State Revolving Funds 101

This guide is intended for potential State Revolving Fund (SRF) borrowers who are seeking to learn more about the Clean Water and Drinking Water SRF Loan programs.

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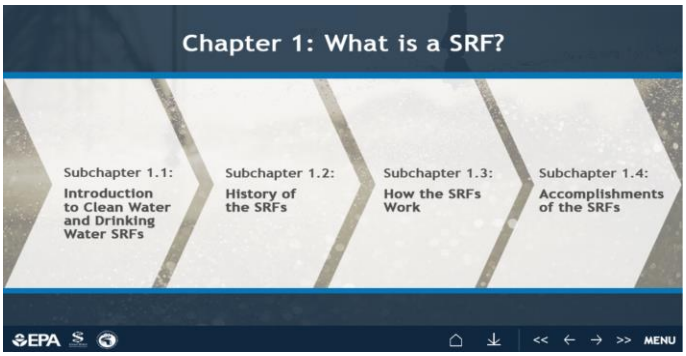

Chapter 1:What is a SRF?

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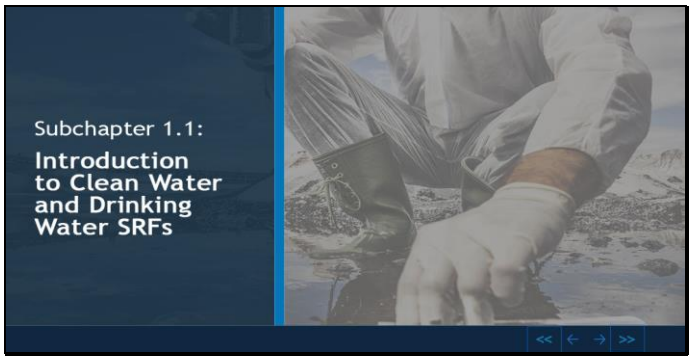
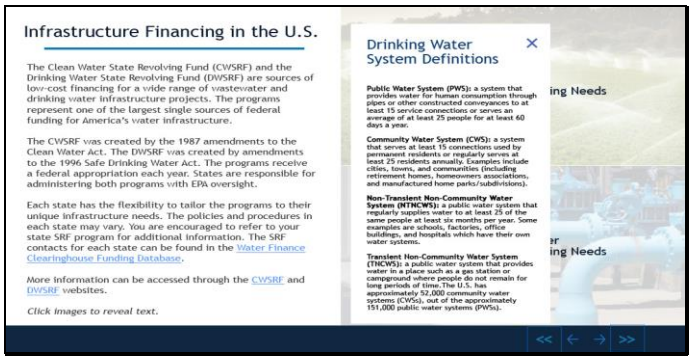


Subchapter 1.1 Introduction to Clean Water and Drinking Water SRFs



Infrastructure Financing in the U.S.

The Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF) are sources of low-cost financing for a wide range of wastewater and drinking water infrastructure projects. The programs represent one of the largest single sources of federal funding for America's water infrastructure.

The CWSRF was created by the 1987 amendments to the Clean Water Act. The DWSRF was created by amendments to the 1996 Safe Drinking Water Act. The programs receive a federal appropriation each year. States are responsible for administering both programs with EPA oversight.

Each state has the flexibility to tailor the programs to their unique infrastructure needs. The policies and procedures in each state may vary. You are encouraged to refer to your state SRF program for additional information. The SRF contacts for each state can be found in the Water Finance Clearinghouse Funding Database (https://ofmpub.epa.gov/apex/wfc/f?p=165:3:13369130388270::NO:3,RIR:).

More information can be accessed through the CWSRF (https://www.epa.gov/cwsrf/forms/contact-us-about-clean-water-state-revolving-fund-cwsrf#state) and DWSRF (https://www.epa.gov/drinkingwatersrf/state-dwsrf-website-and-contacts) websites.

Click images to reveal text.

Wastewater Infrastructure Financing Needs

Clean Water Infrastructure Financing in the U.S.

Introduction to the Clean Water State Revolving Fund (CWSRF)

- Approximately 14,500 wastewater treatment plants serve nearly 240 million people nationwide.
- Communities across the country face the challenge of aging and inadequate water infrastructure. Most of our underground water infrastructure was built 50 or more years ago, in the post-World War II era. The implications of deteriorating infrastructure can be felt nationwide.
- The 2012 Clean Watersheds Needs Survey (https://www.epa.gov/cwns) estimated that over the 20-year period from 2012-2032, $271 billion in capital investments will be needed to address water quality or water quality-related public health problems.

Drinking Water Infrastructure Financing Needs

Drinking Water Infrastructure Financing in the U.S.

Introduction to the Drinking Water State Revolving Fund (DWSRF)

- A defining characteristic of the United States' water sector is its size.
    - The U.S. has approximately 52,000 community water systems (CWSs) and approximately 151,000 public water systems (PWSs).
    - 8% of the CWSs serve 82% of the population.
    - Approximately 83% of CWSs serve fewer than 3,300 people.
    - Over half of all CWSs (56%) serve fewer than 500 people.
- Communities across the country face the challenge of aging and inadequate water infrastructure. Most of our underground water infrastructure was built 50 or more years ago, in the post-World War II era. The implications of deteriorating infrastructure can be felt nationwide.
- EPA's 2015 Drinking Water Infrastructure Needs Survey and Assessment (https://www.epa.gov/sites/production/files/2018-03/documents/sixth_drinking_water_infrastructure_needs_survey_and_assessment.pdf) estimates that over the next 20 years (from 2015-2034), an estimated $472.6 billion in infrastructure improvements will be needed for drinking water systems to continue to provide safe drinking water to the public.

Click to view Drinking Water System Definitions.

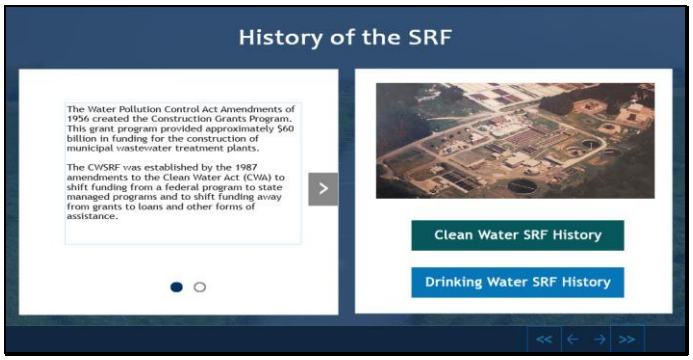
Public Water System (PWS): a system that provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year.

Community Water System (CWS): a system that serves at least 15 connections used by permanent residents or regularly serves at least 25 residents annually. Examples include cities, towns, and communities (including retirement homes, homeowners associations, and manufactured home parks/subdivisions).

Non-Transient Non-Community Water System (NTNCWS): a public water system that regularly supplies water to at least 25 of the same people at least six months per year. Some examples are schools, factories, office buildings, and hospitals which have their own water systems.

Transient Non-Community Water System (TNCWS): a public water system that provides water in a place such as a gas station or campground where people do not remain for long periods of time.The U.S. has approximately 52,000 community water systems (CWSs), out of the approximately 151,000 public water systems (PWSs).

Subchapter 1.2 History of the SRFs



History of the SRF

The Water Pollution Control Act Amendments of 1956 created the Construction Grants Program. This grant program provided approximately $60 billion in funding for the construction of municipal wastewater treatment plants.

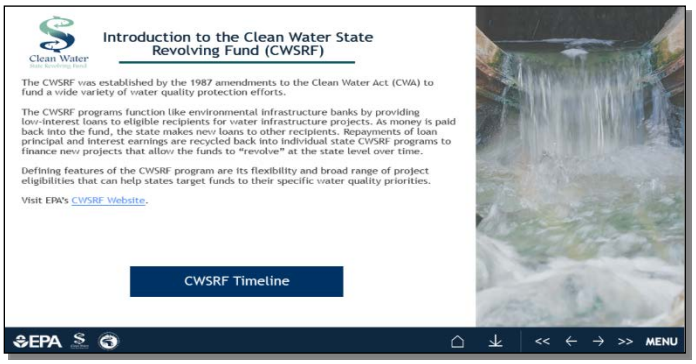
The CWSRF was established by the 1987 amendments to the Clean Water Act (CWA) to shift funding from a federal program to state managed programs and to shift funding away from grants to loans and other forms of assistance.

With the success of the CWSRF, the DWSRF was established by Congress in the 1996 amendments to the Safe Drinking Water Act (SDWA).

The CWSRF and the DWSRF are strong federal and state partnerships, with every dollar contributed by the federal government matched at 20% by the state.

Clean Water SRF History

Drinking Water SRF History



Introduction to the Clean Water State Revolving Fund (CWSRF)

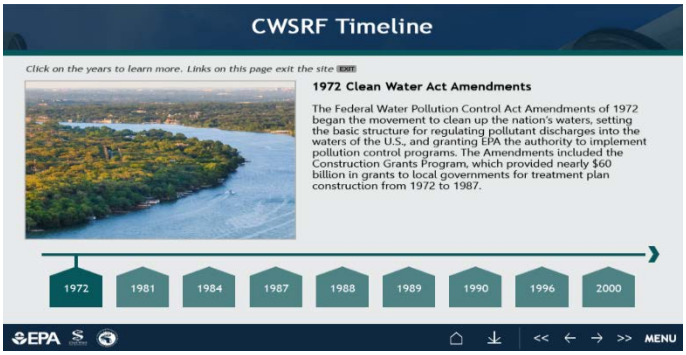
The CWSRF was established by the 1987 amendments to the Clean Water Act (CWA) to fund a wide variety of water quality protection efforts.

The CWSRF Programs function like environmental infrastructure banks by providing low interest loans to eligible recipients for water infrastructure projects. As money is paid back into the fund, the state makes new loans to other recipients. Repayments of loan principal and interest earnings are recycled back into individual state CWSRF programs to finance new projects that allow the funds to “revolve” at the state level over time.

Defining features of the CWSRF program are its flexibility and broad range of project eligibilities that can help states target funds to their specific water quality priorities.

Visit EPA’s CWSRF Website (https://www.epa.gov/cwsrf).

CWSRF Timeline



CWSRF Timeline

Click on the years to learn more. Links on this page exit the site

1972 Clean Water Act Amendments

The Federal Water Pollution Control Act Amendments of 1972 began the movement to clean up the nation's waters, setting the basic structure for regulating pollutant discharges into the waters of the U.S., and granting EPA the authority to implement pollution control programs. The Amendments included the Construction Grants Program, which provided nearly $60 billion in grants to local governments for treatment plan construction from 1972 to 1987.

1981 Amendments to the Clean Water Act

The Municipal Wastewater Treatment Construction Grants Amendments of 1981 significantly changed the procedural and administrative aspects of municipal construction grants made after December 29, 1981, streamlining the grants process and improving the capabilities of treatment plants built under the program.

1984 Study Released

Completion of the report, Study of the Future Federal Role in Municipal Wastewater Treatment (https://nepis.epa.gov/EPA/html/DLwait.htm?url=/Exe/ZyPDF.cgi/94X00N4Z.PDF?Dockey=94X00N4Z.PDF), recommending the creation of state revolving funds for municipal wastewater infrastructure.

1987 Amendments to the Clean Water Act

Amendments phased out the Construction Grants Program and replaced it with the State Water Pollution Control Revolving Fund, commonly known as the Clean Water State Revolving Fund (CWSRF). The CWSRF moved federal assistance from grants to a loan-based program to help states develop financial capacity for their infrastructure needs. This change signaled a major shift in federal policy that placed greater responsibility for the funding of infrastructure in the hands of local communities.

Statutory language for the 1987 amendments to the CWA is at 33 U.S. Code §1383 (http://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title33-section1383&num=0&edition=prelim) regulatory language.

1988

EPA issues CWSRF Initial Guidance and Letter of Credit Brochure.

On March 30th, the first CWSRF capitalization grants are awarded to Tennessee and Texas.

1989

Iowa and New Jersey are the first states to leverage, yielding a total of $79.2 million in available funds.

1990

EPA issues CWSRF Interim Final Rule.

Maryland and Washington fund the first nonpoint source projects totally over $300,000.

1996

The Clean Water State Revolving Fund Funding Framework (https://nepis.epa.gov/Exe/ZyPDF.cgi/2000CZGQ.PDF?Dockey=2000CZGQ.PDF) is released, which articulates a process for identifying and prioritizing nontraditional projects to move towards a watershed approach.

The Drinking Water State Revolving Fund (https://www.epa.gov/cwns/cwns-2000-report-congress), modeled after the success of the CWSRF, is created by the Safe Drinking Water Act (SDWA).

2000 Clean Watershed Needs Survey

The 2000 Clean Watersheds Needs Survey (https://www.epa.gov/cwns/cwns-2000-report-congress) identified a 20-year capital improvement need of $181.2 billion for wastewater and stormwater.

2004 Clean Watershed Needs Survey

The 2004 Clean Watersheds Needs Survey (https://www.epa.gov/sites/production/files/2015-06/documents/2008_01_09_2004rtc_cwns2004rtc.pdf) was released in January of 2008 and identified a 20-year capital improvement need of $202.5 billion for wastewater and stormwater.

2007

Clean Water State Revolving Fund: Tapping its Untapped Potential (https://www.epa.gov/sites/production/files/documents/SRF_TappingUntappedPotential.pdf) provides the first compilation of the non-traditional project eligibilities under the original CWSRF statutory authority.

2008 Clean Watershed Needs Survey

The 2008 Clean Watersheds Needs Survey (https://www.epa.gov/sites/production/files/2015-06/documents/cwns2008rtc.pdf) identified a 20-year capital improvement need of $298.1 billion for wastewater and stormwater.

2009 American Recovery and Reinvestment Act (ARRA)

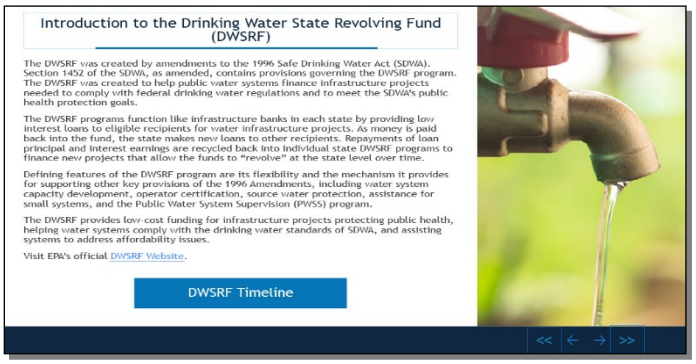
ARRA legislation is signed into law February 17, 2009 appropriating $4 billion to the CWSRF and introducing the Green Project Reserve (https://www.epa.gov/sites/production/files/2015-04/documents/arra_green_project_reserve_report.pdf), additional subsidization, Buy American, and Davis Bacon requirements.

2012 Clean Watershed Needs Survey

The 2012 Clean Watersheds Needs Survey (https://www.epa.gov/sites/production/files/2015-12/documents/cwns_2012_report_to_congress-508-opt.pdf) identified a 20-year capital improvement need of $271.0 billion for wastewater and stormwater.

2014 Water Resources Reform and Development Act (WRRDA)

WRRDA (https://www.epa.gov/cwsrf/water-resources-reform-and-development-act-wrrda-guidance-clean-water-state-revolving-fund) is signed into law on June 10, 2014, amending the CWSRF for the first time in the program's history.



Introduction to the Drinking Water State Revolving Fund (DWSRF)

The DWSRF was created by amendments to the 1996 Safe Drinking Water Act (SDWA). Section 1452 of the SDWA, as amended, contains provisions governing the DWSRF program. The DWSRF was created to help public water systems finance infrastructure projects needed to comply with federal drinking water regulations and to meet the SDWA's public health protection goals.

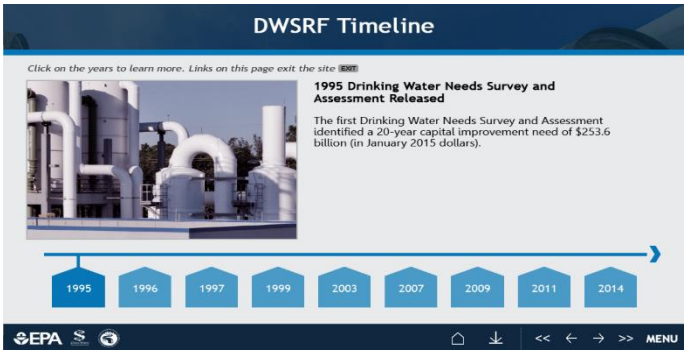
The DWSRF programs function like infrastructure banks in each state by providing low interest loans to eligible recipients for water infrastructure projects. As money is paid back into the fund, the state makes new loans to other recipients. Repayments of loan principal and interest earnings are recycled back into individual state DWSRF programs to finance new projects that allow the funds to "revolve" at the state level over time.

Defining features of the DWSRF program are its flexibility and the mechanism it provides for supporting other key provisions of the 1996 Amendments, including water system capacity development, operator certification, source water protection, assistance for small systems, and the Public Water System Supervision (PWSS) program.

The DWSRF provides low-cost funding for infrastructure projects protecting public health, helping water systems comply with the drinking water standards of SDWA, and assisting systems to address affordability issues.

Visit EPA's DWSRF Website (https://www.epa.gov/drinkingwatersrf).

DWSRF Timeline



DWSRF Timeline

Click on the years to learn more. Links on this page exit the site

1995 Drinking Water Needs Survey and Assessment Released

The first Drinking Water Needs Survey and Assessment identified a 20-year capital improvement need of $253.6 billion (in January 2015 dollars).

1996 Amendments to the Safe Drinking Water Act (SDWA)

The 1996 Amendments to the SDWA created the DWSRF to help communities finance infrastructure improvements needed to protect public health and ensure compliance with drinking water standards. Not all drinking water compliance problems, however, can be solved through capital improvements. With that in mind, Congress gave states the option to take a portion of their federal capitalization grant for “set-asides.” Set-asides can be used to administer state drinking water programs, provide technical assistance and training for water utilities, and fund other activities that support achieving the public health protection objectives of the SDWA.

Regulatory language for the Drinking Water State Revolving Funds is at 40 CFR Part 35 Subpart L (https://www.ecfr.gov/cgi-bin/text-idx?SID=b9c4bcea0fe379373db3a27524b56cc7&mc=true&node=sp40.1.35.l&rgn=div6).

1997 DWSRF First Award

The first DWSRF capitalization grant awarded to Georgia.

The first DWSRF loan made to Williamsburg, PA for $4.2 million.

1999 Drinking Water Needs Survey and Assessment Released

The second Drinking Water Needs Survey and Assessment identified a 20-year capital improvement need of $250.9 billion (in January 2015 dollars).

2003 Drinking Water Needs Survey and Assessment Released

The third Drinking Water Needs Survey and Assessment identified a 20-year capital improvement need of $419.4 billion (in January 2015 dollars).

2007 Drinking Water Needs Survey and Assessment Released

The fourth Drinking Water Needs Survey and Assessment identified a 20-year capital improvement need of $423.7 billion (in January 2015 dollars).

2009 American Recovery and Reinvestment Act (ARRA)

ARRA provided $2 billion for drinking water infrastructure needs. States receiving ARRA DWSRF funds were required to use at least 50% of their funds to further subsidize low-interest loans (i.e., principal

forgiveness, negative interest rates, and grants). Borrowers were required to apply Davis Bacon wage rates and to comply with Buy American provisions of the Act. States were also required to implement a Green Project Reserve, using a portion of their capitalization grant for green infrastructure, water and energy efficiency, and other environmentally innovative projects to the extent sufficient projects were available.

2011 Drinking Water Needs Survey and Assessment Released

The fifth Drinking Water Needs Survey and Assessment (https://www.epa.gov/sites/production/files/2015-07/documents/epa816r13006.pdf) was released in April of 2013 and identified a 20-year capital improvement need of $428.6 billion (in January 2015 dollars).

2014 American Iron and Steel

Starting in 2014, the American Iron and Steel (AIS) provision requires borrowers to use iron and steel products that are produced in the United States. This requirement applies to projects for the construction, alteration, maintenance, or repair of a public water system. For additional information, visit the EPA SRF AIS website (https://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-ais-requirement).

2015 Drinking Water Needs Survey and Assessment Released

The sixth Drinking Water Needs Survey and Assessment (https://www.epa.gov/drinkingwatersrf/epas-6th-drinking-water-infrastructure-needs-survey-and-assessment), was released in 2018 and identified a 20-year capital improvement need of $483 billion (in January 2015 dollars).

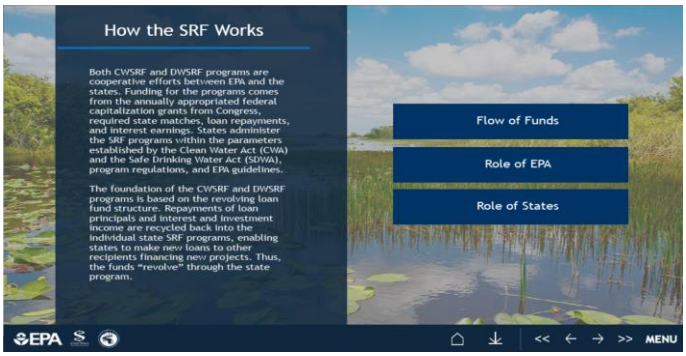
2016 Water Infrastructure Improvements for the Nation (WIIN) ACT

WIIN (https://www.epa.gov/goldkingmine/water-infrastructure-improvements-nation-wiin-act) amended several parts of SDWA including provisions regarding the DWSRF program. The WIIN Act provides further flexibilities to state DWSRF programs including set-asides.

2018 FY17 Drinking Water State Revolving Fund Annual Report

The Drinking Water State Revolving Fund 2017 Annual Report (https://www.epa.gov/sites/production/files/2018-08/documents/20th_anniversary_dwsrf_report_final_508.pdf) commemorates the DWSRF's 20th anniversary, highlighting program accomplishments for 2017, in the context of the outstanding public health protection achieved through the DWSRF program over the past two decades.

Subchapter 1.3 How the SRFs Work



How the SRF Works

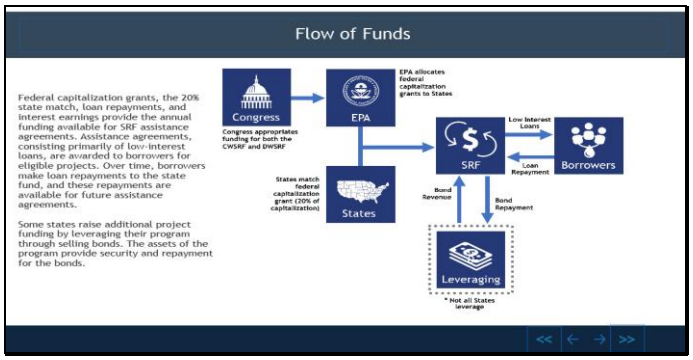
Both CWSRF and DWSRF programs are cooperative efforts between EPA and the states. Funding for the programs comes from the annually appropriated federal capitalization grants from Congress, required state matches, loan repayments, and interest earnings. States administer the SRF programs within the parameters established by the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA), program regulations, and EPA guidelines.

The foundation of the CWSRF and DWSRF programs is based on the revolving loan fund structure. Repayments of loan principals and interest and investment income are recycled back into the individual state SRF programs, enabling states to make new loans to other recipients financing new projects. Thus, the funds “revolve” through the state program.

Flow of Funds

Role of EPA

Role of States



Flow of Funds

Federal capitalization grants, the 20% state match, loan repayments, and interest earnings provide the annual funding available for SRF assistance agreements. Assistance agreements, consisting primarily of low-interest loans, are awarded to borrowers for eligible projects. Over time, borrowers make loan repayments to the state fund, and these repayments are available for future assistance agreements.

Some states raise additional project funding by leveraging their program through selling bonds. The assets of the program provide security and repayment for the bonds.

Congress appropriates funding for both the CWSRF and DWSRF. EPA allocates federal capitalization grants to States.

States match federal capitalization grant (20% of capitalization).

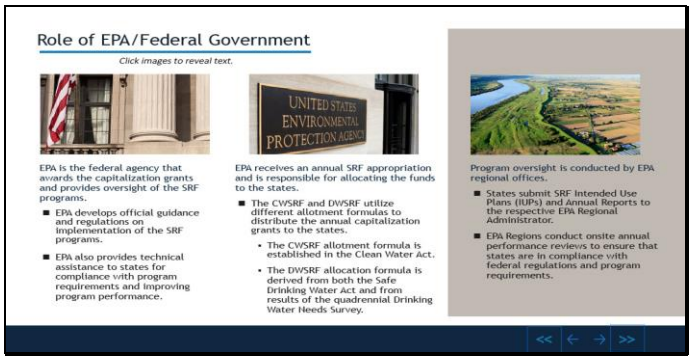
SRF bond revenue

SRF bond repayment

Not all states leverage.

SRF grants low interest loans to borrowers.

Borrows repay loans to SRF.



Role of EPA/Federal Government

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EPA is the federal agency that awards the capitalization grants and provides oversight of the SRF programs.

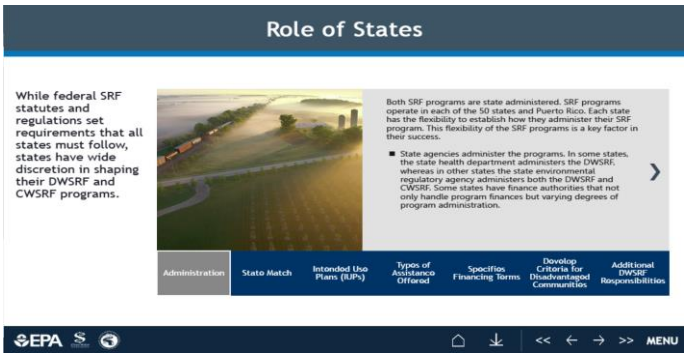
- EPA develops official guidance and regulations on implementation of the SRF programs.
- EPA also provides technical assistance to states for compliance with program requirements and improving program performance.

EPA receives an annual SRF appropriation and is responsible for allocating the funds to the states.

- The CWSRF and DWSRF utilize different allotment formulas to distribute the annual capitalization grants to the states.
  - The CWSRF allotment formula is established in the Clean Water Act.
  - The DWSRF allocation formula is derived from both the Safe Drinking Water Act and from results of the quadrennial Drinking Water Needs Survey.

Program oversight is conducted by EPA regional offices.

- States submit SRF Intended Use Plans (IUPs) and Annual Reports to the respective EPA Regional Administrator.
- EPA Regions conduct onsite annual performance reviews to ensure that states are in compliance with federal regulations and program requirements.



Role of States

While federal SRF statutes and regulations set requirements that all states must follow, states have wide discretion in shaping their DWSRF and CWSRF programs.

Administration

Both SRF programs are state administered. SRF programs operate in each of the 50 states and Puerto Rico. Each state has the flexibility to establish how they administer their SRF program. This flexibility of the SRF programs is a key factor in their success.

State agencies administer the programs. In some states, the state health department administers the DWSRF, whereas in other states the state environmental regulatory agency administers both the DWSRF and CWSRF. Some states have finance authorities that not only handle program finances but varying degrees of program administration.

States are responsible for fund accounting and generating annual financial reports, ensuring that borrowers are credit-worthy and that loans are repaid.

States are responsible for selecting projects based on the state's priority list, while ensuring that the projects are technically feasible and eligible for CWSRF assistance.

For the DWSRF, states administer capacity development programs that help ensure the technical, managerial, and financial capacity (TMF) required of DWSRF borrowers.

State Match

The SRF programs are federally and state funded. EPA provides funding to state SRF programs each year in the form of capitalization grants. States are required to provide a 20% match to those grants.

Intended Use Plan (IUPs)

Each state is required to develop an annual IUP that describes how the state plans to use available funds, including the federal capitalization grant, state matching funds, loan repayments, and fund interest earnings.

- The IUP is part of the capitalization grant application process.
- IUPs must be made available for review and public comment before being submitted to the state's EPA regional office for approval.

The IUP must include a list of projects (including a list of specific nonpoint source and national estuary protection management activities) that the state intends to fund, and the criteria and methods used to determine the distribution of the CWSRF funds. States develop Project Priority Lists (PPL) for the CWSRF and DWSRF that reflect state-specific environmental and public health priorities.

- A publicly owned treatment works project must be on the PPL to receive funding from the CWSRF program.
- The CWSRF can fund any project from the list. See CWSRF regulations on IUPs at 40 CFR 35.3150
- For the DWSRF, states are required to fund in priority order, unless they have a bypass procedure in place. See DWSRF regulations on IUPs at 40 CFR 35.3555.

Types of Assistance Offered

Each state determines the types and amounts of assistance offered through the CWSRF and DWSRF to recipients (e.g., loans, debt purchases, additional subsidization, refinancing, guarantees, etc.).

Specifies Financing Terms

Each state specifies CWSRF and DWSRF financing terms such as interest rates (at or below market rates), administrative fees, additional subsidization, and repayment periods. States can establish criteria to customize financing terms for the benefit of borrowers.

- CWSRF repayments can be up to 30 years or the useful life of the project, whichever is less. Some states offer financing with final terms beyond 30 years ("extended term financing").
- DWSRF repayments can be up to 20 years or up to 30 years (or useful life) for state-defined disadvantaged communities. With EPA approval, some states can offer financing with final terms beyond 30 years ("extended term financing") through the purchase of debt instruments.

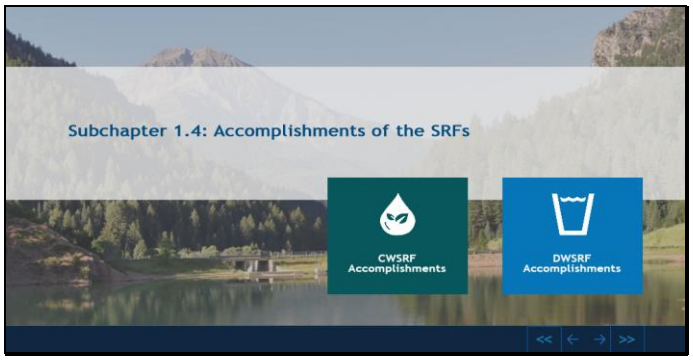
Develop Criteria for Disadvantaged Communities

State DWSRF programs may choose to develop criteria for disadvantaged communities and to customize financing terms for those communities that meet the state's criteria. For disadvantaged communities, states may establish flexible financing terms, provide technical assistance, coordinate funding partnerships, and provide additional subsidization through principal forgiveness or negative interest rate loans.

- DWSRF: the value of additional loan subsidies may not exceed 30% of the state's capitalization grant in any given year. For more information, please see EPA's Case Studies in DWSRF Implementation III. Disadvantaged Communities (https://www.epa.gov/sites/production/files/2018-08/documents/20th_anniversary_dwsrf_report_final_508.pdf).

Additional DWSRF Responsibilities

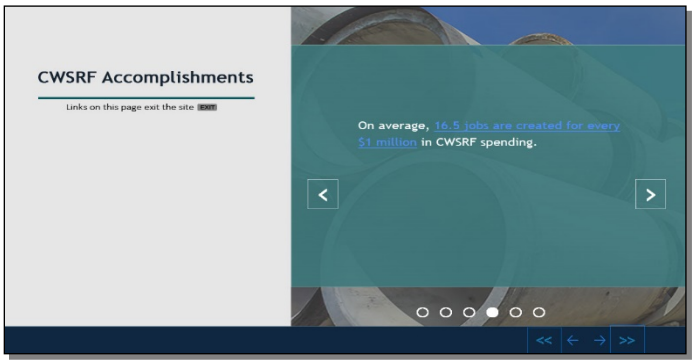
- Set-Aside Funds: States determine if and how the state will use set-aside funds. States may use up to approximately 31% of their capitalization grants for eligible DWSRF set-aside activities. Workplans are required for set-aside usage. Set-Asides are described in more detail in Chapter 7.
- Small Community Assistance: The DWSRF requires that states use at least 15% of available funds for loan assistance to small communities of less than 10,000 people, to the extent that there are eligible projects. See 40 CFR 35.3525(a)(5).



