WFX
WATER FINANCE EXCHANGE
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COMMUNITY RESOURCES

Green Infrastructure and State Revolving Funds

Green infrastructure provides a cost-effective way to address water quality challenges while providing multiple benefits. For example, tree planting can reduce surface temperatures locally, wetland restoration can create open space for recreation and tourism, and bioswales can improve surface water storage. Green infrastructure can reduce the cost of achieving water quality goals and has the potential to obviate the need for some grey infrastructure capital investments. Through the Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF), communities have an opportunity to obtain low-interest financing for "green projects," including for green infrastructure. Both funds are federal-state partnerships in which the Environmental Protection Agency (EPA) provides capitalization grants to states, with a 20 percent state match. However, the funds are implemented differently across states, and navigating these processes takes staff capacity, resources, and expertise. For smaller communities, technical assistance may be necessary to capitalize on the green infrastructure opportunities in their state revolving funds.

What is Green Infrastructure?

Green infrastructure is often used interchangeably with other terms, such as nature-based solutions or resiliency projects. EPA uses "green infrastructure" to describe a variety of projects, ranging from rain gardens at the neighborhood scale to riparian buffers at the landscape or watershed scale. The 2019 Water Infrastructure Improvement Act defines it as: "The range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspirate stormwater and reduce flows to sewer systems or to surface waters." [1]

Green infrastructure solutions are designed to reduce sediment and nutrient pollution and to improve source water quality and/or quantity, thereby contributing to both clean water and drinking water goals. It can also improve habitat protection, flood mitigation, water filtration, and natural hydrologic functions. The relatively low operation and maintenance costs of green infrastructure, as well as the benefits derived from reduced treatment costs and water quantity management, contributes to the long-term affordability of communities' green infrastructure investments. Costs can be further offset through the low interest rates and principal forgiveness or grants offered by state revolving loan funds.

Clean Water SRF

The Clean Water State Revolving Fund provides low-cost financing for water quality infrastructure projects. The American Recovery Act of 2009 required all CWSRF programs to fund "projects that address green infrastructure, water and energy efficiency, or other environmentally innovative activities" using a set-aside percentage of their capitalization grants.[2] Known as a Green Project Reserve (GPR), this was the first time that the EPA specifically encouraged CWSRFs to invest in green infrastructure projects.[3] Moreover, annual appropriations since the American Recovery Act's passage have authorized states to use some of their funding for the additional subsidization of green infrastructure projects, such as providing grants and principal loan forgiveness.

An evaluation of investments in green infrastructure found that, between 2016 and 2020, states "allocated three percent of Clean Water State Revolving Fund commitments to green stormwater infrastructure and natural infrastructure," with the amounts generally increasing over time. However, the project types and investment amounts substantially varied across states.

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Developed in 2010, the Sustainability Policy for Clean Water and Drinking Water Infrastructure emphasized the EPA's interest in green infrastructure. EPA then created a Green Infrastructure Policy for the Clean Water State Revolving Fund in 2015, recommending the increased use of CWSRF for financing green infrastructure and encouraging state revolving funds to integrate green infrastructure into their priority systems, marketing, and incentives.

Drinking Water SRF

The Drinking Water State Revolving Fund aims to help water systems to meet the objectives of the Safe Drinking Water Act. In 2010 and 2011, states were required under The American Recovery Act to use part of their DWSRF appropriation to create a Green Project Reserve.[4] Since 2012, states have had the discretion to continue using DWSRF funding for green projects (or green portions of larger infrastructure projects), and some states use the EPA's previous Green Project Reserve guidance for their ongoing programs.[4]

State Implementation

While complying with federal guidelines and rules, states have different incentives for green infrastructure in their SRFs.

Examples of Eligible Green Infrastructure Projects

Clean Water SRF

- Street Tree or Urban Forestry Programs
- Downspout Disconnections
- Retrofits to Address Sewer Discharges
- Establishment or Restoration of Natural Features (e.g., Permanent Riparian Buffers)
- Wetlands Management

Drinking Water SRF

- Bioretention
- Green Roofs
- Xeriscape or Drought Resistant Landscaping
- Landscape Conversion Programs
- Retrofitting or Replacing Existing Irrigation Systems with Moisture and Rain Sensing Equipment

Both

- Pervious or Porous Pavement
- Rainwater Harvesting
- Reuse and Gray Water Use Projects

Note: The CWSRF examples are categorically eligible for the Green Project Reserve, but other project types may be evaluated for eligibility based on their business case.

- **Financial incentives** - These include flexible loan repayment schedules, principal forgiveness, negative interest loans, and grants for green infrastructure projects.
- **Set-asides** - States can set aside funding to create incentives for green infrastructure, such as offering these reserves at lower interest rates.[5]
- **Additional points in ranking systems** - States can help green infrastructure projects to rise on their funding priority list by assigning additional points to these project alternatives. For example, New Hampshire awards 20 (of a possible 100) points for projects that meet the Green Project Reserve criteria, and Oregon scores criteria, including the inclusion of green infrastructure components, on a scale from 1 to 6.[5]

DWSRF criteria for green infrastructure projects are particularly varied across states. For example, in Tennessee's DWSRF, the state has allocated at least 10 percent of their 2022 project funds to green projects and can offer 20 percent principal forgiveness, not to exceed total principal forgiveness of $2,500,000 per project, if the project proposal "incorporates a significant amount of green infrastructure, water and energy efficiency, or sustainable, resilient, and innovative practices."[6] With these measures, they aim to meet their goal of 18 percent allocation for green infrastructure. In Texas, the DWSRF offers up to 15 percent forgiveness for projects that include approved green components with costs exceeding 30 percent of the total project costs.[7] Alabama's DWSRF pre-application includes points for the "[i]nstallation of green stormwater infrastructure at a water treatment plant" and for the "[p]rotection of onsite trees, vegetation, native habitats and urban forests" in their ranking criteria.[8]

Given the differences in state implementation of green infrastructure policies and incentives in their revolving funds, municipalities—and particularly small, rural, and underserved communities—can benefit from technical assistance to access this low-cost financing and ultimately improve their water quality.

