

Financing Green Stormwater Infrastructure for Resilient Small, Rural, and Tribal Water Systems

February 4, 10am PT / 1pm ET



Financing Green Stormwater Infrastructure for Resilient Small, Rural, Systems

Q&A

You ask: 13:05
How do I use these awesome tools?

Joshua Jones answered: 13:06
You are already using one of the most awesome tools. We'll discuss the rest right away.

Please input your question

Send Anonymously Send

February 4, 10am PT / 1pm ET



Certificate of Completion

This session has NOT been submitted for pre-approval of Continuing Education Credits, but eligible attendees will receive a certificate of attendance for their personal record.

To receive a certificate:

- You must attend the entire session
- You must register and attend using your real name and unique email address - group viewing credit will not be acceptable
- You must participate in polls
- Certificates will be sent via email within 30 days

If you have questions or need assistance, please contact smallsystems@syr.edu.

About Us

The [Environmental Finance Center Network \(EFCN\)](#) is a university- and non-profit-based organization creating innovative solutions to the difficult how-to-pay issues of environmental protection and water infrastructure.

The EFCN works collectively and as individual centers to address these issues across the entire U.S, including the 5 territories and the Navajo Nation. The EFCN aims to assist public and private sectors through training, direct professional assistance, production of durable resources, and innovative policy ideas.





WaterNow works to advance transformation in the urban water sector to accelerate the widespread adoption of equitable, climate resilient and environmentally sustainable strategies.

We do this as a national network for local water leaders and decision makers, empowering them with the technical assistance, resources, and tools they need to implement innovative One Water drinking water, stormwater, and wastewater solutions in their communities.





WHAT DO WE MEAN BY SUSTAINABLE?

Providing safe, healthy, and affordable water services for people while preserving the integrity of water resources and the environment for future generations





WHAT DO WE MEAN BY EQUITABLE?

Water equity means universal access to secure, affordable, safe, and healthy drinking water, and wastewater and stormwater management services.

Equitable water infrastructure investment should support the long-term sustainability of our waterways, water systems, and utilities



PLEASE COMPLETE OUR SURVEY!



 **waternow** alliance
water leaders. resilient solutions.

AGENDA

- Meet Today's Speakers
- GSI Impact Hub: What is it and how can it help?
- Leveraging State Revolving Funds
- Get Technical Assistance
- Audience Q&A



TODAYS SPEAKERS



Janet Clements
President & Founder
One Water Econ



Caroline Koch
Water Policy Director
WaterNow Alliance



Andrew Teegarden
Water Policy Associate
WaterNow Alliance

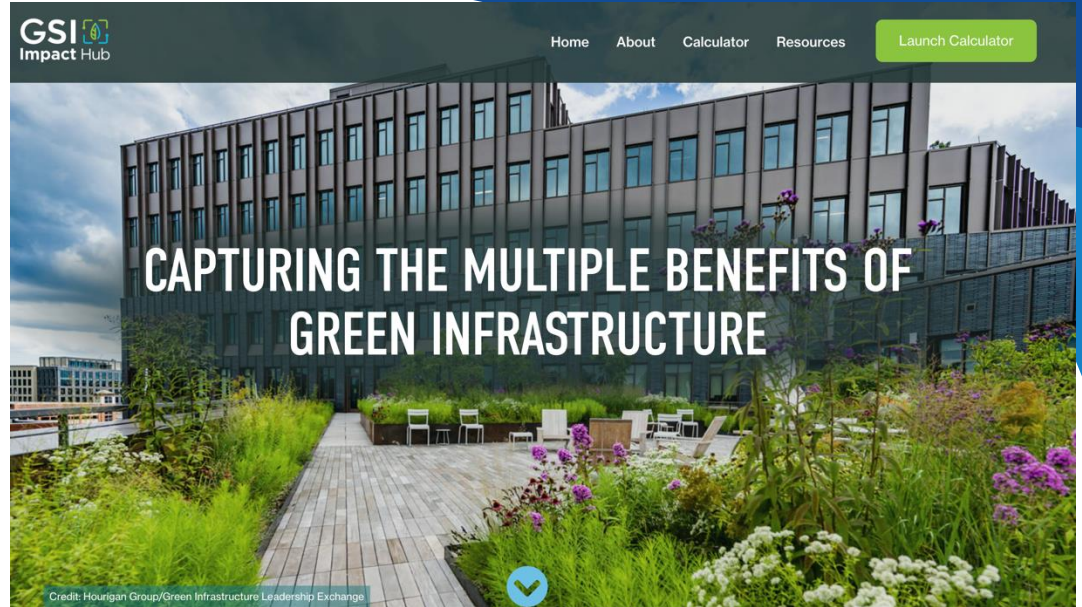
**Time for
a poll!**



GSI Impact Hub: What is it and how can it help?