Subchapter 1.4: Accomplishments of the SRFs

CWSRF Accomplishments

DWSRF Accomplishments



CWSRF Accomplishments

Since the inception of the CWSRF program, EPA has awarded more than $42 billion in federal funding to states.

As of 2017, states effectively leveraged CWSRF funds to provide over $126 billion in funding to wastewater utilities and other eligible borrowers.

Every $1 from the federal government has resulted in $3 loaned to CWSRF borrowers.

On average, 16.5 jobs are created for every $1 million in CWSRF spending (http://uswateralliance.org/sites/uswateralliance.org/files/publications/Economic%20Impact%20of%20Investing%20in%20Water%20Infrastructure_VOW_FINAL_pages.pdf).

States have funded over 38,441 assistance agreements as of 2017.

CWSRF low-cost loans have saved borrowers more than $37 billion in interest costs over the last 30 years (based on a comparison of weighted average interest rates).

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DWSRF Accomplishments

Since the inception of the DWSRF program, EPA has awarded nearly $20 billion in federal funding to states.

As of 2017, states effectively leveraged DWSRF funds to provide nearly $35.4 billion in loans to water utilities. The loan program has disbursed $1.87 for every $1 drawn from the U.S. Treasury.

States have signed approximately 13,800 loan agreements as of 2017.

States have provided assistance to the neediest communities:

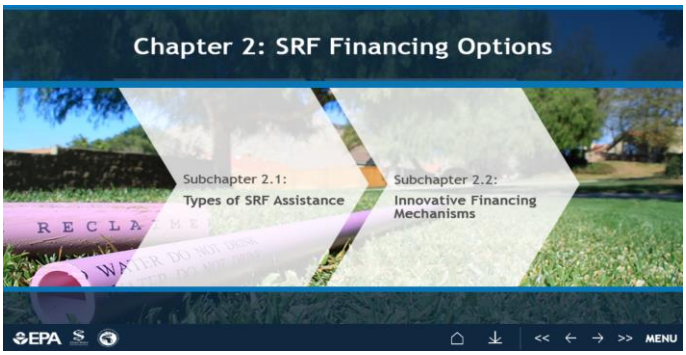
Disadvantaged communities have entered into approximately 4,610 assistance agreements with a total value of $9.3 billion.

States have provided nearly $295 million in technical assistance to small systems.

In 2017 alone, over 24,000 small drinking water systems received this technical assistance.

States have provided $3 billion for capacity building, operator certification, source water protection, and DWSRF and Public Water System Supervision (PWSS) support from the DWSRF set-asides since 1997.

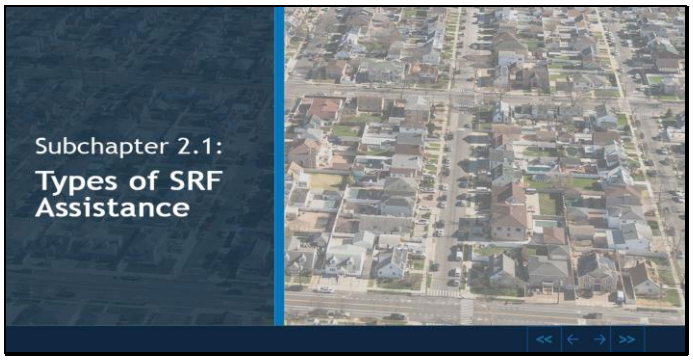
See the 2017 DWSRF Annual Report (https://www.epa.gov/sites/production/files/2018-08/documents/20th_anniversary_dwsrf_report_final_508.pdf).



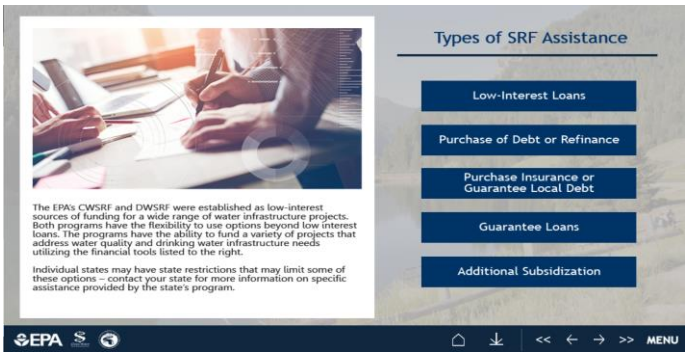
Chapter 2: SRF Financing Options

Subchapter 2.1: Types of SRF Assistance

Subchapter 2.2: Innovative Financing Mechanisms



Subchapter 2.1 Types of SRF Assistance



Types of SRF Assistance

The EPA's CWSRF and DWSRF were established as low-interest sources of funding for a wide range of water infrastructure projects. Both programs have the flexibility to use options beyond low interest loans. The programs have the ability to fund a variety of projects that address water quality and drinking water infrastructure needs utilizing the financial tools listed to the right.

Individual states may have state restrictions that may limit some of these options – contact your state for more information on specific assistance provided by the state's program.

Low-Interest Loans

The primary assistance offered in both SRF programs is low-interest loans. Interest rates range from zero percent to market rate. Overall, SRF interest rates are significantly lower than market rates.

In 2017, the DWSRF weighted average interest rate was 1.563%, compared to a market rate of 3.285%. (Source: DWNIMS National Report 2017, lines 287 and 288)

In 2016, the CWSRF weighted average interest rate was 1.4% (Source: CWNIMS National Report 2016, line 240)

In the CWSRF, loan repayment terms cannot exceed the lesser of 30 years or the useful life of the project.

In the DWSRF, the loan repayment term is 20 years or up to 30 years (or up to the useful service life) for state-defined Disadvantaged Communities. The extent to which, and to whom, each program offers these terms is at the discretion of the states administering the programs.

Purchase of Debt or Refinance

In addition to direct loans, SRFs can purchase municipal bonds. They are able to do this under the eligibility allowing states to refinance or purchase local debt obligations. In some states, cities issue bonds when they incur debt. In those cases, the bonds are directly purchased by the SRF program at a low-interest rate.

With EPA approval, SRFs may set terms for purchased debt that exceed 30 years, but may not exceed the useful life of the project.

Case Study: Chino Valley, Arizona

In 2016, the Town of Chino Valley received $4.5 million from the CWSRF for the Center Street Sewer from Highway 89 to Molly Rae project. The Town used $3.9 million to refinance a U.S. Department of Agriculture Rural Development loan, which provided a significant cost savings through the CWSRF's (Water Infrastructure Finance Authority of Arizona) lower interest rate. The Town used the remaining funding to extend the sewer collection system to areas previously served by septic. The

decommissioning of these residential septic systems was estimated to result in almost 200 new connections.

Purchase Insurance or Guarantee Local Debt

The SRF programs may purchase insurance for local debt obligations or guarantee such obligations for a DWSRF- or CWSRF-eligible project to improve a recipient's credit market access or reduce the interest rate on the debt obligation.

Guarantee Loans

The CWSRF program can issue loan guarantees for revolving funds established by municipalities or inter-municipal agencies. The guarantee of local revolving fund loans by the CWSRF can help a municipal or inter-municipal agency receive a better rating on bonds issued to capitalize the sub-state or local revolving fund. The CWSRF can also directly guarantee obligations purchased by a sub-state revolving fund, which would deliver the same rating benefit and pass-through of interest cost savings to borrowers. While states cannot use the DWSRF to issue a loan guarantee for local revolving fund loans, they can support local revolving funds with other forms of assistance, such as direct loans, purchasing the local revolving fund debt obligations, or guaranteeing the local revolving fund obligation rather than their loans.

Case Study: NYSERDA

In 2013, the New York State Energy Research and Development Authority (NYSERDA) sold $24.3 million in revenue bonds to finance loans for energy efficiency improvements as part of its Green Jobs-Green New York Program.

NYSERDA uses the bond proceeds to finance consumer loans that will be used for the installation of residential energy efficiency improvements and ENERGY STAR compliant products.

These bonds were rated triple-A due to a guarantee from the New York State Environment Facilities Corporation (NYEFC), New York's CWSRF.

Additional Subsidization

Both SRF programs offer additional forms of subsidization to recipients who meet state-defined requirements. Subsidization takes the form of principal forgiveness, negative interest rate loans, and grants. The extent to which, and to whom, each program offers additional subsidization is at the discretion of the states administering the programs, subject to authorities provided by Congress.

For the CWSRF:

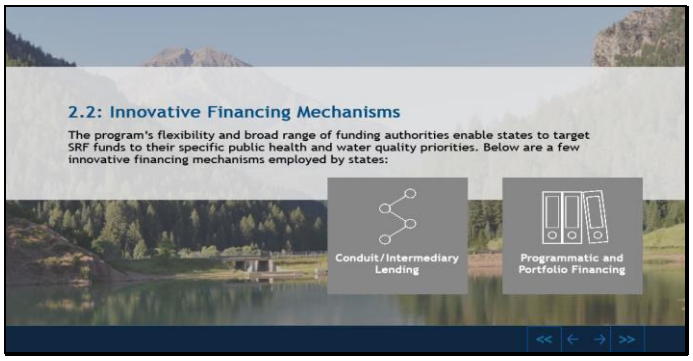
- Since 2010, the SRF appropriation has included a provision requiring states to provide a portion of their annual capitalization grant as additional subsidization. At the states' discretion, any borrower or project may receive this additional subsidy.
- In addition, Water Resources Reform and Development Act (WRRDA) included a provision that under certain conditions, CWSRF programs may provide up to a fixed percentage of their capitalization grants as additional subsidization in the form of principal forgiveness, negative interest rate loans, or grants.
    - The annual CWSRF appropriation must be greater than $1 billion.
    - Additional subsidization may only be used to help address affordability issues or to implement a process, material, technique, or technology that addresses water or energy efficiency goals; mitigates stormwater runoff; or encourages sustainable project planning, design, and construction.

Under the DWSRF, a state may, at its discretion, establish disadvantaged community criteria and offer negative interest rates, principal forgiveness, and/or an extended repayment term of 30 years.

For more information, see the DWSRF (https://www.epa.gov/drinkingwatersrf) and CWSRF (https://www.epa.gov/cwsrf) websites, or contact your state office.

Case Study: Hagerman, Idaho

CWSRF: In 2014 the City of Hagerman, Idaho submitted a letter to the Idaho Department of Environmental Quality (DEQ) indicating their desire to finance upgrades to their wastewater treatment infrastructure, as well as purchase 100 acres for the beneficial reuse of wastewater effluent. At a price tag of $10 million, Hagerman also needed to determine how a population of less than 1,000 was going to pay for the project. Even with access to Idaho's low CWSRF interest rates, monthly user fees would need to be raised to $115 to pay back a loan. Collaboration between the engineering staff at DEQ and other federal and state funding sources led to Hagerman reducing the cost of the project to $7.8 million. Idaho's CWSRF provided Hagerman with a $6.2 million loan, of which $1.2 million was provided as principal forgiveness, with the remaining infrastructure costs covered by other funding agencies. This collaboration between funding partners satisfied Hagerman's infrastructure needs and maintained a manageable monthly user fee of $57.

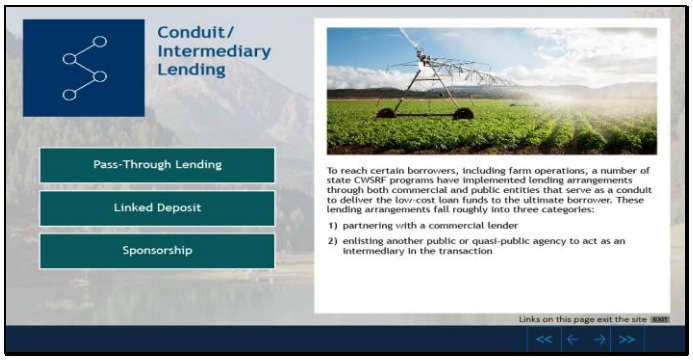


2.2: Innovative Financing Mechanisms

The program’s flexibility and broad range of funding authorities enable states to target SRF funds to their specific public health and water quality priorities. Below are a few innovative financing mechanisms employed by states:

Conduit/Intermediary Lending

Programmatic and Portfolio Financing



Conduit/ Intermediary Lending

To reach certain borrowers, including farm operations, a number of state CWSRF programs have implemented lending arrangements through both commercial and public entities that serve as a conduit to deliver the low-cost loan funds to the ultimate borrower. These lending arrangements fall roughly into three categories:

1. partnering with a commercial lender
2. enlisting another public or quasi-public agency to act as an intermediary in the transaction
3. involving a cooperative or other not-for-profit producer related enterprise as the conduit.

Pass-Through Lending

The most common structure for intermediary lending in the CWSRF programs is frequently referred to as “pass-through lending.” Pass-through lending channels CWSRF funds through a conduit entity to an end borrower. A variety of conduit entities have partnered with CWSRF programs in pass-through arrangements including state agencies, counties, conservation districts, and local municipalities.

Financing Direct Seed Equipment

Direct seed systems use equipment that disturbs only a narrow strip of soil, significantly reducing erosion, improving soil quality, reducing fuel consumption, and protecting water quality by reducing the sediment and nutrient load associated with conventional farming techniques.

Since 1995, the Washington CWSRF has provided more than $19.5 million for the direct seed pass-through program via the Spokane County Conservation District. The Spokane direct seed program benefits farmers in 14 counties in Eastern Washington. The program has issued 300 loans, converting 700,000 acres of farmland to no-till and preventing 1.9 million tons of sediment, nitrogen, pesticides, and other chemicals from entering Washington waterways. The program is set up as a revolving fund. Direct seed equipment purchases are repaid to the Conservation District, which uses the landowner repayment to repay the CWSRF loan. The loans are secured through local tax assessment funds. Five- to ten-year loan terms are offered. The Conservation District also receives a grant from the Department of Ecology for the Direct Seed program. The grant funds are used to offset administration costs and education, marketing, and outreach efforts.

Pass-Through for Failing Septic Systems

The Washington CWSRF also funds a pass-through program with 15 counties or local health departments in the Puget Sound and marine counties, as well as the Spokane Conservation District, that provides financing to individual residents to repair failing onsite sewage systems. The loans may also pay for abandonment of septic systems and connection to sewer. The county or health department is responsible for local loan servicing, collecting payments, and payment tracking (but may contract these services to a lending institution). The pass-through entity also approves or denies

loan requests and establishes the terms of the sub-loans to residents. Quarterly progress reports must be submitted to the CWSRF program providing schedules for project completion, loan marketing activities, data on loan applications and closures, and a final list of local loans provided to homeowners and small commercial enterprises. $15 million in CWSRF loans has been provided for the program since 1990, and over 600 homeowners have participated since 2007.

In 2016, the Washington CWSRF launched a unified program that provides financing to individual residents to repair or replace failing onsite sewage systems in 11 of the marine counties of Washington State. The State Department of Ecology has contracted with a financial institution on behalf of those 11 counties, and the financial institution provides affordable loans (including loan servicing, collecting payments, payment tracking, approval or denial of loan requests, and establishing the loan terms) to property owners within the 11-county region. The financial institution repays the CWSRF loan. The financial institution submits quarterly reports, loan marketing activities, data on loan applications and closures, etc. The participating counties refer homeowners to the financial institution.

Source (https://www.epa.gov/sites/production/files/201705/documents/financing_options_for_nontraditional_eligibilities_final.pdf)

Linked Deposit

Linked deposit financing takes advantage of the provision in the CWSRF authorizing statute allowing CWSRF funds to be used “to earn interest on fund accounts” (Title 33 Subchapter VI §1383(d)(6)). In a linked deposit arrangement, a state CWSRF program purchases a reduced-rate certificate of deposit from a private financial institution.

The financial institution then makes loans (at a slightly lower interest rate) to individuals for smaller-scale water quality projects. Many states have used linked deposits to successfully fund projects such as septic replacements, agricultural best management practices, or environmentally-friendly forestry equipment.

Source (https://www.epa.gov/sites/production/files/201705/documents/financing_options_for_nontraditional_eligibilities_final.pdf)

Linked Deposit Loans for Green Forestry Equipment

A long-running example of a linked deposit lending arrangement is the Memorandum of Understanding between the Maine Bond Bank, the Maine Department of Environmental Protection, the Maine Forest Service, and several local banks to fund the purchase of “green” forestry equipment. The loans are intended to increase the use of best management practices and environmentally-friendly logging equipment in the Maine logging industry, which help protect and restore water quality around logging operations.

Eligible purchases include mulching machines, tractors, graders, flotation tires, GPS equipment tracking systems, bridges, and sediment and erosion control products. A Maine Forest Service advisory committee reviews purchase proposals for equipment and structures to ensure that they are needed to implement environmentally sound logging operations. Qualified loggers may apply for loans up to $800,000 to purchase timber harvesting equipment and implement best management practices that reduce the risk of nonpoint source pollution from silviculture activities.

Since the three agencies signed the Memorandum of Understanding creating the linked deposit arrangement in 2007, a total of $23.6 million has been committed to this program. In total, 91 loans have been made equaling $21.2 million. The Maine CWSRF provided $4.8 million for 19 silviculture loans in 2016 through the linked deposit program.

Sponsorship

Webinar (presented by EPA and the USDA Forest Service National Urban Forest Technology and Science Delivery Team on April 13, 2017): Sponsorship: A Unique Tool for Funding Land Conservation Projects with the CWSRF (https://www.youtube.com/watch?v=ib2FLT1D6Ds&feature=youtu.be).

CWSRF sponsorship lending pairs a traditional publicly owned treatment works project with a nontraditional one, often a nonpoint source (NPS) project. A utility receives a loan with a reduced interest rate as compensation for also undertaking (i.e., sponsoring) a nontraditional project, thus allowing utilities to address watershed restoration or protection priorities without placing a repayment responsibility on NPS projects.

Nontraditional Project Examples:

- Preservation and restoration of wetlands and riparian areas
- Land conservation
- Agricultural Best Management Practices
- Green street implementation of permeable pavement, bioretention cells, and green alleys

For more information and examples see EPA's fact sheet on Sponsorship Lending and the Clean Water State Revolving Fund (https://www.epa.gov/sites/production/files/2017-10/documents/sponsorship_style_newest_final.pdf).

The Ohio EPA Sponsorship Program

The Ohio EPA originated the concept of sponsorship lending with its Water Resource Restoration Sponsor Program (WRRSP). The WRRSP offers communities very low interest rates on loans for wastewater treatment plant improvements if the communities also sponsor projects that protect or restore water resources. A community that participates in the WRRSP does not typically implement a restoration project itself. Instead, it enters into a sponsorship agreement with an implementing partner—such as a land trust or a park district—that develops and implements the project, while the sponsoring community repays the loan. The WRRSP has supported projects that have acquired wetlands and riparian lands, acquired conservation easements, restored habitat, and modified dams. Ohio's WRRSP reinforces the idea that wastewater treatment plant improvements and water resource restoration projects are complementary efforts.

The Iowa Clean Water SRF Water Resource Restoration Sponsored Projects

The Iowa Clean Water SRF Water Resource Restoration Sponsored Projects effort provides an incentive for cities and wastewater utilities to address nonpoint source water quality issues while they're addressing their point source upgrades. In 2013, the City of Clinton received a CWSRF loan to construct two pump stations as part of a sewer separation project intended to reduce the amount of untreated wastewater discharging directly into the Mississippi River. To supplement the new storm sewer system, the City also sponsored a green infrastructure project to reduce the volume of stormwater entering the system. The City installed bioretention cells with native plantings, permeable pavement and sidewalk pavers, green alleys, and Silva Cell frames for tree plantings. The total cost of this project was $7.2 million of which $6.5 million was borrowed for the sewer separation project plus $655,000 for the sponsored project. The overall interest rate on the total amount borrowed was lowered to 0.76%, which has made the loan repayments equal to what they would have been for just the wastewater project at Iowa's normal CWSRF interest rate of 1.75%.

- Traditional portion: $6.5M
- Non-traditional portion: $655,000
- Interest rate: 0.76%

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Programmatic and Portfolio Financing

Programmatic Financing

Programmatic financing shifts the traditional project-specific lending strategy to one that is more congruent with using bonds to finance an annual (or multi-year) cash flow for capital improvement projects. Instead of issuing a binding commitment for a certain amount of SRF dollars to a single project, a programmatic financing loan is designed to fund the utility's entire CIP (Capital Improvement Plan) - or any portion thereof - so long as the projects are eligible and prepared in compliance with SRF program requirements.

This also encompasses nontraditional projects (e.g., nonpoint source and estuary projects) that are included as part of the CIP.

Often these types of projects include stormwater, green infrastructure applications, conservation easements, and various types of restoration projects for wetlands, streambanks, and watersheds. In the event that a project in the CIP is delayed or falls through for any reason, programmatic financing makes it easy for the borrower to direct the funding toward any other eligible project activity included in the CIP, thus ensuring that disbursements continue to flow uninterrupted.

How Does Programmatic Financing Work?

The Basics

DWSRF and CWSRF commit to a level of funding for repeat borrowers

Borrower prepares CIP projects to meet CWSRF and DWSRF compliance requirements

Single loan agreement encompasses a "basket" of projects from the CIP

DWSRF and CWSRF funding may go toward ANY eligible project cost from the CIP

Example

DWSRF and CWSRF promise $15M/year in financing

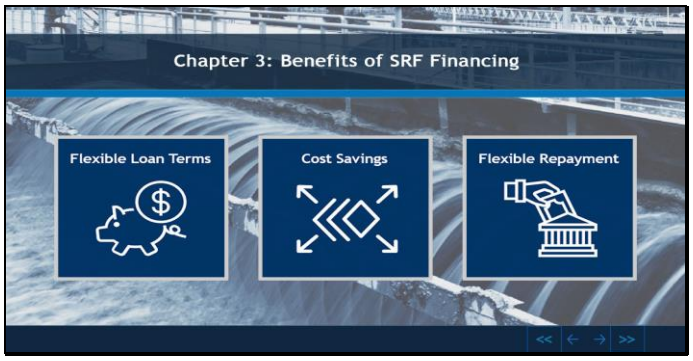
Any eligible project invoice that comes in is paid until all $15M is expended

Portfolio Financing

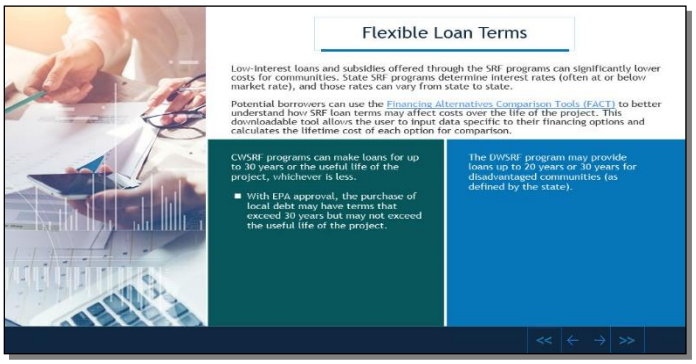
Portfolio financing consists of multiple loans over multiple years. Portfolio financing is a strategy where a SRF commits funding over time to one or several projects, (e.g., from a capital improvement or watershed management plan.)

Source (https://www.epa.gov/sites/production/files/2017-05/documents/financing_options_for_nontraditional_eligibilities_final.pdf)

Chapter 3: Benefits of SRF Financing



Chapter 3: Benefits of SRF Financing



Flexible Loan Terms

Low-interest loans and subsidies offered through the SRF programs can significantly lower costs for communities. State SRF programs determine interest rates (often at or below market rate), and those rates can vary from state to state.

Potential borrowers can use the Financing Alternatives Comparison Tools (FACT) (https://www.epa.gov/cwsrf/financing-alternatives-comparison-tool) to better understand how SRF loan terms may affect costs over the life of the project. This downloadable tool allows the user to input data specific to their financing options and calculates the lifetime cost of each option for comparison.

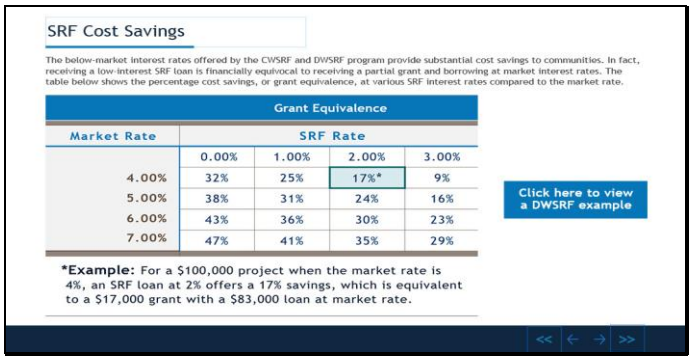
CWSRF Loan Terms

CWSRF programs can make loans for up to 30 years or the useful life of the project, whichever is less.

With EPA approval, the purchase of local debt may have terms that exceed 30 years but may not exceed the useful life of the project.

DWSRF Loan Terms

The DWSRF program may provide loans up to 20 years or 30 years for disadvantaged communities (as defined by the state).

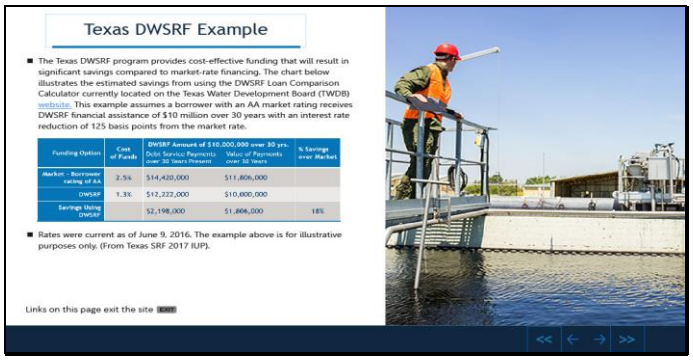


SRF Cost Savings

The below-market interest rates offered by the CWSRF and DWSRF program provide substantial cost savings to communities. In fact, receiving a low-interest SRF loan is financially equivocal to receiving a partial grant and borrowing at market interest rates. The table below shows the percentage cost savings, or grant equivalence, at various SRF interest rates compared to the market rate.

Click here to view a DWSRF example

Example: For a $100,000 project when the market rate is 4%, an SRF loan 2% offers a 17% savings, which is equivalent to a $17,000 grant with a $83,000 loan at market rate.



Texas DWSRF Example

The Texas DWSRF program provides cost-effective funding that will result in significant savings compared to market-rate financing. The chart below illustrates the estimated savings from using the DWSRF Loan Comparison Calculator currently located on the Texas Water Development Board (TWDB) website. (http://www.twdb.texas.gov/financial/index.asp)This example assumes a borrower with an AA market rating receives DWSRF financial assistance of $10 million over 30 years with an interest rate reduction of 125 basis points from the market rate.

Rates were current as of June 9, 2016. The example above is for illustrative purposes only. (From Texas SRF 2017 IUP).

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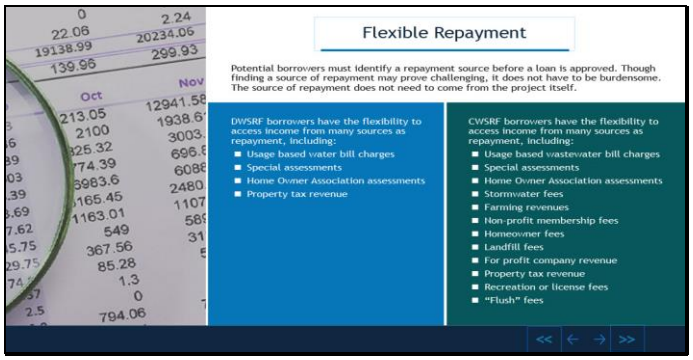


Flexible Repayment

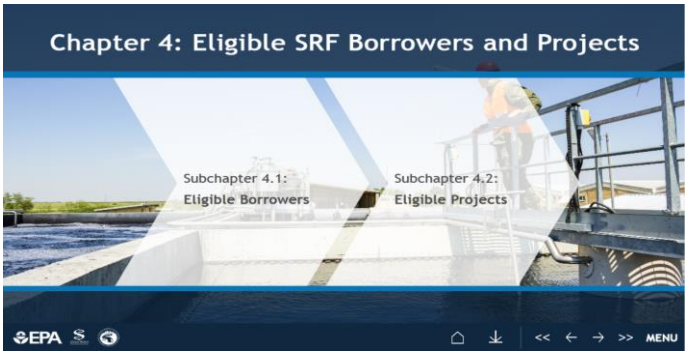
Potential borrowers must identify a repayment source before a loan is approved. Though finding a source of repayment may prove challenging, it does not have to be burdensome. The source of repayment does not need to come from the project itself.

DWSRF borrowers have the flexibility to access income from many sources as repayment, including:

- Usage based water bill charges
- Special assessments
- Home Owner Association assessments
- Property tax revenue
- Flexible Repayment

CWSRF borrowers have the flexibility to access income from many sources as repayment, including:

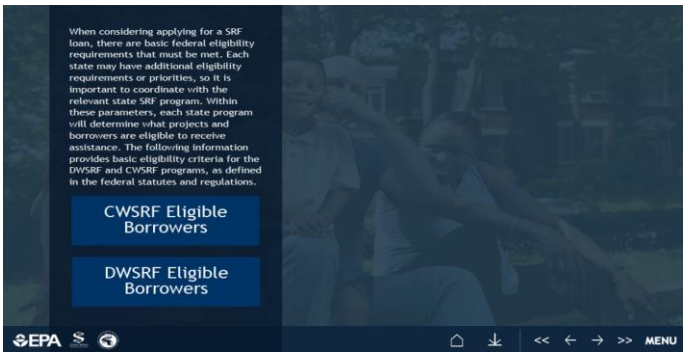
- Usage based wastewater bill charges
- Special assessments
- Home Owner Association assessments
- Stormwater fees
- Farming revenues
- Non-profit membership fees
- Homeowner fees
- Landfill fees
- For profit company revenue
- Property tax revenue
- Recreation or license fees
- "Flush" fees



Chapter 4: Eligible SRF Borrowers and Projects

Subchapter 4.1: Eligible Borrowers

Subchapter 4.2: Eligible Projects



Subchapter 4.1: Eligible Borrowers

When considering applying for a SRF loan, there are basic federal eligibility requirements that must be met. Each state may have additional eligibility requirements or priorities, so it is important to coordinate with the relevant state SRF program. Within these parameters, each state program will determine what projects and borrowers are eligible to receive assistance. The following information provides basic eligibility criteria for the DWSRF and CWSRF programs, as defined in the federal statutes and regulations.

CWSRF Eligible Borrowers

DWSRF Eligible Borrowers

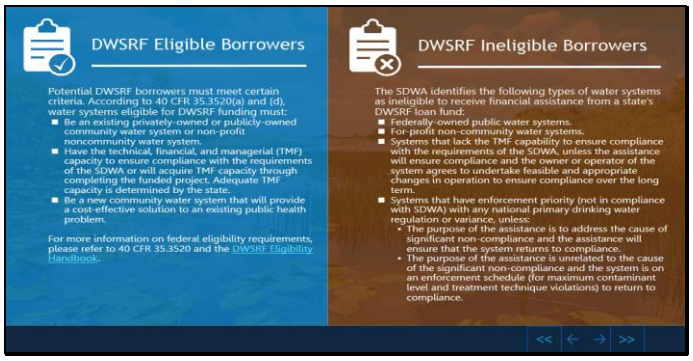
CWSRF Eligible Borrowers

Potential CWSRF borrowers must meet certain criteria to be eligible to apply for CWSRF assistance. CWSRF programs may provide assistance to public, private, or nonprofit entities for water infrastructure projects. Eligible recipients vary by project type and include municipalities, utilities, state agencies, community groups, farmers, homeowners, small businesses, conservation districts, and nonprofit organizations.

For more information on federal eligibility requirements, please refer to 40 CFR Part 35.31 and the Overview of Clean Water State Revolving Fund Eligibilities (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf).

CWSRF Ineligible Borrowers

Eligible borrowers vary by project type. Section 603(c) of the Clean Water Act describes the eligible entities for each project type. Refer to CWSRF Project eligibilities to identify eligible borrowers by project type.



