



Established 1928

# Newsletter

## Federal Water Quality Association

An Affiliate of the Water Environment Federation; [www.fwqa-dc.org](http://www.fwqa-dc.org)

### ***2020-21 Theme - Providing Access to Safe, Clean Water During Challenging Times***



Mayor of Herndon VA, Sheila Olem gave the keynote address and presented the Harvey Olem Scholarship Award at the FWQA 27th Annual Capital Environmental Scholarship Program Virtual Award Ceremony on May 22. See additional articles and pictures on Pages 3 & 4.

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## Future Water Resource Professionals Awarded

*by Sharon Nye*

Congratulations to the FWQA 27th Annual Capital Environmental Scholarship Program winners recognized in a virtual awards ceremony on May 22! The 2021 scholarship awardees are Alissa Lovejoy, Stone Bridge High School, Cate Schultz, Bethesda-Chevy Chase High School, Connor Ransom, Poolsville High School, and Sofia Nuri, District of Columbia International School.

We honor the four outstanding students for their academic accomplishments and service in the environment. These talented young students were awarded \$2,000 each and will go on to pursue their environmental studies at various universities in the U.S. Applicants from Washington, DC and surrounding Maryland and Virginia counties are rated on academic achievement, environment-related essays, references, extra-curricular activities related to the environment, and overall presentation. The selection process is not an easy one especially since FWQA receives many high caliber applicants whose environmental awareness relating to water quality is versatile and covers a broad spectrum.

Thank you to this year's judging committee: Christian Davies-Venn (FWQA President & PEER Consultants, retired), Jan Goodwin (FWQA & EPA, retired), Jim Wheeler (FWQA & EPA, retired) and Sharon Nye (FWQA), for their hard work and dedication to this program and especially to our sponsors – this program wouldn't be possible without you!

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## Newsletter Editor

Mary B. Klein  
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## President's Corner

The COVID-19 pandemic has affected all of us in so many ways over the past year and FWQA has been no exception. Since our last newsletter, we have continued our webinar series based on our theme for this year: "Providing Access to Safe, Clean Water during Challenging Times".


In January, we were pleased to have Kristina Surfus of the National Association of Clean Water Agencies (NACWA) and Steve Dye of the Water Environment Federation (WEF) to discuss post-election briefings and the anticipated changes in the landscape of the Legislative and Executive Branches of the U.S. government, and what these changes might mean in terms of Congressional priorities for the clean water sector as the new Administration got underway. In April, in celebration of Women's Day, our webinar featured a panel of four outstanding women leaders in various water sectors, including engineering, business, law, finance, and entrepreneurship. Our panelists: Dr. Lilia Abron, CEO of PEER Consultants; Karen Pallansch, General Manager and Chief Executive Officer of Alexandria Renew Enterprises; Amanda Waters an attorney with AquaLaw and former General Counsel for the National Association of Clean Water Agencies (NACWA); and Debra Coy, an investment consultant and Executive in Residence with XPV Water Partners, shared their unique experiences, perspectives, and visions for the future role of women in the water industry.

Both webinars were very informative and engaging and were well received. See articles on pages 5 & 8 of this newsletter for details. Our sincere thanks to all our speakers, planners, and participants. If you missed any of these events, the recordings are available upon request. We plan to continue our webinar series as we look forward to the light at the end of the tunnel with regards to the pandemic, and as we eagerly anticipate a return to our usual face-to-face meetings, luncheons, and other planned activities.


Finally, congratulations to this year's science fair and scholarship winners for their accomplishments and the recognition of their hard work and perseverance despite some unique challenges. We were particularly pleased to host our award winners and their parents at our virtual awards ceremony on May 22nd. Our special thanks to all our science fair judges, scholarship application reviewers, and our sponsors for their support. To our winners, we wish you the best of luck in your academic pursuits. We hope you will keep in touch with FWQA and update us on your progress.

Christian Davies-Venn ([fwqadc@gmail.com](mailto:fwqadc@gmail.com))

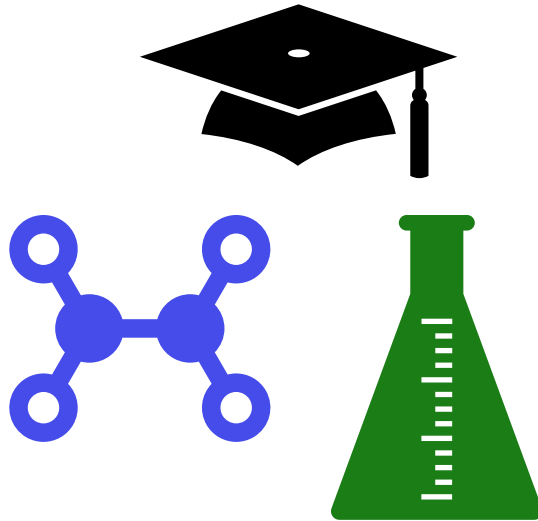




## Thank You to Our Sponsors and Scholarship Awardees!!



**National Association of Clean Water Agencies,**  
McCallum Scholarship Sponsor — Awardee, Connor Ransom  
**National Association of Water Companies and FWQA,**  
Olem Scholarship Sponsor — Awardee, Alissa Lovejoy  
**Chesapeake Water Environment Association,**  
President's Scholarship — Awardee, Cate Schultz  
**Eastern Research Group,**  
Barber Scholarship Sponsor — Awardee, Sofia Nuri



## Recognizing Young Scientists at Science Fairs *by Janet Goodwin*

We had a successful year judging virtual science fairs in 5 jurisdictions this year. The judging was interesting and very different from in person judging. The jurisdictions did a good job helping the students present their projects. Most presentations included a PowerPoint presentation along with a video in some cases. The students were somewhat restricted in the types of projects they could undertake, but they showed great ingenuity in developing and accomplishing their projects. The first-place winners from our judging are:

### Prince George's County

Marcus Bryant from Walker Middle School  
Tyler Ludlow from Great Mills High School

### Fairfax County

Lynn Tao from Thomas Jefferson High School  
Maya Littman and Lauren Dick-Peddie from Fairfax High School

### Northern Virginia

Nadia Lachab from Dorothy Hamm Middle School  
James Licato from Washington-Liberty High School

### Montgomery County

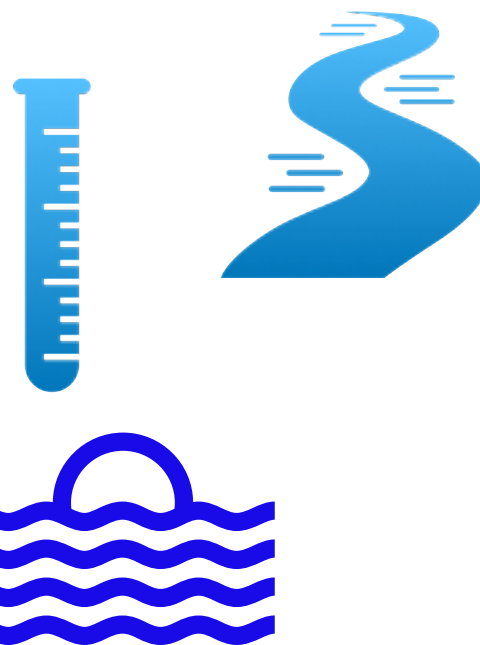
Shriyadita De from Takoma Park Middle School  
Sudish Swain from Montgomery Blair High School

