EPA

2018 Issue

SRFs Up

U.S. EPA's Annual Clean Water State Revolving Fund Newsletter

Greetings and welcome to the 2018 issue of SRFs Up, the annual newsletter of the Clean Water State Revolving Fund (CWSRF) program. I usually begin with a review of the accomplishments of the 51 CWSRF programs. However, this year I would first like to pay well-earned recognition to the professional and administrative management and staff working in EPA and in the 51 CWSRF programs. The impressive growth and successes of the CWSRF are directly attributable to their solid accomplishments. As a tangible result, I should note that after 31 years of operation we have now passed $132.5 billion in assistance provided, averaging almost $7.3 billion annually over the last three years alone. The number of loans made now totals 39,948.

What has this huge investment of federal and state dollars achieved? Well over $80 billion – or 50 percent – of the assistance provided has gone to wastewater treatment at publicly owned treatment works. Another $49 billion – or 38 percent – has gone to pipe needs and the correction of combined sewer overflows. The program has also made an important contribution to the prevention of nonpoint source pollution with nearly $5 billion in assistance to a wide range of nontraditional projects. We've been formally tracking the anticipated environmental benefits of the program since 2005. Since then, the CWSRF programs have reported that their assistance has protected 14,395 and restored 7,449 waterbodies.

This issue highlights CWSRF Partnerships and our ongoing PISCES recognition program and ends with updates from headquarters.

Andrew Sawyers, Ph.D.
Director, Office of Wastewater Management

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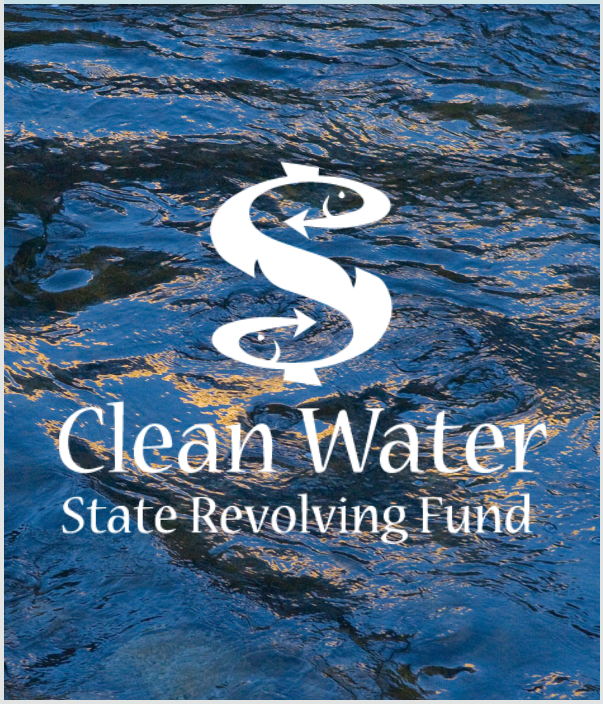


CWSRF Partnerships

With its wide range of project eligibilities, the CWSRF program can support the missions of many other EPA and state programs. In the past year, the CWSRF team has forged relationships with several EPA programs to explore how the CWSRF can help fund their water quality improvement projects to maximize federal investment.

Contaminated Sites

The Office of Wastewater Management and the Office of Land and Emergency Management at EPA worked together to identify ways the CWSRF can support the water quality aspects of brownfields and Superfund remediation projects. This year, we released an updated fact sheet, "Funding Brownfield Remediation with the Clean Water State Revolving Fund," which demonstrates how the CWSRF provides assistance to eligible recipients for the water quality aspects of brownfield site assessment and cleanup. We also released a document entitled, "The Clean Water State Revolving Fund: A Powerful Financial Tool to Support Brownfield and Superfund Assessment and Cleanup," which highlights several CWSRF, brownfields, and Superfund co-funded projects.

