State Revolving Fund "Additional Subsidy" and Household Affordability

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Federal spending on local water infrastructure represents a tiny fraction of total spending across federal, state, and local governments.[1] Nevertheless, there are various buckets of financial support available from the U.S. government, including through State Revolving Fund (SRF) programs, in the form of grants, below-market rate loans, principal forgiveness, other "additional subsidy," and more, to help communities defray the cost of local water infrastructure and, in some cases, specifically to support household water affordability.

This memo provides a brief overview of the structure of the SRFs, focusing on their "additional subsidization" provisions, and how these programs can provide direct benefits to households facing affordability challenges. As described below, the legal landscape is somewhat complex as the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA) direct EPA and the states to implement the additional subsidy provisions somewhat differently, although both have the same intention; to ameliorate the burden of rate increases on lower income customers.

State Revolving Funds Background

EPA administers two State Revolving Funds that together represent the largest amount of federal support for local water infrastructure investments.[2] The Clean Water SRF (CWSRF) was established in amendments to the Clean Water Act in 1987,[3] and the Drinking Water SRF (DWSRF) by amendments to the Safe Drinking Water Act in 1996.[4] The SRFs replaced prior federal water infrastructure grant programs and were designed to provide below-market rate loans to fund local water infrastructure compliance with Clean Water Act and Safe Drinking Water Act mandates. Thus, DWSRF projects include primarily drinking water treatment, storage, and transmission facilities;[5] CWSRF projects focus primarily on wastewater collection and treatment systems, stormwater management, nonpoint source pollution control, water reuse, and estuary management projects. Through the Green Project Reserve, the CWSRFs target green infrastructure, water efficiency improvements, and other environmentally innovative activities.

[1] See, e.g., Congressional Research Service, Drinking Water State Revolving Fund: Overview, Issues, and Legislation (2018) at 11, citing Congressional Budget Office, Public Spending on Transportation and Water (federal share of total public spending on water and wastewater utilities was 4%, while state and local government expenditures accounted for 94% of all public spending on this infrastructure). While SRF loans are a helpful form of financing, these loans are repaid out of local rates and fees.

[2] Some funding is available for project planning, but ongoing operations and maintenance costs are not.

[3] https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title33-section1383&num=0&edition=prelim

[4] 42 U.S.C. §300j-12. The DWSRF program is patterned after the CWSRF program that Congress authorized in 1987 for financing municipal wastewater treatment projects. See, Congressional Research Service, Drinking Water State Revolving Fund: Overview, Issues, and Legislation (2018) at 1. The CWSRF program replaced a construction grants program. See CRS Report 96-647, Water Infrastructure Financing: History of EPA Appropriations, by Jonathan L. Ramseur and Mary Tiemann.

[5] Dams and reservoirs are generally ineligible.

The mission of both SRF programs is to reduce the cost of financing for critical water infrastructure for local communities. This is accomplished through Federal/State partnerships in each state. The two SRF programs operate similarly in many ways, but there are key differences. Each year, Congress appropriates funding to EPA to be distributed to the state DWSRF and CWSRF programs. For the Drinking Water Program, EPA allocates a percentage of funding ("capitalization grant") to each state based on its most recent needs assessments.[6] The capitalization grant allocations for the Clean Water SRFs, by contrast, are based on a formula set by Congress.[7] The individual state SRF programs then allocate funds to local communities through a project application process governed by Intended Use Plans (IUPs). The states prepare the IUPs, which are typically updated annually to reflect state priorities for SRF program spending.

The SRF programs are sustained in part through repayment of the loans, thus creating a perpetual source of low-cost borrowing for local drinking water and wastewater infrastructure investments. All principal and interest payments on loans must be credited directly to the SRFs, and loans are to be repaid within 30 years of a project's completion, not to exceed the project's useful life. One of the key benefits of the revolving loan model is that it allows the state programs to leverage funds to grow the overall pot of money available for borrowing.

The SRF programs provide an array of financing options to help bring down the cost of utility investments in water infrastructure. These include:[8]

- Below Market Rate Loans: Interest rates must be at or below market rate, including interest-free.
- Purchase of Debt or Refinance**:** SRF programs may refinance previously issued debt.
- Guarantees and insurance**:** Guarantees or insurance can be used where such assistance will result in improved credit market access or reduced interest rates.
- Guarantee SRF revenue debt: SRF programs may issue debt guaranteed by SRF funds. The revenue generated is used to provide assistance to borrowers for eligible projects.
- Provide loan guarantees**:** Revolving funds established by municipalities or inter-municipal agencies can receive loan guarantees.
- "Additional subsidization:" SRF programs can provide a portion of their capitalization grants as "additional subsidization" in the form of principal forgiveness, negative interest rate loans, or grants.

