UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF WATER

MEMORANDUM

SUBJECT: The SRF Sustainability Conversation Guide

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TO: Water Management Division Directors, Regions 1-X
SRF Coordinators. Regions I-X

The purpose of this memorandum is to transmit the *Sustainability Conversation Guide* that accompanies the State Revolving Fund (SRF) Annual Review Checklist. The guide is intended to facilitate a conversation with the SRFs on various sustainability topics. Because the guide is also intended to help EPA Regions answer the sustainability questions on the SRF Annual Review Checklist, the guide follows the checklist questions on .sustainability prov,dang supporting information and discussion questions for each topic. Note that the guide is based on the November 2013 Annual Review Checklist; whenev-er the checklist is revised, we will update this guide accordingly. The next anticipated revision will be to address the amendments to the Clean Water SRF contained in the Water Resources Reform and Development Act of2014.

Please note that you are not required to use this guide or to ask all of the supplemental questions provided. For those who do choose to use it, we do not recommend simply reading through the guide in its entirety, but rather using the supporting information and -ex1ternal links to learn about any copies that may be unfamiliar. It can also be useful as a reference document during annual reviews. Consider referring back to a particular section of-the guide for additional d1scussion questions as needed to fully explore certain topics.

As you know, sustainability and climate change, in particular, are becoming increasingly relevant to our work with the SRFs. Thank you for your hard work in support of this key agency priority. If you have any questions regarding this document, please contact Emily Nicasio at (202) 564-9920 or Kirsten Anderer at (202) 564-3 134.e

Attachment

Sustainability Conversation Guide

to Accompany the SRF Annual Review Checklist

BACKGROUND

Sustainability is a core objective of the U.S. Environmental Protection Agency (EPA) and the states. As described in the Clean Water and Drinking Water Infrastructure Sustainability Policy, supporting sustainable water infrastructure, systems, and communities is a key Agency priority. The Sustainability Policy is aligned with the principles set forth under the 2009 Partnership for Sustainable Communities supported by EPA, the U.S. Department of Housing and Urban Development, and the U.S. Department of Transportation; ensuring that communities make sustainable water infrastructure investments is an important part of the Partnership's work. As discussed at length in these and other publications on effective and sustainable water utility management, it is essential that utilities and communities incorporate sustainability into water infrastructure investments. As a major source of funding for such investments, Clean Water and Drinking Water State Revolving Fund (SRF) programs have a clear responsibility to encourage sustainable practices and provide the necessary leadership to meet that objective.

This conversation guide is intended to facilitate a conversation between the EPA Regions and the SRFs about water sector sustainability issues. The goal of this conversation is to both (a) encourage the SRFs to continue to take measures to ensure assistance recipients sustainably plan, fund, operate, maintain, and replace water infrastructure over time and (b) learn about SRF successes so that best practices can be shared with other programs. Before beginning this discussion, Regions should explain why EPA believes sustainability is so important in the SRF program and any specific facets of sustainability that are of particular interest to the Agency (e.g., climate adaptation). Start by asking if/how sustainability is part of strategic planning and find out what objectives the SRF would like to accomplish over the coming year. A Region should come away from this conversation with an understanding of the SRF's current practices and their strategic plan for the future.

QUICK START GUIDE

The conversation guide follows the SRF Annual Review Checklist questions on sustainability. Supporting information and supplemental discussion questions tailored to each topic are found in the full guide beginning on page 2. A quick start reference—consisting of a series of generic supplemental questions that can be tailored to the various annual review checklist questions—is provided below.

a. Does the SRF fund [topic]?
   i. Are there any [topic] projects on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
   ii. What types of [topic] projects were funded by the SRF in the most recent IUP?
b. How does the SRF share information on eligibilities related to [topic] with potential assistance recipients?
c. How does the SRF encourage [topic]?
   i. Does the SRF require [topic] as a condition of getting an SRF loan?
   ii. Does the SRF use financial incentives or its priority ranking system to encourage [topic]?
d. Does the SRF coordinate/collaborate with any entities (e.g., other state agencies) to provide technical assistance for [topic]?
e. What other opportunities exist to encourage [topic]?
f. Are there any legal, regulatory, technical, or practical barriers to [topic]? If so, what opportunities exist to overcome those barriers?
g. How have the SRF's efforts to encourage [topic] affected SRF demand or the types of projects being proposed?

FULL CONVERSATION GUIDE

The conversation guide is organized around the SRF Annual Review Checklist questions on sustainability. For each checklist question, supporting information and supplemental discussion questions are provided to help facilitate a conversation with the SRFs. Regions are not required to use this guide or ask all of the supplemental questions it contains. It is our intention that by using this guide, an SRF Project Officer could conduct this interview on their own, but we strongly recommend identifying and collaborating with your Regional coordinators/contacts for climate change, sustainability, green infrastructure, water security, etc.

