

NATIONAL ENVIRONMENTAL JUSTICE ADVISORY COUNCIL

Environmental Justice and Water Infrastructure Finance and Management

DRAFT CHARGE

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I. CHARGE QUESTIONS TO THE NEJAC

The U.S. Environmental Protection Agency (EPA) recognizes that safe drinking water and proper wastewater management are fundamental to the quality of life for all people and together are the backbone of every community. Water treatment, storage and distribution activities carried out under the Safe Drinking Water Act (SDWA) enable delivery of potable water daily to homes, schools and workplaces throughout the country. Activities carried out under the Clean Water Act (CWA) to prevent contamination of rivers, lakes and streams also support safe drinking water. Other important benefits of clean water include healthy aquatic ecosystems and fisheries, and recreational opportunities.

Some communities may be more challenged than others in their efforts to achieve the goals of safe and clean water. Vulnerable, overburdened and economically distressed communities may face a variety of challenges such as aging, antiquated or inadequate drinking water and wastewater infrastructure; insufficient training for water system operators; gaps in water system managerial and financial expertise; and difficulties obtaining financing from traditional lenders.

State and federal agencies are engaged in a variety of initiatives that provide financing or other tools to help these communities to 1) develop water system technical, managerial and financial capacity and 2) address needs for infrastructure planning, design and construction. The EPA seeks the NEJAC's recommendations on the use of these tools, as well as on best practices to assist vulnerable, overburdened or otherwise disadvantaged communities with providing for safe and clean water. In framing its charge to the NEJAC, the EPA is identifying three major categories of concern: 1) small, low-income communities; 2) larger, economically-stressed cities; and 3) low-income households located within a water system service area where the community as a whole is not economically stressed.

The EPA is also interested in the NEJAC's thoughts about opportunities to complement state and federal government efforts with local and regional partnership approaches as an additional way to help address water system capacity and infrastructure needs. Water system partnerships, established as mutual arrangements between two or more community water systems, can enable communities to share expertise and combine financial and other resources (e.g., equipment, treatment plant capacity, managerial or operator expertise) in support of safe and clean water.

Select Environmental Finance Advisory Board (EFAB) members will work with the NEJAC providing their expertise and advice on matters involving financing challenges, partnership opportunities, financial and management tools and practices, capacity issues, and both traditional (such as the Drinking Water and Clean Water State Revolving Funds) and innovative financing approaches.

Specifically, EPA would like to receive advice and recommendations on the following questions:

1. Can the NEJAC verify this paper's framework of three major categories of concern? Are there additional categories of communities that should be considered?

2. What does the NEJAC understand to be the most significant challenges for overburdened or disadvantaged communities in providing for safe and clean water?
3. What insights can the NEJAC offer to states and EPA to help identify communities of concern and to set priorities for providing assistance, including consideration of vulnerable and/or overburdened communities that face public health risks from regulated or unregulated contaminants?
4. What tools and practices would the NEJAC recommend to best assist communities with the development of water system technical, managerial and financial capacity?
 - a. Can the NEJAC provide examples of how these tools and practices have been used effectively?
 - b. Can the NEJAC provide examples of innovations?
 - c. Are some practices particularly well-matched to communities within certain categories of concern?
5. What approaches and best practices would the NEJAC recommend to elicit community engagement and input, from overburdened and/or disadvantaged communities in particular, to help inform the implementation of state revolving fund programs? What steps can states and the EPA take to encourage communities to participate in state planning processes for determining 1) priorities for infrastructure financing and 2) the use of funds to deliver technical assistance and training to support water system capacity development and infrastructure project pre-development?
6. In the NEJAC's experience, what are the barriers to water system partnerships and how can they be overcome? What can EPA, working with states and communities, do to inform and encourage communities to identify partnership opportunities and enter into sustainable partnerships? What can EPA do to increase collaboration within the water sector to benefit overburdened and vulnerable communities?

II. BACKGROUND

Foundations of Safe and Clean Water: Water System Capacity and Infrastructure

The ability to ensure safe and clean water at the local level relies in large part on the acquisition, as well as the repair, rehabilitation and renewal, of physical infrastructure. Key infrastructure components include drinking water treatment plants, wastewater treatment works, pumps and pumping stations, storage, and distribution and conveyance systems. Communities can also benefit from the installation of green infrastructure to help manage wet weather runoff and protect local waterways; and from infrastructure design choices that contribute to water system sustainability and resiliency.

Equally as necessary as the infrastructure is the capacity to operate and maintain drinking water and wastewater systems for compliance, sustainability and resilience. Water system technical, managerial and financial capacity is essential to ensuring reliable service to customers and compliance with public health and environmental protection laws. Factors that contribute to a

water system's capacity to be sustainable and resilient over the long term include trained and certified operators; comprehensive asset inventories and management plans; cost-effective practices such as energy conservation; and appropriate rate structures.