DWSRF Eligible Borrowers

Potential DWSRF borrowers must meet certain criteria. According to 40 CFR 35.3520(a) and (d), water systems eligible for DWSRF funding must:

- Be an existing privately-owned or publicly-owned community water system or non-profit noncommunity water system.
- Have the technical, financial, and managerial (TMF) capacity to ensure compliance with the requirements of the SDWA or will acquire TMF capacity through completing the funded project. Adequate TMF capacity is determined by the state.
- Be a new community water system that will provide a cost-effective solution to an existing public health problem.

For more information on federal eligibility requirements, please refer to 40 CFR 35.3520 and the DWSRF Eligibility Handbook (https://www.epa.gov/sites/production/files/2017-06/documents/dwsrf_eligibility_handbook_june_13_2017_updated_508_version.pdf).

DWSRF Ineligible Borrowers

The SDWA identifies the following types of water systems as ineligible to receive financial assistance from a state's DWSRF loan fund:

- Federally-owned public water systems.
- For-profit non-community water systems.
- Systems that lack the TMF capability to ensure compliance with the requirements of the SDWA, unless the assistance will ensure compliance and the owner or operator of the system agrees to undertake feasible and appropriate changes in operation to ensure compliance over the long term.
- Systems that have enforcement priority (not in compliance with SDWA) with any national primary drinking water regulation or variance, unless:
    - The purpose of the assistance is to address the cause of significant non-compliance and the assistance will ensure that the system returns to compliance.
    - The purpose of the assistance is unrelated to the cause of the significant non-compliance and the system is on an enforcement schedule (for maximum contaminant level and treatment technique violations) to return to compliance.

4.2: Eligible and Ineligible Projects

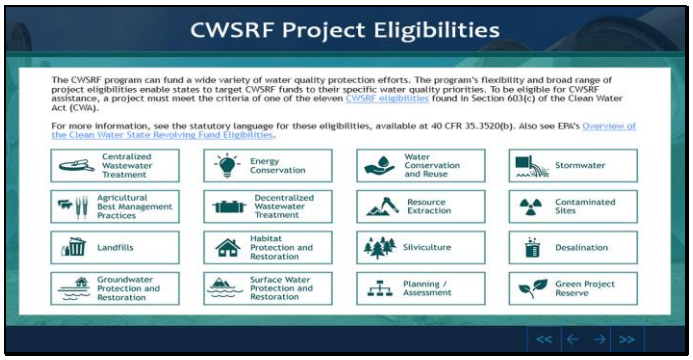
The SRF programs fund a wide range of project types and allow for considerable flexibility depending on state priorities. Basic information about SRF project types are provided here, but please refer to each program's eligibility handbook for more information (DWSRF (https://www.epa.gov/drinkingwatersrf/dwsrf-eligibility-handbook), CWSRF (https://www.epa.gov/cwsrf/overview-clean-water-state-revolving-fund-eligibilities)). Eligibilities will vary from state to state - contact your state program offices for additional eligibility details.

CWSRF Project Eligibilities

DWSRF Project Eligibilities

Ineligible CWSRF Projects

Ineligible DWSRF Projects



CWSRF Project Eligibilities

The CWSRF program can fund a wide variety of water quality protection efforts. The program's flexibility and broad range of project eligibilities enable states to target CWSRF funds to their specific water quality priorities. To be eligible for CWSRF assistance, a project must meet the criteria of one of the eleven CWSRF eligibilities (https://www.epa.gov/cwsrf/learn-about-clean-water-state-revolving-fund-cwsrf#eligibilities) found in Section 603(c) of the Clean Water Act (CWA).

For more information, see the statutory language for these eligibilities, available at 40 CFR 35.3520(b). Also see EPA's Overview of the Clean Water State Revolving Fund Eligibilities (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf).

Centralized Wastewater Treatment

Energy Conservation

Water Conservation and Reuse

Stormwater

Agricultural Best Management Practices

Decentralized Wastewater Treatment

Resource Extraction

Contaminated Sites

Landfills

Habitat Protection and Restoration

Silviculture

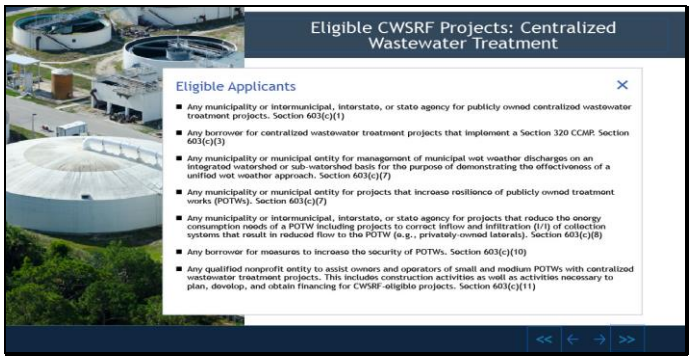
Desalination

Groundwater Protection and Restoration

Surface Water Protection and Restoration

Planning/Assessment

Green Project Reserve



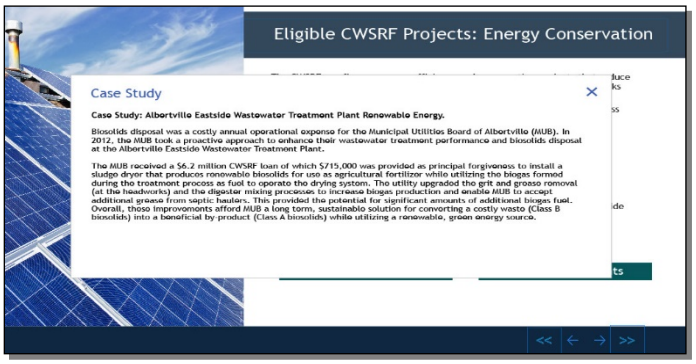
Eligible CWSRF Projects: Centralized Wastewater Treatment

The CWSRF can provide financial assistance for publicly owned, centralized wastewater treatment projects, including:

- Primary and secondary treatment
- Advanced treatment
- Sewer system repair and replacement
- Combined Sewer Overflow (CSO) correction
- Resilience to extreme weather event
- Security

Eligible applicants

- Any municipality or intermunicipal, interstate, or state agency for publicly owned centralized wastewater treatment projects. Section 603(c)(1)
- Any borrower for centralized wastewater treatment projects that implement a Section 320 CCMP. Section 603(c)(3)
- Any municipality or municipal entity for management of municipal wet weather discharges on an integrated watershed or sub-watershed basis for the purpose of demonstrating the effectiveness of a unified wet weather approach. Section 603(c)(7)
- Any municipality or municipal entity for projects that increase resilience of publicly owned treatment works (POTWs). Section 603(c)(7)
- Any municipality or intermunicipal, interstate, or state agency for projects that reduce the energy consumption needs of a POTW including projects to correct inflow and infiltration (I/I) of collection systems that result in reduced flow to the POTW (e.g., privately-owned laterals). Section 603(c)(8)
- Any borrower for measures to increase the security of POTWs. Section 603(c)(10)
- Any qualified nonprofit entity to assist owners and operators of small and medium POTWs with centralized wastewater treatment projects. This includes construction activities as well as activities necessary to plan, develop, and obtain financing for CWSRF-eligible projects. Section 603(c)(11)



Eligible CWSRF Projects: Energy Conservation

The CWSRF can finance energy efficiency and conservation projects that reduce the amount of thermoelectric energy used at publicly owned treatment works (POTW). Eligible projects include:

- Energy-efficient equipment and components (e.g., lighting, HVAC, process equipment)
- Onsite renewable energy (e.g., wind, solar)
- Methane capture and energy conversion equipment
- Biosolids drying/dewatering and energy conversion equipment
- Co-digestion
- Combined heat and power (CHP) systems
- Pro rata share of capital costs of offsite clean energy facilities that provide power to a treatment works

Eligible Applicants (Source (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf))

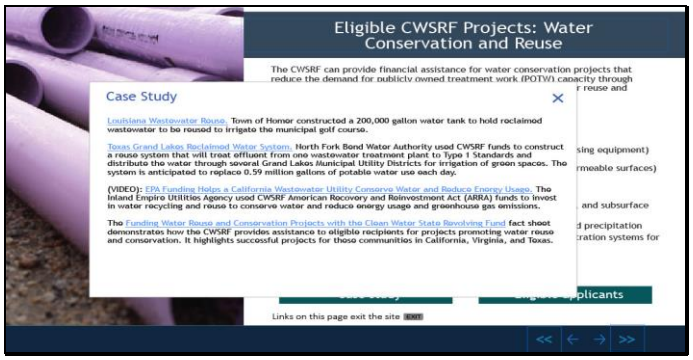
- Any municipality or intermunicipal, interstate, or state agency for energy conservation projects for POTWs. Section 603(c)(1)
- Any borrower for energy conservation projects for treatment works that implement a Section 320 CCMP. Section 603(c)(3)
- Any municipality or intermunicipal, interstate, or state agency for the pro rata share of capital costs of energy conservation projects that provide power to a POTW (e.g., landfill gas conversion and waste to energy projects). Section 603(c)(8)
- Any borrower for energy conservation projects at water reuse facilities. Section 603(c)(9)
- Any borrower for projects to reuse the energy content of wastewater (e.g., privately owned CHP systems) or generate energy from water reuse activities (e.g., micro hydro turbines). Section 603(c)(9)
- Any borrower for energy efficient security systems at POTWs. Section 603(c)(10)
- Any qualified nonprofit entity to assist owners and operators of small and medium POTWs with energy conservation projects. This includes construction activities as well as activities necessary to plan, develop, and obtain financing for CWSRF-eligible projects. Section 603(c)(11)

Case Study

Case Study: Albertville Eastside Wastewater Treatment Plant Renewable Energy.

Biosolids disposal was a costly annual operational expense for the Municipal Utilities Board of Albertville (MUB). In 2012, the MUB took a proactive approach to enhance their wastewater treatment performance and biosolids disposal at the Albertville Eastside Wastewater Treatment Plant.

The MUB received a $6.2 million CWSRF loan of which $715,000 was provided as principal forgiveness to install a sludge dryer that produces renewable biosolids for use as agricultural fertilizer while utilizing the biogas formed during the treatment process as fuel to operate the drying system. The utility upgraded the grit and grease removal (at the headworks) and the digester mixing processes to increase biogas production and enable MUB to accept additional grease from septic haulers. This provided the potential for significant amounts of additional biogas fuel. Overall, these improvements afford MUB a long term, sustainable solution for converting a costly waste (Class B biosolids) into a beneficial by-product (Class A biosolids) while utilizing a renewable, green energy source.



Eligible CWSRF Projects: Water Conservation and Reuse

The CWSRF can provide financial assistance for water conservation projects that reduce the demand for publicly owned treatment work (POTW) capacity through reduced water consumption (i.e., water efficiency), as well as water reuse and precipitation harvesting.

Eligible water efficiency projects include:

- Water meters
- Plumbing fixture retrofits or replacements
- Water efficient appliances
- Water efficient irrigation equipment (e.g., moisture and rain sensing equipment)
- Education programs
- Incentive programs (e.g., rebates for installing rain barrels or permeable surfaces)
- Direct potable reuse

Eligible water reuse projects include:

- Collection and treatment systems (e.g., wastewater, stormwater, and subsurface drainage water collection and treatment)
- Distribution lines to support water reuse and the use of harvested precipitation
- Transmission lines, injection wells, and green infrastructure infiltration systems for groundwater recharge
- Equipment to reuse reclaimed water
- Direct portable reuse

Case Study

Louisiana Wastewater Reuse (https://www.epa.gov/sites/production/files/2017-11/documents/pisces_compendium_final2.pdf#page=18). Town of Homer constructed a 200,000 gallon water tank to hold reclaimed wastewater to be reused to irrigate the municipal golf course.

Texas Grand Lakes Reclaimed Water System (https://www.epa.gov/sites/production/files/2017-11/documents/pisces_compendium_final2.pdf#page=22). North Fork Bend Water Authority used CWSRF funds to construct a reuse system that will treat effluent from one wastewater treatment plant to Type 1 Standards and distribute the water through several Grand Lakes Municipal Utility Districts for irrigation of green spaces. The system is anticipated to replace 0.59 million gallons of potable water use each day.

(VIDEO): EPA Funding Helps a California Wastewater Utility Conserve Water and Reduce Energy Usage (https://www.epa.gov/cwsrf/clean-water-state-revolving-fund-cwsrf-water-conservation). The Inland Empire Utilities Agency used CWSRF American Recovery and Reinvestment Act (ARRA) funds to invest in water recycling and reuse to conserve water and reduce energy usage and greenhouse gas emissions.

The Funding Water Reuse and Conservation Projects with the Clean Water State Revolving Fund fact sheet (https://www.epa.gov/cwsrf/funding-water-reuse-and-conservation-projects-clean-water-state-revolving-fund) demonstrates how the CWSRF provides assistance to eligible recipients for projects promoting water reuse and conservation. It highlights successful projects for these communities in California, Virginia, and Texas.

Eligible Applicants

- Any municipality or intermunicipal, interstate, or state agency for publicly owned water conservation projects. Section 603(c)(1)
- Any borrower for water conservation projects that implement a Section 319 NPS management program. Section 603(c)(2)
- Any borrower for water conservation projects that implement a Section 320 CCMP. Section 603(c)(3)
- Any borrower for water conservation projects that recapture stormwater or subsurface drainage water. Section 603(c)(5)
- Any municipality or intermunicipal, interstate, or state agency for water conservation projects that reduce the demand for POTW capacity. Section 603(c)(6)
- Any municipality or municipal entity for stormwater BMPs in municipal separate storm sewers (MS4s) for the purpose of demonstrating and determining controls that are cost-effective and use innovative technologies. Section 603(c)(7)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)
- Any borrower for projects to reuse or recycle wastewater, stormwater, or subsurface drainage water. This includes recycling of nutrient and organic content (e.g., privately owned CHP). Section 603(c)(9)
- Any qualified nonprofit entity to assist owners and operators of small and medium POTWs with water conservation projects. This includes construction activities as well as activities necessary to plan, develop, and obtain financing for CWSRF-eligible projects. Section 603(c)(11)

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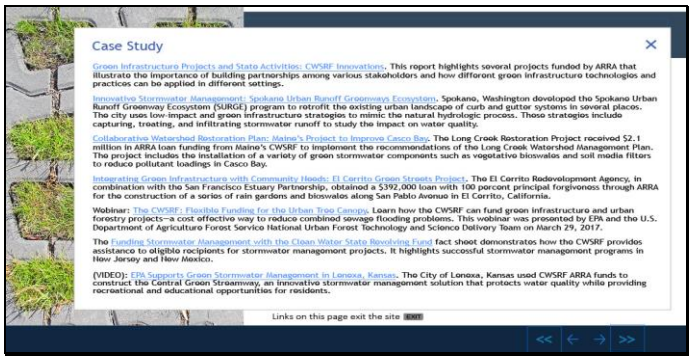

Eligible CWSRF Projects: Stormwater

CWSRF programs are well-positioned to help address water quality issues caused by stormwater runoff through the financing of gray and green infrastructure solutions.

Green infrastructure solutions eligible for CWSRF assistance include:

- Green roofs, green streets, and green walls
- Rainwater harvesting collection, storage, management, and distribution systems
- Real-time control systems for harvested rainwater
- Infiltration basins
- Constructed wetlands, including surface flow and subsurface flow (e.g., gravel) wetlands
- Bioretention/bioswales (e.g., rain gardens, tree boxes)
- Permeable pavement
- Wetland/riparian/shoreline creation, protection, and restoration
- Establishment/restoration of urban tree canopy
- Replacement of gray infrastructure with green infrastructure including purchase and demolition costs

Gray infrastructure solutions eligible for CWSRF assistance include:

- Traditional pipe, storage, and treatment systems
- Real-time control systems for combined sewer overflow (CSO) management
- Sediment controls including (e.g., filter fences, storm drain inlet protection, street sweepers, and vacuum trucks)

Case Study

Green Infrastructure Projects and State Activities: CWSRF Innovations (https://www.epa.gov/cwsrf/green-infrastructure-projects-and-state-activities-cwsrf-innovations). This report highlights several projects funded by ARRA that illustrate the importance of building partnerships among various stakeholders and how different green infrastructure technologies and practices can be applied in different settings.

Innovative Stormwater Management: Spokane Urban Runoff Greenways Ecosystem (https://www.epa.gov/cwsrf/innovative-stormwater-management-spokane-urban-runoff-greenways-ecosystem). Spokane, Washington developed the Spokane Urban Runoff Greenway Ecosystem (SURGE) program to retrofit the existing urban landscape of curb and gutter systems in several places. The

city uses low-impact and green infrastructure strategies to mimic the natural hydrologic process. These strategies include capturing, treating, and infiltrating stormwater runoff to study the impact on water quality.

Collaborative Watershed Restoration Plan: Maine's Project to Improve Casco Bay (https://www.epa.gov/cwsrf/collaborative-watershed-restoration-plan-maines-project-improve-casco-bay). The Long Creek Restoration Project received $2.1 million in ARRA loan funding from Maine's CWSRF to implement the recommendations of the Long Creek Watershed Management Plan. The project includes the installation of a variety of green stormwater components such as vegetative bioswales and soil media filters to reduce pollutant loadings in Casco Bay.

Integrating Green Infrastructure with Community Needs (https://www.epa.gov/cwsrf/integrating-green-infrastructure-community-needs-el-cerrito-green-streets-project): El Cerrito Green Streets Project. The El Cerrito Redevelopment Agency, in combination with the San Francisco Estuary Partnership, obtained a $392,000 loan with 100 percent principal forgiveness through ARRA for the construction of a series of rain gardens and bioswales along San Pablo Avenue in El Cerrito, California.

Webinar: The CWSRF: Flexible Funding for the Urban Tree Canopy (https://www.youtube.com/watch?v=oXe7RzxT808&feature=youtu.be). Learn how the CWSRF can fund green infrastructure and urban forestry projects—a cost effective way to reduce combined sewage flooding problems. This webinar was presented by EPA and the U.S. Department of Agriculture Forest Service National Urban Forest Technology and Science Delivery Team on March 29, 2017.

The Funding Stormwater Management with the Clean Water State Revolving Fund fact sheet (https://www.epa.gov/cwsrf/funding-stormwater-management-clean-water-state-revolving-fund) demonstrates how the CWSRF provides assistance to eligible recipients for stormwater management projects. It highlights successful stormwater management programs in New Jersey and New Mexico.

(VIDEO): EPA Supports Green Stormwater Management in Lenexa, Kansas (https://www.epa.gov/cwsrf/clean-water-state-revolving-fund-cwsrf-stormwater). The City of Lenexa, Kansas used CWSRF ARRA funds to construct the Central Green Streamway, an innovative stormwater management solution that protects water quality while providing recreational and educational opportunities for residents.

Eligible Applicants (Source (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf))

- Any municipality or intermunicipal, interstate, or state agency for publicly owned stormwater projects. Section 603(c)(1)
- Any borrower for stormwater projects that implement a Section 319 NPS management program. Section 603(c)(2)
- Any borrower for stormwater projects that implement a Section 320 CCMP. Section 603(c)(3)
- Any borrower for projects that manage, reduce, treat, or recapture stormwater or subsurface drainage water. Section 603(c)(5)
- Any municipality or municipal entity for management of municipal wet weather discharges on an integrated watershed or sub-watershed basis for the purpose of demonstrating the effectiveness of a unified wet weather approach. Section 603(c)(7)
- Any municipality or municipal entity for stormwater BMPs in municipal separate storm sewers (MS4s) for the purpose of demonstrating and determining controls that are cost-effective and use innovative technologies. Section 603(c)(7)

- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)
- Any municipality or municipal entity for the development and implementation of a municipality-wide stormwater management plan. Section 603(c)(7)
- Any borrower for projects to reuse stormwater or subsurface drainage water. Section 603(c)(9)

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Eligible CWSRF Projects: Agricultural Best Management Practices

CWSRF assistance may be provided for agricultural best management practices (BMPs) that address runoff and erosion from agricultural cropland and animal feeding operations (AFOs). BMP activities at concentrated animal feeding operations (CAFOs) are not eligible except in limited circumstances.

Eligible cropland activities include:

- Manure injection equipment
- Manure spreaders
- Water efficient irrigation equipment
- Conservation tillage equipment
- Windbreaks
- Sediment control basins
- Terraces
- Diversions
- Buffer and filter strips
- Rip-rapping
- Streambank stabilization
- Chemical use reduction (e.g., chemical spray equipment and chemical storage containment structures)

Eligible AFO activities include:

- Livestock/milk house waste management systems
- Manure containment structures
- Vessel composters
- Manure injection equipment
- Well sealing and water diversions to avoid feedlots
- Fencing/alternative water supply for animals to keep them out of water bodies

Case study

The Hood River Farmers Irrigation District used $36.2 million in CWSRF loans between 2009-2012 for a multiple-year endeavor to convert the open canal system to a piped, pressurized irrigation system to maximize water conservation, and restore reliable water delivery to crops.

(VIDEO https://www.youtube.com/watch?v=kcvR9bx2D6E): The Funding Agricultural Best Management Practices with the Clean Water State Revolving Fund fact sheet (https://www.epa.gov/cwsrf/funding-agricultural-best-management-practices-clean-water-state-revolving-fund) demonstrates how the CWSRF provides assistance to eligible recipients for projects promoting agricultural best management practices. It also gives an overview of the Maryland and Virginia Farm Credit Banks, as well as the Minnesota Ag BMP Loan Program.

Eligible Applicants (Source (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf))

- Any borrower for BMPs on agricultural land or at AFOs that implement a Section 319 NPS management program. Projects at CAFOs are not eligible. Section 603(c)(2)
    - BMPs to treat or make beneficial use of manure that is not under the control of a CAFO are eligible.
- Any borrower to refinance debt undertaken by an AFO for projects to remove the characteristics that made it a CAFO if the project implements a Section 319 NPS management program. Section 603(c)(2)
    - As long as the AFO is no longer a CAFO at the time of the CWSRF binding commitment.
- Any borrower for agricultural BMPs that implement a Section 320 CCMP. Section 603(c)(3)
- Any borrower for projects that manage, reduce, treat, or recapture agricultural stormwater or subsurface drainage water. Section 603(c)(5)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Projects at CAFOs are not eligible. Section 603(c)(7)
- Any municipality, intermunicipal, interstate, or state agency to cover the pro rata costs of renewable energy projects at AFOs that provide power to a POTW. Section 603(c)(8)
- Any borrower for projects to reuse agricultural wastewater, stormwater, or subsurface drainage water. Section 603(c)(9)
- Any borrower for projects to receive and distribute reclaimed water for irrigation systems or other agricultural uses. Section 603(c)(9)

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Eligible CWSRF Projects: Decentralized Wastewater Practices

Decentralized wastewater treatment is an onsite or clustered system used to collect, treat, and disperse or reclaim wastewater from a small community or service area (e.g., septic systems, cluster systems, lagoons). CWSRF-eligible decentralized wastewater treatment projects include:

- Upgrade (e.g., nutrient removal), repair, or replacement of existing systems
- Construction/installation of new systems
- Costs associated with the establishment of a responsible management entity (RME) (e.g., permitting fees, legal fees, etc.)
- Septage treatment works and pumper trucks to support the proper maintenance of decentralized systems

Case study

Stanislaus County Parklawn Sewer Project (https://pubapps.waterboards.ca.gov/water_issues/programs/grants_loans/srf/success_stories.shtml). The Parklawn neighborhood is an unincorporated community established in the 1940s, made up of 326 residential properties with approximately 1,500 residents. According to an income survey conducted by staff from California Rural Legal Assistance and Self-Help Enterprises, the community qualifies as a severely disadvantaged community with an annual median household income below $20,000. Residents were previously utilizing septic systems, with reports of surfacing sewage, failing leach lines, and sewage backups. The Project connected the area to the City of Modesto's existing public sewer system, including approximately 14,475 linear feet of sewer main, and constructed a pump station.

Ohio's CWSRF program (https://www.epa.gov/cwsrf/decentralized-wastewater-treatment-ohios-home-sewage-treatment-system-program) provided over $3 million in ARRA funds to decentralized wastewater projects as part of its Home Sewage Treatment System program.

The Funding Decentralized Wastewater Treatment Systems with the Clean Water State Revolving Fund fact sheet (https://www.epa.gov/cwsrf/funding-decentralized-wastewater-treatment-systems-clean-water-state-revolving-fund) demonstrates how the CWSRF provides assistance to eligible recipients for decentralized wastewater treatment system projects. It highlights successful decentralized wastewater treatment programs in Rhode Island and Alabama.

The Decentralized Systems: Developing Partnerships to Broaden Opportunities (https://www.epa.gov/cwsrf/decentralized-systems-developing-partnerships-broaden-opportunities-using-cwsrf) Using the CWSRF fact sheet details how many states maximized the effect of their CWSRF ARRA grant by partnering with other state agencies, local governments, and nonprofit

organizations to manage a large number of projects to repair and replace failing onsite treatment systems which ensured cleaner water for their states.

Webinar (https://www.youtube.com/watch?v=urjvK5L9zJQ&feature=youtu.be): Funding Decentralized Wastewater Treatment with the CWSRF: Learn how the CWSRF can be used to create innovative partnerships and financing mechanisms for funding decentralized wastewater treatment systems, including a public-private partnership between Washington Department of Health, Department of Ecology, and a Washington nonprofit Community Development Financial Institution. This webinar was presented by EPA and representatives from the Washington State Departments of Health and Ecology, West Virginia Department of Environmental Protection, and Minnesota Department of Agriculture on October 12, 2017.

Eligible Applicants

- Any borrower for decentralized wastewater treatment projects if they implement a Section 319 NPS management program, including privately owned decentralized systems treating non-municipal, non-domestic sewage that correct an existing NPS problem (e.g., direct pipe from residence to waterbody, cesspool). Section 603(c)(2)
    - Decentralized systems for new construction do not correct an existing NPS problem.
- Any borrower for the portion of a centralized wastewater treatment works that is associated with the collection and treatment of effluent from properties with failing decentralized systems or properties where no active treatment system is in place (e.g., cesspools), including the house lateral to connect such homes to a centralized treatment works, if the project implements a Section 319 NPS management program. Section 603(c)(2)
- Any borrower for decentralized wastewater treatment projects if they implement a Section 320 CCMP. This includes privately owned decentralized systems treating non-municipal, non-domestic sewage. Section 603(c)(3)
- Any borrower for decentralized wastewater treatment projects treating municipal or domestic sewage. Section 603(c)(4)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)

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Eligible CWSRF Projects: Resource Extraction

Resource extraction includes mining, quarrying, hydraulic fracturing, and oil/gas operations. Eligible water quality projects that remediate or prevent contamination from these sites, whether active or abandoned, include projects that:

- Treat drainage (e.g., acid mine drainage) and wastewater (e.g., fracking wastewater)
- Prevent aquifer contamination
- Excavate and remediate contaminated soil at the site
- Remove contamination from water or soil that is not part of the site (e.g., removal of mine tailings from stream beds)
- Prevent runoff
    - Runoff control projects include discharge diversion, runoff dispersion, sediment control and collection, grading and capping of contaminated sources, backfilling site openings, and soil stabilization

Eligible Applicants (Source (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf))

- Any municipality or intermunicipal, interstate, or state agency for publicly owned water quality projects that remediate or prevent contamination from resource extraction sites. Section 603(c)(1)
- Any borrower for water quality projects that remediate or prevent contamination from resource extraction sites if they implement a Section 319 NPS management program. Section 603(c)(2)
- Any borrower for water quality projects that remediate or prevent contamination from resource extraction sites if they implement a Section 320 CCMP. Section 603(c)(3)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)
- Any borrower for projects to reuse wastewater generated by resource extraction activities (e.g., hydraulic fracturing wastewater). Section 603(c)(9)

Eligible CWSRF Projects: Contaminated Sites

Communities can use the CWSRF to address the water quality aspects of site assessment and cleanup of brownfields, Superfund sites, and sites of current or former aboveground or underground storage tanks. Eligible activities include, but are not limited to:

- Excavation and disposal of underground storage tanks
- Constructed wetlands
- Excavation, removal, and disposal of contaminated soil or sediments
- Well abandonment
- Site assessments
- Cleanup of contaminated groundwater or surface water
- Environmental insurance premium
- Collection/remediation of stormwater generated at the site

Case Studies

Former Columbus Wood Treating Plant, Indiana (Brownfield Project): A combination of CWSRF and Brownfields Revolving Loan Fund loan funding has benefited the City of Columbus, Indiana. A December 29, 2011 loan to the City from the Indiana Finance Authority has helped to fund petroleum remediation activities at the 1.24-acre, vacant, former site of the Columbus Wood Treating Plant, which facilitated construction of a pedestrian/cycling trail. The trail serves as interim greenspace redevelopment for the Columbus community until commercial or other redevelopment occurs in the future.

The funding mix included $1.2 million in petroleum Brownfields loan funds coupled with $600,000 in CWSRF loan funds, totaling $1.8 million in loan funding to mitigate groundwater and soil impacts associated with a long history of the plant's operations, including coal and coke processing and wood treating/preservation. The remediation activities helped to eliminate the discharge of contaminants and protect the Flat Rock River. The combined CWSRF and Brownfields Revolving Loan Fund financial assistance for the site has leveraged additional funding to facilitate reuse including a federal Housing and Urban Development Economic Development Initiative Grant for over $300,000.

The EcoCenter at Heron's Head Park, California (Brownfield Project): The EcoCenter at Heron's Head Park, located on a former abandoned brownfield site, is now a center for community youth to learn about energy efficiency, waste management, water conservation, green infrastructure, and green building. Every feature of the 1,500 square foot EcoCenter serves as a teaching tool for sustainability and green building design, emphasizing the interconnection of social, economic, and environmental issues as they relate to the history of the Bayview Hunters Point community. The EcoCenter treats its

own wastewater using constructed wetlands, biological treatment, and ultraviolet sterilization lamps. In addition, it features a green roof and native landscaping, which conserve water and prevent stormwater runoff.

Redevelopment of the site into the EcoCenter was funded in part by approximately $350,000 in CWSRF funds from the California State Water Resource Control Board. In recent years, EPA's Brownfields Program has invested over $1.7 million to continue the revitalization of the neighborhood through site assessment, cleanup, and other EPA grants. In total, EPA's investment leverages over $6.5 million in property cleanup, design and planning work which is helping to guide the multi-million dollar redevelopment of India Basin Waterfront Park located within the Bayview Hunters Point community. Learn More (https://www.epa.gov/cwsrf/community-sustainability-and-revitalization-ecocenter-herons-head-park-san-francisco).

The Funding Brownfield Remediation with the Clean Water State Revolving Fund fact sheet (https://www.epa.gov/cwsrf/funding-brownfield-remediation-clean-water-state-revolving-fund) demonstrates how the CWSRF provides assistance to eligible recipients for the water quality aspects of brownfield site assessment and cleanup. It highlights a successful project in Indiana.