4.1.1 How does the State encourage the use of asset management programs? Does the State's Project Priority List (PPL) include projects that emerged as a result of an asset management program?

Supporting Information and Discussion Questions:

Effective management of a water utility is a key component of its overall sustainability and can be achieved and maintained through a series of tools. An important first step is for utilities to assess their existing effectiveness. EPA and other partners have developed criteria and tools to facilitate this assessment including Attributes of Effectively Managed Water Sector Utilities and the Rural and Small Systems Guidebook to Sustainable Utility Management. Based on this assessment, utilities can identify the right set of practices to ensure the long-term sustainability of their operations and infrastructure, such as those suggested in Moving Toward Sustainability: Effective and Sustainable Practices for Creating your Water Utility Roadmap. One recurring theme of these and other documents is asset management, the goal of which is to provide a desired level of service at the lowest life cycle cost. It involves inventorying assets, life cycle planning, pricing appropriate to the desired level of service, and efficient operations. Asset management can range from simple planning and analysis to complex triple bottom line analyses, which incorporates social and environmental considerations into the traditional financial "bottom line."

a. Does the SRF fund asset management planning?
b. How does the SRF encourage asset management by potential assistance recipients?
    i. Does the SRF require asset management planning as a condition of getting an SRF loan?
    ii. Does the SRF use financial incentives or its priority ranking system to encourage asset management?
c. Besides asset management, how else does the SRF encourage sustainable management? Other management practices are Effective Utility Management, Energy Management Systems, and Lean. Are SRF staff familiar with these resources?
    i. If so, are they implementing any of them or interested in doing so?
    ii. If not, would staff be interested in learning more about a particular management practice?
d. Does the SRF coordinate/collaborate with any entities (e.g., other state agencies) to provide technical assistance for sustainable management practices or to ensure utilities are sustainably managed?
e. What other opportunities exist to encourage sustainable management?
    i. Have staff taken Check Up Program for Small Systems (CUPSS) training?
    ii. Does the Drinking Water SRF use set asides to provide assistance to utilities to set up and utilize CUPSS?
f. How have the SRF's efforts to encourage sustainable management practices affected SRF demand or the types of projects being proposed?
g. What managerial and operational benefits of sustainable management (e.g., cost savings, capital program effectiveness, and timely investment) have utilities in the state documented?

4.1.2: How does the State encourage planning processes by potential SRF recipients that:

a. **include steps to consider other relevant community sustainability priorities from other sectors, such as transportation and housing?**
b. **evaluate a range of alternatives, including green and or decentralized alternatives, based on full life-cycle costs?**
c. **ensure that potential recipients have a financial system in place, including appropriate rates, to ensure that future projects will be funded, operated, maintained and replaced over time, with appropriate considerations for low income households?**

Supporting Information and Discussion Questions:
Water infrastructure investments can influence the overall character, livability, and sustainability of the local community. The impacts can be positive (e.g., by promoting urban infill) or negative (e.g., by encouraging sprawl). Cross-sector planning provides an opportunity to consider these aspects of sustainability.

a. Does the SRF fund planning?
    i. Are there any planning projects on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
    ii. What types of planning projects were funded by the SRF in the most recent IUP?
b. How does the SRF encourage cross-sector planning by potential assistance recipients?
    i. Does the SRF require cross-sector planning as a condition of getting an SRF loan?
    ii. Does the SRF use financial incentives or its priority ranking system to encourage cross-sector planning?
    iii. Does the SRF require proposed projects meet sustainability criteria in order to be eligible for SRF assistance? For example, New York's State Smart Growth Public Infrastructure Policy Act requires projects funded by the New York CWSRF meet certain smart growth criteria. EPA's Planning for Sustainability: A Handbook for Water and Wastewater Utilities contains examples of other sustainability criteria (e.g., ecological and economic impacts, cost effectiveness, energy efficiency, and others).
c. Does the SRF coordinate/collaborate with any entities (e.g., other state agencies) to provide technical assistance for collaborative planning or to ensure water projects align with cross-sector interests?
d. What other opportunities exist to encourage cross-sector planning?
e. How have the SRF's efforts to encourage planning affected SRF demand or the types of projects being proposed?

