FWQA Volume 45, No. 1, 2020-2021

Established 1928

Newsletter

Federal Water Quality Association

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

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

Aerial view of the H.L. Mooney Water Reclamation Facility in Prince William County Virginia. The plant was the subject of FWQA's first virtual presentation on October 29th, 2020.

In This Issue:

Virtual Tour of H.L. Mooney Water Reclamation Facility

by K. Jack Kooyoomjian, Ph.D.

On October 29, 2020 the Federal Water Quality Association (FWQA) hosted a virtual plant tour of the H.L. Mooney Advanced Water Reclamation Facility (AWRF) located in Prince William County (PWC), VA. The Prince William County Service Authority (PWCSA, or PWC Service Authority) staff hosted the event.

The host speakers were Shannon Spence who is currently serving as the Acting Director of the Environmental Services and Water Reclamation Division of the PWCSA, Rachel Carson who is the Wastewater Treatment Plant Superintendent at the H.L. Mooney AWRF, and Maureen O'Shaughnessy, P. Eng., the Process Engineer at the H.L. Mooney AWRF. The moderator of the virtual plant tour was yours truly, Jack Kooyoomjian, who is Chairman of the PWCSA's Board of Directors.

Our FWQA President, Dr. Christian Davies-Venn introduced the moderator, who then introduced the three speakers and offered a few introductory remarks regarding the facility and the PWC Service Authority's role in providing clean, safe water in cooperation with other utilities in the Northern Virginia region. The speakers followed this with more in-depth discussion on the specifics of the H.L.Mooney Plant operations and the PWC Service Authority's activities in protecting the receiving waters of Neabsco Creek, which discharges directly to the Potomac River.

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President's Corner

What an unforgettable year 2020 has been! The outbreak of the COVID-19 pandemic has led to unprecedented effects on our life-home-work routines through stay-at-home orders and reduced or shuttered social, commercial, industrial, academic activities, among others, that are having economically adverse impacts on our communities. In compliance with these orders, FWQA has put on hold all in-person events including luncheon meetings, science fair judging, and scholarship award ceremonies which we continue to do virtually. However, with approval of promising vaccines, we hope to soon see the light at the end of the tunnel, and we look forward to resuming our in-person activities when it is safe to do so.

As we wrap up and reflect on this year, we look forward to a healthy, safe and productive 2021. In the meantime, FWQA has been very active. In keeping with this year's theme of "Providing Access to Safe, Clean Water During Challenging Times" we hosted two successful webinars, namely, "A Virtual Plant Tour of the Prince William County Service Authority's H. L. Mooney Advanced Water Reclamation Facility" (see article on Page 1) and "Wastewater COVID-19 Epidemiology and the National Wastewater Sewage Surveillance (NWSS) Program" (see article on Page 4). We have received many positive feedbacks from attendees of both webinars and over 25 people have requested to be added to our mailing list. A special thanks to Tessa Roscoe and all who worked hard to make this happen. We plan to continue our webinar series on relevant topics of local, national, and international interest.

I hope you are all doing well in these trying and uncertain times. Please stay safe and healthy. As always, I welcome your ideas and feedback on and active participation in our upcoming programs.
Christian Davies-Venn
fwqadc@gmail.com

Continued from Page 1 - H.L. Mooney facility tour

The PWCSA's H.L. Mooney AWRF has just recently earned a Platinum Peak Performance Award from the National Association of Clean Water Agencies (NACWA). The H.L. Mooney AWRF plant is one of only five member facilities to have maintained 100% compliance with its state regulations for 11 years in a row. Virginia Department of Environmental Quality (DEQ) regulations require the H.L. Mooney AWRF to remove excess nutrients from wastewater during treatment. NACWA presented the Platinum 11 Peak Performance Award to this year's winners on October 28, the day before the virtual plant tour.

During the unprecedented world-wide COVID-19 health pandemic, the FWQA was looking for a safe way to continue its mission of reaching out to water and wastewater professionals and others concerned with providing environmental protection services and education, as well as professional networking to its members. To this end, FWQA decided that a virtual plant tour would be a perfect format to address this year's theme of "Providing Access to Safe, Clean Water During Challenging Times." The PWC Service Authority had a vetted video tour prepared of its H.L. Mooney AWRF that was made prior to the COVID-19 health pandemic, and it allowed the speakers to "walk the FWQA participants through the plant" with the video tour. The participants learned the basics of how the plant works, and got summary statistics on the plant, such as its approved plant flow of 24 million gallons per day (MGD), with a peak capacity of 48 MGD.

