



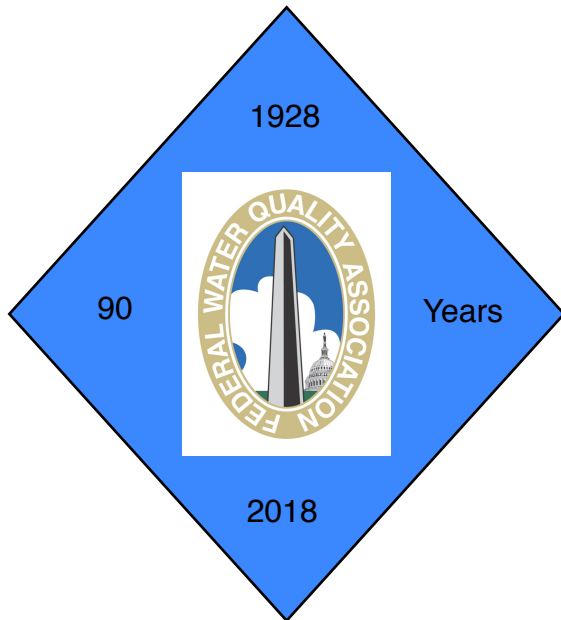
Established 1928

Newsletter

Federal Water Quality Association

An Affiliate of the Water Environment Federation; www.fwqa-dc.org

2018-19 Theme - Water Resources: Preparing for Climate Change



FWQA is Celebrating Its Diamond Anniversary -- 90 Years of Working With the Water Environment Federation (WEF) and Hundreds of Water Resource Professionals.

Enter the Diamond Anniversary Contest - See Page 9

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Recognizing Science Fair and Scholarship Winners

On May 16, FWQA members had the honor of recognizing the 2019 science fair and scholarship winners at the Elephant and Castle restaurant in Washington DC. In the picture below, FWQA President Janet Goodwin (on right) is shown with some of the science fair winners who attended the annual awards luncheon. There were four scholarship winners and numerous first place winners from five county, city, or regional science fairs. See pages 3, 5, and 7 for articles and additional pictures.



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Mary B. Klein
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President's Corner

As I close out my tenure as president, I am optimistic that FWQA is on a good track to becoming more effective for you, our members. With the help of Tessa Roscoe one of our at-large board members, we now have a group email that has been populated with the entire membership roster, at least all members that have provided an email address. With this membership list at the board's disposal we hope to be able to reach everyone with our newsletters and announcements of events.

I continue to look forward to meeting you at events in the future and hope you will find opportunities to become more engaged with FWQA through attending our luncheons, embassy events or other activities. Also please consider participating as judges in regional science fairs throughout our area in the spring next year. Two of this year's judges who had fun judging -- Jack Kooyoomjian and Clancy McQuigg (with the green hat!) --- are pictured below with students at the Prince William County Regional Science Fair.

We are already thinking about events for next year and hope to host an embassy event as well as a happy hour, so look for those announcements in the fall.

It has been my great pleasure to serve as the president of FWQA for the past 2 years.

Janet Goodwin
janetkaygoodwin@gmail.com



2019 Scholarship Award Winners Honored!

by Sharon Nye

Congratulations to the FWQA 27th Annual Capital Environmental Scholarship Program winners! The 2019 scholarship awardees are Adriana Pena, Anne Arundel County, MD; Alison Ransom, Montgomery County, MD; Alliana Snead, Annapolis, MD, and Sophia Goldbeck, Loudoun County, VA.

These four outstanding students were honored along with local science fair winners at FWQA's yearly awards luncheon held at the Elephant & Castle in May (see related articles on Pages 5 and 7). The talented young women 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 was not an easy one especially since many high caliber environmentally- active students chose to apply, and we are glad they did!

Thank you to our judging committee: Christian Davies-Venn (PEER retired), Sheila Olem (Herndon Town Council), Janet Goodwin (EPA retired), Jim Wheeler (EPA retired) and Beth Conway (WEF), for their hard work and dedication to this program and especially to our sponsors – this program wouldn't be possible without you!



Pictured left is the McCallum Scholarship winner; right is the Olem Scholarship winner; below left is the President's Scholarship winner; and below right is the Barber Scholarship winner.