Brownfield Project - Indiana
Former Columbus Wood Treating Plant

Before After

Brownfield Project - Alabama
Fairview Environmental Park

Nonpoint Source Program

The CWSRF is working closely with our partners in EPA's nonpoint source (NPS) program to develop a guide to help states get started or take the next steps toward increasing their CWSRF investments in NPS projects. The guide will also present best practices for improving the integration between their CWSRF programs and their CWA Section 319 NPS management programs.

National Estuary Program

The CWSRF team met with the National Estuary Program (NEP) team at EPA headquarters. The NEP program protects and restores water quality and ecological integrity in 28 designated estuaries of national significance across the United States, including Puerto Rico. Each NEP develops a Comprehensive Conservation and Management Plan (CCMP) under Section 320 of the Clean Water Act (CWA).

The NEP team at EPA headquarters and several NEP programs in different states discussed ways the CWSRF can support the NEPs and increase funding for water quality improvement projects that implement their CCMPs. Discussions focused around funding projects in NEP watersheds under section 603(c)(3) of the CWA and the importance of coordination between NEPs and state CWSRF programs. The CWSRF plans to hold an introductory webinar and meeting of state

CWSRF programs and the NEP directors. CWSRF team members spoke at the NEP National Conference in Washington, DC and are presenting at the Restoring America's Estuary Conference this year.

Estuary Project - Bellingham, Washington
Squalicum Creek Reroute

Watershed Financing Partnerships

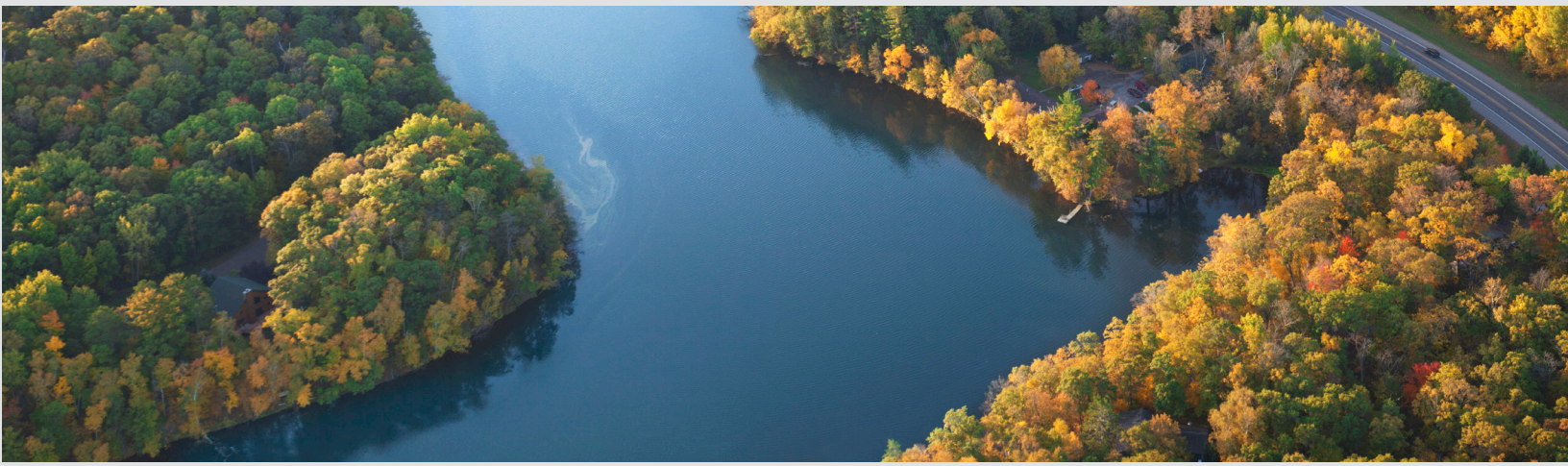
A CWSRF watershed financing partnership is a model for implementing projects on a watershed basis using CWSRF financial assistance. Through this model, a CWSRF works with a watershed partner to finance and implement a group(s) of eligible projects within a watershed. The partner(s) may act as a broker, implement the projects, or provide sub-assistance agreements to additional partners. A watershed financing partnership differs from the typical model where CWSRF assistance is delivered on a project by project basis directly to an assistance recipient, and where the assistance may not be linked to a particular watershed.