Alternatives analysis is another crucial planning activity to ensure recipients consider broad environmental impacts and long term cost-benefit scenarios. All available alternatives—from the latest treatment technologies to green infrastructure solutions—should be evaluated when selecting sustainable solutions for infrastructure needs. Other alternatives include decentralized wastewater or consolidated drinking water solutions and programs that prevent the need for new raw water supply investments (e.g., water efficiency or reuse programs). Planning for Sustainability: A Handbook for Water and Wastewater Utilities describes how to incorporate sustainability into alternatives analysis including examples of actual criteria that can be used.

a. Does the SRF fund alternatives analysis?
b. How does the SRF ensure potential assistance recipients consider all available alternatives for addressing infrastructure needs, particularly sustainable alternatives?
    i. Does the SRF require an alternatives analysis as a condition of getting an SRF loan?
    ii. Does the SRF use financial incentives or its priority ranking system to encourage alternatives analysis?
    iii. Does the SRF use the Preliminary Engineering Report template, which includes conducting an alternatives analysis?

iv. Are there any types of projects that typically do not have an alternative analysis conducted, and if so, why?

c. What other opportunities exist to ensure potential assistance recipients consider all available alternatives for addressing infrastructure needs, particularly sustainable alternatives?
d. Are there any legal, regulatory, technical, or practical barriers (e.g., engineering sector preferences for certain technologies) to evaluating all available and reasonable alternatives, especially sustainable alternatives? If so, what opportunities exist to overcome those barriers?
e. How have the SRF's efforts to encourage alternatives analysis affected SRF demand or the types of projects being proposed?

Ensuring loan recipients have an appropriate rate structure in place (i.e., one that will maintain infrastructure throughout its operational life) is a critical component of sustainability not only for the utility, but also for the SRF program. Traditional water/wastewater user charges have not always reflected the full, long term maintenance and replacement costs of assets, leading to delayed—and more expensive—maintenance and replacement. Utilities with rate structures covering the full cost of operations are in a better position to adequately maintain their systems and will be less reliant on financial subsidies, including those provided by the SRF programs.

a. How does the SRF ensure that projects will be funded, operated, maintained, and replaced appropriately over time?
    i. Does the SRF coordinate/collaborate with any entities (e.g., other state agencies) to provide technical assistance to establish comprehensive financing and pricing strategies or to ensure rate structures are appropriate?
    ii. Has a rate dashboard been developed for your state? If so, do utilities utilize the dashboard to observe rate increase effects on revenues and affordability?
b. What other opportunities exist to ensure that projects will be funded, operated, maintained, and replaced appropriately over time?
c. Are there any legal, regulatory, technical, or practical barriers to establishing appropriate rate structures? If so, what opportunities exist to overcome those barriers?

Disadvantaged communities, which are more likely to lack the technical, managerial, and financial capacity to properly manage infrastructure over time, may require additional assistance with planning processes. Third-party technical assistance providers may be able to provide cross-sector planning assistance, conduct alternatives analysis, or aid systems in identifying and moving towards appropriate rate setting practices.

a. Does the Drinking Water SRF use set asides to provide assistance to disadvantaged communities to plan and design sustainable water infrastructure?
b. Does the SRF coordinate/collaborate with any entities (e.g., other state agencies) to provide technical assistance to disadvantaged communities?
c. What other opportunities exist to support disadvantaged communities?

4.1.3: Does the State's project pipeline include projects that utilize green infrastructure or decentralized approaches as an integral part of the treatment process? Describe any activities that the State uses to encourage these types of projects.

Supporting Information and Discussion Questions:
Green Infrastructure (GI) provides cost-effective stormwater management, flood mitigation, and other benefits by using vegetation and soil to manage rainwater where it falls. GI is also a major component of low impact development (LID), which is an approach to land development that promotes the natural movement of water within a watershed in order to maintain or restore its hydrologic and ecological functions. LID is achieved by managing stormwater as close to its source as possible to reduce the environmental impact of built areas. GI solutions include green roofs, rain gardens, and pervious pavement.

a. Does the Clean Water SRF fund GI projects? Are GI components being incorporated into Drinking Water SRF projects?
    i. Are there any GI projects on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
    ii. What types of GI projects were funded by the SRF in the most recent IUP?
    iii. Have any new/unique sources of repayment been used to fund GI projects?
b. How does the SRF encourage GI projects?
    i. Does the SRF use financial incentives or its priority ranking system to encourage GI projects?
    ii. Does the SRF do any marketing/outreach or have a specialized funding arrangement to encourage GI projects?
c. What other opportunities exist to encourage GI projects?
d. Are there any legal, regulatory, technical, or practical barriers (e.g., engineering sector preferences for gray infrastructure) to implementing GI projects? Are there any barriers specific to incorporating GI into Drinking Water SRF projects? If so, what opportunities exist to overcome those barriers?

