Environmental Finance Advisory Board Affordability Report: Executive Summary

Introduction: EFAB Affordability Framework

The U.S. Environmental Protection Agency (EPA) Environmental Finance Advisory Board (EFAB or Board) developed this report in response to a five-part EFAB charge related to the affordability of water, sewer, and stormwater services. (See Figure ES-1 for full charge text).

After many decades of relatively inexpensive water services, the affordability of drinking water, wastewater, and stormwater management is a mounting issue. Household water bills are still relatively cheap for many people – particularly compared with energy, internet, phone, and other monthly expenses. However, the cost of providing clean, safe, and reliable water services is escalating; for at least the past decade, increases in water and wastewater rates have outpaced growth in household incomes and the general rate of inflation. Cities, towns, and utilities nationwide will require greater levels of investment to address aging infrastructure, regulatory requirements, climate change impacts, emerging contaminants, lead service line replacements, and other issues. Rates for drinking water, wastewater and stormwater management will continue to rise. And for many people, even at current rates, paying for water services is a struggle.

A consensus is emerging that ensuring water affordability for vulnerable populations is critical, and a growing body of literature has been exploring water affordability issues. In response to the elements in EPA's charge, this report synthesizes much of that work and presents a holistic framework for EPA and others to consider in addressing water affordability challenges. As described in greater detail below, this inquiry is framed by a few context-setting observations:

- In the U.S., water, sewer, and stormwater service are paid for primarily at the local level.
- Affordability is a household-level problem, distinct from the cost of regulatory compliance for communities as a whole.
- The affordability challenges facing the 9% of utilities that serve 85% of the US population, including the majority of low-income households, are generally of a fundamentally different nature than the access and affordability issues facing the thousands of very small utilities serving primarily small, often isolated areas. This paper for the most part focuses on the former and recommends a deep dive into the latter.
- While there is no universally accepted definition of water service affordability, for purposes of this report, we concur with a recent AWWA Expert Panel that water affordability can be viewed ***"as the ability of a customer to pay the water bill in full and on time without jeopardizing the customer's ability to pay for other essential expenses***."

In response to EPA's five-part affordability charge, EFAB developed a high-level roadmap, or framework of considerations, for addressing water sector affordability issues. Discussions about how to make water more affordable for low-income households often begin and end with consumer assistance programs (CAPs). As important as these programs are, affordability can be addressed at various levels from capital investments to operations to rates to federal financial support. The framework concept is that utilities can address household water affordability at various points in their decision making and financing processes, and through various mechanisms, as most appropriate for their community and ratepayer needs as indicated in Figure ES-2.

Figure ES-1. Five part EFAB Affordability Charge

The five-part charge includes the following affordability-related elements:

1. **Capital Investments:** Conduct a high-level exploration of types of capital projects that could address local water service needs that are innately less burdensome on local ratepayers. For example, large-scale water use efficiency measures as an alternative to a more expensive new pipeline. This objective will not involve a comprehensive study of such alternatives, but will address how consideration of infrastructure investment choices can be broadened to include unconventional options that are more affordable for the whole community while still solving for the water infrastructure challenges. The deliverable would ideally include a survey of the types of capital projects that have already been shown to have substantial promise as alternatives and supplements to conventional water systems.
2. **Customer Assistance Program (CAP) Barriers:** Identify and analyze common state and/or local legal barriers (and possibly other types), including perceived barriers, to adoption of CAPs and other affordability measures, and provide recommendations for EPA to address these. For example, few states explicitly preclude CAPs; instead, they establish broad restrictions on how ratepayer funds can be used, which can provide some room for flexibility. Having a more precise understanding of the 3-5 primary types of barriers will provide a foundation for EFAB's recommendations to address affordability challenges.
3. **Rate Structure/Design:** Identify and analyze options for rate structure/design to help households who would be adversely affected by significant rate increases for water services, focusing on what can be accomplished within the bounds of existing legal requirements or restrictions (where those exist). Options might include, but would not be limited to, lifeline rates, income-based rate structures, senior assistance plans, host community rate structures, payment restructuring programs, and customer charge waivers.
4. **State Revolving Fund Subsidies:** Research the possible flow of SRF funds, through rate structures or other mechanisms, for additional subsidization to ratepayers that would experience a financial hardship because of an increase in rates necessary to fund capital infrastructure projects.
5. **EPA Support:** Provide recommendations on ways that EPA could support legal arguments and develop supportive policy for providing customer assistance and provide leadership in guiding program implementation. These recommendations would recognize that EPA's role is not directive but limited to providing resources and guidance that could be useful to states in navigating affordability issues.

