk. The SWIFT Research Center contains a 1 MGD demonstration-scale treatment facility, supports the pilot-scale research efforts, and includes areas for public outreach. This tour will provide a complete background on the issues the region is facing and how HRSD is working to help with the SWIFT Program. HRSD staff, operators, and consultants will be on hand to discuss the facilities and answer questions.

The cost is \$20 and includes a boxed lunch. Please note on your registration form if you plan to attend. Space is limited, and this tour fills up quickly, so make your reservations early. Please note: Transportation between the VBCC and HRSD's SWIFT Research Center will not be provided.



WaterJAM Twitter Contest

Want to win a \$100 gift card? It's easy!

The person who posts the most tweets during
2019 WaterJAM will be presented a
\$100 gift card. Please use:

#WaterJAM2019

Winner will be announced at the Awards Banquet during WaterJAM

Official Guidelines for the 2019 VWEA/ VA AWWA WaterJAM Twitter Contest

General Information:

- Who:** Open to all registered attendees at the 2019 WaterJAM conference
- What:** Twitter contest hosted by the WaterJAM Conference Committee
- When:** Contest begins 10:00 am, September 9th through 3:00 pm, September 11th
- Where:** Tweet anytime between 10:00 am, September 9th through 3:00 pm, September 11th
- Why:** Let's make our presence known and get #WaterJAM2019 trending on Twitter!
- Prize:** The winner of this contest will be receiving an \$100 Amazon gift card and will be announced at the awards banquet dinner on Wednesday September 11th

Rules and Guidelines:

- Contestants must include #WaterJAM2019 in the tweets to be counted.
- Tweets must be of substance and cannot be repeating.
- Contests must have registered for at least one full day of the conference
- Tweets will only count between 10:00 am September 9th through 3:00 pm September 11






Be sure to follow us at WaterJAM @WaterJAM_VA

concurrent technical sessions

Tuesday, September 10




Time: 1:30 - 2:00 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 1: PUBLIC OUTREACH AND EDUCATION MEETING ROOM 1C		Looking for a Way to Create a Public-Private Partnership? Start with Outreach! The AlexRenew and Virginia American Water Story Lisa Van Riper, <i>Alexandria Renew Enterprises</i> ; Alison Bibb-Carson
SESSION 2: DESIGN AND CONSTRUCTION I MEETING ROOM 1D		Distribution Water Main Rehabilitation Using a Spray-On Structural Lining Robert Cotten, <i>Fairfax Water</i> ; Jerry Scott
SESSION 3: NUTRIENT REMOVAL AND RECOVERY MEETING ROOM 2A		Free Ammonia Resistance of NOB Developed in Continuous Flow Aerobic Granulation Reactor Performing Partial Nitrification Zhaohui An, <i>Virginia Tech</i> ; Tim Kent, Charles Bott, Zhi-Wu Wang
SESSION 4: ALTERNATIVE PROJECT DELIVERY MEETING ROOM 2B		Innovative Delivery Yields Innovative Technical Solutions Mike Hanna, <i>Black & Veatch</i> ; Phil Cummins, David Hill, Ann McPherson
SESSION 5: WATER FORUM MEETING ROOM 2CD		A New KPI for Valve Operability Optimization Dave Lewis, <i>Wachs Water Services</i>
SESSION 6: WASTEWATER TREATMENT I MEETING ROOM 3AB		Evaluation of Peracetic Acid for Disinfection of Filtered Secondary Effluent at Washington Suburban Sanitary District Beth Maloney, <i>Stantec</i> ; Malcolm Taylor, Caroline Nguyen, Joseph Jacangelo
SESSION 7: PLANNING AND MODELING I MEETING ROOM 3C		Water All Around – Planning for Future Water and Wastewater Needs in Mount Pleasant, SC Matthias Wittenberg, <i>CDM Smith</i> ; Sheryl Smith, David Niesse, Meredith Miller, Pradeep Sudini
SESSION 8: ASSET MANAGEMENT I MEETING ROOM 3DE		Leaking It or Giving It Away: Understanding the Value of Leak Detection vs. Meter Inaccuracy Jonathan Gunn, <i>Johnson Controls</i>
SESSION 9: YP WORKSHOP MEETING ROOM 4AB		Growing with Industry: Where Water Can Take You Andrew Newbold, <i>Hazen and Sawyer</i> : “Building Bridges in the Water Industry: Getting from Here to There”
SESSION 10: TECHNOLOGY FORUM I MEETING ROOM 4C		TBD TBD

concurrent technical sessions

Tuesday, September 10




Time: 2:00 - 2:30 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 1: PUBLIC OUTREACH AND EDUCATION MEETING ROOM 1C		Encouraging Middle School Students to Explore the Water Industry Through a Model Water Tower Competition Michelle Bouchard, <i>Prince William County Service Authority</i> ; Mark Titcomb
SESSION 2: DESIGN AND CONSTRUCTION I MEETING ROOM 1D		Design and Construction of the Major Water Supply Artery for Loudoun Water: Making It Last for 100 Years David Cooper, <i>Dewberry Engineers</i> ; Martin Kazmierczak; Gerardo Castaneda
SESSION 3: NUTRIENT REMOVAL AND RECOVERY MEETING ROOM 2A		Inline Enhanced Biological Phosphorus Removal at WSSC Caroline Nguyen, <i>Washington Suburban Sanitary Commission</i> ; Marty Johnson, Sam Amad, Malcolm Taylor, Mike Hanna, Ann McPherson
SESSION 4: ALTERNATIVE PROJECT DELIVERY MEETING ROOM 2B		Client/End User and Construction Manager Commissioning Approach for Design/Build Project—Lesson Learned David Jacobson, <i>Arcadis</i> ; Jun Fang, Eric Liang
SESSION 5: WATER FORUM MEETING ROOM 2CD		Safe Yield Assessment for the James River Ben Wright, <i>Hazen and Sawyer</i> ; Alexandra McIntyre, Roger Arnold, Chris Tabor
SESSION 6: WASTEWATER TREATMENT I MEETING ROOM 3AB		Design of WWTP and Collection with Highly Variable Seasonal Flows at a Ski Resort in Environmental, Steep, Wooded, Rocky Terrain David Rigby, <i>Century Engineering</i>
SESSION 7: PLANNING AND MODELING I MEETING ROOM 3C		Real Time Hydraulic Modeling at DC Water Russell Deason, <i>Mott MacDonald</i> ; Alireza Parhami
SESSION 8: ASSET MANAGEMENT I MEETING ROOM 3DE		Applying Innovative GIS and Business Intelligence Technology Solutions to Support Utility Asset Management and Operations Jayson Brennen, <i>CDM Smith</i>
SESSION 9: YP WORKSHOP MEETING ROOM 4AB		Growing with Industry: Where Water Can Take You Jason Kerns, <i>HDR</i> ; “Avoid Leaving Footsteps in the Sand and Leave a Permanent Mark on the Water Industry”
SESSION 10: TECHNOLOGY FORUM I MEETING ROOM 4C		TBD TBD

concurrent technical sessions

Tuesday, September 10

Time: 2:30 - 3:00 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 1: PUBLIC OUTREACH AND EDUCATION MEETING ROOM 1C		Managing a Dam Crisis and International Media Attention Jes Gearing, <i>Lynchburg Water Resources</i> ; Timothy Mitchell
SESSION 2: DESIGN AND CONSTRUCTION I MEETING ROOM 1D		Case Study of Blending Blowers for Optimum Aeration Efficiency Paul Petersen, <i>Atlas Copco</i>
SESSION 3: NUTRIENT REMOVAL AND RECOVERY MEETING ROOM 2A		Ammonia Recovery from Urine Using Electrochemical Cell and Air Stripping Akshay Jain, <i>Virginia Tech</i> ; Jason He
SESSION 4: ALTERNATIVE PROJECT DELIVERY MEETING ROOM 2B		Living in Three Different Worlds: An Owner's Perspective on D/B/B, D/B, and CMAR Projects Delivered Concurrently Laura Kirkwood, <i>HRSD</i>
SESSION 5: WATER FORUM MEETING ROOM 2CD		Using DMAs to Investigate NRW Christie Patel, <i>Brown and Caldwell</i> ; Joe Thurwanger, Julie Black
SESSION 6: WASTEWATER TREATMENT I MEETING ROOM 3AB		Handling Grit in More Ways Than One – Lessons Learned at Loudoun Water Rick Zaepfel, <i>Loudoun Water</i> ; Sarah Lothman, Michael R. Rumke, Jeff Angiel, Kendra Sveum, Janice Carroll, Phill Yi
SESSION 7: PLANNING AND MODELING I MEETING ROOM 3C		Near Real Time Hydraulic Modeling Nathan Griffin, <i>Prince William County Service Authority</i> ; Annie Short
SESSION 8: ASSET MANAGEMENT I MEETING ROOM 3DE		An Update on HRSD's Asset Management Journey – Where We Are, Where We Have Come From and Where We Are Going Will Williams, <i>Black & Veatch</i> ; Anas Malkawi, Martin Jones
SESSION 9: YP WORKSHOP MEETING ROOM 4AB		Growing with Industry: Where Water Can Take You Patrick Lewis, <i>Dewberry Engineers</i> ; "Rising Above the Tide: Networking into A Path of Career Growth"
SESSION 10: TECHNOLOGY FORUM I MEETING ROOM 4C		TBD TBD

