



Smart Management for
Small Water Systems

A Conversation Regarding Coronavirus (COVID-19) and How it Might Affect Your Small Water System's Finances & Management

April 8, 2020

www.efcnetwork.org



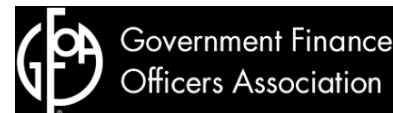
SCHOOL OF GOVERNMENT
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Logistics

Opening the control panel



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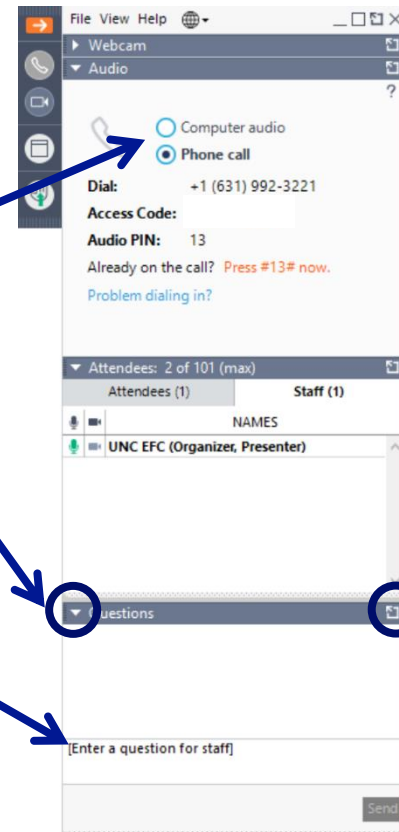
Using the control panel


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Submit **questions** in the Questions box at any time, and press [Send]



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- **You must attend the entire 1 hour session**
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If you have questions or need assistance, please contact *smallsystems@syr.edu*.



About Us

The Environmental Finance Center Network (EFCN) is a university-based organization promoting innovative and sustainable environmental solutions while bolstering efforts to manage costs.

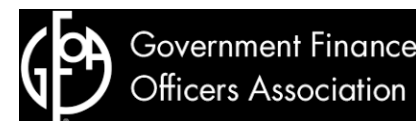


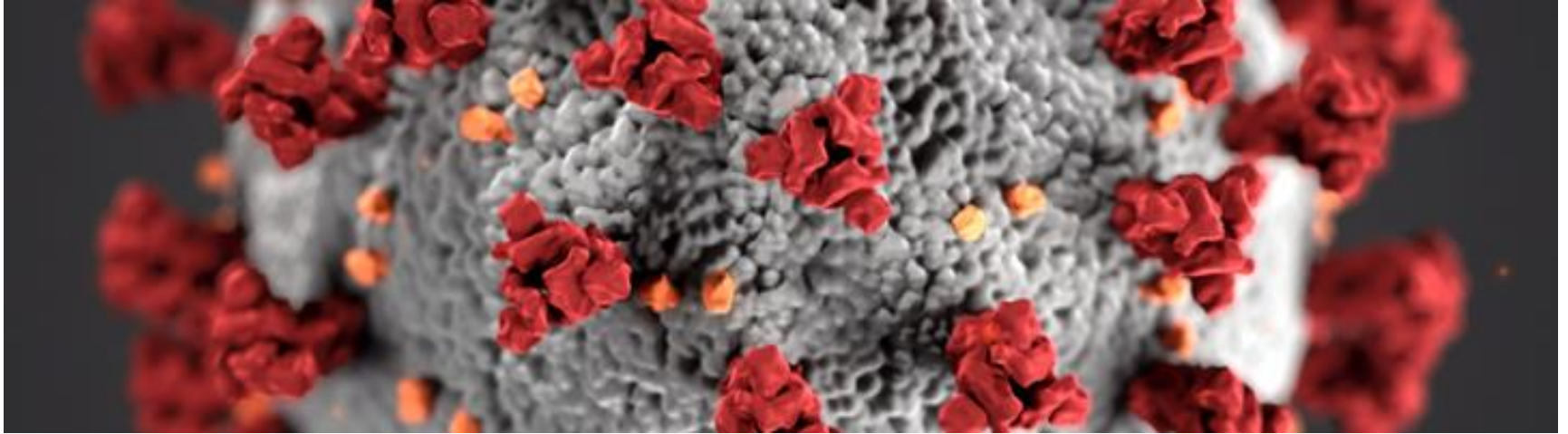
**Smart Management for
Small Water Systems**

The Smart Management for Small Water Systems Program works in every state, territory, and the Navajo Nation. All small drinking water systems are eligible to receive free training and technical assistance.