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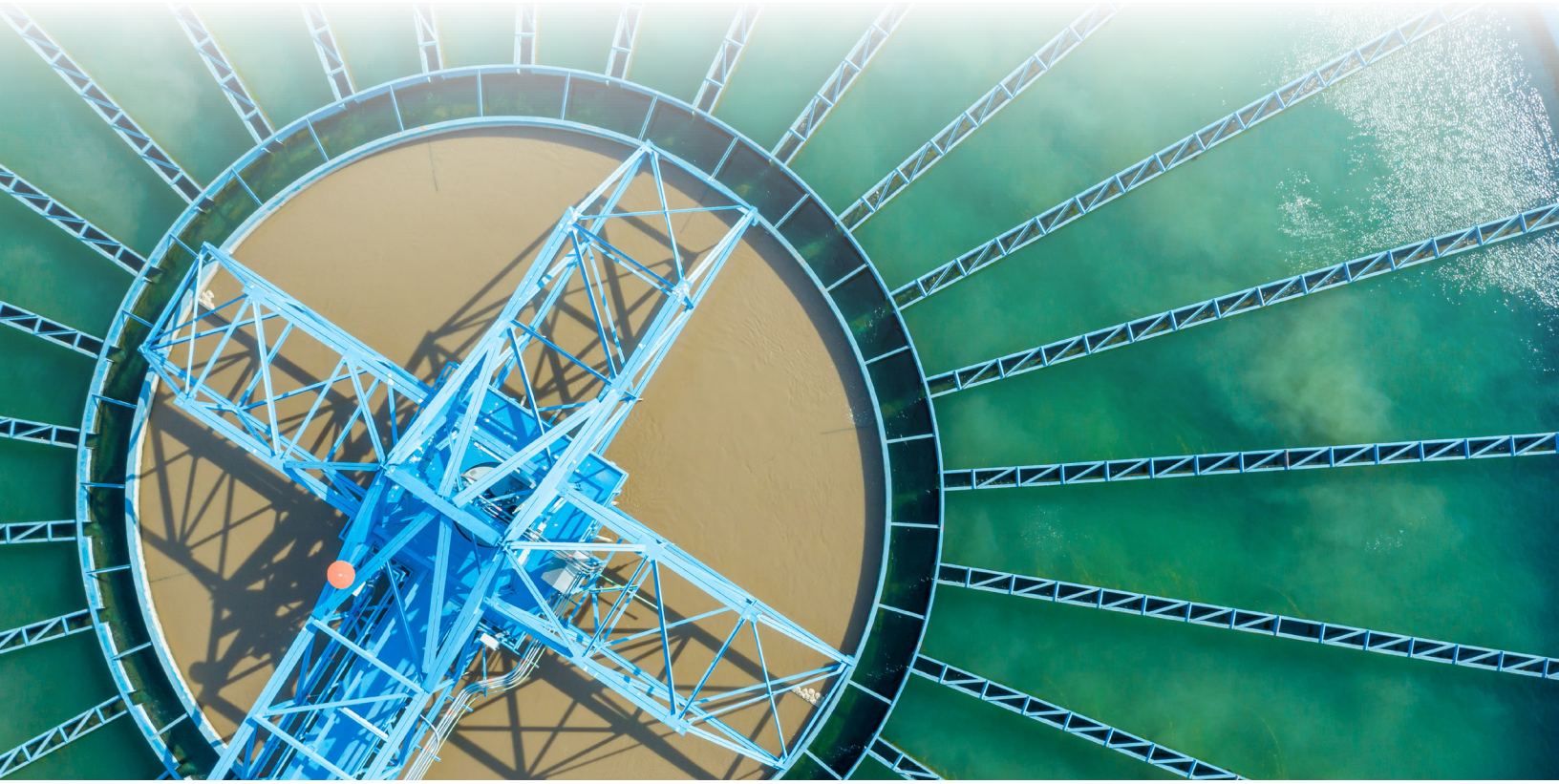
About Water Finance Exchange

Water Finance Exchange (WFX) is a 501(c)(3) non-profit comprised of experienced water and finance professionals who work closely with communities to address head-on their water infrastructure funding needs and opportunities. WFX assesses a community partners' positioning in their region and, where applicable, actively promotes and supports regional strategies to advance watershed solutions. Our mission is to help communities build sustainable and resilient utilities that are the foundation of economic growth and prosperity. WFX will work with you to explore the various green infrastructure solutions and identify the best approach for your community. WFX can also serve as an intermediary, an expert resource, an advocate, and a partner with communities that are seeking to implement green infrastructure approaches.

Links to Resources & References

(1) https://www.congress.gov/115/plaws/publ436/PLAW-115publ436.pdf
(2) https://www.epa.gov/cwsrf/green-project-reserve-guidance-clean-water-state-revolving-fund-cwsrf
(3) https://www.epa.gov/green-infrastructure/financing-green-infrastructure-best-practices-clean-water-state-revolving-fund
(4) https://www.epa.gov/sites/default/files/2017-06/documents/dwsrf_eligibility_handbook_june_13_2017_updated_508_version.pdf
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