Arizona Uses the Water Infrastructure Finance Authority to Provide Funding for Infrastructure Projects that Address Climate Impacts

Overview

Arizona is pushing the boundaries of establishing sustainable infrastructure in the Southwest portion of the country. The Water Infrastructure Finance Authority (WIFA) of Arizona is providing financial incentives and technical assistance to promote innovative water conservation, efficiency, and reuse projects; as well as an approach to reduce water loss. WIFA is additionally pursuing energy efficiency practices as a way to help reduce water use and costs, along with using green stormwater infrastructure and facility redesign to provide resiliency in a changing climate. These programmatic efforts are helping utilities, homes, and communities invest in a water supply future that is both sustainable and affordable.

Background

The Water Infrastructure Finance Authority of Arizona (WIFA) was established by the State legislature in 1989. WIFA works to maintain and improve water quality in Arizona by financing the construction, rehabilitation, and improvement of drinking water and wastewater facilities and nonpoint source pollution projects through both the Clean Water and Drinking Water Revolving Funds. WIFA also has a Planning and Design Technical Assistance Program designed to help water and wastewater facilities prepare for future infrastructure project construction.

WIFA's *2015 Annual Report* recognized sustainable infrastructure as essential to maintain the environmental and economic sustainability of communities. *The FY17 Intended Use Plan* set the most recent priorities for clean water and drinking water funds, emphasizing projects that promote sustainability through efficient resource use, green infrastructure, and environmentally innovative activities. Outside of the Green Project Reserve, the State Revolving Funds (SRFs) are broadly promoting conservation activities by expanding eligible projects to those that embrace water reclamation and reuse, stormwater management, nonpoint source pollution, and watershed protection. Each project is scored according its green components, as WIFA gives priority to projects that are completely or primarily green.

Program Partners: Arizona Water Infrastructure Finance Authority (WIFA), Arizona Department of Water Resources (ADWR), Arizona Department of Environmental Quality (ADEQ), Arizona Corporation Commission

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The Water Infrastructure Finance Authority of Arizona (WIFA)

Like other SRF programs, WIFA currently supports four categories of eligible green projects: water efficiency, energy efficiency, environmentally innovative, and green stormwater infrastructure. Green Projects have been funded since 2009, and include projects under both the drinking water and clean water SRFs. WIFA continues to emphasize and provide support for non-traditional projects surrounding flood control, watershed protection, forest restoration, and water and energy efficiency (Figure 1). Water efficiency projects include water audit and conservation plans expected to result in a capital project, water reuse projects that replace potable sources with non-potable sources, and gray water/wastewater effluent reuse systems. Green Stormwater infrastructure projects support stormwater harvesting and reuse, as well as the creation or repair of riparian buffers, floodplains, wetlands, and other natural features. Energy efficiency projects and design strategies are also eligible, as they help reduce resource demand for both energy and water.

The Program is further promoting long-term efficiency and sustainability efforts through new loan recipient requirements and incentives:

- For clean water projects funded on or after October 1, 2015, loan recipients must develop a Fiscal Sustainability Plan that evaluates ongoing energy and water use efficiency improvements over the life of an asset, as well as gain

- certification that the facility will implement these conservation efforts.
- Clean Water SRF recipients must complete a Cost and Effectiveness Analysis to demonstrate how an awarded project will maximize efficient water use, reuse, conservation, and energy conservation over its lifetime.
- WIFA is offering financial incentives for green projects in the form of reduced interest rates and forgivable principal if the majority of project costs are related to green components. Recently funded drinking water and clean water projects focused on water audits and leak detection surveys, smart meter installation, flood mitigation, water recycling and effluent reuse, solar installation, and green infrastructure action plans.

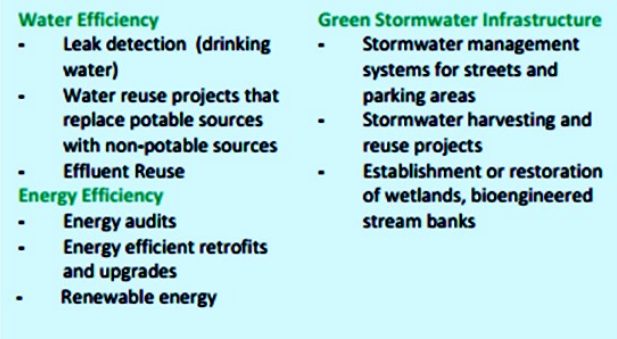

Figure 1. Examples of projects for water efficiency, energy efficiency, and green stormwater infrastructure.

Using the State Revolving Funds to Provide Technical Assistance

In addition to loans, WIFA is offering funding for technical assistance with the planning and design of infrastructure, and professional consultation through their Planning and Design Technical Assistance Program. The Program helps both clean water and drinking water facilities prepare for future infrastructure construction. Program funding priorities include projects that prevent or correct a public health or water quality concern, in addition to projects with a significant portion of green components. A recent project in the City of Mesa focused on creating a Low Impact Development Toolkit to help design and construct infrastructure improvements that lessen flooding impacts and polluted stormwater released to natural waterways. WIFA also encourages climate resilient infrastructure designs that incorporate energy and water efficiency features, as well as consider extreme weather events. Both drinking water and clean water projects are eligible for 100% of the total funding cost up to $35k, depending on the portion of a project identified as green. WIFA will use FY17 technical assistance funding to help complete the annual Water and Wastewater Rates Survey and interactive Rates Dashboard tool, which, among other comparisons, helps utilities encourage efficient water use among ratepayers. The Survey analyzes residential drinking water and wastewater data from nearly 90% of Arizona's utilities, and contains features such as a cost recovery dial for each utility, a dial to determine if rates are encouraging conservation, and climate zone and watershed comparison groups.

Innovations to Address Drought and Ensure Resilient Water Systems

WIFA has new initiatives to direct funding to address serious threats to Arizona's water supply from nonpoint source pollution and stormwater. Floodplains and natural landscapes not only filter pollutants and protect water quality, but also minimize the impacts of floods, reduce burden on public drainage infrastructure, and increase groundwater recharge. These restoration projects help maintain a resilient water infrastructure system, and can decrease capital costs to supply clean drinking water and treat wastewater.

For example, several projects in Tucson have focused on water supply and the use of green infrastructure to mitigate flooding. Two WIFA loans provided the City with $20 million in financing to increase water recovery, reduce reliance on limited groundwater supplies, and prevent over-drafting of the Southern Avra Valley aquifer. WIFA also provided $35,000 through its Technical Assistance Program for a green infrastructure project to assess green stormwater infrastructure (GSI) alternatives and analyze cost-benefit comparisons of using conventional stormwater management and GSI. Results from modeling the benefits of GSI throughout Tucson's Airport Wash area showed GSI can have a significant impact in reducing flooding, runoff, and pollution from both large and small storm events.

WIFA is enhancing their conservation efforts by partnering with ADWR to start up a water loss control program. WIFA will draw upon SRF set asides to hire contractors that can work directly with utilities to implement American Water Works Association procedures. Utilities throughout Arizona will receive training in analyzing and managing non-revenue water, and learn AWWA water loss auditing and validation practices to improve system efficiency.