Janet Clements

President & Founder
One Water Econ





Capturing the Multiple Benefits of Green Stormwater Infrastructure (GSI)

October 30, 2024

Green Stormwater Infrastructure

“... range of measures that use plant or soil systems, permeable pavement, stormwater harvest and reuse, or other approaches to store, infiltrate, or evapotranspirate stormwater and reduce flows to sewer systems or to surface waters.”



Financial Aspects of GSI

Costs vs. revenues

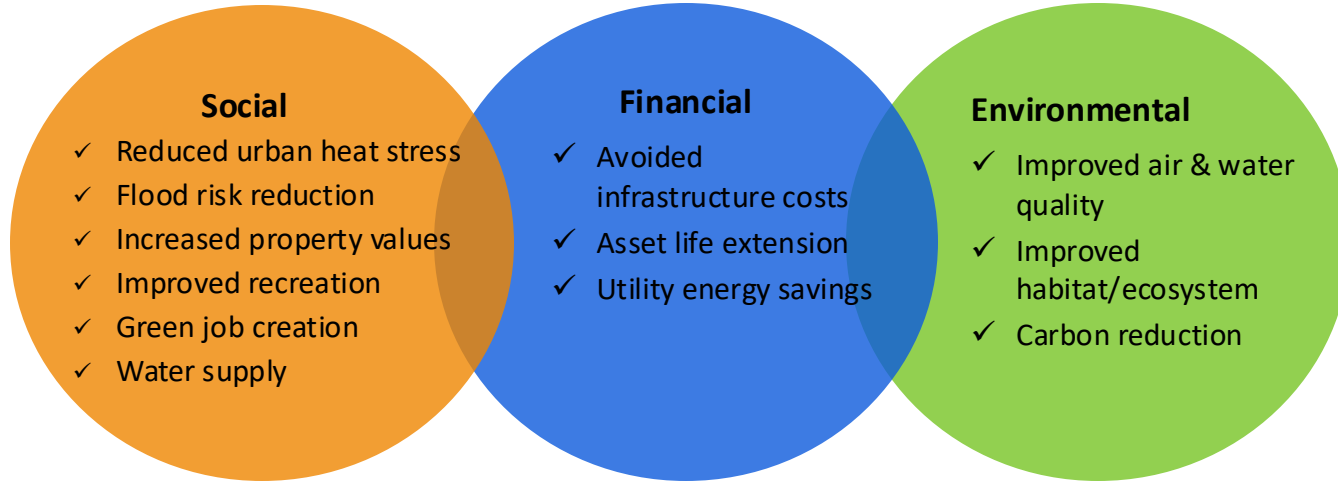
Cost effectiveness

- \$/lb of pollutant removal
- \$/acre managed
- GSI not always as cost-effective as traditional approaches



Economic Aspects of GSI

A broader *economic* (TBL) perspective can reveal that GSI provides greater benefits for communities.



What is Triple Bottom Line Analysis?

Comprehensive **benefit-cost analysis** that accounts for:

- *financial*
- *social*
- *environmental*

benefits and costs of a project or program **over time**, and to **whom they accrue**.



Suite of GSI Co-Benefit Resources

- Five Co-benefit Guides
 - Urban Heat Reduction
 - Flood Risk Reduction
 - Urban Habitat and Biodiversity
 - Green Jobs and Economic Development
 - Transportation Enhancement
- Compendium of GSI co-benefits evaluation tools
- New, “block-level” calculator



Focusing on Framework and Methods

- General framework applicable across wide range of natural assets
- Additional resources:
 - *WRF 4852: Economic Framework and Tools for Quantifying and Monetizing the TBL Benefits of GSI*
 - *WRF 5246: Quantifying the Performance of Source Water Protection Measures to Improve Utilities' Decision Making*
 - *WRF 5253: Maximizing the Value of Natural Assets and Green Infrastructure at the Watershed Scale.*



Co-Benefits Calculator

Welcome

Define Scenario

Refine GSI Portfolio

Evaluate Benefits

Review Costs

Explore Results

Welcome to the GSI Impact Calculator!