[6] The DWINSA is a statistical survey sent by EPA to public water systems throughout the country and estimates the infrastructure needs that are eligible for the DWSRF. The 2021 Bipartisan Infrastructure Law amended the CWA to direct EPA to conduct and complete an assessment of capital improvement needs for all projects that are eligible under Section 603(c) for assistance from state water pollution control revolving funds. https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title33-section1375&num=0&edition=prelim

[7] See CRS, Clean Water State Revolving Fund Allotment Formula: Background and Options (March 2023). As indicated in this report, how the Clean Water SRF formula works or may not work well is a subject of ongoing debate.

[8] https://www.epa.gov/cwsrf/about-clean-water-state-revolving-fund-cwsrf

- Earn interest**:** SRF programs may invest in short-term investments; all interest earnings must remain in the Fund to be used for eligible SRF purposes.

While EPA provides guidance and program oversight, the SRFs are structured to operate at the state level. Thus, how the state programs are established, their funding priorities, eligibilities, and scoring all have significant impacts for cities, towns and local water utilities seeking financial support to lower the cost of local water investments.

SRF Additional Subsidy Overview

The challenge of the federal policy shift from block grants to loans for local water infrastructure has become more apparent over time as utilities nationwide have struggled to keep up with the cost of critical water infrastructure, particularly as noted above, in the face of climate change, aging infrastructure, new public health risks (e.g., lead lines, PFAs), and escalating construction costs.

One modest retrenchment at the federal level has been the concept of providing "additional subsidization" in connection with SRF loans to address affordability challenges.[9] Recognizing that the benefits provided by below market loans may not be sufficient for many communities, Congress has directed EPA and the state SRF programs to provide additional subsidization – i.e., a portion of the SRF loan that does not need to be repaid – to water and wastewater utilities serving low income populations. EPA has recognized that "additional subsidy, in the form of financial assistance that does not need to be repaid, **is the most effective means to improve affordability for the communities that need it most.**"[10]

The Drinking Water SRF has had the ability to provide additional subsidization since it was established in 1996, while Congress included additional subsidization provisions to Clean Water SRF in 2009.[11] As of 2022, State SRF programs are required to provide at least 14% of their annual capitalization grant as "additional subsidy" to disadvantaged communities, up to a maximum of 35%. Additional subsidization can take the form of principal forgiveness, loans with negative interest rates, or grants, although most SRF programs seem to opt for principal forgiveness as the easiest option to administer. The analysis below addresses how the Drinking Water SRF and Clean Water SRF differ with regard to eligibility requirements and how these provisions can direct impact affordability at the local level.

Mechanisms to Provide Clean Water Act Additional Subsidization Benefits to Low Income Households

Access to additional subsidization under the Clean Water Act is complex and is permitted under several circumstances: (1) for communities that meet affordability criteria; (2) for communities that **do not** meet the affordability criteria but can be eligible under an alternative set of metrics; and (3) for projects with "greener" or efficiency elements.

[9] The "first" SRF subsidization is the provision of below market rates for borrowing.
[10] EPA: Drinking Water SRF DAC Definitions: A Reference for States at 5 (Oct 2022) at 16 (emphasis added).
[11] In 2014, the Water Resources Reform and Development Act made additional significant changes to the program including expansion of eligibilities for CWSRF assistance and the use of additional loan subsides and among other elements to make the program more accessible. https://www.govinfo.gov/content/pkg/PLAW-113publ121/pdf/PLAW-113publ121.pdf.