Eligible Applicants (Source (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf))

- Any borrower for water quality projects to clean up contaminated sites if they implement a Section 319 NPS management program. Section 603(c)(2)
- Any borrower for water quality projects to clean up contaminated sites if they implement a Section 320 CCMP. Section 603(c)(3)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)

Eligible CWSRF Projects: Landfills

Eligible landfill projects include landfill closure and landfill leachate collection and treatment. Eligible activities include:

Landfill closure

- Capping systems (gas venting layer, geosynthetics, barrier layer, top cover, etc.)
- Leachate collection, storage, and treatment systems (onsite or off-site)
- Side slope seepage prevention and control systems
- Gas condensation systems
- Monitoring wells and equipment
- Stormwater runoff controls

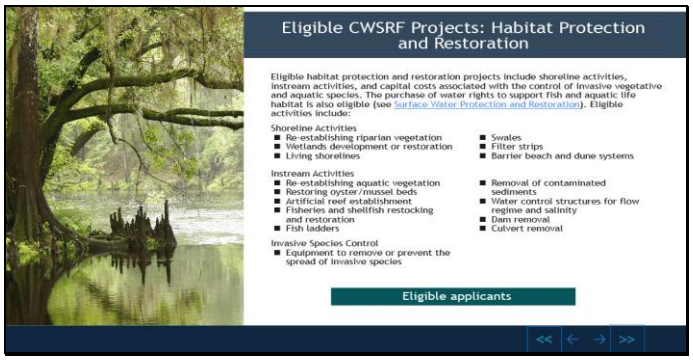
Landfill leachate collection and treatment

- Landfill liner systems
- Leachate removal or collection systems
- Toe drains and cut-off walls
- Onsite leachate treatment facilities
- Barge shelters, containment booms, litter fences

Eligible Applicants

- Any municipality or intermunicipal, interstate, or state agency for projects that prevent or reduce leachate pollution from publicly owned landfills. Section 603(c)(1)
- Any borrower for water quality projects that reduce NPS pollution from landfills if they implement a Section 319 NPS management program. Section 603(c)(2)
- Any borrower for water quality projects that prevent or reduce pollution from landfills if they implement a Section 320 CCMP. Section 603(c)(3)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)
- Any borrower for projects to reuse landfill leachate. Section 603(c)(9)
- Any qualified nonprofit entity to assist owners and operators of small and medium publicly owned landfills with projects that prevent or reduce leachate pollutions. This includes

construction activities as well as activities necessary to plan, develop, and obtain financing for CWSRF-eligible projects. Section 603(c)(11)



Eligible CWSRF Projects: Habitat Protection and Restoration

Eligible habitat protection and restoration projects include shoreline activities, instream activities, and capital costs associated with the control of invasive vegetative and aquatic species. The purchase of water rights to support fish and aquatic life habitat is also eligible (see Surface Water Protection and Restoration). Eligible activities include:

Shoreline Activities

- Re-establishing riparian vegetation
- Wetlands development or restoration
- Living shorelines
- Swales
- Filter strips
- Barrier beach and dune systems

Instream Activities

- Re-establishing aquatic vegetation
- Restoring oyster/mussel beds
- Artificial reef establishment
- Fisheries and shellfish restocking and restoration
- Fish ladders
- Removal of contaminated sediments
- Water control structures for flow regime and salinity
- Dam removal
- Culvert removal

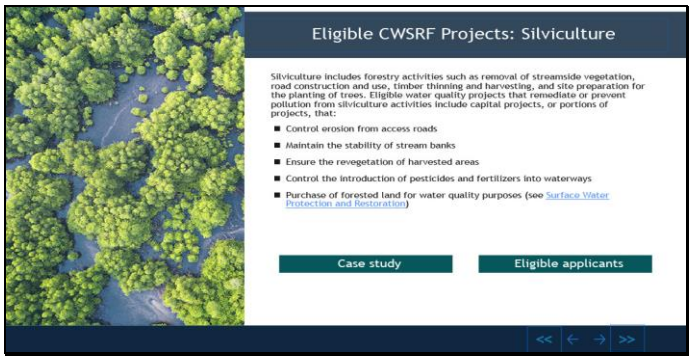
Invasive Species Control

- Equipment to remove or prevent the spread of invasive species

Eligible Applicants (Source (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf))

- Any borrower for habitat protection and restoration projects that implement a Section 319 NPS management program. Section 603(c)(2)

- Any borrower for habitat protection and restoration projects that implement a Section 320 CCMP. Section 603(c)(3)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)



Eligible CWSRF Projects: Silviculture

Silviculture includes forestry activities such as removal of streamside vegetation, road construction and use, timber thinning and harvesting, and site preparation for the planting of trees. Eligible water quality projects that remediate or prevent pollution from silviculture activities include capital projects, or portions of projects, that:

- Control erosion from access roads
- Maintain the stability of stream banks
- Ensure the revegetation of harvested areas
- Control the introduction of pesticides and fertilizers into waterways
- Purchase of forested land for water quality purposes (see Surface Water Protection and Restoration)

Eligible Applicants (Source (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf))

- Any borrower for water quality projects that remediate or prevent pollution from silviculture activities if they implement a Section 319 NPS management program. Section 603(c)(2)
- Any borrower for water quality projects that remediate or prevent pollution from silviculture activities if they implement a Section 320 CCMP. Section 603(c)(3)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)

Case Study

The Maine CWSRF Provides Linked Deposit Loans for Green Forestry Equipment. The Maine CWSRF has a linked deposit lending arrangement between the Maine Bond Bank, the Maine Department of Environmental Protection, the Maine Forest Service (MFS), and several local banks to fund the purchase of “green” forestry equipment. The loans are intended to increase the use of best management practices and environmentally-friendly logging equipment in the Maine logging industry, which will in turn help protect and restore water quality around logging operations.

Eligible purchases include mulching machines, tractors, graders, flotation tires, GPS equipment tracking systems, bridges, and sediment and erosion control products. An MFS advisory committee reviews purchase proposals for equipment and structures to ensure that they are needed to implement environmentally sound logging operations. Qualified loggers may apply for loans up to $800,000 to purchase timber harvesting equipment and implement best management practices that reduce the risk of nonpoint source pollution from silviculture activities.

Since the three agencies signed the Memorandum of Understanding creating the linked deposit arrangement in 2007, a total of $23.6 million has been committed to this program. In total, 91 loans have been made equaling $21.2 million. In 2016, the Maine CWSRF provided $4.8 million for 19 silviculture loans through the linked deposit program.

Eligible CWSRF Projects: Desalination

Desalination projects are eligible where there is a water quality benefit. Projects include:

- Treatment and disposal of brine
- Desalination of brackish water to augment water supply
- Aquifer recharge using desalinated sea water
- Treatment/reinjection of brackish groundwater

Eligible Applicants

- Any municipality or intermunicipal, interstate, or state agency for treatment and disposal of brine from the desalination process. Section 603(c)(1)
- Any borrower for desalination projects that decrease the burden on aquifers where there is causal relationship between aquifer withdrawals and saltwater intrusion if the projects implement a Section 319 NPS management program. This could include projects in which desalinated seawater is injected into the aquifer to mitigate or prevent salt water intrusion, as well as projects in which brackish water is removed from an aquifer, desalinated, and returned to the aquifer. Section 603(c)(2)
    - In cases where only a portion of the project will mitigate or prevent salt water intrusion, the CWSRF may finance the eligible projects costs on a pro rata basis.
- Any borrower for the treatment and disposal of brine from the desalination process. Eligibility may extend to other parts of the desalination process, if the project implements a Section 320 CCMP. Section 603(c)(3)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)

Eligible CWSRF Projects: Groundwater Protection and Restoration

Eligible groundwater projects include those that protect and restore aquifers. This includes:

- Pump and treat projects
- Aquifer recharge projects
- Projects that decrease aquifer withdrawals through rainwater harvesting, water conservation, or water reuse

Eligible Applicants

- Any borrower for groundwater projects that implement a Section 319 NPS management program. Section 603(c)(2)
- Any borrower for groundwater projects that implement a Section 320 CCMP. Section 603(c)(3)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)
- Any borrower for treatment, transmission, and injection of wastewater, stormwater, and subsurface drainage water for aquifer recharge. Section 603(c)(9)

Eligible CWSRF Projects: Surface Water Protection and Restoration

Many CWSRF eligible activities result in the protection or restoration of surface water, such as stormwater management and habitat restoration. In addition to the activities already covered, eligible surface water projects include:

Land and water rights acquisition to protect water quality

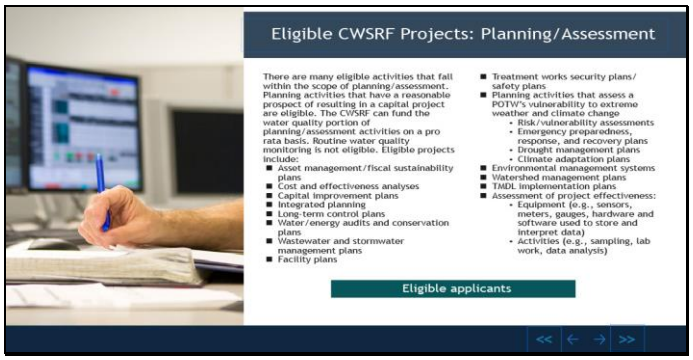
- Purchase of land: leasing, fee-simple purchase, and easement
    - Includes amenities that improve water quality on purchased land (e.g., water quality related signage, pervious trails, etc.)
- Purchase of water rights

Activities that reduce atmospheric deposition of pollutants

- Air pollution reducing technologies (i.e., scrubbers)
- Activities that reduce the use of thermoelectric power
    - Energy efficient upgrades (e.g., appliances, HVAC, insulation, etc.)
    - Renewable energy generation projects

Eligible Applicants (Source (https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf))

- Any borrower for surface water projects that implement a Section 319 NPS management program. Section 603(c)(2)
- Any borrower for surface water projects that implement a Section 320 CCMP. Section 603(c)(3)
- Any municipality or municipal entity for efforts of municipalities and property owners to develop or implement watershed partnerships to address nonpoint sources of pollution. Section 603(c)(7)



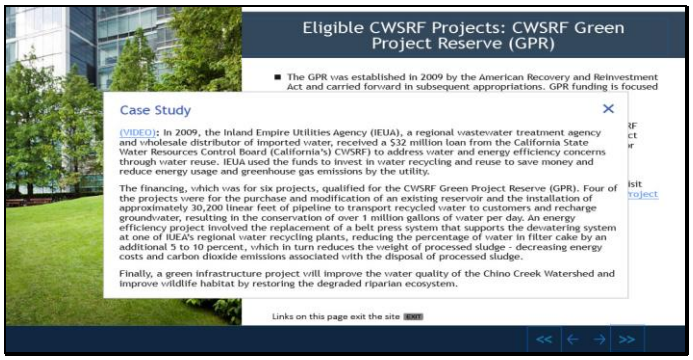
Eligible CWSRF Projects: Planning/Assessment

There are many eligible activities that fall within the scope of planning/assessment. Planning activities that have a reasonable prospect of resulting in a capital project are eligible. The CWSRF can fund the water quality portion of planning/assessment activities on a pro rata basis. Routine water quality monitoring is not eligible. Eligible projects include:

- Asset management/fiscal sustainability plans
- Cost and effectiveness analyses
- Capital improvement plans
- Integrated planning
- Long-term control plans
- Water/energy audits and conservation plans
- Wastewater and stormwater management plans
- Facility plans
- Treatment works security plans/safety plans
- Planning activities that assess a POTW's vulnerability to extreme weather and climate change
    - Risk/vulnerability assessments
    - Emergency preparedness, response, and recovery plans
    - Drought management plans
    - Climate adaptation plans
- Environmental management systems
- Watershed management plans
- TMDL implementation plans
- Assessment of project effectiveness:
    - Equipment (e.g., sensors, meters, gauges, hardware and software used to store and interpret data)
    - Activities (e.g., sampling, lab work, data analysis)

Eligible Applicants

- Any municipality or intermunicipal, interstate, or state agency for planning/assessment for POTWs that can reasonably be expected to lead to an eligible capital project. Section 603(c)(1)
- Any borrower for planning/assessment activities that implement a Section 319 NPS management program as long as the activity is not required by a permit. Section 603(c)(2)
- Any borrower for planning/assessment activities that implement a Section 320 CCMP. Section 603(c)(3)
- Any borrower for development or amendment of a Section 320 CCMP. Section 603(c)(3)
- Any borrower for planning/assessment for decentralized wastewater treatment systems that can reasonably be expected to lead to a capital project. Section 603(c)(4)



Eligible CWSRF Projects: CWSRF Green Project Reserve (GPR)

The GPR was established in 2009 by the American Recovery and Reinvestment Act and carried forward in subsequent appropriations. GPR funding is focused on funding green infrastructure, water and energy efficiency, and environmentally innovative projects.

A project is eligible for GPR funding if it is otherwise qualified for CWSRF funding and also addresses one of the four aforementioned green project categories. GPR project eligibilities may include green infrastructure for stormwater management, water metering/leak detection equipment installation, and renewable energy projects.

For more information about GPR eligibilities under the CWSRF, please visit the 2012 CWSRF 10% Green Project Reserve Guidance for Determining Project Eligibility (https://www.epa.gov/sites/production/files/2015-04/documents/green_project_reserve_eligibility_guidance.pdf) or the crosswalk table (https://www.epa.gov/sites/production/files/2015-04/documents/green_project_reserve-crosswalk-table.pdf) detailing project eligibilities.

Case Study

(VIDEO (https://www.youtube.com/watch?v=EE-1mHOqAUs)): In 2009, the Inland Empire Utilities Agency (IEUA), a regional wastewater treatment agency and wholesale distributor of imported water, received a $32 million loan from the California State Water Resources Control Board (California's) CWSRF) to address water and energy efficiency concerns through water reuse. IEUA used the funds to invest in water recycling and reuse to save money and reduce energy usage and greenhouse gas emissions by the utility.

The financing, which was for six projects, qualified for the CWSRF Green Project Reserve (GPR). Four of the projects were for the purchase and modification of an existing reservoir and the installation of approximately 30,200 linear feet of pipeline to transport recycled water to customers and recharge groundwater, resulting in the conservation of over 1 million gallons of water per day. An energy efficiency project involved the replacement of a belt press system that supports the dewatering system at one of IUEA's regional water recycling plants, reducing the percentage of water in filter cake by an additional 5 to 10 percent, which in turn reduces the weight of processed sludge – decreasing energy costs and carbon dioxide emissions associated with the disposal of processed sludge.

Finally, a green infrastructure project will improve the water quality of the Chino Creek Watershed and improve wildlife habitat by restoring the degraded riparian ecosystem.

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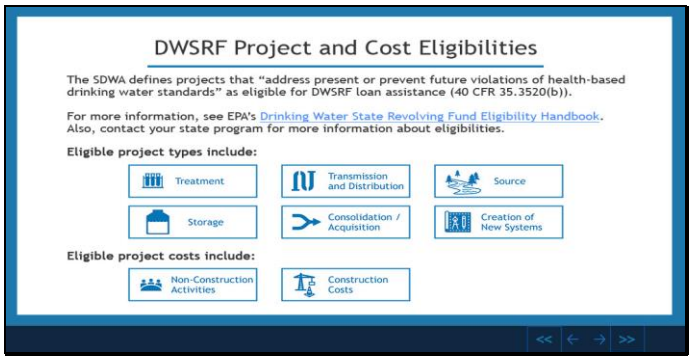
CWSRF Ineligible Projects

While the CWSRF has broad eligibilities, projects must fit the eligibility criteria set forth in Section 603(c) of the Clean Water Act. To be eligible, projects for the construction of publicly owned treatment works must be on the state Project Priority List. Projects funded by the CWSRF must be tied to a capital asset. O&M expenses and routine water quality monitoring are ineligible.



DWSRF Project and Cost Eligibilities

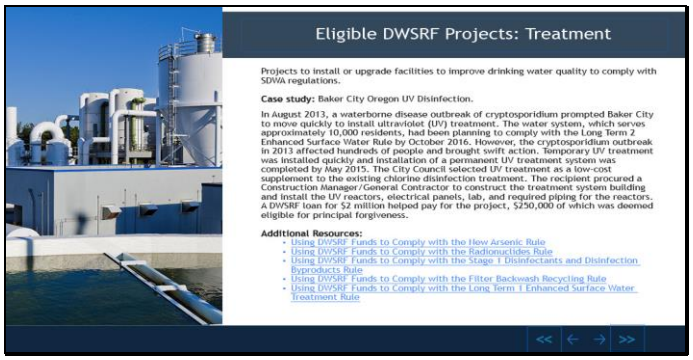
The SDWA defines projects that “address present or prevent future violations of health-based drinking water standards” as eligible for DWSRF loan assistance (40 CFR 35.3520(b)).

For more information, see EPA’s Drinking Water State Revolving Fund Eligibility Handbook (https://www.epa.gov/sites/production/files/2017-08/documents/dwsrf_eligibility_handbook_june_13_2017_updated_508_versioni_0.pdf). Also, contact your state program for more information about eligibilities. Eligible project types include:

- Treatment
- Transmission and Distribution
- Source
- Storage
- Consolidation/Acquisition
- Creation of New Systems

Eligible project costs include:

- Non-construction Activities
- Construction Costs



Eligible DWSRF Projects: Treatment

Projects to install or upgrade facilities to improve drinking water quality to comply with SDWA regulations.

Case study: Baker City Oregon UV Disinfection.

In August 2013, a waterborne disease outbreak of cryptosporidium prompted Baker City to move quickly to install ultraviolet (UV) treatment. The water system, which serves approximately 10,000 residents, had been planning to comply with the Long Term 2 Enhanced Surface Water Rule by October 2016. However, the cryptosporidium outbreak in 2013 affected hundreds of people and brought swift action. Temporary UV treatment was installed quickly and installation of a permanent UV treatment system was completed by May 2015. The City Council selected UV treatment as a low-cost supplement to the existing chlorine disinfection treatment. The recipient procured a Construction Manager/General Contractor to construct the treatment system building and install the UV reactors, electrical panels, lab, and required piping for the reactors. A DWSRF loan for $2 million helped pay for the project, $250,000 of which was deemed eligible for principal forgiveness.

Additional Resources:

- Using DWSRF Funds to Comply with the New Arsenic Rule (https://nepis.epa.gov/Exe/ZyNET.exe/901G0P00.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2000+Thru+2005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C00thru05%5CTxt%5C00000011%5C901G0P00.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL)
- Using DWSRF Funds to Comply with the Radionuclides Rule (https://nepis.epa.gov/Exe/ZyNET.exe/20017JM4.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2000+Thru+2005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C00thru05%5CTxt%5C00000010%5C20017JM4.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL)
- Using DWSRF Funds to Comply with the Stage 1 Disinfectants and Disinfection Byproducts Rule (https://nepis.epa.gov/Exe/ZyNET.exe/901U0H00.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2000+Thru+2005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=

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- Using DWSRF Funds to Comply with the Filter Backwash Recycling Rule (https://nepis.epa.gov/Exe/ZyNET.exe/901G0R00.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2000+Thru+2005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C00thru05%5CTxt%5C00000011%5C901G0R00.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL)
- Using DWSRF Funds to Comply with the Long Term 1 Enhanced Surface Water Treatment Rule (https://nepis.epa.gov/Exe/ZyNET.exe/901G0Q00.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2000+Thru+2005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C00thru05%5CTxt%5C00000011%5C901G0Q00.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL)

Eligible DWSRF Projects: Transmission and Distribution

Rehabilitation, replacement, or installation of infrastructure (including pipes, meters, pumps, service lines, etc.) to improve water pressure to safe levels or to prevent contamination caused by leaky or broken pipes

Case study: Lead Service Line Replacement in Wisconsin: Wisconsin created a funding program within its DWSRF in 2017 to help disadvantaged municipalities replace lead service lines, including the portion on private property. Municipalities can receive a certain amount of principal forgiveness based on population ($1 million for population 500,000 and greater; $500,000 for population between 50,000 and 500,000; and $300,000 for population less than 50,000). More information about this project can be found here (https://dnr.wi.gov/Aid/documents/EIF/leadServiceLineFunding.html).

Additional Resources:

Using DWSRF Funds for Transmission and Distribution Needs (https://nepis.epa.gov/Exe/ZyNET.exe/901G0S00.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2000+Thru+2005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C00thru05%5CTxt%5C00000011%5C901G0S00.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL)

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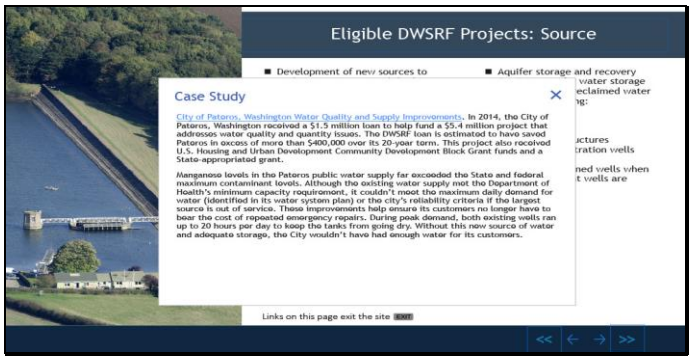

Eligible DWSRF Projects: Source

- Development of new sources to replace a contaminated drinking water source or to increase drought resilience
- Raw water intakes, wells, or other constructed infrastructure that allows for movement of raw water into the treatment plant or into the distribution system
- Alternative supply in case of emergency or drought, such as:
- Interconnections
- Surface water intakes
- Groundwater wells
- Aquifer storage and recovery (ASR) system for water storage (e.g., part of a reclaimed water system), including:
- Wells
- Pumps
- Pipes
- Wellhead structures
- Riverbank filtration wells
- Plugging abandoned wells when new replacement wells are drilled

Case study

City of Pateros, Washington Water Quality and Supply Improvements (https://www.doh.wa.gov/Portals/1/Documents/Pubs/331-535-Pateros.pdf). In 2014, the City of Pateros, Washington received a $1.5 million loan to help fund a $5.4 million project that addresses water quality and quantity issues. The DWSRF loan is estimated to have saved Pateros in excess of more than $400,000 over its 20-year term. This project also received U.S. Housing and Urban Development Community Development Block Grant funds and a State-appropriated grant.

Manganese levels in the Pateros public water supply far exceeded the State and federal maximum contaminant levels. Although the existing water supply met the Department of Health’s minimum capacity requirement, it couldn’t meet the maximum daily demand for water (identified in its water system plan) or the city’s reliability criteria if the largest source is out of service. These improvements help ensure its customers no longer have to bear the cost of repeated emergency repairs. During peak demand, both existing wells ran up to 20 hours per day to keep the tanks from

going dry. Without this new source of water and adequate storage, the City wouldn't have had enough water for its customers.

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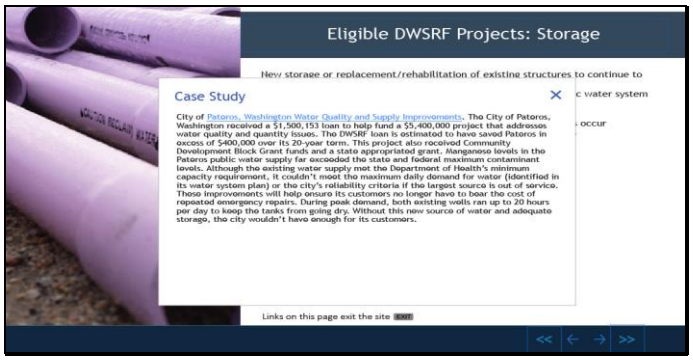

Eligible DWSRF Projects: Storage

New storage or replacement/rehabilitation of existing structures to continue to maintain compliance and protect public health by:

- Preventing microbiological contaminants from entering a public water system
- Equalizing water demands
- Reducing pressure fluctuations in the distribution system
- Providing reserves when power outages and other emergencies occur
- Storing water for reclaimed water (aka “purple pipe”) systems
- Providing drought resiliency

Case study

City of Pateros, Washington Water Quality and Supply Improvements (https://www.doh.wa.gov/Portals/1/Documents/Pubs/331-535-Pateros.pdf). The City of Pateros, Washington received a $1,500,153 loan to help fund a $5,400,000 project that addresses water quality and quantity issues. The DWSRF loan is estimated to have saved Pateros in excess of $400,000 over its 20-year term. This project also received Community Development Block Grant funds and a state appropriated grant. Manganese levels in the Pateros public water supply far exceeded the state and federal maximum contaminant levels. Although the existing water supply met the Department of Health’s minimum capacity requirement, it couldn’t meet the maximum daily demand for water (identified in its water system plan) or the city’s reliability criteria if the largest source is out of service. These improvements will help ensure its customers no longer have to bear the cost of repeated emergency repairs. During peak demand, both existing wells ran up to 20 hours per day to keep the tanks from going dry. Without this new source of water and adequate storage, the city wouldn’t have enough for its customers.

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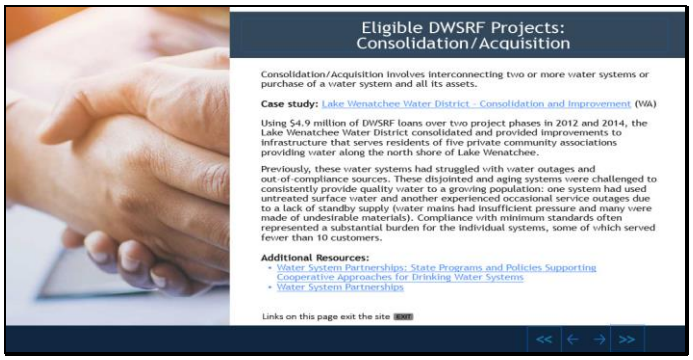

Eligible DWSRF Projects: Consolidation/Acquisition

Consolidation/Acquisition involves interconnecting two or more water systems or purchase of a water system and all its assets.

Case study: Lake Wenatchee Water District - Consolidation and Improvement (WA)

Using $4.9 million of DWSRF loans over two project phases in 2012 and 2014, the Lake Wenatchee Water District consolidated and provided improvements to infrastructure that serves residents of five private community associations providing water along the north shore of Lake Wenatchee.

Previously, these water systems had struggled with water outages and out-of-compliance sources. These disjointed and aging systems were challenged to consistently provide quality water to a growing population: one system had used untreated surface water and another experienced occasional service outages due to a lack of standby supply (water mains had insufficient pressure and many were made of undesirable materials). Compliance with minimum standards often represented a substantial burden for the individual systems, some of which served fewer than 10 customers.

Additional Resources:

Water System Partnerships: State Programs and Policies Supporting Cooperative Approaches for Drinking Water Systems (https://www.doh.wa.gov/Portals/1/Documents/Pubs/331-565-LakeWenatchee.pdf)

Water System Partnerships (https://www.epa.gov/dwcapacity/water-system-partnerships)

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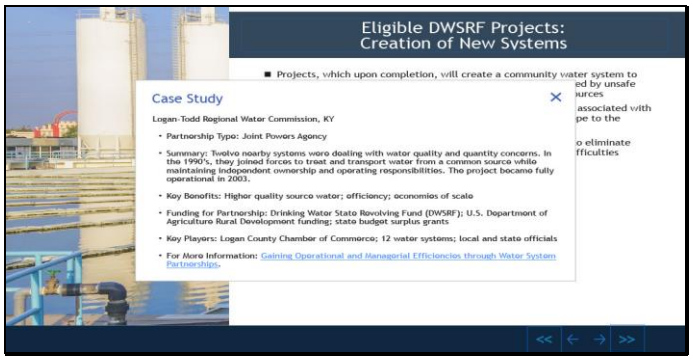


Eligible DWSRF Projects: Creation of New Systems

Projects, which upon completion, will create a community water system to address existing public health problems with serious risks caused by unsafe drinking water provided by individual wells or surface water sources

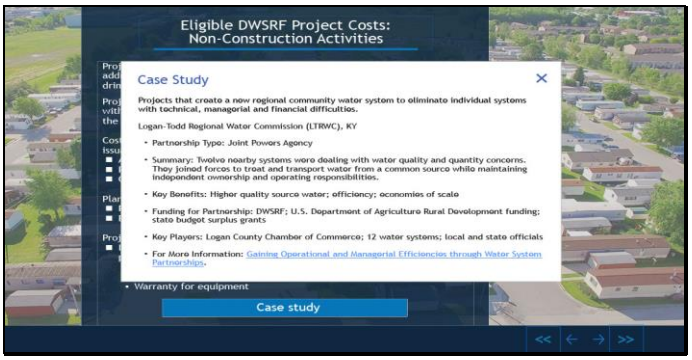
Projects to address existing public health protection problems associated with individual wells or surface water source must be limited in scope to the specific geographic area affected by contamination

Projects that create a new regional community water system to eliminate individual systems with technical, managerial, and financial difficulties

Case study

Logan-Todd Regional Water Commission, KY

- Partnership Type: Joint Powers Agency
- Summary: Twelve nearby systems were dealing with water quality and quantity concerns. In the 1990's, they joined forces to treat and transport water from a common source while maintaining independent ownership and operating responsibilities. The project became fully operational in 2003.
- Key Benefits: Higher quality source water; efficiency; economies of scale
- Funding for Partnership: Drinking Water State Revolving Fund (DWSRF); U.S. Department of Agriculture Rural Development funding; state budget surplus grants
- Key Players: Logan County Chamber of Commerce; 12 water systems; local and state officials
- For More Information: Gaining Operational and Managerial Efficiencies through Water System Partnerships.



Eligible DWSRF Project Costs: Non-Construction Activities

Projects, which upon completion, will create a community water system to address existing public health problems with serious risks caused by unsafe drinking water provided by individual wells or surface water sources.

Projects to address existing public health protection problems associated with individual wells or surface water source must be limited in scope to the specific geographic area affected by contamination.

- Costs associated with obtaining project authorization and issuance/execution of the loan:
- Administrative and legal counsel
- Preliminary engineering report/feasibility report
- Obtaining permits

Planning and design costs:

- Project design (plans and specifications)
- Environmental review documentation

Project start-up costs:

- If included as part of the construction contract or engineering services provided, such as:
    - Software and software training
    - Training for equipment operation
    - Warranty for equipment

Projects that create a new regional community water system to eliminate individual systems with technical, managerial and financial difficulties.

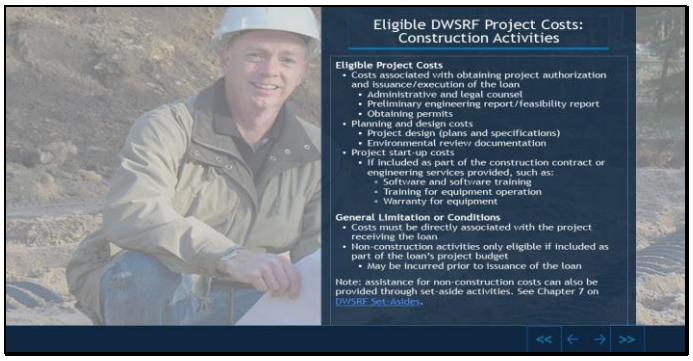
Case Study

Logan-Todd Regional Water Commission (LTRWC), KY

- Partnership Type: Joint Powers Agency
- Summary: Twelve nearby systems were dealing with water quality and quantity concerns. They joined forces to treat and transport water from a common source while maintaining independent ownership and operating responsibilities.
- Key Benefits: Higher quality source water; efficiency; economies of scale

- Funding for Partnership: DWSRF; U.S. Department of Agriculture Rural Development funding; state budget surplus grants
- Key Players: Logan County Chamber of Commerce; 12 water systems; local and state officials

For More Information: Gaining Operational and Managerial Efficiencies through Water System Partnerships (https://nepis.epa.gov/Exe/ZyPDF.cgi/P1006MD0.PDF?Dockey=P1006MD0.PDF).



Eligible DWSRF Project Costs: Construction Activities

Eligible Project Costs

- Costs associated with obtaining project authorization and issuance/execution of the loan
  - Administrative and legal counsel
  - Preliminary engineering report/feasibility report
  - Obtaining permits
- Planning and design costs
  - Project design (plans and specifications)
  - Environmental review documentation
- Project start-up costs
  - If included as part of the construction contract or engineering services provided, such as:
    - Software and software training
    - Training for equipment operation
    - Warranty for equipment

General Limitation or Conditions

- Costs must be directly associated with the project receiving the loan
- Non-construction activities only eligible if included as part of the loan's project budget
  - May be incurred prior to issuance of the loan

Note: assistance for non-construction costs can also be provided through set-aside activities. See Chapter 7 on DWSRF Set-Asides.

DWSRF Ineligible Projects and Project Costs

Some project types and costs are expressly prohibited, as identified at 40 CFR 35.3520(e) and (f). However, EPA has authority to provide project eligibility deviations from its regulations (see Page 13 of the DWSRF Eligibility Handbook (https://www.epa.gov/sites/production/files/2017-08/documents/dwsrf_eligibility_handbook_june_13_2017_updated_508_versioni_0.pdf#page=13)).