When properly executed, decentralized wastewater treatment, which includes a wide range of individual and cluster treatment systems, is a viable—and sometimes the best—option for protecting public health, the environment, and the economic vitality of a community.

a. Does the Clean Water SRF fund decentralized wastewater treatment?
    i. Are there any decentralized projects or activities on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
    ii. What types of decentralized projects were funded by the SRF in the most recent IUP?
    iii. Does the SRF fund the formation of responsible management entities or is this being considered?
b. How does the Clean Water SRF ensure decentralized approaches are used where appropriate?
    i. Does the SRF require consideration of decentralized options prior to funding the expansion of centralized systems to service new areas? For example, does the SRF require alternatives analysis that considers decentralized options (see 4.1.2)?
    ii. Does the SRF use financial incentives or its priority ranking system to encourage decentralized projects?
    iii. Does the SRF do any marketing/outreach or have a specialized funding arrangement to encourage dencentralized projects?
c. What other opportunities exist to ensure decentralized approaches are used where appropriate?
d. Are there any legal, regulatory, technical, or practical barriers (e.g., engineering sector preferences for centralized treatment) to implementing decentralized projects? If so, what opportunities exist to overcome those barriers?

4.1.4: Does the project pipeline include projects that maintain or create additional green space? Examples could include riparian buffer zones or conservation easements. Describe any activities the State uses to encourage these types of projects.

Supporting Information and Discussion Questions:
Green space is maintained or created through conservation easements and land acquisition. Preserving green space protects or improves water quality by providing a buffer between development and water bodies and by restoring or preserving the natural hydrology of the watershed; it can be an important and effective means of source water protection. While these projects can be difficult to finance due to the lack of a repayment stream, SRF programs are discovering innovative financing options that encourage these activities.

a. Does the Clean Water SRF fund projects that create or maintain green space? Does the Drinking Water SRF use set asides to promote source water protection activities?
    i. Are there any projects that create or maintain green space on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.

ii. What types of green space projects were funded by the SRF in the most recent IUP?
iii. Have any new/unique sources of repayment been used to fund projects that maintain or create green space?

b. How does the SRF encourage projects that create or maintain green space?
   i. Does the SRF use financial incentives or its priority ranking system to encourage projects that create or maintain green space?
   ii. Does the SRF do any marketing/outreach or have a specialized funding arrangement to encourage projects that create or maintain green space?
c. What other opportunities exist to encourage projects that create or maintain green space?
d. Are there any legal, regulatory, technical, or practical barriers to funding projects that create or maintain green space? If so, what opportunities exist to overcome those barriers?

4.1.5: Does the project pipeline include projects that make use of technologies and practices to reduce energy and/or water consumption, and use energy in a more efficient way, and/or produce/utilize renewable energy? Describe any activities the State uses to encourage these types of projects.

Supporting Information and Discussion Questions:

Energy Efficiency

Energy efficiency is the use of improved technologies and practices to reduce the energy consumption of water projects, use energy in a more efficient way, and/or produce/utilize renewable energy. Energy efficiency has numerous environmental benefits and reduces utilities' operating costs.

a. Does the SRF fund energy efficiency projects?
   i. Are there any energy efficiency projects on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
   ii. What types of energy efficiency or LEED certified projects were funded by the SRF in the most recent IUP?
b. How does the SRF encourage energy efficiency projects?
   i. Does the SRF use financial incentives or its priority ranking system to encourage energy efficiency projects?
   ii. Does the SRF do any marketing/outreach to encourage energy efficiency projects?
c. What other opportunities exist to encourage energy efficiency projects?
d. Are there any legal, regulatory, technical, or practical barriers to funding energy efficiency projects? If so, what opportunities exist to overcome those barriers?

Energy audits are a key step towards becoming more energy efficient.

a. Does the SRF fund energy audits?
b. How does the SRF encourage energy audits by potential assistance recipients?
   i. Does the SRF require energy audits as a condition of getting an SRF loan?
   ii. Does the SRF use financial incentives or its priority ranking system to encourage energy audits?
   iii. Does the SRF do any marketing/outreach or have a specialized funding arrangement to encourage energy audits?
   iv. Does the SRF assist communities with conducting energy audits, determining existing energy usage, and/or creating energy management plans?
   v. Does the Drinking Water SRF use set asides to provide assistance to utilities to conduct energy audits?
c. Does the SRF use or promote any of the available EPA tools (e.g. Ensuring a Sustainable Future: An Energy Management Guidebook for Wastewater and Water Utilities, which helps systems put together a plan for achieving greater efficiency; EPA's Energy Use Assessment Tool, which is an Excel-based tool that can be used by small to medium systems to conduct a utility bill and equipment

analysis to assess individual baseline energy use and costs; or the EnergyStar Portfolio Manager, which is an online tool used to measure and track energy/water consumption as well as greenhouse gas emissions)?

d. What other opportunities exist to encourage energy audits?
e. How have the SRF's efforts to encourage energy audits affected SRF demand or the types of projects being proposed?