concurrent technical sessions

Tuesday, September 10



Time: 4:00 - 4:30 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 1: PUBLIC OUTREACH AND EDUCATION MEETING ROOM 1C		Fairfax County's Wastewater Management Works with Local Pharmacies and Universities In Medication Pilot Program Melissa Atwood, <i>Fairfax County Wastewater Management</i>
SESSION 2: DESIGN AND CONSTRUCTION I MEETING ROOM 1D		Going Deep to Avoid Conflict – Microtunneling for Utility Construction Dennis Funk, <i>Gannett Fleming</i>
SESSION 3: NUTRIENT REMOVAL AND RECOVERY MEETING ROOM 2A		Evaluation of Phosphorus Recovery Through Struvite Crystallization and Brushite Precipitation Andre Adams, <i>Centrisys</i> ; Menachem Tabanpour, Gerhard Forstner
SESSION 4: ALTERNATIVE PROJECT DELIVERY MEETING ROOM 2B		Comparing Three Procurement Methods Used to Purchase Water Treatment Plants for Smaller Service Areas Thomas Stanton, <i>Water Membranes Systems, LLC</i>
SESSION 5: WATER FORUM MEETING ROOM 2CD		What It Really Takes to Implement Remote Water Quality Monitoring Michael Mulcare, <i>Mott MacDonald</i> ; Essey Woldemariam
SESSION 6: WASTEWATER TREATMENT I MEETING ROOM 3AB		Don't Forget Secondary Clarifier Design Features to Improve BNR Performance Anjana Kadava, <i>Black & Veatch</i> ; Ed Kobylinski, Jim Fitzpatrick, Gary Hunter
SESSION 7: PLANNING AND MODELING I MEETING ROOM 3C		AlexRenew's Drop Shaft Design and Physical Modeling Liliana Maldonado, <i>Alexandria Renew Enterprises</i> ; Liliana Maldonado, Caitlin Feehan, Justin Carl, Kelvin Coles
SESSION 8: ASSET MANAGEMENT I MEETING ROOM 3DE		Vallejo Flood and Wastewater District's Pragmatic Asset Management Journey Mert Muftugil, <i>GHD</i> ; Charles Card, Gage Muckleroy, Johnson Ho
SESSION 9: YP WORKSHOP MEETING ROOM 4AB		Panel Discussion (continued): "Growing with Industry: Where Water Can Take You" Andrew Newbold, <i>Hazen and Sawyer</i> ; Jason Kerns, <i>HDR</i> ; Patrick Lewis, <i>Dewberry Engineers</i>
SESSION 10: TECHNOLOGY FORUM I MEETING ROOM 4C		TBD TBD

concurrent technical sessions






Tuesday, September 10

Time: 4:30 - 5:00 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 1: PUBLIC OUTREACH AND EDUCATION MEETING ROOM 1C		Communicating Emerging Contaminants to Your Customers Mike McGill, <i>WaterPIO</i>
SESSION 2: DESIGN AND CONSTRUCTION I MEETING ROOM 1D		Innovative MBR and BNR retrofit in a Western Pennsylvania Wastewater Treatment Facility Joel Kostelac, <i>GHD</i>
SESSION 3: NUTRIENT REMOVAL AND RECOVERY MEETING ROOM 2A		Converting MBBR to IFAS ANITA Mox to Improve Treatment of THP Sidestream Meg Hollowed, <i>Veolia Water Technologies</i> ; Hong Zhao, Magnus Christensson, Romain Lemaire, Sudhakar Viswanathan
SESSION 4: ALTERNATIVE PROJECT DELIVERY MEETING ROOM 2B		Strategies for Success – Delivering a \$110M Advanced Water Treatment Facility via Design Build Zuleyka Marquez, <i>Gannett Fleming</i>
SESSION 5: WATER FORUM MEETING ROOM 2CD		Reducing Reliance on Groundwater Paul Peterson, <i>Arcadis</i> ; Larry Dame
SESSION 6: WASTEWATER TREATMENT I MEETING ROOM 3AB		A Case Study on the Moorefield Wastewater Treatment Plant System Upgrade with the MOB™ Process Justin Bell, <i>Nuvoda US</i> ; Jason Calhoun
SESSION 7: PLANNING AND MODELING I MEETING ROOM 3C		Modeling to Support the Military Ken Orie, <i>McKim & Creed</i> ; Stephanie Hudik
SESSION 8: ASSET MANAGEMENT I MEETING ROOM 3DE		Putting Your Money Where Your “Need” Is: Implementing an Asset Management-Driven CIP Framework Russ Dalton, <i>Hazen and Sawyer</i> ; Chad Pritchett
SESSION 9: YP WORKSHOP MEETING ROOM 4AB		Growing with Industry: Where Water Can Take You
SESSION 10: TECHNOLOGY FORUM I MEETING ROOM 4C		TBD TBD

Wednesday, September 11

Time: 8:30 - 9:00 AM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 11: UTILITY MANAGEMENT I MEETING ROOM 1C		First-of-Its-Kind-in-Virginia Project: HRSD's SWIFT Full-Scale Implementation Program Initiation Lauren Zuravnsky, <i>HRSD</i> ; Bohdan Bodniewicz, Paul Delphos
SESSION 12: COLLECTION AND INTERCEPTOR SYSTEMS I MEETING ROOM 4AB		Evaluating Challenges of Rehabilitating Small Diameter Force Main Using Cured-in-Place Pipe (CIPP) Lining Tenzin Jigme, <i>RKK</i> ; Shravani Ravadagundhi, Christopher Mata, Tenzin Jigme
SESSION 13: WATER RESOURCES MEETING ROOM 2A		PFAS, Wastewater Treatment, and Indirect Potable Reuse: A Utility's Perspective on the Importance of Source Control Dana Gonzalez, <i>HRSD</i> ; Jon Nelson, Andrew Keisel, Charles Bott
SESSION 14: WATER TREATMENT I MEETING ROOM 2B		Mitigating Bromate Formation During Ozonation Using a Novel Combined Advanced Oxidation Process Christina Alito, <i>HDR</i> ; Rob Hoffman, Gwen Woods-Chabane
SESSION 15: SYSTEM OPERATIONS & MAINTENANCE MEETING ROOM 2CD		Remote Monitoring for Cost Savings to the City of Lexington York Grow, <i>Duncan-Parnell</i>
SESSION 16: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING I MEETING ROOM 3AB		Impact of Efficient Polymer Activation on Sludge Dewatering – Two Case Studies Yong Kim, <i>UGSI Solutions</i> ; Brian Hawley, Mike Whitaker
SESSION 17: EMERGING TECHNOLOGY MEETING ROOM 3C		UTILALERT™ – A“Plug & Play” Excavator-Mounted Notification Device/System to Discern Digging Activity and Prevent Damage Jeffrey Griffiths, <i>HydromaxUSA</i>
SESSION 18: YOUNG PROFESSIONALS PAPER SESSION MEETING ROOM 3DE		Using Asset Management and SSES Planning to Develop and Prioritize Capital Improvement Projects Ryan Muncy, <i>Kimley-Horn</i> ; Jamie Weist, Sean Fisher
SESSION 19: GOVERNMENT AFFAIRS MEETING ROOM 1D		DEQ Priorities Update David Paylor, <i>Virginia Department of Environmental Quality</i>
SESSION 20: ONE WATER MEETING ROOM 4C		Update on Next Generation Biological Wastewater Reuse System for NASA Fei Dai, <i>Pancopia</i> ; Holly Anne Matel, Bill Cumbie, John Whitelaw, Kevin Gilmore, Matias Vanotti

concurrent technical sessions

Wednesday, September 11

Time: 9:00 - 9:30 AM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 11: UTILITY MANAGEMENT I MEETING ROOM 1C		Thank You for Being a Friend: Loudoun Water's Strategic Relationships are Golden Sarah Lothman, <i>Loudoun Water</i> ; Thom Lipinski
SESSION 12: COLLECTION AND INTERCEPTOR SYSTEMS I MEETING ROOM 4AB		Fresh Air! Improving Neighborhood Air Quality Through Effective Collection System Odor Mitigation Stephanie Acosta, <i>Dewberry Engineers</i> ; Randall Flowers
SESSION 13: WATER RESOURCES MEETING ROOM 2A		Maryland's Newest Dam Preserves a Community's Most Valuable Resource Sophia Liskovich, <i>Gannett Fleming</i> ; Anthony Nokovich
SESSION 14: WATER TREATMENT I MEETING ROOM 2B		Saving Lives with Safe Water – Protecting Our Veterans with a State of the Art Membrane Plant John Civardi, <i>Mott MacDonald</i> ; Brian Aylaian
SESSION 15: SYSTEM OPERATIONS & MAINTENANCE MEETING ROOM 2CD		Pump Vibration and Surge Investigation at Critical 460-MGD Combined Sewage Pumping Station Edward Talbot, <i>OBG</i> ; Robert Dudley
SESSION 16: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING I MEETING ROOM 3AB		Dissolved Phosphate Control & Sludge Dewaterability Improvement by Using Cerium Chloride Dian Zhang, <i>Virginia Tech</i> ; Bob Angelotti, Erick Schlosser, Zhi-Wu Wang
SESSION 17: EMERGING TECHNOLOGY MEETING ROOM 3C		Making State of the Art the Standard Bob Bonk, <i>Draper Aden Associates</i> ; David Barton
SESSION 18: YOUNG PROFESSIONALS PAPER SESSION MEETING ROOM 3DE		What Is the Impact of Excess VFA Addition to a RAS Fermenter on Biological Phosphorus Removal and Denitrification? Kathryn Printz, <i>Virginia Tech & HRSD</i> ; Stephanie Klaus, Kester McCullough, Lindsey Ferguson, Cody Campolong, Charles Bott
SESSION 19: GOVERNMENT AFFAIRS MEETING ROOM 1D		Water Permitting Update Melanie Davenport, <i>Virginia Department of Environmental Quality</i>
SESSION 20: ONE WATER MEETING ROOM 4C		Replenishing Water Resources in Parker, Colorado Rueter-Hess Water Purification Facility Taps a Renewable Supply Alan Pratt, <i>Dewberry Engineers</i> ; Patrick Radabaugh