Ineligible Projects

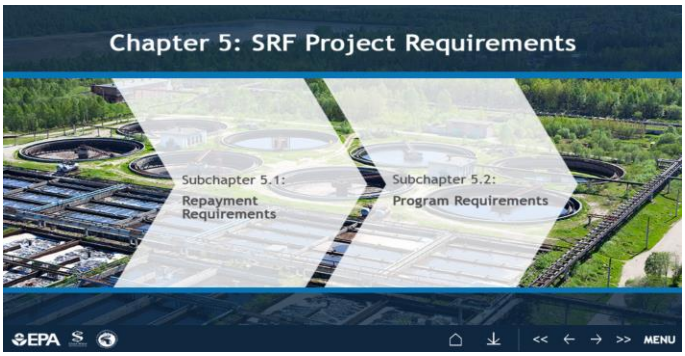
Projects that generally cannot be funded with the DWSRF include:

- Construction or rehabilitation of dams
- Purchase of water rights, unless the water rights are owned by a system to be purchased for consolidation as part of a capacity development strategy
- Construction or rehabilitation of reservoirs, except for finished water reservoirs and those reservoirs that are part of the treatment process and are on the property where the treatment facility is located
- Projects needed primarily for fire protection
- Projects needed primarily to serve future population growth (prohibited by statute)
- Projects that have received assistance from the national set-aside for Indian Tribes and Alaska Native Villages under the SDWA §1452(i) (prohibited by statute)

Ineligible Project Costs

Ineligible project-related costs are expenditures that do not facilitate compliance with the national primary drinking water regulations or do not otherwise significantly further the public health protection objectives of the SDWA. Additionally, the state cannot use the DWSRF to prepay anticipated costs of future activity. The cost of trucked-in water or purchasing bottled water are also not eligible project costs. Other ineligible costs specifically cited in the SDWA include:

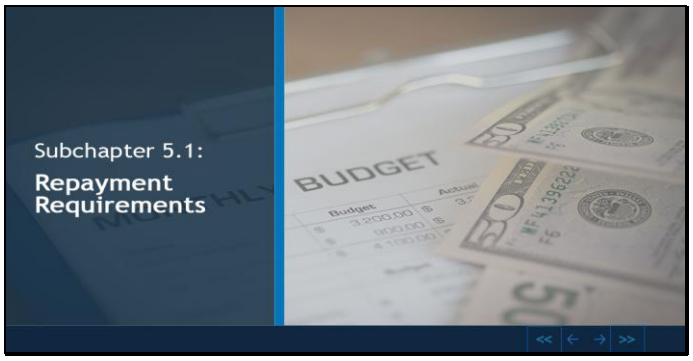
- Water system operation and maintenance expenses
- Routine compliance monitoring expenses



Chapter 5: SRF Project Requirements

Subchapter 5.1: Repayment Requirements

Subchapter 5.2: Program Requirements



Subchapter 5.1: Repayment Requirements

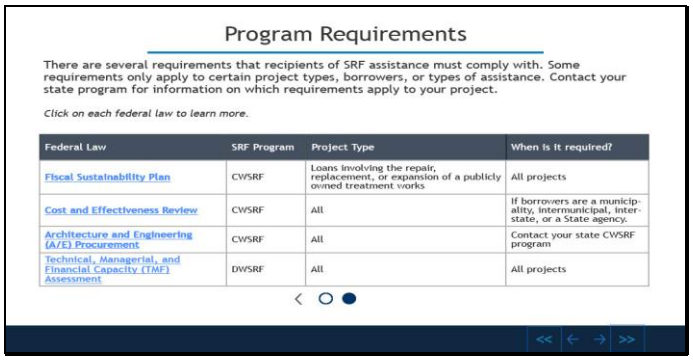
Repayment Requirements

For all CWSRF and DWSRF loans a dedicated repayment source must be established. For more information about flexible repayment options see Chapter 3.

SRF regulations require that principal and interest repayment must begin within one year of project completion. States vary in when they begin repayments, with some starting during construction while others wait until a year after project completion. States may also offer different repayment structures:

- Level debt service: Periodic equal total payments of principal and interest, resulting in lower principal payments early and larger principal payments later. Most SRF loans have level debt service.
- Level principal: Periodic equal payments of principal over the loan amortization period, while interest included in total payments declines over time.
- Gradual ramp-up: Periodic payment of principal and interest increases over time. The resulting principal payment in early years is lower than level debt service.
- Balloon payment: Majority of principal is paid at the end of the loan authorization period. Interest (if charged) is paid on the outstanding loan balance until the balloon payment is made.

Subchapter 5.2: Program Requirements



Program Requirements

There are several requirements that recipients of SRF assistance must comply with. Some requirements only apply to certain project types, borrowers, or types of assistance. Contact your state program for information on which requirements apply to your project.

Click on each federal law to learn more.

Federal Law

SRF Program

Project Type

When is it required?

American Iron and Steel (AIS)

Both

CWSRF: Treatment works only

All Projects

Davis-Bacon Wage Requirement

Both

CWSRF: Treatment works only

All Projects

Environmental Review

Both

CWSRF: Treatment works only

All treatment works projects

Single Audit

Both

All

Contact your state SRF program

Participation by Disadvantaged Business Enterprises in Procurement

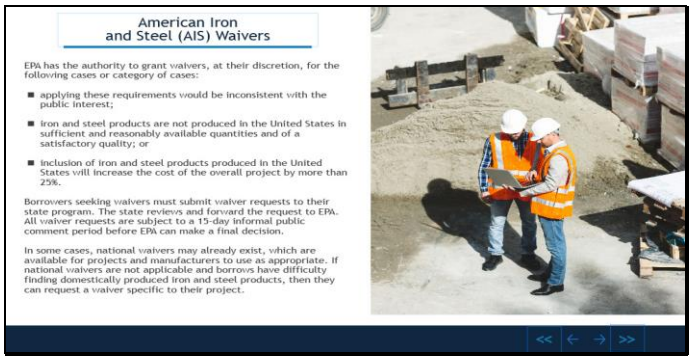
Both

All
Contact your state SRF program
Fiscal Sustainability Plan
CWSRF
Loans involving the repair, replacement, or expansion of a publicly owned treatment works.
All Projects
Cost and Effectiveness Review
CWSRF
All
If borrowers are a municipality, intermunicipal, interstate, or a State agency.
Architecture & Engineering (A/E) Procurement
CWSRF
All
Contact your state CWSRF program
Technical, Managerial, and Financial Capacity (TMF) Assessment
DWSRF
All
All Projects

American Iron and Steel (AIS) Provision

- SRF borrowers are required to use iron and steel products that are produced in the United States for projects that include the construction, alteration, maintenance, or repair of public water systems or treatment works (defined in Section 212 in the CWA) initiated on or after January 17, 2014.
- Iron and steel products covered by this provision are: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.
- If a project receives any SRF funding, then the entire project is required to comply with this provision.
- Iron and steel products used in SRF projects need product certification letters noting AIS compliance.
- All CWSRF projects are permanently subject to the AIS provision (Section 608 of CWA).
- All DWSRF projects are subject to the provision under current congressional appropriations.

For more information on AIS, visit the State Revolving Fund American Iron and Steel (AIS) Requirement website (https://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-ais-requirement).



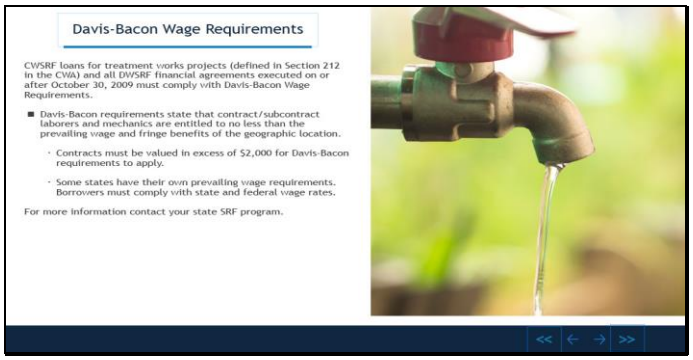
American Iron and Steel (AIS) Waivers

EPA has the authority to grant waivers, at their discretion, for the following cases or category of cases:

- applying these requirements would be inconsistent with the public interest;
- iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
- inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25%.

Borrowers seeking waivers must submit waiver requests to their state program. The state reviews and forward the request to EPA. All waiver requests are subject to a 15-day informal public comment period before EPA can make a final decision.

In some cases, national waivers may already exist, which are available for projects and manufacturers to use as appropriate. If national waivers are not applicable and borrows have difficulty finding domestically produced iron and steel products, then they can request a waiver specific to their project.

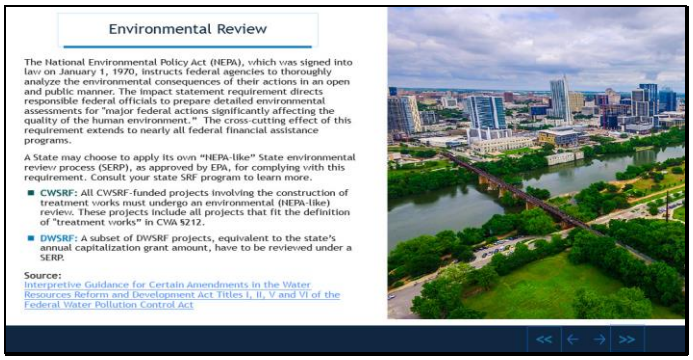


Davis-Bacon Wage Requirements

CWSRF loans for treatment works projects (defined in Section 212 in the CWA) and all DWSRF financial agreements executed on or after October 30, 2009 must comply with Davis-Bacon Wage Requirements.

- Davis-Bacon requirements state that contract/subcontract laborers and mechanics are entitled to no less than the prevailing wage and fringe benefits of the geographic location.
  - Contracts must be valued in excess of $2,000 for Davis-Bacon requirements to apply.
  - Some states have their own prevailing wage requirements. Borrowers must comply with state and federal wage rates.

For more information contact your state SRF program.



Environmental Review

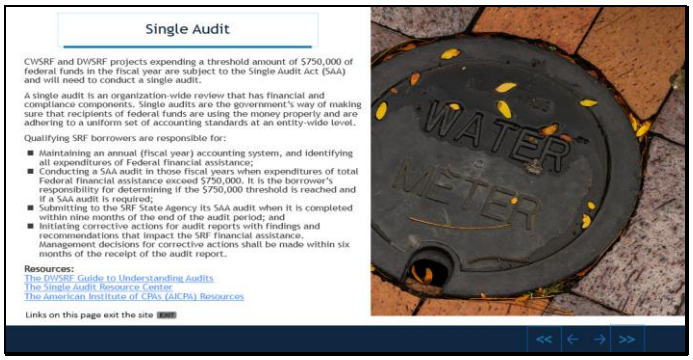
The National Environmental Policy Act (NEPA), which was signed into law on January 1, 1970, instructs federal agencies to thoroughly analyze the environmental consequences of their actions in an open and public manner. The impact statement requirement directs responsible federal officials to prepare detailed environmental assessments for "major federal actions significantly affecting the quality of the human environment." The cross-cutting effect of this requirement extends to nearly all federal financial assistance programs.

A State may choose to apply its own "NEPA-like" State environmental review process (SERP), as approved by EPA, for complying with this requirement. Consult your state SRF program to learn more.

- CWSRF: All CWSRF-funded projects involving the construction of treatment works must undergo an environmental (NEPA-like) review. These projects include all projects that fit the definition of "treatment works" in CWA §212.
- DWSRF: A subset of DWSRF projects, equivalent to the state's annual capitalization grant amount, have to be reviewed under a SERP.

Source:

Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act Titles I, II, V, and VI of the Federal Water Pollution Control Act (https://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-ais-requirement)



Single Audit

CWSRF and DWSRF projects expending a threshold amount of $750,000 of federal funds in the fiscal year are subject to the Single Audit Act (SAA) and will need to conduct a single audit.

A single audit is an organization-wide review that has financial and compliance components. Single audits are the government's way of making sure that recipients of federal funds are using the money properly and are adhering to a uniform set of accounting standards at an entity-wide level.

Qualifying SRF borrowers are responsible for:

- Maintaining an annual (fiscal year) accounting system, and identifying all expenditures of Federal financial assistance;
- Conducting a SAA audit in those fiscal years when expenditures of total Federal financial assistance exceed $750,000. It is the borrower's responsibility for determining if the $750,000 threshold is reached and if a SAA audit is required;
- Submitting to the SRF State Agency its SAA audit when it is completed within nine months of the end of the audit period; and
- Initiating corrective actions for audit reports with findings and recommendations that impact the SRF financial assistance. Management decisions for corrective actions shall be made within six months of the receipt of the audit report.

Resources:

The DWSRF Guide to Understanding Audits (https://nepis.epa.gov/Exe/ZyNET.exe/P1009DLS.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2006+Thru+2010&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C06thru10%5CTxt%5C00000022%5CP1009DLS.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL)

The Single Audit Resource Center (https://singleaudit.org/)

The American Institute of CPAs (AICPA) Resources (https://www.aicpa.org/interestareas/governmentalauditquality/resources/singleaudit.html)

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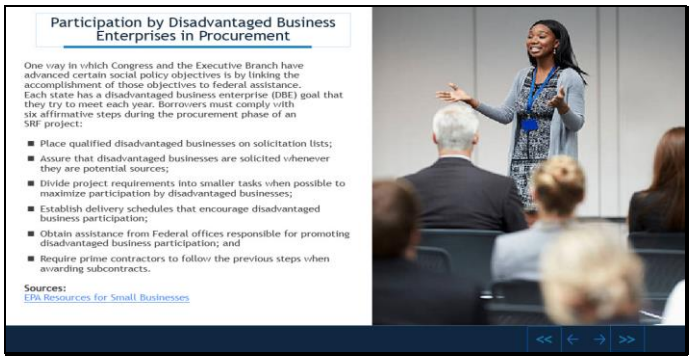


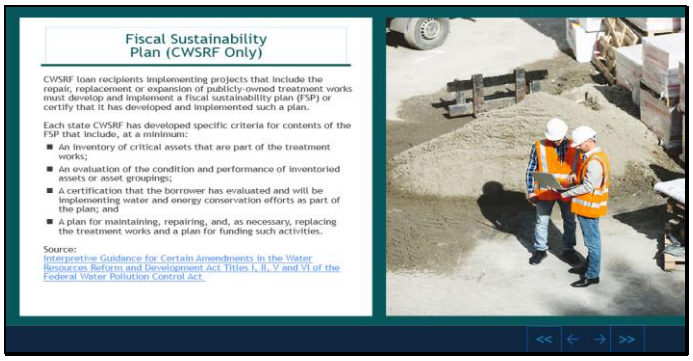
Participation by Disadvantaged Business Enterprises in Procurement

One way in which Congress and the Executive Branch have advanced certain social policy objectives is by linking the accomplishment of those objectives to federal assistance. Each state has a disadvantaged business enterprise (DBE) goal that they try to meet each year. Borrowers must comply with six affirmative steps during the procurement phase of an SRF project:

- Place qualified disadvantaged businesses on solicitation lists;
- Assure that disadvantaged businesses are solicited whenever they are potential sources;
- Divide project requirements into smaller tasks when possible to maximize participation by disadvantaged businesses;
- Establish delivery schedules that encourage disadvantaged business participation;
- Obtain assistance from Federal offices responsible for promoting disadvantaged business participation; and
- Require prime contractors to follow the previous steps when awarding subcontracts.

Sources:

EPA Resources for Small Businesses (https://www.epa.gov/resources-small-businesses)



Fiscal Sustainability Plan (CWSRF Only)

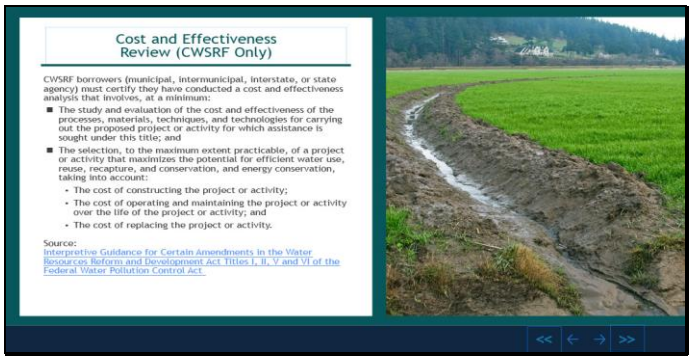
CWSRF loan recipients implementing projects that include the repair, replacement or expansion of publicly-owned treatment works must develop and implement a fiscal sustainability plan (FSP) or certify that it has developed and implemented such a plan.

Each state CWSRF has developed specific criteria for contents of the FSP that include, at a minimum:

- An inventory of critical assets that are part of the treatment works;
- An evaluation of the condition and performance of inventoried assets or asset groupings
- A certification that the borrower has evaluated and will be implementing water and energy conservation efforts as part of the plan; and
- A plan for maintaining, repairing, and, as necessary, replacing the treatment works and a plan for funding such activities.

Source:

Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act Titles I, II, V, and VI of the Federal Water Pollution Control Act (https://www.epa.gov/sites/production/files/2015-04/documents/water_resources_reform_and_development_act_guidance.pdf)



Cost and Effectiveness Review (CWSRF Only)

CWSRF borrowers (municipal, intermunicipal, interstate, or state agency) must certify they have conducted a cost and effectiveness analysis that involves, at a minimum:

- The study and evaluation of the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is sought under this title; and
- The selection, to the maximum extent practicable, of a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account:
    - The cost of constructing the project or activity;
    - The cost of operating and maintaining the project or activity over the life of the project or activity; and
    - The cost of replacing the project or activity.

Source:

Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act Titles I, II, V, and VI of the Federal Water Pollution Control Act (https://www.epa.gov/sites/production/files/2015-04/documents/water_resources_reform_and_development_act_guidance.pdf)

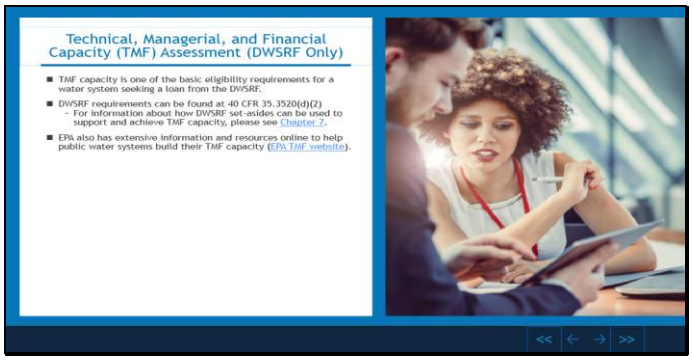
Architecture and Engineering (A/E) Procurement (CWSRF Only)

Some CWSRF projects (consult with your state) may need to demonstrate that the procurement of project-related architectural and engineering (A/E) contracts comply with40 U.S.C. 1101 et seq. or an equivalent state requirement. The requirements of 40 U.S.C. 1101 et seq. are:

- Public announcement of the solicitation (e.g., a Request for Qualifications);
- Evaluation and ranking of the submitted qualification statements based on established, publicly available criteria (e.g., identified in the solicitation);
    - Evaluation criteria should be based on demonstrated competence and qualification for the type of professional services required (e.g., past performance, specialized experience, and technical competence in the type of work required);
- Discussion with at least three firms to consider anticipated concepts and compare alternative methods for furnishing services;
- Selection of at least three firms considered to be the most highly qualified to provide the services required; and
- Contract negotiation with the most highly qualified firm to determine compensation that is fair and reasonable based on a clear understanding of the project scope, complexity, professional nature, and the estimated value of the services to be rendered;
    - In the event that a contract cannot be negotiated with the most highly qualified firm, negotiation continues in order of qualification.

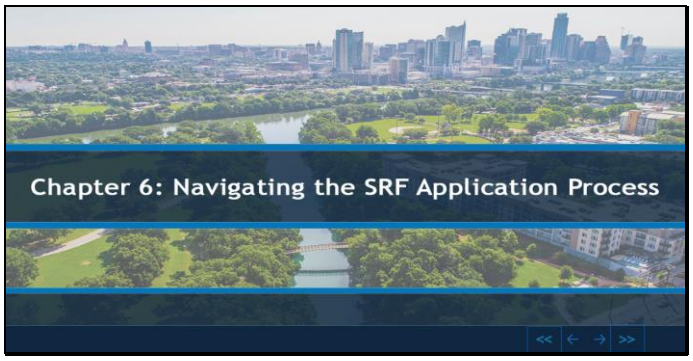
Source:

Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act Titles I, II, V, and VI of the Federal Water Pollution Control Act (https://www.epa.gov/sites/production/files/2015-04/documents/water_resources_reform_and_development_act_guidance.pdf)

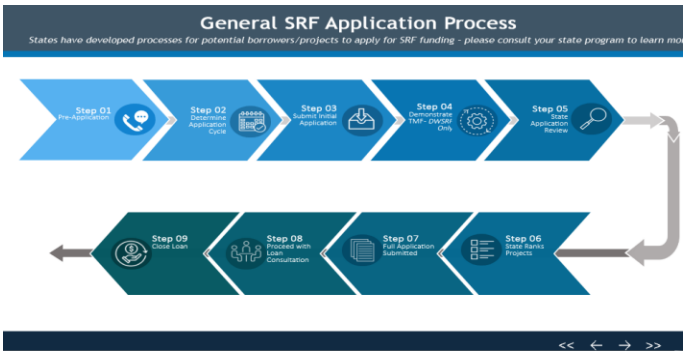


Technical, Managerial, and Financial Capacity (TMF) Assessment (DWSRF Only)

- TMF capacity is one of the basic eligibility requirements for a water system seeking a loan from the DWSRF.
- DWSRF requirements can be found at 40 CFR 35.3520(d)(2)
  - For information about how DWSRF set-asides can be used to support and achieve TMF capacity, please see Chapter 7.
- EPA also has extensive information and resources online to help public water systems build their TMF capacity (EPA TMF website (https://www.epa.gov/dwcapacity/technical-managerial-and-financial-tmf-capacity-resources-small-drinking-water-systems)).



Chapter 6: Navigating the SRF Application Process



General SRF Application Process

States have developed processes for potential borrowers/projects to apply for SRF funding – please consult your state program to learn more.

Step 01

Pre-Application

It is good practice to contact your state SRF program prior to submitting an application to ensure both the intended applicant and project meet the program's basic eligibilities.

Step 02

Determine Application Cycle

The precise SRF funding or application cycles are determined by each state. Potential applicants should consult their state SRF program to understand funding timeliness in their state.

States may offer one or more funding cycles each year. In many cases, states combine the application process for several funding sources. For example, state programs often consolidate the application process for the CWSRF, Water Pollution Control (Section 106) Grants, and Nonpoint Source Management (Section 319) grants.

Step 03

Submit Initial Application

Each state has their own application requirements and process. Please consult your State SRF to learn more.

The level of detail that you will need to provide at this stage varies amongst the states. Some have "lite" applications to acquire basic project and community information, while others may require further detail.

Step 04

Demonstrate TMF - DWSRF Only

All DWSRF applicants must be able to demonstrate technical, managerial, and financial capacity (TMF) to successfully maintain and operate their system, or that the project to be funded will enable the system to acquire TMF capacity. Learn more.

Step 05

State Application Review

The state will review the application to ensure the applicant and project meet the program's basic eligibilities.

Step 06

State Ranks Projects

After the state has reviewed applications, it will rank the projects in priority order and publicly post a Project Priority List. All projects listed on the State's Project Priority List are eligible for SRF funding.

Depending on available funding within the State, applicants will be invited to proceed with a full loan application

*CWSRF projects that do not meet the definition of "treatment works" do not need to be on the Project Priority List to qualify for funding.

Step 07

Full Application Submitted

Projects above the fundable line on a state's Project Priority List may be invited to submit a full loan application. The full application typically requires more detailed information about the applicant's project and financial status (annual audits, project budgets, and rate schedules). The state conducts a financial review to determine an applicant's ability to repay the loan.

Step 08

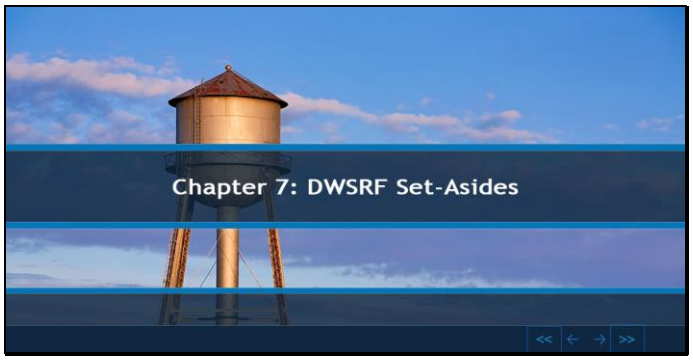
Proceed with Loan Consultation

Applicants will work with the state to discuss the terms of the loan agreement. Terms typically include interest rate, repayment schedule, etc.

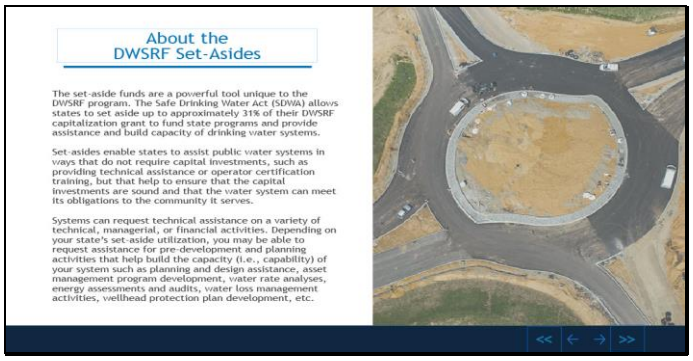
Step 09

Close Loan

Once a loan is closed the borrower can begin invoicing the state for completed, eligible activities covered by the loan agreement.



Chapter 7: DWSRF Set-Asides

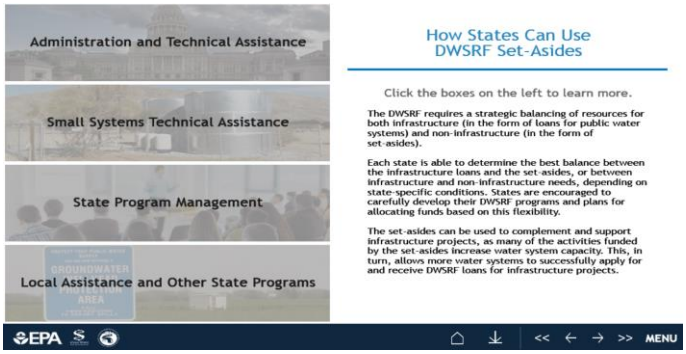


About the DWSRF Set-Asides

The set-aside funds are a powerful tool unique to the DWSRF program. The Safe Drinking Water Act (SDWA) allows states to set aside up to approximately 31% of their DWSRF capitalization grant to fund state programs and provide assistance and build capacity of drinking water systems.

Set-asides enable states to assist public water systems in ways that do not require capital investments, such as providing technical assistance or operator certification training, but that help to ensure that the capital investments are sound and that the water system can meet its obligations to the community it serves.

Systems can request technical assistance on a variety of technical, managerial, or financial activities. Depending on your state's set-aside utilization, you may be able to request assistance for pre-development and planning activities that help build the capacity (i.e., capability) of your system such as planning and design assistance, asset management program development, water rate analyses, energy assessments and audits, water loss management activities, wellhead protection plan development, etc.



How States Can Use DWSRF Set-Asides

Click on the boxes on the left to learn more.

The DWSRF requires a strategic balancing of resources for both infrastructure (in the form of loans for public water systems) and non-infrastructure (in the form of set-asides).

Each state is able to determine the best balance between the infrastructure loans and the set-asides, or between infrastructure and non-infrastructure needs, depending on state-specific conditions. States are encouraged to carefully develop their DWSRF programs and plans for allocating funds based on this flexibility.

The set-asides can be used to complement and support infrastructure projects, as many of the activities funded by the set-asides increase water system capacity. This, in turn, allows more water systems to successfully apply for and receive DWSRF loans for infrastructure projects.

Administration and Technical Assistance

A state may reserve up to the greater of: $400,000, 1/5th percent of the current valuation of the fund, or 4 percent of all grant awards for the fiscal year for the administration and oversight of its DWSRF project loan fund and set-aside programs and to provide technical assistance to public water systems.

Small Systems Technical Assistance

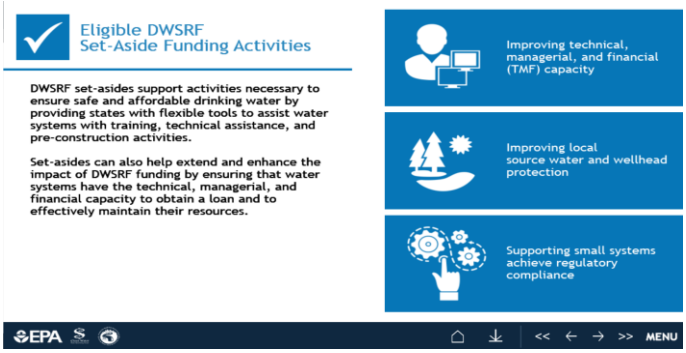
A state may reserve up to 2% of a capitalization grant to provide technical assistance to public water systems serving 10,000 or fewer persons.

State Program Management

A state may reserve up to 10% of a capitalization grant to develop and implement its drinking water protection, capacity development, operator certification, and source water protection programs.

Local Assistance and Other State Programs

A state may reserve up to 15% of a capitalization grant for capacity development and source water and wellhead protection activities using the Local Assistance and Other State Programs set-aside. Of the 15% available, no more than 10% of the capitalization grant may apply toward any single type of activity.



Eligible DWSRF Set-Aside Funding Activities

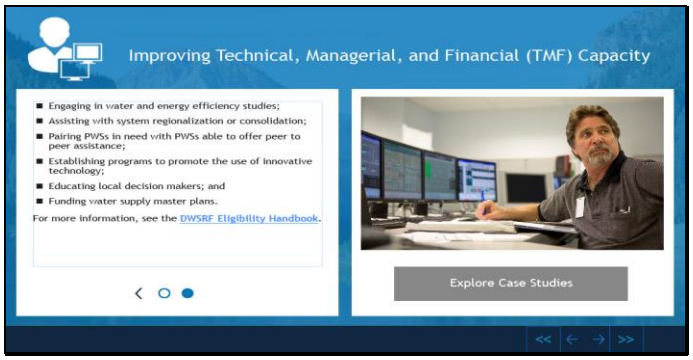
DWSRF set-asides support activities necessary to ensure safe and affordable drinking water by providing states with flexible tools to assist water systems with training, technical assistance, and pre-construction activities.

Set-asides can also help extend and enhance the impact of DWSRF funding by ensuring that water systems have the technical, managerial, and financial capacity to obtain a loan and to effectively maintain their resources.

Improving technical, managerial, and financial (TMF) capacity

Improving local source water and wellhead protection

Supporting small systems achieve regulatory compliance



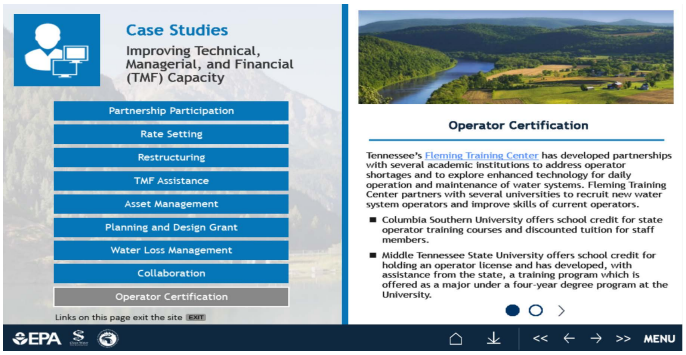
Improving Technical, Managerial, and Financial (TMF) Capacity

Set-asides can be used to improve sustainability, or TMF capacity, at water systems. Improving water system sustainability covers a range of activities. Examples include:

- Conducting asset life-cycle and condition assessments;
- Assisting with rate evaluations;
- Developing capital improvement plans to assist with asset management planning;
- Planning for resilience, including preparing systems against extreme events;
- Developing and distributing tools to help return to compliance;
- Ensuring that water systems have properly trained operators;
- Engaging in water and energy efficiency studies;
- Assisting with system regionalization or consolidation;
- Pairing PWSs in need with PWSs able to offer peer to peer assistance;
- Establishing programs to promote the use of innovative technology;
- Educating local decision makers; and
- Funding water supply master plans.

