



George F. Ames **PISCES 2022** **Recognition Program**



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Cover photo credit: East County Advanced Water Purification Joint Powers Authority

DIRECTOR'S ADDRESS



I am excited to share the project nominations for the 2022 Clean Water State Revolving Fund George F. Ames Performance and Innovation in the SRF Creating Environmental Success (PISCES) program. This year, we received nominations from 20 state Clean Water State Revolving Fund (CWSRF) programs.

The 2022 PISCES nominations cover a wide variety of project types, from septic to sewer, regionalization and partnerships, and mitigation and resiliency to natural disasters. These projects demonstrate leadership in innovative financing, system partnerships, community engagement, public health protection, and creative solutions.

Thank you to everyone who participated in planning, financing, constructing, nominating, and reviewing this year's projects. Most of all, thank you to the managers of the 51 state CWSRF programs for your continued commitment to the environment and public health protection.

I hope that you enjoy reading this compendium of 2022 PISCES-nominated projects and that the projects inspire continued innovation in the CWSRF.

A handwritten signature in black ink, appearing to read "A. Sawyers".

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



Photo credit: East County Advanced Water Purification Joint Powers Authority

RECOGNIZING EXCEPTIONAL SUCCESS

The CWSRF George F. Ames PISCES Recognition Program nationally recognizes CWSRF-funded projects for exceptional focuses on the environment and public health. These projects are examples of the high level of innovation possible with the CWSRF.

Participating states in this voluntary recognition program nominated one CWSRF project during the 2022 round. Nominations were based on the following criteria categories. EPA selected one project from each category to be recognized as an Exceptional Project based on the project's overall impact in the category.

- **Innovative Financing:** Uses a creative financing mechanism that aligns with the needs of the community.
- **System Partnerships:** Creates a partnership that brings together stakeholder groups and resources to create a collaborative approach to addressing water quality needs.
- **Community Engagement:** Involves the community during the project design or includes a project element that encourages community engagement.
- **Environmental and Public Health Protection:** Employs a sophisticated approach to addressing water quality. These projects may include preemptive treatments, reduction in capacity loading, use of new technologies, or other aspects that focus on innovative design.
- **Creative Solutions:** Uses an unconventional approach in meeting the community's needs.