The Small Systems Program Team

- Environmental Finance Center at The University of North Carolina at Chapel Hill
- Environmental Finance Center at Wichita State University
- EFC West
- Government Finance Officers Association (GFOA)
- Great Lakes Environmental Infrastructure Center
- National Association of Development Organizations (NADO)
- New England Environmental Finance Center at the University of Southern Maine
- Southwest Environmental Finance Center at the University of New Mexico
- Syracuse University Environmental Finance Center
- Environmental Finance Center at the University of Maryland
- Rural Community Assistance Corporation
- Environmental Finance Center at California State University, Sacramento





A Conversation Regarding Coronavirus (COVID-19) and How it Might Affect Your Small Water System's Finances & Management

Presenters:

Shadi Eskaf, Research Director, Environmental Finance Center at the University of North Carolina at Chapel Hill

Heather Himmelberger, Director, Southwest Environmental Finance Center

Erin Riggs, Senior Project Director, Environmental Finance Center at the University of North Carolina at Chapel Hill

Topics



Helping customers keep access to water



Loss of revenues



Financial relief and how to deal with revenue losses



What you can do now and prepare for in system operations



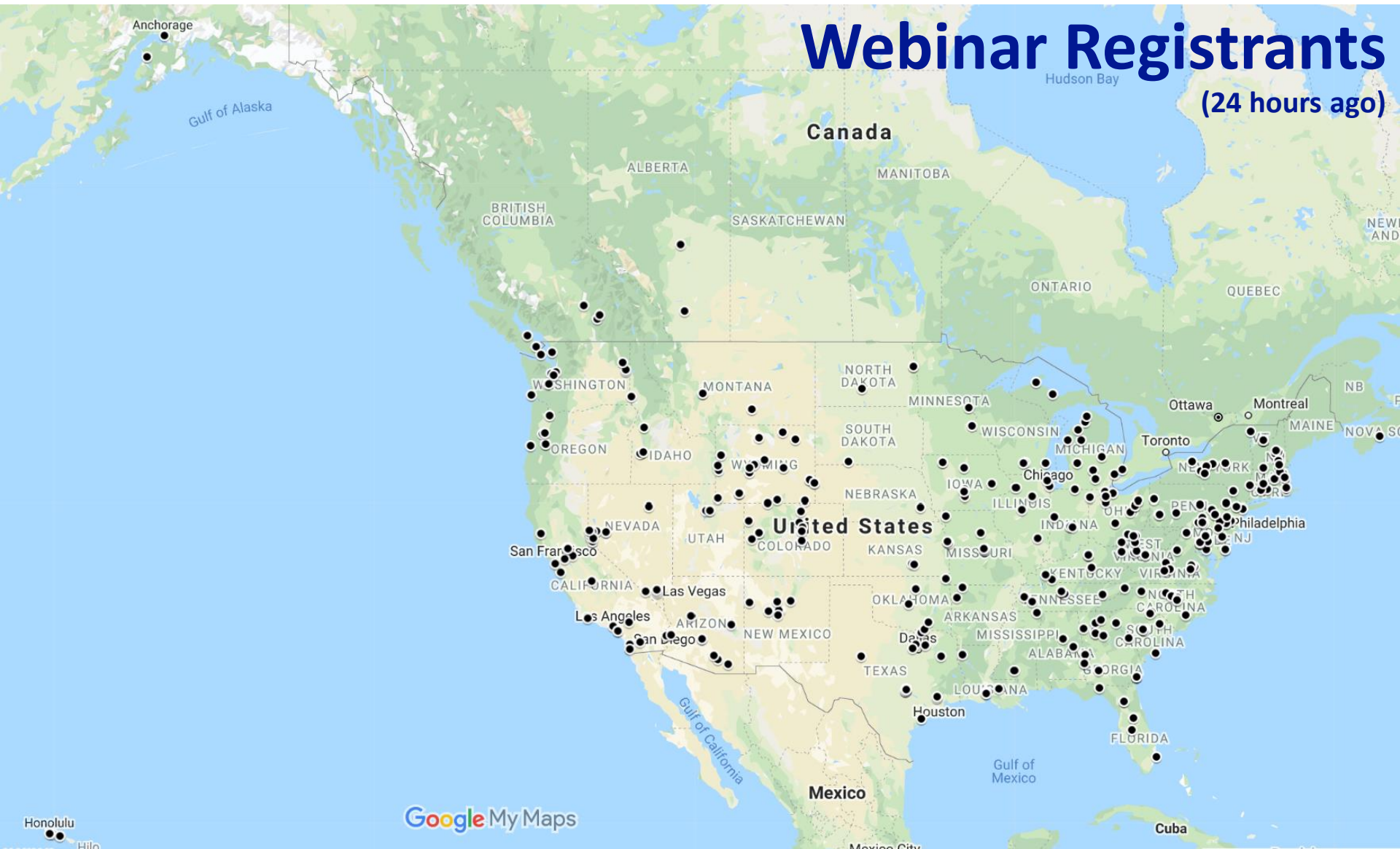
Resilience measures in a pandemic



Assistance and resources



YOUR QUESTIONS





**Helping Customers Keep Access
to Water**



Common Practices

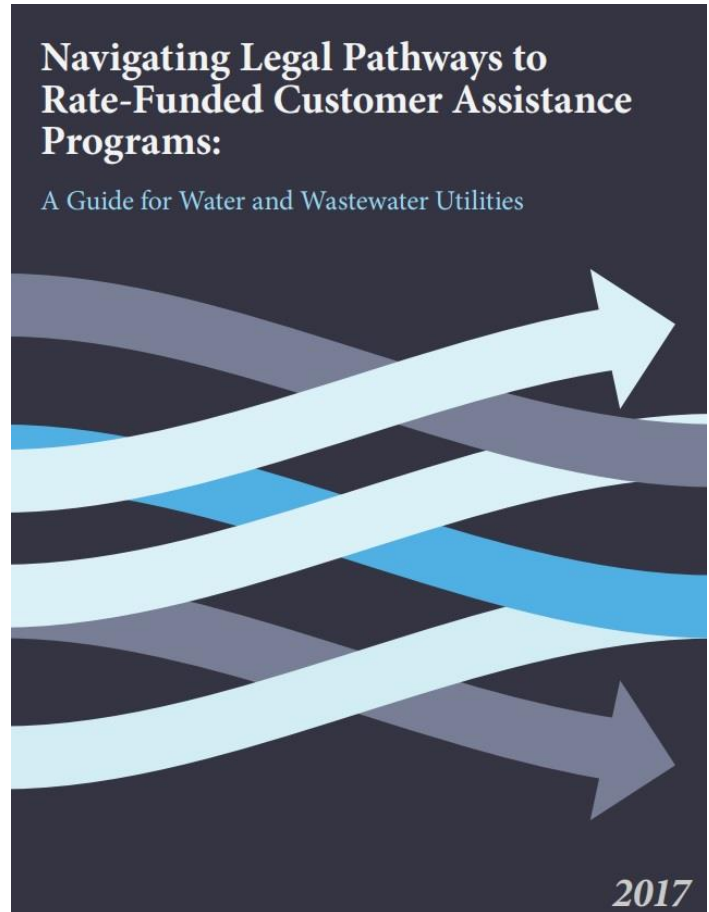
- Suspending cutoffs due to non-payment
- Reconnecting cutoff customers
- Waivers of late fees and penalties
- Collections:
 - Extended payment plans
 - Alternative payment methods
 - What happens after?
- Customer assistance programs



Customer Assistance Programs

How to fund a customer assistance program?

<https://efc.sog.unc.edu/resource/navigating-legal-pathways-rate-funded-customer-assistance-programs-guide-water-and>