For more information, see the DWSRF Eligibility Handbook (https://www.epa.gov/drinkingwatersrf/dwsrf-eligibility-handbook).

Explore case studies.



Case Studies

Improving Technical, Managerial, and Financial (TMF) Capacity

Partnership Participation

In accordance with its Capability Enhancement Program, Pennsylvania's Department of Environmental Protection (DEP) has used DWSRF set-aside funds to enhance its statewide participation in the national Partnership for Safe Water. These activities started in 2005 to encourage surveying public water system infrastructure, O&M procedures, and management practices to identify and correct system weaknesses.

Rate Setting

Since the early 2000s, South Dakota has used the Small System Technical Assistance (2 percent) set-aside to provide grants to small systems for implementing rate analyses, as well as funding for a technical assistance provider to conduct onsite assistance.

Restructuring

In 2010, North Carolina implemented a Disadvantaged Community Program under the State Program Management (10 percent) set-aside to assist systems lacking capacity by consolidating with another water system or through some other form of partnership.

TMF Assistance

Since 2011, the Missouri Department of Natural Resources Public Drinking Water Branch has contracted with the Missouri Rural Water Association (MRWA) for three small system circuit riders to assist state-prioritized public water systems (PWSs) with leak detection, energy efficiency assessments, long-term strategic planning, various compliance issues, operator certification, and assessing, obtaining, and maintaining their TMF capacity. These activities are funded using the Local Assistance (15 percent) set-aside.

Asset Management

In 2015, Delaware used the Local Assistance (15 percent) set-aside to assist small systems with developing an asset management plan using the Check Up Program for Small Systems (CUPSS) software developed by the EPA. A technical assistance provider helps the water system set up CUPSS with its data and then trains the staff on use of the software.

Planning and Design Grant

Through the Local Assistance (15%) set-aside, in 2014 Virginia provided grants of up to $50,000 per project for small, rural, financially-stressed communities serving 10,000 or fewer people. Eligible costs included preliminary engineering reports, design, plans and specifications, and quantity studies, drilling test wells to determine source feasibility, or other similar technical assistance projects.

In 2015, through South Dakota's Small Community Planning Grant Program, small communities (serving 2,500 or fewer people) received financial assistance to complete a preliminary engineering report (PER) as part of their DWSRF loan application. Participating systems are reimbursed for 80 percent of the cost of their engineering study, up to a maximum reimbursement of $8,000 (i.e., for a $10,000 study). This program utilizes the Small System (2 percent) set-aside.

Water Loss Management

In 2010, Georgia embarked on comprehensive water loss control training and annual reporting using the American Water Works Association (AWWA) Free Audit Software. The state validated audits, developed an audit certification program, and provided technical assistance to communities. A combination of the Small System Technical Assistance (2 percent) set-aside and the Local Assistance (15 percent) set-aside, along with DWSRF loan fees, was used for this activity.

Collaboration

Washington's Departments of Health, Commerce, and Ecology have a long history of working together and formalized their collaboration through the Small Communities Initiative in 1999. Washington supports this effort using funding from the DWSRF Small Systems Technical Assistance (2 percent) set-aside. The Small Communities Initiative has two employees in Commerce that work with small and rural cities, unincorporated communities, utility districts, and water associations referred by the departments of Health and Ecology. They provide technical advice and facilitation services to local elected officials and staff to develop infrastructure projects, make strategic investments, and identify and access appropriate fund sources.

Operator Certification

Tennessee's Fleming Training Center (https://www.tn.gov/environment/program-areas/wr-water-resources/fleming-training-center.html) has developed partnerships with several academic institutions to address operator shortages and to explore enhanced technology for daily operation and maintenance of water systems. Fleming Training Center partners with several universities to recruit new water system operators and improve skills of current operators.

- Columbia Southern University offers school credit for state operator training courses and discounted tuition for staff members.
- Middle Tennessee State University offers school credit for holding an operator license and has developed, with assistance from the state, a training program which is offered as a major under a four-year degree program at the University.
- Tennessee Tech University developed three technological tools for operators.

During the 2015 National Capacity Development/Operator Certification Workshop, Tennessee presented an example of one tool developed for operators called the "Watercalc" app, which is free for Android and iPhone users. It serves as a calculator for water system operators and contains all the formulas operators need on a day-to-day basis, as well as all the formulas included in the American Board of Certification's Formula Book.

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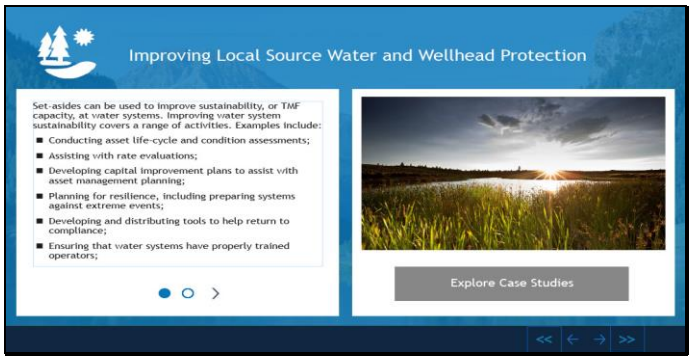

Improving Local Source Water and Wellhead Protection

Set-asides can be used to improve sustainability, or TMF capacity, at water systems. Improving water system sustainability covers a range of activities. Examples include:

- Conducting asset life-cycle and condition assessments;
- Assisting with rate evaluations;
- Developing capital improvement plans to assist with asset management planning;
- Planning for resilience, including preparing systems against extreme events;
- Developing and distributing tools to help return to compliance;
- Ensuring that water systems have properly trained operators;
- Engaging in water and energy efficiency studies;
- Assisting with system regionalization or consolidation;
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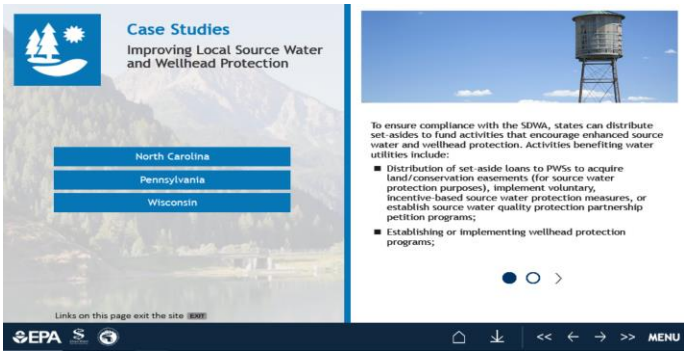
Explore Case Studies



Case Studies

Improving Local Source Water and Wellhead Protection

To ensure compliance with the SDWA, states can distribute set-asides to fund activities that encourage enhanced source water and wellhead protection. Activities benefiting water utilities include:

- Distribution of set-aside loans to PWSs to acquire land/conservation easements (for source water protection purposes), implement voluntary, incentive-based source water protection measures, or establish source water quality protection partnership petition programs;
- Establishing or implementing wellhead protection programs;
- Decommissioning abandoned wells;
- Building fences to prevent unauthorized access to a well pump house;
- Hiring staff to provide administrative and technical assistance for PWS source water protection programs;
- Conducting contamination source inventories or susceptibility analyses; and
- Conducting assessments for and delineating source water protection areas for PWSs.

North Carolina

In 2000, North Carolina (https://www.epa.gov/sites/production/files/2015-04/documents/water_resources_reform_and_development_act_guidance.pdf) used set-asides to initiate a campaign educating local and state officials, stakeholders, and the public about wellhead protection. They also used set-aside funds to develop and implement wellhead protection plans, perform well inspections, and conduct sanitary surveys of PWSs using groundwater as their source water.

Wisconsin

Despite efforts to reduce nitrate contamination, some Wisconsin Public Water Systems still experience increasing levels of nitrate in wells. The continued increase of nitrates could eventually lead to the installation of additional water treatment equipment by the water system owners to meet SDWA requirements.

To help address this concern, in 2015, Wisconsin implemented an incentivized watershed intervention approach in one small geographic area. The project tested if the practices contributing to nitrogen in groundwater can be altered to mitigate pollution. The effort included “the use of advanced modeling, incentives, innovative institutional arrangements, and intensive monitoring” to reduce

nitrogen enough to avoid exceeding SDWA nitrate levels and also studied the effects on microbial and pesticide levels.

Pennsylvania

Pennsylvania ensures that source water protection is promoted and incorporated into interstate water organizations. In 2016, Pennsylvania Department of Environmental Protection (DEP) staff were actively involved in and coordinated source water protection activities for various interstate organizations, including: the Partnership for the Delaware Estuary, the Interstate Council on Water Quality, the Interstate Council on the Potomac River Basin, the Schuylkill Action Network, the Christina River Basin Project, and the Delaware River Basin Commission. These groups are often made up of county planners and conservation district staff who reach out to water systems to make sure they have developed source water protection plans and keep them up-to-date. The State recognizes that this type of outreach, especially among different water systems and counties, is effective in stimulating local efforts.

Supporting Small Systems Achieve Regulatory Compliance

Set-asides can be used to improve sustainability, or TMF capacity, at water systems. Improving water system sustainability covers a range of activities. Examples include:

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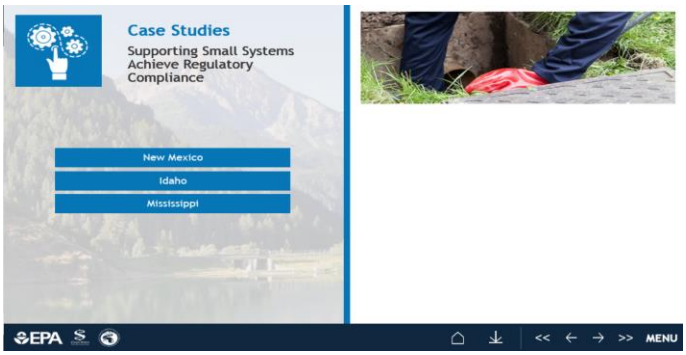


Case Studies

Supporting Small Systems Achieve Regulatory Compliance

New Mexico

New Mexico provided assistance to small systems developing their Consumer Confidence Reports (CCRs) in 2017, a required annual issuance to their customers. In particular, the State assists in developing language for areas of the CCR where the system is experiencing compliance difficulties. New Mexico has also helped small systems develop O&M manuals to train operators on new treatment and/or operation procedures.

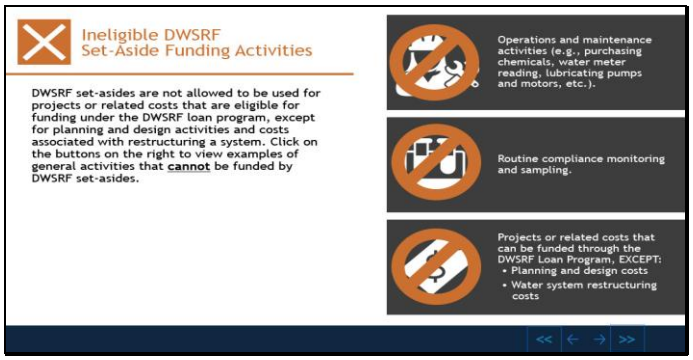
Idaho

Idaho used DWSRF set-aside funds in 2014 to pay for an autodialer, which reminds water system operators and owners about required sampling. The system is set up to both call and email a water system when the Safe Drinking Water Information System (SDWIS) database shows that the system has not sampled within the last two weeks of a compliance period. Not only has the autodialer reduced the number of monitoring violations by 47 percent, but it has also reduced the amount of time the Idaho Department of Environmental Quality staff spend reminding water systems to sample. This has proven to be a cost- and time-saving effort that ultimately increases public health protection. The autodialer system can provide further benefit by disbursing other vital or emergency information to water systems.

Mississippi

In 2002, Mississippi created the PEER Review Program to provide assistance to capacity deficient systems in preparing for their annual Mississippi State Department of Health inspections. All systems with a capacity assessment score below a level specified by the state are invited to participate in the program. If these public water systems (PWSs) choose to participate, the water system operator and owner meet with the PEER Review Team, which is often made up of experienced water system operators.

A mock capacity assessment is performed during the meeting and the team evaluates other technical, managerial, and financial aspects of the water system that were not looked at in the past. As noted in Mississippi's 2017 capacity development report to the governor, "the team approach to problem solving provides an additional boost in capacity assessment areas thereby providing increased operational efficiency, managerial stability, and financial solvency." After the meeting, the PEER Review Team writes a report outlining the issues and providing suggested actions to improve upon the issues identified.



Ineligible DWSRF Set-Aside Funding Activities

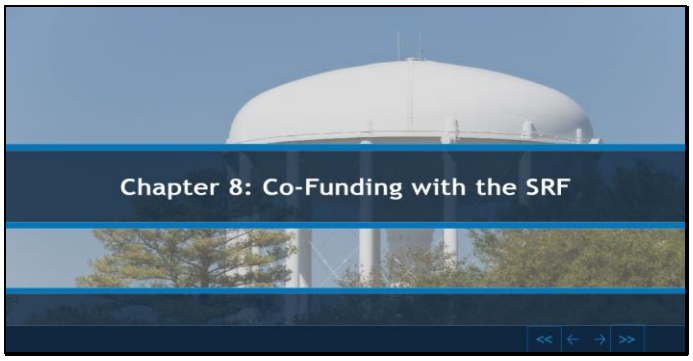
DWSRF set-asides are not allowed to be used for projects or related costs that are eligible for funding under the DWSRF loan program, except for planning and design activities and costs associated with restructuring a system. Click on the buttons on the right to view examples of general activities that cannot be funded by DWSRF set-asides.

Operations and maintenance activities (e.g. purchasing chemicals, water meter reading, lubricating pumps and motors, etc.)

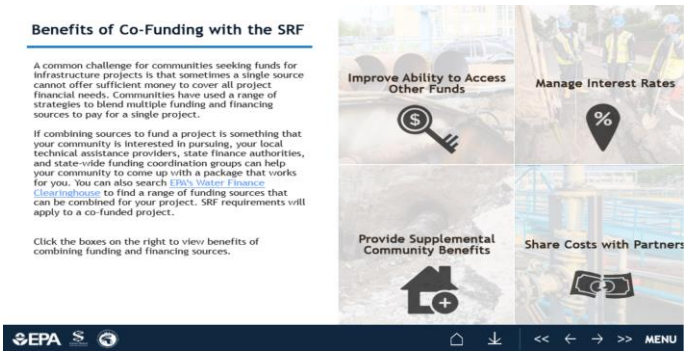
Routine compliance monitoring and sampling.

Projects or related costs that can be funded through the DWSRF Loan Program, EXCEPT:

- Planning and design costs
- Water system restructuring costs



Chapter 8: Co-Funding with the SRF



Benefits of Co-Funding with the SRF

A common challenge for communities seeking funds for infrastructure projects is that sometimes a single source cannot offer sufficient money to cover all project financial needs. Communities have used a range of strategies to blend multiple funding and financing sources to pay for a single project.

If combining sources to fund a project is something that your community is interested in pursuing, your local technical assistance providers, state finance authorities, and state-wide funding coordination groups can help your community to come up with a package that works for you. You can also search EPA's Water Finance Clearinghouse (https://ofmpub.epa.gov/apex/wfc/f?p=165:1) to find a range of funding sources that can be combined for your project. SRF requirements will apply to a co-funded project.

Click the boxes on the right to view benefits of combining funding and financing sources.

Improve Ability to Access Other Funds

Some funding sources require matching funds to qualify. Sources may also have restrictions on the project phases that can be covered by their funds. For example, a community may use one source to cover pre-development costs to help bring in additional funds for construction.

Manage Interest Rates

Using one secured source of money (e.g., grant money) to "buy down" the interest rate on another source of money, or paying off high interest loans before paying off lower (less expensive) loans/sources of money.

Provide Supplemental Community Benefits

Securing additional funding to access or add secondary community benefits to an infrastructure project (e.g., receiving grant money to add a community park space above a covered water reservoir).

Share Costs with Partners

Sharing funding with another utility, community, or partner organization to fund a large-scale regional project (managed jointly by several communities / utilities / organizations), or several smaller projects in a region (each project managed by an individual community / utility / organizations).

SRF Co-Funding Opportunities

While a large portion of infrastructure needs are funded through user fees collected by the utility, communities have many opportunities to combine SRF financing with other funding sources to meet their drinking water, wastewater, and stormwater infrastructure needs.

Sources that can co-fund your infrastructure project along with your SRF assistance include:

FEDERAL

STATE

PHILANTHROPIC

ALTERNATIVE SERVICE DELIVERY

Federal Co-Funding Opportunities

U.S. Environmental Protection Agency

WIFIA

The Water Infrastructure Finance and Innovation Act (WIFIA) program's mission is to accelerate investment in our nation's water and wastewater infrastructure by providing long-term, low-cost, supplemental credit assistance (loans) under customized terms to creditworthy water and wastewater projects of national and regional significance. Learn more at the EPA's WIFIA Program Website (https://www.epa.gov/wifia) or by taking the WIFIA 101 Learning Module (http://www.cadmusweb.com/captivate/WIFIA101Module/index.html).

Nonpoint Source Management (Section 319) Grants

Under Section 319 of the Clean Water Act (Section 319 Nonpoint Source Management Program (https://www.gpo.gov/fdsys/pkg/USCODE-2010-title33/pdf/USCODE-2010-title33-chap26-subchapIII-sec1329.pdf)), states, territories and tribes receive grant money that supports a wide variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects and monitoring to assess the success of specific nonpoint source implementation projects. Learn more at the EPA's 319 Grants Program Website (https://www.epa.gov/nps/319-grant-program-states-and-territories).

Water Pollution Control (Section 106) Grants

Under section 106 of the Clean Water Act (33 U.S. Code §1256 (http://uscode.house.gov/view.xhtml?path=/prelim@title33/chapter26/subchapter1&edition=prelim)), EPA provides assistance to states (including territories and the District of Columbia), interstate agencies, and eligible tribes to establish and implement ongoing water pollution control programs. Learn more at the EPA's Section 106 Grants Website (https://www.epa.gov/water-pollution-control-section-106-grants).

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Federal Co-Funding Opportunities

U.S. Department of Agriculture

The U.S. Department of Agriculture's Water and Environment Program (WEP) offers financing to rural communities with populations of 10,000 or fewer to develop, construct, or improve water and wastewater infrastructure. WEP also provides funding to organizations that provide technical assistance and training to rural communities for water and wastewater activities. Examples of their assistance are provided here. Visit the Water and Environmental Programs website (https://www.rd.usda.gov/programs-services/all-programs/water-environmental-programs) for a more complete description of funding and assistance opportunities.

Water and Waste Disposal Loan and Grant Program

Water and Waste Disposal Loan and Grant Program offers long-term, low-interest loans to finance the acquisition, construction, and improvement of drinking water, sanitary sewage disposal, sanitary solid waste disposal, and stormwater drainage systems.

State and local governments, private nonprofits, and federally recognized tribes serving rural systems of 10,000 people or fewer are eligible to apply.

Water and Waste Disposal Predevelopment Planning Grants offer grants to low-income communities to help fund the initial planning and application development stages of the loan and grant program.

See website (https://www.rd.usda.gov/programs-services/search-special-evaluation-assistance-rural-communities-and-households) for more information.

Special Evaluation Assistance for Rural Communities and Households

Special Evaluation Assistance for Rural Communities and Households (SEARCH) helps very small, distressed rural communities with predevelopment planning costs associated with water and waste disposal projects.

- Assistance may be used to fund project feasibility studies, design or engineering analyses, or technical assistance with financial assistance applications.
- State and local governments, private nonprofits, and federally recognized tribes serving rural systems of 2,500 people or less are eligible to apply.
- See website (https://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program) for more information.

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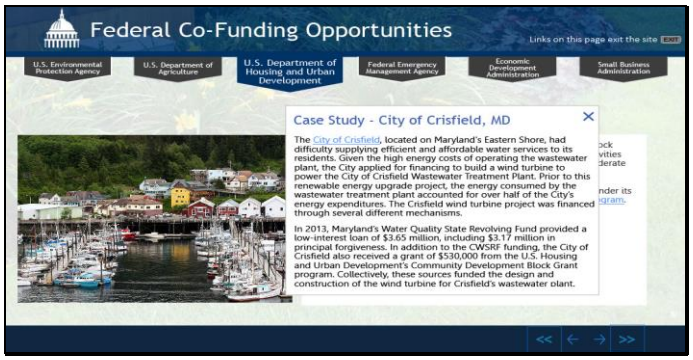

Federal Co-Funding Opportunities

U.S. Department of Housing and Urban Development

Housing and Urban Development’s Community Development Block Grant (CDBG) program funds local community development activities that expand economic opportunities, principally for low and moderate income areas.

The program can fund drinking water and wastewater projects under its State Administered (https://www.epa.gov/sites/production/files/2015-10/documents/cdbg_state.pdf) CDBG Program and its CDBG Entitlement Program (https://www.epa.gov/sites/production/files/2015-10/documents/community_development_block_grant_cdbg_0.pdf).

See HUD’s website (https://www.hud.gov/program_offices/comm_planning/communitydevelopment/programs) or Fed FUNDS (https://www.epa.gov/fedfunds/housing-and-urban-development-community-grants-available-water-and-wastewater-utilities) for more information.

Case Study

The City of Crisfield (https://www.epa.gov/fedfunds/housing-and-urban-development-community-grants-available-water-and-wastewater-utilities), located on Maryland's Eastern Shore, had difficulty supplying efficient and affordable water services to its residents. Given the high energy costs of operating the wastewater plant, the City applied for financing to build a wind turbine to power the City of Crisfield Wastewater Treatment Plant. Prior to this renewable energy upgrade project, the energy consumed by the wastewater treatment plant accounted for over half of the City’s energy expenditures. The Crisfield wind turbine project was financed through several different mechanisms.

In 2013, Maryland’s Water Quality State Revolving Fund provided a low-interest loan of $3.65 million, including $3.17 million in principal forgiveness. In addition to the CWSRF funding, the City of Crisfield also received a grant of $530,000 from the U.S. Housing and Urban Development’s Community Development Block Grant program. Collectively, these sources funded the design and construction of the wind turbine for Crisfield’s wastewater plant.

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Federal Co-Funding Opportunities

Federal Emergency Management Agency

The SRFs have the potential to support mitigation or post-disaster recovery and rebuilding projects. After a presidentially-declared disaster, Federal Emergency Management Agency (FEMA) (https://www.fema.gov/) can provide funding under the Public Assistance (PA) Grant Program. FEMA can also provide funds to mitigate damage from future disasters under the Hazard Mitigation Grant Program (HMGP). The program requires matching funds from local and state governments.

SRF non-federal and non-state match funds can be used to match FEMA grants (https://www.epa.gov/sites/production/files/2016-05/documents/cwsrfprofile.pdf).

States may provide priority funding for projects that are needed for an emergency or potential public health threat, if emergency bypass procedures are included in their IUP. State DWSRF programs may also earmark funds for technical assistance to help utilities assess damages, purchase backup generators, install physical flood barriers, and relocate wells. These funds can supplement funds received from FEMA.

See the Checklist for EPA DWSRF (https://www.epa.gov/sites/production/files/2015-10/documents/dwsrfchcklst_0.pdf).

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Federal Co-Funding Opportunities

Economic Development Administration

The Economic Development Administration’s Public Works program issues grants to economically distressed areas to foster job creation and attract private investment. Grants are available to underwrite planning and construction costs to upgrade physical infrastructure in economically distressed communities, including drinking water and wastewater facilities.

City, township, special district, county, and state governments, federally recognized tribal governments, and nonprofits are eligible to apply for funding.

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Federal Co-Funding Opportunities

Small Business Administration

The U.S. Small Business Administration's (SBA) Office of Disaster Assistance provides low-interest, long-term loans following a disaster. These loans are available to private for-profit and private non-profit drinking water and wastewater utilities.

The loans help utilities return infrastructure to its pre-disaster operability. Loans may be for up to 30 years and are available for physical or economic disasters.

Click here for more information (https://www.epa.gov/fedfunds/small-business-administration-loans-available-water-and-wastewater-utilities).

Case Study – DWSRF City of Mabton, WA

Mabton (https://www.doh.wa.gov/Portals/1/Documents/Pubs/331-504-Mabton.pdf) used funds from the DWSRF, the U.S. Housing and Urban Development Community Development Block Grant, and the U.S. Department of Agriculture Rural Development to address deteriorating infrastructure that was increasing the costs of pumping and treating water. The City also faced declining water supply due to poor water quality in its wells.

In 2013, the City received $1.8 million in funding from the DWSRF for construction of a new well. The City received an additional $1.5 million in 2014 to purchase a 1-million gallon reservoir, improve chlorination, and relocate a diesel generator.

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State Co-Funding Opportunities

Opportunities for co-funding will vary by state, depending on each state’s priorities and funding structures. Potential state agencies that may provide funding include departments of:

Public Health

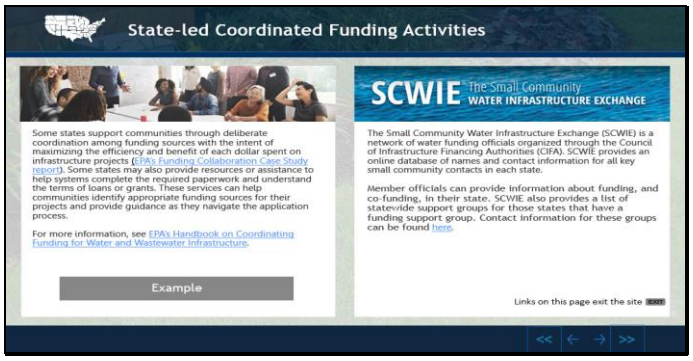
Commerce

Environment

Agriculture

Housing and Development

Communities should contact their state SRF program administrators to understand what co-funding opportunities are available to them. Note that these icons are not clickable.



State-led Coordinated Funding Activities

Some states support communities through deliberate coordination among funding sources with the intent of maximizing the efficiency and benefit of each dollar spent on infrastructure projects (EPA's Funding Collaboration Case Study report (https://www.epa.gov/sites/production/files/2015-04/documents/epa816f12007.pdf)). Some states may also provide resources or assistance to help systems complete the required paperwork and understand the terms of loans or grants. These services can help communities identify appropriate funding sources for their projects and provide guidance as they navigate the application process.

For more information, see EPA's Handbook on Coordinating Funding for Water and Wastewater Infrastructure (https://nepis.epa.gov/Exe/ZyNET.exe/200026MH.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2000+Thru+2005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C00thru05%5CTxt%5C00000007%5C200026MH.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL).

The Small Community Water Infrastructure Exchange (SCWIE) is a network of water funding officials organized through the Council of Infrastructure Financing Authorities (CIFA). SCWIE provides an online database of names and contact information for all key small community contacts in each state.

Member officials can provide information about funding, and co-funding, in their state. SCWIE also provides a list of statewide support groups for those states that have a funding support group. Contact information for these groups can be found here (https://www.scwie.org/statewide-support-groups).

Case Study - California Financing Coordinating Committee (CFCC)

The CFCC was formed in 1998 to assist small, rural public water systems (PWSs) and includes representatives from most of the infrastructure funding sources in the state—including the California Department of Public Health, California Department of Water Resources, U.S. Department of Agriculture, and U.S. Department of Housing and Community Development. CFCC holds four to five funding fairs each year where the participating funding agencies present their programs and are then available to discuss specific project plans with potential applicants. Following the fair, a booklet of the presentations that were given at the fair, as well as a booklet of information on each funding agency, is distributed to interested PWSs.

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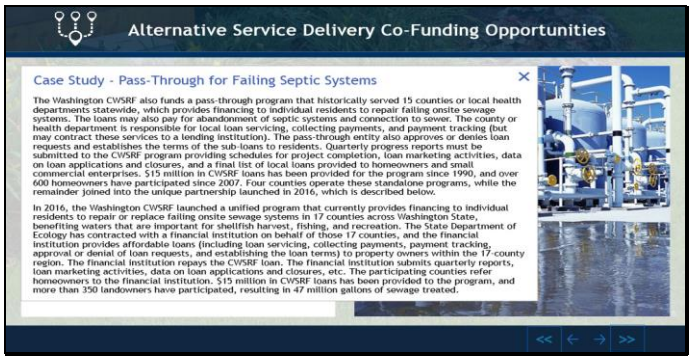
Philanthropic Co-Funding Opportunities

In addition to interagency funding coordination at the federal, state, and local level, state-level funders can also coordinate with other funding organizations such as private philanthropic foundations.

Foundations are nongovernmental, nonprofit organizations that are typically established to support charitable activities that align with their overall mission.

You can search the Water Finance Clearinghouse's Funds database (https://ofmpub.epa.gov/apex/wfc/f?p=165:3:8084624701732::NO:3,RIR::) to identify foundations that may fund water projects.



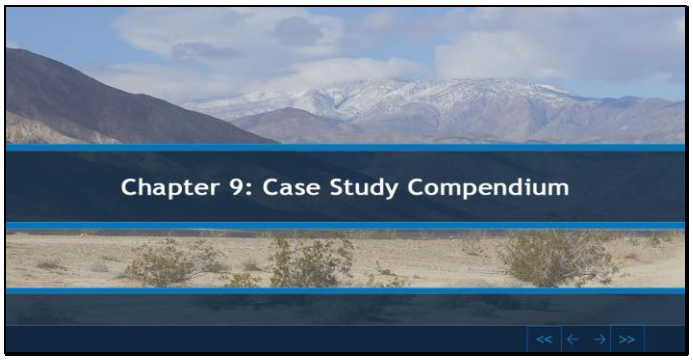
Alternative Service Delivery Co-Funding Opportunities

These project delivery models offer alternative approaches to obtaining financing for water infrastructure improvements. These financing methods can be used in conjunction with other funding sources, such as the SRFs.

Case Study - Pass-Through for Failing Septic Systems

The Washington CWSRF also funds a pass-through program that historically served 15 counties or local health departments statewide, which provides financing to individual residents to repair failing onsite sewage systems. The loans may also pay for abandonment of septic systems and connection to sewer. The county or health department is responsible for local loan servicing, collecting payments, and payment tracking (but may contract these services to a lending institution). The pass-through entity also approves or denies loan requests and establishes the terms of the sub-loans to residents. Quarterly progress reports must be submitted to the CWSRF program providing schedules for project completion, loan marketing activities, data on loan applications and closures, and a final list of local loans provided to homeowners and small commercial enterprises. $15 million in CWSRF loans has been provided for the program since 1990, and over 600 homeowners have participated since 2007. Four counties operate these standalone programs, while the remainder joined into the unique partnership launched in 2016, which is described below.

In 2016, the Washington CWSRF launched a unified program that currently provides financing to individual residents to repair or replace failing onsite sewage systems in 17 counties across Washington State, benefiting waters that are important for shellfish harvest, fishing, and recreation. The State Department of Ecology has contracted with a financial institution on behalf of those 17 counties, and the financial institution provides affordable loans (including loan servicing, collecting payments, payment tracking, approval or denial of loan requests, and establishing the loan terms) to property owners within the 17-county region. The financial institution repays the CWSRF loan. The financial institution submits quarterly reports, loan marketing activities, data on loan applications and closures, etc. The participating counties refer homeowners to the financial institution. $15 million in CWSRF loans has been provided to the program, and more than 350 landowners have participated, resulting in 47 million gallons of sewage treated.



Chapter 9: Case Study Compendium

Case Studies

This chapter provides case study examples of programs that have successfully provided assistance in a variety of geographic regions.