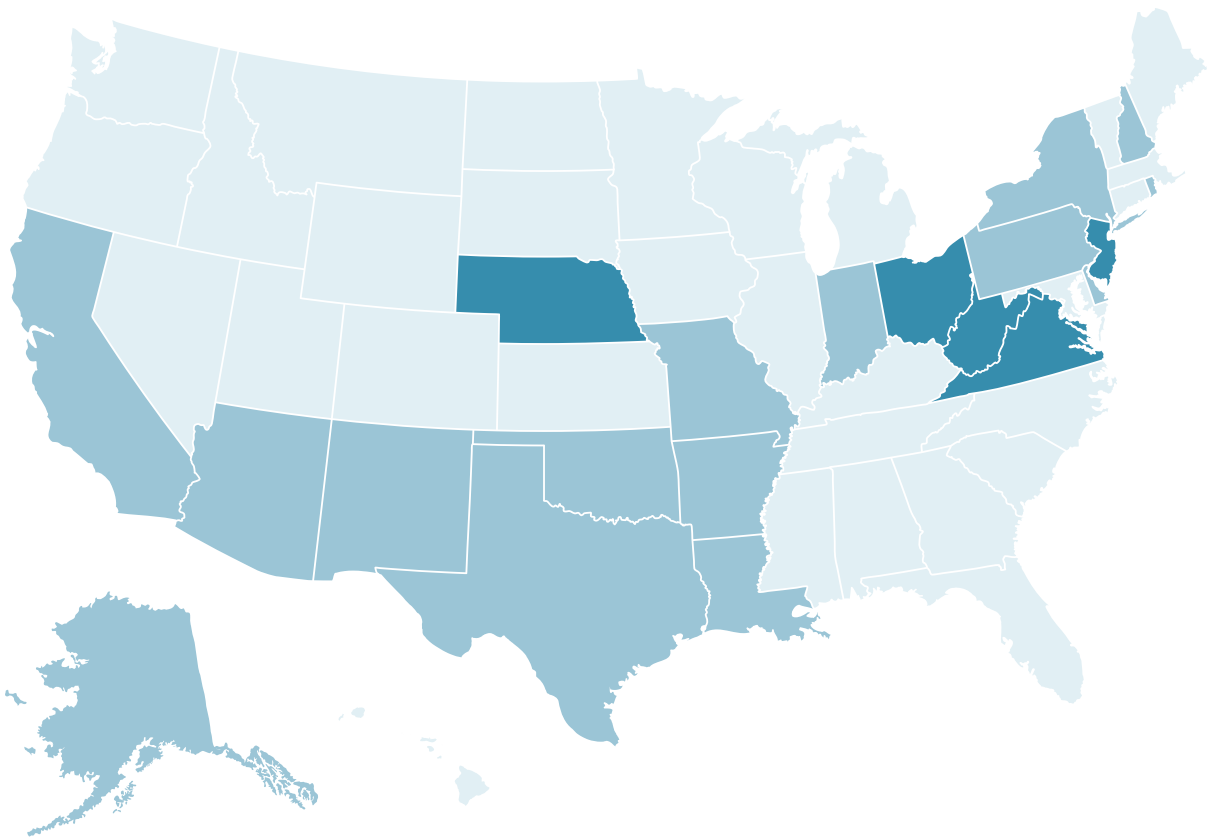




Photo credit: City of Hastings

Creative Solutions

Nebraska Department of Environment and Energy

Project Name: Hastings Aquifer Storage and Restoration Project

Assistance Recipient: City of Hastings, Nebraska

Drinking water wells in the City of Hastings contained high concentrations of nitrate and uranium. Hastings Utilities faced a difficult decision, as constructing a traditional water treatment plant would cost more than \$100 million and severely increase community utility rates. Instead, Hastings Utilities chose to proceed with an Aquifer Storage and Restoration project to treat highly concentrated nitrate water and inject it back into the aquifer to provide a clean drinking water source. Hastings received \$2.8 million in CWSRF assistance towards this \$6.7 million project.

The project involves extracting groundwater upgradient of the Hastings municipal water supply wells. A dual pump system is utilized to extract groundwater having higher nitrates found near the top of the aquifer and lower nitrate water found at the bottom. The high nitrate groundwater is treated using a reverse osmosis system. Afterwards, it is blended with the low nitrate groundwater to produce a stable injection water and then injected back into the aquifer through a network of restoration wells. The average monthly injection volume is 90 million gallons of potable water, with the Reverse Osmosis Facility operating at a third of its capacity. Initial signs of the project's effectiveness have been shown through decreased contaminant concentrations in water tests of extraction wells and dedicated monitoring wells. This project demonstrated an economical engineering solution for providing treated drinking water to the city's residents.



Photo credit: McDowell County

Environmental & Public Health Protection

West Virginia Department of Environmental Protection

Project Name: Coalwood Sewer Project – Phase 1

Assistance Recipient: McDowell County Public Service District

Challenges such as declining population, low income, and mountainous terrain have made traditional sewer extensions infeasible in the community of Coalwood in McDowell County, West Virginia. Residential sewage had been either treated by individual septic tanks or discharged directly to Clear Fork, a tributary of the Guyandotte River. Previous projects that proposed a single system to serve the Coalwood area were turned down due to high operation costs for multiple pump stations. The McDowell County Public Service District's (PSD) Coalwood Sewer Project marks the district's first foray in becoming a sewer utility.