1. Communities that Meet Affordability Criteria.

The CWA establishes that a state may provide additional subsidization in assistance to municipalities that meet the affordability criteria established by that State's CWSRF program.[12] States have broad discretion in establishing this criteria to identify municipalities that "would experience a significant hardship raising the revenue necessary to finance a project or activity" that is the subject of an SRF loan.[13] However, the criteria must be based on "income and unemployment data, population trends, and other data determined relevant by the State, including whether the project or activity is to be carried out in an economically distressed area."[14]

2. Communities that Do Not Meet Affordability Criteria.

The Clean Water Act also provides that additional subsidization is available for municipalities seeking SRF loans that do not meet their state's affordability criteria if they:

- Seek the additional subsidization **for the benefit of individual residential ratepayers**;
- Demonstrate that these ratepayers will experience significant hardship due to rate increases necessary to finance the project that is the subject of the SRF loan; and
- Ensure that the additional subsidization is directed to those ratepayers.[15]

Anecdotally, it appears that Clean Water SRF additional subsidization benefits nationwide have been awarded primarily, if not exclusively, when the state's established affordability criteria have been met. EPA has expressed concern that there has been substantial under-utilization of the Section, §1383 (i)(A)(ii) exception to provide meaningful support for low income households in communities that do not

[12] 33 USC 1381 "(i) Additional subsidization (1) In general. In any case in which a State provides assistance to an eligible recipient under subsection (d), the State may provide additional subsidization (including forgiveness of principal, grants, negative interest loans, other loan forgiveness, and through buying, refinancing, or restructuring debt)-(A) in assistance to a municipality or intermunicipal, interstate, or State agency to benefit a municipality that- (i) meets the affordability criteria of the State established under paragraph (2); …"

[13] 33 USC 1381(2)(A)(i)

[14] 33 USC 1383(i)(2)(ii)

[15] 33 U.S. Code § 1383(j) – "(i) Additional Subsidization (1) "In any case in which a State provides assistance to an eligible recipient under subsection (d), the State may provide additional subsidization" – (A) in assistance to a municipality that – either (i) meets the affordability criteria established by the state; or "(ii) **does not meet the affordability criteria** of the State if the recipient—

(I) seeks additional subsidization to benefit individual ratepayers in the residential user rate class;
(II) demonstrates to the State that such ratepayers will experience a significant hardship from the increase in rates necessary to finance the project or activity for which assistance is sought; and
(III) ensures, as part of an assistance agreement between the State and the recipient, that the additional subsidization provided under this paragraph is directed through a user charge rate system (or other appropriate method) to such ratepayers; or…" (emphasis added).

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meet the state SRF's affordability criteria.[16] This is a particular problem for larger cities with significant populations of low income residents:

> (A) The city must raise rates in order to pay for critically needed water infrastructure to comply with federal mandates and to ensure safe, healthy and reliable drinking water and wastewater services for everyone;
>
> (B) These rate increases will demonstrably inflict economic hardship on their low income customers, which is what the additional subsidization provisions are intended to address;
>
> (C) However, because the city as a whole does not qualify for additional subsidization under the state CWSRF program's affordability criteria, it is denied this benefit which would direct affordability benefits to those who need it most.

While not a panacea, it appears that § 1383(i)(1)(A)(ii) could provide a near-term pathway for communities to address water affordability challenges associated with rate increases flowing from water infrastructure investments.

3. Innovative Water Projects

Entirely apart from whether or not a community meets (or doesn't meet) CWSRF affordability criteria, States may also authorize principal forgiveness and other additional subsidy benefits for CWSRF loans to implement a process, material, technique or technology to:

- address water-efficiency goals; or
- address energy efficiency goals; or
- mitigate stormwater runoff; or
- encourage sustainable project planning, design, and construction.[17]

Like § 1838(i)(1)(A)(ii) discussed above, Section § 1838(i)(1)(B)(i-iv) appears to have been under-utilized to date. It is not clear whether and to what extent state CWSRF programs have provided additional subsidy pursuant to this provision. It could, however, provide another basis for communities to seek loan forgiveness for Clean Water projects that have greener, or more sustainability-focused elements, which are capable of providing a broad range of community benefits, in particular to under-served populations in urban areas.

[16] EPA issued a charge to the USEPA Environmental Finance Advisory Board (EFAB) to address a number of water affordability issues including the question of how this provision could be better utilized. EFAB issued its report, Advancing Water Affordability Nationwide: A Framework for Action in January 2025. Among its other recommendations, EFAB proposed a pilot program to demonstrate to state SRF programs how this provision could be operationalized.

[17] 33 USC § 1838(i)(1)(B)(i-iv).