Water Resources & Climate Change: Back to Basics? - - -

Stream Restoration in the “51st State” *By K. Jack Kooyoomjian, Ph.D*

On April 25, 2019 at the Elephant & Castle Restaurant, in Washington, DC the Federal Water Quality Association (FWQA) hosted Mr. Joshua (Josh) Burch (pictured right) of the Washington, DC Department of Energy and Environment (DOEE). Josh is an Environmental Protection Specialist in the Watershed Protection Division. He discussed DOEE’s efforts to reduce bank erosion, sedimentation, and polluted runoff to improve water quality and provide resiliency to stormwater flows in the Potomac and Anacostia Rivers. Mr. Burch presented real-world examples how DOEE has made a difference to improve stream flow and to protect the environment. Josh also discussed DOEE’s stream restoration work, which focuses on how to reduce bank erosion and how to achieve floodplain connectivity to dissipate the energy of stream flow and increase wetland areas. In particular, he discussed two projects, Nash Run and Alger Park in Washington DC (the District), where the work focused on creating floodplain connectivity.

Nash Run: At Nash Run DOEE used a valley restoration approach to the stream restoration. In Nash Run, there was severe bank erosion and trash. After assessing the situation, the overall goals came into focus, namely to 1) Prevent erosion; 2) Improve water quality; 3) Enhance in-stream and riparian habitat; and 4) Protect infrastructure. DOEE addressed the question of how can we best manage stormwater? This is summarized briefly as, Capture it! Infiltrate it! Spread it out! and ...Put it to work! At Nash Run, DOEE conducted restoration step-by-step, which involved site selection, selecting restoration techniques, construction, and monitoring.

At Nash Run, there was a very narrow stream channel with vertical stream banks that were actively eroding. The stream bank erosion was quite severe and produced an estimated 27 tons per year of sediment, and was squarely within the 100 year flood plain. DOEE had begun the project by excavating the legacy sediment (approx. 11,000 cubic yards of soil up to a 55 feet wide channel). In the process of the construction activity, they were conscious that they had to save backyards. This involved some stone wall construction activity, as well as the stream restoration activity. During the project logs were buried in the sediment perpendicular to the stream flow to stabilize the newly constructed low floodplain bench and to act as a carbon source to assist with denitrification.



In the process of conducting the restoration activity, they also created an additional acre of wetland area in the District. The resulting in-channel restored stream has been very stable, and fish and macro invertebrates have been observed to have returned up-stream.

Alger Park: In Alger Park DOEE used the regenerative stream method for this restoration project. In this area, there are very steeply-sloped areas. For instance, the upstream area is at 850 feet, and the downstream area is at 700 feet. There are very steep banks, where the street is 50 feet above the stream area. In this case, DOEE staff and their contractor crews brought up the stream bank, established rock weirs, and significantly elevated the base of the stream bank. DOEE brought in a lot of soil to reduce the stream base elevation. In this area of Alger Park, 27 acres drain via 5 outfalls. DOEE is in the process of installing 32 stormwater management (SWM) Best Management Practices (BMPs) in that neighborhood. Josh showed pictures of the final product where there was clean water flowing over the rock cascade that was installed in this stream restoration project. The SWM capture technique (Continued on Page 11)

2019 Science Fair Winners *By Janet Goodwin*

FWQA judged at five regional science fairs this past March, Northern Virginia, Montgomery County, Fairfax County, Prince William County and Loudoun County. I want to express my appreciation to FWQA members and Engineers Without Borders for spreading the word and finding excellent judges to help us cover all of these fairs.

I want to recognize the following judges that helped make this year's science fair season a big success: Jack Kooyoomjian, Clancy McQuigg, Joe Ford, Anthony Tripp, Ken Foo, Melinda Miller, Emi Cummings, and Daryl Ferguson.