### Loudoun County

Sachi Watsen from Rock Ridge High School  
Felix Carlson and Hamdy Elficky from Rock Ridge High School

### Prince William County and Manassas City

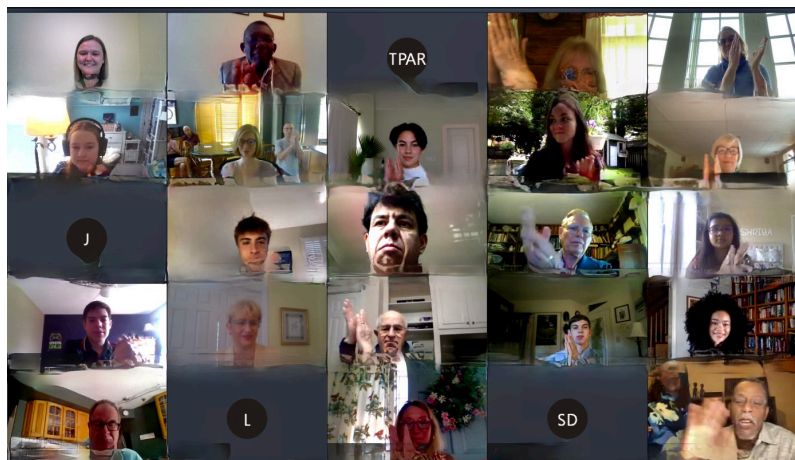
Victoria Salley from St. Francis of Assisi  
Cassidy Dailly from Osborne Park High School  
Vinay Bhakthan, Mehreen Rahman and Pearl Raichura from Colgan High School



Congratulations to these young scientists and also to all of our other winners.

I also want to thank all of our judges who put in the time to review all of the materials these students put together: Anthony Tripp, Ken Foo, Dylan Owen, Andy Stoddard, Sharon Nye, Chandra Vavilala, Alana Gildner, Bob Forgione, Clancy McQuigg, Joe Ford, Jack Kooyoomjian, Katherine Schmotzer, and Christian Davies-Venn.

Without all of their support we would not have been able to accomplish our Science Fair participation this year, thank you all.



Attendees and Scholarship & Science Fair Winners cheering at the FWQA Virtual Awards Ceremony, May 22, 2021.



## Addressing the Changing Landscape in the Legislative and Executive Branches *by K. Jack Kooyoomjian, Ph.D.*

On January 25, 2021 the Federal Water Quality Association (FWQA) hosted a virtual webinar to discuss the upcoming changes in the landscape of the legislative and executive branches of the U.S. Government. With new leadership in the White House as of January 20th, a Senate Majority shakeup, and new faces around Congress, 2021 brings about significant change in the direction of federal water policy. The FWQA webinar speakers from the Water Environment Federation (WEF) and the National Association of Clean Water Agencies (NACWA) provided an overview of what these changes in government might mean in terms of Congressional priorities and what the clean water sector is watching closely as the new Administration gets underway.

Kristina Surfus highlighted to the FWQA participants the shifts in the 117th Congress and the U.S. House of Representatives. She noted that there are 222 Democrats and 211 Republicans, and that while the Democrats lost nine seats, the Republicans gained nine seats. Ms. Surfus advised that there will be committee changes in the House, and there is consistency among the Democratic leadership which will provide stability to champion the water sector. In the Senate, she notes the 50/50 split with Vice President Harris as the deciding tie-breaker vote. She observed that there are mostly Democrats who are the new Senators. She suggested that this will affect chairship of key committees, such as the Environment and Public Works Committee, the Senate Chair for the Appropriations Committee, the Infrastructure Subcommittee, and the Interior and Environmental Appropriations Committee.

Steve Dye postured that there likely will be major water-related legislation and that President Biden wants, and will, push for another COVID relief package. With regard to the Infrastructure package, President Biden proposed a \$2.4 trillion energy and infrastructure, and an emerging transportation infrastructure (roads, bridges, etc.) package. He noted that the current Highway Authorization

### PRESENTERS



Ms. Kristina Surfus, is the Managing Director of Government Affairs with the NACWA, where she focuses on federal legislative and regulatory advocacy. Prior to joining NACWA in 2015, Kristina worked in the US Senate and municipal consulting. She received a Master's Degree from the University of Wisconsin, Milwaukee in Freshwater Sciences.



Mr. Steve Dye, served since 2011 as Legislative Director for the Water Environment Federation (WEF). Steve represents the Federation before Congress, monitors key legislation and federal policies, develops and executes legislative strategies and proposals, and represents WEF's positions before public and private interests in the water sector. Steve also leads WEF's Water Advocates Program, a grassroots program designed to train and mobilize WEF members to advocate for water issues before federal, state and local officials.

Bill expires in September. Steve also noted that the Per- and polyfluoroalkyl substances (PFAS) legislation from previous bills has been added to Superfund (CERCLA) and the Clean Water Act (CWA), and he anticipates that Congress will likely want to set timelines for EPA action.

Mr. Dye noted that the utilities are receivers of PFAS, not the producers, and they need to have the federal funds to assist in cleanup costs. They may need a Municipal exemption from PFAS when it is really not their fault that PFAS are there in the first place. PFAS are long-lasting man-made chemicals that were created in the early 1940's for such applications as stain-resistant and water-repellant fabrics, carpets, non-stick cookware and many other products. Tests have shown low levels of PFAS in the bloodstream of individuals.

There was some discussion on the Climate Change/ Energy Bill with respect to President Biden's \$2.4 trillion energy and infrastructure plan to move the (Continued on Page13)

## REFLECTIONS

*A New Feature Capturing  
Thoughts and Reflections on People,  
Programs, and Activities in the  
Water Resource Arena by Esteemed  
Professionals*



*Photo By Mary B. Klein*

***Reflections on the Environmental Protection Agency's (EPA) Women Water Resource Leaders, 50th Anniversary, and the EPA Alumni Association*** *By Robert Wayland (former EPA Director, Office of Wetlands, Oceans and Watersheds (along with other positions), and former President of the EPA Alumni Association)*

I was so glad my friend and former EPA Colleague Mary Belefski Klein shared the link to the FWQA's recent webinar with women leaders in water management. It very much put me in mind of some of the outstanding women with whom I worked at EPA, including Martha Prothro, who was director of Permits, then water Quality Standards, and then Deputy Assistant Administrator of Water. I have also recently been in touch with Rebecca Hanmer, who was a Charter Member of EPA. When I first met Rebecca she was in charge of the Office that handled EPA responsibilities under the National Environmental Policy Act. Rebecca later was Regional Administrator in 2 EPA Regions and Deputy Assistant Administrator for Water. I was privileged to be Deputy to LaJuana Wilcher, who was Assistant Administrator for Water during Administrator Bill Reilly's tenure at EPA.

I have been able to stay connected to these outstanding colleagues through our membership in the EPA Alumni Association. The Association was established nearly a decade ago, and I have been honored to serve on its Board. We now have over 2,000 members. Any former Federal employee who worked at EPA for a year is eligible to join. We have an extensive data base on the program areas and physical locations where members worked along with information they choose to share about their post-EPA employment or hobbies. But the Association is not just about helping former colleagues stay in touch or re-connect. We have conducted training and mentoring with EPA, recorded oral histories with founding figures at the Agency, have launched an "Academy" with virtual seminars on key issues, and conducted Teach-ins connected to the EPA and Earth Day 50th Anniversaries.