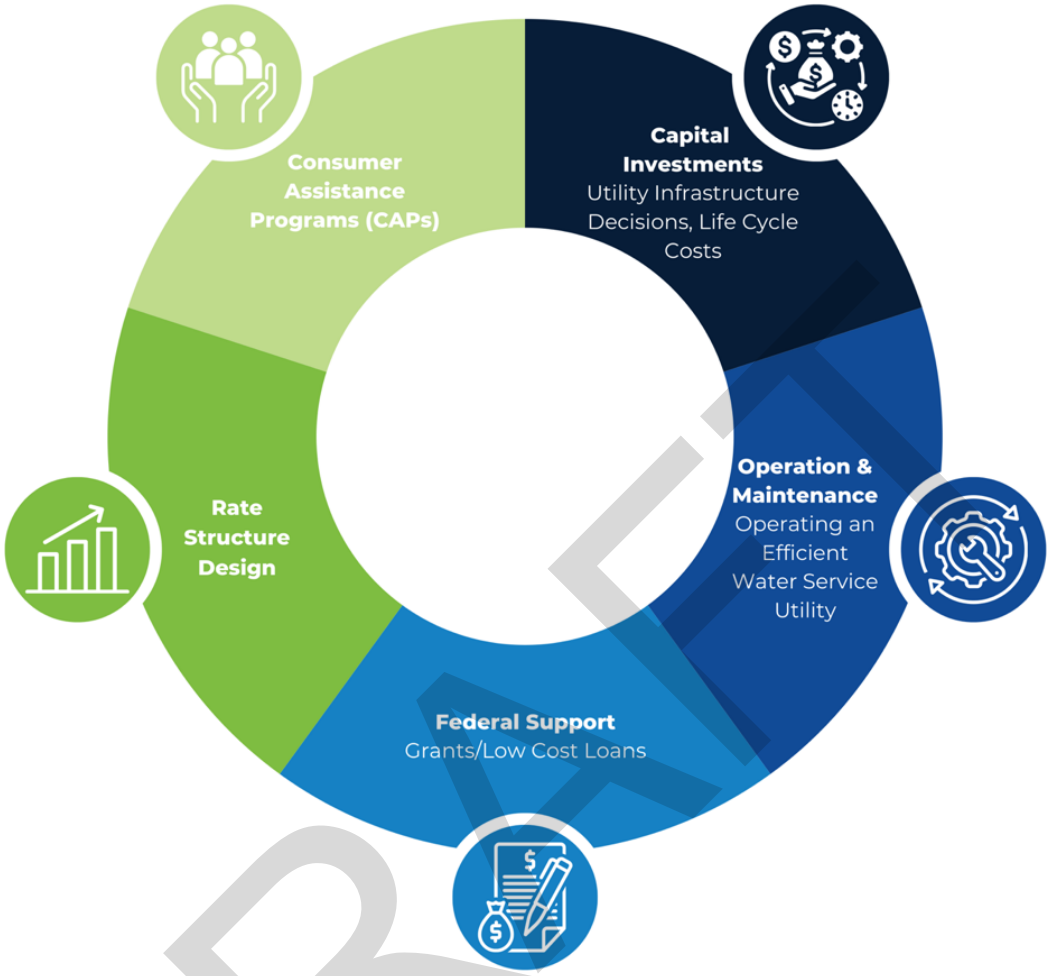

Figure ES-2. EFAB Affordability Framework

The elements of EFAB's affordability framework are as follows:

- Capital Investments: The amount a customer pays for water services is driven by utility investments in infrastructure - what they build and how they build it. This paper discusses infrastructure and project delivery alternatives that can provide meaningful cost savings over the long term.
- Operational Efficiency: Numerous resources have been developed to support utilities seeking to maximize operational efficiencies, thereby limiting costs and ratepayer burdens.
- Federal Financial Support: The federal government, and some states, offer various financial support options for local water capital investment, including grants, below-market-rate loans, principal forgiveness, other "additional subsidies," and more.

- Rate Structures and Design: Many water service providers have options for creating more equitable rate structures that can reduce financial burdens for low income customers within current legal and regulatory parameters.