I also want to recognize the first place winners and their award winning projects:

Northern Virginia

James Licato, Washington-Lee High School, "Optimizing Metformin Removal Utilizing Molecular Sieves and Absorbents Within Sand Filtration Units"

Catherine Goldstein, George Washington M.S., "All that Glitters Is Not Gold: Testing the Biodegradability of Glitter in Freshwater"

Katherine Donnellan and Nikolai Kosinski, TC Williams H.S., "Mega 'Mounts of Microplastics: The Effect of the Size of a Watershed on Microplastic Concentration in Corresponding Bodies of Water"

Prince William County

Agrim Sharma, Battlefield High School, "Evaluating the Effectiveness of Different Types of Tidal Wave Barriers"

Anisha Ramakrishnan, Ronald Reagan Middle School, "The Effect of Superabsorbent Polymers (SAP) on Plant Life"

Ashish Pothireddy and Clarence Ramirez, Osborne H.S., "The Effect of Different Hydroxide Compound Solutions on Atmospheric Carbon Capture"

Montgomery County

Shreya Shrete, Poolesville High School, "The Future of Potable Water: Analyzing the Efficacy of Air Cathode Microbial Desalination Cells with Varying Mesh Sizes"

Rohun Sarkar, Roberto Clemente Middle School, "How Does Time Affect Solar Power Water Desalination"

Fairfax County

Ankisha Singh, Oakton High School, "The Effect of Cilantro vs. Standard Water Purification Methods on Water Quality"

Sarah Syed, Miamar Burgos-Rosario and Saijai Supankang, Hayfield High School, "Cyanocide: A Novel Strategy for Harmful Algal Bloom Mitigation via Initiation of Programmed Cell Death"

Loudoun County

Madison Ruschaupt, Riverside High School, "Effects of Polypropylene Microplastic Levels on Motility and Stereotypical Activity in *Dugesia dorotodephala* (freshwater planaria)"

Julian Lee and Vivek Poluru, Academy of Science, Freedom H.S., "Increasing the Heavy Metal Bioremediation Efficiency of *Cupriavidus metallidurans*"

Congratulations on your scientific achievements!

Water Resources & Climate Change: Back to Basics? - - -

Health and Legal Status of the Chesapeake Bay

By K. Jack Kooyoomjian, Ph.D

The Federal Water Quality Association (FWQA) hosted Mr. Jon Mueller (pictured right), Vice President for Litigation at the Chesapeake Bay Foundation (CBF) in Annapolis, MD on March 21 at the Elephant & Castle Restaurant in Washington, DC. Mr. Mueller develops strategic litigation, handles administrative and judicial matters, manages five attorneys, and also assists in the overall management of the CBF. Before coming to CBF in 2004 as the first Director of Litigation, Mr. Mueller was a Senior Trial Attorney in the U.S. Department of Justice's (DOJ), Environmental Enforcement Section for 17 years. Prior to DOJ, he was a litigator at McGuire Woods and Battle. Mr. Mueller remarked that the CBF views litigation measures as a method of "last resort," preferring to communicate and educate various stakeholders, and the interested public.

Mr. Mueller obtained his JD from the University of Richmond and a BS in Biology from the College of William and Mary. He is licensed in Washington, DC, MD, PA and VA, is the former chairman of the Maryland State Bar, Energy and Environment Section and teaches a seminar on the Clean Water Act as an Adjunct Professor at the University of Maryland King Carey School of Law. For his presentation Jon provided some background information on the CBF and then discussed environmental challenges, and success stories, and legal cases all affecting the health of the Chesapeake Bay (or the Bay).

The CBF serves as a watchdog, fighting for effective, science-based solutions to the pollution degrading the Chesapeake Bay and its rivers and streams. The CBF mission primarily centers on four main activity areas, namely 1) Education; 2) Advocacy; 3) Litigation; and 4) Restoration. The Chesapeake Bay is the largest Estuary in the country. CBF's motto "Save the Bay," is a regional rallying cry for pollution reduction throughout the Chesapeake's six-state, 64,000 square mile watershed, which has 11,684 miles of shoreline, is home to more than 18 million people, and 3,000 species of plants and animals.

The CBF was founded 50 years ago primarily focused on education and getting young people in the Bay area to understand what the issues are. Just staying two days on the Port Isobel Island Center adjacent to Tangier Island dramatically changes one's mindset and perspective toward



the Bay. There is a Waterman Culture on Tangier Island and in and around the Chesapeake Bay waters. It should be noted that Fox Island may be close to closing, due to sea-level rise.