Many CWSRF programs may already be utilizing forms of watershed financing partnerships. We are developing a program bulletin for the SRF programs that builds upon this concept. The purpose of this bulletin is to raise awareness of this financing model and to share what has already been done across the country.

Marketing and Outreach

This year, we continued the successful limited state marketing surveys and focus groups in Arizona, Nebraska, Nevada, and Arkansas. The surveys and focus groups allow the SRFs to gain better insight into the perception of their programs by potential assistance recipients and consulting engineers. The focus groups and surveys revealed several views that are generally consistent across SRF programs. We plan to develop a document summarizing the findings of these activities for the benefit of states across the country that are interested in gaining insight into their own SRF programs.

Related to our work with the Nonpoint Source (NPS) program, we have been working on a marketing pilot with the Vermont SRF program. As part of this pilot, EPA supported a focus group that brought together municipalities and nonprofits to get feedback on how a NPS sponsorship program should be designed and incentivized, and also provide an opportunity for some preliminary "matchmaking" between municipalities and the NPS projects they might sponsor. We also supported the development of a calculator showing the benefit of NPS projects on reducing downstream pollution, treatment costs, and chemical loadings that Vermont plans to use as a marketing tool to encourage community participation in the NPS sponsorship program.



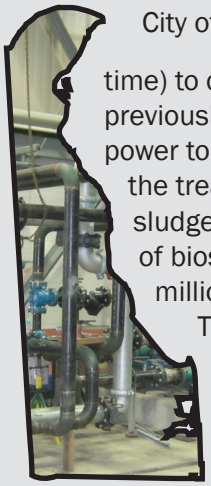
2018 PISCES EXCEPTIONAL PROJECTS

Performance and Innovation in the SRF Creating Environmental Success

The CWSRF's Performance and Innovation in the SRF Creating Environmental Success (PISCES) program recognizes projects that have demonstrated excellence in promoting EPA's mission of protecting human health and the environment. This year's projects serve as examples of distinguished performance and financial integrity. All recognized projects are featured in the PISCES Compendium that can be found on the CWSRF website at www.epa.gov/cwsrf/pisces.

Renewable Energy and Biosolids Facility

City of Wilmington, Delaware



The City of Wilmington's wastewater treatment facility received a $36 million CWSRF loan (largest in the program at the time) to construct a renewable energy and biosolids facility for their treatment plant. This new facility now captures previously flared off methane gas from the plant's anaerobic digester and landfill gas from nearby and uses this power to run two reciprocating internal combustion engines that generate four megawatts of electricity. This offsets the treatment facility's electricity needs by 90 percent. The thermal energy from the engines is used to heat a sludge thermal dryer which reduces 140 wet tons of daily biosolids by nearly 80 percent to reach about 30 dry tons of biosolids. These reductions in electricity and solid waste disposal costs are estimated to save the city $16.7 million over 20 years.

This project also sponsored a $3.4 million CWSRF loan for the permanent conservation and remediation of 22 acres of wetlands in the historic Southbridge region. The total loan interest rate was reduced from 3 percent to 2 percent which allowed Wilmington to borrow the additional funds at 0 percent interest. The two loans have the same annual debt service of the original loan, which means conserving the wetlands required no extra funds. This has led to an application for an additional CWSRF loan for $15.2 million to remediate the wetlands for flood control and stormwater management for the nearby Southbridge community.