This calculator allows you to quantify and monetize the multiple benefits, or co-benefits, associated with green stormwater infrastructure (GSI) projects early in the planning process. Users can input information at the block level to determine recommended GSI Best Management Practices (BMPs) and estimate associated benefits and costs from proposed projects that extend beyond typical water quality and quantity goals. The calculator incorporates the following benefit categories:

 Avoided Infrastructure Costs

 Avoided Replacement Costs

 Energy Savings

 Water Supply

 Air Quality

 Property Values

 Ecosystem

 Heat Stress

 Recreation

 Water Quality

 Green Jobs

 Carbon Sequestration

Visit [GSI Impact Hub](https://www.gsiimpacthub.org) to learn more about the multiple benefits of GSI and designing stormwater projects for the greatest impact.

PROCEED

www.gsiimpacthub.org

Use Case: Garfield Heights, Cleveland, OH

Project Goals

The overall goals of the Garfield Boulevard Reconstruction & Trail Project are simple: strengthen access, enhance safety, encourage reinvestment, and improve stormwater management practices along Garfield Boulevard. This project will transform the corridor and drive economic development efforts forward by attracting businesses and visitors to the community.



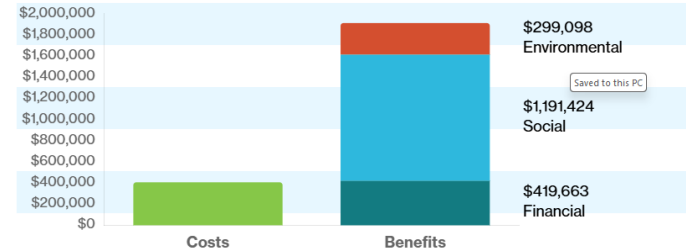
GSI IMPACT - SUMMARY OF BENEFITS AND COSTS

Garfield Heights

This summary of benefits and costs was determined using the [GSI Impact Calculator](#). The calculator users to quantify and monetize the multiple benefits, or co-benefits, associated with green stormwater infrastructure (GSI) projects. This tool is intended for use in the early stages of project planning; it provides a high-level estimate of expected benefits and costs.

Present Value Benefits and Costs

Over the 30-year analysis period, total present value benefits amount to \$1,910,185, or an average of \$63,673 per year. This compares to total present value costs of \$405,718, including capital and maintenance costs over time.



Note: present value benefits and costs are calculated using a discount rate of 2%

Highlights

**371%
ROI**


The project's return on investment (ROI), which is the total present value benefits divided by total costs, is estimated to be \$4.71 for every \$1 invested.

**\$63,673
Annual Benefits**


The GSI Scenario will result in \$63,673 in average annual benefits over the 30-year analysis period.

Top 3 Co-benefits

Property Values

 \$572,854

Heat Stress

 \$494,221

Avoided Infrastructure Costs

 \$406,088

**Time for
a poll!**



GSI Impact Hub

Capturing the Multiple Benefits
of Green Infrastructure



www.gsiimpacthub.org



Leveraging State Revolving Funds

Caroline Koch

Water Policy Director
WaterNow Alliance

Challenges

- Lack of infrastructure
- No access to wastewater and stormwater services
- Limited financial resources
- Impacts of severe weather
- Geographically dispersed population
- Difficulty attracting, training, or retaining system operators

Water and Climate Equity in Rural Water Systems in the United States



<https://pacinst.org/publication/water-and-climate-equity-in-rural-water-systems-in-the-united-states/>

Potential Part of the Solution: Clean Water State Revolving Funds

- Largest source of federal funding for water infrastructure
- Flow of funding: Congress → EPA → States and Tribes → Cities / Water Utilities / Communities
- 51 Clean Water SRFs nationwide

Clean Water SRFs

Since
1998



ASSISTANCE PROVIDED:
\$172 Billion
(with \$52.4B in federal investments)