Indeed, capacity is so crucial that the SDWA prohibits the use of a state's Drinking Water State Revolving Fund to finance infrastructure absent an affirmative finding by the state that the water system has adequate technical, managerial and financial capacity. Adequate capacity is necessary for a water system to realize the intended public health and environmental protection benefits of its infrastructure investments.

Thus, every community faces a two-part challenge:

- 1) To develop and maintain water system technical, managerial and financial capacity; and
- 2) To acquire, repair, replace and rehabilitate drinking water and wastewater infrastructure.

Community Challenges to Achieving Environmental Justice

Vulnerable and overburdened communities, of all sizes and in all parts of the country, can face particularly steep challenges in meeting their water system capacity and infrastructure needs. Environmental justice challenges to safe and clean water at the community level generally can be framed within three categories of concern:

- **Small, low-income communities**

The vast majority – 92% -- of the nation's 51,000 community water systems are small, serving 10,000 or fewer people; and over half of all community water systems are very small, serving 500 or fewer people. Although there is not a single set of small system characteristics, many of these small systems are likely to serve low-income, vulnerable populations. The sheer numbers of small systems can strain state resources for providing needed oversight and technical assistance.

Small systems often face a significant range of technical, managerial and financial capacity challenges. This may be further compounded by difficulties with operator training and retention. Additionally, small systems are unable to benefit financially from economies of scale available to larger systems for installation and operation of their drinking water and wastewater infrastructure.

- **Larger, economically-stressed cities**

Larger cities with overburdened populations can face significant challenges to ensuring safe and clean water. This includes cities where household incomes are generally low or population numbers are declining. Cities with population declines must grapple with shrinking rate bases without proportional decreases in water system capital needs and operating expenses. Unmet needs for infrastructure repair and replacement may be cumulative, making it ever more difficult to address a growing backlog. Additionally, distribution systems originally designed for

neighborhoods that were more populous than they are today can present challenges to providing safe water.

Water systems in economically-stressed cities are also vulnerable to shortfalls in technical, managerial and financial capacity. Inadequate capacity for a system of any size can lead to operational deficiencies and infrastructure failure.

- **Low-income households within a water system service area**

A community may experience financial stability overall, yet may have low-income households that struggle to keep up with water and sewer bills and maintain uninterrupted service. Economically-challenged households may include those managing on fixed incomes or lower incomes; as well as those that face a temporary or unanticipated crisis such as a job loss or illness. Local rate structures for water and sewer services do not always take these kinds of household differences into account.

III. TECHNICAL ASSISTANCE PROGRAMS AND INITIATIVES

State Capacity Development Strategies

The SDWA requires all states to have capacity development strategies to assist public water systems in acquiring and maintaining technical, managerial and financial capacity. All 50 states have strategies and are implementing them. The strategies and any subsequent revisions must be developed with public input. The SDWA emphasizes the importance of state capacity development strategies by requiring a 20 percent withholding of the state's Drinking Water State Revolving Fund capitalization grant if the state is not implementing its strategy. The SDWA also requires states to have new systems programs to address the capabilities of potential new public water systems.

The EPA supports states in implementing their capacity development strategies by providing training and technical assistance focused on key topics such as asset management, use of Drinking Water State Revolving Fund set-asides to build water system capacity and workforce development. The EPA also hosts national and regional capacity development workshops that bring together states and third party technical assistance providers.

Training and Technical Assistance Grants

The EPA has competitively awarded grants, pursuant to federal appropriations laws for fiscal years 2012 through 2014, at an approximate total of \$32 million to non-profit organizations for the provision of training and technical assistance to public water systems and wastewater systems located in urban and rural communities. Some of the funds were also allocated to organizations that carry out activities to assist private well owners. The EPA is in the process of awarding \$12.7 million in funds for fiscal year 2015 funds and has begun preparations to compete additional funds for fiscal year 2016.

A few examples of activities conducted by awardees under these grants include:

- National Rural Water Association efforts with five systems in South Carolina to develop a partnership and reconcile rate structure and infrastructure improvements.
- Rural Community Assistance Program work with a small community in Arizona to assist with rate setting, and financial and capital improvement planning after a devastating fire.
- Environmental Finance Center use of a Water and Wastewater Rates Analysis Model to assist a small community in New Mexico in planning a capital improvement project.

Water System Partnerships Project

Water system partnerships offer opportunities for local and regional collaboration to enhance operations and maintenance activities and share infrastructure or other costs to better support public health and environmental compliance and water system sustainability. Partnerships can range from informal arrangements (e.g., sharing equipment) to more complex arrangements that may include shared management structures. The EPA has hosted a training to raise awareness of water system partnership potential and initiate engagement among states and technical assistance providers; and is planning to begin a formal workgroup effort with states to identify and promote best practices building on existing partnership case studies.

