2021 Annual Report

Office of Wastewater Management

Message from the Director

As FY 2021 comes to a close, yet again, I find myself rapt as I tally up the immense undertakings and incredible accomplishments of the Office of Wastewater Management (OWM). For all that we achieved together over the past 12 months, I express my immense gratitude.

Environmental protection and human health is as important as ever. While the task may seem daunting at times, OWM staff brings their expertise and dedication to the table every day. I've said it before: In my opinion, OWM is one of the most important offices in the entire agency. Our work keeps water safe – whether by setting guardrails to prevent pollution, helping communities figure out real solutions for their water needs, or helping them afford those solutions – the benefits of our work is seen in every home across the country.

As the pandemic changes, OWM's work remains consistent, reliable and enduring. More than that, we persist: in achieving what we set out to do, in continuing to bring our best selves to our work, and in performing our duties commendably. From dining room tables, basements, home offices, or wherever my colleagues in OWM worked from, the work simply got done right.

Thank you for all you have done and all you continue to do to make OWM successful and a great place to work.

WHO WE ARE

The Office of Wastewater Management (OWM) is part of the U.S. EPA's Office of Water. OWM partners with federal, state, and local governments; industries; and tribes to provide innovative solutions for our nation's water quality and quantity challenges.

WHAT WE DO

We envision a nation where all communities have access to clean water. By working with stakeholders, we develop approaches to manage water as a critical resource and prevent water pollution. Our programs and initiatives protect public health and the environment as we support a growing economy.

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Funding

Water Infrastructure and Innovation Act Program

WIFIA Loan Closings

In FY 2021, the Water Infrastructure Finance and Innovation Act (WIFIA) program announced 24 loans totaling over $4.7 billion to help finance nearly $10.2 billion of water infrastructure projects across the country. 2021 WIFIA borrowers represent 11 states plus Washington, D.C. In total, these borrowers will save over $1.4 billion and create over 33,000 jobs.

Administrator Michael Regan speaks to media gathered at the Silicon Valley Clean Water facility in Redwood City, CA; August 2021

WIFIA Notice of Funding Availability

In April 2021, EPA announced the availability of financing for $5.5 billion in WIFIA loans and $1 billion in State infrastructure financing authority WIFIA (SWIFIA) loans.

For the first time, EPA prioritized supporting economically stressed communities in its selection process. In addition, EPA also named protecting water infrastructure against the impacts of climate change; reducing exposure to lead; addressing emerging contaminants; updating aging infrastructure; and implementing new or innovative approaches including cybersecurity and green infrastructure as selection priorities. Also new for 2021, EPA offered small communities (serving less than 25,000 people) WIFIA loans for up to 80 percent of total project costs. In June and July 2021, EPA received 50 letters of interest from public and private prospective borrower requesting $8.2 billion in WIFIA and SWIFIA loans to help finance water infrastructure projects totaling $22.5 billion in 25 states.

WIFIA Webinars & Articles

From May to June 2021, the WIFIA program hosted a series of webinars to provide program updates, explain the benefits of financing with WIFIA loans, and prepare prospective borrowers to submit letters of interest. The WIFIA program had over 200 participants for the three webinars given during this time. As part of FY 2021 outreach, EPA supported the publication of a variety of articles highlighting the program in different online outlets including Journal AWWA, WaterWorld, and Water & Wastes Digest.

WIFIA's Portfolio

After three years of closing loans, the WIFIA program

now has a robust portfolio of 61 loans to manage. The WIFIA program's growing portfolio team tracks disbursements, construction progress, and works closely with borrowers to ensure environmental and economic project goals are met. The WIFIA program's portfolio includes a mixture of wastewater, drinking water, stormwater, and water reuse projects. About one-third of closed loans support economically stressed communities and more than half of WIFIA-financed projects will provide infrastructure protection against climate change.

Clean Water State Revolving Fund Program

CWSRF Program Success

In 2020, Clean Water State Revolving Fund (CWSRF) programs offered over 1,600 assistance agreements, providing over $7.5 billion for projects that improved wastewater infrastructure, addressed stormwater, promoted energy and water efficiency, and mitigated nonpoint source pollution. In the last three years alone, average annual CWSRF funding has exceeded $6.8 billion.

CWSRF programs continue to provide tremendous cost savings to borrowers. The national average SRF interest rate in 2020 was 1.2 percent. During the same year, over $380 million in additional subsidy was provided to help communities that could not otherwise afford critically important projects needed to address high priority environmental challenges. Since 1988, it is estimated that CWSRF low-cost loans have saved municipal, nonprofit, and individual borrowers more than $44 billion in interest costs.

CWSRF Marketing and Outreach

In FY 2021 the CWSRF program continued to assist interested state programs with surveys and focus groups to gain feedback on potential assistance recipients' perceptions of the CWSRF program. This year one survey and two focus groups were conducted. Sixteen states have participated in this effort to date. The feedback from these surveys and focus groups helps to guide states in streamlining and marketing their programs so that they can increase assistance provided.

PISCES Recognition Program

FY 2021, OWM's CWSRF Performance and Innovation in the SRF Creating Environmental Success (PISCES) Recognition Program highlighted 33 projects for their distinguished accomplishments in promoting human health and improving water quality. In December 2020, five of these projects were announced as an Exceptional Project for one of the following categories: Innovative Financing; System Partnerships; Community Engagement; Environmental and Public Health Protection; and Problem Solving.

CWSRF Training and Oversight

The CWSRF program continues to support training for state and regional staff on the financial and programmatic aspects of CWSRF programs. In FY 2021, the program continued with a virtual format and held training sessions for state and regional staff from Region 1, 2, 5, 8, and 9. The training sessions included discussions on fund management, program marketing, and federal requirements. This year, the CWSRF program also conducted a national virtual SRF 101 with nearly 500 state and regional SRF program managers and staff registered and a virtual "mini training" session on SRF Streamlining with over 200 people registered.

American Iron and Steel

In FY 2021, EPA continued its implementation of the American Iron and Steel (AIS) requirements. The AIS program completed 60 virtual site visits to active CWSRF construction projects across 11 states. The site visits provided an opportunity for outreach with CWSRF projects. EPA conducted 12 trainings for states and stakeholders, explaining how

the AIS requirements apply to SRF projects. This effort included one annual national training and two "Lunch and Learn" trainings, which are short presentations focusing on specific aspects of the AIS requirement. While the majority of the country's water infrastructure projects use iron and steel made in America, when domestic sources are not available, EPA thoroughly evaluates project-specific waiver requests. In FY 2021, EPA received and processed 29 CWSRF project-specific waiver requests, 28 availability requests and one cost-based, of which 25 were approved, 4 were withdrawn or not approved, and 6 are currently being processed.

Sewer Overflow and Stormwater Reuse Municipal Grants Program

The Sewer Overflow and Stormwater Reuse Municipal Grants Program (OSG) was launched in 2021 and began accepting state applications for their allocation funding. States will soon provide funding for municipalities across the 50 states, D.C., Puerto Rico, and the territories to address their infrastructure needs in managing combined sewer overflows (CSOs), sanitary sewer overflows (SSOs), and stormwater. In 2021, OWM received applications from six states totaling over $5 million for awards that will be used to fund municipal projects.

Clean Watersheds Needs Survey

The Clean Watersheds Need Survey (CWNS) is a comprehensive assessment of the capital costs (or needs) to meet the water quality goals of the Clean Water Act (CWA) and address water quality and water quality related public health concerns. It is administered to all states and territories over a year-long period and requires significant coordination from local to national levels.

In FY 2021, OWM and state subcommittee members held their final meeting, ending a more than year-long collaboration on survey scope and design. OWM also completed the beta-version of the new CWNS data entry portal and held testing with state coordinators at the end of August 2021. In addition to updating existing tools, OWM built new cost estimation tools for stormwater and certain nonpoint source needs categories to help states maximize the number of needs captured by the survey. Pending approval by the Office of Management and Budget (OMB), the CWNS is slated to launch in March 2022. Training for state coordinators participating in the CWNS will begin in November 2021.