DISBURSEMENTS:
\$151.3 Billion

ASSISTANCE AGREEMENTS: 48,915

Since 1988,

12%

of assistance agreements went to state-defined disadvantaged communities

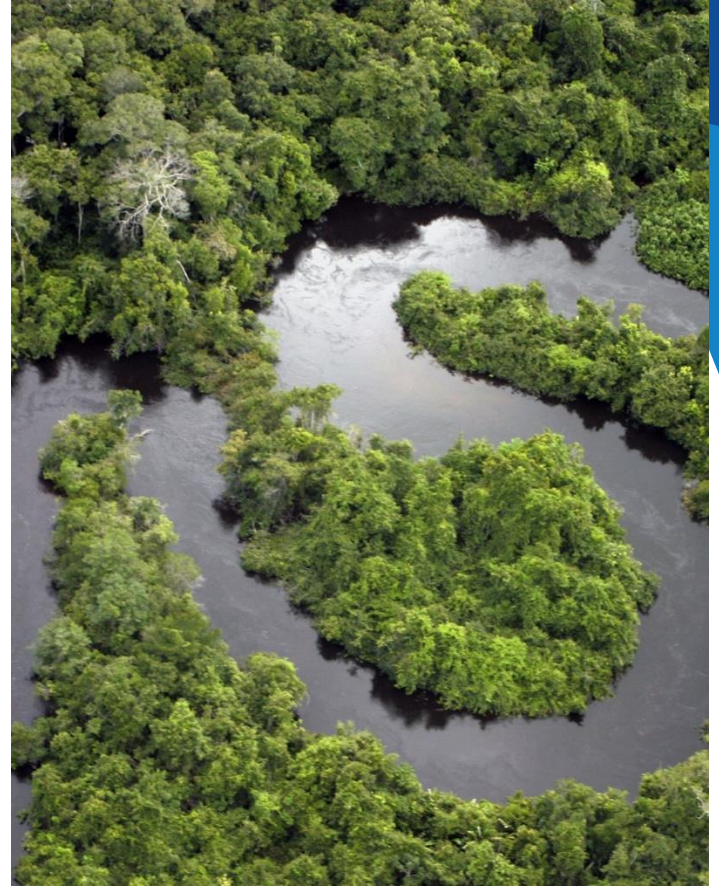


Purpose & Eligibility

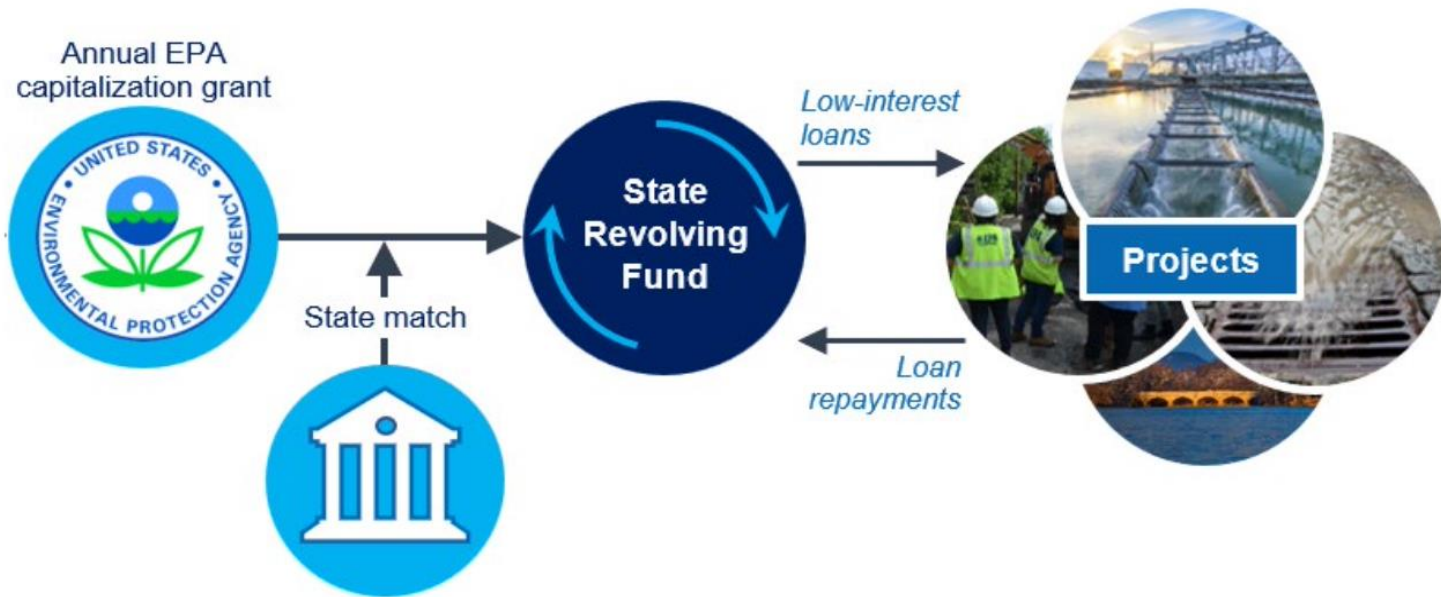
Provide **low-cost financing** for projects that address **highest priority water quality needs**