After the video plant tour, the speakers received a number of questions via the chat feature regarding the operation of the plant, and they did some "deep dives" into responding to questions from a knowledgeable group of professionals. Tessa Roscoe, our FWQA technical host, read aloud the questions pertaining to various aspects of plant operations and the three presenters coordinated smoothly who should answer the nuances of plant operations. The questions ranged from the head of the plant in managing flow through the equalization basin, the clarifiers, returning the settled material back through for further treatment, and the finishing operations with the UV disinfection and the cascade into the receiving waters of Neabsco Creek, as well as the nuances of solids management, sludge incineration, and air pollution controls.

Because we had a virtual plant tour, we were not limited in the number of participants we could host on-site. On the actual day of the virtual plant tour, it happened to rain very heavily. If it had been a real plant tour, it would have been cancelled due to inclement weather. Tessa Roscoe reported that we had 70 registrants, with 49 actual attendees at our peak, for a 71% average attendance rate - - quite impressive! We also had students who were interns at the PWC Service Authority who took the opportunity to take the virtual plant tour. Because we had a GoToWebinar format, we also got detailed statistics on all of the participants. We were very fortunate to have Ms. Tessa Roscoe, our FWQA Vice President to host and moderate our virtual plant tour in the GoToWebinar format. Overall, we had a very successful event.

PRESENTERS



Rachel Carlson is the Wastewater Treatment Plant Superintendent at the H.L. Mooney AWRF. She is responsible for the overall operations and maintenance of the facility. Rachel joined the Service Authority in 2013, and she has nearly 20 years of professional experience in the wastewater industry. **Maureen O'Shaughnessy, P.E.** is the Process Engineer at the H.L. Mooney AWRF supporting the plant's successful water reclamation process. Prior to joining the Service Authority in 2011, she worked in utility administration and as a wastewater treatment plant design consulting engineer. **Shannon Spence, P.E.** is currently serving as the Acting Director of the Environmental Services and Water Reclamation Division of the Service Authority. She has worked there for almost four years. Prior to that she was an engineering consultant in the utility sector for 20 years, and has expertise in control systems facilities and security and emergency preparedness for water and wastewater utilities. She holds a B.S. in Civil Engineering.

Wastewater-Based Epidemiology For COVID-19 and the National Wastewater Sewage Surveillance (NWSS) Program

by K. Jack Kooyoomjian, Ph.D.

PRESENTERS

Smiti Nepal, P.E. joined EPA's Office of Wastewater Management in 2016 with a focus on water reuse and nutrient removal and recovery technologies, and more recently, in wastewater-based epidemiology related to Covid-19. Smiti has worked with the Maryland Department of the Environment on solid waste landfill design, review, and permitting and with a consulting firm designing components of wastewater treatment plants. Smiti received her BS in Environmental Engineering degree and MS in Systems and Ecological Engineering from the University of Florida. She also has her PE license from the State of Maryland.

Dr. Jay L Garland joined EPA's Office of Research and Development in 2011. He received his Ph.D. in Environment Science from the University of Virginia and spent over 20 years working on NASA's efforts to develop closed, bioregenerative life support systems for extended human spaceflight. He has worked on a range of topics, including methods for microbial community analysis, factors affecting human associated pathogens' survival, and various biological approaches for recycling wastes. He has completed visiting fellowships and professorships at the Institute for Environment Sciences in Japan, the University of Innsbruck in Austria, and the University of Buenos Aires in Argentina. His current efforts focus on advancing innovative approaches to water infrastructure, including decentralized water reuse, and mitigating risks associated with antimicrobial resistance in the water cycle.

On December 8, 2020 the Federal Water Quality Association (FWQA) hosted a virtual meeting dealing with wastewater-based epidemiology for COVID-19 and the National Wastewater Sewage Surveillance (NWSS) Program. The speakers were Ms. Smiti Nepal, P.E. and Dr. Jay L. Garland, both with the U.S. EPA (*see bios above*). FWQA President, Dr. Christian Davies-Venn introduced the speakers, and explained how this topic relates to the FWQA's theme for this year on "Providing Access to Safe, Clean Water During Challenging Times."