concurrent technical sessions

Wednesday, September 11






Time: 9:30 - 10:00 AM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 11: UTILITY MANAGEMENT I MEETING ROOM 1C		Succession Planning for Aging Infrastructure & Staff Turner Perrow, <i>Woodard & Curran</i> ; Jay Sheehan
SESSION 12: COLLECTION AND INTERCEPTOR SYSTEMS I MEETING ROOM 4AB		Commissioning and Operation of DC Water's New CSO Tunnel System During the Wettest Year on Record Nicholas Bonacquisti, <i>DC Water</i> ; Carlton Ray, Moussa Wone, John Cassidy, Brandon Flora
SESSION 13: WATER RESOURCES MEETING ROOM 2A		GIS Vulnerability Tool for Public Water Supplies – Integrating Publicly Available PFAS Data with Analytics Joseph Quinnan, <i>Arcadis</i> ; Deborah Roth, Brian Webb
SESSION 14: WATER TREATMENT I MEETING ROOM 2B		Using Zeta Potential to Achieve Optimum Water Treatment Performance Nicolle Boulay, <i>Stantec</i>
SESSION 15: SYSTEM OPERATIONS & MAINTENANCE MEETING ROOM 2CD		Pump Station Preferences and Lessons Learned – An Owner's Perspective Kenneth Beaman, <i>HRSD</i> ; Claude Stevens, Jeff Scarano
SESSION 16: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING I MEETING ROOM 3AB		Proactive Planning Pays Off – Lessons Learned from the BRWRF Interim Biosolids Project Jennifer Walsh, <i>Hazen and Sawyer</i> ; Matt Van Horne, Mike Rumke, Sean Stunkle, Erik Smedley, Sam Flores
SESSION 17: EMERGING TECHNOLOGY MEETING ROOM 3C		Water's Worth It! "Is it Leaking? Where? Looked for It, Found It, Fixed It" Jimmy Stewart, <i>Pure Technologies</i>
SESSION 18: YOUNG PROFESSIONALS PAPER SESSION MEETING ROOM 3DE		Implementing Asset Management Software in a Mid-Sized Water and Wastewater Utility Michelle Cock, <i>City of Salem Water Department</i>
SESSION 19: GOVERNMENT AFFAIRS MEETING ROOM 1D		WQS and TMDLs Jutta Schneider, <i>Virginia Department of Environmental Quality</i>
SESSION 20: ONE WATER MEETING ROOM 4C		Sustainable Water Initiative For Tomorrow Research Center (SWIFTRC) Preliminary Aquifer Recharge Experience Daniel Holloway, <i>Jacobs</i> ; Mark Lucas, Lauren Zuravnsky, Charles Bott, Jamie Mitchell, Chris Wilson, Ted Henifin

concurrent technical sessions

Wednesday, September 11





Time: 11:00 - 11:30 AM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 11: UTILITY MANAGEMENT I MEETING ROOM 1C		Utility Assets from Start to Finish Erik Ray, <i>Spotsylvania County Utilities</i> ; Bradley Sacra, Michael Edwards, Lou Garcia
SESSION 12: COLLECTION AND INTERCEPTOR SYSTEMS I MEETING ROOM 4AB		Rehabilitation of 125' Deep Brick Manhole Leading to Degraded 350', 78" x 66", Egg-Shaped Brick Culvert w/ Geopolymer Mortar Kit Jones, <i>Vortex Companies</i> ; Steve Henning
SESSION 13: WATER RESOURCES MEETING ROOM 2A		Reservoir Management for Algae and Algal Toxin Control Elizabeth Crafton, <i>Hazen and Sawyer</i>
SESSION 14: WATER TREATMENT I MEETING ROOM 2B		Ozone-Biofiltration for Controlling Extreme Taste and Odor Events Chris Schulz, <i>CDM Smith</i>
SESSION 15: SYSTEM OPERATIONS & MAINTENANCE MEETING ROOM 2CD		Preserving Institutional Knowledge Through Developing Standard Operating Procedures Wayne Sirna, <i>Dewberry Engineers</i> ; Ali Nemati
SESSION 16: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING I MEETING ROOM 3AB		Not an Easy A: Overcoming Obstacles Associated with the Beneficial Use of Class A Biosolids Amanda Marsh, <i>CHA Consulting</i> ; Lawrence Hoffman
SESSION 17: EMERGING TECHNOLOGY MEETING ROOM 3C		How HRSD Is Operating Their Collection System Like a Stock Exchange Maria Comuniello, <i>EmNet</i> ; Ryan Radspinner, Jennifer Steffens
SESSION 18: YOUNG PROFESSIONALS PAPER SESSION MEETING ROOM 3DE		The Innovation Awards: Making Advancements in the Wastewater Treatment Industry Through Employee Recognition Audrey Arnold, <i>Prince William County Service Authority</i> ; Kathy Bentz
SESSION 19: GOVERNMENT AFFAIRS MEETING ROOM 1D		Biosolids Update Neil Zahradka, <i>Virginia Department of Environmental Quality</i>
SESSION 20: ONE WATER MEETING ROOM 4C		Contaminant Removal Through Soil Aquifer Treatment During Managed Aquifer Recharge Thomas Dziura, <i>Virginia Tech</i> ; Prarthana Pradhan, Germano Salazar-Benites, Chris Wilson, Charles Bott, Mark Widdowson

concurrent technical sessions

Wednesday, September 11

Time: 11:30 AM - Noon

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 11: UTILITY MANAGEMENT I MEETING ROOM 1C		Optimizing Billing and Customer Service with Multiple Third-Party Contractors – It's All About Work Flow! Dana Hargrove, <i>Hazen and Sawyer</i> ; Ryan Nagel, Jerry Byerly, Jeanie Grandstaff
SESSION 12: COLLECTION AND INTERCEPTOR SYSTEMS I MEETING ROOM 4AB		Sewer Sleuthing of the Oxon Run Interceptor to Remediate a Significant Overflow Robert Bell, <i>OBG</i> ; Srinivasa Gadiparthi, Eric Schroeder
SESSION 13: WATER RESOURCES MEETING ROOM 2A		Wise County PSA Raw Water Intake Upgrade Alan Harrison, <i>Wise County PSA</i> ; Eric Price
SESSION 14: WATER TREATMENT I MEETING ROOM 2B		Portsmouth's Lake Kilby Water Treatment Facility Treatability Study Rachel DuBois, <i>Jacobs</i> ; Jay Maggi, Ed Snyder, Ronnie Ricks, Sandra Raphael
SESSION 15: SYSTEM OPERATIONS & MAINTENANCE MEETING ROOM 2CD		Rethinking Electrical Safety – A Programmatic Approach to Arc Flash and Electrical Safety Julio Mayen, <i>Greeley and Hansen</i>
SESSION 16: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING I MEETING ROOM 3AB		The Many Different Ways to Raise Steam for a THP Project Michael McWhirter, <i>Stantec</i> ; Kevin Selock, Jesse Hoffman, David Socha, Teri Poussard, Jonathon Maclaren
SESSION 17: EMERGING TECHNOLOGY MEETING ROOM 3C		Carefully Balancing Energy at a CHP Facility Jesse Hoffman, <i>Stantec</i> ; John Willis, Stan Dabek, Joe Merry, David Socha, Matt Van Horne, Joe Uglevich
SESSION 18: YOUNG PROFESSIONALS PAPER SESSION MEETING ROOM 3DE		Communities of Need – How Does Loudoun Water Help? Andrew Beatty, <i>Loudoun Water</i> ; Thomas Lipinski
SESSION 19: GOVERNMENT AFFAIRS MEETING ROOM 1D		Virginia's Phase III WIP Jutta Schneider, <i>Virginia Department of Environmental Quality</i> ; Melanie Davenport, <i>Virginia Department of Environmental Quality</i>
SESSION 20: ONE WATER MEETING ROOM 4C		Hey, Can We Use That? The Expansion of New Kent County's Water Reclamation/Reuse System Kris Edelman, <i>Arcadis</i> ; Harold Jones