Finance a **broad range of water-quality focused projects**, including:

- Wastewater
- Stormwater
- Non-point source pollution
- Water use efficiency
- Green infrastructure



How Does the Clean Water SRF Work?



How Does the Clean Water SRF Work?



**Time for
a poll!**



Increasing Access to the Clean Water SRFs

Pathways for Rural, Small & Tribal Systems

- Principal forgiveness
- Lower interest rates
- Longer repayment terms
- “Green” project incentives
- Tribal set-aside
- Technical assistance

Principal Forgiveness

- Portion of CWSRF financing that does not need to be repaid
- Available for “Disadvantaged communities”
- Amount of principal forgiveness determined during loan approval process — not always part of application phase
- State may cap loan amount eligible for principal forgiveness

Key to accessing principal forgiveness is understanding your state’s disadvantaged community definitions and determinations

Affordability Criteria for Small / Rural Systems

Example: Texas SRFs

- Annual MHI $\leq 75\%$ of state
- Household Cost Factor, i.e., income, unemployment rates, and population trends must be $\geq 1\%$ if only water or sewer or $\geq 2\%$ if both water and sewer

Clean Water SRF Interest Rates: The Big Picture

States are authorized* to make loans on the condition that:

“the interest rate for each loan is **less than or equal to the market interest rate**, including an interest free loans”

*Source: 42 U.S. Code § 1383 – Water pollution control revolving loan funds

National CWSRF loan average interest rate

1.46% (2023)

State CWSRF Administrators define “market rates.”

Options for Lowering Your Interest Rate

- Rate reductions based
 - Median household income
 - Local user rates
- Example - New Mexico
 - 0% when per capita income (PCI) <75% of statewide avg.
 - PCI and wastewater system rates >1.82% of PCI

Longer Repayment Terms

- Repayment period up to 30-40 years
- Extended timeline helps keep reduce payment amounts
- Example – West Virginia
 - Offers disadvantaged communities up to 40 years to repay
 - Community must meet state-specific criteria

Must not exceed the project's useful life

“Green” Project Incentives

- Green Project Reserve requires **at least 10%** of CWSRF funds are spend on green projects
- GPR eligible projects are those that incorporate
 - Green infrastructure
 - Water and energy efficiency
 - Other environmentally innovative activities
- Benefits of applying for CWSRF loans for green projects include **priority scoring, reduced interest rates**, and/or **principal forgiveness**

Includes implementation of consumer incentive programs

Example: Village of Williamsville, New York

- Small system serving **5,458**
- Challenge – erosion and sedimentation
- Solution – Clean Water SRF grant for green infrastructure