Ms. Nepal introduced the participants to the basics of epidemiology of COVID-19 via sewage surveillance. She indicated that COVID-19 patients generally develop symptoms over a 2-week period before they seek testing and/or treatment. The SARS CoV-2 virus is shed in feces within about 3 days from the time of infection. In the past, sewage has been used as an indicator for diseases such as polio and norovirus disease detection, as well as for detection of illicit drugs and opioids. The leading countries that currently employ detection methodologies for COVID-19 include the Netherlands, Australia and South Africa.

Commercialization of the process is occurring via a number of private-sector companies. She then explained the five steps in the disease surveillance process, namely 1) Data Collection, 2) Data Analysis, 3) Data Interpretation, 4) Data Dissemination; and 5) Links to Action.

Ms. Nepal explained that one can target detection and occurrence of the virus in a community, and that this process has been recently applied to a variety of institutional settings such as nursing homes, college dormitories, prisons, hospitals and other settings. Such surveillance is helpful to guide policy actions such as when to shutdown a facility to limit the spread of the virus. She then introduced the National Wastewater Surveillance System (NWSS) concept for testing in wastewater and how it centralizes information with the Centers for Disease Control (CDC) as the focus to communicate with others.

The NWSS is designed to ensure appropriate resourcing of wastewater utilities to participate in the surveillance program. Ms. Nepal indicated that the CDC and the US EPA have been working with the National Association of Clean Water Agencies (NACWA), the American Water Works Association (AWWA) and other advocacy groups toward the basic goal to better understand the viral load in

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Wastewater-Based Epidemiology For COVID-19 (Continued from Page 4)

wastewater, how it moves through the wastewater system, and to help inform decision-makers and health professionals of the potential public health risks associated with viral load in sewage. Her presentation was followed with a brief Q&A session. Topics covered included the extent of private sector involvement, detection limits, whether all project researchers use the same detection methods and detection limits. She deferred the answers to of some of these questions to Dr. Garland.

Dr. Jay L. Garland joined the U.S. EPA Office of Research and Development in 2011, and had spent 20 years working on NASA's efforts to develop closed bio-regenerative life support systems for extended human spaceflight, and worked on a range of topics including methods for microbial community analysis, factors affecting human pathogen survival and various biological approaches for recycling wastes. He has extensive international experiences, as well, having completed visiting fellowships and professorships at the Institute for Environmental Sciences in Japan, the University of Innsbruck in Austria, and the University of Buenos Aires in Argentina. In Dr. Garland's opening comments, he noted that approximately 75-80% of the U.S. population is served by municipal sewage systems. He noted that the SARS-Co-V-2 virus has been detected in raw sewage in the U.S., Europe, Australia, Africa and other locations. He remarked that monitoring can be a useful leading indicator of changes in community-based infection, and that the sewer can be viewed as a "Mirror" of society.

Jay briefly touched upon and introduced the FWQA participants to the process of analytical method development, how researchers can understand the process of dilution and degradation in the sewer system, how to relate the sewer signal to community case rates, and how to build a system for state-wide monitoring using the State of Ohio as an example. He discussed the components to help understand what might be going on, touching on such factors as sample type, sample preparation, sample concentration, RNA extraction and measurement. He touched briefly on other considerations such as biosafety, supply chain issues, practicality and quality assurance and quality control (QA/QC) issues. Jay then discussed the process of acquiring a 24-hour composite sample, using a centrifuge followed by membrane filtration and ultra-filtration with 80 to 90% of the virus being recovered in the extracted sample. He gave several examples of the process applications in metropolitan sewer systems such as in Cincinnati, Ohio and surveillance in specific sewer sheds (Mill Creek & Taylor Creek) and sub-sewer sheds, such as Lick Run. Dr. Garland walked us through the peaks that were detected in March, August and October/November of 2020 during the current COVID-19 pandemic health emergency showing temporal trends of SARS-CoV-2 in sewer sheds in Ohio. He then discussed responses to sampling that had been taken in 52 sites in Ohio, looking for trend analysis in each site, and touched on the recent focus of monitoring all colleges in the state of Ohio.

Dr. Garland concluded that:

1) There is no standard method of analytical method development;

2) There are different approaches to normalize the on-going comparisons of dilution/degradation in the sewer system;

3) There is a relation of the sewage signal to the infection rate;

4) It is possible to develop a state-wide network linking wastewater utilities and common analytical tests to assist and inform public health agencies; and

5) Translating data to public health decisions can be informed by focusing on trends or significant changes.