- Customer Assistance Programs: There are households in every community unable to pay for essential water services, either chronically or in response to unexpected crises. CAPs can provide bill assistance directly to these customers through bill discounts, water use efficiency programs, payment management plans, and other methods.

Sections I-V address each of the framework elements in turn.

Section I: Capital Investments

Water infrastructure is the most capital-intensive utility to operate, with some analysts estimating it to be twice as capital-intensive as providing electricity, and three times as capital-intensive as providing gas. Water infrastructure decisions can impact ratepayers for decades to come. While the cost of conventional water infrastructure is rising at record rates, utilities increasingly have a wider array of alternatives to meet their drinking water, wastewater, and stormwater management objectives, both in terms of the options they choose to invest in, as well as how they go about implementing those decisions.

Capital Investments: Alternatives to Conventional Infrastructure

Advances in water technology, use of data, as well as green and nature-based infrastructure mean that communities are better positioned than in the past to develop diverse water infrastructure portfolios that could be more affordable in the long run rather than defaulting to conventional systems and approaches that are often more expensive. In this regard, EPA has requested that EFAB:

> *. . . .conduct a high-level exploration of types of capital projects that could address local water service needs that are innately less burdensome on local ratepayers. For example, large-scale measures as an alternative to a more expensive new pipeline. This objective will not involve a comprehensive study of such alternatives, but will address how consideration of infrastructure investment choices can be broadened to include unconventional options that are more affordable for the whole community while still solving for the water infrastructure challenges (e.g., water supply, treatment, stormwater capture, etc.). The deliverable would ideally include a survey of the types of capital projects that have already been shown to have substantial promise as alternatives and supplements to conventional water systems, such as green stormwater infrastructure and technologies aimed at reducing system leaks.*

Single purpose conventional built water infrastructure systems can be less resilient in the face of climate change, the cost of upgrades, and emerging challenges. Technological and other innovations are making it possible, in the right circumstances, for utilities to invest in decentralized, “One Water” alternatives that integrate with built systems, and can result in substantial avoided costs and/or cost savings, potentially leading to greater affordability over time. By treating all water as assets to be employed, rather than waste to be disposed of, these alternative or hybrid approaches can also provide greater climate resilience and other co-benefits, which further supports keeping infrastructure investments more affordable.

This report does not attempt to serve as a comprehensive review of water infrastructure alternatives; it instead provides a high level review of alternative approaches, a number of illustrative case studies, and

recommendations to EPA for gathering more comprehensive data and other information. The approaches explored in the report include:

- Water Use Efficiency as a Source of Water Supply
- Green Stormwater Infrastructure
- Source Water Protection Interventions as Water Quality Infrastructure
- Optimization with Intelligent Infrastructure
- Regionalization of Water Infrastructure (in connection primarily with very small utilities).

Capital Investment Recommendations: Alternatives to Conventional Infrastructure

The decisions that cities, towns and utilities make about their investments in water infrastructure significantly impact the cost of water services and household affordability. Certainly, there will be times when more expensive options will be the right ones to address particular health, safety, reliability, or other priorities. However, it may often be the case that a more robust portfolio of strategies - one that blends nature-based, digital and other non-traditional water infrastructure with built systems - can help to ensure that water services are more cost-effective over time. EFAB recommends the following eight actions to EPA for further consideration and development in this regard:

1. **Study on Relative Costs of Infrastructure Investment Options**: Commission a comprehensive study documenting utility level and regional data on the actual cost of green, distributed, nature-based, digital, and regional water infrastructure options implemented nationwide. This would be extremely valuable to communities and utilities seeking tangible information about how the cost of these strategies has played out in other areas.

2. **Infrastructure Life Cycle Benefits and Cost Assessment**: Identify a standardized approach to assessing the life cycle benefits and costs of distributed and nature-based water infrastructure alternatives (including water use efficiency, source water protection/watershed restoration, urban GSI, water reuse, etc.) that allow for an apples to apples comparison to more conventional approaches to capital investment in water infrastructure. This would involve compiling and refining the approaches that have been developed to date, not reinventing the wheel. While much work has been conducted on this topic, it can be hard to access and/or to adapt to specific utility circumstances.