The McDowell County PSD pursued a creative solution to split the residents into different collection systems and wastewater treatment plants. This approach removed the need for multiple lift stations and deep interceptor sewers. The first phase of the project will install a decentralized collection system and a 17,500 gallon per day moving bed bioreactor wastewater treatment plant to serve 72 residents in the geographically remote area. Future phases will provide adequate treatment for an additional 137 residences, eliminating direct sewage discharges and failing septic tanks in Coalwood. Additionally, the PSD partnered with the nearby City of Welch, West Virginia, to provide sludge processing for Coalwood. This partnership removed the cost of adding sludge processing to the project and significantly reduced future trucking costs for sludge disposal. The PSD leveraged a \$1.2 million CWSRF loan with 100% principal forgiveness for decentralized systems in conjunction with a U.S. Department of Housing and Urban Development Community Development Block Grant and a West Virginia Infrastructure and Jobs Development Council Grant. This project will provide both public health and environmental benefits by reducing sewage discharges and lowering fecal coliform inputs to the impaired Clear Fork.



Photo credit: Hunt Engineering LLC

System Partnerships

Ohio Environmental Protection Agency

Project Name: STEP Collection System Dupont-Cloverdale Wastewater Plant

Assistance Recipient: Village of Dupont, Village of Cloverdale

The neighboring northwest Ohio communities of Dupont and Cloverdale suffered from failing home sewage treatment systems and required significant financial assistance to make the necessary upgrades affordable for their combined 460 residents. This project eliminated 186 failing or compromised home sewage treatment systems by constructing a regional wastewater treatment plant between Dupont and Cloverdale and individual septic tank effluent pump collection systems in each community.

By coordinating together to propose a regionalization project, the communities were able to develop a financing package that qualified them for the Ohio SRF's Water Pollution Control Loan Fund (WPCLF) principal forgiveness and grant funding. Dupont received \$4 million in CWSRF principal forgiveness as well as grants from the U.S. Army Corps of Engineers, U.S. Department of Housing and Urban Development Community Development Block Grant (CDBG) and the Ohio Water Development Authority (OWDA). Cloverdale received \$902,000 CWSRF loan at a 0% "small community" rate, \$500,000 from the OWDA, and grants from the CDBG program.



Photo credit: Town of Kearny

Community Engagement

New Jersey Department of Environmental Protection

Project Name: Kearny Town Redevelopment of Recreational Complex

Assistance Recipient: Town of Kearny, New Jersey

The Town of Kearny used a creative approach to address contamination and redevelop the Gunnell Oval Recreational Complex into a modern artificial turf sports complex. The site was contaminated with historic fill materials beneath its natural grass cover, creating polluted runoff that would flow into the nearby tidal Kearny Marsh. This area also experienced frequent flooding and surplus backflow within the Kearny Marsh ecosystem. Due to strong community engagement between the mayor, town council, and the public, along with multiple funding sources, the town was able to construct and redevelop the Gunnell Oval Recreational complex. The New Jersey Water Bank provided Kearny with a \$12.4 million CWSRF loan for the project, thereby creating a savings of \$3.2 million. The town also received over \$3.6 million in state grants.

The project involved installing an engineered cap over the historic fill to minimize exposure to the contaminated materials and reduce polluted runoff into the Kearney Marsh, which brought the project into compliance with the State's water quality requirements. Additional environmental benefits include improved stormwater management to minimize the frequent flooding in residential and industrial neighborhoods. This is achieved through the direct collection of runoff through the artificial turf underdrain system, improved discharge capabilities through the construction of a new stormwater outfall, elevated ground levels to 100-year flood levels, and on-site retention systems. An estimated 200,000 gallons of stormwater can be stored under the playing fields. Lastly, the project provides additional recreational opportunities through its multi-sport facility including various regulation-sized fields for baseball, softball, soccer, football, and a skate park. Through available financing options, Kearny took the steps to address this area's long-standing public health, environmental, and recreational needs through one, multi-faceted project.