**Poll: have you suspended
disconnections?**



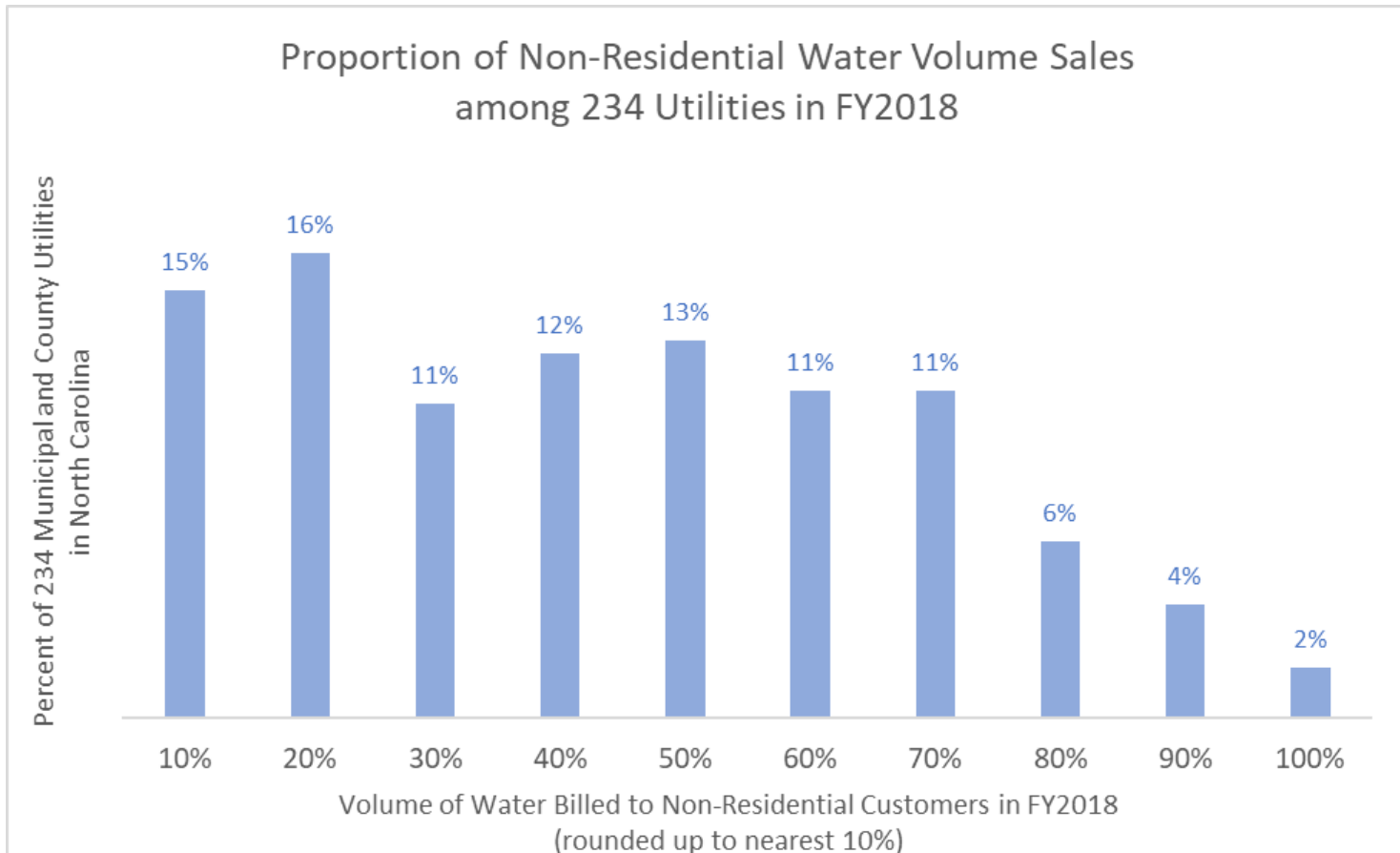
Loss of Revenue



Effects on Revenues

- Suspension of cutoffs, late fees, penalties
- Extension of payment plans
- Inability to pay (affordability) likely to increase
- Water use changes:
 - Commercial: decreasing
 - Residential: increasing

Non-Residential Sales by Volume



Analysis by the Environmental Finance Center at the University of North Carolina, Chapel Hill.

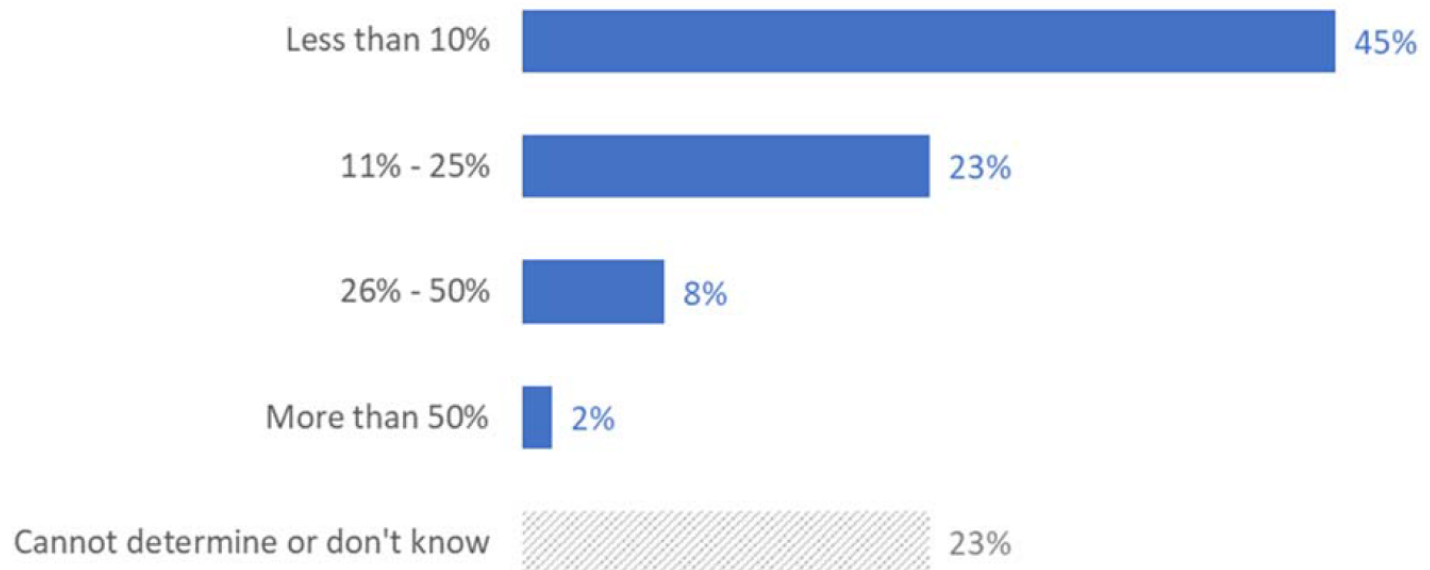
Data Source: North Carolina Department of State Treasurer, State and Local Government Finance Division: AFIRs from Municipal and County governments in FY2018.