While there have been and continues to be major challenges to restoring the Bay's ecosystem health and to improve water quality, there are signs of progress in restoration of water quality and in ecosystem change in and along the Bay and its tributaries and streams. For instance, there is success with planting of bay grasses and working with others to introduce over 10 billion oysters to cleanse the Bay. A big success story mentioned by Mr. Mueller is the successful efforts to stem the effects of nutrient enrichment of the Bay from the region's sewage treatment plants.

Also, some successes have been achieved in reducing urban and suburban stormwater runoff, and in reductions of air pollutants with implementation of the 1990 Clean Air Act reforms. In the air pollution arena, nitrogen oxides and acidification from fossil fuels from power plants and from mobile source pollutants from autos and trucks are deposited into the Bay waters. In fact 1/3 of the nitrogen load comes from atmospheric deposition from these airborne sources. While improvements have been made in reducing pollutants from the agricultural sector, there are many more challenges ahead and things that could, should and need to happen in this significant area.

A big indicator of the health of the Chesapeake Bay waters is dissolved oxygen. The dead zones (Continued on Page 10)

Waters Addresses Attendees at 27th Annual Awards Lunch

By K. Jack Kooyoomjian, Ph.D

On May 16, 2019 at the Elephant & Castle Restaurant in Washington, DC the Federal Water Quality Association (FWQA) conducted its annual Spring Awards Luncheon honoring the 2019 Scholarship Awardees and the Washington Metropolitan Region Area Science Fair First Place Winners. Our featured speaker was Ms. Amanda Waters, General Counsel for the National Association of Clean Water Agencies (NACWA). She has been in this position for the past 6 years. Founded in 1970, NACWA is the Nation's recognized leader in regulatory, legislative and legal advocacy on the full spectrum of clean water issues. NACWA represents public clean water agencies of all sizes nation-wide to help build a strong and sustainable clean water future.

Amanda manages NACWA's litigation portfolio and implements the Association's legal advocacy initiatives. She was previously General Counsel and Director of Public Advocacy and Outreach for the Water Environment Foundation (WEF), as well as Deputy Executive Director and General Counsel for Sanitation District No. 1 of Northern Kentucky. She has also served as Deputy General Counsel for the State of Kentucky Environmental and Public Protection Cabinet and as a staff attorney with the West Virginia Department of Environmental Protection. She began her legal career as a staff attorney for the Hudson Riverkeeper. She grew up in Kentucky, received a law degree and Certificate of Environmental Law from Pace University and a BS in biology from Eastern Kentucky University.

Ms. Waters opened her remarks to the Science Fair and Scholarship winners by quoting Leonardo da Vinci (1452-1519): "Water is the driving force of all nature." Amanda shared details of how water has driven her career path. Along the way she learned that the water sector is overflowing with opportunities for not only engineers and scientists, but also educators, communications and business management experts, attorneys, policy specialists, treatment plant operators, and technicians. The scientific disciplines needed are wide ranging: chemistry, biology, microbiology, geo and hydromorphology, meteorology, oceanography, and forestry. For each of these specialties there are different sectors to choose from: academia, nonprofit associations, nonprofit environmental advocacy groups, as well as federal, state, and local government.

She noted that nothing is static about water. The challenges, mandates, technology and laws are



Jan Goodwin, FWQA President, (left) congratulating one of the 2019 Science Fair winners at the May Awards Lunch.

constantly evolving. The clean water sector faces significant obstacles associated with a growing and shifting population, extreme weather/climate change, water scarcity and flooding, nutrients and stormwater pollution, emerging contaminants, and increasing regulations. These challenges require upgraded, right-sized, and continuously maintained infrastructure, as well as technology and innovation, which in turn will require an enormous investment and sustainable funding. Couple all this with workforce shortages due to baby boomer retirements, and the result is a tremendous demand for talent to help tackle these formidable challenges.

Amanda remarked that we live in the age of information with a world of knowledge at our fingertips. While the internet and social media are incredibly valuable, they should not underestimate the power of personal connections, such as networking at the FWQA shortages due to baby boomer retirements, and the result is a tremendous demand for talent to help tackle these formidable challenges.