Over two dozen of our members contributed to a series of reports we first developed in 2016, and updated in 2019. The Half Century of Progress (HCP) reports served as the foundation for our Teach-in efforts. I commend these reports (view at [www.epaalumni.com/hcp](http://www.epaalumni.com/hcp)) to your attention. Readers of this newsletter will probably be most interested in "Water Quality A Half Century of Progress." That report is summarized in an overview report, Environmental Protection: A Half Century of Progress along with Cleaning the Air We Breathe, Reducing Pesticide Risks, Assuring Safe Drinking Water, Controlling Toxic Substances, Recycling and Managing Waste, and Emergency Response and Hazardous Site Cleanup. I was honored to work with my colleagues Mike Cook, Jim Hanlon, and Mike Quigley on Protecting Water Quality. Of course the progress we describe was not achieved by EPA on its own. In addition to State, Territorial and Tribal programs (Continued on Page 7)



## Reflections (Continued from Page 6)

recognized under the Clean Water Act, Federal Departments and Agencies have key roles, including the Army Corps of Engineers; the Fish and Wildlife Service; and the Forest Service, Natural Resources Conservation Service, and Farm Services Agency at USDA. The private sector has invested billions in meeting pollution control requirements and has been creative in finding ways to do so at lower cost through product redesign and materials substitution. Many of these agencies and companies support habitat restoration efforts which complement pollution control in returning impaired waters to full attainment of designated uses. Of course national environmental groups have pushed the effort forward with advocacy and litigation. Many waterbodies, large and small, are the focus of “Friends of” groups, river keepers, and the like. They often play a key role in environmental education as well as organizing and mobilizing citizens to work on restoration projects.

The Alumni Association’s motto is “We’re Not Done Yet.” This is not just a statement about the post-EPA lives of our members, but also reflects the fact, documented in the Half Century reports, that there is still a lot of work to be done by society to realize the goals of the several laws EPA implements. Some environmental problems, such as non-point source pollution, have proven very difficult to overcome using existing statutory tools. Other problems have emerged only since most pollution control efforts were designed, like pharmaceutical and personal care products that are used or ingested and then find their way through sewage treatment facilities. And climate change did not receive urgent attention until considerable damaging impact had been “baked-in.”

The Association hopes that the “HCP” (we cut our teeth on acronyms, after all!) will make those who never experienced the kind of pollution that ravaged the country in the 60’s and 70’s realize how much damage had been done before citizens demanded effective pollution control, how much progress has been realized, and how important it is to address remaining and newly emerging challenges.

## Illustrations from the Water Half Century of Progress (HCP) Report



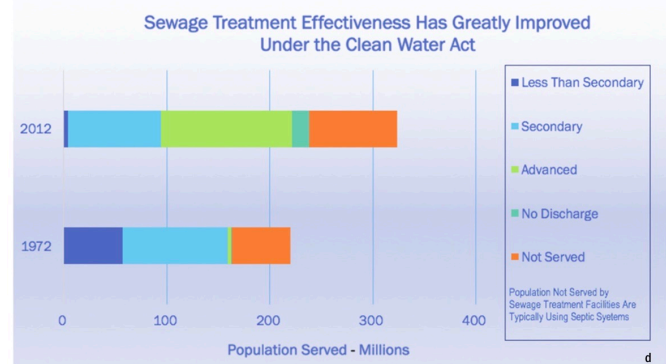
Georgetown Gap Outfall which discharged 15 million gallons of raw sewage each day to the Potomac behind the Watergate complex in 1965.



Nonpoint Source Pollution: Allowing cattle into streams introduces pollution from erosion, pathogens, and nutrients. Photo: Dave Harp



Volunteers relocate mussels on the Thornapple River. Photos: Joanne Barnard, Barry Conservation District



Federal Investment in Improving Wastewater Treatment

# Women in the Water Industry Focus on Experiences, Equality, and Career Whos, Whats, and Whys *by K. Jack Kooyoomjian, Ph.D.*

## Who are the Panelists?:

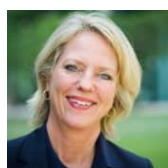


**Dr. Lilia Abron, P.E., BCEE**, is the CEO, President and Founder of PEER Consultants, P.C. (PEER). She has the distinct honor of being the first African-American woman in the nation to earn a Ph.D. in Chemical Engineering and the first African-American woman in the nation to start an engineering consulting firm focused primarily on the environment and environmental issues. To help advance the condition of the impoverished sector worldwide using sustainability measures, Lilia also founded PEER Africa Western Cape, CC in 1995. She holds a B.S. degree in Chemistry from Lemoyne College in Memphis, TN, with Distinction; and M.S. degree in Environmental and Sanitary Engineering from Washington University in St. Louis; and, in 1972, Dr. Abron obtained her Ph.D. in Chemical Engineering from the University of Iowa. Most recently, Dr. Abron has been inducted into the notable American Academy of Arts & Sciences and Tau Beta Pi, DC Alpha Chapter as an Eminent Engineer. She is also a member of the International Women's Forum; Delta Sigma Theta, a social services sorority. In addition, she serves on several college advisory boards. As of January, 2021, she became President of The American Academy of Environmental Engineers and Scientists (AAEES).

**Ms. Amanda Waters** is an attorney with AquaLaw, a nationally recognized law firm for its' expertise on environmental and business matters, with over 20 years of environmental law experience. She has extensive practical expertise working nationally with utilities on a variety of environmental permitting, compliance and enforcement issues. Prior to joining AquaLaw, Amanda was General Counsel for the National Association of Clean Water Agencies (NACWA), where she managed the legal advocacy program implementing NACWA's mission to safeguard the interests of municipal wastewater and stormwater utilities. Amanda previously served as General Counsel and Director of Public Advocacy for the Water Environment Federation (WEF), General Counsel and Deputy Executive Director for Sanitation District No. 1 of Northern Kentucky (a public wastewater and stormwater utility), Deputy General Counsel for the State of Kentucky Environment and Public Protection Cabinet, and as a staff attorney with the West Virginia Department of Environmental Protection.



**Debra Coy** is Executive in residence with XPV Water partners, the largest water-focused growth equity fund in North America. She works with growth companies utilizing her experience as a top-ranked investment research analyst and strategic consultant to investors, companies and municipal utilities. She is a regular speaker and columnist on water industry finance and innovation and currently serves on the Boards of Directors for Global Water Resources, Inc. (NASDAQ: GWRS), a Phoenix-based water utility, Willdan Group, Inc. (NASDAQ: WLDN), a leading energy efficiency consultant, and Water for People, a global non-profit. Debra is well known in the water industry from her 20 years on Wall Street as an equity research analyst, where she developed a leading franchise and broad expertise in covering the global water markets for investors at firms including Janney Montgomery Scott, Schwab Capital markets, HSBC Securities, and National Westminster Bank.