Revenues from Largest Customers

34) What percentage of your utility's total annual revenue is normally billed to your 5 largest non-wholesale customers (i.e. the five largest industrial or commercial customers, but NOT sales to other utilities)?

Utilities are most likely to bill **less than ten percent** of their total annual revenue to their five largest non-wholesale customers (n = 190).





Poll: how are your revenues affected?



Financial Relief and How to Deal with Revenue Losses



Is there Financial Relief?

- Current federal stimulus bills?
 - CARES?
 - Payroll Protection Plan (non-governmental)?
- Future federal stimulus?
- Debt forgiveness or flexibility?
- State assistance?



Local Options

- Manage your costs
- Track your revenue losses
- Use your reserves
- Make use of low-interest loans
- Check in with funding programs
- Re-examine and adjust rates in the future

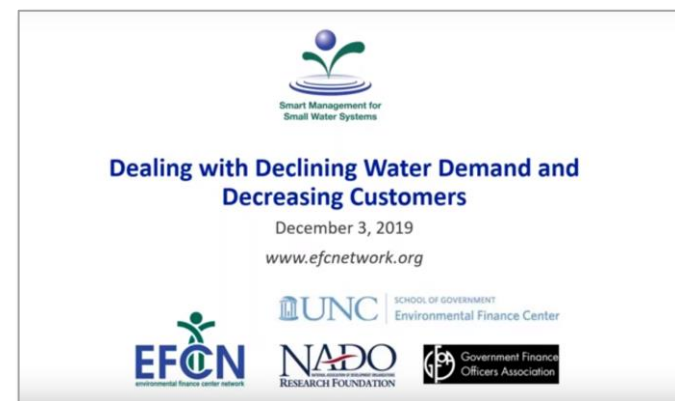


Financial Strategies in Dealing with Declining Demands (Revenues)

Discussed in a Dec 2019 Recorded Webinar

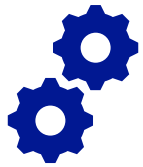
- Reduction and management of operating costs
- Management of capital expenditures
- Build up reserves
- Revenue enhancement
- Rate adjustment approaches
- Alternative rate designs
- Financial performance targets

<https://efcnetwork.org/events/webinar-dealing-with-declining-water-demand-and-decreasing-customers/>





Poll: how long can you pay expenses?



What You Can Do Now and Prepare for in System Operations



Asset Management Amid Corona Virus

- Consider the scenario of another operator being required to fill in for an operator who is either sick or in quarantine. The outside operator may not have any familiarity with the system and it may be very difficult for the usual operator to help with asset knowledge.
 - Do you have a map of your assets?
 - If yes, is it accessible to a new operator? Can you leave instructions on how to access it? Can you print one out or print it in segments and leave it out?
 - If no, can you very quickly make up a map, even a very simple, hand-drawn one that can help if you become incapacitated or otherwise unable to work? There are lots of on-line tools to help. You can also reach out to SW EFC for help on how to generate a simple map



Asset Management Amid Corona Virus

- Some employees are working from home and may be able to work on asset management plans during this time
- Asset management data collection can be done by one person at a time so social distancing can be practiced while developing an asset management plan
- Developing maintenance plans can be vitally important right now to keep equipment running during this pandemic. You don't want to have to call in repair teams or contractors or have to order new equipment if you can at all help it



Operation & Maintenance Plan Amid Corona Virus

- Do you have an operation and maintenance plan?
 - If yes, make sure it is accessible to everyone who may need to operate the facility, whether they are your current staff or potentially from an outside source
 - If no, consider developing one very quickly and making it accessible. It doesn't have to be fancy, just the basics.
 - Where are key on/off switches, emergency shut-offs, emergency generators, and any other important operational equipment?
 - Where do you get important chemicals? How do you order?
 - What are the main operational tasks per day, per week, per month?
 - What data needs to be collected every day, week, month?
 - Where are test locations for routine monitoring?
 - Where are all necessary supplies located?
 - If a new operator can't handle everything, what are the absolutely critical tasks that must be done?
 - What maintenance tasks are important daily, weekly, monthly



Emergency Equipment Amid Corona Virus

- Do you have emergency equipment on site?
 - If yes, what equipment do you have? Where is it? Is it all in working order? Make sure to document the location and type of equipment where everyone knows where to find it quickly and easily
 - If no, what equipment should you have on hand?
 - This is equipment for both corona and non-corona related emergencies and should match the needs of the facility. For example, if dangerous chemicals are used or confined spaces are in the facility, a breathing apparatus is needed. Other equipment may include: eye wear, masks, protective clothing
 - Can you procure the necessary equipment? If so, from where? Order what you need as soon as possible. Make sure you have plenty.



Restarting Customers Who May Have Been Shut Off for a While

If you are turning on a customer who was previously shut off before corona to give them water service now **Or** You are turning on a customer who was closed for a long period of time during stay at home orders (this will be some time after businesses reopen)...