Water Infrastructure and Resiliency Finance Center

2021 Financial Capability Assessment for Clean Water Act Obligations

The proposed 2020 Financial Capability Assessment (FCA) for CWA Obligations advances the ability of communities to more accurately demonstrate the financial burdens they face and increases the transparency of EPA's considerations as it endeavors to consistently apply FCA methodologies across the country. The 30-day comment period on the new proposed FCA closed in October 2020. A total of 70 comments were received. EPA sought public comment on the two alternative approaches for assessing financial capability proposed in the 2020 FCA.

In January 2021, EPA signed a federal register notice finalizing the 2021 Financial Capability Assessment (FCA) for Clean Water Act (CWA) Obligations to replace the 1997 Guidance for Financial Capability Assessment and Schedule Development and revise the Combined Sewer Overflows Guidance for Financial Capability Assessment and Schedule Development and portions of the Interim Economic Guidance for Water Quality Standards: Workbook. Upon further comment, EPA is continuing to revise the guidance.

Water Finance Clearinghouse

In December 2020, the Water Finance Center launched the Clearinghouse for Environmental Finance (ChEF). This new Clearinghouse is three databases in one: the original Water Finance Clearinghouse and two new finance Clearinghouses for Air and Land. At launch, the Clearinghouse for Environmental Finance includes 958 sources of funding and financing and 885 financial resources. Former Administrator Wheeler announced ChEF during prerecorded remarks to EPA's Local Government Advisory Committee (LGAC) and Small Communities Advisory Subcommittee (SCAS) Meetings.

In June 2021, the Local Government Environmental Assistance Network (LGEAN) released their podcast

on "The 4-1-1 on Financing: Strategies and Support for Small Water and Wastewater Systems." The podcast featured interviews with EPA's Office of Enforcement and Compliance Assurance (OECA), the University of North Carolina Environmental Finance Center, and EPA's Water Finance Center. The Center spoke about the differences between funding and financing as well as promoting the Water Finance Clearinghouse portion of EPA's Clearinghouse for Environmental Finance.

In August 2021, the Water Finance Center presented on the Water Finance Clearinghouse in partnership with the Organization for Economic Co-operation and Development (OECD) as part of the World Water Week. The Center provided information on the Clearinghouse as an example that session participants could use to develop a similar repository to get more international Water Supply, Sanitation and Water Security projects funded.

To enhance the Water Finance Clearinghouse user experience and improve access to its technical and funding-related information, the Water Finance Center modified the Clearinghouse's filter and search functions. The modified search and filter tools were developed in response to user feedback and the Center plans to roll out additional design modifications to the Clearinghouse. In FY 2021, 1,015 funds and 417 resources entries were added. The administration team reviewed and approved 367 suggestions to add new entries and update existing data. The Clearinghouse has 290 general users and 137 contributors – a gain of 2 contributors and 8 general users in FY 2021. The Clearinghouse received 52,349 visits for FY 2021.

Environmental Finance Center Grants

In FY 2021, EPA provided funding of $60,000 to each of the ten Environmental Finance Centers (EFCs). This core funding will be utilized to support regional-based projects. These grants have been awarded annually. The grants support basic EFC operations and project work topics including environmental justice, small system asset management, utility financial sustainability and rates management, water and wastewater training and employment needs, tribal technical assistance, stormwater financing, environmental finance education and outreach, source water protection, watershed management, and green infrastructure.

Community Assistance Compendiums

EPA's Water Finance Center continues to provide a suite of information and assistance to local decision makers, water utilities, and homeowners on funding and financing for their water needs. In FY 2021, the Water Finance Center completed three community assistance compendiums. EPA's Office of Congressional and Intergovernmental Relations (OCIR) routed a request to the Center as part of ongoing agency discussions with Greenville, MS. The Greenville compendium contains 33 potential funding sources or resources. The Center also provided compendiums for Lincoln, NE (64 potential funding sources or resources) and Boise, ID (87 potential funding sources or resources).

Forest Resilience Bond

In March 2021, the Water Finance Center developed an in-depth technical report on the first Forest Resilience Bond. This new financing structure was developed to fund a portion of a forest restoration project on the Tahoe National Forest in California's North Yuba River watershed. The project protects and restores 15,000 acres of forest from catastrophic wildfire while providing additional water related and rural community co-benefits. To support the report's release, in spring 2021, the Center hosted two webinars discussing the report. These webinars featured a moderated panel with speakers from the U.S. Forest Service, Yuba Water Agency, Blue Forest, Calvert Impact Capital, and World Resources Institute. Both webinars also had an open question and answer period for attendees. 160 people attended the webinars, which were recorded.

Environmental Finance Advisory Board

Environmental Finance Advisory Board Letter to the Administrator

In April 2021, the Environmental Finance Advisory Board (EFAB) submitted an introductory letter to EPA Administrator Michael Regan. The letter discusses the role of EFAB in supporting EPA, the composition of its membership, and the Board's recently completed products. In the letter, the Board enumerates the ways it is working with EPA on current financing and investment issues facing the environmental sector. These include advancing social and environmental justice through infrastructure financing and investment, risk assessment and the cost of capital

for infrastructure, expanding regional approaches to scaling water-based infrastructure financing and investment, and more. This letter also notifies Administrator Regan that the Board is prepared to serve as a resource and engage on critical climate financing topics. Through this letter, EFAB offers to provide expertise and recommendations on innovative policy interventions to enable transformational environmental, economic, and social changes in communities throughout the country.

EFAB Public Meetings and Webinars

The Water Finance Center hosted EFAB's first ever virtual public meeting in October 2020. EPA published the Federal Register Notice (FRN) in September 2020, the prior Fiscal Year, to meet the regulatory deadline of advance public federal advisory committee meeting notification. The meeting had a record registration with 273 people registered to view the meeting simulcast online. The meeting reached a peak viewership of over 220 viewers. During the meeting, EFAB heard about opportunity zones, including community stories from St. Louis, MO, and Dubuque, IA, and voted to accept a charge on an opportunity zone report. In addition, the Board voted to further refine two proposed charges related to environmental risk and cost of capital and stormwater credit trading. The Board also received briefings on EFAB's standard operating procedures, the Water Finance Center, Environmental Finance Center Network (EFCN), and EPA responses to recent EFAB reports.

In February and March, all three EFAB workgroups held their first meetings. These workgroup meetings allowed the members to refine the charges and determine next steps to present at the upcoming full EFAB meeting. The workgroups are Opportunity Zones, Stormwater Credit Trading, and Environmental Risk & Cost of Capital.

In April 2021, EFAB held a virtual public meeting with 219 attendees in addition to the Board members. EPA issued the FRN of this public meeting in March 2021, well in advance of the regulatory 15-day deadline. The Board heard from EPA's Office of Public Engagement and Environmental Education, EPA's Chief Financial Officer, EPA's Office of Policy, and EPA's Office of the Chief Financial Officer. EPA's Office of Pollution Prevention and Toxics presented on a proposed charge and members volunteered to form an exploratory group. The EFCN presented an update and overview on recent activities. EFAB also held discussions on three existing workgroups: Opportunity Zones, Stormwater Credit Trading, and Environmental Risk & Cost of Capital. EFAB's Designated Federal Officer shared EPA's responses to recent EFAB recommendations and received very positive feedback from the Board members.

In August, EFAB held a public webinar for an Opportunity Zones Practitioner Panel for the EFAB Opportunity Zones Workgroup. Due to interest from the full Board, this webinar was opened to the public. EPA published the FRN announcement for this webinar earlier the same month, meeting the regulatory deadline. The webinar was held for members of the EFAB to hear from Opportunity Zones practitioners who work on Opportunity Zones investments in disadvantaged communities and shared their experiences to support the workgroup's charge.

EFAB Chair

In August 2021, EPA announced the selection of Kerry E. O'Neill to serve as the chair of EFAB. Ms. O'Neill replaces Joanne Throwe, whose six-year term limit ended in June. Kerry E. O'Neill is the chief executive officer of Inclusive Prosperity Capital Inc., a nonprofit investment fund that was spun out of the Connecticut Green Bank in 2018 to scale up impact for underserved communities and under-invested markets across the country. Ms. O'Neill joined EFAB in June 2020 and was selected for a two-year term as chair. Ms. O'Neill and the other members of EFAB are drawn from all 10 EPA regions and hail from 17 states and the District of Columbia.