concurrent technical sessions



Wednesday, September 11

Time: 1:30 - 2:00 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 21: TECHNOLOGY FORUM II MEETING ROOM 1D		TBD TBD
SESSION 22: WASTEWATER FORUM MEETING ROOM 1C		Controlling Phosphorus Recycles and Scaling with Struvite Precipitation Chris Moline, <i>HDR</i> ; Brian Balchunas, Lawrence Hentz, Robert Hindt
SESSION 23: DESIGN AND CONSTRUCTION II MEETING ROOM 2A		HRSD Sets the Bar HI: Designing a Fully HI Compliant Sewer Pump Station for HRSD Alan Edwards, <i>AECOM</i> ; Tim Marsh
SESSION 24: CONDITION ASSESSMENT MEETING ROOM 2B		PCAT – Non-Invasive Pipeline Condition Assessment for Water and Sewer Force Mains Using Inverse Transient Pressure Wave Analysis Mike Funk, <i>HydromaxUSA</i>
SESSION 25: WASTEWATER TREATMENT II MEETING ROOM 2CD		Enhanced and Simple Wet Weather Treatment with Pile Cloth Media Filtration John Dyson, <i>Aqua-Aerobic Systems</i>
SESSION 26: STORMWATER I MEETING ROOM 3AB		Impact of Periodic High Concentrations of Salts on Bioretention Nutrients Performance Meigan McManus, <i>Fairfax County Government</i> ; Allen Davis
SESSION 27: DISTRIBUTION AND OPERATIONS MEETING ROOM 3C		Lead Service Line Replacement Master Planning – Concepts Through Implementation Roger Arnold, <i>Hazen and Sawyer</i>
SESSION 28: SUSTAINABILITY AND RESILIENCY I MEETING ROOM 3DE		Establishing a Framework for Lifeline Infrastructure Resilience Programs Ahmad Habibian, <i>CDM Smith</i>
SESSION 29: STUDENT WATER CHALLENGE MEETING ROOM 4AB		WEF Student Design Competition Wastewater Presentation: “Solids Handling Upgrades at H.L. Mooney AWRF” <i>George Mason University</i> : Amir Akbarzadeh, Josiah Eidson, Michael Parker, Alan Quiroga, Michael Quiroga
SESSION 30: SMALL UTILITIES MEETING ROOM 4C		Balancing the Impact of Septage Acceptance on Biological Nutrient Removal Performance Ladan Holakoo, <i>GHD</i> ; Thor Young, James Ritter

Wednesday, September 11

Time: 2:00 - 2:30 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 21: TECHNOLOGY FORUM II MEETING ROOM 1D		TBD TBD
SESSION 22: WASTEWATER FORUM MEETING ROOM 1C		Finding the Right Solution for Phosphorus Harvesting: A Risk-Based Approach to the Evaluation of Process Alternatives Greg Knight, <i>Black & Veatch</i> ; Engin Guven
SESSION 23: DESIGN AND CONSTRUCTION II MEETING ROOM 2A		Well, It Matters To Me! Part 2 – The Importance of Minimizing Impacts to the Public in Large-Scale Utilities Replacement Projects Nicholas Robertson, <i>Draper Aden Associates</i> ; Andy Snyder
SESSION 24: CONDITION ASSESSMENT MEETING ROOM 2B		Zinc-Coated DIP Force Main Study: Utility Applies Corrosion Engineering for Thorough Results Andrew Fuller, <i>AECOM</i> ; Belinda Wilson, Brent Werlein, Will Gibson
SESSION 25: WASTEWATER TREATMENT II MEETING ROOM 2CD		UV Disinfection of Wet Weather Primary Effluent: Lessons Learned from a Large WWTP Bernardo Vazquez-Bravo, <i>Greeley and Hansen</i> ; Edwin Edmondson, George Guhse, Kurt Stykemain
SESSION 26: STORMWATER I MEETING ROOM 3AB		Stormwater Management Within a Coastal Flood Protection Project Timothy Hare, <i>Arcadis</i>
SESSION 27: DISTRIBUTION AND OPERATIONS MEETING ROOM 3C		Cranking Up the Pressure in DC - Lessons Learned from Starting Up a New Pressure Zone in DC Jason Garz, <i>Mott MacDonald</i> ; Deidre Saunders, Getachew Melsew
SESSION 28: SUSTAINABILITY AND RESILIENCY I MEETING ROOM 3DE		Public Utilities' Utilization of FEMA Hazard Mitigation Assistance Programs: Lessons Learned Michelle Stanley, <i>Arcadis</i> ; Keren Bolter, Edward Fernandez, Lori Gale, Michael Wooden, Anne Urenda
SESSION 29: STUDENT WATER CHALLENGE MEETING ROOM 4AB		WEF Student Design Competition Environmental Presentation: "Magnolia Avenue Shoreline Restoration" <i>Old Dominion University</i> : Corynn Brett, Kyle Bush, Laura Saunders
SESSION 30: SMALL UTILITIES MEETING ROOM 4C		Small Doesn't Mean Simple: Balancing Appropriate Innovation and Economics for Plant-Wide Biosolids Improvements Ryan Hendrix, <i>Peppers Ferry Regional Wastewater Treatment Authority</i> ; Clarke Wallcraft, Matt Van Horne, Paul Vavonese

concurrent technical sessions





Wednesday, September 11

Time: 2:30 - 3:00 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 21: TECHNOLOGY FORUM II MEETING ROOM 1D		TBD TBD
SESSION 22: WASTEWATER FORUM MEETING ROOM 1C		Implementation of Hydrocyclone Technology to Assess the Potential for Sludge Settleability Improvements Matthew Brooks, <i>Upper Occoquan Service Authority</i> ; Bob Angelotti, Tim Gallagher, Adrienne Willoughby, Ed Fleischer, Yewei Sun
SESSION 23: DESIGN AND CONSTRUCTION II MEETING ROOM 2A		Sliplining with 42-Inch Steel Pipe Renews Critical 48-Inch Cast Iron Water Main Jordan Carrier, <i>Garney Companies</i>
SESSION 24: CONDITION ASSESSMENT MEETING ROOM 2B		Maximize Condition Assessments Using Drones Liz Sitter, <i>GHD</i> ; Micah Archibald
SESSION 25: WASTEWATER TREATMENT II MEETING ROOM 2CD		Saving Energy and Money Through Better Wastewater Treatment Plant Mixing Michele Braas, <i>Xylem</i>
SESSION 26: STORMWATER I MEETING ROOM 3AB		The Downfall of a Dam: Navigating the Removal of a High-Hazard Dam and Environmental Remediation Erin Hawkins, <i>City of Lynchburg</i> ; Timothy A. Mitchell, Laura Henry-Stone
SESSION 27: DISTRIBUTION AND OPERATIONS MEETING ROOM 3C		A Systematic Approach to Pump Station Hydraulic Performance Testing: Theory vs. Reality Martin Kazmierczak, <i>Dewberry Engineers</i> ; Christine Thiel
SESSION 28: SUSTAINABILITY AND RESILIENCY I MEETING ROOM 3DE		A Hurricane is Coming – Is Your Facility Ready? Taha Mohammed, <i>CDM Smith</i> ; Paul Pouliot, Robert Magsipoc
SESSION 29: STUDENT WATER CHALLENGE MEETING ROOM 4AB		At 1:30 pm, the winning teams of the Wastewater and Environmental categories of the 2019 VWEA Student Design Competition will give their presentations in preparation for representing Virginia at WEFTEC 2019. Immediately following, the teams in the 2019 VA AWWA Student Water Challenge will present the findings from their day's work on a water quality, treatment, or distribution problem. Winners will be announced at the Awards Banquet.
SESSION 30: SMALL UTILITIES MEETING ROOM 4C		Cost Effectively Optimizing Biological Nutrient Removal at a Small Utility: A Case Study of the 2.53 MGD Louisville WWTP Patrick Radabaugh, <i>Dewberry Engineers</i>

Wednesday, September 11

Time: 4:00 - 4:30 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 21: TECHNOLOGY FORUM II MEETING ROOM 1D		TBD TBD
SESSION 22: WASTEWATER FORUM MEETING ROOM 1C		Improving Activated Sludge Performance Using Wastewater Microbiology as an Operations Tool Lindsay Swain, <i>CHA Consulting</i>
SESSION 23: DESIGN AND CONSTRUCTION II MEETING ROOM 2A		It Takes Two to Tango Towards Project Closeout: The Dance Between Owner & Contractor During Startup of a New Water Treatment Plant Monika Bueltel, <i>Greeley and Hansen</i> ; Carolyn Hannoeh
SESSION 24: CONDITION ASSESSMENT MEETING ROOM 2B		Creek Crossing Risk Assessment – A Dual Condition Assessment of Sanitary Infrastructure and Urban Streams Susan Hamilton, <i>Richmond Public Utilities</i> ; Ben Custalow, Brandon Cooper
SESSION 25: WASTEWATER TREATMENT II MEETING ROOM 2CD		Optimization of Secondary Clarifiers – Achieve Low TSS and TP Limits by Installation of a Variable Clarifier Inlet System Gerhard Forstner, <i>CNP - Technology Water and Biosolids Corp.</i>
SESSION 26: STORMWATER I MEETING ROOM 3AB		Beavers ... Dam! Warren Wilczynski, <i>Michael Baker International</i> ; David She
SESSION 27: DISTRIBUTION AND OPERATIONS MEETING ROOM 3C		Satellite-Assisted Pipe Leak Detection Pilot Study – Is It Worth It? Leita Bennett, <i>GHD</i> ; Glenn Pearson
SESSION 28: SUSTAINABILITY AND RESILIENCY I MEETING ROOM 3DE		When You Need a Bigger Bucket: Containing the Storm, a Wet Weather Success Timothy Castillo, <i>Rivanna Water and Sewer Authority</i> ; Michelle Simpson, David Tungate, Brian Porter
SESSION 29: STUDENT WATER CHALLENGE MEETING ROOM 4AB		At 1:30 pm, the winning teams of the Wastewater and Environmental categories of the 2019 VWEA Student Design Competition will give their presentations in preparation for representing Virginia at WEFTEC 2019. Immediately following, the teams in the 2019 VA AWWA Student Water Challenge will present the findings from their day's work on a water quality, treatment, or distribution problem. Winners will be announced at the Awards Banquet.
SESSION 30: SMALL UTILITIES MEETING ROOM 4C		Reverse Osmosis Replacement Membrane Selection Based on Total Cost of Ownership and Water Quality in Gloucester, Virginia Andrew Newbold, <i>Hazen and Sawyer</i> ; Brenton Payne, James Dawson