3. **Nature-Based Infrastructure Benefits Valuation:** Elevate and highlight the tools that have been developed for quantifying and valuing the co-benefits that can accrue from investments in green infrastructure, energy efficiency (e.g., generating energy onsite), and other non-traditional water infrastructure, such as reduced urban heat island effect, creating more urban green space, economic and workforce development, and improved air quality, among others. While distinct from Recommendation 2 above, ideally these efforts would be closely integrated.

4. **EPA Affordability Website Page**. Create a new affordability page on EPA's website that repurposes and integrates EPA's current set of resources related to each component to the affordability framework that EFAB has developed. This recommendation would incorporate resources related to each section outlined in this report, as well as other EPA resources related to addressing local water affordability challenges. With respect to capital investment alternatives

to conventional infrastructure, the website would include resources related to green stormwater infrastructure, water efficiency and conservation, reuse, recycling, and digital solutions, among others, from utility cost savings and affordability perspectives.

5. **Expand EPA Integrated Planning Guidance**. Revise EPA's integrated planning guidance to incorporate more of a "One Water" approach. Specifically, this would include incorporating compliance with drinking water regulations, in addition to wastewater and stormwater requirements, into EPA's Integrated Planning Process. Integrated planning identifies efficiencies, benefits, and affordability to best prioritize capital investments and achieve human health and water quality objectives. Integrated planning should balance compliance timelines with affordability, and the ability to assist low-income households, and prioritize projects (and mandates) that provide the greatest benefit to ratepayers.

6. **Affordability Screening Metrics for Capital Planning**. Develop metrics and associated template affordability screen that utilities can use or adapt as part of their capital investment decision making. EPA has developed something like this in its FCA Guidance in the context of regulatory compliance; but this could be revised as an optional tool for utilities seeking to elevate local affordability issues in decision making. It could include for example, measures of success that would allow utilities to examine forecasted spending against financial and affordability objects.

7. **Case Study Highlights**. Develop a biennial publication highlighting case studies and lessons learned related to nature-based, digital, green and other forms of non-traditional water infrastructure for distribution to states and local governments. Ideally these case studies would be widely amplified not only through EPA's networks, but through the EFCs, academics, NGOs, CBOs and others capable of reaching a wide audience.

8. **New PISCES Award for Non-Traditional Water Infrastructure**. Create a distinct PISCES award that recognizes the most innovative non-traditional water infrastructure projects funded by the Drinking Water and Clean Water State Revolving Fund in each of five categories: conservation-based, distributed, nature-based, digital, and regional water infrastructure.

Capital Investments: Alternative Delivery Models

The other key aspect of water affordability involving capital investments involves how infrastructure decisions are implemented, i.e., how the utility designs, bids, and builds their water projects. For many utilities, the project development process can be made substantially more affordable by adopting a holistic approach that emphasizes all phases of project planning, design, and construction. Conventional project delivery models can suffer from challenges that affect the total amount a community will need to pay for infrastructure, including: (1) over-designing or overbuilding projects; (2) using models that elevate lower up-front costs, but end up costing the community more over time due to high operations and maintenance costs; and (3) misaligning incentives, such that total project cost increases over time. All of these drivers increase the total expense associated with infrastructure projects, burdening ratepayers with higher than optimal costs, as discussed in more detail below. This report outlines several opportunities to address these challenges including:

- Taking an integrated approach to project delivery planning

- Building new leadership capabilities emphasizing a culture of collaboration and people-focused management
- Addressing statutory constraints that can unnecessarily limit the forms of project delivery available to community water systems.

Capital Investment Recommendations: Alternative Delivery Models

The methods utilities use to design, bid out, and build local water infrastructure can significantly affect household water affordability. We recommend the following four actions for further consideration and potential development:

1. **Project Delivery Strategies Study**. Commission a study on the impact of various project delivery strategies on lifecycle costs of water infrastructure projects.

2. **Legal Barriers Impacting Water Project Delivery Study**. Commission a study of current state and local ordinances that allow or prohibit various water project delivery strategies, with lessons learned and tools (e.g. model ordinances).

3. **Best Practices Recommendations**. Develop high level suggestions and ideas for how utilities can best organize to have the long-term capabilities needed to carry out the planning, designing, building, operating, and maintaining of water system capital improvement projects. These capabilities should ideally include incorporating quality-based selection processes.