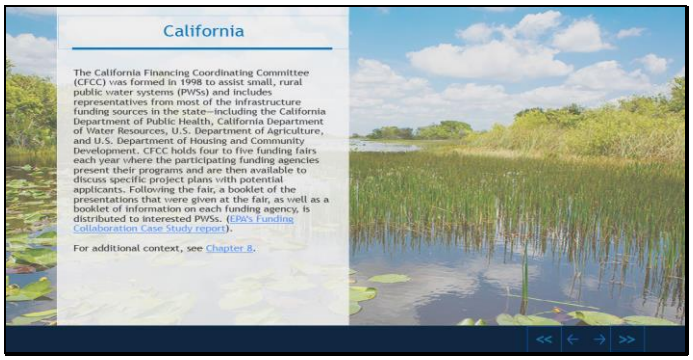
DWSRF

CWSRF

DWSRF Case Studies
Step 1: Pick a project type.
Step 2: Choose state or program.
Step 3: Choose a community case study to explore.
Source
New Mexico
New Source
Washington
Construction of a New Well
Treatment
Oregon
UV Treatment
Rhode Island
Rehabilitation of Pipes and New Treatment Plant
Washington
Reduction of Manganese Levels
Wisconsin
Nitrate Compliance Assistance
Transmission and Distribution
Pennsylvania
First DWSRF Loan in the Nation
Rhode Island
Rehabilitation of Pipes and New Treatment Plant
Wisconsin
Lead Service Line Replacement
Storage

Pennsylvania
First DWSRF Loan in the Nation
Source Water Protection
Pennsylvania
Interstate Collaboration
Set-Asides
Delaware
Check Up Program for Small Systems
Georgia
Water Loss Management Audits
Idaho
Autodialer System
Missouri
Circuit Riders and Local Assistance
North Carolina
Disadvantaged Community System
Wellhead Protection Campaign
Pennsylvania
Partnership for Safe Water
South Dakota
Water System Rate Analysis
Small Community Planning and Design Grant
Virginia
Planning and Design Grant
Washington
Small Communities Initiative
Consolidation/Acquisition
Kentucky
Water Systems Partnerships
Nevada
North County Regional Water Project
Washington
Improvement through Consolidation
Information Exchange

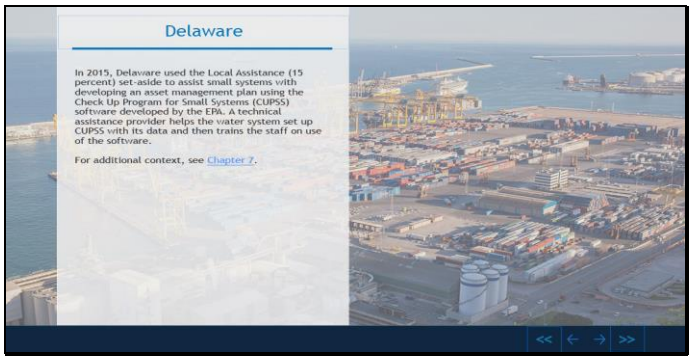
California
Financing Coordinating Committee
Mississippi
PEER Review Program
New Mexico
Consumer Confidence Report Development
Tennessee
Tools for Operators
Small Community Water Infrastructure Exchange



California

The California Financing Coordinating Committee (CFCC) was formed in 1998 to assist small, rural public water systems (PWSs) and includes representatives from most of the infrastructure funding sources in the state—including the California Department of Public Health, California Department of Water Resources, U.S. Department of Agriculture, and U.S. Department of Housing and Community Development. CFCC holds four to five funding fairs each year where the participating funding agencies present their programs and are then available to discuss specific project plans with potential applicants. Following the fair, a booklet of the presentations that were given at the fair, as well as a booklet of information on each funding agency, is distributed to interested PWSs. (EPA's Funding Collaboration Case Study report (https://www.epa.gov/sites/production/files/2015-04/documents/epa816f12007.pdf)).

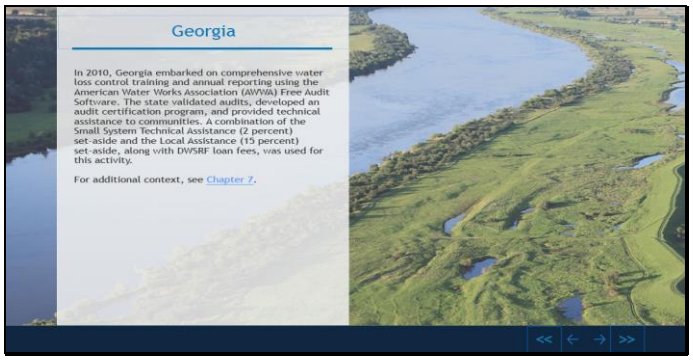
For additional context, see Chapter 8.



Delaware

In 2015, Delaware used the Local Assistance (15 percent) set-aside to assist small systems with developing an asset management plan using the Check Up Program for Small Systems (CUPSS) software developed by the EPA. A technical assistance provider helps the water system set up CUPSS with its data and then trains the staff on use of the software.

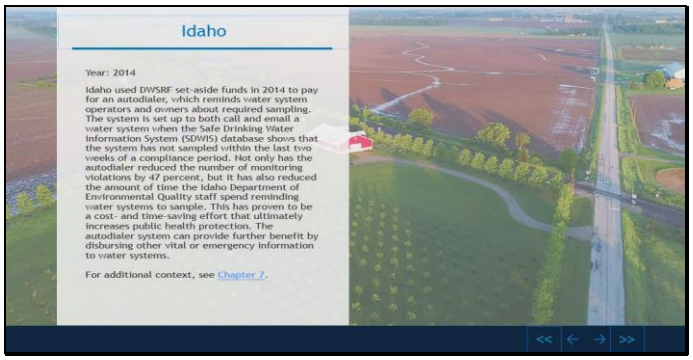
For additional context, see Chapter 7.



Georgia

In 2010, Georgia embarked on comprehensive water loss control training and annual reporting using the American Water Works Association (AWWA) Free Audit Software. The state validated audits, developed an audit certification program, and provided technical assistance to communities. A combination of the Small System Technical Assistance (2 percent) set-aside and the Local Assistance (15 percent) set-aside, along with DWSRF loan fees, was used for this activity.

For additional context, see Chapter 7.

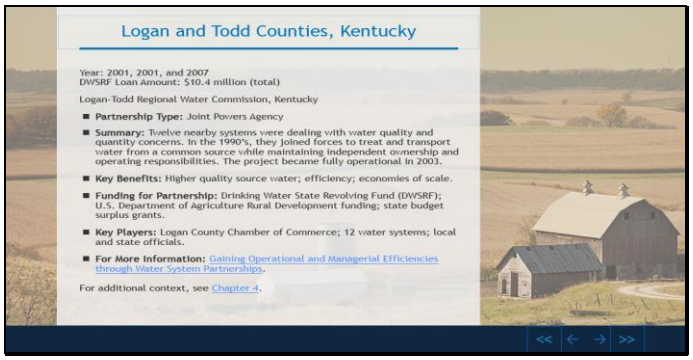


Idaho

Year: 2014

Idaho used DWSRF set-aside funds in 2014 to pay for an autodialer, which reminds water system operators and owners about required sampling. The system is set up to both call and email a water system when the Safe Drinking Water Information System (SDWIS) database shows that the system has not sampled within the last two weeks of a compliance period. Not only has the autodialer reduced the number of monitoring violations by 47 percent, but it has also reduced the amount of time the Idaho Department of Environmental Quality staff spend reminding water systems to sample. This has proven to be a cost- and time-saving effort that ultimately increases public health protection. The autodialer system can provide further benefit by disbursing other vital or emergency information to water systems.

For additional context, see Chapter 7.



Logan and Todd Counties, Kentucky

Year: 2001 and 2007

DWSRF Loan Amount: $10.4 million (total)

Logan-Todd Regional Water Commission, Kentucky

Partnership Type: Joint Powers Agency

Summary: Twelve nearby systems were dealing with water quality and quantity concerns. In the 1990's, they joined forces to treat and transport water from a common source while maintaining independent ownership and operating responsibilities. The project became fully operational in 2003.

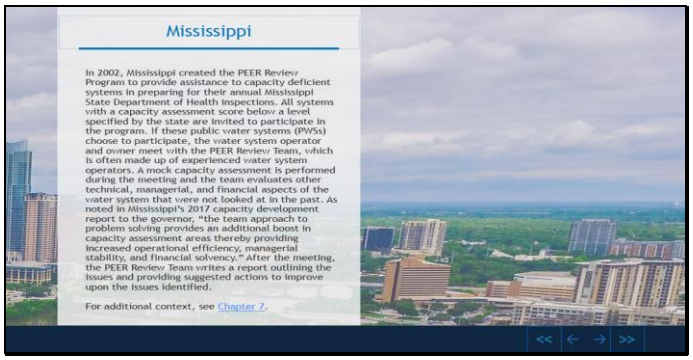
Key Benefits: Higher quality source water; efficiency; economies of scale.

Funding for Partnership: Drinking Water State Revolving Fund (DWSRF); U.S. Department of Agriculture Rural Development funding; state budget surplus grants.

Key Players: Logan County Chamber of Commerce; 12 water systems; local and state officials.

For More Information: Gaining Operational and Managerial Efficiencies through Water System Partnerships (https://nepis.epa.gov/Exe/ZyPDF.cgi/P1006MD0.PDF?Dockey=P1006MD0.PDF).

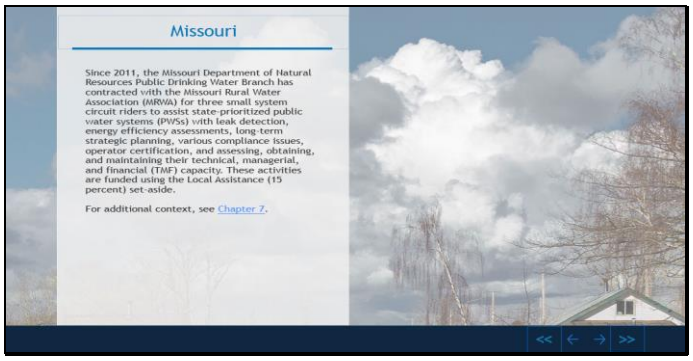
For additional context, see Chapter 4.



Mississippi

In 2002, Mississippi created the PEER Review Program to provide assistance to capacity deficient systems in preparing for their annual Mississippi State Department of Health inspections. All systems with a capacity assessment score below a level specified by the state are invited to participate in the program. If these public water systems (PWSs) choose to participate, the water system operator and owner meet with the PEER Review Team, which is often made up of experienced water system operators. A mock capacity assessment is performed during the meeting and the team evaluates other technical, managerial, and financial aspects of the water system that were not looked at in the past. As noted in Mississippi's 2017 capacity development report to the governor, "the team approach to problem solving provides an additional boost in capacity assessment areas thereby providing increased operational efficiency, managerial stability, and financial solvency." After the meeting, the PEER Review Team writes a report outlining the issues and providing suggested actions to improve upon the issues identified.

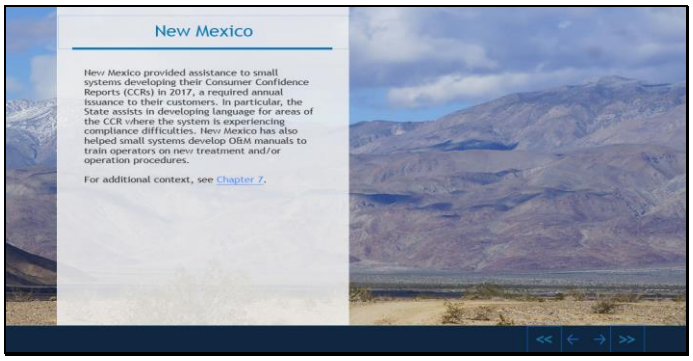
For additional context, see Chapter 7.



Missouri

Since 2011, the Missouri Department of Natural Resources Public Drinking Water Branch has contracted with the Missouri Rural Water Association (MRWA) for three small system circuit riders to assist state-prioritized public water systems (PWSs) with leak detection, energy efficiency assessments, long-term strategic planning, various compliance issues, operator certification, and assessing, obtaining, and maintaining their technical, managerial, and financial (TMF) capacity. These activities are funded using the Local Assistance (15 percent) set-aside.

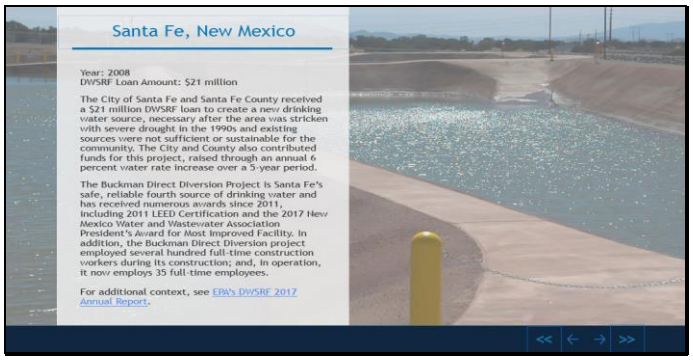
For additional context, see Chapter 7.



New Mexico

New Mexico provided assistance to small systems developing their Consumer Confidence Reports (CCRs) in 2017, a required annual issuance to their customers. In particular, the State assists in developing language for areas of the CCR where the system is experiencing compliance difficulties. New Mexico has also helped small systems develop O&M manuals to train operators on new treatment and/or operation procedures.

For additional context, see Chapter 7.



Santa Fe, New Mexico

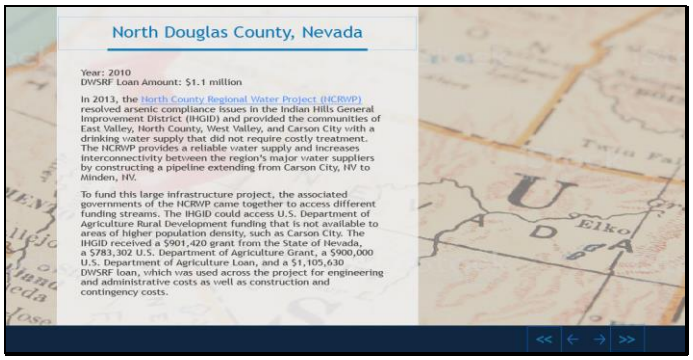
Year: 2008

DWSRF Loan Amount: $21 million

The City of Santa Fe and Santa Fe County received a $21 million DWSRF loan to create a new drinking water source, necessary after the area was stricken with severe drought in the 1990s and existing sources were not sufficient or sustainable for the community. The City and County also contributed funds for this project, raised through an annual 6 percent water rate increase over a 5-year period.

The Buckman Direct Diversion Project is Santa Fe's safe, reliable fourth source of drinking water and has received numerous awards since 2011, including 2011 LEED Certification and the 2017 New Mexico Water and Wastewater Association President's Award for Most Improved Facility. In addition, the Buckman Direct Diversion project employed several hundred full-time construction workers during its construction; and, in operation, it now employs 35 full-time employees.

For additional context, see EPA's DWSRF 2017 Annual Report (https://www.epa.gov/sites/production/files/2018-08/documents/20th_anniversary_dwsrf_report_final_508.pdf).



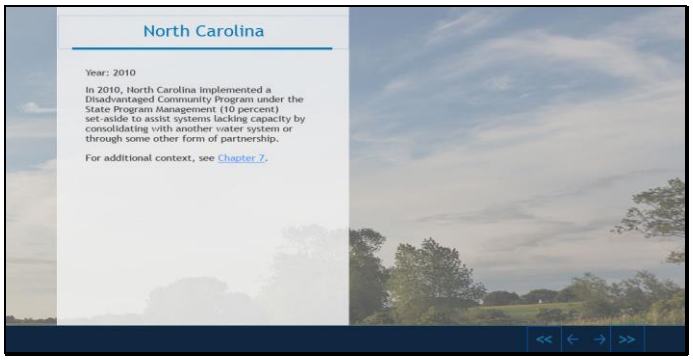
North Douglas County, Nevada

Year: 2010

DWSRF Loan Amount: $1.1 million

In 2013, the North County Regional Water Project (NCRWP) (https://nepis.epa.gov/Exe/ZyPDF.cgi/P1006MD0.PDF?Dockey=P1006MD0.PDF) resolved arsenic compliance issues in the Indian Hills General Improvement District (IHGID) and provided the communities of East Valley, North County, West Valley, and Carson City with a drinking water supply that did not require costly treatment. The NCRWP provides a reliable water supply and increases interconnectivity between the region’s major water suppliers by constructing a pipeline extending from Carson City, NV to Minden, NV.

To fund this large infrastructure project, the associated governments of the NCRWP came together to access different funding streams. The IHGID could access U.S. Department of Agriculture Rural Development funding that is not available to areas of higher population density, such as Carson City. The IHGID received a $901,420 grant from the State of Nevada, a $783,302 U.S. Department of Agriculture Grant, a $900,000 U.S. Department of Agriculture Loan, and a $1,105,630 DWSRF loan, which was used across the project for engineering and administrative costs as well as construction and contingency costs.

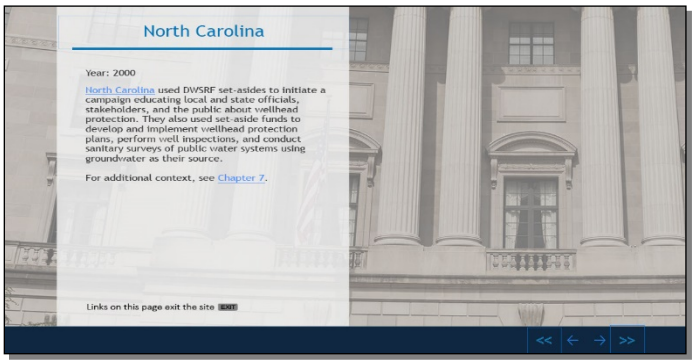


North Carolina

Year: 2010

In 2010, North Carolina implemented a Disadvantaged Community Program under the State Program Management (10 percent) set-aside to assist systems lacking capacity by consolidating with another water system or through some other form of partnership.

For additional context, see Chapter 7.



North Carolina

Year: 2000

North Carolina (https://files.nc.gov/ncdeq/Water%20Resources/files/pws/srf/2011AnnualReport.pdf) used DWSRF set-asides to initiate a campaign educating local and state officials, stakeholders, and the public about wellhead protection. They also used set-aside funds to develop and implement wellhead protection plans, perform well inspections, and conduct sanitary surveys of public water systems using groundwater as their source.

For additional context, see Chapter 7.

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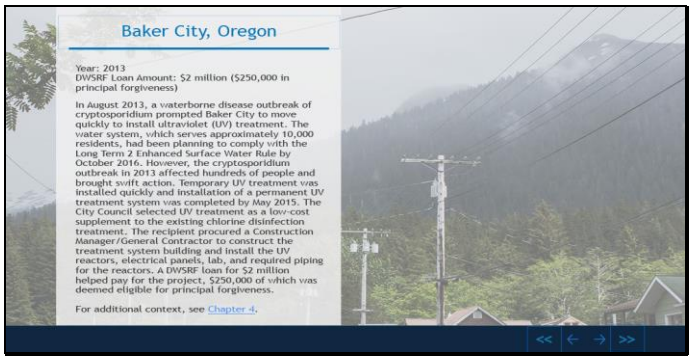


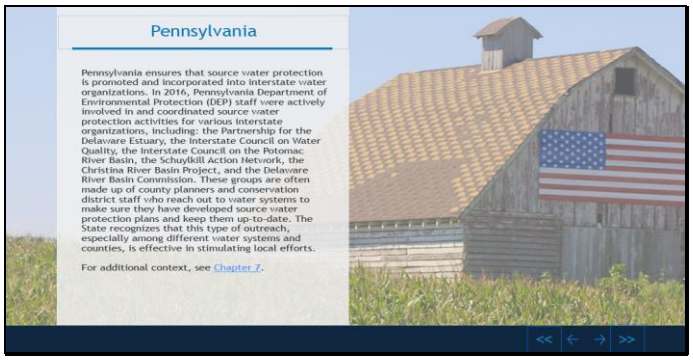
Baker City, Oregon

Year: 2013

DWSRF Loan Amount: $2 million ($250,000 in principal forgiveness)

In August 2013, a waterborne disease outbreak of cryptosporidium prompted Baker City to move quickly to install ultraviolet (UV) treatment. The water system, which serves approximately 10,000 residents, had been planning to comply with the Long Term 2 Enhanced Surface Water Rule by October 2016. However, the cryptosporidium outbreak in 2013 affected hundreds of people and brought swift action. Temporary UV treatment was installed quickly and installation of a permanent UV treatment system was completed by May 2015. The City Council selected UV treatment as a low-cost supplement to the existing chlorine disinfection treatment. The recipient procured a Construction Manager/General Contractor to construct the treatment system building and install the UV reactors, electrical panels, lab, and required piping for the reactors. A DWSRF loan for $2 million helped pay for the project, $250,000 of which was deemed eligible for principal forgiveness.

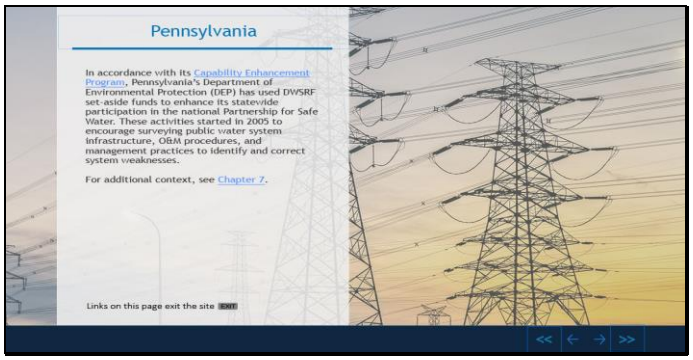
For additional context, see Chapter 4.



Pennsylvania

Pennsylvania ensures that source water protection is promoted and incorporated into interstate water organizations. In 2016, Pennsylvania Department of Environmental Protection (DEP) staff were actively involved in and coordinated source water protection activities for various interstate organizations, including: the Partnership for the Delaware Estuary, the Interstate Council on Water Quality, the Interstate Council on the Potomac River Basin, the Schuylkill Action Network, the Christina River Basin Project, and the Delaware River Basin Commission. These groups are often made up of county planners and conservation district staff who reach out to water systems to make sure they have developed source water protection plans and keep them up-to-date. The State recognizes that this type of outreach, especially among different water systems and counties, is effective in stimulating local efforts.

For additional context, see Chapter 7.



Pennsylvania

In accordance with its Capability Enhancement Program (http://files.dep.state.pa.us/Water/BPNPSM/InfrastructureFinance/StateRevolvFundIntendUsePlan/2017/PA%20DEP%20SRF%20Set-Aside%20Work%20Plan%20FY%2017-18%20Addendum%20For%20Submittal%20to%20EPA%20(002).pdf), Pennsylvania's Department of Environmental Protection (DEP) has used DWSRF set-aside funds to enhance its statewide participation in the national Partnership for Safe Water. These activities started in 2005 to encourage surveying public water system infrastructure, O&M procedures, and management practices to identify and correct system weaknesses.

For additional context, see Chapter 7.

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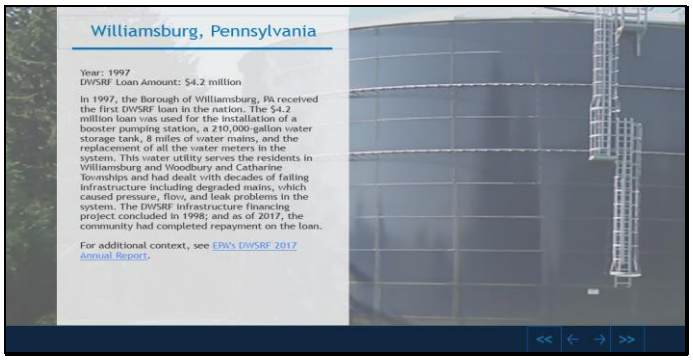


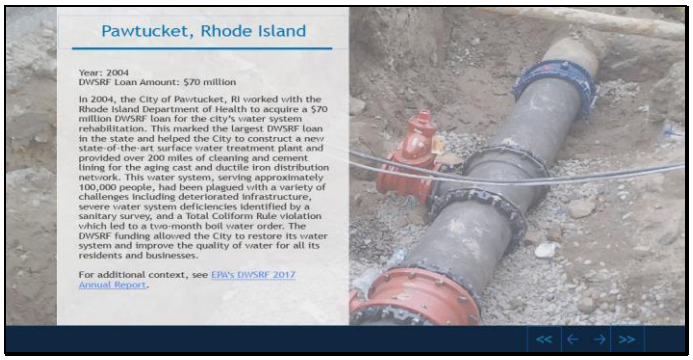
Williamsburg, Pennsylvania

Year: 1997

DWSRF Loan Amount: $4.2 million

In 1997, the Borough of Williamsburg, PA received the first DWSRF loan in the nation. The $4.2 million loan was used for the installation of a booster pumping station, a 210,000-gallon water storage tank, 8 miles of water mains, and the replacement of all the water meters in the system. This water utility serves the residents in Williamsburg and Woodbury and Catharine Townships and had dealt with decades of failing infrastructure including degraded mains, which caused pressure, flow, and leak problems in the system. The DWSRF infrastructure financing project concluded in 1998; and as of 2017, the community had completed repayment on the loan.

For additional context, see EPA's DWSRF 2017 Annual Report (https://www.epa.gov/sites/production/files/2018-08/documents/20th_anniversary_dwsrf_report_final_508.pdf).



Pawtucket, Rhode Island

Year: 2004

DWSRF Loan Amount: $70 million

In 2004, the City of Pawtucket, RI worked with the Rhode Island Department of Health to acquire a $70 million DWSRF loan for the city's water system rehabilitation. This marked the largest DWSRF loan in the state and helped the City to construct a new state-of-the-art surface water treatment plant and provided over 200 miles of cleaning and cement lining for the aging cast and ductile iron distribution network. This water system, serving approximately 100,000 people, had been plagued with a variety of challenges including deteriorated infrastructure, severe water system deficiencies identified by a sanitary survey, and a Total Coliform Rule violation which led to a two-month boil water order. The DWSRF funding allowed the City to restore its water system and improve the quality of water for all its residents and businesses.

For additional context, see EPA's DWSRF 2017 Annual Report (https://www.epa.gov/sites/production/files/2018-08/documents/20th_anniversary_dwsrf_report_final_508.pdf).

South Dakota

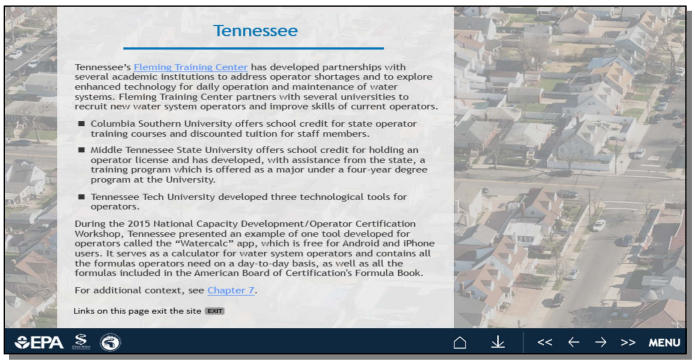
Since the early 2000s, South Dakota has used the Small System Technical Assistance (2 percent) set-aside to provide grants to small systems for implementing rate analyses, as well as funding for a technical assistance provider to conduct onsite assistance.

For additional context, see Chapter 7.

South Dakota

In 2015, through South Dakota's Small Community Planning Grant Program, small communities (serving 2,500 or fewer people) received financial assistance to complete a preliminary engineering report (PER) as part of their DWSRF loan application. Participating systems are reimbursed for 80 percent of the cost of their engineering study, up to a maximum reimbursement of $8,000 (i.e., for a $10,000 study). This program utilizes the Small System (2 percent) set-aside.

For additional context, see Chapter 7.



Tennessee

Tennessee's Fleming Training Center (https://www.tn.gov/environment/program-areas/wr-water-resources/fleming-training-center.html) has developed partnerships with several academic institutions to address operator shortages and to explore enhanced technology for daily operation and maintenance of water systems. Fleming Training Center partners with several universities to recruit new water system operators and improve skills of current operators.

Columbia Southern University offers school credit for state operator training courses and discounted tuition for staff members.

Middle Tennessee State University offers school credit for holding an operator license and has developed, with assistance from the state, a training program which is offered as a major under a four-year degree program at the University.

Tennessee Tech University developed three technological tools for operators.

During the 2015 National Capacity Development/Operator Certification Workshop, Tennessee presented an example of one tool developed for operators called the "Watercalc" app, which is free for Android and iPhone users. It serves as a calculator for water system operators and contains all the formulas operators need on a day-to-day basis, as well as all the formulas included in the American Board of Certification's Formula Book.

For additional context, see Chapter 7.

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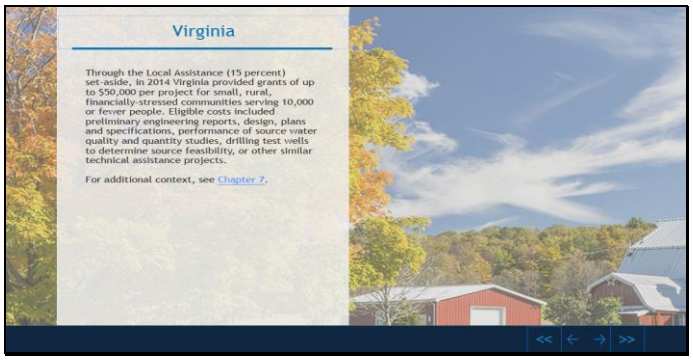
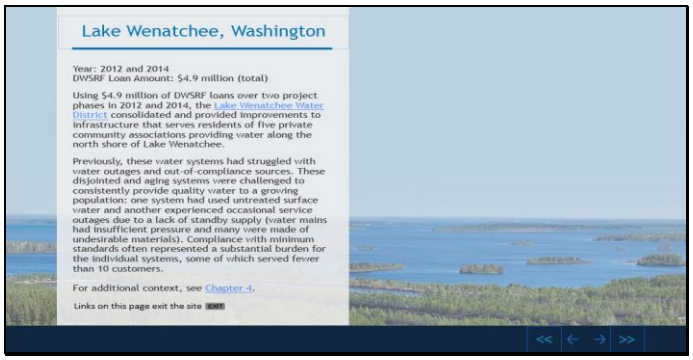


Virginia

Through the Local Assistance (15 percent) set-aside, in 2014 Virginia provided grants of up to $50,000 per project for small, rural, financially-stressed communities serving 10,000 or fewer people. Eligible costs included preliminary engineering reports, design, plans and specifications, performance of source water quality and quantity studies, drilling test wells to determine source feasibility, or other similar technical assistance projects.

For additional context, see Chapter 7.



Lake Wenatchee, Washington

Year: 2012 and 2014

DWSRF Loan Amount: $4.9 million (total)

Using $4.9 million of DWSRF loans over two project phases in 2012 and 2014, the Lake Wenatchee Water District (https://www.doh.wa.gov/Portals/1/Documents/Pubs/331-565-LakeWenatchee.pdf) consolidated and provided improvements to infrastructure that serves residents of five private community associations providing water along the north shore of Lake Wenatchee.

Previously, these water systems had struggled with water outages and out-of-compliance sources. These disjointed and aging systems were challenged to consistently provide quality water to a growing population: one system had used untreated surface water and another experienced occasional service outages due to a lack of standby supply (water mains had insufficient pressure and many were made of undesirable materials). Compliance with minimum standards often represented a substantial burden for the individual systems, some of which served fewer than 10 customers.

For additional context, see Chapter 4.