Dodge City Bio-Gas Reuse to Motor Fuel

Dodge City, Kansas

In recent years, the Dodge City South Wastewater Treatment Plant was funded in part with an EPA grant to reuse 100 percent of its 1.7 billion gallons a year of treated effluent as irrigation for over 3,000 acres of agricultural fields resulting in groundwater being saved for the public water supply. This treatment process had produced a significant amount of carbon dioxide and methane gas which were then burned off in a flare. Their new project will clean and pressurize the bio-gas into high quality natural gas that then can be used as fuel. This process will remove water from the gas and use pressure swing adsorption molecular sieves to separate the gases. A purified methane bio-gas is then pumped to a nearby gas line and entered into the commercial market as a renewal resource. The project costs are expected to be less than $10 million and the city plans to receive about $2.5 million a year in revenue in Renewal Identification Number (RIN) methane sales and will be sold as motor vehicle fuel across the Midwest. The annual methane fuel production being produced as a renewable source is estimated to be the equivalent of 3.5 million gallons of gasoline per year.

Pump Station Resiliency Initiative

South Monmouth Regional Sewerage Authority (SMRSA), New Jersey

The South Monmouth Regional Sewerage Authority (SMRSA) operates a sewage treatment plant and a conveyance system that services several coastal communities that have recently experienced extreme storms. Using the NJ Water Bank's Statewide Assistance Infrastructure Loan (SAIL) Program, SRF funds were used to provide SMRSA short term funding as an advance for Federal Emergency Management Agency (FEMA) assistance to build three resilient pump stations. Two of these pump stations are fully operational mobile units that can be disconnected during a severe storm and hauled to a safe location. Once the storm subsides, the mobile stations are returned and reconnected. These mobile resilient pump stations (MRPS) contain main electrical components, computer equipment, and an emergency generator located on a mobile trailer at the original pump station site. Older pump stations in these coastal areas have received serious damage in recent years that have cost millions and left the community without sewer services. The MRPS have proven to limit the disruption in conveyance, minimize sewer overflows, and have saved SMRSA millions of dollars. The third pump station replaced an older station in a 100-year flood zone. This new pump station is a permanent fixture designed to look like the neighboring residential housing and was placed outside the flood plain.

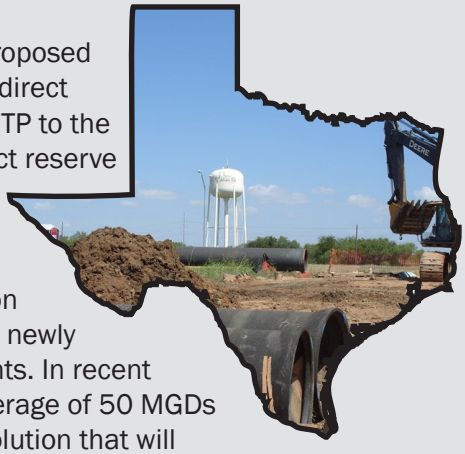
Crooked River Wetlands Complex

City of Prineville, Oregon

Several years ago, the city of Prineville needed to increase their wastewater treatment capacity to keep up with the city's growth. Since a new treatment center was estimated to cost $62 million, the city explored their options and received a grant to fund a groundwater study and test a constructed wetland pilot. Results were promising, so the 120-acre Crooked River Wetlands Complex was designed and constructed to achieve cooler water and an augmented stream flow to meet the effluent limits in the city's NPDES wastewater permit. This wetland wastewater treatment system cost $7.7 million to construct, which saved the city $54 million by no longer needing to build a traditional WWTP. The project has over 2 miles of riparian improvements and over 5.4 miles of new trails for recreational use of which 3.25 miles are paved for use year-round. The complex also makes an excellent outdoor classroom as at least 500 school children have visited the complex for educational opportunities. Overall, this innovative project expanded the city's wastewater capacity, lowered residential and business system development charges, stabilized monthly wastewater rates, created a new public hiking trail system with numerous educational opportunities, and improved riparian and instream conditions in the Crooked River.