**Karen Pallansch** is the General Manager and Chief Executive Officer (CEO) of Alexandria Renew Enterprises (AlexRenew), a position she has held since 2005. Karen is a Board-Certified Environmental Engineer and Registered Professional Engineer with a Master's degree in Business Management from Texas A&M University Texarkana. She holds a Class 1 Wastewater License and is a Water Environment Federation (WEF) Fellow. She has over 30 years of experience in the water industry. Throughout her career, Karen has been devoted to mentoring women in the water industry, workforce development and water sector leadership. Karen founded the Women's Water Network for the National Association of Clean Water Agencies (NACWA) and continues to develop and mentor existing and future women water leaders in the water sector. Karen has held board roles for several organizations including NACWA, international NGO ROCKBlue, and WaterReuse Association. She has published or presented more than 50 educational papers and talks and received multiple awards for public service and innovation.



## What Happened?

On Wednesday, April 21, 2021 the Federal Water Quality Association (FWQA) hosted a virtual webinar to highlight contributions made by women in the water industry. Ms. Janet Kay Goodwin of FWQA was the host and moderator for this event. She welcomed all the participants with a Happy Earth Day Eve (Continued on Page 9)



## Women in the Water Industry (Continued from Page 8)

message, and then introduced the four distinguished and accomplished women panelists in the water field. Moderator Janet Goodwin gave a brief background on the FWQA and our activities, introduced the four accomplished panelists, and began the round of questions.

The first question was directed to Dr. Abron and stated ***“When did you decide to pursue a specialty in the water field?”***

Lilia has worked in all sorts of aspects of the entire area of water and sanitation. She was inspired by the book authored by Rachel Carson entitled ***“Silent Spring,”*** which fascinated her and tweaked her interest in things environmental. As a youngster in a family of very smart black females, she couldn’t call trash men as garbage men. We are all humans. We called them “Sanitary Engineers.” She was always interested in Science, Technical, Engineering, Math, Medicine (STEM) activities at an early age.

Karen Pallansch is also a Chemical Engineer and in 6th grade she entered her Science Fair project in a Wastewater Plant. She lived in a very industrial town in Pennsylvania along the Schuylkill River, which back then was considered a “dying river,” due to the pollution. It tweaked her interest as to what is going on and she ended up in a Federal government and industrial pollution career. She worked at the Department of Environmental Quality (DEQ) at the State level, and was motivated to “making a difference” in the water world.

Amanda Waters stressed that while she was not attracted to engineering, she grew up in Southern Kentucky and at a very young age went out into the national forest areas with her sister. When venturing into the creeks in the woods, according to her father, he admonished them ***“Do not swim in the streams, they are polluted.”*** ... so she and her sister went upstream and observed a car wash operation discharging to the stream. She pursued biological sciences in undergraduate school in college. She took a tour of a wastewater treatment plant and learned that it was a fascinating and eye-opening experience and she seemed to drift toward considering Environmental Law.

Debra Coy found that water challenged her. She had no technical education, receiving degrees in English and Journalism. She dreamt of being a star reporter with the Washington Post, but that did not happen. She learned about environmental policy at EPA and on the Hill when the Safe Drinking Water Act was being reauthorized, and ended up 100% interested in the water field, especially when the United Kingdom privatized their water sector. She went out and learned about the intersection between money and policy on water and has been engaged in this field for over 20 years now. She remarked that for whatever reason, “Once we ‘fall’ into the water industry, we never leave.”

The next question that was asked is ***“What have you experienced in your professional careers in terms of challenges and obstacles and how have you overcome them?”***

Debra Coy started with observing that the water and wastewater industry is a very male-dominated industry. Learning to be sufficiently assertive has been a challenge, and learning to speak up and making herself heard is an acquired skill. There is also the challenge of balancing between raising children and her career. Sometimes she wished that she stressed more time and attention with the family, but she found that they are both manageable. (Continued on Page 10)



### **Moderator:**

**Ms. Janet Goodwin** is retired from the U.S. Environmental Protection Agency (EPA) in Washington, DC where she worked for 37 years in the Office of Water. Janet has worked on numerous industrial water discharge regulations, including regulations for the metals and chemicals industries, as well as construction discharge requirements. Janet has also worked on projects related to stormwater runoff from developed land and a survey of POTWs. She has served as President of FWQA for 3 years and has been responsible for FWQA Science Fair judging since 2004.

## Women in the Water Industry (Continued from Page 9)

Amanda Waters had similar observations with regard to this being a male-dominated industry. She was the first female General Counsel in the State of Kentucky. She tried to always be true to herself and to be authentic and genuine in all her dealings as a professional. She would go into a room as a subject-matter expert, but was not viewed by everyone in the room as the decision-maker. She would learn to “read” the audience and continue to be credible and respectful. She observed that there are lots of women going into the utility industry world.

Karen Pallansch remarked that you are confident that you are the one in the room that knows the answer, but others (males) might try to take credit. The utility industry is clearly male-dominated. She worked in operations & maintenance (O&M) and several men under her employ left, because they couldn't take female leadership. She served 15 years at Alexandria Renew as General Manager (GM) and knows how to work with males and females and be successful.

Lilia Abron observed that as a black and female professional, she experienced that this puts you at the bottom of the food chain. She grew up in a very loving family in the south with highly educated parents. She didn't even know she was poor growing up because they were so loved and cared for. She thought she was going to medical school, but went to a historically black college university (HBCU) and the other schools wanted her to go to a 5-year college. Her first obstacle was trying to go to graduate school. She applied to the University of Washington in Seattle. She was from a household of precocious girls and just because you are black and female, she learned that you are NOT at the bottom of the food chain. Lilia initially didn't have monitors in graduate school and she concluded that was a mistake. Her second obstacle was being black and female and NOT having a monitor or mentor. This was overcome when she acquired Dr. Cecil Lue-Hing as a monitor! He was a very supportive role model to acquire assertiveness and leadership skills. Dr. Lue-Hing is President of Cecil Lue-Hing & Associates, Inc. in Chicago, Illinois.

Amanda Waters remarked that if you think of a picture of a scientist in our culture and many others, it is usually a male, but they do not think they are biased. Thinking with objectivity and with appropriate skills are the important element.

Karen Pallansch remarked that ... **“The world is your oyster. Focus on acquiring communication skills as well as empathy skills. Enjoy life, learn and hone your multi-tasking skills.”** Debra Coy remarked that she agreed with Karen's advice. Women often gravitate to finance, business, marketing, human resources (HR) - - these skill sets are needed in the water and wastewater industry. We are going through generational change in our talents and work force.

Lilia expanded on Karen's remarks for women in water. We don't all have to be engineers. What it takes to operate and build a wastewater plant involves many occupational skills, some of which can be acquired at the Community College level, such as occupational skills in construction, as inspectors, as mechanical and electrical contractors, as laboratory technicians and chemists, and people who have skills in day-to-day maintenance of infrastructure and so on. There is nothing she cannot do! She can be a fork-lift operator. She has worked with women at Blue Plains, and there is nothing that they can't do! There are all very well paying jobs available to women, if you have the appropriate skill sets - - - Are you good with your hands? --- being a mechanic is perfect! Take a look at what we have to offer in this field!

Amanda Waters felt that communication and collaboration skills are needed in this industry. In the water industry they are very important. It is important to “check your ego” at the door and listen carefully and see how you can come up in the field with different stakeholders.

Another question that was asked is : **“Any suggestions how to improve communication skills?”**

Karen Pallansch remarked to be a good listener. Make that presentation, start with a colleague, go  
(Continued on Page 11)

## Women in the Water Industry (Continued from Page 10)

find people that are really good at this and observe them to acquire better observation and listening skills.