Can this be used for early warning? There is a need for rapid turn-around and sentinel sites might be useful, but the attributes of individual sites vary.

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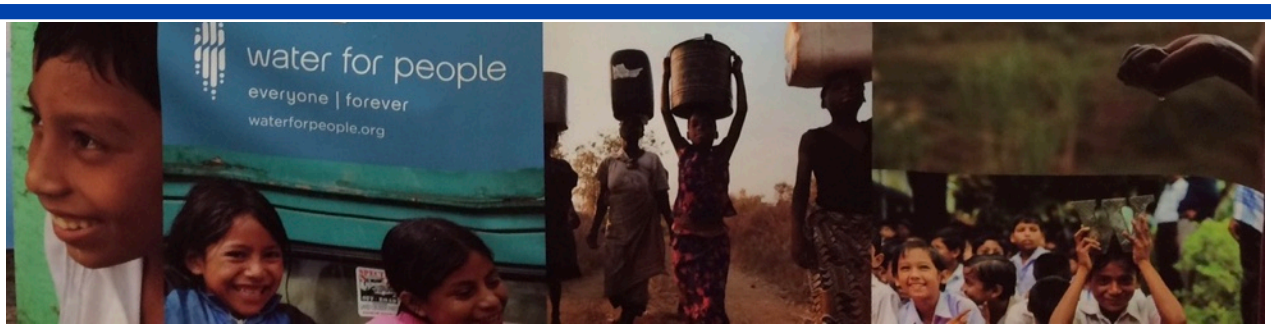

WATER FOR PEOPLE NEWS

See Updates in Next Issue!

Wastewater-Based Epidemiology For COVID-19 (Continued from Page 5)

A fairly intense Q&A session followed. Topics covered included what might be the most challenging scientific aspects of this study; the need for speed to get data out quickly to public health officials; how does sampling and analysis change depending on the size of the plant; how is routine composite sampling accomplished, depending on the size of the plant; what turn-around is achieved (3-4 day turn-around); how often is data posted (twice a week); are these composite samples (yes); what is the turn-around time (typically 24-36 hours, with 36 hours as the target); and how is data shared with the public at large (it is available on the Corona Virus Dashboard). Dr. Garland talked about a mother sharing the data with her child's school system, indicating that the Dashboard is fairly user-friendly with the public. Other questions dealt with collaboration with other states, such as the state of Utah and the states of Maryland and Arkansas, and that CDC is adopting common approaches to move toward and adopt a standard reporting mechanism.

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.

Stay Tuned for the Next Virtual Webinar!

When: January 25, 2021

Topic: Changes in the Legislative and Executive Branches

Wanted: Science Fair Judges

By Janet Goodwin

I would like to invite you to participate with FWQA in judging at Regional Science Fairs in the Metropolitan area. Each year FWQA participates in many of the science fairs in our region by sending members to judge projects that relate to water quality or pollution control. This year we are facing particular challenges because we do not know how many fairs will be held in person or virtually.

Please let me know if you are interested in judging at any of the science fairs this Spring. You can contact me at janetkaygoodwin@gmail.com.

Retrospective Look on EPA's 50 Years - Part 1

by K. Jack Kooyoomjian, Ph.D.

(First article of two by Dr. Kooyoomjian. Part two and others in this anniversary series will be in future newsletters this year)

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.

Before the U.S. EPA was created, America's conscience was elevated considerably toward things environmental by many visible natural disasters and emergencies, as well as by a growing public awareness of the insidious effects of pollutants released into the environment. There were the very visible effects of offshore oil spills on California's beautiful shorelines, which fouled beaches and devastated wildlife, fisheries and local economies. Near Cleveland, Ohio the Cuyahoga River, choked with industrial pollutants spontaneously burst into flames. Concerns in the air that needed to be addressed included visible air pollution in industrial areas from smoke stacks; pollution from cars and especially visible diesel fumes from trucks; and smog and the effects of air pollutants in the urban and industrial environments. Safety issues arose for our drinking water supplies as well as the integrity of our food supplies and agricultural areas from the adverse effects of pesticides and pollution. Protecting the largest assemblage of fresh water in the world in the Great Lakes was recognized as a growing challenge. Lake Erie was referred to as a "Dead Lake," choked with algal blooms and dead fish and was a growing concern. In 1962 Rachel Carson published what is now considered a classic textbook, Silent Spring. Rachel Carson was educated as a marine biologist and conservationist at John's Hopkins University in Baltimore, MD and began her career with the Bureau of Fisheries in 1936. She soon published Under the Sea Wind, which was the first of many nature books. Her book on Silent Spring published in 1962 is an often-cited classic which looked at the devastation wrought by the indiscriminate use of pesticides. She is also known for other nature textbooks, such as The Sea Around Us, The Edge of the Sea, Under The Sea Wind, The Sense of Wonder and others.