Permanent Reuse Project

Wichita Falls, Texas



The drought prone city of Wichita Falls has proposed a permanent reuse project that will deliver indirect potable reuse water from the River Road WWTP to the city's raw water source, Arrowhead Lake. This $33.5 million CWSRF loan is a green project reserve loan with over $252,000 of principle forgiveness. When complete, this project will allow the plant to make stringent effluent limits that will allow up to 16 million gallons per day (MGDs) of processed wastewater to be added to the lake. Improvements will consist of a chemical coagulation, filtration, and reaeration system along with a new pump station and a 15-mile outfall pipeline that will run to the lake to make the city compliant with the newly established Texas Pollutant Discharge Elimination System (TPDES) discharge requirements. In recent years, Wichita Falls imposed strict water restrictions on the community going from an average of 50 MGDs of use in the summer to just 14 MGDs. This reuse system plans to provide a long-term solution that will assist the city in meeting their water source needs.

2018 PISCES Honorable Mention and Recognized Projects

- Afton Green Infrastructure & Advanced Wastewater Treatment, MN
- Avon Lake Lateral Loan Program, OH
- Bellingham Squalicum Creek Water Quality and Biotic Integrity Improvements Project, WA
- Cocoa Beach Minuteman Causeway Stormwater/ Streetscape Improvements, FL
- Cuba Solids Handling and Effluent Reuse, NM
- Cullman WWTP Improvements, AL
- Cumberland CSO Storage Facility, MD
- Durango Santa Rita Water Reclamation Facility, CO
- East Lansing Headworks Upgrades and Outfall Retrofit into a Relief Interceptor, MI
- Grafton Wastewater Treatment Improvements, MA
- Harrisonburg-Rockingham Regional Sewer Authority Biogas Recovery & Reuse at the North River WWTF, VA
- Kodiak Compost Facility, AK
- Lewis-Auburn Water Pollution Control Authority Anaerobic Digestion and Cogeneration Units, ME
- Liberty Design-Build Wastewater Treatment Facility, MO
- Lincoln County Sanitation District Junction City to Hustonville Sewer Project, KY
- Nampa Wastewater Treatment Plant Upgrade Project, ID
- Newport Wellington Ave CSO Treatment Facility Upgrade, RI
- Oklahoma City Atoka Reservoir Dam Rehabilitation, OK
- Peachtree City Lake Peachtree Dam Spillway, GA
- Pennsoboro Wastewater System Improvement Project, WV
- Reading Fritz Island Solids & Liquids Plant Upgrade, PA
- Renewable Water Resources Reedy River Basin Sewer Tunnel, SC
- San Francisco Public Utilities Commission Lake Merced Green Infrastructure, CA
- Waterbury Wastewater Treatment Facility Upgrade, VT
- West Monroe Solar Panel Farm, LA

Honorable Mention projects are highlighted in orange.

For more information on all of these exciting projects, please visit www.epa.gov/cwsrf/pisces.

Headquarters Updates

American Iron and Steel (AIS)

AIS Site Visits and Outreach

As part of the American Iron and Steel (AIS) provision, EPA conducts outreach to SRF projects through site visits and training to ensure proper implementation of the AIS requirements.

In 2018, the AIS program completed 35 site visits across 10 states. The site visits provide an opportunity for communities to ask project-specific AIS questions and receive EPA recommendations for improving their AIS documentation prior to project completion. The AIS program also conducted five trainings in Oklahoma (1), West Virginia (1), Florida (2), and Wisconsin (1), providing technical assistance to engineers, contractors, suppliers, and manufacturers involved with CWSRF projects. The trainings explain how AIS requirements apply to SRF projects and outline the responsibilities of each stakeholder, including federal and state governments, in its implementation. They also provide an opportunity for engineers, contractors, suppliers, and manufacturers to note project-specific or product-specific AIS obstacles and receive EPA feedback on potential solutions. The program has an open offer for EPA-led AIS trainings to all state SRF programs.