4. **Workforce Development Series**. Initiate a series of studies to improve workforce development in the water sector. While STEM skills are important, the water sector also requires strong leadership and management skills that are not often integrated into STEM programs. Studies that EPA could implement that would ideally serve as a foundation for improved local capital improvement programs should focus on the following questions:
    - How can organizations be staffed and organized to implement capital improvement programs and individual projects successfully?
    - What technical and leadership training programs would be needed to provide the necessary staff qualifications to carry out future capital improvement projects optimally and successfully?
    - What Project Delivery Methods are most appropriate for a given type of program/project? And what are the must functional public/private partnerships from a household affordability perspective?
    - How can risk analysis focus more on meaningful project outcomes such as health improvements, reduced mortality rates?
    - What factors should be considered when establishing the type of project delivery method to be used for a project?
    - What changes to local and/or state rules and statutes could make more transparent and improve the options available to cities, towns and utilities around the choice of project delivery methods best tailored and suited for any particular community?

- What is the optimal target service life of facilities that would allow maximum funding to providing systems to communities without any facilities?

Section II: Operational Efficiencies

Utility operations offer another opportunity to explore lowering the cost of providing water services with positive outcomes for affordability. EPA has long recognized the importance of effective utility management (EUM) practices, including asset management, as a key operational tool for maximizing benefits and limiting life cycle cost. Asset management is the practice of managing water infrastructure capital assets in conjunction with ongoing operation and maintenance to minimize the total cost of owning and operating those assets. EPA has developed substantial resources to support both EUM and utility asset management, and there is a wealth of information available on these topics from EFCs, academics, water sector associations, and others.

While these subjects are outside of the direct scope of the current EFAB charge, given the potential impact of utility operational costs on affordability, and EPA's long history of providing resources related to these topics, they are important to flag for purposes of the water affordability roadmap.

Operational Efficiency Recommendations

In relation to utility operational efficiency, EFAB recommends the following three actions to EPA for consideration:

1. **Highlight successful asset management programs.** Commission a review of water utility asset management programs and identify 12 to 24 successful programs that have resulted in significant cost savings.
    a. What are the 3-7 most significant mistakes that water utilities do in managing their water infrastructure assets that result in adverse financial impacts?
    b. Did the asset management approach result in substantial cost savings to the utility over time or provide additional avoided cost benefits? If so, how was that documented?
    c. If asset management was proven to save utility resources, did that translate into rate benefits for households and if so can that benefit be quantified?
    d. What distinguishes successful asset management – defined as saving utilities and their consumers substantial costs – from programs that are less successful?
    e. Distinguish in the study between asset management programs for large complex utilities and smaller ones. While larger utilities often have more resources to put these systems in place, their greater complexity can make asset management more expensive and daunting than for mid-size and smaller systems. Alternatively, systems serving 10,000 people or fewer are often too resource constrained to implement even basic asset management systems. realistically only available to larger utilities with substantial resources, or can these programs be scaled to utilities serving smaller and mid-size populations (e.g., down to 10,000 people)?

2. **EPA Affordability Website Page.** Consistent with the above recommendation, create a new affordability page on EPA's website that repurposes and integrates EPA's current set of resources related to each component to the affordability framework that EFAB has developed. With respect to operational efficiencies, the website would bring together all of its asset

management and EUM resources as potential affordability strategies. Ideally this would include updating these resources to include case studies of how utilities are utilizing Continuous and Process Improvement tools to make substantial savings to operating processes (e.g.,. chemical dosing, supply chain management, lead replacement).

3. **Incentivize asset management programs.** Develop incentives for local water utilities to implement asset management programs focused on maintaining utility fiscal health. Options could include but not be limited to:

    - Justice40 credit
    - Eligibility for higher levels of additional subsidy

Section III: Federal Financial Support (SRF Subsidy)

While federal spending on local water infrastructure represents a small fraction of total spending in this area, some federal support is available to help communities defray the cost of water infrastructure investments (but not operations) and, in some cases, specifically support household water affordability. EPA administers two State Revolving Funds (SRFs) – the Clean Water SRF and the Drinking Water SRF. Together, the SRFs represent the greatest level of federal financial support for local water infrastructure, primarily in the form of low interest (i.e., below market rate) loans.

Recognizing that loans may not be sufficient for many communities, Congress has directed both SRF programs to provide "additional subsidization" (with the below market interest rate loan being the first subsidization) to utilities serving low income populations. The additional subsidization, i.e., a portion of the SRF loan that does not need to be repaid, is intended to defray all or part of an increase in household water bills necessary to repay the SRF loan.