Water Pollution Control Program Grants

Section 106 Program

Section 106 of the CWA authorizes EPA to provide federal assistance to states, territories, the District of Columbia, interstate agencies, and eligible tribes to establish and implement water pollution control programs. This funding supports ambient water quality monitoring, water quality standard and total maximum daily load development, National Pollutant Discharge Elimination System (NPDES) permitting and enforcement, training, and public information.

EPA provided approximately $230 million in Section 106 funding to prevent and control water pollution in FY 2021.

State and Interstate Water Pollution Control Grants

In FY 2020, EPA provided $181 million in Section 106 grant funding to state and interstate agencies to protect and restore water bodies. Increasingly, EPA and states are working together to develop basin-wide approaches to water quality management. The grant program encourages states to take a watershed protection approach which looks at state water quality problems holistically and targets finances to the most important problems. In FY 2021, the Section 106 Program, working with EPA's Office of Wetlands, Oceans, and Watersheds (OWOW) and EPA Region 8, developed seven water quality parameter fact sheets: temperature, e. Coli, pH, turbidity, dissolved oxygen, nutrients and macroinvertebrates. The water quality parameter fact sheets provide an introduction to monitoring common parameters and are particularly useful for training new water quality monitoring staff and explaining water quality sampling to outside partners.

Tribal Water Pollution Control Grants

Section 106 grants are a crucial, dedicated source of funding for developing, maintaining, and expanding tribal programs designed to prevent, control, and eliminate water pollution. Of the 565 federally recognized tribes, approximately 330 meet the criteria to receive Section 106 funding, and 279 of these tribes were eligible to receive grants totaling approximately $26.4 million in FY 2021.

In FY 2020, OWM formed an EPA workgroup to develop recommendations for the revision of the 2007 Final Guidance on Awards of Grants to Indian Tribes under Section 106 of the CWAct. OWM initiated consultation with tribal partners in January and requested comment on EPA's recommended revision approach. Two informational webinars were conducted. The workgroup was expanded to include 24 tribal members. EPA/tribal sub-groups were formed to revise the guidance. A draft guidance will be available for comment in early 2022.

State and Tribal Water Monitoring Initiative

Using approximately $17 million, OWM and OWOW continue to work with states and tribes to enhance their water quality monitoring programs and implement a multi-year, statistically valid survey of the nation's waters. In FY 2021, states and tribes conducted sampling and reported water quality monitoring data for the National Wetlands Condition Assessment. The monitoring initiative allows EPA, states, and tribes to enhance their water quality monitoring programs and implement a multi-year, statistically valid survey to report on the condition of the nation's waters and make progress toward assessing trends in water condition in a scientifically defensible manner.

Grants & Underserved Communities' Infrastructure

Clean Water Act Title II Grants to District of Columbia and the U.S. Territories

The District of Columbia and the U.S. territories, namely, Virgin Islands, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands received an exemption from establishing a CWSRF, as these jurisdictions have government agencies that also manage wastewater treatment systems. These jurisdictions receive CWSRF appropriated funds as grants. In FY 2021, EPA received $31.470 million for the CWA Title II Construction Grants Program, which was allocated to these jurisdictions. This funding does not include CWA 604(b) funds of $100,000 to each of the jurisdictions. The grants are being awarded to municipalities for the construction of wastewater treatment systems.

Wastewater Infrastructure Support for Tribal and Small Communities

In FY 2021, OWM's tribal wastewater infrastructure program scheduled approximately 9,600 tribal homes to be provided improved access to sanitation services at an average cost of $3,400/home. The smallest project funded with the Clean Water Indian Set-Aside (CWISA) this year was $28,000 for lift station improvements for the Ho Chunk Tribe in Region 5, and while the largest project was $5.4 million for

constructing a new sewage lagoon for the Noorvik, AK, about 500 miles northwest of Anchorage. In addition, in FY 2021 the CWISA program aims to leverage an additional $43 million from other federal and tribal organizations for tribal wastewater infrastructure improvements. In FY 2021 the Alaska Native Villages grant program will fund six drinking water and/or wastewater infrastructure planning projects and eight construction projects.

Tribal Infrastructure Task Force

Staff from OWM and EPA's Office of Ground Water and Drinking Water (OGWDW) continue to lead the tribal Infrastructure Task Force (ITF) and the important renewal of a multi-agency Memorandum of Understanding (MOU) in FY 2021. Although great progress has been made, following decades of work, tribal communities are disproportionately lacking access to safe drinking water and sanitation, and many struggle with the sustainability of infrastructure and the resiliency needed to mitigate the impacts of climate change. To better support tribal communities and to further our agencies' goals, ITF members are seeking to renew and expand the MOU to include the Bureau of Reclamation and the Centers for Disease Control and Prevention (CDC).

Technical Assistance and Training for Small and Rural Tribal Communities

In FY 2021, OWM kicked-off an inaugural grant program to fund technical assistance for small, rural, and tribal wastewater systems. Staff not only established roles, responsibilities, and financial conduits, but also developed the Request for Applications (RFA), directed the application review panel and public outreach. The $12 million will be distributed to three applicants at $4 million each to address:

- Acquiring infrastructure financing
- Protecting water quality and achieving CWA compliance, and
- Disseminating planning, design, construction, and operation information.

U.S.-Mexico Border Infrastructure Program

In FY 2021, Congress allocated $30 million in the agency's State and Tribal Assistance Grants (STAG) account to the U.S.-Mexico Border Water Infrastructure Program (BWIP) to address drinking and wastewater infrastructure needs along the border that are negatively impacting U.S.-Mexico Border communities. OWM granted these funds to Regions 6 and 9 who ultimately award and administer these funds in close collaboration with the North American Development Bank (NADB).

To date, the program has funded 136 projects. More than nine million people are benefiting from 101 completed projects, and nearly 1.3 million people will benefit from projects currently under construction. In FY 2021 around $9.4 million were disbursed for the successful completion of four projects, positively impacting/benefiting close to 110,000 people in underserved communities.

USMCA Mitigation of Contaminated Transboundary Flows in the Tijuana River Watershed

Pursuant to the U.S.-Mexico-Canada Agreement Implementing Legislation (2020), EPA is coordinating with eligible public entities to identify infrastructure solutions to mitigate chronic transboundary flows in the Tijuana River and adjacent coastal areas that are often polluted with untreated wastewater, trash, and sediment. These flows routinely enter the U.S. in San Diego County, CA, from Mexico, causing significant negative impacts to water quality, public health, and the environment. In FY 2021, EPA convened five meetings of the Eligible Public Entities Coordinating Group, composed of federal, state, and local organizations to promote coordination and information sharing; held four public information meetings; conducted a robust technical assessment of potential infrastructure solutions; and initiated the National Environmental Policy Act (NEPA) process, including a 45-day public scoping period. The agency also initiated binational discussions with Mexico to promote cooperation and coordination during project implementation. Congress appropriated $300 million for project implementation.

Tools

Water Workforce

America's Water Workforce Initiative

OWM, along with OGWDW, continued to implement America's Water Sector Workforce Initiative, the first of its kind. The Initiative reflects a commitment by EPA and our federal, local, and state partners to work with other stakeholders across the water sector to ensure that our workforce is strong, diverse, and resilient and attracts talented individuals from many different backgrounds. The Initiative also emphasizes the need to recognize our water workforce for the vital service they provide to our communities every day. It convenes the resources across the government and industry by bringing discrete efforts together under one umbrella to more effectively bolster water sector careers and reach the next generation of water protection specialists.

Water Workforce Case Study Compendium

As part of our commitment to work with many partners to make water truly a career of choice, OWM developed an additional three case studies to add to our existing Water Workforce Case Study Compendium. All of these case studies describe in detail the many ways in which water workers across the country are making a difference in their communities every day. These case studies document how utility and community leaders are stepping forward to ensure their current workers have the skills to meet both current and future challenges as they continue to provide reliable, sustainable, and affordable water services. These case studies also highlight the policies and programs utilities are designing to ensure greater equity, diversity, and inclusion at their utility and for their community. Many utilities are engaging in innovative work to build community connections to attract and prepare new, talented people to the water sector. These community partnerships amplify and support both utility workforce and public engagement efforts.