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Mechanisms to Provide SDWA Additional Subsidization Benefits to Low Income Households

Access to additional subsidization under the Safe Drinking Water Act is governed by somewhat simpler statutory language than the CWA; states may provide additional subsidization "to a disadvantaged community or to a community that the State expects to become a disadvantaged community as the result of a proposed project."[18] Defining disadvantaged communities (DACs) is left largely to the state's discretion. A considerable amount has been written in recent years regarding how state Drinking Water SRF programs define DACs for additional subsidization purposes. Because these definitions directly impact which communities in which states are eligible for this key source of federal funding, these definitions take on outsize importance. EPA itself has noted, "a clear and readily accessible definition of DAC is critical for implementation of a state DWSRF program so that state managers and EPA can clearly identify which water systems may receive DAC additional subsidy or other forms of financial assistance."[19]

Historically, states have relied heavily on Median Household Income (MHI) to determine whether communities are disadvantaged for SRF purposes.[20] This approach has been criticized as a metric for assessing affordability due to growing appreciation that MHI effectively masks affordability challenges for low-income households that struggle to pay for basic water services.[21]

One assessment has suggested employing a Household Burden Indicator (HBI) as an alternative to MHI for defining affordability.[22] This approach compares the cost of water services associated with a basic level of use for the average household size to the lowest 20th percentile of income.[23] The HBI focuses on the upper limit of the lowest quintile income (LQI) because when water service costs increase, households at the lower end of the income spectrum must make hard choices about how to allocate their household budgets, often making tradeoffs that adversely affect their health or security (i.e., the effect on low-income households paying 7% of their income for water services is likely not the same as

[18] 42 USC § 300j–12(d)(1)(A).

[19] EPA: Drinking Water SRF DAC Definitions: A Reference for States (Oct 2022) at 1-2.

[20] EPA: Drinking Water SRF DAC Definitions at 8.

[21] Berahzer, Czerwinski, Stanley J., et al. "Developing a New Framework for Community Affordability of Clean Water Services" at 29-30 *National Academy of Public Administration*, National Academy of Public Administration, Oct. 2017, https://napawash.org/academy-studies/developing-a-new-framework-for-community-affordability-of-clean-water- servi.; Teodoro, MP, Water and Sewer Affordability in the United States: A 2019 Update. AWWA Water Sci. (2020); Raucher, R., et al. "Developing a New Framework for Household Affordability and Financial Capability Assessment in the Water Sector." *American Water Works Association*, American Water Works Association, 17 Apr. 2019, www.awwa.org/Portals/0/AWWA/ETS/Resources/DevelopingNewFrameworkForAffordability.pdf?ver=2020-02-03- 090519-813. EPA: Drinking Water SRF DAC Definitions: A Reference for States (Oct 2022) at 5 ("MHI may obscure the prevalence of households in poverty, especially in communities with a skewed or wide income distribution.")

[22] Berahzer et al. "Developing a New Framework for Community Affordability of Clean Water Services (2022)

[23] Berahzer 2022 at 29-30

households at the median paying 4.5%). This has equity implications as households at the lower end of the income spectrum are more adversely affected by the same threshold.[24]

EPA prepared a detailed report for state SRF programs in 2022 addressing how these programs may be better able to provide assistance to disadvantaged communities by: (1) reviewing the indicators states are currently using to define DACs; (2) identifying how DAC criteria can better capture communities in need; (3) evaluating the relationship between DAC definitions and additional subsidy policies; and (4) exploring options for refining DAC assistance programs.[25] While the report covers many factors, its primary emphasis is on refocusing the approaches that state SRF programs use to define disadvantaged communities to capture the specific financial challenges faced by over-burdened households, rather than focusing on broader economic indicators that often fail to capture these hardship and risk factors.[26]

The Bipartisan Infrastructure Law (BIL) of 2021 included several new requirements for state SRFs regarding additional subsidy, with an eye toward addressing affordability challenges. In particular, the BIL made a priority of ensuring that disadvantaged communities benefit directly from the new congressional investment in local water infrastructure.[27] The BIL mandates that, among other actions:

- 49% of funds provided through the DWSRF General Supplemental Funding and DWSRF Lead Service Line Replacement Funding must be provided as grants and forgivable loans to disadvantaged communities.[28]
- Not less than 25% of funds provided through the DWSRF Emerging Contaminants Funding be provided as grants and forgivable loans to DACs serving fewer than 25,000 people.[29]
- 49% of funds provided through the CWSRF General Supplemental Funding must be provided as grants and forgivable loans to:
    - Municipalities that meet the state's affordability criteria
    - Municipalities that seek additional subsidization to benefit individual ratepayers in the residential user rate class