Photo credit: Hampton Roads Sanitation District

Innovative Financing

Virginia Department of Environmental Quality

Project Name: Hampton Roads Sanitation District Programmatic Loan

Assistance Recipient: Hampton Roads Sanitation District

The Hampton Roads Sanitation District (HRSRD) has \$1.1 billion in system repairs and improvements to be completed by 2040 in response to a Consent Decree to reduce sanitary sewer overflows in its service area. HRSRD needs a flexible financing partner to implement its adaptive management approach and meet its goal to prioritize the greatest public health and community benefits for public dollars invested. Virginia's Clean Water Revolving Loan Fund (VCWRLF) worked in collaboration with HRSRD and the Virginia Resources Authority (VRA) to create a programmatic agreement that uses a \$100 million loan to pay for 48 individual projects across 18 localities, thereby creating a consistent source of funding and flexibility to the sub-projects, while protecting HRSRD from fluctuations in the bond market.

Because of this programmatic loan, a considerable amount of time has been saved and many legal fees have been avoided, while locking in a low interest rate of 1.15% that will result in savings of \$32.8 million. A tracking tool co-managed and continually updated by HRSRD and VCWRLF ensures individual projects are not receiving reimbursement for expenses unless program requirements are met. The tool has also helped monitor the draw-down of the loan to balance planning and design expenses with construction expenses. In addition, one project in the loan is co-funded with a federal Water Infrastructure Finance and Innovation Act programmatic loan, which has allowed HRSRD to achieve the lowest capital cost for that program. The improvement and growth of HRSRD's wastewater system through this creative financing mechanism serves as an example for VCWRLF in promoting regionalization as a path towards universal access to wastewater treatment for all Virginians.

Recognized Projects



Indiana Finance Authority

Project Name: Wastewater System Improvement Projects

Assistance Recipient: City of Bluffton, Indiana

The City of Bluffton collaborated with the Indiana SRF program and Wells County to finance a regionalization project that merged Wells County Regional Sewer District with Bluffton's collection system and wastewater treatment plant. The system merge eliminated 35 failing septic systems, reduced inflow and infiltration, and optimized Bluffton's utility operations. By pursuing a system partnership, as opposed to constructing a new wastewater treatment plant, both partners were able to save money and improve services for their customers.

To finance this regionalization project, Bluffton worked closely with the Indiana SRF to develop an innovation financing package that combined federal, state, and local resources. The Indiana Finance Authority (IFA) purchased \$12.7 million in wastewater bonds from the City of Bluffton, which were offered through the IFA's extended term program at a 35-year period and a 2.50% interest rate. As the project impacted disadvantaged communities, IFA also awarded Bluffton a State Water Infrastructure Fund Grant to mitigate the user rate impact. The combination of the extended term loan and the grant saved Bluffton over \$3.8 million in interest expenses over the life of the loan.

New Mexico Environment Department

Project Name: The Town of Taos Wastewater Treatment Plant Solar Project

Assistance Recipient: Town of Taos, New Mexico

In 2016, the Town of Taos applied for funding through the New Mexico CWSRF for the construction of two solar projects at its wastewater treatment plant, which also serves the El Prado Water and Sanitation District and the El Valle de Los Ranchos Water and Sanitation District. The first project was a 1-million-watt photovoltaic system that generated enough power to offset most of the electric utility costs associated with the town's wastewater treatment plant. The second project was a net metered photovoltaic system with battery storage for the membrane bioreactor facility. Membrane bioreactors are a type of secondary wastewater treatment technology that combines filtration and biological treatment processes.

Completed in July 2022, the solar projects provide significant financial savings and cleaner energy for the multiple small communities served by the wastewater treatment facility. The total CWSRF assistance for this project was \$2 million that included \$1.2 million as principal forgiveness. The Town of Taos expects to save \$4.4 million in energy costs over the 25-year repayment period.





Missouri Department of Natural Resources

Project Name: City of Van Buren/ Deer Run Reorganized Common Sewer District (Deer Run Development)

Assistance Recipient: City of Van Buren, Missouri

The Deer Run Reorganized Common Sewer District (Deer Run Development), located within the Mark Twain National Forest, until recently, sent its wastewater to a 50-year-old unpermitted lagoon that released its effluent to the Current River. Most of the properties in the community utilize on-site septic systems, contributing to the risk of contamination of the Current River. These issues resulted in a moratorium being placed on both new connections to the lagoon and installation of new on-site septic systems, effectively preventing further development of the area. Due to the low number of residents, the Deer Run Development struggled to achieve compliance with the elimination of unauthorized discharges.