Water Workforce Webinar Series

Recruiting and retaining a talented and diverse workforce are some of the most important challenges facing today's water and wastewater utilities. Providing information to help utilities develop their own workforce programs is an essential part of OWM's mission. As part of its ongoing webinar series in 2021, OWM conducted three national webinars, attracting over 1,500 registrants, to highlight ways in which various organizations are implementing programs that can help utilities and communities ensure that the many dedicated professionals that ensure our citizens have clean and safe water every day are sustained to help make sure the water continues to be a career of choice.

Water Workforce Grant Program

OWM led the effort to develop the RFA for a new workforce grant program authorized under America's Water Infrastructure Act of 2018 (AWIA) to support increased collaboration on water workforce among government and other organizations. The new grant program will help assist in the development and utilization of innovative activities related to workforce and expand public awareness about utilities. This new grant will help fund activities such as targeted internship, apprenticeship, and pre-apprenticeship programs; education programs for elementary, secondary, and higher education students; regional industry and workforce development collaborations;

integrated learning laboratories in secondary educational institutions; leadership development; occupational training; mentoring; and cross-training. The competition closed on March 26, 2021. Ten organizations will receive a total of $3.8 million in grant funding to support the front-line workers at water and wastewater treatment utilities across the country.

Water Workforce Social Media Competition

Through an interagency agreement with U.S. Department of Health and Human Services (HHS), OWM successfully completed a social media competition about the value of clean and safe water. Students ages 13-24 had the opportunity to submit one of the following creative ideas that expresses their feelings about water and water careers: a video essay, featuring acting, singing, poetry, or other spoken word; an illustration; a vision board; a poem; or a written essay. The competition ended on May 12, 2021. Three successful students received a winning prize.

Social Media Contest Winner; Natalie W.

Clean Water Technology Center

Clean Water Technology Center

The Clean Water Technology Center is an information and networking center, helping communities make informed decisions on innovative and alternative technology solutions for a resilient, sustainable, and equitable water future. The Center portfolio brings together under one umbrella technical expertise, sector partnerships, technology assessments, streamlining barriers to technology adoption, and information dissemination. In addition to providing technical support internally to the agency, the team has also met with many external entities and technology vendors seeking expertise and guidance.

Wastewater Treatment Technology and Research

In FY 2021, OWM continued to provide technical support to EPA regions and Office of Water program offices on wastewater technology performance areas and actively collaborated with internal and external stakeholders on wastewater studies and research projects. Areas of technical support included mainstream and sidestream nutrient removal, low energy treatment, Mexico border wastewater infrastructure, wastewater-based epidemiology, PFAS management, and water reuse. OWM's research coordination efforts included collaborating with the National Water Program research coordination team and EPA's Office of Research and Development (ORD) and their Safe and Sustainable Water Resources research program.

Wastewater Technology Clearinghouse

The Wastewater Technology Clearinghouse was launched in January 2021. It is an easily navigated, web-based platform sharing resources on the cost-effectiveness and performance of innovative, alternative, and reuse wastewater technologies. The Wastewater Technology Clearinghouse aims to help communities make informed choices about innovative, alternative, and reuse wastewater technologies.

The Clearinghouse is separated into two searchable databases for centralized and on-site/ decentralized technologies. It highlights real-world uses of adopted technologies through resources such as reports, case

studies, and webinars. Additionally, a searchable map links technology resources to a user's location, allowing users to learn about the performance of technologies in their geographic conditions.

Training

NPDES Training to Regions and States

OWM offers a range of training courses and workshops to support implementation of the NPDES Program. These efforts are critical to build and maintain program integrity in the 48 authorized state/territory programs and 10 EPA Regions. In 2021, EPA hosted approximately 15 NPDES-focused trainings and workshops that reached over 1,000 participants. These included the Guided Learning Permit Writers' Course and several targeted and advanced trainings to build permit writers' technical skills, such as specialized training on NPDES whole effluent toxicity for EPA Region 4 and its states.

Pretreatment Training

In FY 2021, OWM completed the reconstituted national "Pretreatment Program 101" course and hosted six virtual events between December 2020 and June 2021. The introductory level courses focused on local municipal program development by individuals with less than five years' experience in the program and were conducted on a monthly basis. Approximately 1,000 municipal and state employees were trained in the National Pretreatment Program regulations and program implementation tools, as well as how the pretreatment program fits within the NPDES structure and interfaces with multimedia industrial regulations of hazardous waste and air emissions.

Stormwater Funding and Financing Approaches Webinar Series

The Water Finance Center began a new webinar series in summer 2021 with a webinar on the EPA Programs for Stormwater Funding and Financing. This webinar highlighted opportunities for funding and financing stormwater infrastructure through existing EPA programs. Speakers for this first webinar include representatives from WIFIA, Georgia Environmental Protection Department's Nonpoint Source Program, the CWSRF program, and the Sewer Overflow and Stormwater Reuse Municipal Grants program. The second webinar on stormwater equity highlighted equity considerations in stormwater infrastructure funding and financing. Speakers for this second webinar included representatives from the New York Environmental Facilities Corporation, the Environmental Finance Center at the University of Maryland, Moonshot Missions, and Greenprint Partners. The third webinar covered funding options for stormwater operations and maintenance with speakers representing OptiRTC, Milwaukee Metropolitan Sewerage District, and PowerCorps PHL.

Forest Resiliency Bond Webinar

In July 2021, the Water Finance Center participated on a webinar hosted by the Western States Water Council to discuss the newly innovated Forest Resilience Bond (FRB) finance mechanism. Other participants were from Blue Forest Conservation, the FRB developer, and the Yuba County Water Agency in California, which committed a revenue stream to secure the bonds. Yuba Water is a third-party beneficiary of the forest restoration work that is being undertaken on the Tahoe National Forest and their watershed. On the call, it was shared that there are new FRB initiatives, underscored by the enhanced need for forest restoration investment in the face of accelerating catastrophic fire risk.

Accounting for the Cost of Climate Change in Nutrient Management Activities: Forum and Community Framework

The Water Finance Center held a three-day virtual invitational forum in June 2021. The forum will help shape the development of a forthcoming community-facing framework for states and local governments to use in accounting for the influence of climate change on nutrient impacts.

During the forum, participants heard from leaders at the leading edge of climate-driven nutrient management and the integration of external costs in nutrient management planning. Together, the panelists and attendees created an interdisciplinary exchange to advance understanding of the financial implications to practitioners resulting from climate change influences on nutrient impacts. They also worked to refine a community-facing framework to support practitioners in identifying the potential influence of climate change on nutrient impacts in

their watersheds, the possible cost to communities resulting from failing to provide for adequate nutrient management, as well as robust, multi-benefit interventions available to optimize investments in a changing and difficult-to-predict future. Sixty-four people registered for the forum with a maximum attendance of 40 people.

Agricultural-Municipal Partnerships Webinar

The Water Finance Center hosted a webinar on Improving Watershed Health through Agricultural-Municipal Partnerships in July 2021. Attendees learned about three different agricultural-municipal partnerships and heard from the City of Boise, Ohio's Miami Conservancy District, and Kansas Center for Agricultural Resources and the Environment.

Sustainable Financial Management Planning for Water Utilities Webinar

In August 2021, the Water Finance Center hosted a webinar on Sustainable Financial Management Planning. Many water sector utilities across the nation are addressing mounting financial challenges by projecting revenue expectations, capital improvement needs, and expenses years into the future. These sustainable financial management practices often work in support of, and are also supported by, improved asset management. Key activities like improved capital budgeting can help utilities achieve stronger financial footing while enabling them to maintain and replace aging infrastructure well into the future. This webinar featured speakers from Columbus Water Works in Georgia and Union Sanitary District in California.