Use of renewable energy (e.g., cogeneration, solar panels, wind turbines, fuel cells, geothermal, or micro-hydroturbines), whether generated on- or off-site, is another method for achieving energy efficiency.

a. Does the SRF fund renewable energy projects?
    i. Are there any renewable energy projects on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
    ii. What types of renewable energy projects were funded by the SRF in the most recent IUP?
b. How does the SRF encourage renewable energy projects?
    i. Does the SRF use financial incentives or its priority ranking system to encourage renewable energy projects?
    ii. Does the SRF do any marketing/outreach to encourage renewable energy projects?
c. What other opportunities exist to encourage renewable energy projects?
d. Are there any legal, regulatory, technical, or practical barriers to funding renewable energy projects? If so, what opportunities exist to overcome those barriers?

Water Efficiency

Water efficiency is the use of improved technologies and practices to deliver equal or better services with less water; it encompasses conservation and reuse efforts, as well as water loss reduction and prevention to protect water resources for the future. Water efficiency has numerous environmental and economic benefits.

a. Does the SRF fund water efficiency projects?
    i. Are there any water efficiency projects on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
    ii. What types of water efficiency projects were funded by the SRF in the most recent IUP?
b. How does the SRF encourage water efficiency projects?
    i. Does the SRF use financial incentives or its priority ranking system to encourage water efficiency projects?
    ii. Does the SRF do any marketing/outreach to encourage water efficiency projects?
c. What other opportunities exist to encourage water efficiency projects?
    i. Is the SRF a WaterSense partner? WaterSense partnership is free and provides SRFs with access to outreach materials.
d. Are there any legal, regulatory, technical, or practical barriers to funding water efficiency projects? If so, what opportunities exist to overcome those barriers?

Water audits are a key step towards becoming more water efficient.

a. Does the SRF fund water audits?
b. How does the SRF encourage water audits by potential assistance recipients?
    i. Does the SRF require water audits as a condition of getting an SRF loan?
    ii. Does the SRF use financial incentives or its priority ranking system to encourage water audits?
    iii. Does the SRF do any marketing/outreach or have a specialized funding arrangement to encourage water audits?
    iv. Does the SRF assist communities with conducting water audits, performing leak detection, developing pressure management studies, and/or developing conservation plans?
    v. Does the Drinking Water SRF use set asides to provide assistance to utilities to conduct energy audits?
c. What other opportunities exist to encourage water audits?

d. How have the SRF's efforts to encourage water audits affected SRF demand or the types of projects being proposed?

Another important aspect of water efficiency is reuse. Water reuse is the reclamation and recyling of water to reduce the demand on our raw water supply. Reclaimed water is often used for industrial purposes (e.g., thermoelectric power plant cooling, manufacturing process water), agricultural purposes (e.g., crop irrigation), or non-potable municipal purposes (e.g., landscape irrigation, water features, other outdoor uses). Direct potable reuse is also gaining traction. On the drinking water side, water reuse includes recycling internal process water at a treatment plant, such as recycling filter backwash water. Water reuse has numerous environmental benefits. In most cases, reclaimed water does not need as high a degree of treatment as potahle water; therefore, replacing potable water with non-potable reclaimed water can result in significant energy and chemical savings at the drinking water utility. In other cases, a higher standard of treatment may be required, but even in these cases the benefits of water reuse are numerous: less strain on freshwater resources, less impingement and entrainment of aquatic organisms from surface water intakes, less land subsidence from overdrafting aquifers, etc.

a. Does the Clean Water SRF fund water reuse projects? Does the Drinking Water SRF fund any projects that incorporate water reuse components, such as gray water, condensate, and wastewater effluent reuse systems (where local codes allow), or filter backwash recycling?
    i. Are there any water reuse projects on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
    ii. What types of water reuse projects were funded by the SRF in the most recent IUP?
b. How does the SRF encourage water reuse projects?
    i. Does the SRF use financial incentives or its priority ranking system to encourage water reuse projects?
    ii. Does the SRF do any marketing/outreach to encourage water reuse projects?
c. What other opportunities exist to encourage water reuse projects?
d. Are there any legal, regulatory, technical, or practical barriers (e.g., water rights) to funding water reuse projects? If so, what opportunities exist to overcome those barriers?
    i. Is there an opportunity for the SRF to encourage or help establish state regulations for water reuse if none exist?
    ii. Is there an opportunity for the SRF to formulate positive messaging through marketing or other means if the public perception is currently negative?