Lilia remarked to know your audience. Know who you are communicating with. You must understand your audience, and this varies to where you are. She gave an example in South Africa where she made assumptions that English was the common language. No, not so! South Africa has 13 different languages and a variety of dialects. You need to learn and ask questions and find a translator in Zulu, Xhosa, or Afrikaans, etc. When you are out there, you must study your audience and the way they hear you and you must adapt to their preferences for communication.

Amanda Waters remarked that communication is a lifetime learning experience and learning how people absorb information and what sticks with them is important. She further stressed that practicing, preparation and observation are necessary to be successful.

Another question that was asked is: ***“Why should women think about careers in water?”***

Amanda Waters observed that going to the office and taking for granted that you have water flowing thru the pipes is the bedrock of society in many civilized countries. This will only become more challenging in other developing areas where access to safe drinking water is not the norm, and not taken for granted. The ability to be more innovative and the prospect of tackling these issues is exciting. She observed that there are many opportunities such as water entrepreneurs as well as opportunities to make an impact on legislative and regulatory careers, such as that experienced by Janet Goodwin and they are there for others to pursue.

Lilia Abron offered the thought that when you are thinking opportunity, also think internationally. In many developing countries, women cannot get to school when they reach puberty in some of these countries. Instead, they walk all day looking for water. How can you improve the lot of women and educate and elevate them in this world? Can a better place be found when this situation exists? It is a challenge to overcome culturally, socially and otherwise.

Karen Pallancsh remarked that these are great stories that we have in the water industry and we have to move from “underground” and move “up front” to bring in talent (all genders working together) to make our world a better place.

FWQA President, Dr. Christian Davies-Venn thanked panelists for their excellent discussion and openly shared thoughts and perspectives, especially as they came forward in the excellent Q&A session that took place. He provided closing remarks, touching upon a variety of opportunities to engage with the FWQA in the various programs. He thanked Ms. Janet Goodwin the moderator and Tessa Roscoe, our FWQA Vice-President who served as Webinar technical host. He also thanked the members and our special guests, which numbered nearly 100 participants. He invited the participants to become active in the FWQA, and encouraged them to participate in our post Webinar survey and get involved, remarking that ... “We have something for everyone.”

There was additional time and opportunity for extending the Q&A directly from the audience. One question was as follows: ***“Any suggestions for what to do when you feel stuck in your field?”***

Amanda Waters started off the dialogue by recommending to find mentors in other areas. Debra Coy observed that sometimes as a woman, you need to be brave and to step out of your comfort zone. She once walked off a job and it worked out great!

Another question was: ***“What thoughts do you have on how to find mentors?”***

(Continued on Page 17)





## Retrospective Look on EPA's 50 Years - Part 2

by K. Jack Kooyoomjian, Ph.D.

(Second article of two by Dr. Kooyoomjian)

**ABOUT THE AUTHOR:** Dr. Kooyoomjian is a lifetime member of WEF and on the Board of the FWQA. He is the FWQA's pH 7 Influent Integrator in the FWQA 5S Society. He worked at the U.S. EPA Headquarters Office in Washington, D.C. from 1974 to 2013 as an Environmental Engineer. He received his Ph.D. in Environmental Engineering from Rensselaer Polytechnic Institute in Troy, NY. He has served in the Office of Solid Waste (Hazardous Waste Management Division), the Office of Water (Effluent Guidelines Division, and the Oil and Hazardous Substances Division), in the Superfund Program (Office of Emergency and Remedial Response, Emergency Response Division), and on the Science Advisory Board Staff of the Office of the EPA Administrator as a Designated Federal Officer for the Environmental Engineering Committee, Drinking Water Committee, Clean Air Compliance and Analysis Council, the Radiation Advisory Committee and other assignments.

Looking back upon the EPA which was established with just under 6,000 employees on December 2, 1970, so much has been accomplished. The EPA was established as a decentralized organization with a headquarters office and 10 regional offices strategically located around the country to work proactively with the states and the cities, as well as having National Laboratories. Just making a short list of accomplishments would include cleaning up the nation's waters and working toward fishable, swimmable waters (still working on that goal), establishing the National Pollution Discharge Elimination (NPDES) Permits system for municipal and industrial discharges and pretreatment programs for industrial discharges to our nation's waters under the Clean Water Act (still a work in progress). There is the visible and successful effort of banning the use of DDT and regulating pesticides, herbicides, insecticides, and rodenticides under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), regulating auto and truck emissions and regulating stationary source pollution under the Clean Air Act, cleaning up toxic waste and establishing a cradle-to-grave manifest system under the Resource Conservation and Recovery Act (RCRA) to track hazardous wastes, protecting depletion of the ozone layer under the Clean Air Act, having well designed and managed solid waste disposal facilities and increasing recycling under the Solid Waste Disposal Act, revitalizing the inner cities/Brownfields under Superfund legislation (CERCLA), the challenges of providing the public clean, safe drinking water under the Safe Drinking Water Act (SDWA), and the list goes on.

The earliest legislation that EPA used was the 1899 Navigation Act, which was intended to protect marine commerce. The National Environmental Policy Act (NEPA) of 1969 created the Council of Environmental Quality (CEQ) and established the Environmental Impact Analysis (EIS) requirements to understand the environmental impacts of many public works projects. There were many pieces of legislation that drove EPA in a variety of directions over the decades usually to pursue single media pollution issues, called "stove pipe" oriented legislatively driven programs since its' establishment in 1970. Some later legislation addressed multi-media issues, but most focused on a single media problem. Some of these include The Clean Water Act of 1977 and 1987, the Clean Air Act of 1970, 1977 & 1990, the Resource Conservation and Recovery Act (RCRA), the Toxic Substance Control Act (TSCA), the Marine Protection, Research and Sanctuaries Act (ocean dumping), the Noise Control Act, the Environmental Research, Development and Demonstration Authorization Act (ERDDA) and Superfund (the Comprehensive Environmental Response and Liability Act – CERCLA) to address hazardous waste sites like Love Canal as well as issues of releases of pollutants into all media, the Emergency Planning and Community Right-to-Know Act (EPCRA) following the devastating leak and release of a highly toxic pesticide (Methyl Isocyanate) in Bhopal India, which killed thousands of India's citizens (at least 3,787 deaths) on December 2, 1984 from a Union Carbide plant. There are many more legislative acts that drive the Agency's programs.

The most visible emergency events create awareness in the public's mind of our need to maintain  
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**Addressing Legislative Changes (Continued from Page 5)**

United States toward a carbon neutrality position by 2050. The COVID relief package included \$35 billion for renewable energy research as well as tax incentives.

With respect to water recycling and reuse bills, a \$2 billion package is likely to be introduced in 2021. Steve mentioned the bipartisan Senate Bill S1932 Drought Resiliency and Water Supply Infrastructure Act to address the nation's water supply and drought resiliency.

The WEF and NACWA priorities include infrastructure, such as the Clean Water Act State Revolving Fund reauthorization with approximately \$40 Billion over 5 years. There are additional incentives being considered, such as grants, negative interest loans and loan forgiveness. Funds can be designed and engineered to focus on wastewater and stormwater systems. The Water Infrastructure Finance and Innovation Act (WIFIA) reauthorization is likely to provide approximately \$55 million/year. Water Workforce Development is likely to see approximately \$3 million per year for the EPA Water Workforce Grant. There is authorization to use 1 percent of the Office of Water State Revolving Fund for workforce development.