Technical Support & Assistance

Report to Congress on Integrated Planning

In July 2021, EPA transmitted the Integrated Planning Report to Congress. The report, which fulfills a requirement from the 2019 Water Infrastructure Improvement Act (WIIA), is based on research into how many communities used the integrated planning process, what challenges they tried to address, how they engaged their community, and how the process supported achieving their CWA goals. To date, more than two dozen municipalities and wastewater utilities have developed integrated plans. In addition to the report, OWM extended an agreement with Environmental Finance Centers to provide free technical assistance to municipalities and states interested in developing an integrated plan through September 2022. Finally, OWM has been implementing an extensive outreach plan to share the process with states and communities who need a holistic approach to planning their stormwater and wastewater management efforts.

Permit Writers' Clearinghouse

OWM launched the NPDES Permit Writers' Clearinghouse database and worked with Regions and States to populate it. The Clearinghouse, an easily navigable and searchable web-based portal, helps NPDES authorities access and share resources such as final permits, fact sheets, policies, program requirements, training materials, webinars, compendiums, guidance, frequently asked questions, tools, models, databases, and calculators that will enable them to make informed decisions for their permits. The Clearinghouse also provides permit writers with a space to showcase and share innovative approaches to addressing contaminants of emerging concern, such as PFAS.

National Approach to Disaster Mitigation and Recovery

OWM supported the Office of Water on EPA's National Approach to Disaster Mitigation and Recovery (Order 2074). The purpose of the Order is to reaffirm and leverage existing agency programs and resources on disaster mitigation and recovery and to provide a structure for how regional offices and national programs will support states, tribes, territories, and local communities to recover from disasters. This cross-office effort is being led by staff from the Office of Water's Water Security Division, who presented the standard operating procedures document in March 2021.

Wastewater Utility Emergency Response Plans

In August 2021, the Water Finance Center supported the Office of Water's Water Security Division's publication of Wastewater Utility Emergency Response Plan (ERP) Template and Instructions that

describe strategies, resources, plans, and procedures for wastewater utilities to prepare for and respond to all-hazard incidents. This product is intended to address the gap in ERP guidance between drinking water systems under AWIA and wastewater systems. For consistency, the template was designed to mirror the structure in the AWIA drinking water ERP guidance and was developed with small- and medium-sized systems in mind.

Effective Utility Management Workshops

As part of OWM's long-standing commitment to help utilities improve all aspects of their operations and become truly sustainable, OWM continued to sponsor workshops with utilities to help them assess their operations using the Attributes of Effective Utility Management (EUM) framework, endorsed by EPA and other major water sector organizations. Since 2017, 14 workshops have been held, including 5 in 2021. In total, over 800 attendees from various utilities, mainly smaller and medium-sized utilities, have benefited from this training. In addition, OWM completed a major case study describing how Austin Water Utility in Texas successfully used EUM to improve many facets of its operations.

Innovative Nutrient Removal Technologies Report

In FY 2021, the OWM completed a study and published a technical report that analyzed six municipal wastewater facilities that implemented innovative technologies or process enhancements to significantly intensify treatment or enhance the removal of nitrogen or phosphorus species. The analysis assesses technology performance at each facility and the statistical variability of plant effluent nutrient concentrations over a three-year period. Each case study presents a detailed process description, performance analysis, assessment of process train consistency in meeting permit limits, and lessons learned in process implementation. The report, Innovative Nutrient Removal Technologies: Case Studies of Intensified or Enhanced Treatment, can also be found in EPA's Wastewater Technologies Clearinghouse. This report will support the work of utilities, states, tribes, and communities.

Making the Right Choices for Your Utility

Effective planning is essential for water and wastewater utilities to manage their operations and infrastructure and ensure the sustainability of the communities they serve. As part of the ongoing commitment to assist utilities in their planning efforts, OWM collaborated with the Office of Community Revitalization (OCR) to work with utilities using the EPA developed, Augmented Alternatives Analysis (AAA) planning process, called Making the Right Choices for Your Utility. EPA partnered with the Highline Canal Conservancy near Denver, Colorado, and with the Saco Water Resources Recovery Department in Maine to go through the steps of the planning process. EPA hosted a webinar that highlights the steps in process, the results of the process for each participant group, and valuable input from the Conservancy and Saco on how the process benefited them.

Utilities as Anchor Institutions

EPA also met with utility leaders around the country to observe the ways utilities act as "Anchor Institutions," deeply rooted within their communities. In addition to the extraordinary daily effort of safeguarding public health and protecting the environment by providing clean and safe water, utilities are also uniquely positioned as anchor institutions to create positive economic, social, and environmental impacts in their community. They do this through a variety of activities, above and beyond their daily operations, like workforce development, ecological improvements, and by increasing equity in their communities. EPA created a report that shares some examples of how utilities are leading to promote environmental justice, sustain critical infrastructure investments, and partner with others to advance community goals, with a focus on utility leadership and community equity. EPA hosted a webinar spotlight some of these utilities and their activities.

Small Communities Lagoon Action Strategy Cross-Office Efforts

Throughout the United States, most lagoon systems are found in small, tribal, and rural communities. Lagoons are typically used in these communities due to their affordability to construct, maintain, and operate. Additionally, they serve as excellent

natural wastewater treatment systems. However, despite these benefits, small communities across the United States lack the necessary resources to upgrade and maintain their systems. To address this issue, OWM, Office of Water's Office of Science and Technology, OECA, and EPA regional offices, are working on completing the development of the Cross-Office Small Community Lagoon Strategy. The strategy is supporting efforts to identify the universe of lagoons nationally. Additionally, it is helping with the development of cost and treatment performance data through the ORD STAR Grant RFA and completion of tools for states, tribes, and communities, to streamline the economic demonstration needed to support Water Quality Standards (WQS) variances for small rural and tribal communities. Lastly, the strategy is helping identify financial and technical assistance resources specific to small, rural, and tribal communities. As part of this work, the group has also connected with LGEAN to develop and serve as a "First-Stop Toolbox" for small communities looking for financial, regulatory, or compliance support.

2020 COVID-19 Water Sector Survey Summary Report

In August 2021, EPA published the 2020 COVID-19 Water Sector Survey Summary Report, which relays the results of the 2020 COVID-19 Water Sector Survey. This voluntary survey was conducted under an OMB-approved emergency Information Collection Request (ICR) and gathered information on how the pandemic affected utility function across multiple areas. The survey included information on chemical and equipment supply-chain, workforce, financial, sampling and analysis, and cybersecurity concerns. Through continued technical assistance to potential respondents, the team achieved an impressive 30 percent response rate for the voluntary survey. The results of the survey highlight the resilience of the water sector in continuing to deliver safe and reliable water services, despite the challenges presented by the pandemic. The Water Finance Center assisted Office of Water's Water Security Division in the development of the survey and the report.

Compendium of U.S. Wastewater Surveillance to Support COVID-19 Public Health Response

OWM created a compendium that documents efforts across the country to support the surveillance of SARS-CoV-2 through wastewater sampling and to guide those who are interested in implementing wastewater surveillance in the future by elaborating on funding, project management, results, and potential actions to prevent the continued spread of COVID-19. To support this goal, the compendium documents the efforts of federal, state, local, and tribal agencies—as well as associations, universities, and the private sector—throughout 2020 and into early 2021 to explore federal and other funding sources, develop and implement wastewater surveillance for SARS-CoV-2 and provide information on how programs were implemented through case studies.

Industrial Stormwater Monitoring and Sampling Guide

In April 2021, OWM updated the Industrial Stormwater Monitoring and Sampling Guide as part of a suite of revised technical assistance materials for the industrial stormwater program. A how-to primer for industrial facility operators, specifically those under EPA's 2021 Multi-Sector General Permit (MSGP), the guide presents procedures for conducting visual assessments and analytical monitoring of stormwater discharges. Most industrial stormwater permits, including the 2021 MSGP, require installation and implementation of control measures to minimize or eliminate pollutants in stormwater discharged from facilities. The results of regular stormwater monitoring, along with inspections and visual assessments, provide both quantitative and qualitative information to both the operator and regulators on the effectiveness of controls as well as the overall stormwater management program.