4.1.6: Does the State's DWSRF project list include projects that utilize consolidation, partnership, or regionalization approaches? Describe any activities that the State uses to encourage these types of projects. (DRINKING WATER ONLY)

Supporting Information and Discussion Questions:
Small utilities face unique challenges in providing affordable drinking water that meets federal and state regulations, especially as new drinking water requirements become increasingly complex. To overcome some of these challenges, water utilities may need to develop partnerships with other systems. These partnerships can provide opportunities to collaborate on compliance solutions and operations and maintenance activities and to share costs with other nearby systems, thereby increasing capacity and enabling systems to provide safe and affordable water to their communities. Partnerships can range from informal arrangements (e.g., sharing equipment with another utility) to more complex arrangements (e.g., sharing management with another utility) and may involve changes to the operational, managerial or institutional structure of a utility. Funding can be provided either through the Drinking Water SRF set asides, or through the loan fund as long as these activities are reasonably expected to result in a capital project.

a. Does the Drinking Water SRF fund activities that support consolidation and partnerships?
    i. Are there any consolidation/partnership projects on the most recent PPL (including regionalization and consolidation)? If so, did they make it onto the IUP? If not, find out why.

ii. What types of consolidation/partnership projects were funded by the SRF in the most recent IUP?
iii. Does the SRF track how many consolidation/partnership projects they have done?

b. How does the Drinking Water SRF encourage consolidation/partnership projects?
   i. Does the SRF actively work to identify potential partnership opportunities (i.e., part of capacity development strategy to identify opportunities)?
   ii. Does the SRF assist communities with conducting consolidation studies?
   iii. Does the SRF require utilities evaluate partnership alternatives as a condition of getting an SRF loan?
   iv. Does the SRF use financial incentives, including set-asides, or its priority ranking system[1] to encourage consolidation/partnerships projects? If priority points are used, are they enough points to significantly bump a project up higher on the priority list?
   v. Does the SRF do any marketing/outreach to encourage consolidation/partnerships?
c. What other opportunities exist to encourage consilidation/partnership projects?
d. Are there any legal, regulatory, technical, or practical barriers to implementing consolidation/ partnership projects? If so, what opportunities exist to overcome those barriers?

4.2.1: Is there a state climate change or adaptation plan? If so, does it include a role for water infrastructure or the SRFs?

Supporting Information and Discussion Questions:
Preparing for more frequent, intense, or prolonged extreme weather events is an essential component of sustainability for the water sector. Accordingly, many states and local governments have developed climate change or adaptation plans. A climate change plan lays out specific policy proposals or planning processes, including institutional and policy structures, that a state or local government will use to develop and implement a climate change mitigation strategy. It might include regional and local vulnerabilities, mitigation options, recommendations and strategy for implementation, and more.

a. Is there a state-wide climate change or adaptation plan? Are there any local or (non-EPA) regional plans? If so,
   i. How often is it updated or scheduled to be updated?
   i. Does it describe the issues facing the water sector? Does it reference the SRFs as a financing option?
   ii. How does the SRF use the plan? For example, are SRF projects tied to the plan in any way?
b. If there is no state, regional, or local plan right now, is one under development or planned for development? Is there an opportunity for SRFs to participate in the development or review of the plan?

4.2.2: Does the SRF program provide information about eligible costs related to developing or implementing an adaptation plan in the IUP or other program information?

Supporting Information and Discussion Questions:
There are a number of planning activities that can make communities and utilities more resilient to extreme weather events and permanent climatic changes. Examples include vulnerability assessments; emergency preparedness, response, and recovery plans; and climate adaptation plans.

a. Does the SRF fund climate-related planning?

[1] If a large system does take over a small system (population less than 10,000) then the state can take credit for that project toward meeting the DWSRF small system goal.)

i. Are there any climate-related planning activities on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
ii. What types of climate-related planning activities were funded by the SRF in the most recent IUP?

b. How does the SRF share information on climate-related planning eligibilities with potential assistance recipients?
i. Does the SRF use its Call for Projects or IUP[2] to make potential loan recipients aware of climate-related planning eligibilities?
ii. Does the SRF share information about climate-related planning eligibilities through the its website or other program material?

c. How does the SRF encourage climate-related planning?
i. Does the SRF require climate-related planning (e.g., vulnerability assessments) as a condition of getting an SRF loan?
ii. Does the SRF coordinate/collaborate with any entities (e.g., other state agencies) to provide technical assistance for climate-related planning?
iii. Does the SRF use financial incentives or its priority ranking system to encourage climate-related planning?
iv. Does the Drinking Water SRF use set asides to provide assistance to utilities to conduct climate-related planning?
v. Does the SRF do any marketing/outreach to encourage climate-related planning?

d. What other opportunities exist to encourage climate-related planning activities?
e. Are there any legal, regulatory, technical, or practical barriers to climate-related planning? If so, what opportunities exist to overcome those barriers?
f. How have the SRF's efforts to encourage climate-related planning affected SRF demand or the types of projects being proposed?

4.2.3. Does the SRF program provide incentives to encourage facilities to incorporate potential climate change impacts or strategies for building resilience to extreme events in new or revised facilities plans? Extreme events may include intense precipitation and flood, increasing temperatures and drought, or sea level rise, increasing intensity of coastal storms, and storm surge. What incentives does the SRF program provide?