AIS Waiver Requests

As part of the AIS requirements, SRF projects are permitted to request a project-specific waiver through their state for products of foreign or unknown origin. In 2018, EPA received and processed 17 CWSRF project-specific waiver requests, of which, 1 was approved, 8 were withdrawn or denied, 2 are currently in process, and 6 await management decision. The AIS program continues to work with the states and its CWSRF projects to identify domestic alternatives that meet project specifications. EPA may grant a waiver in instances where (1) applying these requirements would be inconsistent with the public interest; (2) iron and steel products are not produced in the U.S. in sufficient and reasonably available quantities and of a satisfactory quality; or (3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Coordination of AIS Requirements Across the Federal Government

AIS requirements have been incorporated into various other programs. This year, the AIS program continued collaborating with the U.S. Department of Agriculture (USDA) and the WIFIA program through trainings and site visits. Because the AIS requirements are identical, the CWSRF AIS program is supporting its consistent implementation across these federal programs. As part of the same Office, the CWSRF AIS program is supporting the WIFIA program with general AIS implementation.

Through an Interagency Agreement (IA), the USDA and EPA hold bi-weekly calls to discuss AIS-related inquiries and project-specific waivers, provide updates on national waivers, and share AIS resources. The AIS program participated in USDA AIS trainings in Utah, Minnesota, Ohio, and South Carolina to help answer questions from USDA state engineers and other stakeholders on AIS implementation. USDA state engineers were invited to attend CWSRF site visits for observation and have attended several site visits in multiple states.

Green Project Reserve Case Studies

Across the United States there is increasing awareness of the need to address pollution generated by stormwater runoff. As stormwater moves through the landscape it captures and carries trash, bacteria, heavy metals, and other pollutants from the urban environment. These pollutants degrade the quality of receiving waters and threaten public health. Stormwater can also cause erosion and flooding, damaging wildlife habitat, property, and infrastructure.

Green infrastructure practices offer flexible solutions for managing stormwater runoff and protecting public health and water quality. Green infrastructure works by incorporating both the natural environment and engineered systems to protect, restore, or mimic the natural water cycle. A variety of green infrastructure practices can be used to capture, treat, infiltrate, and evapotranspire stormwater runoff. At the local level, green infrastructure practices include land conservation, rain gardens, permeable pavements, green roofs, infiltration planters, trees, rainwater harvesting systems, and more. Applied at scale, green infrastructure preserves and restores natural landscapes and allows for better management of stormwater runoff in the urban environment. At any scale, green infrastructure practices can provide a wide array environmental benefits.

In September, the CWSRF team issued a report on the environmental benefits of CWSRF-funded green infrastructure projects. The report includes case studies of projects from New York, Pennsylvania, Ohio, Minnesota, and Oklahoma for which monitoring or modeling was conducted to assess the environmental benefits of the projects. Their results are quantifiable and not only highlight the environmental benefits of green infrastructure, but tell an important story: across a wide variety of projects and multiple geographic areas, CWSRF programs are making a substantial difference in the national effort to prevent stormwater pollution.

SRF Database Modernization

To help streamline CWSRF and DWSRF data collection, the CWSRF team is partnering with the Office of Ground Water and Drinking Water to redesign and consolidate the multiple databases currently used to collect SRF performance information into a single system. This effort will reduce reporting burden by eliminating redundancy and providing a more streamlined interface for states to submit data required by EPA. As part of this effort, EPA is actively exploring ways by which required data can be uploaded from other EPA and state databases to further reduce the burden placed upon the states.

Congratulations to Sheila Platt on 50 Years of EPA (and CWSRF) Success!!

She has left an indelible footprint on the SRF program and in the hearts of many EPA folk that she gave her time and energy to assist.
- Region 9

You are indubitably the cornerstone, the voice of reason, and the rock of Gibraltar when it comes to the CWSRF, and how it should be run.
- Region 10

Thank you for your great institutional knowledge and wisdom of the SRF program and for always being the go to person to help us in resolving difficult issues.
- Region 2

Feedback

We would like to engage with stakeholders on future SRFs Up content and are always willing to feature guest articles on topics of interest to the CWSRF community. If you have ideas for articles you would like to see in future newsletters, please let us know by contacting us at CWSRF@epa.gov.

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