concurrent technical sessions

Wednesday, September 11

Time: 4:30 - 5:00 PM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 21: TECHNOLOGY FORUM II MEETING ROOM 1D		TBD TBD
SESSION 22: WASTEWATER FORUM MEETING ROOM 1C		The Impact of Granule Size on the Inhibition of Nitrite Oxidizing Bacteria by Free Ammonia in Continuous Flow Bioreactors Treating Timothy Kent, <i>AECOM</i> ; Yewei Sun, Zhaohui An, Charles Bott, Zhi-Wu Wang
SESSION 23: DESIGN AND CONSTRUCTION II MEETING ROOM 2A		"The Land Down Under" – A Guided Bore in a Congested Downtown Business District Selo Qejvani, <i>City of Norfolk, Department of Utilities</i> ; Scott Smith
SESSION 24: CONDITION ASSESSMENT MEETING ROOM 2B		Scotts Run Sewer – Failure of a Concrete Cylinder Pipe in a Gravity Sewer Application Jennifer Howells, <i>Arcadis</i> ; Tom Grala, Paul Batman
SESSION 25: WASTEWATER TREATMENT II MEETING ROOM 2CD		Peak Flow Dual-Use Filters Also Help Meet Dry-Weather Goals Jim Fitzpatrick, <i>Black & Veatch</i> ; Mike Hundley, Bob O'Bryan, Bently Green
SESSION 26: STORMWATER I MEETING ROOM 3AB		Coordinating Efforts to Collect Stormwater Management Facilities Data with New As-Built Charts Nikki Comber, <i>AECOM</i> ; Alexander Tiedemann
SESSION 27: DISTRIBUTION AND OPERATIONS MEETING ROOM 3C		Evaluation of Mean Hydraulic Residence Time and DBP Formation Using Modeling and Lab Simulated SDS Stephen Steele, <i>CHA Consulting</i> ; Lindsay Swain, Brian McNinney, Caleb Taylor
SESSION 28: SUSTAINABILITY AND RESILIENCY I MEETING ROOM 3DE		Envision: The Missing Puzzle Piece to a Sustainable Utility Evan Bowles, <i>Hazen and Sawyer</i> ; Bruce Husselbee, Lauren Zuravnsky
SESSION 29: STUDENT WATER CHALLENGE MEETING ROOM 4AB		At 1:30 pm, the winning teams of the Wastewater and Environmental categories of the 2019 VWEA Student Design Competition will give their presentations in preparation for representing Virginia at WEFTEC 2019. Immediately following, the teams in the 2019 VA AWWA Student Water Challenge will present the findings from their day's work on a water quality, treatment, or distribution problem. Winners will be announced at the Awards Banquet.
SESSION 30: SMALL UTILITIES MEETING ROOM 4C		Getting the Most Out of Your Limited CIP Dollars – Wet Weather Storage Solution to Reduce CIP Spending While Improving Performance Carlos Toro-Escobar, <i>Brown and Caldwell</i> ; Ashley Yeh, Gabriel Retana

concurrent technical sessions

Thursday, September 12

Time: 8:30 - 9:00 AM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 31: REGULATORY ISSUES MEETING ROOM 1C		Negotiating An Uncertain Landscape: Health and Regulatory Considerations for Potable Reuse David MacNevin, <i>Tetra Tech</i>
SESSION 32: UTILITY MANAGEMENT II MEETING ROOM 1D		What is a Smart Utility and How Do I Implement It? John Abrera, <i>Brown and Caldwell</i> ; Kevin Stively, George Bunimovich, Michael Karl
SESSION 33: ASSET MANAGEMENT II MEETING ROOM 2A		Optimizing Scarce Resources: Using Pipeline Renewal Models to Develop Focused CIP Eric Harold, <i>Carollo Engineers</i> ; Laura Khouvilay, David Baranowski
SESSION 34: SUSTAINABILITY AND RESILIENCY II MEETING ROOM 2B		Why Participate in Voluntary Programs? Meghann Quinn, <i>Virginia Department of Environmental Quality</i>
SESSION 35: STORMWATER II MEETING ROOM 2CD		Stop the Tide, Save the Storage: Solutions for Flooding in Windsor Woods and Beyond Nicole Dane, <i>Michael Baker International</i> ; Michael Mundy, Ian Kaliakin
SESSION 36: WATER TREATMENT II MEETING ROOM 3AB		Coagulant Changeover for Treatment Process Optimization – Balancing Water Quality and Operational Objectives Farrell Owens, <i>City of Winchester</i> ; Roger Arnold, Glenn Rogers Erik Rosenfeldt
SESSION 37: DESIGN AND CONSTRUCTION III MEETING ROOM 3C		Where Art Meets Infrastructure: DC Water's Coordination with the Kennedy Center Expansion Project Brandon Flora, <i>Greeley and Hansen</i> ; Carlton Ray, Moussa Wone, Amanda Morgan, Ryan Payne, John Cassidy
SESSION 38: PLANNING AND MODELING II MEETING ROOM 3DE		Developing a Refined Hydrologic Event Model for the Occoquan Reservoir Niffy Saji, <i>Fairfax Water</i>
SESSION 39: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING II MEETING ROOM 4AB		How Much Digestion Volume Do You Really Need for a THP Facility? Amy Hanna, <i>Hazen and Sawyer</i> ; Mike Bullard, Joe Uglevich, Kevin Selock, Stanley Dabek, Andy Seaton
SESSION 40: COLLECTION AND INTERCEPTOR SYSTEMS II MEETING ROOM 4C		Rethinking Collection & Treatment Schemes: Where Regional Approach Over Satellite Approach Provided Significant Savings Aziz Ahmed, <i>Draper Aden Associates</i> ; Mike Haggerty

concurrent technical sessions

Thursday, September 12

Time: 9:00 - 9:30 AM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 31: REGULATORY ISSUES MEETING ROOM 1C		Cyanotoxin Assessment and Management Plan for a Mid-Atlantic Water Supply Yann Le Gouellec, <i>Newport News Waterworks</i> ; Ron Harris, Mike Hotaling, Louis Martinez
SESSION 32: UTILITY MANAGEMENT II MEETING ROOM 1D		It's Money for Nothing, So What Could Go Wrong? An Analysis of Issues with the Installation of Cell Phone Equipment on Water Tanks Dean Westman, <i>Whitman, Requardt & Associates</i>
SESSION 33: ASSET MANAGEMENT II MEETING ROOM 2A		Western Branch Denite Process Optimization – A Step Beyond a Business Case Evaluation Ann McPherson, <i>Black & Veatch</i> ; Adebola Fashokun, Mike Hanna
SESSION 34: SUSTAINABILITY AND RESILIENCY II MEETING ROOM 2B		Making Climate Change Projections Actionable for Urban Engineering Applications in Philadelphia Mark Maimone, <i>CDM Smith</i> ; Julia Rockwell, Sebastian Malter, Varsha Raj, Abby Sullivan
SESSION 35: STORMWATER II MEETING ROOM 2CD		Utilizing Data Visualizations for Holistic Stormwater Decision-Making Alysondria Eason, <i>Hazen and Sawyer</i> ; Matthew Jones, Lisa Jeffrey
SESSION 36: WATER TREATMENT II MEETING ROOM 3AB		Clear as Mud: How to Optimize Residuals Handling During a Record Rainfall Year Rodney Mutter, <i>CDM Smith</i> ; Brandon Flint, Gerardo Castaneda, Ray Braithwaite, Tom Barrack
SESSION 37: DESIGN AND CONSTRUCTION III MEETING ROOM 3C		Using Virtual Reality to Ensure Operator-Friendly Designs Jeff Scarano, <i>HRSD</i> ; Frank Pesce, Laura Kirkwood
SESSION 38: PLANNING AND MODELING II MEETING ROOM 3DE		I Have Recent SCADA Data, So What? - A Resourceful Use of Collected Data to Estimate My Sewered Area Flows Angel Retana, <i>Brown and Caldwell</i> ; Keith Havron, Katherine Nixon, Carlos Toro Escobar
SESSION 39: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING II MEETING ROOM 4AB		Conversion of Conventional Aerobic Digesters to an Autothermal Thermophilic Aerobic Digestion (ATAD) Process for Class A Biosolids John Cannon, <i>GHD</i> ; Thor Young, Tim Fristoe
SESSION 40: COLLECTION AND INTERCEPTOR SYSTEMS II MEETING ROOM 4C		Relining the Four Mile Run Relief Sewer: Construction Management Challenges Hisham Wahdan, <i>Arlington County</i> ; Carla Alayon