Through extensive stakeholder engagement, the City of Van Buren and the Deer Run Development created a regionalization plan to construct a sewer extension from the Deer Run Development to the city's wastewater treatment facility. The project involved the construction of a new lift station and the installation of an electromagnetic flowmeter. Thanks to a Missouri CWSRF Regionalization Incentive Grant of \$1.7 million, the City of Van Buren was able to help Deer Run Development connect to a fully functional sanitary sewer system and close the unpermitted lagoon.

Photo credit: Hunt Engineering LLC

New York Environmental Facilities Corporation

Project Name: City of Rome Water Resources Recovery Facility Upgrades

Assistance Recipient: City of Rome, New York

The City of Rome owns and operates a Water Resource Recovery Facility (WRRF) that required significant upgrades to its aging treatment equipment. In addition to the necessary treatment capacity expansions, the City invested in the installation of a high strength organic waste receiving station for acceptance of dairy whey, liquid sludge, source separated organics, and fat/oil/grease wastes. The city also constructed a combined heat and power system (CHP) that generates electricity with biogas, thereby offsetting some of the WRRF's energy usage. These upgrades to the WRRF allow the plant to treat large quantities of high strength organic waste and develop partnerships with Chobani and many other local businesses wishing to dispose of their organic waste in a more cost-efficient and environmentally friendly way.

The City of Rome received \$10.4 million in interest-free CWSRF financing and a \$2 million New York State Green Innovation Grant for the project. The improvements to the WRRF and new CHP facilities allow the WRRF to increase its revenue stream while moving further towards energy independence through biogas utilization. These benefits lead to a cleaner environment and lower sewer rates for customers in the municipality in the long-term.

Photo credit: City of Rome





Texas Water Development Board

Project Name: Biosolids Reuse – Using Design-Build Alternative Delivery Method

Assistance Recipient: City of Fort Worth, Texas

The City of Fort Worth received \$62.8 million in CWSRF assistance to increase the marketability of the biosolids produced from its wastewater treatment plant. Biosolids, an organic matter recycled from treated sewage, can be land-applied to farmland in North Central Texas. To increase the marketability of this product, the city constructed a new biosolids reuse processing facility at the Village Creek Water Reclamation Plant using improved technology. The new facility produces Class A Bio-Solid pellets, which meet both current and projected regulatory requirements and produce less odor when applied. In addition, the biogas produced by the treatment plant will be used to help reduce the facility's use of natural gas for heating.