Additional subsidies are primarily available to eligible low-income communities. However, the statutory eligibility criteria for "low-income" under the Safe Drinking Water Act (SDWA) and the Clean Water Act (CWA), which respectively authorize the two SRF programs, differ in important ways. Most critically for purposes of this report, the CWA directs that additional subsidy can be provided to communities seeking SRF loans that do **not** meet the community-level CWA affordability criteria if specific metrics are met, including undue hardship to low-income ratepayers resulting from an CWSRF loan. This provision has been identified as a tool that could be utilized to address a key challenge that large utilities often face; having substantial low-income populations within their service areas that would, on their own, qualify for additional subsidy, but the overall higher income of the community precludes these utilities from being eligible for additional subsidy awards. In this regard, EPA has requested that EFAB:

> *Research the possible flow of SRF funds, through rate structures or other mechanisms, for additional subsidization to ratepayers that would experience a financial hardship because of an increase in rates necessary to fund capital infrastructure projects.*

It appears that there may be substantial under-utilization of the relevant additional subsidization provision of the CWA, (33 USC § 1383 (i)(A)(ii)), with potential to support low income households when the community affordability criteria are not met but the additional subsidy could be sought by the SRF loan applicant to support residents who would be adversely impacted by rate increases related to repayment of the loan. While EPA has provided guidance and encouragement to state SRF programs to

address this issue, for the most part state SRF programs are not programming SFF funds for this purpose for several reasons.

First, SRF programs have experienced significant declines in the allocation of federal funds in recent years as earmarks have been reintroduced at relatively high levels. In addition, providing CWSRF additional subsidy to otherwise non-eligible communities could involve substantial challenges including but not limited to; the administrative cost to develop a parallel award program, reallocation of limited subsidy funds from existing programmatic goals, separate application processes and qualifications for utilities with eligible subcommunities, and reporting requirements.

Related to, but distinct from the CWSRF issues above, additional subsidy is provided under the Drinking Water SRF for "disadvantaged communities" (DACs). This report does not address additional subsidy under the Safe Drinking Water Act in detail because, the unlike the CWA, the SDWA does not include a provision allowing for additional subsidy where the eligibility criteria -- i.e., the state definition of DACs -- has not been met. However, in light of EPA's engagement on DAC state definitions and the direct impact of those definitions on the availability of additional subsidy to address water affordability, it is appropriate to briefly acknowledge these issues as well. A key question has been how DWSRF DAC definitions can best capture hardship and risk factors; for example, some states are shifting from historic reliance on Median Household Income (MHI) as a primary metric and toward a more inclusive approach employing environmental justice tools.

SRF Additional Subsidy Recommendations

With respect to leveraging SRF subsidies to provide assistance to low income households, EFAB offers the following recommendations:

1. **Pilot Program.** Identify water utilities that are interested in partnering with their state Clean Water SRF program to pilot a project that could be awarded loan funds with additional subsidy to channel to low-income utility rate payers within the service area.
2. **Guidance Toolkit for CWSRF Programs**. Develop a guidance toolkit for SRF programs initially advising SRF programs managers of the opportunity to program these funds to low income customers, ways to award, set up the funding, work with a utility, and push the administrative burden of the program to the benefiting utility. Eventually the guidance toolkit should be revised to incorporate lessons learned from program pilots. Key focus areas of the toolkit would include:
    - Award criteria
    - Application – require utilities to collect data to identify the number of eligible households that could receive channeled assistance funds and the calculation of assistance per households that would defray the related debt service cost to these households.
    - Guidance on ways to channel funds to target low-income households such as an existing utility low income assistance program, local community action agencies that distributed COVID LIWAP funds, and considerations for hard to reach populations such as multiunit renters that pay utilities through a landlord who owns the master metered building account. (see also CAP section of this report)

- Ways to award the funds that will be distributed over the life of the loan – see example of Washington State Conservation Reserve Enhancement Program Trust Fund reserve – WA AG develops/administers 15 year contracts with farmers who are compensated for planting native vegetation along salmon bearing streams instead of crops. Buffers are preserved under 10-15 year renewable contracts. Project costs are paid for by the program. This kind of analog could guide a sinking fund trust fund approach to reserving the assistance funds for the life of the loan to be awarded and drawn on through the life of the debt service to defray the low income bill impact.