It is important to consider good flushing practices. AWWA has recommendations on their website:

<https://www.awwa.org/Resources-Tools/Resource-Topics/Coronavirus#10681543-shutoffs-and-return-to-service-guidance>

In general, consider social distancing when talking to or working with customers; flush water through lots of fixtures simultaneously; remove point of entry or point of use devices as well as aerators; cold flush first then hot; consider back flow prevention



Compliance And Data Collection Considerations Amid Corona Virus

- Should you still worry about compliance during a pandemic?
 - The answer is ABSOLUTELY!! More important than ever!!
 - Furthermore, EPA expects all utilities to continue to comply. We presume states are following suit.
- What are some compliance concerns during this specific time?
 - Locations of sample sites: if entry into buildings and houses is required at this time, can PPE for the operator be provided? What if a business that is a normal sample site is closed? Contact your state about potential alternates if none of your usual sites will be accessible.
 - Is it possible to install specific sample sites that are not inside houses or buildings?
 - Additional flushing might be required if a business is using much less water than normal.
 - Do you have a back up lab for sample analysis? If not, consider getting one.
 - Do you have sufficient bottles, reagents, etc. for any testing you need to do? Does everyone know where these items are located?



Compliance And Data Collection Considerations Amid Corona Virus

- If there is any reason that you cannot meet compliance and it is ***directly related to corona virus***, and you believe that you should be able to avoid a violation, make sure you save ALL RELATED DATA AND INFORMATION
- Err on the side of collecting too much rather than not enough
- You will have to be able to make your case. It may not be easy as compliance is expected right now.



Resilience Measures



Resilience Measures in a Pandemic

- It may be too late now to consider implementing a resilience measure that could help in a pandemic, but it is not too late to consider putting some in place for the next pandemic (or other emergency that might occur)
 - Regionalization
 - Water System Cooperation
 - Asset Management, particularly asset inventory and mapping
 - Reserve Accounts
 - Increasing Days of Cash on Hand
 - Emergency Response Plan – consider going deeper than ever before
 - Tabletop exercises to prepare and test the plan
 - Increase awareness of and use of remote technologies (continue to use these even after the pressure is off)
 - Know who to call for a variety of things: labs, chemicals, regulatory personnel, emergency fill-in operator, police, fire, etc.
- Don't forget to take on these measures after the pressure is off. The next emergency may be on the horizon and you need to be prepared.



Assistance and Resources

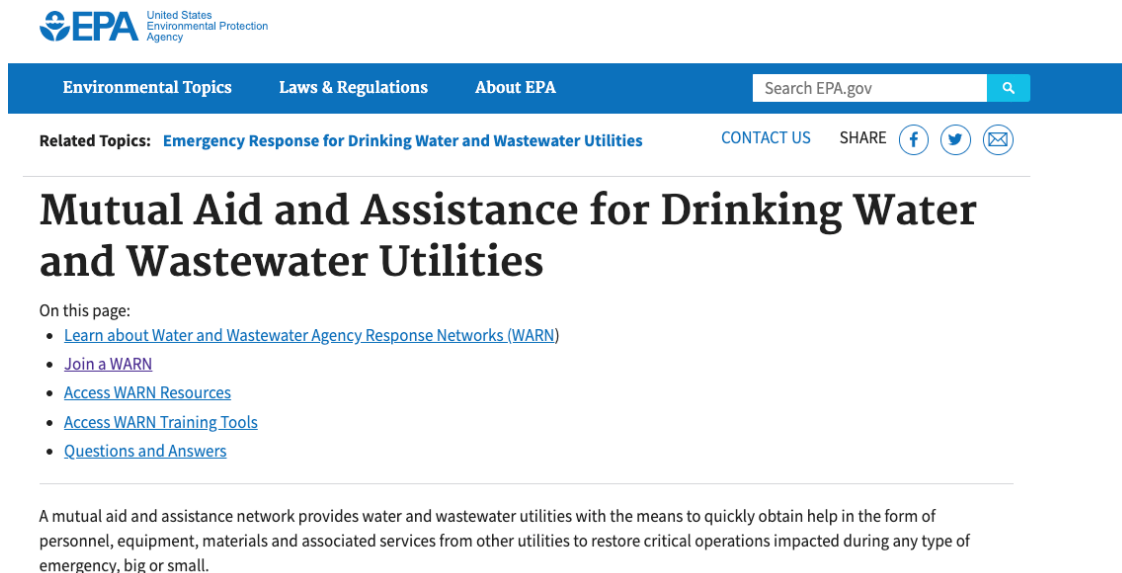


Resources and News for Utilities

- CDC: cdc.gov/coronavirus
- EPA: epa.gov/coronavirus
- AWWA: awwa.org/coronavirus ← many free resources now available
- WEF: wef.org/coronavirus

Resources for Staffing




- There are resources available for staffing if there is a shortage related to the pandemic or some other emergency (remember “regular” emergencies will continue, such as fire, flood, hurricane, tornadoes)
 - WARN programs