\$799,160 grant from the **New York CWSRF**



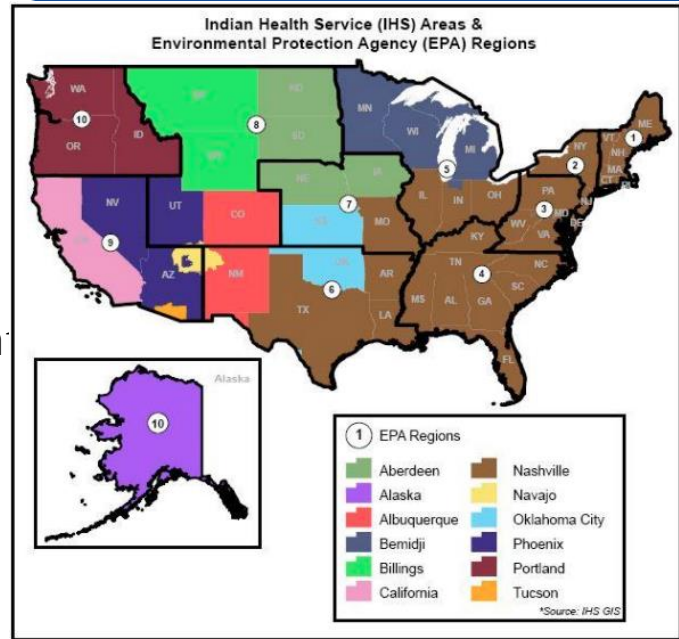
Clean Water Indian Set-Aside Program



- Sets aside 2% of annual Clean Water State Revolving Fund federal appropriation, i.e., \$69 million in FY24
- Funds wastewater infrastructure projects, encourages sustainability
- Can cover up to 100% of eligible project costs; no match or repayment required

How Does the Set-Side Program Work?

- Administered by EPA and Indian Health Services Sanitation Facilities Construction Program
 - Each EPA region has a region-specific program
 - Coordinates with other federal partners via Tribal Infrastructure Task Force
- Funds are allocated by region proportionate to need
- Projects must be included in the Sanitation Deficiency System database and on the priority list



Get Technical Assistance

Andrew Teegarden
Water Policy Associate
WaterNow Alliance



How can Technical Assistance can help you?



Technical Assistance (TA): Targeted support that external experts or consultants provide to ensure a project application, process, or outcome is achieved. Technical assistance may include financial, legal, engineering, communications, grant writing, environmental assessments, and other services, including community engagement. Applicants and recipients can receive TA prior to preparing an SRF application, during the application process, and while the project is underway.

Technical Assistance Options Overview

WaterNow can provide technical assistance for RST systems in a variety of ways:

- Direct assistance for participating RST systems
- External Partnership with the Southwest Environmental Finance Center
- Project Accelerator Initiative
- Tap into Resilience Pilot Project
- Colorado State Revolving Fund Technical Assistance Program
- Assistance for all RST systems through this initiative

Specialized Technical Assistance for Rural, Small, Tribal System

- Pro bono support for wastewater and stormwater systems serving $\leq 10,000$
- National scope – utilities in all states and regions are eligible



About Us ▾ Training & Events Resources ▾ Our Initiatives Contact

Get Help



Get Help

Tackle Your Technical, Managerial, and Financial Challenges: Services from the EFCN

We offer free, customized support services to water and wastewater systems, decentralized systems, local governments, and others seeking technical, managerial, and financial (TMF) solutions to environmental infrastructure challenges. Our team of experts work hand-in-hand with operators, elected officials, utility directors, and other utility staff to identify barriers and address challenges head-on.

Request Help Now

<https://efcnetwork.org/get-help/>

Available Types of Technical Assistance

- ✓ Identifying funding and financing options
- ✓ Support with putting together Funding Applications
- ✓ Legal and Policy Research
- ✓ Training and Outreach
- ✓ Developing external partnerships for project implementation
- ✓ Creating education materials for utility board and staff

Region 6 Environmental Finance Center (EFC)

WaterNow has partnered with the Southwest Environmental Finance Center to help RST systems in EPA Region 6 plan, develop, and acquire funding for projects under the CWSRF program

What Services does the EFC Offer?

- Evaluating System Needs
- Community Engagement
- Project Development
- Technical Assistance and Capacity Building
- Finance and Funding
- Construction Management