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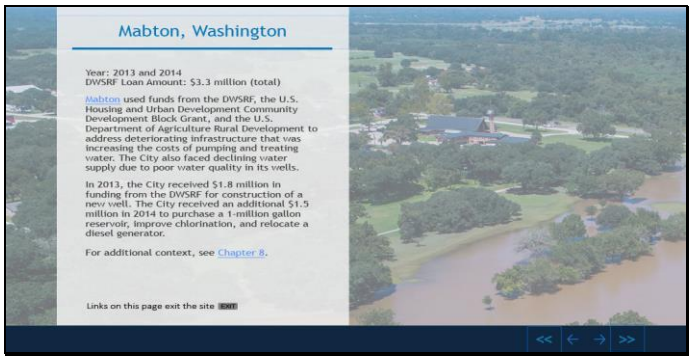

Mabton, Washington

Year: 2013 and 2014

DWSRF Loan Amount: $3.3 million (total)

Mabton (https://www.doh.wa.gov/Portals/1/Documents/Pubs/331-504-Mabton.pdf) used funds from the DWSRF, the U.S. Housing and Urban Development Community Development Block Grant, and the U.S. Department of Agriculture Rural Development to address deteriorating infrastructure that was increasing the costs of pumping and treating water. The City also faced declining water supply due to poor water quality in its wells.

In 2013, the City received $1.8 million in funding from the DWSRF for construction of a new well. The City received an additional $1.5 million in 2014 to purchase a 1-million gallon reservoir, improve chlorination, and relocate a diesel generator.

For additional context, see Chapter 8.

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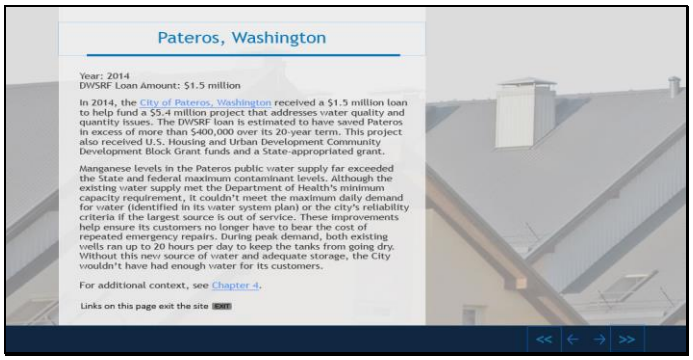

Pateros, Washington

Year: 2014

DWSRF Loan Amount: $1.5 million

In 2014, the City of Pateros, Washington (https://www.doh.wa.gov/Portals/1/Documents/Pubs/331-535-Pateros.pdf) received a $1.5 million loan to help fund a $5.4 million project that addresses water quality and quantity issues. The DWSRF loan is estimated to have saved Pateros in excess of more than $400,000 over its 20-year term. This project also received U.S. Housing and Urban Development Community Development Block Grant funds and a State-appropriated grant.

Manganese levels in the Pateros public water supply far exceeded the State and federal maximum contaminant levels. Although the existing water supply met the Department of Health's minimum capacity requirement, it couldn't meet the maximum daily demand for water (identified in its water system plan) or the city's reliability criteria if the largest source is out of service. These improvements help ensure its customers no longer have to bear the cost of repeated emergency repairs. During peak demand, both existing wells ran up to 20 hours per day to keep the tanks from going dry. Without this new source of water and adequate storage, the City wouldn't have had enough water for its customers.

For additional context, see Chapter 4.

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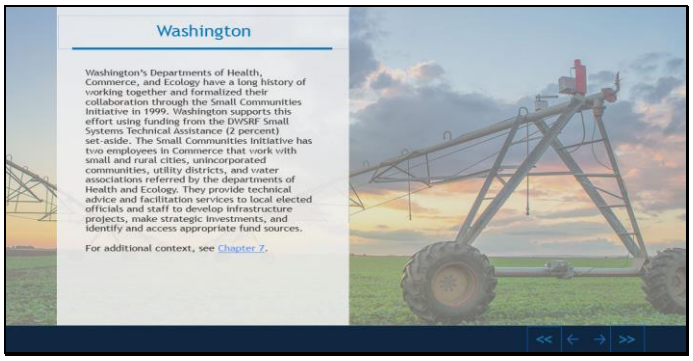
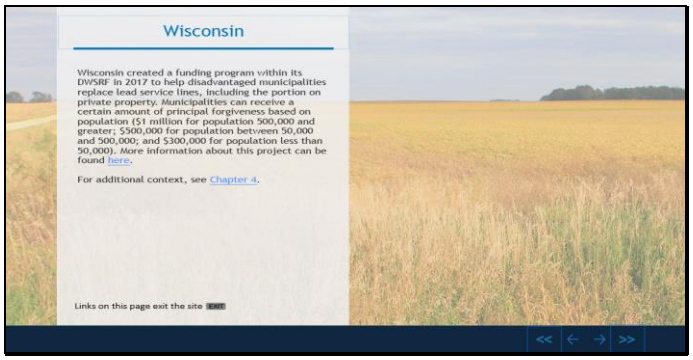


Washington

Washington's Departments of Health, Commerce, and Ecology have a long history of working together and formalized their collaboration through the Small Communities Initiative in 1999. Washington supports this effort using funding from the DWSRF Small Systems Technical Assistance (2 percent) set-aside. The Small Communities Initiative has two employees in Commerce that work with small and rural cities, unincorporated communities, utility districts, and water associations referred by the departments of Health and Ecology. They provide technical advice and facilitation services to local elected officials and staff to develop infrastructure projects, make strategic investments, and identify and access appropriate fund sources.

For additional context, see Chapter 7.



Wisconsin

Wisconsin created a funding program within its DWSRF in 2017 to help disadvantaged municipalities replace lead service lines, including the portion on private property. Municipalities can receive a certain amount of principal forgiveness based on population ($1 million for population 500,000 and greater; $500,000 for population between 50,000 and 500,000; and $300,000 for population less than 50,000). More information about this project can be found here (https://dnr.wi.gov/Aid/documents/EIF/leadServiceLineFunding.html).

For additional context, see Chapter 4.

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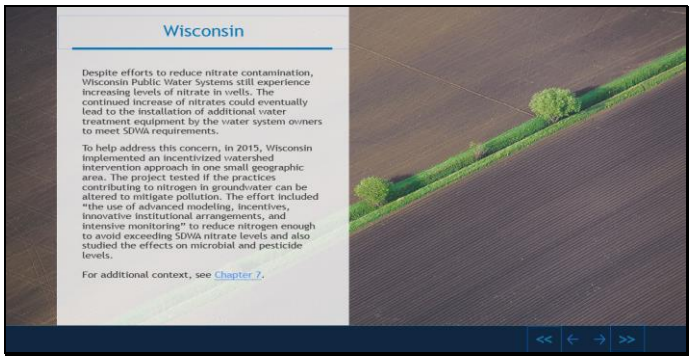


Wisconsin

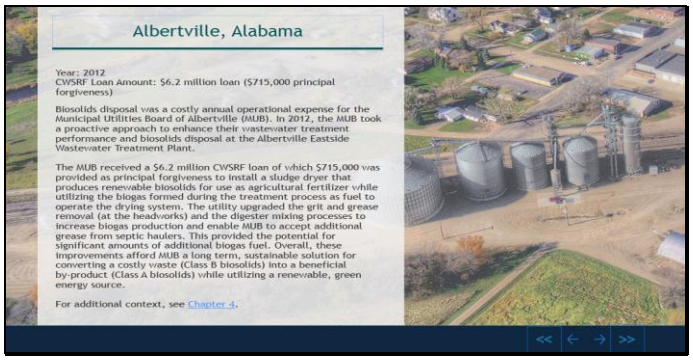
Despite efforts to reduce nitrate contamination, Wisconsin Public Water Systems still experience increasing levels of nitrate in wells. The continued increase of nitrates could eventually lead to the installation of additional water treatment equipment by the water system owners to meet SDWA requirements.

To help address this concern, in 2015, Wisconsin implemented an incentivized watershed intervention approach in one small geographic area. The project tested if the practices contributing to nitrogen in groundwater can be altered to mitigate pollution. The effort included “the use of advanced modeling, incentives, innovative institutional arrangements, and intensive monitoring” to reduce nitrogen enough to avoid exceeding SDWA nitrate levels and also studied the effects on microbial and pesticide levels.

For additional context, see Chapter 7.

CWSRF Case Studies
Step 1: Pick a project type.
Step 2: Choose state or program.
Step 3: Choose a community case study to explore.
Centralized Wastewater Treatment
Arizona
Refinance and Sewer Extension
Idaho
Centralized Multi-Stage Activated Biological Process
Funding Partners to Improve Infrastructure
Agricultural Best Management Practices
Oregon
Irrigation System for Water Conservation
Washington
Nonpoint Source Water Quality Solutions
Stormwater
Iowa
Bee Branch Creek Project
Virginia
Wetland Stormwater Retention System
Washington
Nonpoint Source Water Quality Solutions
Surface Water Protection and Restoration
Idaho
Centralized Multi-Stage Activated Biological Process
Virginia

Wetland Stormwater Retention System
Washington
Nonpoint Source Water Quality Solutions
Energy Conservation
Alabama
Biosolid Treatment and Reuse
California
Improve Water Conservation and Energy Efficiency
Maryland
Renewable Energy Upgrade
New York
Green Jobs-Green New York Program
Water Conservation and Reuse
California
Improve Water Conservation and Energy Efficiency
Oregon
Irrigation System for Water Conservation
Green Project Reserve
California
Improve Water Conservation and Energy Efficiency
Silviculture
Maine
Green Forestry Initiative
Information Exchange
Small Community Water Infrastructure Exchange
SCWIE
Step 2: Choose state or program.
Step 3: Choose a community case study to explore.



Albertville, Alabama

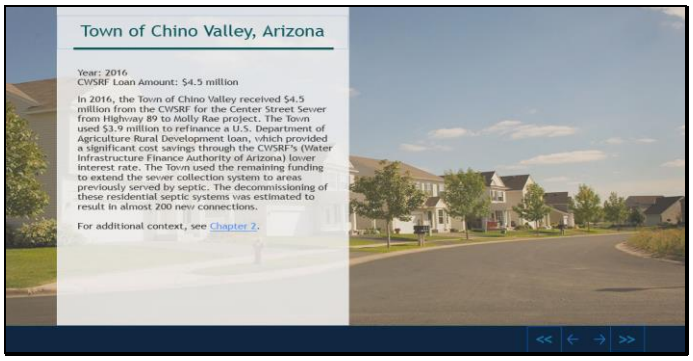
Year: 2012

CWSRF Loan Amount: $6.2 million loan ($715,000 principal forgiveness)

Biosolids disposal was a costly annual operational expense for the Municipal Utilities Board of Albertville (MUB). In 2012, the MUB took a proactive approach to enhance their wastewater treatment performance and biosolids disposal at the Albertville Eastside Wastewater Treatment Plant.

The MUB received a $6.2 million CWSRF loan of which $715,000 was provided as principal forgiveness to install a sludge dryer that produces renewable biosolids for use as agricultural fertilizer while utilizing the biogas formed during the treatment process as fuel to operate the drying system. The utility upgraded the grit and grease removal (at the headworks) and the digester mixing processes to increase biogas production and enable MUB to accept additional grease from septic haulers. This provided the potential for significant amounts of additional biogas fuel. Overall, these improvements afford MUB a long term, sustainable solution for converting a costly waste (Class B biosolids) into a beneficial by-product (Class A biosolids) while utilizing a renewable, green energy source.

For additional context, see Chapter 4.



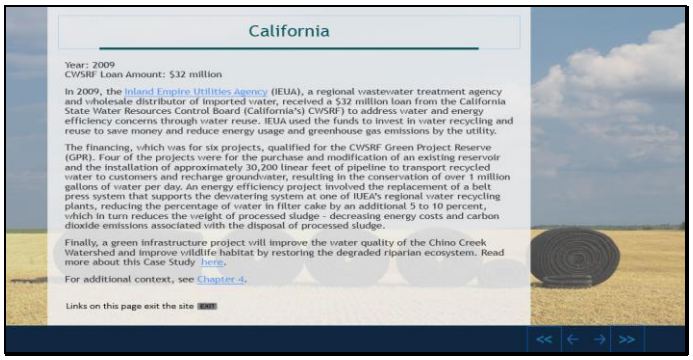
Town of Chino Valley, Arizona

Year: 2016

CWSRF Loan Amount: $4.5 million

In 2016, the Town of Chino Valley received $4.5 million from the CWSRF for the Center Street Sewer from Highway 89 to Molly Rae project. The Town used $3.9 million to refinance a U.S. Department of Agriculture Rural Development loan, which provided a significant cost savings through the CWSRF's (Water Infrastructure Finance Authority of Arizona) lower interest rate. The Town used the remaining funding to extend the sewer collection system to areas previously served by septic. The decommissioning of these residential septic systems was estimated to result in almost 200 new connections.

For additional context, see Chapter 2.



California

Year: 2009

CWSRF Loan Amount: $32 million

In 2009, the Inland Empire Utilities Agency (IEUA) (https://www.youtube.com/watch?v=EE-1mHOqAUs), a regional wastewater treatment agency and wholesale distributor of imported water, received a $32 million loan from the California State Water Resources Control Board (California's) CWSRF) to address water and energy efficiency concerns through water reuse. IEUA used the funds to invest in water recycling and reuse to save money and reduce energy usage and greenhouse gas emissions by the utility.

The financing, which was for six projects, qualified for the CWSRF Green Project Reserve (GPR). Four of the projects were for the purchase and modification of an existing reservoir and the installation of approximately 30,200 linear feet of pipeline to transport recycled water to customers and recharge groundwater, resulting in the conservation of over 1 million gallons of water per day. An energy efficiency project involved the replacement of a belt press system that supports the dewatering system at one of IUEA's regional water recycling plants, reducing the percentage of water in filter cake by an additional 5 to 10 percent, which in turn reduces the weight of processed sludge – decreasing energy costs and carbon dioxide emissions associated with the disposal of processed sludge.

Finally, a green infrastructure project will improve the water quality of the Chino Creek Watershed and improve wildlife habitat by restoring the degraded riparian ecosystem. Read more about this Case Study here (https://www.epa.gov/sites/production/files/2015-04/documents/creating_a_sustainable_wastewater_utility-california.pdf).

For additional context, see Chapter 4.

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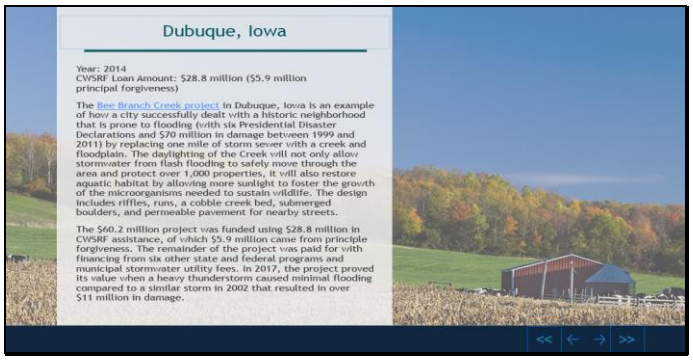


Dubuque, Iowa

Year: 2014

CWSRF Loan Amount: $28.8 million ($5.9 million principal forgiveness)

The Bee Branch Creek project (https://www.epa.gov/sites/production/files/2017-11/documents/pisces_compendium_final2.pdf) in Dubuque, Iowa is an example of how a city successfully dealt with a historic neighborhood that is prone to flooding (with six Presidential Disaster Declarations and $70 million in damage between 1999 and 2011) by replacing one mile of storm sewer with a creek and floodplain. The daylighting of the Creek will not only allow stormwater from flash flooding to safely move through the area and protect over 1,000 properties, it will also restore aquatic habitat by allowing more sunlight to foster the growth of the microorganisms needed to sustain wildlife. The design includes riffles, runs, a cobble creek bed, submerged boulders, and permeable pavement for nearby streets.

The $60.2 million project was funded using $28.8 million in CWSRF assistance, of which $5.9 million came from principle forgiveness. The remainder of the project was paid for with financing from six other state and federal programs and municipal stormwater utility fees. In 2017, the project proved its value when a heavy thunderstorm caused minimal flooding compared to a similar storm in 2002 that resulted in over $11 million in damage.

Fruitland, Idaho

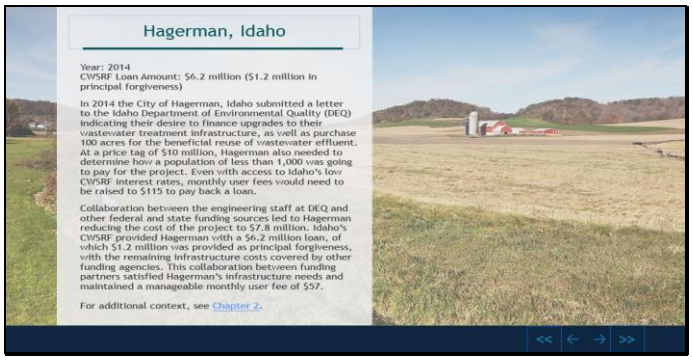
Year: 2013

CWSRF Loan Amount: $20 million ($542,322 of principal forgiveness)

Fruitland, Idaho relied on outdated lagoons to treat their wastewater and struggled to meet permit limits for their discharges to two different 303(d)-listed streams. In 2013, a project was initiated to replace these failing treatment systems with a single innovative Multi-Stage Activated Biological Process, allowing the City to protect salmon populations in the Snake River.

The project eliminates one discharge and removes enough nutrients to meet the permit levels at the other discharge without adding any chemicals. Fruitland coupled these improvements with additional energy saving upgrades, including a new interceptor sewer (consolidating all wastewater flow to the downstream upgraded plant), a high-intensity UV disinfection system, and tertiary filtration.

Idaho’s CWSRF financed half the project and partnered with a variety of local, state, and federal funding sources to fund the rest. The energy efficiency improvements alone were expected to save the small community $300,000 annually, with a similar sum saved from eliminating the need for chemical purchase and byproduct disposal. The City now has a single, combined wastewater treatment facility with a single discharge to a different receiving stream, meeting stringent effluent permit limits.



Hagerman, Idaho

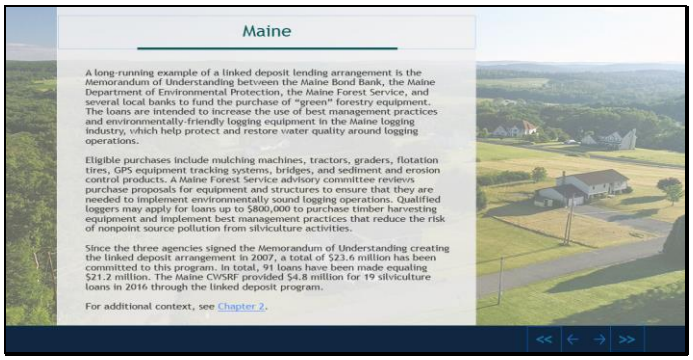
Year: 2014

CWSRF Loan Amount: $6.2 million ($1.2 million in principal forgiveness)

In 2014 the City of Hagerman, Idaho submitted a letter to the Idaho Department of Environmental Quality (DEQ) indicating their desire to finance upgrades to their wastewater treatment infrastructure, as well as purchase 100 acres for the beneficial reuse of wastewater effluent. At a price tag of $10 million, Hagerman also needed to determine how a population of less than 1,000 was going to pay for the project. Even with access to Idaho’s low CWSRF interest rates, monthly user fees would need to be raised to $115 to pay back a loan.

Collaboration between the engineering staff at DEQ and other federal and state funding sources led to Hagerman reducing the cost of the project to $7.8 million. Idaho’s CWSRF provided Hagerman with a $6.2 million loan, of which $1.2 million was provided as principal forgiveness, with the remaining infrastructure costs covered by other funding agencies. This collaboration between funding partners satisfied Hagerman’s infrastructure needs and maintained a manageable monthly user fee of $57.

For additional context, see Chapter 2.



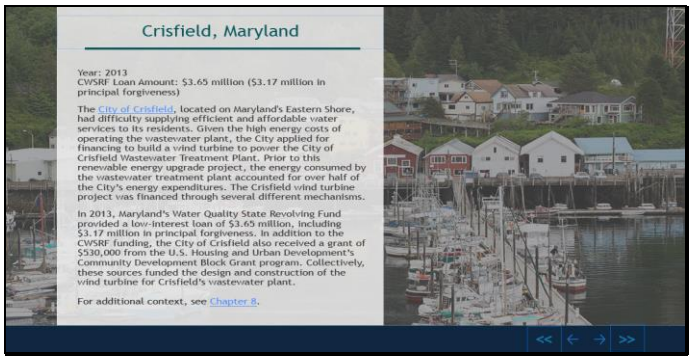
Maine

A long-running example of a linked deposit lending arrangement is the Memorandum of Understanding between the Maine Bond Bank, the Maine Department of Environmental Protection, the Maine Forest Service, and several local banks to fund the purchase of “green” forestry equipment. The loans are intended to increase the use of best management practices and environmentally-friendly logging equipment in the Maine logging industry, which help protect and restore water quality around logging operations.

Eligible purchases include mulching machines, tractors, graders, flotation tires, GPS equipment tracking systems, bridges, and sediment and erosion control products. A Maine Forest Service advisory committee reviews purchase proposals for equipment and structures to ensure that they are needed to implement environmentally sound logging operations. Qualified loggers may apply for loans up to $800,000 to purchase timber harvesting equipment and implement best management practices that reduce the risk of nonpoint source pollution from silviculture activities.

Since the three agencies signed the Memorandum of Understanding creating the linked deposit arrangement in 2007, a total of $23.6 million has been committed to this program. In total, 91 loans have been made equaling $21.2 million. The Maine CWSRF provided $4.8 million for 19 silviculture loans in 2016 through the linked deposit program.

For additional context, see Chapter 2.



Crisfield, Maryland

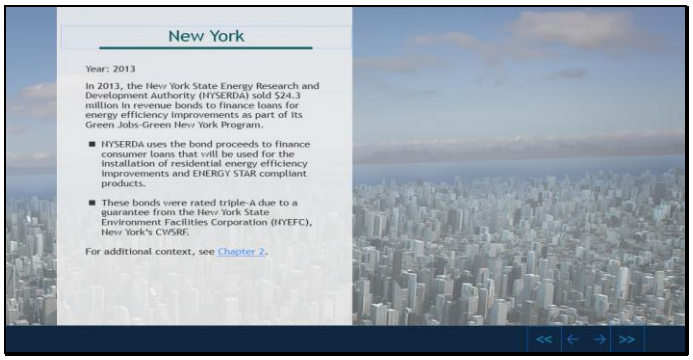
Year: 2013

CWSRF Loan Amount: $3.65 million ($3.17 million in principal forgiveness)

The City of Crisfield (https://www.epa.gov/sites/production/files/2017-09/documents/financial_leadership_practices_document_final_draft_9-25-17_0.pdf#page=37), located on Maryland's Eastern Shore, had difficulty supplying efficient and affordable water services to its residents. Given the high energy costs of operating the wastewater plant, the City applied for financing to build a wind turbine to power the City of Crisfield Wastewater Treatment Plant. Prior to this renewable energy upgrade project, the energy consumed by the wastewater treatment plant accounted for over half of the City's energy expenditures. The Crisfield wind turbine project was financed through several different mechanisms.

In 2013, Maryland's Water Quality State Revolving Fund provided a low-interest loan of $3.65 million, including $3.17 million in principal forgiveness. In addition to the CWSRF funding, the City of Crisfield also received a grant of $530,000 from the U.S. Housing and Urban Development's Community Development Block Grant program. Collectively, these sources funded the design and construction of the wind turbine for Crisfield's wastewater plant.

For additional context, see Chapter 8.



New York

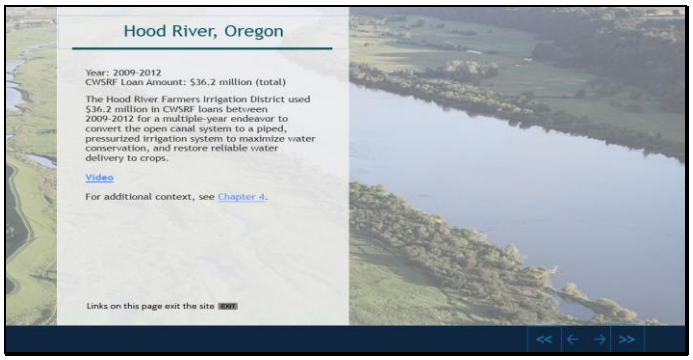
Year: 2013

In 2013, the New York State Energy Research and Development Authority (NYSERDA) sold $24.3 million in revenue bonds to finance loans for energy efficiency improvements as part of its Green Jobs-Green New York Program.

NYSERDA uses the bond proceeds to finance consumer loans that will be used for the installation of residential energy efficiency improvements and ENERGY STAR compliant products.

These bonds were rated triple-A due to a guarantee from the New York State Environment Facilities Corporation (NYEFC), New York’s CWSRF.

For additional context, see Chapter 2.



Hood River, Oregon

Year: 2009-2012

CWSRF Loan Amount: $36.2 million (total)

The Hood River Farmers Irrigation District used $36.2 million in CWSRF loans between 2009-2012 for a multiple-year endeavor to convert the open canal system to a piped, pressurized irrigation system to maximize water conservation, and restore reliable water delivery to crops.

Video (https://www.youtube.com/watch?v=kcvR9bx2D6E)

For additional context, see Chapter 4.

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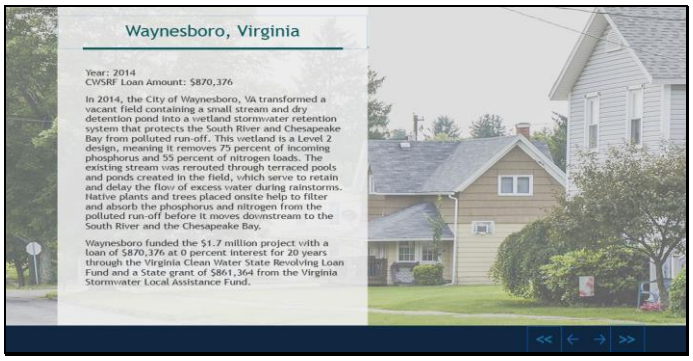


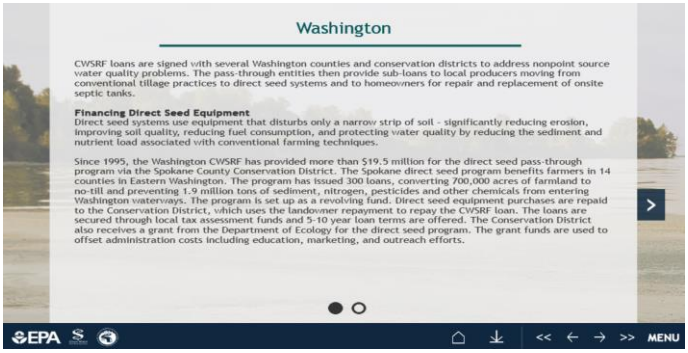
Waynesboro, Virginia

Year: 2014

CWSRF Loan Amount: $870,376

In 2014, the City of Waynesboro, VA transformed a vacant field containing a small stream and dry detention pond into a wetland stormwater retention system that protects the South River and Chesapeake Bay from polluted run-off. This wetland is a Level 2 design, meaning it removes 75 percent of incoming phosphorus and 55 percent of nitrogen loads. The existing stream was rerouted through terraced pools and ponds created in the field, which serve to retain and delay the flow of excess water during rainstorms. Native plants and trees placed onsite help to filter and absorb the phosphorus and nitrogen from the polluted run-off before it moves downstream to the South River and the Chesapeake Bay.

Waynesboro funded the $1.7 million project with a loan of $870,376 at 0 percent interest for 20 years through the Virginia Clean Water State Revolving Loan Fund and a State grant of $861,364 from the Virginia Stormwater Local Assistance Fund.



Washington

CWSRF loans are signed with several Washington counties and conservation districts to address nonpoint source water quality problems. The pass-through entities then provide sub-loans to local producers moving from conventional tillage practices to direct seed systems and to homeowners for repair and replacement of onsite septic tanks.

Financing Direct Seed Equipment

Direct seed systems use equipment that disturbs only a narrow strip of soil – significantly reducing erosion, improving soil quality, reducing fuel consumption, and protecting water quality by reducing the sediment and nutrient load associated with conventional farming techniques.

Since 1995, the Washington CWSRF has provided more than $19.5 million for the direct seed pass-through program via the Spokane County Conservation District. The Spokane direct seed program benefits farmers in 14 counties in Eastern Washington. The program has issued 300 loans, converting 700,000 acres of farmland to no-till and preventing 1.9 million tons of sediment, nitrogen, pesticides and other chemicals from entering Washington waterways. The program is set up as a revolving fund. Direct seed equipment purchases are repaid to the Conservation District, which uses the landowner repayment to repay the CWSRF loan. The loans are secured through local tax assessment funds and 5-10 year loan terms are offered. The Conservation District also receives a grant from the Department of Ecology for the direct seed program. The grant funds are used to offset administration costs including education, marketing, and outreach efforts.

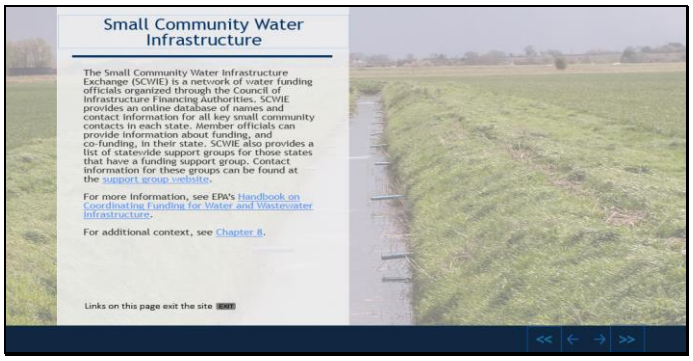
Pass-Through for Failing Septic Systems

The Washington CWSRF also funds a pass-through program that historically served 15 counties or local health departments statewide, which provides financing to individual residents to repair failing onsite sewage systems. The loans may also pay for abandonment of septic systems and connection to sewer. The county or health department is responsible for local loan servicing, collecting payments, and payment tracking (but may contract these services to a lending institution). The pass-through entity also approves or denies loan requests and establishes the terms of the sub-loans to residents. Quarterly progress reports must be submitted to the CWSRF program providing schedules for project completion, loan marketing activities, data on loan applications and closures, and a final list of local loans provided to homeowners and small commercial enterprises. $15 million in CWSRF loans has been provided for the program since 1990, and over 600 homeowners have participated since 2007. Four counties (Spokane, Skagit, San Juan Island, and Snohomish) operate these standalone programs, while the remainder joined into the unique partnership launched in 2016, which is described below.

In 2016, the Washington CWSRF launched a unified program that currently provides financing to individual residents to repair or replace failing onsite sewage systems in 17 counties across Washington State, benefiting waters that are important for shellfish harvest, fishing, and recreation. The State Department of Ecology has contracted with a financial institution on behalf of those 17

counties, and the financial institution provides affordable loans (including loan servicing, collecting payments, payment tracking, approval or denial of loan requests, and establishing the loan terms) to property owners within the 17-county region. The financial institution repays the CWSRF loan. The financial institution submits quarterly reports, loan marketing activities, data on loan applications and closures, etc. The participating counties refer homeowners to the financial institution. $15 million in CWSRF loans has been provided to the program, and more than 350 landowners have participated, resulting in 47 million gallons of sewage treated. This covers awarded funds from FY16-18, though only $2.6M in CWSRF loans has been spent thus far.

For additional context, see Chapter 4.



Small Community Water Infrastructure

The Small Community Water Infrastructure Exchange (SCWIE) is a network of water funding officials organized through the Council of Infrastructure Financing Authorities. SCWIE provides an online database of names and contact information for all key small community contacts in each state. Member officials can provide information about funding, and co-funding, in their state. SCWIE also provides a list of statewide support groups for those states that have a funding support group. Contact information for these groups can be found at the support group website (http://www.scwie.org/statewide-support-groups).

For more information, see EPA's Handbook on Coordinating Funding for Water and Wastewater Infrastructure (https://nepis.epa.gov/Exe/ZyNET.exe/200026MH.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2000+Thru+2005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C00thru05%5CTxt%5C00000007%5C200026MH.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL).

For additional context, see Chapter 8.

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Additional Information

For further information on SRF Funding, see EPA's DWSRF (https://www.epa.gov/drinkingwatersrf) and CWSRF(https://www.epa.gov/cwsrf) webpages.