Supporting Information and Discussion Questions:
There are a number of projects that can make communities and utilities more resilient to extreme weather events and permanent climatic changes. Projects to increase climate-related resilience range from adaptation to permanent climatic changes like sea level rise to those that reduce the risk of physical damage from an extreme weather event, help maintain operations during an event, or help a utility/community recover quickly from an event. Examples include building sea walls and levees, elevating equipment, waterproofing, and installing green infrastructure.

a. Does the SRF fund climate resilience projects?
i. Are there any climate resilience projects on the most recent PPL? If so, did they make it onto the IUP? If not, find out why.
ii. What types of climate resilience projects were funded by the SRF in the most recent IUP?

b. How does the SRF share information on climate resilience project eligibilities with potential assistance recipients?

[2] There are uniform requirements for IUP content that apply to all SRF programs. However, the scope of an IUP can extend far beyond fundamental requirements to give consideration to sustainability priorities such as climate change adaptation and weather-related resilience.

i. Does the SRF use its Call for Projects or IUP[3] to make potential loan recipients aware of climate resilience project eligibilities?
ii. Does the SRF share information about climate resilience project eligibilities through the its website or other program material?

c. How does the SRF encourage climate resilience projects?
i. Does the SRF require all SRF projects demonstrate a level of climate resilience as a condition of getting an SRF loan?
ii. Does the SRF coordinate/collaborate with any entities (e.g., other state agencies) to provide technical assistance for climate resilient planning/design/assessment to ensure projects are climate resilient?
iii. Does the SRF use financial incentives or its priority ranking system to encourage climate resilience projects?
iv. Does the SRF do any marketing/outreach to encourage climate resilience projects?
v. Does the SRF review state hazard mitigation plans for projects that address hazards to water and wastewater utilities? If so, how does the SRF reach out to those potential assistance recipients?

d. What other opportunities exist to encourage climate resilience projects?
e. Are there any legal, regulatory, technical, or practical barriers to funding climate resilience projects? If so, what opportunities exist to overcome those barriers?

4.2.4. Does the state have plans in place for rebuilding water (and other) infrastructure after damage from an extreme event, in ways that decrease vulnerability and increase resilience to future extremes?

Supporting Information and Discussion Questions:
EPA's Water Security Division has developed a variety of guidance documents and other resources to help drinking water and wastewater utilities prepare for and recover from a natural disaster. These resources include information on EPA's recovery support for water/wastewater utilities under the National Disaster Recovery Framework, guidance on the containment and disposal of contaminated wastewater, decontamination and recovery planning, and federal funding opportunities (e.g., FedFUNDS).

a. Does the state have a plan/protocol for rebuilding infrastructure after extreme weather events?
b. Are there examples of infrastructure being rebuilt or altered after an event to be more resilient in the future?
c. Have concerns over climate change impacts been raised in the context of financing or insuring water infrastructure?

4.2.5. Are the state SRF program staff aware of sources of information to help you understand and plan for future resiliency, e.g., EPA's Climate Ready Water Utilities tools and information?

Supporting Information and Discussion Questions:
In its efforts to promote a clear understanding of climate change and resilience, EPA's Climate Ready Water Utilities initiative has developed a variety of tools to translate complex climate projections into accessible formats. This information helps utility owners and operators better prepare for the impacts of climate change and extreme weather events. For example, EPA's Climate Resilience Evaluation and Awareness Tool (CREAT) helps drinking water and wastewater utility owners and operators understand the potential impacts of various climate change scenarios. CREAT also enables utilities to evaluate adaptive options to mitigate these

[3] There are uniform requirements for IUP content that apply to all SRF programs. However, the scope of an IUP can extend far beyond fundamental requirements to give consideration to sustainability priorities such as climate change adaptation and weather-related resilience.

impacts using both traditional risk assessment and scenario-based decision making. Another tool for utilities is the Preparing for Extreme Weather Events: Workshop Planner for the Water Sector. The Workshop Planner helps utilities conduct community workshops for adaptation planning related to five extreme event scenarios: flooding, drought, reduced snowpack, sea level rise, and wildfires. Through such workshops, utilities and stakeholders discuss the weather and climate-related challenges they face and formulate a plan to address those challenges. A tool for communities was created by EPA's Community-Based Water Resiliency (CBWR) initiative, which seeks to increase awareness of water sector interdependencies and provide tools/information to increase the preparedness and resilience of water utilities through community collaboration. A community can use the CBWR Tool to assess its current vulnerabilities to water service interruptions and learn about ways to become more resilient. SRFs that are familiar with these tools are in a better position to help utilities prepare for climate change and extreme weather events.

a. Is the SRF familiar with these tools?
    i. If so, are they implementing any of them or interested in doing so?
    ii. If not, would staff be interested in learning more about a particular resource?
b. Does the Drinking Water SRF use set asides to provide assistance to utilities to use CREAT or other tools?
c. What other resources is the SRF using to help communities understand, plan for, and build resilience?