concurrent technical sessions

Thursday, September 12



Time: 9:30 - 10:00 AM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 31: REGULATORY ISSUES MEETING ROOM 1C		Surviving Ammonia – Both Aquatic Life and Your Utility Richard Sedgley, <i>AquaLaw PLC</i>
SESSION 32: UTILITY MANAGEMENT II MEETING ROOM 1D		How Suspicious is REALLY Suspicious? Peter Ceo, <i>Arlington County Water Pollution Control Plant</i>
SESSION 33: ASSET MANAGEMENT II MEETING ROOM 2A		DC Water's Green Infrastructure Asset Management Program Ramakrishna Jeedigunta, <i>Greeley and Hansen</i> ; Monica Outland, Seth Charde
SESSION 34: SUSTAINABILITY AND RESILIENCY II MEETING ROOM 2B		Designing for Resiliency in Urban Environments Margaret Hopkins, <i>AKRF</i>
SESSION 35: STORMWATER II MEETING ROOM 2CD		Rising Waters: Protecting Fairfax County's Huntington Neighborhood James O'Shaughnessy, <i>Arcadis</i>
SESSION 36: WATER TREATMENT II MEETING ROOM 3AB		Managing Manganese Removal and DBP Formation Minimization at a Large WTP Meric Selbes, <i>Hazen and Sawyer</i> ; Paul Le Bel, Aaron Duke, William Becker
SESSION 37: DESIGN AND CONSTRUCTION III MEETING ROOM 3C		Designed. Bid. Built: Considerations from the Contractor and Consultant on the Clinton Zone Transmission Main Nick Lewis, <i>Gannett Fleming</i> ; Clay Greene
SESSION 38: PLANNING AND MODELING II MEETING ROOM 3DE		How Much Flow? Determining Wastewater Flow Factors From Water Billing and Land Use Data Charles Moore, <i>CDM Smith</i> ; Anna Neugebauer, Kenneth Dixon
SESSION 39: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING II MEETING ROOM 4AB		The State of the Biogas Washwater Treatment and Upgrading Market Chengyan Zhang, <i>Stantec</i> ; Dru Whitlock, Nick Szoke, David Socha, Michael McWhirter
SESSION 40: COLLECTION AND INTERCEPTOR SYSTEMS II MEETING ROOM 4C		Utility Develops Triple-Bottom-Line Decision Matrix to Select Highest-Scoring Solution to Critical Sewer System Improvement Needs Tim Marsh, <i>HRSD</i> ; William Gibson, Jeff Scarano

concurrent technical sessions

Thursday, September 12

Time: 10:30 - 11:00 AM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 31: REGULATORY ISSUES MEETING ROOM 1C		Don't Build it Yet! Permitting Alternatives for Complying with the New Freshwater Ammonia Criteria Lawrence Hoffman, <i>CHA Consulting</i>
SESSION 32: UTILITY MANAGEMENT II MEETING ROOM 1D		How Intelligent Do We Really Want Our Water to Be? Luis Casado, <i>Gannett Fleming</i> ; Gene Koontz, Jessica Hou
SESSION 33: ASSET MANAGEMENT II MEETING ROOM 2A		The Evolution of Meter Asset Management: Prioritized Meter Testing, Replacement and Revenue Recovery Carl Sharkey, <i>Valor Water Analytics</i>
SESSION 34: SUSTAINABILITY AND RESILIENCY II MEETING ROOM 2B		Integrating Stormwater Pump Stations into Neighborhood Resiliency John Millsbaugh, <i>Arcadis</i>
SESSION 35: STORMWATER II MEETING ROOM 2CD		Herring Run Emergency Bank Stabilization – Protecting the Trail Jeffrey Stamm, <i>Gannett Fleming</i>
SESSION 36: WATER TREATMENT II MEETING ROOM 3AB		Operation and Optimization of HRSD's 1-MGD SWIFT Research Center for Advanced Water Treatment and Aquifer Recharge Samantha Hogard, <i>Virginia Tech</i> ; Germano Salazar-Benites, Tyler Nading, Chris Wilson, Charles Bott
SESSION 37: DESIGN AND CONSTRUCTION III MEETING ROOM 3C		Leveraging Partnerships - Collaborative Response to Emergency Repair and Rehabilitation of Failing Outfall Pipes Guiying (Laurel) Xiao, <i>Fairfax County</i> ; Jennifer Walsh, Laurel Xiao, Sajana Chitrakar, Matt Van Horne, Josh Pavlus
SESSION 38: PLANNING AND MODELING II MEETING ROOM 3DE		Streamlining System Analysis Through Optimization Aman Tuteja, <i>Arcadis</i> ; Kimberly Six, Patrick Parault
SESSION 39: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING II MEETING ROOM 4AB		It Takes a Village: Collaboration to Import Technology to Virginia for a Cost-Effective Solids Handling Solution Stephanie Spalding, <i>HDR</i> ; Chad Link, Katherine Linares, Paul Christy
SESSION 40: COLLECTION AND INTERCEPTOR SYSTEMS II MEETING ROOM 4C		Pressure Sewers Providing A Cost Effective Solution For Modern Day Infrastructure W. Ben Burton, <i>Bay Design Group</i> ; Keith McHale

Thursday, September 12





Time: 11:00 - 11:30 AM

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 31: REGULATORY ISSUES MEETING ROOM 1C		Preparing for Challenges to Permitting New Water, Wastewater, and Stormwater Projects in a Demanding Public and Regulatory Climate Justin Curtis, <i>AquaLaw PLC</i>
SESSION 32: UTILITY MANAGEMENT II MEETING ROOM 1D		Achieving Utility Success Through Business Process Flow Charts and Standard Operating Procedures Maura Carroll, <i>Arcadis</i> ; Bhaumik Hotha, Debbie Maxwell
SESSION 33: ASSET MANAGEMENT II MEETING ROOM 2A		Getting Down and Dirty: How Sewer Pump Station Risk Assessment Can Be Used to Advance a Utility's Asset Management Culture Jamie Bondurant, <i>Hazen and Sawyer</i> ; H. Lenny Matthews, Francis Malik, Ryan Nagel
SESSION 34: SUSTAINABILITY AND RESILIENCY II MEETING ROOM 2B		10 Years of Progress – WSSC's GHG Inventory Report Card Miranda Santucci, <i>Jacobs</i> ; Robert Taylor, Paula Sanjines, Carolyn Meisner
SESSION 35: STORMWATER II MEETING ROOM 2CD		Current and Future Directions in Stream Restoration as an Effective BMP Robert Siegfried, <i>RES</i> ; Pat Bradley
SESSION 36: WATER TREATMENT II MEETING ROOM 3AB		Water Utility Increases Recovery Rate from 75% to More Than 90% Using Novel Flow Reversal Reverse Osmosis Technology Richard Cavagnaro, <i>AdEdge Water Technologies</i>
SESSION 37: DESIGN AND CONSTRUCTION III MEETING ROOM 3C		Rehoboth Beach Ocean Outfall Case History Craig Camp, <i>GHD</i> ; Brandon Gott
SESSION 38: PLANNING AND MODELING II MEETING ROOM 3DE		It Takes Two to Model Build: Combining SCADA Data with Operations Staff Knowledge To Efficiently Develop a Complex Hydraulic Model Katherine Sager, <i>Carollo Engineers</i> ; Laura Khouvilay
SESSION 39: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING II MEETING ROOM 4AB		A Synergistic Approach to Net Zero Resource Recovery Facilities – Hermitage Municipal Authority Success Story Sudhakar Viswanathan, <i>Veolia Water Technologies</i> ; Thomas Darby, Jason Wert, Richard DiMassimo, Meg Hollowed
SESSION 40: COLLECTION AND INTERCEPTOR SYSTEMS II MEETING ROOM 4C		The Journey to Upgrade a Sewage Pumping Station for a Small Customer Service Area – How Much Is Too Much? Steven Carter, <i>GHD</i> ; Samantha Keulmann, Vince Maillard, Nyika Roberson-Ramos

