

COVID-19 has presented unprecedented challenges and adversity for all of us. The ability to adapt to these sudden changes on the fly and the continued collaboration between WSSC Water, State/Federal Agencies and the regulated community is remarkable. Those regulated industries have continued to work with WSSC Water to ensure pretreatment and compliance excellence, making this year's Pretreatment Recognition Awards Ceremony very special.

Unique compliance efforts throughout 2020 include using technology to conduct virtual site inspections, introducing new methods of remote communication, individual industry virus response safety protocols, and implementing social distancing during routine sampling events. It's truly impressive what everyone has been able to accomplish throughout the pandemic.

This year's awards ceremony was held by the Industrial Discharge Control Program staff, along with WSSC Water GM and CEO Carla Reid, Chief Engineer Mike Harmer and Regulatory Services Division Manager I-Hsin McConnell. Thirty industries were recognized for their efforts to maintain compliance with pretreatment regulations, an increase from last year!

For the first time, the ceremony was completely virtual. WSSC Water highly appreciates all who attended despite these unusual circumstances. We look forward to celebrating face to face once again next year.

There are three tiers of recognition for industrial users that have demonstrated consistent compliance with all federal and local requirements. Gold winners have demonstrated five or more consecutive years of consistent compliance. Silver winners are recognized for at least three consecutive years of consistent compliance and five years without being in Significant Non-Compliance. Bronze award winners are recognized for demonstrating compliance for the 2020 calendar year.

The WSSC Water Annual Pretreatment Recognition Award is the standard by which we recognize our industrial partners who strive to ensure our waterways are kept free of harmful pollutants. Those recognized industries have demonstrated consistency in environmental stewardship, one of WSSC Water's core values.

Congratulations to all of the 2020 winners!

The 2020 Pretreatment Recognition Award Winners

GOLD

ATK Space Systems, Inc.
(two facilities)*

Capital Electro-Circuits, Inc.*

De Perini Metal Fabricators,
Inc.*

KMC Thermo, LLC*

Maryland Metal Plating &
Polishing, Inc.#

Mid-Atlantic Finishing, Inc.*

Tricon Chemical Corporation*

WMATA (Greenbelt)#

SILVER

Adelphi Laboratory Center^

GlaxoSmithKline LLC^

Thales Defense & Security

United Therapeutics Corp.

University of MD/DOD,
Physical Sciences Laboratory^

WMATA (Shady Grove)^

WSSC Water Potomac Water
Filtration Plant^

BRONZE

Bethesda Art Metal Works

Chevy Chase Plating &
Polishing, LLC

Emergent BioSolutions

Human Genome Sciences,
Inc. (SSM)

Metal Raps

NASA/Goddard Space Flight
Center+

National Institutes of Health –
5625 Fishers Lane

Naval Support Activity
Bethesda

Nixon Uniform Service, Inc.

O3 Technologies, LLC dba
Metro Laundry Service+

PSEG Keys Energy Center, LLC+

Ritchie Land Reclamation, LLC

United States Food and Drug
Administration

United Therapeutics
Corporation (1101 Spring St)+

WSSC Water Patuxent Water
Filtration Plant

* Repeat gold winner

Silver winner last year

^ bronze last year

+ New winner for 2020

Industrial Discharge Control Program Staff Updates

The past year brought many changes and challenges for the IDC Program staff. Standard day-to-day activities and operations were disrupted mid-March when WSSC Water employees were sent home to telework. New norms began taking shape (e.g., video conference meetings, social distancing, face masks, electronic file reviews), and IDC Program staff, new and old, worked together to find new ways to complete required work tasks. Staff supervisors and investigators trained the new staff investigators hired in late February and early March 2020, who jumped in with both feet to learn and complete their assigned tasks. Both I-Hsin McConnell, Regulatory Services Division Manager, and Philip (Phil) Rindge, IDC Section Manager, made sure staff had any personal protection equipment (PPE) necessary to perform job duties in the field and office.

As a delegated Pretreatment Program by the State of Maryland, WSSC Water has State-mandated requirements that must be completed. These include a minimum number of industrial investigations, compliance monitoring events, quarterly reporting, and special projects (e.g., dental amalgam rule). With all the new staff and changes in operational activities, including social distancing and limited contact with individuals, there was a question hanging in the air: Would the IDC Program meet all mandated requirements by the end of the year? By year's end, it was clear the answer was YES!

All members of the IDC team worked to ensure that every significant industrial user (SIU) was investigated, compliance monitoring was conducted at every SIU at least once, periodic compliance reports and compliance reports were reviewed, reports to the State were prepared and submitted on time, WSSC Water's Water Resource Recovery Facilities were sampled, and dental facilities were contacted. The resiliency of the staff (David Aires, Alex DeWire, Marianna Eberle, Todd Gentry, Brenden Hogan, Elizabeth Shearn, Peter Holland, John Matthews and Phil Rindge) to adapt to and meet all requirements was a true team effort and would not have been successful if every member had not contributed.

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Fats, Oils and Grease

Fats, Oils and Grease (FOG) have adverse effects within the wastewater treatment system. Most commonly, FOG can clog pipes, which creates a medium for other materials, such as solids, metals and hazardous chemicals to stick to. This increases corrosion within pipes and can lead to leaks, spills and overflows. Furthermore, FOG within a wastewater treatment plant require additional organic treatment and are often the cause of upsetting balance and adding cost to bacterial treatment systems.

The Environmental Protection Agency (EPA) requires FOG analysis through Method 1664, which is a two-step process. First, a one-liter sample of wastewater is mixed with n-Hexane, filtered, and then heated to the boiling point of the n-Hexane. Whatever remains after heating is considered Hexane Extractable Material (HEM, also known as Total Oil and Grease).