Ms. Waters remarked that we live in the age of information with a world of knowledge at our fingertips. While the internet and social media are
(Continued on Page 8)

Waters Addresses Award Lunch Attendees

(Contd. from Page 7)

incredibly valuable, they should not underestimate the power of personal connections, such as networking at the FWQA professional society luncheon and other events and opportunities to cultivate relationships with experienced professionals.

Amanda noted that the CWA's 50th anniversary is coming up in 2022. We have come a long way since the CWA was passed in 1972 when two-thirds of waterways were unsafe for swimming or fishing, the Potomac was considered a national disgrace, and the Cuyahoga river burned. But much work remains.

She concluded with a quote by Lao Tzu - "Nothing is softer or more flexible than water, yet nothing can resist it" – and told the students that they were choosing a powerful field that will allow them to be a driving force for progress over the next 50 years.

Ms. Waters then invited Dr. Eileen O'Neill, the Executive Director of the Water Environment Federation (WEF) to come up and briefly share some of her thoughts with the young people in the audience. Dr. O'Neill has a B.S. in Soil Science from the University of Newcastle-upon-Tyne (U.K.) and a Ph.D. in Soil Science from the University of Aberdeen (U.K.) and undertook a postdoctoral traineeship in environmental toxicology at the University of Wisconsin at Madison (USA). Dr. O'Neill has served as the WEF's chief technical officer with responsibility for oversight of WEF's technical, international, and communications programs. Before joining WEF, she worked as an academic and environmental consultant to the U.S. and in Europe.

Dr. O'Neill stressed the numerous opportunities for young people in the environmental area and encouraged them to think about environmental career options as they ponder the course and paths to take for their futures. She stressed that there are so many opportunities to work on the numerous challenges awaiting them in the environment field, which in her view is very, very important. She also thanked the parents, teachers and guidance counselors who are encouraging the young people, especially those here at the FWQA event where we are honoring and celebrating their successes and accomplishments. The speakers were followed by the honors and awards program, where the students were formally recognized and applauded by all for their accomplishments.

Additional Highlights:

Jim Wheeler (second from right) along with WEF Award Lunch participants presenting Janet Goodwin with a plaque for her terms serving as FWQA President.

Way to Go Jan!



Celebrate Our Diamond Anniversary & Be a Winner!

Every year at the FWQA Awards Luncheon I present a scholarship award in honor of my husband who was a professional water engineer lost in South America when his plane went missing.



Not only can I drive a golf cart at FWQA scholarship golf tournaments, and speak at luncheons, I also served as one of the few 3-term FWQA Presidents.



I worked at the Environmental Protection Agency's Office of Water for many years, in addition to other water resource protection positions, including one in France.



FWQA Diamond Anniversary Contest

Since there were no winners from the last two newsletters, the prize quadruples! Identify the well known FWQA members and luncheon speakers pictured on this page. The first correct response emailed to the newsletter editor wins FREE lunches at ALL of our Speaker Series luncheons for 2019-2020! (Current FWQA Board Members NOT eligible)

Health and Legal Status of the Chesapeake Bay (Contd. from Page 6)

are where oxygen is depleted as a result of nutrient enrichment and sedimentation followed by dramatic algae blooms, and is often followed by fish kills and other adverse effects on the Bay waters. The sediment loadings from stormwater runoff dump sediment into the bay and smother the oysters, which are now at 2% of their historic number. There are continuing problems with sediment runoff from construction sites, as well as stormwater from urban and suburban areas.

Agriculture contributes phosphorus, nitrogen and sediment in the runoff from this source. There is a continuing need to educate farmers to adopt no-till farming practices and other measures, such as fencing cattle out of stream areas and planting forested buffer areas along streams, to reduce these loadings from farming activities. In contrast to the watershed drainage area, the airshed, which contributes 1/3 of the total nitrogen pollution to the Bay, is a lot larger, and includes atmospheric deposition from power plants in Indiana, Kentucky and elsewhere. Portions of the states of Maryland and Delaware are not in attainment of ozone health standards. They have filed suits against EPA for failing to require upwind sources to control their emissions of nitrogen oxides. CBF has joined those states in support.