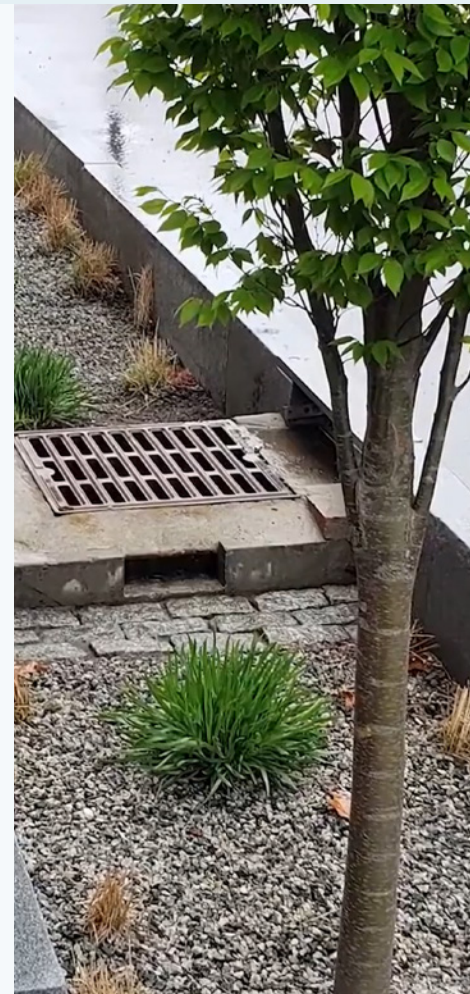
Photo credit: City of Fort Worth

Rhode Island Infrastructure Bank

Project Name: Pine Street South Green Stormwater Improvements in TOD District

Assistance Recipient: City of Pawtucket, Rhode Island

Rhode Island's Pawtucket-Central Falls commuter rail train station and Transit-Oriented Development (TOD) District was formerly an underutilized and vacant area with stormwater and combined sewer overflow issues that led to the impairment of the nearby Blackstone River. Thanks to innovative financing and a strong collaborative plan between the cities of Pawtucket and Central Falls, the cities were able to upgrade the commuter rail station and TOD District by installing green stormwater management practices. Funding consisted of a \$350,000 CWSRF loan that included \$77,000 in principal forgiveness, along with state and city grants. The project involved narrowing south Pine Street in the TOD and constructing a concrete sidewalk with seven bio-retention planters and approximately 1,535 square feet of permeable pavers to help reduce combined sewer overflows into the Blackstone River. Pawtucket and Central Falls also developed a TOD-wide stormwater master plan that aligns with their Station District Vision Plan and allows the work at Pine Street to be replicated and scaled up across the TOD District. In addition to the environmental benefits of the project, the project provides public benefits through neighborhood beautification, increased walkability, and increased public and private development opportunities.





New Hampshire Department of Environmental Services

Project Name: Lebanon's CSO Elimination Program

Assistance Recipient: City of Lebanon, New Hampshire

The City of Lebanon was facing water quality and public health issues due to combined sewer overflow (CSO) discharges to the Connecticut and Mascoma Rivers, as well as the Great Brook. In 2009, EPA alleged that Lebanon had violated the Clean Water Act based on those discharges from CSO outfalls into the rivers, including nearly 14 million gallons of untreated combined wastewater and stormwater per year from at least 60 to 70 CSO events. EPA and the City of Lebanon entered into a Consent Decree, where the City agreed to continue to implement its Long-Term Control Plan which would result in the elimination of any remaining CSO discharges from its combined sewer system through sewer separation projects. The city spent \$70 million to implement a CSO Elimination Program, of which \$37 million was financed through the CWSRF. This program resulted in 100 percent elimination of Lebanon's CSO discharges to the Connecticut and Mascoma Rivers, and the Great Brook. It completed 14 sewer separation projects over a period of 19 years, including disconnecting 274 catch basins that helped to reduce wastewater treatment plant influent by 25 percent, representing a significant energy savings. In 2021, the United States District Court terminated the Consent Decree.

Photo credit: City of Lebanon

Louisiana Department of Environmental Quality

Project Name: Bayou Lafourche Fresh Water District

Assistance Recipient: Mississippi River Reintroduction in Bayou Lafourche Project

The Bayou Lafourche has been largely disconnected from the Mississippi River at Donaldsonville, Louisiana for almost 120 years by a dam and subsequent levee improvements. These alterations reduced the freshwater flows to area marshes, and saltwater intrusion severely impaired drinking water quality. To help maximize freshwater conveyance down Bayou Lafourche from the Mississippi River, the Bayou Lafourche Fresh Water District (BLFWD) and EPA introduced the concept of the Mississippi River Reintroduction into Bayou Lafourche Project in the early 1990s. The Bayou Lafourche Fresh Water District proposes constructing a new pump station in the Mississippi River to re-introduce freshwater into the Bayou Lafourche and to dredge an area to create a sediment trap to prevent excess sediments from traveling downstream. This will minimize saltwater intrusion and protect the potable water supply for residents along Bayou Lafourche. A new pump station will have the capacity to convey up to 1,500 cubic feet per second (cfs) of freshwater into Bayou Lafourche from the Mississippi River, whose current capacity is only about 200 cfs. Nearly 300,000 people rely upon Bayou Lafourche for their potable water supply, and the additional fresh water supply from this project is critical to the businesses and residents in local parishes.