IV. INFRASTRUCTURE FINANCE PROGRAMS AND INITIATIVES

The Drinking Water and Clean Water State Revolving Funds

The Drinking Water and Clean Water State Revolving Funds (DWSRFs and CWSRFs) are federally-authorized, state-run programs for financing water infrastructure. The SRFs are not intended to address the vast totality of infrastructure funding needs in the water sector.¹ They are, however, a critical source of funding for many drinking water and wastewater projects. To help capitalize the SRFs, EPA awards grants, using funds appropriated annually by Congress, to each of the 50 states.² States use their SRFs to assist communities by providing subsidization in the form of below-market rate financing, with interest rates as low as zero percent, for water infrastructure projects. The funds “revolve” as states make infrastructure loans which are repaid as principal with interest earnings. States use these repayment streams to make new loans.³

¹ Estimates of national drinking water and clean water infrastructure needs are currently in the range of \$660 billion. The EPA’s most recent (2011) Drinking Water Infrastructure Needs Survey identified \$384 billion in capital investment needs over 20 years. The most recent (2012) Clean Watersheds Needs Survey identified a 20-year capital investment need of \$271 billion.

² Although not a focus of this particular NEJAC engagement, it is noted that special consideration at the federal level is given to also providing funding for infrastructure for tribes and territories. The EPA provides direct grants – from DWSRF and CWSRF appropriations to assist tribes and the District of Columbia, U.S. Virgin Islands, American Samoa, Guam and the Commonwealth of Northern Marianas. Grant amounts are determined under statutory provisions. The EPA works with the Indian Health Service in administering tribal funds. Tribes may also, at their option, choose to apply to state SRFs for funding assistance.

³ State SRFs may also borrow on the bond market and use the borrowed funds to finance additional infrastructure projects. This practice, known as leveraging, can help accelerate efforts to improve public health protection and water quality in a state that has a deep “pipeline” of projects that are ready to proceed to financing and construction. A diversified loan portfolio that includes borrowers with high credit ratings can help a state leverage.

Federal law also enables states to use their SRFs to provide, within limits, additional subsidization ("addsub") which may take the form of principle forgiveness, negative interest rates or grants. In recent years Congress has required state DWSRFs and CWSRFs to apply addsub -- in varying amounts and available to all SRF assistance recipient -- under annual appropriations laws. Additionally, the SDWA allows state DWSRFs to use up to 30% of their capitalization grants as addsub for communities that the state defines as disadvantaged. Disadvantaged communities may also receive a longer loan term of 30 years compared to the DWSRF's standard 20 years.

In managing their DWSRFs, states must, by statutory direction and to the maximum extent practicable, prioritize infrastructure projects that address the most serious risk to human health; are necessary to ensure compliance with the SDWA; and assist systems most in need on a per household basis according to affordability criteria established by the state. The SDWA restricts DWSRF infrastructure financing to existing public water systems, with two exceptions, as follows. Funds can be used to create a new community water system to address existing public health problems with serious risks caused by unsafe drinking water provided by individual wells or surface water sources. Funds can also be used to create a new regional community water system by consolidating existing systems that are experiencing technical, managerial or financial difficulties. These solutions must be cost-effective and applicants must have considered alternative solutions to addressing the problem. Capacity to serve future population growth cannot be a substantial portion of these projects.

Projects that are eligible for CWSRF financing include projects that are part of a publicly-owned treatment works, as well as a range of projects to protect waterways from nonpoint source pollution and to conserve and manage estuaries. The CWSRF can also provide assistance for stormwater management. Additionally, the CWSRF can assist with the construction, repair, replacement and upgrade of decentralized wastewater treatment systems that treat municipal wastewater or domestic sewage.

Both the DWSRF and the CWSRF are able to address sustainability and resiliency through projects or project design features that provide for water conservation, efficiency and reuse; energy efficiency; and security measures at public water systems and publicly owned treatment works. In addition, states can use both SRFs to assist with project pre-development activities (including project planning, design and application for financing) through their financing authorities, as well as through provision of direct technical assistance.

In addition to providing financing for infrastructure projects, the SDWA allows states to set aside up to 31% of their DWSRF capitalization grants for various activities that support safe drinking water -- for instance, assisting with the early stages of project development or helping water systems build technical, managerial and financial capacity. These activities complement the infrastructure loan fund's role in protecting public health.

When considering these various flexibilities, it is important to note that under federal law states must ensure that their DWSRFs and CWSRFs will be available in perpetuity for purposes of providing financial assistance. Thus, states must manage their SRF portfolios to ensure adequate

repayment streams. States also need to consider the statutory requirements for perpetuity when making decisions about addsub and set-aside usage.