In the collective sense, the public was sensitized to the assault on their health and welfare by environmental pollutants and contaminants in all media. U.S. Senator Gaylord Nelson helped launch the first Earth Day on April 22, 1970, and he remains an icon of the environmental movement. He said that he came upon environmentalism "by osmosis," having grown up in Clear Lake, Wisconsin. He promoted conservation as governor of Wisconsin, and after he was elected to the Senate in 1962, he used his maiden speech to call for "a comprehensive, nationwide program to save the natural resources of America." He went on to compile an impressive list of accomplishments, including banning DDT, promoting clean air and water, preserving the Appalachian trail, but Earth Day serves as his lasting legacy.

It is interesting to note that in 1969, two American Astronauts, Neil Armstrong and Buzz Aldrin triumphantly landed on the moon on July 20, 1969 and on July 21, 1969 blasted off of the moon, having been the first two humans to land on the moon and to walk on the moon's surface. President Nixon made a historic phone call from the White House to our U.S. astronauts on the moon. Also in 1969, the day our astronauts blasted off of the moon, Russia landed its unmanned space probe, the Luna 15 probe, on the moon. All in all, we have had 12 U.S. astronauts walk on the moon with the Apollo 12 through Apollo 15 flights. We got to see the view of earth from space from satellites as well as from the moon and the International Space Station many times, and we saw ourselves as being creatures inhabiting our special and unique life-sustaining planet that needs our care, respect, protection and stewardship. We didn't get to the moon by accident! It was a national goal to get us there when then President Kennedy stood before

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Retrospective on EPA's 50 Years (Continued from Page 7)

the U.S. Congress *on May 25, 1961 and proposed that the* US ***"should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the Earth."*** That goal was achieved as a national effort to make this happen. It was our "Moon Shot," and as our eyes were opened to the incredible view of the planet Earth from space as a special place, we also grew in awareness that we needed to take care of, nurture and respect this special place we call our home for all who reside and rely on it to sustain life.

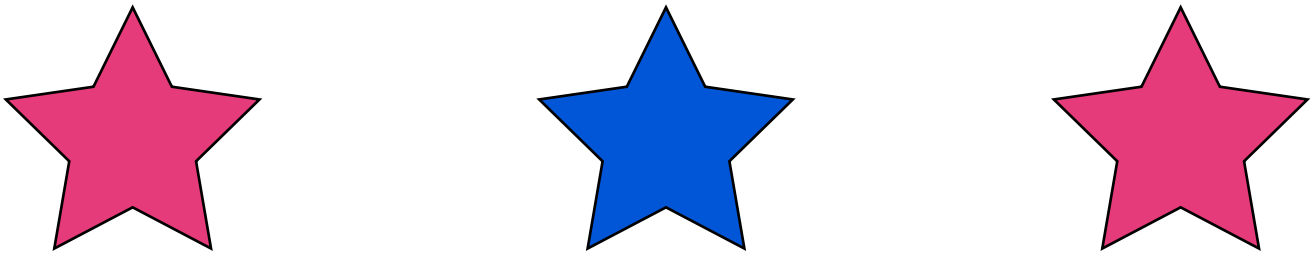
The National Environmental Policy Act (NEPA) was signed into law by President Nixon on January 1, 1970. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. The stated purposes of NEPA are to … ***"declare a national policy which will encourage productive and enjoyable harmony between man and his environment."*** This means that we must promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man. This means that we are to enrich our basic understanding and underpinnings of ecological systems and natural resources important to the nation, and to establish a Council on Environmental Quality (CEQ) in the Office of the President of the United States.