[24] Berahzer 2022 at 43-44.
[25] EPA: Drinking Water SRF DAC Definitions at 1-2.
[26] EPA: Drinking Water SRF DAC Definitions at 13-14. The report also found that states' use of DAC additional subsidy "clusters on the ends of the allowable range, with over half offering either the minimum (18 states) or maximum (9 states) allowable," with fewer programs in the middle of the allowable range. EPA noted also that the overall prevalence towards lower additional subsidy awards may be due, at least in part, to the fact that these awards operate effectively as grant money and therefore do not revolve back through the program "and states have to balance the long-term effects on the program."
[27] P.L. 117-58 (Nov. 15, 2021)
[28] Memorandum from Assistant Administrator Radhika Fox to EPA Regional Water Division Directors re Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law (March 8. 2022)(hereinafter "2022 Fox Memo)
[29] 2022 Fox Memo.

- Entities that 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.[30]

EPA's implementation memorandum signaled its expectation that state SRF programs will reevaluate their Drinking Water SRF DAC definitions, as well as their Clean Water SRF affordability criteria, and revising as appropriate.[31] The implementation memo also indicated that states may be expected to evaluate SRF point systems for project ranking noting, that "**[p]riority points may need to be redistributed to ensure [DACs] are receiving funding**."[32]

Several states are shifting to more holistic definitions that may more accurately reflect when water affordability is an issue for a community, or a sub-population within a community. The Association of State Drinking Water Administrators (ASDWA) undertook a review of DAC definitions following BIL enactment, and created a database listing the definitions adopted by each state.[33] ASDWA found that MHI and water rates continue to be the most used metrics; and that the most significant change in state SRF DAC definitions was "the inclusion of environmental justice tools such as EPA's EJScreen, Council on Environmental Quality's Climate and Economic Justice Screening Tool, and CDC's Social Vulnerability Index. These tools allow states to look at a variety of metrics in one location, and five states use at least one of these three tools."[34]

The Additional Subsidization Catch-22 for Otherwise Eligible Communities

An ongoing issue in the context of federal water financing is that disadvantaged communities that would be eligible for principal forgiveness, under either the SDWA or the CWA, often face an insurmountable hurdle in obtaining SRF loans; they must prove they can repay the entire loan, i.e., have sufficient debt coverage for the whole loan amount *including the amount that would be forgiven*. This is a barrier to qualifying for additional subsidization benefits because DACs often cannot meet this prerequisite. They are thus in something of a catch-22 situation. They cannot afford to replay the full loan, which precludes their ability to obtain forgiveness from repaying the full amount of the loan. This is a particular problem for stormwater projects in cities without stormwater fees. Even if they could obtain principal forgiveness, they cannot qualify for the SRF loan because they don't have a dedicated revenue stream to pay for the loan.

[30] 2022 Fox Memo.
[31] 2022 Fox Memo.
[32] 2022 Fox Memo (emphasis added).
[33] See ASDWA's Environmental Justice webpage. The database has links to where these definitions can be found online, as well as state DWSRF and environmental justice resources. As of late 2022, more than half of the states had modified their DAC definitions; See Association of State Drinking Water Administrators (ASDWA), A New Era for the State Drinking Water Revolving Funds (Jan. 2023).
[34] Closely aligned with BIL enactment, the Biden-Harris Administration unveiled the Justice40 Initiative, which set a goal across all federal agencies to provide 40% of the overall benefits from federal investments to disadvantaged communities that have been marginalized, underserved, and overburdened by pollution.

Additional Subsidy and Asset Management

In other developed nations, asset management for water infrastructure is focused on efficient life cycle spending for capital investments, operations and maintenance. In the U.S., however, when "additional subsidy" SRF dollars are involved, incentives to for efficient asset management are misaligned. This is because the federal government limits additional subsidization for capital investments only, and does not permit subsidies for operations or maintenance. This can skew DAC utility investments toward capital even when it might be cheaper to invest instead in maintenance, repair, and/or rehabilitation of local water infrastructure.[35] A rough analogy is that the way the federal incentives are set up, it may make fiscal sense for a utility to buy a new car every few years rather than invest in maintaining the one they have. As the gap between the cost of building new infrastructure versus maintaining, repairing, and rehabilitating existing systems grows, investing more in these latter categories is likely to become more of a fiscal and affordability necessity. Asset management could provide important benefits in this regard.

[35] Interv. w/H. Himmelberger, SWEFC (July. 8. 2024)