The screenshot shows the EPA website's navigation bar with links for Environmental Topics, Laws & Regulations, and About EPA. A search bar is present. Below the navigation bar, the page title is "Mutual Aid and Assistance for Drinking Water and Wastewater Utilities". Under "On this page:", there are four links: "Learn about Water and Wastewater Agency Response Networks (WARN)", "Join a WARN", "Access WARN Resources", and "Access WARN Training Tools". A "Questions and Answers" link is also visible. A paragraph at the bottom states: "A mutual aid and assistance network provides water and wastewater utilities with the means to quickly obtain help in the form of personnel, equipment, materials and associated services from other utilities to restore critical operations impacted during any type of emergency, big or small."

United States Environmental Protection Agency

Environmental Topics Laws & Regulations About EPA Search EPA.gov

Related Topics: [Emergency Response for Drinking Water and Wastewater Utilities](#) CONTACT US SHARE   

Mutual Aid and Assistance for Drinking Water and Wastewater Utilities

On this page:

- [Learn about Water and Wastewater Agency Response Networks \(WARN\)](#)
- [Join a WARN](#)
- [Access WARN Resources](#)
- [Access WARN Training Tools](#)
- [Questions and Answers](#)

A mutual aid and assistance network provides water and wastewater utilities with the means to quickly obtain help in the form of personnel, equipment, materials and associated services from other utilities to restore critical operations impacted during any type of emergency, big or small.

- Other assistance providers, such as Rural Water Association, Area Development Districts
- State agencies



What Should Assistance Providers, Including AWWA Do to Help

- Continue to support the WARN and other staffing assistance programs
- AWWA has made some resources free at this time, continue to do more of that
- Lots of free webinars are being presented right now for water utilities. These webinars are timely & informative & should be continued
- Make Covid-19 information and resources easy to find
- Help utilities connect with suppliers of equipment and labs if their normal suppliers are not available



EPA Resources Available



Environmental Topics

Laws & Regulations

About EPA

Search EPA.gov



Related Topics: [Coronavirus](#) | [Ground Water and Drinking Water](#)

[CONTACT US](#)

SHARE



Water Utility Resources for the COVID-19 Pandemic

Americans can continue to use and drink water from their tap as usual. Coronavirus, which causes COVID-19, is a type of virus that is particularly susceptible to disinfection and standard treatment and disinfectant processes are expected to be effective. [Read the latest information from EPA about COVID-19 and water.](#) EPA is providing the following summary information of a wide range of resources that were developed for general preparedness purposes. These resources are being provided as a simplified and transparent resource to support the operational needs of drinking water and wastewater systems, including maintaining adequate staffing and laboratory capacity.

EPA supports preparedness planning across the drinking water and wastewater sector by providing resources and tools to states and utilities as they work to provide safe drinking water and wastewater treatment across the United States. Most water systems already have continuity plans in place as part of their best management practices. EPA recommends that states work with their utilities to review their continuity plans.

On this page:

- [System Operations](#)
- [Laboratory Capacity](#)
- [Clean Water and Drinking Water State Resolving Funds](#)
- [Pandemic Incident Action Checklist](#)
- [Additional Resources](#)

<https://www.epa.gov/coronavirus/water-utility-resources-covid-19-pandemic>

EPA Resources Available: Pandemic Incident Action Checklist



Incident Action Checklist – Pandemic Incidents

The actions in this checklist are divided up into three “tip & run” sections and are examples of activities the water sector (drinking water and wastewater systems) can take to prepare for, respond to and recover from a pandemic. You can also populate the “My Contacts” sections with critical information that your utility may need during a pandemic.

Coronavirus Pandemic and Water Utilities

For general information from EPA about COVID-19 and water, see www.epa.gov/coronavirus. The risk of transmission of COVID-19 via drinking water and wastewater is low. However, there are other impacts to drinking water and wastewater utilities, which may include, but are not limited to:

- Staff shortages due to absenteeism;
- Supply chain disruptions (chemicals, materials, personal protective equipment);
- Field operations interruptions (repairs, meter reading, sampling); and
- Inability to maintain all operations.



Many water and wastewater utilities have created pandemic resilience plans based on best practices and experiences from past global outbreaks such as the avian flu in 2003 and swine flu in 2009. Utilities should review and update those plans and stay in close contact with their local health department and regulatory agency as the COVID-19 situation is dynamic and evolving rapidly. Water and wastewater systems need the most up-to-date information in order to make decisions that are right for their utility based on the pandemic impacts to their specific community.

Sign up for any COVID-19 alerts or notifications available from your regulatory agency and local emergency management agencies and health departments to stay up to date.