Transportation and Stormwater Management

In collaboration with the Federal Highways Administration, OWM co-hosted a webinar on EPA's Transportation Stormwater Permit Compendium. Over 1,100 people participated, including the Municipal Separate Storm Sewer System (MS4) permit writers and state and local Departments of Transportation. They learned about resources that can assist in developing MS4 permit terms specific to transportation MS4s.

Robust outreach related to EPA's involvement in

the copper-free brake pad MOU continued through the year. In March 2021, OWM met with MOU signatories and several automotive industry groups, ECOS, California's Department of Toxic Substances Control, and Washington's Department of Ecology to mark the 5-year milestone target date of reducing copper in brake pads to <5 percent by 2025. EPA and fellow signatories co-hosted a webinar detailing the partnership on October 6, 2021. Environment and Climate Change Canada's industrial sectors directorate automotive industry liaison met with OWM to learn about U.S. models for voluntary initiatives to reduce automotive related water pollution.

Smart Data Infrastructure to Improve Control and Decision-making in Sewer Systems

Advancements in data gathering technologies have led to the development of decision support tools for real time wet weather management. These dynamic systems remotely adjust facility operations in response to evolving field conditions to manage combined sewer overflows, sanitary sewer overflows, sewer backups, street flooding, and stormwater discharges. In March 2021, OWM published updates to Smart Data Infrastructure for Wet Weather Control and Decision Support, a summary of how municipalities, utilities, and related organizations can use these advances for wet weather control in real time, or near real time. Smart data infrastructure enhances the collection, storage, and analysis of water-related data to inform operational decisions. Such decisions can improve efficiency, reliability, the lifespan of physical assets, and save costs. With 22 case studies, the document demonstrates the value of smart data infrastructure today and its potential for transforming water and wastewater management in the future.

Permits

PFAS Interim Strategy

In November 2020, the Office of Water issued an interim NPDES permitting strategy for PFAS, which provides recommendations from a cross-agency workgroup to include PFAS-related conditions in EPA-issued NPDES permits. The strategy advises EPA permit writers to consider including PFAS monitoring at facilities where these chemicals are expected to be present in wastewater discharges, including from MS4 and industrial stormwater permits. The PFAS that could be considered for monitoring are those that will have validated EPA analytical methods for wastewater testing, which the agency anticipates being available on a phased-in schedule as multi-lab validated wastewater analytical methods are finalized. The agency's interim strategy also encourages the use of best management practices where appropriate to control or abate the discharge of PFAS and includes recommendations to facilitate information sharing to foster adoption of best practices across states and localities.

Rescission of the Maui Guidance

In September 2021, the Office of Water rescinded the recently issued guidance document entitled "Applying the Supreme Court's County of Maui v. Hawaii Wildlife Fund decision in the CWAct Section 402 NPDES Permit Program," which was signed on January 14, 2021. In April 2020, the Supreme Court held that discharges to groundwater require an NPDES permit if the pollutants eventually reach a WOTUS and they are the "functional equivalent" of a direct surface discharge. The Court identified seven factors to determine a functional equivalent discharge. The guidance was rescinded because, after careful review and consideration, it was determined to be inconsistent with the CWA and the Maui decision.

Issuance of the 2021 Pesticide General Permit

In September, EPA re-issued the Pesticide General Permit (PGP). Point source discharges of biological pesticides and chemical pesticides that leave a residue in waters of the U.S. are required to comply with the PGP in areas where EPA is the permitting authority. The permit was issued almost two months in advance of it becoming effective to give permittees time to seek coverage via a new electronic system. The PGP issuance process also piloted many of OWM's efforts to improve the effectiveness of engagement with states, territories, and tribes where EPA is the NPDES permitting authority. EPA believes these actions we believe will result in an EPA-issued permit that better ensures that state, territories, and tribal concerns are appropriately addressed.

Water Quality Trading on a Watershed Scale

In November 2020, following the issuance of the 2019 memorandum updating EPA's water quality trading policy, OWM published a paper titled "Water Quality Trading on a Watershed Scale," which describes three factors – watershed connectivity, relevant regulatory and policy information, and availability of data and modeling – to consider when evaluating the appropriate scale for a trading area. The paper recommends that boundaries for market-based programs, including water quality trading, result from careful consideration of the available hydrological and ecological data of the watershed along with the extent of the pollutants of concern,

and that a larger geographic area may yield greater participation, with corresponding water quality benefits.

Information Collection Requests

EPA publishes reporting and record-keeping requirements to the public through ICRs. In 2020 OWM published two ICRs: "Public Notification Requirements for CSO to the Great Lakes Basin" and "Effluent Limitations Guidelines and Standards for the Dental Office Point Source Category, Final Rule." OWM is also in the process of renewing the NPDES Program ICR, which consolidates the collection burden of several NPDES-related ICRs. OWM published the first FRN for the CSO ICR and the second FRN for the Dental Office Category ICR. For the NPDES Program ICR, EPA began the process of data collection and estimate refinement.

Addressing NPDES Permit Backlog

EPA's FY 2018-2022 Strategic Plan calls for streamlining and modernizing EPA programs, including issuing permits more efficiently. Improving the timing for issuance and re-issuance of NPDES permits will provide greater certainty for the regulated community and ensure that permits reflect the most up-to-date requirements and scientific information. EPA regions have already succeeded in reducing their backlog of new NPDES permits from 106 in March 2018 to 26 in August 2021. Additionally, EPA regions reduced their backlog of existing permits from 547 to 300 in that same time frame.

State Program Authorizations

OWM continued to support EPA regions' authorization of states to implement components of the NPDES program. On July 1, 2021, Idaho's Department of Environmental Quality completed its four-year phased process to assume full responsibility for administering and enforcing the NPDES program. And on January 15, 2021, EPA authorized the Texas Department of Environmental Quality to implement the NPDES program for oil and gas discharges, which includes discharges of produced water, hydrostatic test water, and gas plant effluent. (Note that Texas received authorization for the other components of the NPDES program on September 14, 1998).

Assessment Process for NPDES Permits and Programs

OWM continued supporting the EPA regions with their oversight of state NPDES programs and state-issued NPDES permits, including support for 10 permit and program quality reviews (PQRs). In 2021, OWM also worked collaboratively with EPA regions to develop and launch an annual program assessment framework designed to promote greater efficiency and consistency in permit oversight. OWM tested the process by holding detailed meetings with all ten EPA regions to discuss their performance and processes for EPA-issued NPDES permits.

NPDES Implementation of Water Quality Standards

EPA coordinates closely across Office of Water programs, EPA regions, and states to ensure that NPDES permits reflect the latest water quality criteria and best science. In July 2021, EPA published the Final Technical Support Document: Implementing the 2019 Recommended Recreational Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin, which explains how permitting authorities that adopt EPA's 2019 recommended criteria for these two cyanotoxins that are linked to harmful algal blooms in their water quality standards can implement the criteria through NPDES permits. EPA has circulated, for public comment, four draft documents to support NPDES implementation of the 2016 aquatic life water quality criterion for selenium in freshwater.

Publication of the Draft 2022 Construction General Permit

In May 2021, EPA published the FRN for the proposed 2022 Construction General Permit (CGP) for stormwater discharges from construction activity. This proposed permit, which will replace the 2017 CGP, covers stormwater discharges from construction activities in areas where EPA is the NPDES permitting authority. Key proposed changes include new or clarified provisions related to erosion and pollution prevention controls, dewatering discharges, and permittee training. The public comment period for the proposed permit garnered over 80 comment letters from a variety of stakeholders including tribes, states (e.g., transportation departments), the National Association of Home Builders (NAHB), Associated General Contractors of America (AGC),

and Chesapeake Bay Foundation (CBF). Since the proposed rule was announced, OWM has hosted two CWA Section 401 pre-filing meetings with state and tribal certifying authorities. In addition, EPA staff have hosted informational webinars for the public as well as for tribes.