The second step of measuring FOG is by analyzing a sample according to polar and non-polar material. In this analysis, silica gel is added to the wastewater sample along with n-Hexane prior to filtration. The remaining material after heating is called the Silica Gel Treated Hexane Extractable Material (SGT-HEM, also known as oil & grease, non-polar). WSSC Water requires industries to report FOG polar values, which are calculated by subtracting the SGT-HEM from the total HEM value.



Several things can impact the measured value of FOG during analysis, including interference due to the presence of detergents, proteins and other substances, which can dissolve in n-Hexane. These substances can cause a false high HEM or SGT-HEM result. WSSC Water requires some industries to take two grab samples for FOG, which can be averaged for the final daily result. Grab samples must be done in a one-liter glass jar and the jar must be dipped in the waste stream only once.

Please refer to the acceptable analytical methods in 40 CFR 136, consult your contract lab, and contact your Industrial Discharge Investigator for additional questions and clarifications about FOG sampling and interference analysis.

Dental Amalgam Recycling Rule Compliance Deadline Passed!

The October 12, 2020, compliance deadline for the United States Environmental Protection Agency (EPA)'s Dental Amalgam Rule passed. In 2017, EPA issued effluent guidelines applicable to dentist offices with a goal of reducing the discharge of mercury-containing dental amalgam into publicly owned treatment works (POTWs) (40 CFR Part 441). For more information, see EPA's Dental Effluent Guidelines website: www.epa.gov/eg/dental-effluent-guidelines.



EPA's rule requires dental offices that place or remove amalgam regularly, to operate and maintain an amalgam separator to prevent mercury-containing amalgam from reaching the sanitary sewer. The majority of mercury entering POTWs ends up in sewage sludge, although some passes through to surface waters. Sewage sludge is often land applied or incinerated, which releases the mercury back to the environment. EPA determined that dental offices are the main source of mercury discharges to POTWs, contributing more than 50 percent. EPA expects this rule to reduce the discharge of metals to POTWs by 10.2 tons per year, about half of which is mercury. Mercury is harmful to human health as a potent neurotoxin that bioaccumulates in fish and shellfish, which we eat.

All dentist offices that are not specifically exempted from the rule (e.g., exclusive orthodontics, oral radiology and surgery, periodontics, prosthodontics, mobile units) are required to submit a one-time compliance report to their Pretreatment Control Authority, regardless if they use or remove amalgam. This includes large institutions such as dental schools or clinics that may be part of a Significant Industrial Users facility.

WSSC Water is the delegated Control Authority for all dentist offices within our [Service Area](#) (predominately Montgomery and Prince George's counties). Over the past three years, WSSC Water has been working to identify and bring into compliance all dentist offices within our service area and more than 95 percent are now compliant with the rule.

Dentist offices that have not already completed a [WSSC Water One-Time Dental Amalgam Compliance Report](#), have changed their practices or ownership, or are new to the WSSC Water service area must fill out a compliance report and mail the original copy back to WSSC Water at the address included on the last page of the report. For the report and more information, please visit www.wsscwater.com/idc.

Wastewater Surveillance Aids in the Fight Against COVID-19

The global COVID-19 pandemic has challenged scientists and public health systems to find solutions to problems at an exceptionally fast pass. WSSC Water and other water resource recovery facilities' (WRRF) staff are helping to meet these challenges by collecting wastewater samples to analyze and detect the presence of COVID-19 in wastewater. The goal is to further develop the science of detecting COVID-19 in communities and make the data useful for public health decisions.

WSSC Water began collecting wastewater samples from all the WRRFs at the raw influent, close to the WRRF, twice a week in March 2020 for researchers at Howard University and the University of Maryland (UMD). The Howard University sampling ended in December 2020 while UMD has continued into 2021.

Wastewater may contain detectable traces of the viral genetic material of SARS-CoV-2 and, when analyzed by a laboratory, may indicate the presence of COVID-19 in the users of the sanitary sewer. Though there is no correlation between these test results and the number of COVID-19 infections in a community, the test data may indicate there are infections. Public health officials may use this information to guide policy decisions.

The wastewater tests may indicate the presence of COVID-19 in a population before they have symptoms and have been tested individually. This data serves as a monitoring system for public health officials. So far, one key finding has been that sampling wastewater for COVID-19 over smaller, discrete areas, like college campuses and prisons provides an effective early warning to alert officials that COVID-19 is present and individuals may need testing.



Industrial Discharge Control Program Staff Updates

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Dan Bower and Terry Haas, pictured above, are the newest members of the IDC team.

Roberto Azevedo, new to IDC in 2020, left WSSC Water to work in a family business. Elizabeth Shearn left IDC in May 2021 to join WSSC Water's Western Branch Water Resource Recovery Facility. IDC wishes both Roberto and Elizabeth well in their new adventures.

The two newest members to the IDC team are Daniel Bower and Theresa (Terry) Haas. Dan comes to us from a consulting business and has experience in the field as a project manager. In his free time, Dan enjoys skiing, rock climbing, traveling abroad, visiting breweries and Penn State football.

Terry most recently handed the day-to-day management of her Arlington-based dog walking business, Loyalty Pet Care to a long-time employee and draws on a background in NPDES permits and Effluent Limitations Guidelines support. Whenever possible, Terry can be found gardening, sleeping or hiking. In fact, she is lazily training for a distant future attempt at thru-hiking a long trail. She also enjoys playing around with her sewing machine, splicing tools and Dyneema materials for the development of specialized dog walking and handling gear.