Bay jurisdictions and EPA ordered a study of the effects of too much nitrogen, phosphorus and sediment overloading the Bay. The 1987 agreement called for a voluntary reduction of nutrients (nitrogen & phosphorus) from point sources (municipal treatment plants) by 40%. The 1992 agreement introduced Tributary Strategies for cleanup of the Bay. The 2000 agreement had a 2010 deadline to remove the Bay from the Clean Water Act list of impaired waters. CBF settled the case with EPA requiring the Agency to, among other things, develop a Total Maximum Daily Load (TMDL) for the Bay. EPA issued the TMDL on December 29, 2010, limiting the amounts of nitrogen, phosphorus and sediment that can be discharged to the Bay. The TMDL divided the Bay into 92 discrete segments. The Susquehanna River contributes 55% of the fresh water coming into the Bay and is considered as one (1) TMDL unit. In support of the TMDL, the U.S. EPA issued a Consequence Letter to the Bay jurisdictions identifying the various actions the agency could take if the jurisdictions failed to comply with the TMDL.

The American Farm Bureau Federation versus the US EPA case was filed in the middle district of Pennsylvania. Several other agriculture lobbying groups joined in support of the American Farm Bureau Federation, such as the Fertilizer Institute, the National Chicken Council and the National Association of Home Builders. The Judge in this proceeding was Judge Sylvia Rambo, and she wrote a 90 page opinion in favor of the EPA or the Agency. The Farm Bureau filed an appeal, but there was a unanimous decision in the 3rd Circuit Court in favor of the Agency. The Farm Bureau sought review by the U.S. Supreme Court. It was encouraging to have the National Association of Clean Water Agencies (NACWA) to file Amicus briefs to support the funds necessary to clean up the Chesapeake Bay. The bottom line is that the U.S. Supreme Court denied the Farm Bureau appeal. We are now at the mid-point of the TMDL deadline of 2025 for meeting the cleanup goals for the Bay.

CBF's litigation work goes back to its participation in a lawsuit over the Calvert Cliffs nuclear power plant, which goes back to the 1971 timeframe, and which defined the scope of Environmental Impact Studies as required within the National Environmental Protection Act (NEPA) and is the very first case defining the scope of NEPA.

The CBF sued Gwaltney of Smithfield VA for polluting the Chesapeake Bay. The case went up to the Supreme Court where the court held that citizens suing under the Clean Water Act must prove there is an ongoing violation of the Act. The case went back on remand and eventually Gwaltney settled. The Smithfield plant was recently bought by the Chinese because they were concerned about contamination from hog viruses at their farms and wanted to buy a commercial operation that could farm correctly from an environmental and sanitation perspective.

The CBF sued the Virginia Department of Environmental Quality over a permit issued to Phillip Morris for discharges of pollution
(Continued on Page 11)



Stream Restoration in the “51st State” (Contd. from Page 10)

to achieve regenerative stream restoration was completed in Alger Park in 2017.

Josh highlighted how at Alger Park, DOEE was able to install 32 BMPs in public spaces throughout the upland area, which reduces the volume and velocity of flows into the stream, while also improving the quality of water entering the down-stream network. To date, DOEE has restored 20,000 linear feet of stream in the Anacostia watershed. Now that people have seen what can be done, everyone wants a trail to be restored in their stream corridor. In fact, the residents are seeing turtles coming back to the restored streams, and that generates a lot of local excitement and interest in what DOEE is doing.

While there are challenges in urban areas for stream restoration, the key is to spread out the flow to create stable stream corridors. There is a grant through the Metropolitan Council of Governments (COG) for the stream restoration activity.

Josh’s presentation was followed by a lively question and answer session. Some questions were asked about Rock Creek Park and the protocol to be followed where the National Park Service is involved. Josh and his colleagues work with the National Park Service folks, but primarily work on the District land where it is easier to do so. The US Park Service has requirements that make projects take longer and are typically more expensive, but the work does need to be done.

Pictured below are FWQA members who attended Josh Burch’s April informative presentation.



Health and Legal Status of the Chesapeake Bay (Contd. from Page 10)

into the James River. The case went to the Virginia Supreme Court where it was held that Virginia law allowed a citizen organization to sue on behalf of its members and itself. On remand, CBF settled with Phillip Morris in 2006. There was also a 2009 case involving the King William Reservoir where the CBF believed that EPA was guilty of a failure to veto a wetland dredge and fill permit for a reservoir.