Issuance of the 2021 Multi-Sector General Permit

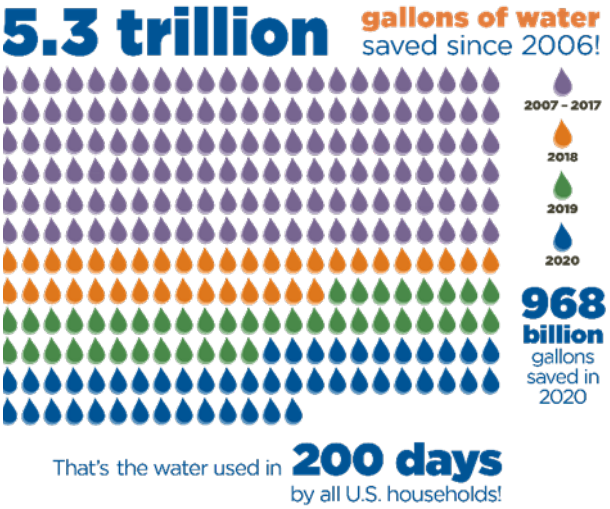
In January 2021, OWM finalized the 2021 Multi-Sector General Permit (MSGP) for stormwater discharges from industrial activity. This permit, which replaces the 2015 MSGP, covers stormwater discharges from industrial facilities in areas where EPA is the NPDES permitting authority and establishes requirements for eligibility, Notice of Intent, effluent limits, inspections, monitoring, and other conditions for 29 sectors of industrial activity. Since the permit was finalized, OWM has presented extensively to over 1,700 stakeholders on the new permit requirements via webinars and professional meetings. New provisions in this permit that will advance protections from industrial stormwater pollutants include requirements for considering enhanced controls for major storm events; indicator monitoring for pH, Total Suspended Solids (TSS), Chemical Oxygen Demand (COD), and polycyclic aromatic hydrocarbons (PAHs); a revised monitoring schedule for impaired waters and benchmark monitoring; and revised follow-up actions for benchmark exceedances.

Partnerships

WaterSense

Fifteen Years of Saving Water

Since June 2006, the program and its more than 2,000 partners have helped save more than an estimated 5.3 trillion gallons of water—more than the amount used by all U.S. households for 200 days. US households, by looking for and installing WaterSense labeled products, saved 968 billion gallons of water in 2020 alone. WaterSense labeled products are independently certified to use at least 20 percent less water and perform as well or better than standard models. More than 36,500 different models of toilets, bathroom faucets and accessories, showerheads, flushing urinals, flushometer-valve toilets, weather-based irrigation controllers, and spray sprinkler bodies have earned the label. EPA estimates WaterSense labeled products have helped Americans save $108 billion in energy and water bills. The WaterSense 2020 Accomplishments Report revisits other successes of the last 15 years.



Controlling Irrigation with Soil Moisture Sensors

After more than a decade of research and collaboration, WaterSense published the final WaterSense Specification for Soil Moisture-Based Irrigation Controllers in February 2021. Soil moisture-based irrigation controllers, also referred to as soil moisture sensors (SMSs), detect the amount of moisture in the ground to prevent sprinkler systems from watering when plants don't need it. Installing a WaterSense labeled SMS can save an average home with an automatic landscape irrigation system more than 15,000 gallons of water annually.

Major Update to WaterSense Homes Program

Completing a process initiated in 2018, WaterSense released Version 2 of the WaterSense Labeled Homes Program in February 2021. The updated program leverages other green building certification programs, provides builders with greater flexibility on how they achieve water savings, and reduces the implementation burden for EPA. Homeowners will benefit from the water and utility bill savings that come from homes that use at least 30 percent less water than typical new homes.

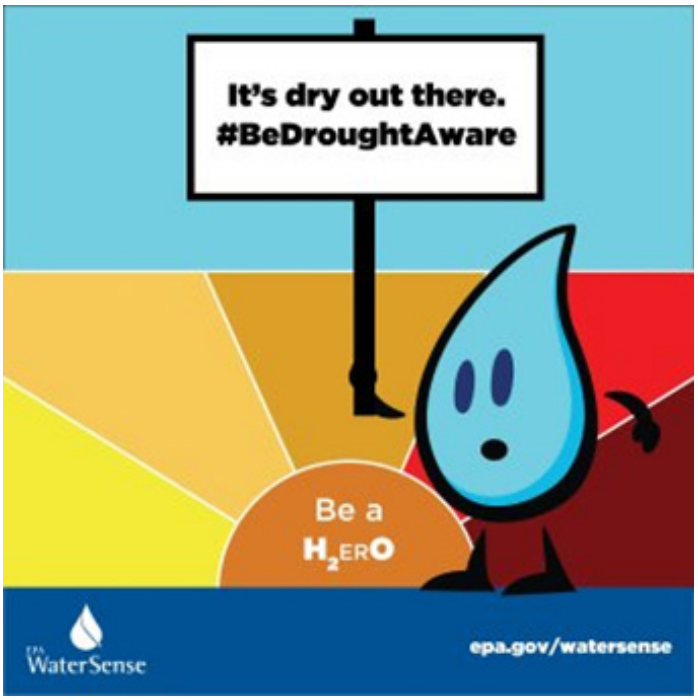
WaterSense Partner Assistance that Saves

During the pandemic many households experienced challenges in managing their utility bills in the face of economic hardships. EPA's WaterSense program worked to better understand how water efficiency programs can help customers with affordability challenges by convening a series of roundtables with several of its partners. The result was the Assistance

that Saves: How WaterSense Partners Incorporate Water Efficiency into Affordability Programs report that was released in July 2021. The resource describes their efforts, lessons learned, and provides case studies that can help other water utilities looking to develop or enhance their programs.

It's Dry Out There! Be Drought Aware!

With drought conditions facing much of the West, WaterSense provided partners with new resources in the summer of 2021 to help them raise awareness with their customers about the need to use water efficiently during a water shortage. The program also updated the drought pages on the WaterSense website with new material to help different parts of the community understand what they can do to help out during a drought.



WaterSense Partners of the Year Awards

WaterSense partners across the country help save water by advancing and promoting WaterSense and water efficiency. While the in-person WaterSmart Innovations Conference was canceled due to the pandemic, the 2020 WaterSense award winners were announced during an October 7, 2020 webinar hosted by the conference organizers.

In 2020, eight partners were recognized with Sustained Excellence Awards for their continued high level of support:

- Athens-Clarke County (Georgia) Public Utilities Department
- Citrus County (Florida) Utilities
- City of Charlottesville (Virginia)
- City of Plano (Texas)
- Metropolitan North Georgia Water Planning District
- Kohler Co.
- The Sonoma-Marin (California) Saving Water Partnership
- KB Home

Eight partners were recognized as Partners of the Year:

- Big Bear Lake (California) Department of Water and Power
- Irvine Ranch (California) Water District
- City of Sacramento (California) Department of Utilities
- Upper San Gabriel Valley (California) Municipal Water District
- Northern Colorado Water Conservancy District
- Orange County (Florida) Utilities
- City of Aspen (Colorado), as a Professional Certifying Organization
- Fulton Homes

WaterSense also presented 13 Excellence Awards, which recognize organizations that stood out in one or more evaluation categories:

- The City of Allen (Texas)
- Hilton Head (South Carolina) Public Service District
- Placer County (California) Water Agency
- City of Durham (North Carolina) Water Management
- Cobb County (Georgia) Water System
- The Toro Company
- City of Flagstaff (Arizona) Water Conservation Program
- Municipal Water District of Orange County (California)
- Sonoma Marin (California) Saving Water Partnership
- SUEZ North America-New York
- Santa Clarita Valley (California) Water Agency
- G3, Green Gardens Group, Los Angeles
- Energy Inspectors Corporation

Decentralized Wastewater Program

Celebrating the 9th Annual SepticSmart Week

EPA's SepticSmart Week campaign informs homeowners about proper septic system care and maintenance, assists local agencies in promoting homeowner education and awareness, and educates local decision makers about infrastructure options to improve and sustain their communities. The 9th Annual SepticSmart Week occurred September 20-24, 2021. Each year, states and organizations submit proclamations of support and commitment to SepticSmart Week; this year, the program received 15 proclamations. The Decentralized MOU Partnership also updated their SepticSmart Week Social Media Guide, which contains social media posts, blogs, press releases, local outreach examples, and much more.