LINKS

Attributes of Effectively Managed Water Sector Utilities
http://www.watereum.org/resources/interactive-primer/ten-attributes/

Asset Management
http://water.epa.gov/infrastructure/sustain/asset_management.cfm

CBWR Tool
http://water.epa.gov/infrastructure/watersecurity/techtools/cbwr.cfm

Check Up Program for Small Systems (CUPSS)
http://water.epa.gov/infrastructure/drinkingwater/pws/cupss/index.cfm

Clean Water and Safe Drinking Water Infrastructure Sustainability Policy
http://water.epa.gov/infrastructure/sustain/Clean-Water-and-Drinking-Water-Infrastructure-Sustainability-Policy.cfm

Climate Change/Adaptation Plans
http://www.epa.gov/statelocalclimate/state/topics/impacts-adaption.html

Climate Ready Water Utilities
http://water.epa.gov/infrastructure/watersecurity/climate/

Climate Resilience Evaluation and Awareness Tool
http://water.epa.gov/infrastructure/watersecurity/climate/creat.cfm

Community-Based Water Resiliency
http://water.epa.gov/infrastructure/watersecurity/communities/

Cross-sector Planning
http://water.epa.gov/infrastructure/sustain/sustainable_communities.cfm

Decentralized Wastewater Treatment
http://water.epa.gov/infrastructure/septic/

Direct Potable Reuse
http://www.nwri-usa.org/documents/NWRIWhitePaperDPRBenefitsJan2012.pdf

Effective and Sustainable Water Utility Management
http://water.epa.gov/infrastructure/sustain/watereum.cfm

Effective Utility Management
http://www.watereum.org/

Energy Efficiency
http://water.epa.gov/infrastructure/sustain/energyefficiency.cfm

Energy Management Systems
http://www.epa.gov/Region5/water/energymanagement/pdf/IN_Pilot_WW_Short_Guides-April_2012.pdf

EnergyStar Portfolio Manager
http://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/use-portfolio-manager

Ensuring a Sustainable Future: An Energy Management Guidebook for Wastewater and Water Utilities
http://www.epa.gov/owm/waterinfrastructure/pdfs/guidebook_si_energymanagement.pdf

EPA's Energy Use Assessment Tool
http://water.epa.gov/infrastructure/sustain/energy_use.cfm

Fed FUNDS
http://water.epa.gov/infrastructure/watersecurity/funding/fedfunds/

Green Infrastructure
http://water.epa.gov/infrastructure/greeninfrastructure/

Green Space
http://www.epa.gov/dced/openspace.htm

Hazard Mitigation Plans
http://www.fema.gov/multi-hazard-mitigation-planning

Lean
http://www.epa.gov/lean

Low Impact Development
http://water.epa.gov/polwaste/green/

Moving Toward Sustainability: Effective and Sustainable Practices for Creating your Water Utility Roadmap
http://water.epa.gov/infrastructure/sustain/upload/Practices-Roadmap-FINAL-4-2-14.pdf

Partnership for Sustainable Communities
http://www.epa.gov/smartgrowth/partnership/

Partnerships
http://water.epa.gov/infrastructure/sustain/partnerships.cfm

Planning for Sustainability: A Handbook for Water and Wastewater Utilities
http://water.epa.gov/infrastructure/sustain/upload/EPA-s-Planning-for-Sustainability-Handbook.pdf

Preparing for Extreme Weather Events: Workshop Planner for the Water Sector
http://water.epa.gov/infrastructure/watersecurity/climate/upload/epa817f13001.pdf

Rate Dashboard
http://www.efc.sog.unc.edu/reslib/item/north-carolina-water-and-wastewater-rates-dashboard

Rate Structure
http://water.epa.gov/infrastructure/sustain/pricing_structures.cfm

Responsible Management Entity
http://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=Septic%20Systems%20Glossary

Rural and Small Systems Guidebook to Sustainable Utility Management
http://water.epa.gov/infrastructure/sustain/upload/SUSTAINABLE-MANAGEMENT-OF-RURAL-AND-SMALL-SYSTEMS-GUIDE-FINAL-10-24-13.pdf

Smart Growth
http://www.epa.gov/dced/index.htm

Source Water Protection
http://water.epa.gov/grants_funding/dwsrf/cwswp.cfm

State Smart Growth Public Infrastructure Policy Act
http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=@SLENV0A6+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=06349431+&TARGET=VIEW

Water Efficiency
http://water.epa.gov/infrastructure/sustain/main_wp_new.cfm

Water Reuse
http://water.epa.gov/infrastructure/sustain/availability_wp.cfm

Water Security Division
http://water.epa.gov/infrastructure/watersecurity/emerplan

WaterSense
http://www.epa.gov/watersense