Is the Chesapeake Bay TMDL working? CBF’s Bay Report Card for 2018 went from a C minus to a D plus, but there is a positive uptick on the Chesapeake Bay grasses. The major impacts we are observing on the Chesapeake Bay include stronger and wetter storms, sea level rise, acidification, warmer temperature trends, loss of forest and wetland buffers, and the consequent inability to meet the established TMDL goals. The cumulative effects of climate change along with the Susquehanna watershed contributions flowing over the Conowingo Dam (Exelon owns the Conowingo Dam), along with last year’s abnormally excessive rainfall than in years past has contributed to a lot more scrutiny on the Bay condition. Sediment has built up behind the Conowingo Dam, and with more frequent big storms, it scours and sends sediments, along with nutrient loadings, into the downstream area. In this case, the Bay grasses act as a buffer, somewhat mitigating these harmful effects. However, the suspended nutrients aggravate the stressed water quality condition with stimulated growths of algae. In addition, construction and storm water controls are not working as they should and this also needs serious attention.

Sea level rise effects are evident, especially in Hampton Roads and other low-lying areas, and it is estimated that one meter rise may be seen over the next 3 plus decades. Recently about ½ meter floods in Dorchester County and other parts of the Chesapeake Bay have been observed. The U.S. Navy is recommending that in Norfolk, Virginia over one billion dollars needs to be spent to build structures such as dykes and berms to provide structural resilience from sea level rise. The CBF suggested more natural options and strategies to restore vegetative buffers and oyster reefs. As part of its Bay-wide mission, the CBF plans to plant 10 million trees and to increase oyster population to approximately 10 billion. The CBF is advocating to revise stormwater regulations and to defend existing air regulations, as well as to counsel the Federal government to mitigate the effects of climate change. A lively Q&A session concluded the event.

FWQA 5S Chapter Inductee for 2019 *By K. Jack Kooyoomjian, Ph.D, pH 7 Influent Integrator - FWQA 5S Chapter*

With great pomp and ceremony, the FWQA's pH 7 Influent Integrator, Dr. K. Jack Kooyoomjian installed one new member into the FWQA's Chapter of the 5S Society. This ceremony took place on April 25 FWQA luncheon. The inductee so honored, Joseph Ford, was elevated to the highest ridge of the sludge bed, with all the lifetime honors, rights, privileges and responsibilities thereunto pertaining for this exalted and much-coveted position.

The honoree received the coveted Golden Shovel, the mandatory sludge Memento (Burnt Biosolids from the H.L. Mooney Advanced Water Reclamation Facility Incinerator in Woodbridge, VA), the updated history of the Select Society of Sanitary Sludge Shovelers, containing many gems of wisdom, including the secret hand-shake and greeting, the 5S Society Universal Distress Signal, the 13-page document containing the FWQA Chapter's 5S history, tradition, rules & folklore, and a list of all FWQA 5S members since our Chapter was installed on November 15, 1986. In addition, Joe Ford received select literature pertaining to sludge and biobricks, along with the genuine certificate signed by some of the 5S Society members. The job of the new 5S inductee is to seek others to complete the signing of their certificate. This is the fifth class since the installation of the first (Charter) class of 1986 that has not received the coveted Biobrick.

The biobricks were originally commissioned by the Washington Suburban Sanitary Commission (WSSC), which contracted with the Maryland Clay Products Company to manufacture 600,000 biobricks. These biobricks were used to construct "Biobrick 1" at the Brighton Dam Park and at the Electrical-Mechanical Maintenance Building at the Parkway Wastewater Treatment Plant, which was the source of sludge used in making those biobricks. The "lifetime" supply of biobricks was housed at the private residence of Dr. Edward Bryan, the Charter pH7 Influent Integrator Emeritus. Unfortunately, his residence was visited by a natural disaster (wind storm and heavy rains), which resulted in a very large tree splitting his house in two. In the ensuing cleanup and reconstruction process, the biobricks were hauled out of the garage and disposed of by the clean-up contractor. So we have provided a sanitary alternative to the Biobricks in the form of Burnt Biosolids from the Mooney Waste Reclamation Plant Incinerator in Prince William County, VA. Sadly, we should note that Dr. Edward Bryan passed away on December 13, 2009.