3. **Continue to Explore Approaches for Defining "Disadvantaged Communities" for the DWSRF.** Build on EPA's existing efforts to identify key elements that would reduce disparities to households resulting from state DAC definitions. This exercise would, of course, require considerable sensitivity to the fact the states have broad discretion in this regard and address widely different circumstances nationwide.

4. **EPA Affordability Website.** Consistent with recommendations above, create a new affordability page on EPA's website that repurposes and integrates EPA's current set of resources related to each component to the affordability framework that EFAB has developed. With respect to the SRF, the website would bring together in one place relevant (i.e., affordability-related) aspects of the agency's resources, policy, and guidance on both SRF programs, additional subsidy, and technical assistance.

Section IV: Rate Structures and Design

Rate structures provide another opportunity for utilities to address affordability challenges, particularly in states and communities that are not burdened by legal barriers to rate structures that support water affordability. In this regard, EPA has requested EFAB:

> *To identify and analyze options for rate structure/design to help households who would be adversely affected by significant rate increases for water services, focusing on what can be accomplished within the bounds of existing legal requirements or restrictions (where those exist). Options might include, but would not be limited to, lifeline rates, income-based rate structures, senior assistance plans, host community rate structures, payment restructuring programs, and customer charge waivers. This analysis would be integrated with [the] element involving the legal limitations on consumer assistance programs (CAPs).*

The report reviews cost of service rate setting principles and provides an overview of the types of state level legal guidance and restrictions on water and sewer utility rate setting that can limit the ability of water utilities to use rate revenues to address local household affordability challenges. It also provides options for enhancing affordability through rate design while following the traditional cost of service framework and abiding by relevant statutes in most states. These "affordability friendly" rate strategies include, but are not limited to (1) reduced fixed charges (2) individualized lifeline rates; and (3) class-based volumetric rates and seasonal rates. Establishing a separate impervious area-based stormwater charge can also more equitably allocate costs across customers, reducing the cost burden for residential customers (including multi-family accounts).

In addition, there may be substantial value in expanding the conventional cost of service framework to recognize water as a public good, explicitly including human health and/or affordability as core utility

functions. Expanding the definition of utility services to include public health and affordability would enable utilities to incorporate related costs into traditional cost of service rate design. Related, it could be useful to quantify the costs incurred by utilities associated with non-payment (administrative, collections, impact on creditworthiness, etc.).

These efforts could facilitate implementation of rate-funded programs that provide more direct assistance to customers, such as income-indexed rates and CAPs (see next section). Income-indexed rates ensure a basic level of water service for low income households at a reasonable price based on their specific circumstances (i.e., their incomes), although these programs can be challenging to implement.

Rate Structure Options for Enhancing Affordability Recommendations:

Pursuant to this topic, EFAB recommends the following five actions to EPA for consideration and development:

1. **Cost of Service Expansion Policy Statement.** Issue a new EPA policy supporting expansion of the cost of service framework to include public health and affordability. Establishing such a policy would recognize that customers receive significant benefits when all residents in a community have access to clean and reliable water services. This effort would provide a stronger legal basis for funding CAPs or income-indexed rates through rate revenues by providing a nationally endorsed approach for cost-of-service ratemaking. It would be useful to work with national water sector organizations and other key stakeholders (including potentially EFAB) in developing this policy.

2. **Tie Federal Financing to Affordability.** Incorporate prioritization criteria related to how well utilities are addressing affordability (e.g., through rate design and/or CAPs) into federal water and wastewater infrastructure funding/financing program decisions (e.g., SRF and WIFIA). Specifically, EPA should develop criteria for state level SRF programs providing higher point values for utility applicants that are addressing local water affordability challenges proactively and effectively. There is precedent for this prioritization via EPA's updated Financial Capability Assessment (FCA) guidance Financial Alternatives Analysis (FAA). This criteria could also apply to WIFIA loans and other federal water infrastructure funding sources.

3. **Elevate Model State Statutes**. Provide examples of state statutes that can serve as models for rate guidance that explicitly allows for funding customer assistance programs and/or income-based rates with rate revenues, and/or incorporating public health and affordability into cost-of-service rate practices. Examples include Washington (for public and private utilities) and California (for privately-owned utilities).

4. **Technical Assistance for Rate Development**. Provide enhanced technical assistance to utilities for rate development, particularly for mid-sized utilities and for stormwater fees. The recently enlarged network of Environmental Finance Centers throughout the U.S. are well suited to provide this assistance, and many already do.