The WEF and NACWA priorities include the following: Low income water ratepayer assistance; restoration of advanced refunding for tax-exempt bonds; lifting of the volume cap on private activity bonds; restoration of the Build America Bonds; increasing the EPA Combined Sewer Overflow (CSO) and Storm Water Management (SWM) reuse Municipal Grant Program for Overflow and Stormwater Reuse (OSG) Program to \$400 million/year; establish up to five Stormwater (SW) Centers of Excellence for SW Infrastructure Technology; establish the Energy & Resource Recovery Package (S 3046) for Wastewater Efficiency and Treatment Act; \$1 billion in recycling grants to Water and Resource Recovery Facilities; extension of terms for the National Pollution Discharge Elimination System (NPDES) permits; Research & Development Funding; Smart Water & Innovative Funding; PFAS Legislation pertaining to liability protections for wastewater and biosolids under CERCLA & the CWA; and there is an interest in partnerships for legislation to encourage regionalization amongst utilities as a voluntary approach and not a regulatory approach.

Kristina Surfus highlighted the WEF and NACWA regulatory areas of interest, and they included the following: Financial Capability Assessment Guidance (Affordability). This would also involve a 20 year collaborative effort on updates to replace the 1997 Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development, the Lead & Copper Rule, Maui Guidance (Waters of the US) to clarify when a NPDES Permit is necessary under the CWA with the Supreme Court of the United States (SCOTUS) "New Functional Equivalent," strengthen transparency in pivotal science, address climate change, address the EPA Water Workforce Program, implement sewer overflow grants, promote advances in wastewater epidemiology for COVID 19, be proactive to see that Publicly Owned Treatment Works (POTW) wastewater utilities have stepped up significantly from the pandemic to assist local health departments to gather data, stay involved with integrated planning, deal with the 2021 Multi-Sector General Permits (MSGP) for industrial stormwater discharges, revisit the Navigable Waters Protection Rule (Waters of the US), examine Nationwide Permit Revisions, deal with Combined Sewer Overflows (CSOs), long-term permitting, the Water Reuse Action Plan, Flushed Wipes, the Toxic Substances Control Act, and the Nutrients Survey.

A fairly intense Q&A session followed. Kristina touched on impacts of the COVID crisis on consumers and estimated the percentage of households that cannot pay their water, sewer and utility bills and rent or mortgages. She noted that utilities are averaging a 28 percent increase in bills that are 30 days overdue. She asked the participants what they think are the top three priorities, and a discussion followed.

Steve Dye addressed water infrastructure issues. He noted that there is a need for increased federal assistance through these enormously unstable times with the COVID health pandemic. He touched on PFAS and how to clean up our communities. He also touched on challenges in the work force, the challenges of climate change and building resilience in our communities.

Kristina stressed that there is a continuing need to address water and wastewater affordability needs, and asks "What is the federal role to assure water access and water affordability?" She stressed that there are 9 to 10  
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## Retrospective on EPA's 50 Years (Continued from Page 12)

diligence. The EPA has many partners in this effort to keep our nation's waters clean, but when those visible events occur, they remind us of the fragility of our water and shoreline areas and the marine life, the fisheries impacts and the impacts on the fisheries industry, the adverse economic impacts on our coastal resort and recreational areas, not the least of which are the longer term ecological impacts. I will touch on highlights of only a few of the many spill events that have occurred over the past five decades. One inland spill of diesel oil took place on January 2, 1988 into the Monongahela River, which released the oil into the Ohio River near the town of Jefferson Hills, Pennsylvania, approximately 20 miles upstream from the city of Pittsburgh, PA. This was caused by the total structural failure of a large oil storage tank owned by the Ashland Oil Company. The tank released its' entire contents of 3.85 million gallons of diesel fuel and about 500,000 to 750,000 gallons made its' way into the Monongahela River and would become one of the very visible inland oil spills in the nation's history, although there were larger oil spills recorded prior to this event.

The Exxon Valdez ran aground on Bligh Reef resulting in the second largest oil spill in U.S. history. The oil spill occurred in Prince William Sound, Alaska on March 24, 1989 and impacted over 1,300 miles of shoreline spilling over 10 million gallons of oil, and cost over \$7 billion in the cleanup efforts. The records document the death of at least 250,000 seabirds, 2,800 sea otters, 1,000 ducks, 300 harbor seals, and 250 bald eagles and 22 killer whales, and billions of salmon and herring eggs that were killed as a direct result of the Exxon Valdez crude oil spill, according to studies. After 25 years there still are effects. This event and others spurred the U.S. Congress to pass The Oil Pollution Act (OPA) of 1990 which streamlined and strengthened EPA's ability to prevent and respond to catastrophic oil spills. The EPA has many partners, and the U.S. Coast Guard is the lead agency for spills in coastal waters and deepwater ports. There is the Marine Protection, Research and Sanctuaries Act (MPRSA), which prohibits dumping into the ocean any material that would unreasonable degrade or endanger human health or the marine environment. There is EPA's oil spill prevention program which includes the Spill Prevention, Control, and Countermeasure (SPCC) and the Facility Response Plan (FRP) rules. The SPCC rule helps facilities to proactively plan and prepare facilities to prevent a discharge of oil into navigable waters and adjoining shorelines.

The largest recorded offshore oil spill involved the British Petroleum (BP) Deepwater Horizon explosion of an offshore oil rig and lasted from April 20, 2010 to September 19, 2010 and was an industrial disaster in the Gulf of Mexico, which is considered to be the largest marine oil spill in the world. It is estimated that it leaked conservatively over 4.9 million barrels (210 million U.S. gallons), spread over an area up to 68,000 square miles and cost over \$61 billion for the cleanup and restoration efforts. Here in 2020 (ten years later), the BP Deepwater Horizon oil spill continues to harm wildlife. Scientific conferences and research have been funded by BP as a part of this restoration activity. BP and the Gulf states have formed partnerships to support and fund scientists to understand and invest into pushing the envelope to advance the science and understanding of such a major catastrophic event.

There are so many things to say and stories to tell, that will not be shared in this retrospective article on EPA's activities over these past 50 years. They remain for other opportunities to be told in their time. Such stories remain to be told, but subjects such as experiences in implementing the Chesapeake Bay Preservation Act, which protects the nation's largest estuary is one of those ongoing stories remaining to be told, and there is a story regarding the FWQA's role in this as well. How we have a National Contingency Plan (NCP), a National Response Center (NRC) operated by the U.S. Coast Guard, On Scene Coordinators (OSCs), how we work with sister agencies such as the U.S. Coast Guard, the U.S. Centers for Disease Control (CDC), the National Institutes of Health (NIH)/National Cancer Institute (NCI), the National Oceanic and Atmospheric Administration (NOAA), the Occupational Safety and Health Administration (OSHA), the Nuclear Regulatory Commission (NRC), the U.S.