concurrent technical sessions

Thursday, September 12

Time: 11:30 AM - Noon

SESSION NAME & NUMBER LOCATION	CREDITS	PRESENTATION TITLE PRESENTER
SESSION 31: REGULATORY ISSUES MEETING ROOM 1C		Addressing Emerging Contaminants with Competing Goals David Briley, <i>Hazen and Sawyer</i> ; Erik Rosenfeldt, Cory Hopkins
SESSION 32: UTILITY MANAGEMENT II MEETING ROOM 1D		Of the People, by the People, for the People – Data Democratization at Newport News Waterworks Adrianna Dimperio, <i>Newport News Waterworks</i> ; Aditya Ramamurthy
SESSION 33: ASSET MANAGEMENT II MEETING ROOM 2A		Rivanna Water and Sewer Authority (RWSA) Asset Management Program Gage Muckleroy, <i>GHD</i> ; Scott Schiller, Charlie Card
SESSION 34: SUSTAINABILITY AND RESILIENCY II MEETING ROOM 2B		A Utility-Wide Approach to Water Resiliency Kathleen Whitten, <i>Loudoun Water</i>
SESSION 35: STORMWATER II MEETING ROOM 2CD		A New Tool for Stormwater BMP Selection Shelly Frie, <i>Jacobs</i>
SESSION 36: WATER TREATMENT II MEETING ROOM 3AB		Comprehensive Piloting of Innovative Process Combinations to Control Disinfection By-Products and Manganese PJ Crow, <i>OBG</i> ; Narayan Venkatesan, George Rest
SESSION 37: DESIGN AND CONSTRUCTION III MEETING ROOM 3C		Future is Digital – How 3D Scanning is Making Design and Construction of Upgrades to Existing Infrastructure More Efficient Tung Nguyen, <i>Arcadis</i> ; Andrew Freitas, John Royse
SESSION 38: PLANNING AND MODELING II MEETING ROOM 3DE		Lower Cape Fear Water & Sewer Authority 54-Inch Parallel Raw Water Main: A Regional Approach to Raw Water Reliability & Capacity Tony Boahn, <i>McKim & Creed</i>
SESSION 39: BIOSOLIDS MANAGEMENT AND SOLIDS HANDLING II MEETING ROOM 4AB		Incidental ATAD at the Largest Wastewater Reclamation Plant in the World Ersin Kasirga, <i>GHD</i> ; Ahamed Ifthikar
SESSION 40: COLLECTION AND INTERCEPTOR SYSTEMS II MEETING ROOM 4C		City of Richmond Marshall Street 60" Brick Sewer Geopolymer Rehabilitation Scott Naiva, <i>Milliken Infrastructure</i> ; Scott Naiva, Tim Bako, Bob Bell



technical session alternates

The WaterJAM committee would like to thank the individuals identified below, who have agreed to present in the event a slated speaker is unable to attend.

Session Name	Credits	Presentation Title & Presenter
ALTERNATIVE PROJECT DELIVERY		The Olympic Cat Herding Final
		Eric Rawdon, <i>Stantec</i> ; Laura Simmers
ASSET MANAGEMENT		Where to Open-Cut & Where to Line: Asset Management for Force Main Replacement
		Zachary Swartzbaugh, <i>HDR</i> ; Marchelle Sossong, Ralph Claytor, Laurissa Hoyle
BIOSOLIDS MANAGEMENT & SOLIDS HANDLING		What Are My Options When I Need a Solids System Upgrade Focused on Maximizing Biogas Production and Use?
		Lauren Glose, <i>Wendel</i> ; John Revette
CONDITION ASSESSMENT		Impact of pH and Alkalinity on Concrete Corrosion in a Two-Sludge Nitrification/Denitrification Process
		Ian Camper, <i>AECOM</i> ; Ed Locke, Timothy Kent, Kathleen Tamborrino, Salil Kharkar, Nicholas Passarelli
DESIGN AND CONSTRUCTION I		Innovation, Collaboration, and Miles of Piles Result in the Successful Completion of a Treatment Plant Expansion on Landfill Site
		Stephen Henning, <i>HDR</i> ; Jason Kerns, Tim Griffin, Katherine Linares, Kelly Lamp, Bob Kincaid
DESIGN AND CONSTRUCTION II		Sixty-Three-Year-old 5.0 MG Water Tank Replacement in a City Old and Historic District
		Thomas DiLego, <i>Greeley and Hansen</i> ; Robert Stone, Janice Bailey
DISTRIBUTION AND OPERATIONS		Promoting Economic Development within a Targeted Growth Area with Phased Infrastructure “Build It (...in Phases) and They Will Come”
		Dan Villhauer, <i>Dewberry Engineers</i> ; Steven Herzog
EMERGING TECHNOLOGY		A Distributed Sensor Deployment for Leak and Transience Detection for Howard County, MD
		Brian Ellis, <i>Pure Technologies</i> ; Zachary Baker
NUTRIENT REMOVAL AND RECOVERY		Balancing Act: Optimizing Primary Effluent Equalization to Reduce Nutrient Load Variability to Secondary Treatment
		Paula Sanjines, <i>Jacobs</i> ; Kacey King-McCrae, Marialena Hatzigeorgiou, Tim Constantine
ONE WATER		Strategies for Integrated Nutrient and Water Resource Management at Loudoun Water
		Phill Yi, <i>Hazen and Sawyer</i> ; Thom Lipinski, Sarah Lothman, Andrew Beatty, Janice Carroll, Stephanie Ishii, Wendell Khunjar
PLANNING AND MODELING		Water and Sewer Infrastructure Improvement Plan for the Irving Street Corridor (Washington, D.C.)
		Teresa Wong, <i>Mott MacDonald</i> ; Sam Ofori, Sonia Oton, Gary Geck

technical session alternates

The WaterJAM committee would like to thank the individuals identified below, who have agreed to present in the event a slated speaker is unable to attend.

Session Name	Credits	Presentation Title & Presenter
PUBLIC OUTREACH AND EDUCATION		Half Efforts Made Whole: How Grant Funding Facilitated Full Lead Service Water Line Replacements Rosemary Green, <i>City of Richmond Department of Public Utilities</i> ; Jonathan Cosby; Bob Stone
REGULATORY ISSUES		PFAS...Planning For Additional Statutes? Treatability In Review Bill Meinert, <i>OBG</i>
SMALL UTILITIES		Fast-Track Chemical System Upgrade to Meet Critical Regulatory Compliance Brett Heim, <i>Dewberry Engineers</i> ; Brenton Payne
STORMWATER I		Implementation of a Large-Scale BMP Retrofit for Cost-Effective TMDL Compliance Michael Wooden, <i>Arcadis</i> ; Scott Smedley, Fernando Pasquel
SUSTAINABILITY AND RESILIENCY I		Innovative Pipeline Inspection Technology Supports Resiliency for Coastal Systems Affected by Sea Level Rise, with Case Studies Michael Condran, <i>Electro Scan</i>
UTILITY MANAGEMENT I		Challenge and Opportunity: One Owner's Tale of Bringing Facility Records into the Digital Age Amanda Lothes, <i>Newport News Waterworks</i> ; Christiana Tambone
WASTEWATER FORUM		Exploration of Electrocoagulation and Electrochemical Oxidation for Treatment of Landfill Leachate Xingjian Liu, <i>Virginia Tech</i> ; Zhen He
WASTEWATER TREATMENT		Design of an Upflow Anaerobic Sludge Blanket (UASB) Reactor in Niamey Niger J. Stuart Hughes, <i>Independent Consultant</i>
WATER FORUM		Crushed Glass Filtration versus Sand Filtration Anna Close, <i>George Mason University</i> ; Stephanie Thomson
WATER RESOURCES		Mile-Long Monitoring: Geotechnical Instrumentation System Design for the Cobbs Creek Regional Water Supply Reservoir Project Corey Schaal, <i>Schnabel Engineering</i> ; Mark Landis, Brian Toombs
WATER TREATMENT		When Algaecides Can't Cut It: Algae Treatment by Air and Sonication Kelsey Kenel, <i>HDR</i> ; Christina Alito, Pete D'Adamo
YOUNG PROFESSIONALS PAPER SESSION		Microorganism Can Take Fast-Growing Strategy to Survive the Extreme Settling Velocity Selection in Aerobic Granulation Reactors Yewei Sun, <i>Virginia Tech</i> ; Bob Angelotti, Zhi-Wu Wang

conference registration forms

You are encouraged to register online. Go to www.vaawwa.org and www.vwea.org, scan the QR code below, or refer to the following link: <http://bit.ly/2Haxzer>. If computer access is not available, mail in the registration form below with payment to: Kathy Rabalais, VWEA, PO Box 2324, Glen Allen, VA 23058-2324.

Registration Payment Options:

- Online registration accepts credit card and check payments. If you are paying with a credit card, you **must** register online. Credit card payments cannot be accepted with a mail-in form.
- Make checks payable to "WaterJAM."

Mail checks to Kathy Rabalais, VWEA, PO Box 2324, Glen Allen, VA 23058-2324. (If you are paying by check, online registration is still the preferred option.)

Attendee Cancellation Policy: Written notification is required and must be received by August 26, 2019. A 25% service fee will be retained on all cancellations. No refunds will be given after August 26, 2019. Substitutions are allowed at no additional cost. In the event WaterJAM must be canceled prior to the start of the conference due to unforeseen circumstances, attendees will be refunded the cost of registration. However, VA AWWA and VWEA does not assume responsibility for any additional costs, charges, or expenses; to include but not limited to, charges made for travel and lodging. In the event WaterJAM is canceled after the start of the conference on Monday, September 9, 2019 due to unforeseen circumstances, pro-rated refunds or credits may be provided for any events not held. Any credit or refund will be at the discretion of VWEA and VA AWWA.