5. **Water Utility Rate Data Gap Study.** Commission studies to explore key rate-related affordability issues, including:

- Advantages and disadvantages of income-indexed rates, focusing on the financial impacts to utilities and customers.
- Impact of best practices for rate design on utilities and low-income customers.

Section V: Customer Assistance Programs

Customer assistance programs (CAPs) can take various forms. Typical models include: (1) bill discounts; (2) flexible terms; (3) temporary assistance; (4) direct installations of water use efficiency measures; and (5) lifeline rates. While a growing number of utilities have adopted CAPs, as EPA has recognized, the reach of utility-led CAPs is limited. Utilities were not established to provide social assistance programs and, with the exception of some notably excellent programs, generally have not excelled in this space. In this regard, EPA has requested EFAB:

> *To identify and analyze common state and/or local legal barriers (and possibly other types), including perceived barriers, to adoption of CAPs and other affordability measures, and provide recommendations for EPA to address these. For example, few states explicitly preclude CAPs; instead, they establish broad restrictions on how ratepayer funds can be used, which can provide some room for flexibility. Having a more precise understanding of the 3-5 primary types of barriers will provide a foundation for EFAB's recommendations to address affordability challenges.*

EFAB has identified several interrelated, overarching reasons for the limited effectiveness of utility-led CAPs nationally: (1) real, and in some cases, perceived legal barriers to funding CAPs; (2) relatively low rates of participation; and (3) low levels of funding or other available resources to implement CAPs. In addition, many of the country's lowest income households (particularly in urban areas) are "hard-to-reach," meaning they do not pay their bill directly to a utility but through rent or similar fees. This means they do not benefit from most traditional assistance programs.

Several of EFAB's recommendations related to rate structures are also applicable to CAPs as they include pathways for reducing legal barriers associated with funding assistance programs with rate revenues. EFAB offers the following additional recommendations related to CAPs.

1. **Planning Grants.** Offer planning grants to water and wastewater utilities to support the development of local affordability **and/**or assistance programs. As noted above, many utilities do not offer CAPs and many are not well equipped to fully understand the affordability challenges within their community. Providing planning grants and technical assistance to develop and implement CAPs based on successful models could help utilities overcome capacity and resource limitations and other barriers.

2. **Federal CAP Study.** Conduct a study to explore the advantages and disadvantages of alternative program pathways for providing a federal water assistance program**.** Ideally, this study should be guided by the following principles:

    - Focus on increasing assistance for those most in need rather than focusing primarily on helping utilities capture lost revenue from past due bills.

    - Include renters and multi-family households (including households who do not pay their water bill directly to a utility), as these customers as a group typically face greater affordability challenges.

- Prioritize limiting the administrative burden on applicants, and allow for automatic enrollment and/or categorical eligibility whenever possible.

- Prioritize limiting the administrative burden on local utilities (in keeping with observation that "water services sector did not evolve to address poverty relief and is acutely challenged to do so.")

- Prioritize limiting costs and administrative burdens on federal program managers by maximizing the use of existing, more or less well-functioning systems and organizations/agencies, and simplifying eligibility requirements.

- Embrace the principle of not allowing the perfect to be the enemy of the good; specifically planning for the reality that no program will reach every household in need, and that some will receive assistance who may not technically be as in need as others.

3. **Best Practice/Case Study Compendium.** Develop a compendium of best practices and provide case studies of successful local, utility-led CAP programs, including those that have successfully overcome barriers related to enrollment/participation, hard-to-reach customers, and/or funding barriers. The compendium and case studies should be published semi-regularly (e.g., biennially), highlighting new and best practices in the field. Key information should include how utilities identified affordability challenges within their community and designed their programs accordingly, as well as successful outreach and enrollment strategies.

4. **Study Costs of Nonpayment/Shutoffs to Utilities.** Commission a study to quantify the administrative and other costs associated with non-payment, and related service shutoffs, to help make the business case for CAPs. Conducting service shutoffs and managing arrearages is expensive and time-consuming, and these costs are covered of course primarily by rate revenue. Solid data on these costs are difficult to come by, however, and so it would be useful for EPA to provide a comprehensive review of the cost of pursuing consumers for non-payment in comparison to the costs of providing more effective customer assistance through the rate options outlined above.