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Department of Commerce (U.S. DOC), the U.S. Department of Transportation (U.S. DOT), the U.S. Department of Agriculture (USDA), the U.S. Geologic Survey (USGS), the U.S. Department of Energy (DOE), the U.S. Department of Defense (DOD), the U.S. Army Corps of Engineers role to administer parts of the Clean Water Act, and others remains to be told in their due time. How we protect special places like the Chesapeake Bay, San Francisco Bay, The Everglades, coral reefs, the mighty Mississippi and other rivers, the Great Lakes, our National Parks in our nation remains to be told. How we use environmental modeling to increase and enhance our understanding and protect us and our environment remains to be told. The many science reviews, the environmental cleanups, the international agreements, the partnerships with academia, the work of the national laboratories, the progress and continuing challenges on Tribal lands, inner cities, suburbs, the Energy Star Program, the story of dioxin, DDT and others, the environmental surveys, the assessments, the building of national, state and local programs, dealing with smart growth, green energy, the greening of public spaces, progress with Superfund cleanups and Brownfields, the many planning and land-use issues, the legal, enforcement and compliance issues. There are so many stories to tell, such as pertaining to EPA and its role regarding Love Canal, Three Mile Island, Chernobyl, Fukushima, Times Beach, the Valley of the Drums, the World Trade Center and 9/11, monitoring radioactive fallout in the US and world-wide - - - all these and more need to be told. There simply are so many that are not listed, and I plead forgiveness for the many omissions in this available space.

There remain many challenges before us, including emerging contaminants such as pharmaceuticals and opioids into waterways, nano-particle pollution, plastic pollution in our nation's waterways and oceans and the adverse effects upon aquatic and marine organisms and wildlife, invasive species on our waterways, land and forests, as well as challenges within our rural and urban environments. So many of these challenges that were identified early on still need to be dealt with, such as protecting our nations ground water supplies, understanding and dealing with the insidious effects of global climate change, deforestation, management of hazardous and nuclear wastes, the many challenges of chemicals, toxics, carcinogens, managing our oceans and fisheries for sustainability, border pollution with our neighbors, natural resource depletion, the challenges of acid rain, a variety of challenges of solid waste management and recycling, numerous energy challenges, the challenges of social equity and social justice for minorities and native Americans, the challenges of international borders and pollution, such as are reflected in the Montreal Protocol, the challenges of working with other countries to address global issues, such as the Kyoto Protocols and the Paris Agreement to reduce greenhouse gas emissions, and the list goes on.

There is a need to have a continuing robust research and development program that supports the Agency's mission of protecting public health and the environment under the Environmental Research, Development and Demonstration Authorization Act (ERDDA) and other vehicles supporting the EPA program offices and the EPA regional offices in their mission in setting standards, protecting the public and the environment and understanding the complex aspects of multi-media environmental and health issues and challenges facing the Agency to meeting its' mission, including understanding how we might deal with and work in partnership with others to address global issues such as avoiding and mitigating the devastating consequences of climate change.

The promise of renewable energy has been elevated with technological advances in more efficient turbine design for wind power, more efficient and cost-effective solar collectors for solar energy. Advances in battery manufacture have provided renewed optimism and interest in hybrid and all-electric vehicles. There is more to look forward to in our energy future which will also benefit our achieving global climate and other lofty goals.

It is a vast understatement that these past five decades have seen huge innovations in technology. The advancement of analytical methods to detect substances in the parts per million to parts per billion and now parts per trillion has revolutionized detection and monitoring and poses challenges as to how we interpret results from environmental measurement and how to best administer compliance of both conventional pollutants and toxics. Advances in technology have brought us remote monitoring and sensors, drone technology and other innovations. Information technology advances have had a profound effect of all sectors of the economy, and the same goes for environmental monitoring, measurement, compliance, enforcement activities, permit writing, NPDES permits, and generally understanding  
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## Retrospective on EPA's 50 Years (Continued from Page 15)

the “big picture” and drilling down to ground truth on many issues. The evolution of the electronic industry from vacuum tubes to transistors to integrated circuits to 13<sup>th</sup> and 15<sup>th</sup> generation integrated computer chip technology and circuitry has made it possible to have desktop computers, laptop computers, smart tablets, memory sticks and more. The transition in computer technology and information storage is profound. Gone are the 5½ inch and 3¼ inch floppy drives. Hello to memory sticks. Hello to cheaper monitors for environmental measurement, compliance and enforcement, hello to social media.

In the communication industry, the transition from rotary phones with shared party lines to digital phones to smart phones to smart watches and remote devices is profound. Gone are the Branch Secretaries typing for staff. Now instead of hard copy communication, we have common use of email, electronic files and paperless offices. Along with these innovations have come huge advances in monitoring and measurement, including use of satellites for monitoring weather, pollutants, forest fires, movement of deserts, migratory patterns of wildlife, global changes, land-use changes and many other patterns. Now it is possible to conduct remote monitoring for all sorts of situations, and the cost of providing this sophisticated technology has become more affordable. Technology has made it possible for facilities to have remarkable SCADA (Supervisory Control and Data Acquisition) systems to provide intelligence in running a variety of complex systems, including water and wastewater treatment plants, pumping stations and whole utility systems.

Stay tuned, there is much more to come with the environmental challenges that lie ahead of the U.S. EPA! Let's aspire that the next 50 years will be multiple times more productive than the first 50 years, and that past successes and the possibility for future success will give us all a reason for optimism, especially as we work our way out of 2020 and the challenges of the COVID-19 world-wide public health Pandemic. There are so many challenges and opportunities to work smarter that await us. We also see the need to deal with social justice and equity issues, and the numerous challenges faced by society, as well as the opportunity to take advantage of the huge leveraging that comes with technology advances. The COVID-19 health crisis has forced us to re-think how we configure our work place, now that we have gotten to be aggressive with working at home and dealing with virtual Zoom, Go to meetings, Webinar and other formats, as well as other forms for virtual engagement. Along with SCADA systems, the use of Geographic Information Systems mapping, computers, smart phones, remote monitoring, electronic banking and other advances, we are faced with newer challenges such as cyber-security, IT issues, and other obstacles that need to be turned into opportunities.

I believe that there is much to remain optimistic that the educational systems and the young people that choose to focus on environmental jobs and education as a career choice will prepare us for the challenges of the future. There is a Native American Proverb, which goes like this: ***“We do not inherit the earth from our ancestors; we borrow it from our children.”*** This gives us pause to reflect upon our stewardship of the one planet we must call home for future generations. With advances in medicine and technology and with more understanding of biological processes and ecosystem change, let's also hope that our nation's leaders, and those that choose to contribute, rise to the challenges and increase our understanding of the issues and make a difference to so many who are counting on us to get it right!

I remain confident that we will continue this remarkable journey and legacy which was launched 50 years ago with so much optimism and faith that we would do the right thing, not just for the American people, but for all the citizens, creatures, and nations who reside on and are so closely linked as passengers concerned for the health of the one place we all call our home, our planet Earth.

## Addressing Legislative Changes (Continued from Page 13)

months of unpaid utility bills hanging over ratepayers, that these numbers are likely to get worse and to be unsustainable, and postured that additional relief is needed and will likely be on the way.

A question was raised as to what kind of initiatives does a workforce grant fund? Steve Dye indicated that usually such grants are directed toward non-profit entities. He touched on the need to address the high school graduates, community college and 4-year college graduates as becoming a part of the workforce of the future, especially as the long-standing senior professionals and practitioners retire from the workforce. He touched on some of the \$200,000 to \$1 million dollar grants to help communities.

One participant asked if they could discuss environmental justice as a policy priority. Kristina remarked that the new administration is likely to deal with this to target investment to disadvantaged communities. She indicated that we may see a consent decree and re-visitation of previous environmental justice issues.