The project is funded in conjunction with Coastal Protection and Restoration Authority's (CPRA) GoMesa Funds. Without the SRF, CPRA funds were limited to what they could provide. BLFWD was able to leverage the SRF program to get more money allocated over a 20-year period from the CPRA to fund this project. The SRF will fund the project on the front end and the CPRA will disburse a specific dollar amount each year to BLFWD, which will in turn repay the loan.





Oklahoma Water Resources Board

Project Name: Guard the Grand, On-Site Wastewater (Septic) Repair/Replace Program

Assistance Recipient: Grand River Dam Authority (GRDA)

As part of the Guard the Grand Septic Repair/Replace Program, the Grand River Dam Authority (GRDA) partnered with the Oklahoma Conservation Commission (OCC) and the Oklahoma Department of Environmental Quality (ODEQ) to offer septic system repair or replacement assistance to homeowners in Oklahoma's Grand Lake and Lake Hudson watersheds. This septic program was created to address private septic issues that can cause sewage backup either at private residences or above the ground. It was funded through an agreement with OCC and Oklahoma Water Resources Board (OWRB) in partnership with ODEQ. OCC's financial contribution of \$50,000 was merged with GRDA's CWSRF pass-through dollars of \$100,000 in principal forgiveness from OWRB. Several private septic systems were identified as sewage discharge contributors within Oklahoma's Grand Lake and Lake Hudson watersheds. This year's pilot project focused on getting interested homeowners to apply for assistance, as well as implementing a marketing and outreach campaign to educate and increase awareness of the environmental issues created by failing private septic systems. As an indication of early success, one homeowners' group, consisting of thirty-five homes with private septic systems which sit directly on one of the lakes, is interested in connecting to a regional public wastewater treatment plant. Continuation of this program will help to reduce non-point source contamination of Oklahoma's lakes, resulting in improved water quality benefits for its residents.

Photo credit: Grand River Dam Authority

Pennsylvania Department of Environmental Protection

Project name: Wyoming Valley Sanitary Authority 2021 ProFi MS4 Stormwater Projects

Assistance Recipient: Wyoming Valley Sanitary Authority

In Luzerne County, Pennsylvania, 31 municipalities partnered with the Wyoming Valley Sanitary Authority to address pollutant reduction goals for sediments and nutrients (nitrogen and phosphorus) in the Authority's MS4 Regional Chesapeake Bay Pollutant Reduction Plan. In lieu of each municipality developing and implementing their own individual plan to address pollution in the Chesapeake Bay, they regionalized and developed a comprehensive plan, then partnered with an existing sewer and water authority to implement it.

The Wyoming Valley Sanitary Authority received \$12.9 million in CWSRF financing to implement green infrastructure and hydromodification projects from the comprehensive regional pollutant reduction plan. This programmatic financing arrangement allowed the Authority to implement several projects, which are broken down into three phases, with just one CWSRF application and loan. On behalf of the partnering municipalities, the Authority has restored over 16,000 feet of creek, constructed two rain gardens, and restored three existing stormwater basins totaling over 18 acres. These projects will result in a load reduction of 1,036,759 lbs of sediment, 145,619 lbs of nitrogen, and 228,944 lbs of phosphorus annually.

Photo credit: Wyoming Valley Sanitary Authority





Arkansas Natural Resources Commission

Project Name: Lost Bridge Village Water and Sewer Improvement Dist. No 1 & 2

Assistance Recipient: Lost Bridge Village Water

Lost Bridge Village is one of the few entities in the State of Arkansas that discharges into Beaver Lake, a drinking water source for about 480,000 Arkansans. In response to a Consent Administrative Order from the Arkansas Department of Environmental Quality, Lost Bridge Village installed a new wastewater treatment plant in the existing footprint of the original plant. The new wastewater treatment system utilizes equalization and extended aeration package plants with dual-media filtration and chlorination. The Village received \$3.1 million of CWSRF assistance including \$2.8 million of principal forgiveness, creating a significant economic savings for the community.