We welcome Joe Ford as the newest member to the FWQA's 5S Chapter. May he remember to wear his Golden Shovel proudly at all official events (or he may have to treat fellow 5S'ers to a free beverage of their choice)! Conversely, Joe (if he is wearing his Golden Shovel) can be on the watch for fellow 5S'ers who do not wear the golden shovel, if he is thirsty and wants to get free beverages of his choice at any official FWQA, WEF or any MA function at any time anywhere in the world!



Pictured are pH7 Influent Integrator, Jack Kooyoomjian, on left, with the newest FWQA 5S Inductee Joe Ford, center, and FWQA President Janet Goodwin, right.

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, 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 on the following page 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 invoice 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.

To make your pledge to the National Capital Environmental Scholarship Fund - Please provide the following information and mail a check to FWQA Scholarship Fund, P.O. Box 14303, Washington, DC 20044

Name:

Address:

Phone:

Email:

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)_____

You can mail your check made out to the FWQA Scholarship Fund to P.O. Box 14303, Washington, DC 20044 or send the pledge form and we will send you an invoice.

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 2019 Ballot

Ballots must be received by FWQA
by June 30, 2019.

Mail to: P.O. Box 14303, Washington, DC, 20044

Email to: fwqaevents@gmail.com

President

- Amanda Waters
- Write in _____

President Elect

- Christian Davies-Venn
- Write in _____

Vice President

- Claudio Ternieden
- Write in _____

Treasurer

- Jim Wheeler _____
- Write in _____

Federation Director

- Greg Mallon
- Write in _____

Biographical Information

Amanda Waters is General Counsel for the National Association of Clean Water Agencies (NACWA). Founded in 1970, NACWA is the nation's recognized leader in regulatory, legislative and legal advocacy on the full spectrum of clean water issues. NACWA represents public clean water agencies of all sizes nationwide to help build a strong and sustainable clean water future.

Amanda manages NACWA's litigation portfolio and implements the Association's legal advocacy initiatives. She was previously General Counsel & Director of Public Advocacy & Outreach for the Water Environment Federation (WEF), as well as Deputy Executive Director & General Counsel for Sanitation District No. 1 of Northern Kentucky. She has also served as Deputy General Counsel for the State of Kentucky Environmental & Public Protection Cabinet and as a staff attorney with the West Virginia Department of Environmental Protection. She began her legal career as a staff attorney for the Hudson Riverkeeper. She received a law degree and Certificate of Environmental Law from Pace University and a BS in biology from Eastern Kentucky University. She is an active member of the WEF and the Federal Water Quality Association (FWQA) Executive Board.

Claudio Ternieden is the Senior Director for Government Affairs at WEF and directs WEF's legislative and regulatory efforts in Washington, DC. Claudio oversees policy development and implementation in the water sector on issues such as reuse, resource recovery, workforce, infrastructure funding, green infrastructure, technology transfer and innovation. Claudio has led research efforts at the Water Environment Research Foundation (now the Water Research Foundation); contributed to the development of federal regulations at the U.S. Environmental Protection Agency, and the development and implementation of water quality standards in the State of Indiana. Claudio has a law degree from Pace University School of Law (White Plains, NY), a Master's Degree in Public Policy from George Mason University (Arlington, VA), and a BA in History from Concordia College (Bronxville, NY).

Christian Davies-Venn recently retired as Vice President and Chief Engineer for 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 (AAEES). He is also an active member of the WEF and FWQA, and is a member of the FWQA's Scholarship Committee.

Jim Wheeler recently retired from the US Environmental Protection Agency, 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 Masters 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.

Greg Mallon has been involved in water quality management for over thirty-five years. He has done so working for and with federal and state agencies and in the private sector. Greg is currently Senior Scientist with Eastern Research Group (ERG). Greg has a science degree from New York State University. Greg served as President of FWQA from 2014 to 2017. He is a long-standing member of WEF and has served on the FWQA Board of since 2013.

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