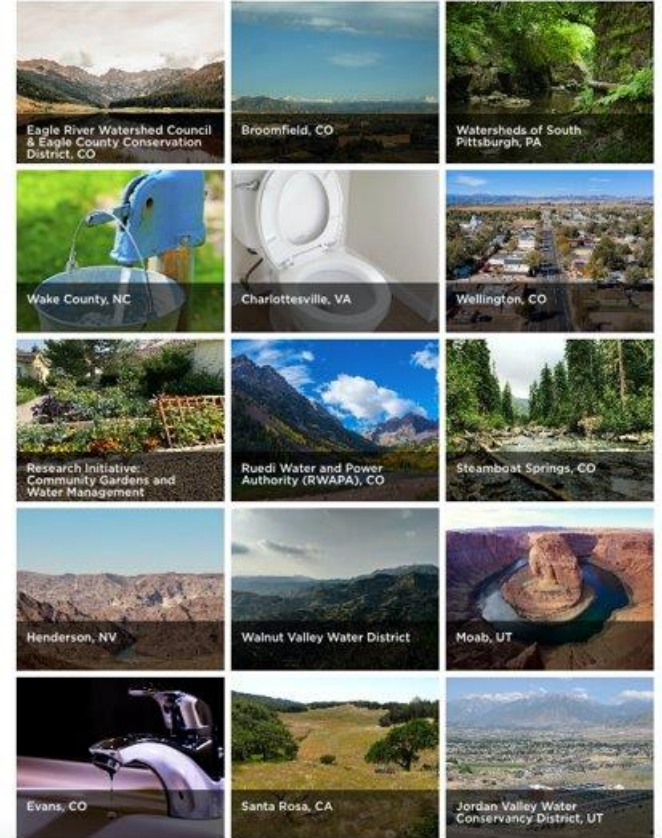


Submit an [Intake Form](#) today to find out how they can help you!

Project Accelerator Support

- 250 hours of [pro bono technical assistance](#)
- Over a [6-9 month](#) period
- City/Agency identified project, driven by [local priorities](#)
- [Jump start](#) innovative water management initiatives

FEATURED PROJECTS



Technical Assistance for Accelerating Investments in Sustainable Projects

Become a TiR Pilot Community

Ready to bring your localized water infrastructure strategies to scale? Become a TiR Pilot Community!

WaterNow and our TiR Experts are available to provide up to **300 hours of hands-on technical support** to cities and utilities interested in activating and scaling-up innovative water strategies in their communities to address water security challenges. TiR communities have access to legal, policy, finance, and accounting expertise over a **6-12 month period, free of charge**, to help them strategize the full scale financing of their particular localized infrastructure project.

Benefits include:

- Access to a team of financing, bond, tax, and accounting experts to identify and execute on financing options.
- Tailored research and analysis on using debt financing mechanisms to pay for localized infrastructure.
- Facilitation of stakeholder meetings to build consensus on localized infrastructure financing options.
- Support on developing bond packets, capital improvement plans, city council resolutions, ordinances, or other materials to advance full scale localized infrastructure financing.
- Guidance on best practices for communicating with customers about localized infrastructure.
- Become a national leader on sustainable water management.

To find out more about becoming a TiR Pilot Community fill out this short form, and WaterNow staff will be in touch.

Colorado State Revolving Fund Technical Assistance Program



New
Program!

- **Drinking Water Revolving Fund**
- **Water Pollution Control Revolving Fund**

- GSI, indoor and outdoor water efficiency, water reuse, source watershed protection, lead service line replacement
- One-on-one consulting hours, resources, webinars, in-depth application support, and more!

Getting Started

Planning
Your Project

Designing
Your Project

Receiving
Your Loan

Building
Your Project

Additional Non-WaterNow Tribal Technical Assistance

- Tribal water providers can receive technical assistance free of charge from the [Inter Tribal Council of Arizona](#)
- Other Tribal assistance providers include: [Inter-Tribal Council of Nevada, Native American Water Association](#) and [United South & Eastern Tribes](#)

The background of the slide is a dense, overlapping collage of rectangular sticky notes. The notes are in various shades of blue, teal, and light green. Each note has a large, dark blue question mark printed on it. The notes are scattered across the frame, creating a textured, busy appearance.

Q&A

JOIN THE ALLIANCE

LEARN MORE AND SIGN UP

www.waternow.org/join-the-leaders



PLEASE COMPLETE OUR SURVEY!



 **waternow** alliance
water leaders. resilient solutions.

CONTACT THE PRESENTERS

Janet Clements – jclements@onewaterrecon.com

Caroline Koch– cak@waternow.org

Andrew Teegarden – ateegarden@waternow.org

THANK YOU!



For more information email:

[Caroline Koch, cak@waternow.org](mailto:cak@waternow.org)

Andrew Teegarden,
ateegarden@waternow.org



Resources:

<https://efcnetwork.org/>