President Richard M. Nixon proposed the establishment of EPA on July 9, 1970 by an executive order, which was ratified by committee hearings in the House and Senate and began operation on December 2, 1970. The U.S. EPA came about as a consolidation of many federal agencies and departments. Some came from the Commissioned Corps of the U.S. Public Health Service, the Federal Water Pollution Control Administration in the Department of Health, Education and Welfare (HEW), while others came out of the U.S. Department of the Interior from the U.S. Department of Agriculture, the US Geologic Survey and elsewhere. There was a need for a single federal agency to work with the states and with many stakeholders (citizens, businesses, trade associations, environmental groups, academia, regional commissions, river basin commissions, sanitary districts, authorities and others) to establish quantitative baseline data to abate pollution across state boundaries and to establish national standards to protect the nation's waters, clean the air we breathe and the land upon which we live, work and play, and which sustains us.

The nation's water pollution problems and challenges were very visible and obvious in those early days, and it was incumbent upon this fledgling agency to be bold and effective to upgrade the nation's water and wastewater infrastructure, including outdated water and sewage conveyance systems and to work with the states, the nation's cities, the nation's commerce, concerned citizens and academics to accomplish this. The Agency got to work to build the necessary infrastructure to upgrade the nation's archaic and ineffective infrastructure of publicly owned treatment works (POTWs). The Agency established the Construction Grants Program and launched a nation-wide decades long effort in the 1970's and 1980's to upgrade the nations' wastewater infrastructure of publically owned wastewater facilities, which included sewage treatment plants, pumping stations, collection and interception sewers, rehabilitation of sewage systems, as well as control of combined sewer overflows. The Construction Grants program was a major source of federal funds, providing more than $60 Billion for the construction of public wastewater infrastructure in the U.S. and its' territories. With the 1987 amendments to the Clean Water Act, Congress established 1990 as the last year for Construction Grants funding.

The Agency established a Revolving Fund to give a big boost to upgrade and renew infrastructure. There was a companion effort to address storm water issues, as well as non-point source pollution, such as from agricultural areas, and that area was much more difficult to address, had slower progress and mixed results, and still needs serious attention today. For instance the challenge even today to clean up the Chesapeake Bay, the Nation's largest estuary and one of the most productive bodies of water in the world, hinges on significant agricultural and non-point source improvements, since many of the POTWs have met the established goals. While agricultural and non-point sources have challenges to meet, there are also other issues. Many older cities had made decisions long ago to combine wastewater and storm water conveyance systems, and those combined systems continue to pose special challenges, where the combined flow, especially during heavy rain or storm events, often would bypass POTWs, creating sanitary sewer overflows (SSOs) and pollute the nation's waterways. We are still dealing with this enormous legacy from combined sewers, and it is a challenge needing serious attention today in many places, even after five decades of EPA's existence. (*To be continued in next Newsletter...*)

2020-2021 FWQA Election Results!

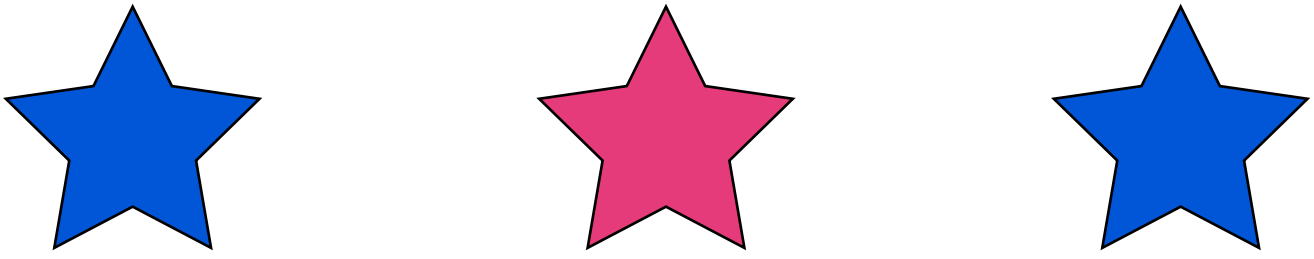


The The FWQA is pleased to announce the official results of the 2020-2021 Executive Board elections. The new Executive Board was effective July 1, 2020.

President Christian Davies-Venn
President Elect Claudio Ternieden
Vice President Tessa Roscoe
Secretary Sharon Nye
Treasurer Jim Wheeler
WEF Delegate Greg Mallon
Past President Janet Goodwin

Four additional at large members will be appointed by the President to make up the full FWQA Executive Board.

Current At-Large Members are:
Mary Klein
Jack Kooyoomjian
Joe Ford



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.

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.

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)_____

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.