Our FWQA President, Dr. Christian Davies-Venn thanked our speakers and provided closing remarks, touching upon a variety of opportunities to engage with the FWQA in their various programs. We especially wish to thank Tessa Roscoe, our FWQA Vice-President who served as a host and moderator for the webinar.

## Women in the Water Industry (Continued from Page 11)

Lilia Abron opined that this is a tough question. She is struggling to find mentors to do new things, but observed that mentors do not have to be in the same field. Use a doctor, minister, a buddy at work. You need to get out of your comfort zone, but it is difficult ... however, don't think you are alone on this matter!

Karen Pallansch remarked that you can learn from a 30 year-old as well as a 70 year old, and don't go in with pre-conceived ideas. Be open to different situations, and put yourself out there and do volunteer work. Build relationships. Be open to different experiences and be brave!

Lilia was asked, ***“Did you encounter barriers in other countries, such as people dealing with females and particularly black females?”*** She stressed that in South Africa when she opened her mouth, they did not see female or black. What they saw was an American! Know your audience. She wasn't quite ready for her audience. She learned how to talk softly, be relaxed and know the culture in order to be a more effective speaker. These were **BIG** lessons for her. She would tell other Americans to lower their voice and be good listeners in order to be more receptive and effective with the audience.

Debra Coy observed that there are places where the culture is more people-friendly, such as where she works for **Water for People** internationally. She observed that in a lot of international cultures, women are involved and successful.

A final question asked was: **“How do you feel when women add (value) to the industry and how do you feel we offer a different perspective.”**

Janet Goodwin remarked that as one of three women professionals starting off in a Federal government office of 100 people (the other women were mostly clerical), and when she finished with the passage of time, she found that women were more prominent in decision-making roles. Those women that first started as professionals had to be disciplined to make their mark and be noticed for their contributions. She worked for a Division Director and was a good listener and tried to be strategic.



## National Capital Environmental Scholarship Fund Pledge Card

The Federal Water Quality Association (FWQA) is a member association of the Water Environment Federation (WEF). WEF is a world leader in water quality and environmental stewardship.

The WEF established the National Capital Environmental Scholarship Fund in 1991. The scholarship fund provides funding to local graduating high school seniors in the Washington, DC metropolitan area that will be attending colleges or universities with an environmental, water resources, or other related curriculum. Since the inception of the scholarship program, the fund has awarded over 80 scholarships, totaling more than \$100,000.

The merit scholarships are awarded based on the applicant's academic achievements and essay demonstration, and the applicant's commitment to environmental stewardship at school, at home, and in the community.

The goal of the scholarship program is to support and encourage students to pursue careers in the water industry, and to become young professionals with the knowledge to tackle the future global challenges of protecting public health and the environment.

We need your help to make this happen. The scholarship fund runs solely on donations from corporations, members, and individuals. You can make a pledge by filling out the information below and mailing it the FWQA.

The FWQA is a technical/educational professional organization and is designated by the IRS as a 501 (c)(3) charitable organization. All donations are tax deductible and you will receive an acknowledgement and an IRS W9 form for your records.

If you need more information about the FWQA scholarship fund, please contact Jim Wheeler, FWQA Treasurer, at [fwqaboard@gmail.com](mailto:fwqaboard@gmail.com).

To make your pledge to the National Capital Environmental Scholarship Fund - Please provide the following information and mail it to: FWQA Scholarship Fund, P.O. Box 14303, Washington, DC 20044. We will mail you an invoice for your pledge amount.

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Name:

Address:

Phone:

Email:

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Pledge level (check appropriate box):

☐ Sponsor - \$2,000\*

☐ Platinum Level - \$1,500

☐ Gold level - \$1,000

☐ Silver Level - \$500

☐ Bronze Level - \$100

☐ Other (please specify) \_\_\_\_\_

Alternatively, you can also mail your donation check made out to the FWQA Scholarship Fund to P.O. Box 14303, Washington, DC 20044.

All donors will be listed on the FWQA web site, included in all FWQA newsletters, and recognized at the scholarship awards luncheon.

\*Sponsors will also be invited to participate in the scholarship selection process and will be invited to attend the scholarship awards luncheon to present the scholarship to the selected recipient.

## FWQA Election of Officers Official 2021 Ballot

Ballots must be received by FWQA  
P.O. Box 14303, Washington, DC, 20044

By email to: [fwqadc@gmail.com](mailto:fwqadc@gmail.com) no later than June 30, 2021.

We appreciate everyone's interest in FWQA programs and events. However only members and dual members of the FWQA can vote in this election. If you are interested in serving as an officer or member-at-large on the Executive Board, please contact us at "fwqadc@gmail.com".

### President

- ☐ **Christian Davies-Venn**  
☐ Write in \_\_\_\_\_

### Vice President

- ☐ **Joe Ford**  
☐ Write in \_\_\_\_\_

### President Elect

- ☐ **Tessa Rosco**  
☐ Write in \_\_\_\_\_

### Treasurer

- ☐ **Jim Wheeler**  
☐ Write in \_\_\_\_\_

## Biographical Information

**Christian Davies-Venn** recently retired as Vice President and Chief Engineer of PEER Consultants. He has a Bachelor of Civil Engineering degree from the University of Sierra Leone, and his M.S. and Ph.D. degrees in Environmental Engineering from the University of Cincinnati and the University of Arkansas, respectively. He is an Adjunct Professor at the Johns Hopkins University Whiting School of Engineering and a past president of the American Academy of Environmental Engineers and Scientists. He is also an active member of the Water Environment Federation (WEF) and the Federal Water Quality Association (FWQA) and is a member of the FWQA's Scholarship Committee.

**Tessa Roscoe** has a B.S. from the University of Maine in her home state and an M.S. from Carnegie Mellon University (CMU), both in Civil and Environmental Engineering. She has an additional M.S. from CMU in Engineering and Technology Innovation Management. She moved to the DC area to start work for Eastern Research Group (ERG) in their Chantilly office at the start of 2016 and specializes in wastewater treatment. She currently serves as the Vice President of Engineers Without Borders-Northern Virginia Professional Chapter (EWB-NOVA) in addition to being the Young Member Liaison for FWQA.

**Joe Ford** is currently an Environmental Engineer in EPA's Office of Chemical Safety and Pollution Prevention since 1997. He has reviewed the environmental fate for over 1,000 chemicals for the High Production Volume Chemicals Challenge Program. Before EPA, he served as a water sanitation volunteer for the United States Peace Corps, in Zambia, Africa (1995-1996). Joe holds a B.S. in Geology from Western Michigan University and Master of Science in Environmental Engineering from Johns Hopkins University. Joe has been an at-large member of the FWQA Board for several years.

**Jim Wheeler** recently retired from the U.S. Environmental Protection Agency (EPA), Office of Wastewater Management in Washington, DC. Jim has over 40 years of experience in environmental engineering, environmental regulations, and municipal technology. Before joining the EPA, Jim worked as an environmental engineer and project manager for several international consulting firms. Jim has a degree in Environmental Engineering from Virginia Tech and a Master of Public Administration from the University of Southern California. Jim served as the FWQA President from 1994 to 1996, was Federation Director for eleven years, and has served as Treasurer since 2007. Jim is an active life member of WEF and FWQA.