Name: _____ Title: _____ Phone: _____

Company: _____ E-mail (required): _____

Mailing Address: _____

City: _____ State _____ Zip _____

AWWA Member No.: _____ WEF Member No.: _____

VA Operator License No.: _____ Name on Badge: _____

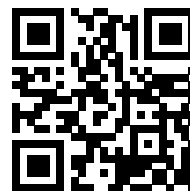
Is this your first time at WaterJAM? ____Y ____N Are you a YP (35 years and under)? ____Y ____N

Do you serve on a committee? If yes, which one? _____

Do you require a dietary-restricted (vegetarian/gluten-free) meal? ____Y ____N

Would you like to participate in the Scavenger Hunt? ____Y ____N

Do you want a printed copy of the conference planner? ____Y ____N



Scan this QR code to go directly to the online registration site.

Note: Photographs will be taken at WaterJAM 2019. By registering for this event, you agree to allow VWEA and VA AWWA to use your photo in any VA AWWA- or VWEA-related publication, video, or website.

Registration continued on next page ⇨

conference registration forms

FULL CONFERENCE REGISTRATION

(Circle to indicate your registration selection:)

FULL CONFERENCE REGISTRATION - Full Conference Registration (except Exhibitor*) includes all technical & general sessions, exhibits, daily lunch, Meet & Greet Reception, Water Reach Reception, Awards Banquet & Fun Night, AM & PM breaks.

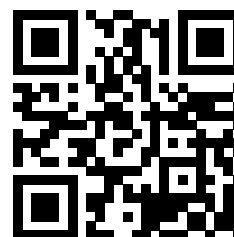
Deadline	Member	Non-Member	Plant, Distribution, Maintenance, or Collections System Staff	Exhibitor*	Retiree/Guest/Spouse	Student
By 8/9	\$410	\$475	\$250	\$235	\$130	FREE
After 8/9	\$480	\$555	\$275	\$275	\$130	FREE

* Exhibitor fee is per person for individuals. Booth Space, Meet & Greet Reception, and Awards Banquet events are not included. To register a booth, please use the online registration process.

Please indicate if you will be attending the following events:

- Monday 9/9:** YP Service Project at Beach Garden Park ____Y ____ N
If Yes: T-Shirt Size: ____ S ____ M ____ L ____ XL
- Monday 9/9:** Opening Night Meet & Greet Reception ____Y ____ N
- Tuesday 9/10:** Orientation Breakfast ____Y ____ N (First time attendees only.)
- Tuesday 9/10:** Networking Reception ____Y ____ N
- Wednesday 9/11:** Awards Banquet and Fun Night ____Y ____ N

Scan this QR code to go directly to the online registration site.



SINGLE DAY/HALF-DAY THURSDAY REGISTRATION

Please indicate the day you will be attending and circle the correct fee below. ____ Tuesday ____ Wednesday

SINGLE DAY - All registrations except Exhibit Hall Pass include technical sessions, exhibits, continental breakfast, lunch, AM & PM breaks

Deadline	Member	Non-Member	Plant, Distribution, Maintenance, or Collections System Staff	Exhibit Hall Pass*	Retiree	Student
By 8/9	\$255	\$320	\$120	\$50	\$80	FREE
After 8/9	\$280	\$350	\$145	N/A	\$80	FREE

* Exhibit Hall Pass registration is restricted to Wednesday and to **Utility Staff only**. It includes Mobile Sessions but excludes Technical Sessions.

HALF DAY THURSDAY - Includes technical sessions, continental breakfast, & AM break

Deadline	Member	Non-Member	Plant, Distribution, Maintenance, or Collections System Staff	Retiree	Student
By 8/9	\$125	\$155	\$50	\$50	FREE
After 8/9	\$145	\$170	\$65	\$50	FREE

Subtotal This Page \$ _____

Registration continued on next page ⇨

ADDITIONAL TICKETS FOR SPECIAL EVENTS

(Please indicate the number of extra tickets for each event.)

SPECIAL BREAKFAST TICKETS

(Not included with registration)

Wednesday, September 11

___ Golden Rodents Breakfast \$25
(Past VWEA Presidents only)

___ Utility Managers' Breakfast \$25

Thursday, September 12

___ 5-S Breakfast \$25
(5-S Members only)

Special Breakfast Subtotal: \$ _____

GOLF TOURNAMENT

Monday, September 9

The Signature at West Neck, Virginia Beach, VA

Team Members at \$95/person

1. _____
2. _____
3. _____
4. _____

Golf Subtotal: \$ _____

HEADSHOT PHOTOGRAPHS

Tuesday, September 10 or

Wednesday, September 11

___ \$35/Person

Headshot Photo Subtotal: \$ _____

Note: Photographs will be taken at WaterJAM 2019.

By registering for this event, you agree to allow VWEA and VA AWWA to use your photo in any VA AWWA- or VWEA-related publication, video, or website.

SOCIAL EVENTS

(Not included with Single Day or Exhibitor registration)

Monday, September 9

___ Opening Night Meet & Greet Reception \$50

Tuesday, September 10

___ Networking Reception w/Silent Auction \$30

Wednesday, September 11

___ Awards Banquet & Fun Night \$55

Social Event Subtotal: \$ _____

CLAY SHOOT

Monday, September 9

Old Forge Sporting Clays, Providence Forge, VA

\$80/person

1. _____
2. _____
3. _____
4. _____

Clay Shoot Subtotal: \$ _____

WATER FOR PEOPLE 5K FUN RUN/WALK

Tuesday, September 10

___ Registration \$40
(Includes T-Shirt/Refreshments)

T-Shirt Size: _____ S _____ M _____ L _____ XL

___ Water for People 5K Sponsorship \$120
(Includes logo on T-shirt)

5K Subtotal: \$ _____

Subtotal This Page \$ _____

Registration continued on next page ⇨

conference registration forms

MONDAY WORKSHOPS

Full Day Workshop (8 AM - 5 PM) \$105

(Includes continental breakfast, lunch, and AM & PM breaks)

___ Laboratory Practices

Half-Day Workshops (1 PM - 5 PM) \$55

___ Wet Weather Storage Solutions

___ Enhanced Coagulation Strategies (*Transportation is not provided.*)

___ What Does It Mean to be A Sustainable Utility?

REGISTRATION TOTALS

Subtotal From This Page \$ _____

Subtotal From Page 52 \$ _____

Subtotal From Page 51 \$ _____

Grand Total \$ _____

Check # _____

If paying by credit card, please register online at:

<http://bit.ly/2Haxzer>.

THURSDAY WORKSHOP

Half-Day Workshop (12:45 PM - 4:30 PM) \$55

(Includes box lunch)

___ Stormwater: Pollutant Trading

Workshop Subtotal \$ _____

Note: Photographs will be taken at WaterJAM 2019.

By registering for this event, you agree to allow

VWEA and VA AWWA to use your photo in any

VA AWWA- or VWEA-related publication, video, or website.

PLANT TOURS

Thursday, September 12 (12:30 PM - 3 PM) \$20

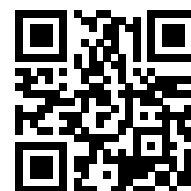
(Includes tour and box lunch only. *Transportation is not provided.*)

___ HRSD's SWIFT Research Center

___ City of Chesapeake's Lake Gaston WTP

Plant Tours Subtotal \$ _____

Scan this
QR code
to go directly
to the online
registration site.



GOLF SPONSORSHIP FORM

Monday, September 9 ~ 7:30 AM - 3 PM

The Signature at West Neck

3100 Arnold Palmer Drive, Virginia Beach, VA 23456

www.signatureatwestneck.com ~ 757-721-2900

Sponsorship opportunities are available in the form of hole sponsorships and cash donations, as well as corporate identifying items, gift certificates, golfing items, etc., to be used in the raffle benefiting Water for People. All sponsor names will be posted the day of the tournament. Hole-in-One sponsors can provide witnesses to oversee their respective hole sponsorship if they choose (otherwise, WaterJAM will provide a witness as required). In order to recognize the Sponsors properly, we are asking that you turn in your donations by Tuesday, September 3. We will still accept raffle prizes the day of the golf tournament. Those interested in sponsorship(s) can register at <http://bit.ly/2Haxzer> or return this form to: Kathy Rabalais, VWEA, PO Box 2324, Glen Allen, VA 23058-2324

Company or Individual's Name _____

Address _____

City _____ State _____ Zip _____

Name and Phone Number of Contact Person _____

Please check one or more of the following:

_____ Breakfast or Lunch Sponsor (\$350; 2 available)

_____ Beverage Sponsor (\$250; 4 available)

_____ Hole Sponsor (\$100; no limit)

_____ Closest to the Pin Sponsor (\$50; 4 available: 1 women's/3 men's)

_____ Long Drive Sponsor (\$50; 2 available: 1 women's/1 men's)

_____ Pebble Beach Golf Trip Hole-in-One Sponsor (\$500; 2 available)

_____ Myrtle Beach Golf Trip Hole-in-One Sponsor (\$500; 2 available)

_____ Raffle Prize Sponsor (merchandise, gift certificate, etc.) Please describe below:

Raffle prize description: _____

Proceeds go to Water for People.

Total amount enclosed: \$ _____. Please make checks payable to: WaterJAM.

For additional information, please contact Paul Delphos (757-779-7083 or Paul.Delphos@aecom.com) or Thom Lipinski (571-291-7792 or tlipinski@loudounwater.org).