Photo credit: Lost Bridge Water & Sewer District

Delaware Department of Natural Resources and Environmental Control

Project Name: Christina River Force Main Emergency Repair Project

Assistance Recipient: Newcastle County

Delaware's New Castle County owns and operates the Christina River Force Main (CRFM) that conveys wastewater to the Wilmington Water Pollution Control Facility (WWPCF) for treatment and discharge. The CRFM receives wastewater from six pumping stations and utilizes approximately 9.5 miles of pipeline to convey this wastewater. During work at the WWPCF, divers observed degradation in a critical section of concrete of the CRFM. Subsequent inspection and evaluations identified this section as a portion of the inner core of the CRFM pipeline. The project team decided that an emergency bypass needed to be designed and put in place to allow for the repair of the damaged section of the CRFM. As there are no secondary or backup lines, this presented a high-risk scenario for the County that included the potential failure and release of millions of gallons of raw wastewater per day. By using CWSRF and the emergency bypass procedures, the County was able to quickly secure \$18 million in low-cost financing without waiting for the next year's project solicitation. Through swift collaboration, planning, financing, and project review, the County was able to successfully install a bypass, and repair 600 feet of the pipe using trenchless technologies. The project was completed under budget and the CRFM is now fully operational.

Photo credit: Newcastle County





California State Water Resources Control Board

Project Name: East County Advanced Water Purification Project

Assistance Recipient: East County Advanced Water Purification Joint Powers Authority

The East County Advanced Water Purification Project is a potable reuse project in East San Diego County, California that will treat wastewater from the service area of the Padre Dam Municipal Water District, the majority of the City of El Cajon, and three unincorporated areas of San Diego County (Alpine, Lakeside, and Winter Gardens). The project will include construction of an advanced water purification facility to provide full advanced treatment (FAT) to recycled water. FAT includes four highly advanced water purification steps (microfiltration, reverse osmosis, ultraviolet disinfection/advanced oxidation, and free chlorine disinfection) in conformance with California regulations.

This project will generate up to 17,400 acre-feet per year of new drinking water supply by providing FAT to recycled water and conveying the treated water to Lake Jennings to help with surface water augmentation. This project will diversify East San Diego County's water supply and reduce the region's dependence on imported water by creating a new, local, sustainable, and drought-proof drinking water supply. The project will also re-purpose water treatment byproducts for beneficial use, including electricity generation.

Photo credit: East County Advanced Water Purification Joint Powers Authority

Water Infrastructure Finance Authority of Arizona

Project Name: Apache Pine Phase 1

Assistance Recipient: White Mountain Apache Housing Authority

The White Mountain Apache Housing Authority (WMAHA), located in East Central Arizona on the Fort Apache Indian Reservation, received CWSRF financing to address a housing shortage in its community. The project consisted of constructing wastewater services for a new development of 38 homes that had previously been blocked due to lack of sewer, water, and utility services. Connecting the community to the existing distribution and collection systems will eliminate the need for septic tanks, while creating additional housing in the overcrowded area. The nearby Hon-Dah Regional Wastewater Treatment Facility will treat all wastewater from the newly developed subdivision. Additional homes will reduce overcrowding in the area, decrease the housing waitlist on the Reservation, improve public health, and improve the community's socioeconomic status. The \$800,000 loan with \$480,000 in principal forgiveness funded the extension of wastewater collection services to Phase 1 of the new development, including 3,980 linear feet of sewer line, one lift station, 2,171 linear feet of laterals, and 16 manholes.





Alaska Department of Environmental Conservation

Project Name: Commercial Metering

Recipient: City of Ketchikan, Alaska

Alaska's Ketchikan Public Water Utility needed to revamp their service rate schedule for large commercial water users. To properly institute these rates, the utility installed water meters for all commercial water users within the city to establish their water use. The water meters were utilized to create a usage rate structure that incentivized lower water usage, with the goal of generating less wastewater volume entering the plant. A CWSRF loan of \$1,250,000 financed the project in conjunction with a DWSRF loan of \$1,250,000. Sharing costs between both utility departments helped defray the costs of the initial infrastructure. This project is an excellent example of how the CWSRF and DWSRF can work in tandem to fund the same project.



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