New SepticSmart Program Materials

EPA's Decentralized Wastewater Program created several new SepticSmart Week products for MOU partners, states, and homeowners. The program developed and released all seven new SepticSmart Quick Tip Videos to educate homeowners on how to care for their septic systems. New Frequently Asked Questions for Septic Systems were also created to provide information for commonly asked questions related to septic systems. It includes information on proper use, maintenance, and environmental/public health impacts of septic systems. Lastly the Program created a SepticSmart Week Recognition Document as a more efficient means for MOU Partners to promote SepticSmart Week within their organizations.

Decentralized Wastewater MOU Partnership 2017–2020 Accomplishments Report

The 2017–2020 Accomplishments Report highlights key accomplishments for the MOU renewal period 2017-2020. The information was provided by members of EPA's Decentralized Wastewater MOU Partnership. The document focuses on the MOU Partnership's priorities to:

- work with state and local government entities on outreach to homeowners with septic systems, such as the annual homeowner awareness campaign, SepticSmart Week;
- obtain accurate decentralized system data nationally;
- emphasize the growing decentralized system technologies;
- leverage financial mechanisms for homeowners with septic systems;
- and promote education and training for the decentralized workforce.

Decentralized Wastewater MOU Partnership Webinar Series

EPA's Decentralized Wastewater MOU Partnership hosted two webinars in 2021. The May 2021 webinar focused on innovative technologies and approaches to address decentralized wastewater infrastructure challenges in the Alabama Black Belt, which highlighted three speakers from academia and public health. The second webinar took place in September 2021, during SepticSmart Week, and explored solutions to data gaps on both national and local levels. The webinar highlighted a recent data gathering effort in Puerto Rico to support planning and funding initiatives; and the research of a Ph.D. candidate using machine learning techniques to identify locations of decentralized systems.

Compendium of Decentralized Wastewater Demonstration Grant Projects

In August 2021, EPA released the Compendium of Decentralized Wastewater Demonstration Grant Projects, which summarizes the 18 community decentralized project grantee final reports, funded under those congressional appropriations. Each summary includes project objectives, funding, technology, lessons learned, and current statuses of those communities or projects. These projects range in topics from installation of new advanced wastewater treatment systems, community-wide assessments, to green infrastructure and stormwater improvements.

Decentralized Wastewater Workforce Efforts

In February 2021, the Decentralized Wastewater Program released the first of three decentralized wastewater workforce reports. The Pipeline to a Sustainable Workforce: Decentralized/Onsite Wastewater Occupations report provides a foundational understanding of the career pathways and job clusters in the decentralized industry. It expands on occupational characteristics, including growth projections, and basic education and training requirements of occupations in the industry. It outlines challenges that have led to shortage in the supply of decentralized workers. It also includes 33 individual profiles on specific career occupations. The second and third reports, titled "Education and Training Landscape: Providing a Supply of Talent for "Decentralized/Onsite Wastewater Occupations" and Building a Decentralized Wastewater Training Program" were also developed and will be available in early FY 2022.

Report to Congress on Alternative Decentralized and Centralized Wastewater Treatment Technology

As required by AWIA, OWM provided a report to congress compiling historical and current data from grant and loan programs, in addition to a review of existing EPA materials. EPA's reports, publications, funding programs, and technical assistance documents were compiled to show the types and amount of information provided to units of local government and nonprofit organizations regarding alternative wastewater treatment and recycling technologies. EPA provided data on investments awarded to the states through EPA-funded loan, grant, and technical assistance programs to show which states and regions have made the greatest use of alternative wastewater treatment and recycling technologies. An overview of programs initiated through EPA seed money, including grant programs, technical assistance tools, guidance documents, and other resources were compiled to show which actions taken by the Administrator have assisted states in the deployment of alternative wastewater treatment and recycling technologies.

Other Collaboration & Synergy

Campus RainWorks Challenge

EPA announced the winners of the 9th annual Campus RainWorks Challenge, a design competition that engages the next generation of environmental professionals to showcase the benefits of green infrastructure. The University of Texas at Arlington and the University of Pittsburgh were the first and second place winners, respectively, in the master plan category. The University of Pennsylvania and Florida International University placed first and second in the demonstration project category. This past year, students from the University of Pennsylvania went above and beyond the requirements of the challenge to obtain funding for project construction. The team's vision will protect urban waters and provide local elementary school students with a more equitable and vibrant space in which to learn. This year's challenge involved over 300 students competing on 57 teams from 39 different institutions. Announced in July 2021, the current Campus RainWorks Challenge marks the 10th anniversary of the competition.

WEFTEC Connect

WEFTEC Connect – the virtual WEFTEC – was held in October 2020. The fully virtual conference attracted over 5,700 registrants. EPA hosted a virtual booth, featuring several documents for download in addition to video recorded presentations on highlighted topics. Former Administrator Wheeler delivered a live keynote speech. The Future of Water

Policy technical session with the Office of Water Office Directors followed immediately after.

Affordability Collaboration with Department of Health & Human Services

Since February 2021, the Water Finance Center organized standing biweekly meeting with HHS and OGWDW to discuss program development and stakeholder input for the Low-Income Household Drinking Water and Wastewater Emergency Assistance Program. This program provides funding to assist low-income households that pay a high proportion of household income for drinking water and wastewater services. OWM assisted HHS with the review of State Implementation Plans for the program, and a virtual event for World Water Week.

American Rescue Act Plan Collaboration with Department of Treasury

In June 2021, the Water Finance Center met with staff from the U.S. Department of Treasury to discuss Treasury's plans for tracking and reporting how American Rescue Plan Act (ARPA) funding is spent. Treasury is building a system to collect the data and staff from Treasury offered to run reports specifically for EPA. The Center also established up an informal cross-office team in July 2021 to help share information and address any questions from Treasury.

New Hampshire Department of Environmental Services

The Water Finance Center coordinated a meeting with the New Hampshire Department of Environmental Services (NHDES), per a request they submitted to the Office of Homeland Security. Representatives from the Water Security Division, Drinking Water State Revolving Fund, and Office of Congressional and Intergovernmental Relations attended. NHDES explained they are looking into using a portion of the state's ARPA allotment towards a grant program to support cybersecurity initiatives at water utilities. NHDES was interested in any potential new cybersecurity requirements, especially regarding sanitary surveys. NHDES has also been in contact with other New England states and are also working with the National Association of Water Companies on this initiative. The Water Security Division agreed to follow-up with NHDES separately on technical assistance and contract support for vulnerability assessments. NHDES also took the opportunity to ask about dam rehabilitation eligibility for SRF funding.

Climate Resilient Infrastructure and the Brookings Institution

In August 2021, the Water Finance Center participated in an interview with the Brookings Institution for a new research project to examine the opportunity for more proactive investment in climate resilient infrastructure nationally. The Center discussed the federal agencies' role investing in climate resilient infrastructure, ongoing research in that space, and opportunities for expansion.

National Caucus of Environmental Legislatures Forum Presentation

In July 2021, the Water Finance Center presented at the National Caucus of Environmental Legislatures (NCEL) national forum on the panel titled "Improving Water Infrastructure at the State and Local Level Through Federal Partnerships." Representative Abe Hudson, Jr. (District 29, MS) facilitated the session. Black Millennials for Flint spoke of lead and other hazardous contaminants in drinking water, CWA presented on recent research on basement backups, and the Center discussed the Water Finance Clearinghouse and the importance of affordable financing for affordable rates.

Co-regulator National Pretreatment Virtual Event

In May, OWM, in collaboration with the National Association of Clean Water Agencies (NACWA), the Association of Clean Water Administrators (ACWA, also known as "the States") held a "Co-regulator National Pretreatment Virtual Event." Over 500 participants pre-registered for the three-day event which included discussions and presentations with all three governmental levels, where topics include: "Breaking Down Barriers," Pretreatment Goes to Pot, Clearing FOG, Wastewater Surveillance and Moving beyond the Pandemic, Pretreatment for PFAS, Cross-Media Electronic Reporting Rule (CROMERR), One Water, Case Studies, Wipes, and Round Table discussions at the end of each day.

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