Decision-making for these complex programs is conducted in an open manner. The SDWA and the CWA require state SRF programs to develop Intended Use Plans (IUPs) as part of the annual grant application process. The IUP must describe the state’s plans for utilizing its funds. EPA reviews every state’s IUP as the basis for awarding capitalization grants. As part of IUP development, states must provide for public review and comment and must also issue detailed reports every year or other year on how they implemented their IUPs.

Water Infrastructure and Resiliency Finance Center (WIRFC)

EPA’s Water Infrastructure and Resiliency Finance Center (Water Finance Center) was created in January 2015 to identify water infrastructure financing approaches that help communities reach their public health and environmental goals. The Water Finance Center is an information and assistance center, helping communities make informed decisions for drinking water, wastewater, and stormwater infrastructure to protect human health and the environment. The Water Finance Center’s strategic goals include:



The Water Finance Center is engaged in a number of activities to further these strategic goals. Activities to address funding and financing for communities in need include:

- **Customer Assistance Programs (CAPs) Compendium**

The Water Finance Center collaborated with national water sector associations to develop a compendium of Customer Assistance Programs (CAPs) offered by drinking water and wastewater utilities to low-income customers. These programs (e.g., bill discounts, special rate structures) enable all customers access to drinking water delivery and wastewater removal services while still allowing utilities to cover the costs of providing

services. CAPs help address affordability concerns for individual households. Compendium available at: <http://ow.ly/4nvSyO>

- **Community Assistance for Resiliency and Excellence (WaterCARE) Program**

The Water Finance Center is providing financial planning assistance to 10 mid-sized communities to increase financial capabilities during the predevelopment stages of water infrastructure investments. Participating communities have a population size of less than 100,000, an immediate public health need, a low median household income, and/or other measure of need. This WaterCARE project is providing financial assessments to help these communities plan for future efficient/affordable water infrastructure investments.

WaterCARE communities include:

- i. Buchanan County, Virginia
- ii. Confederated Salish and Kootenai Tribe (Montana)
- iii. Gatesville, Texas
- iv. Haines Borough, Alaska
- v. Hoopa Valley Tribe (California)
- vi. Johnston, Iowa
- vii. Lawrence, Massachusetts
- viii. Selma, Alabama
- ix. The Township of South Orange Village, New Jersey
- x. Youngstown, Ohio

WaterCARE communities can be found at: <http://ow.ly/T5fm3003nKl>

- **Funding Coordination for Communities in Need**

The Water Finance Center is working with drinking water and wastewater programs within the Office of Water to collaborate more broadly with the larger federal family to share best practices in funding and financing approaches for economically challenged and environmental justice communities. A convening will be held in July 19, 2016 in Washington, DC. A compilation of funding coordination examples will be researched.

- **Environmental Finance Centers (EFCs)**

The Water Finance Center works with the regional based Environmental Finance Centers (EFCs) to provide technical assistance, administer training, and develop tools for environmental needs. The EFCs deliver targeted technical assistance to, and partner with states, tribes, local governments, and the private sector in providing innovative solutions to help manage the costs of environmental financing and program management. Projects are focused on both EPA region and HQ priorities.

- **Environmental Financial Advisory Board (EFAB)**

EPA's Water Infrastructure and Resiliency Finance Center seeks advice from financial experts through EPA's FACA, the Environmental Financial Advisory Board (EFAB), for

a wide range of finance topics including household affordability, small system financial capacity, funding approaches for predevelopment/planning, and stormwater financing.

Other Federal Programs

Other federal funding sources for drinking water and wastewater infrastructure include:

- **U.S. Department of Agriculture (USDA), Rural Development, Water and Environmental Program (WEP)**

USDA Rural Development Water and Environmental Program (WEP) offers financing to rural communities with populations of 10,000 or less to develop, construct or improve water and wastewater infrastructure. WEP also provides funding to organizations that provide technical assistance and training to rural communities for water and wastewater activities.

<http://www.rd.usda.gov/programs-services/all-programs/water-environmental-programs>

- **U.S. Housing and Urban Development (HUD), Community Development Block Grants (CDBG)**

HUD funds local community development activities through the CDBG program to expand economic opportunities, principally for low and moderate income areas. The program can fund drinking water and wastewater projects. Program areas include:

- The State Administered CDBG Program focuses on smaller communities, including cities with a population under 50,000 and counties with a population under 200,000.
- The CDBG Entitlement Program allocates annual grants to cities with a population of at least 50,000 and urban counties of at least 200,000.

http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs

- **U.S. Department of Commerce, Economic Development Administration (EDA)**

Commerce supports development in economically distressed areas of the U.S. through strategic investments that foster job creation and attract private investment. The Economic Development Administration (EDA) Public Works Program helps communities in economic decline upgrade their physical infrastructure, including drinking water and wastewater facilities. EDA grants can underwrite planning and construction costs for projects in these areas that lead to job creation in the community.

<http://www.eda.gov/funding-opportunities/>