General COVID-19 Information

- [U.S. Coronavirus Website](#)
- [U.S. Centers for Disease Control and Prevention](#) Drinking Water and Wastewater COVID-19 (CDC)
- [World Health Organization](#) COVID-19 (WHO)
- [Association of State Drinking Water Administrators](#) COVID-19 (ASDWA)
- [Water Information Sharing and Analysis Center](#) COVID-19 (Water ISAC)
- [Water Environment Federation](#) COVID-19 (WEF)
- [American Water Works Association](#) COVID-19 (AWWA)
- [Coronavirus Research Update](#) (WRF)

Information on Hygiene and Water Safety

- [OSHA Guidance for Wastewater Workers](#) COVID-19 (OSHA)
- [Water, Sanitation, Hygiene and Waste Management for COVID-19](#) (WHO, UNICEF)
- [Memorandum on Identification of Essential Critical Infrastructure Workers During COVID-19 Response](#) (DHS)

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Actions to Prepare for a Pandemic



Planning

- ☐ Identify a lead, back-up, and team of individuals to serve as the Pandemic Response Team.
- ☐ Develop a process for maintaining situational awareness of the current and future spread of the virus, as well as community impacts.
- ☐ Develop strategies for managing the pandemic such as identifying response actions based on current information and the system's emergency response plan and continuity of operations plan.
- ☐ Update your [drinking water emergency response plan](#) (ERP) and [wastewater ERP](#) to ensure all contacts (24/7 availability), system diagrams and standard operating procedures for system operations are up to date.
- ☐ Develop or update a Continuity of Operations Plan (COOP) that specifically addresses the challenges of a pandemic and plans for significant staff shortages. Resources to help in the development of the plan include the [Pandemic Continuity of Operations Template](#) and [Business Continuity Planning for Water Utilities: Guidance Document](#). The COOP should include, at a minimum, plans for the following:
 - Defining Roles and Responsibilities During the Pandemic
 - Protecting Employee Health
 - Maintaining Essential Operations and Critical Positions
 - Maintaining Essential Equipment, Materials and Supplies
 - Communications
 - Addressing Community Mitigation Impacts – Impacts of required social distancing, quarantine, school, and business closures, etc.
 - Identifying Delegations of Authority – Including orders of succession
 - Training – Cross-training and pandemic plan training
- ☐ Join your state's [Water and Wastewater Agency Response Network \(WARN\)](#) or other local mutual aid network. In addition, check to see if you are included in a statewide mutual aid law. WARNs may be able to provide assistance in the form of personnel, equipment, materials and technical assistance.
- ☐ In addition, the Rural Community Assistance Partnership (RCAP), National Rural Water Association (NRWA), Rural Utilities Service (RUS), Indian Health Service (IHS), the Inter Tribal Council of Arizona (ITCA) and the United South and Eastern Tribes (USEET), among others, may be able to provide licensed operators or technical assistance.
- ☐ Assess your system's Information Technology (IT) capability to ensure it can accommodate remote work arrangements without compromising security.
- ☐ Work with local law enforcement and health departments to ensure water sector staff are considered first responders, as specified in the [Department of Homeland Security's \(DHS\) Crisis Emergency Response and Recovery Access \(CERRA\) Framework](#), and will have the ability to conduct field work when necessary if quarantines are placed on a community.
- ☐ DHS developed a [memorandum](#) that identifies drinking water and wastewater personnel as essential workers during the COVID-19 response.
- ☐ Share your COOP, and any specific pandemic issues, with your local emergency management agency (EMA) and health departments, regulatory agency, and any consecutive systems.
- ☐ Conduct internal and external (e.g. EMA, health department, regulatory agency) pandemic specific [tabletop exercises](#) regularly. Be sure to conduct remote exercises to ensure capability during a pandemic.

My Contacts and Resources



CONTACT NAME	UTILITY/ORGANIZATION NAME	PHONE NUMBER
	Primacy Agency	
	Local Health Department	
	Local EMA	
	WARN Chair	
	Local Laboratory	
	State EMA	

Resources

Mutual Aid Programs

- [Water/Wastewater Agency Response Network](#) (EPA)

Emergency Response and Continuity of Operations Planning


- [Drinking Water Emergency Response Plans](#) (EPA)
- [Wastewater Emergency Response Plan Template](#) (RCAP)
- [Pandemic Continuity of Operations Template](#) (GLCAP)
- [Business Continuity Planning for Water Utilities: Guidance Document](#) (WRF, AWWA, EPA)
- [Business Continuity Planning in the Event of an Influenza A Reference Guide](#) (AMWA, WaterSAC)
- [Tabletop Exercise Tool: Pandemic Scenario](#) (EPA)

Other Tools and Resources

- [Water Laboratory Alliance](#) – Drinking Water and Wastewater (EPA)
- [Crisis, Emergency Response and Recovery Access \(CERRA\) Framework](#) (DHS)
- [Water Utility Communication During Emergency Response](#) (EPA)
- [Water Utility Response On-The-Go](#) (EPA)
- [Resources for Small Public Water System Operators](#) (EPA)

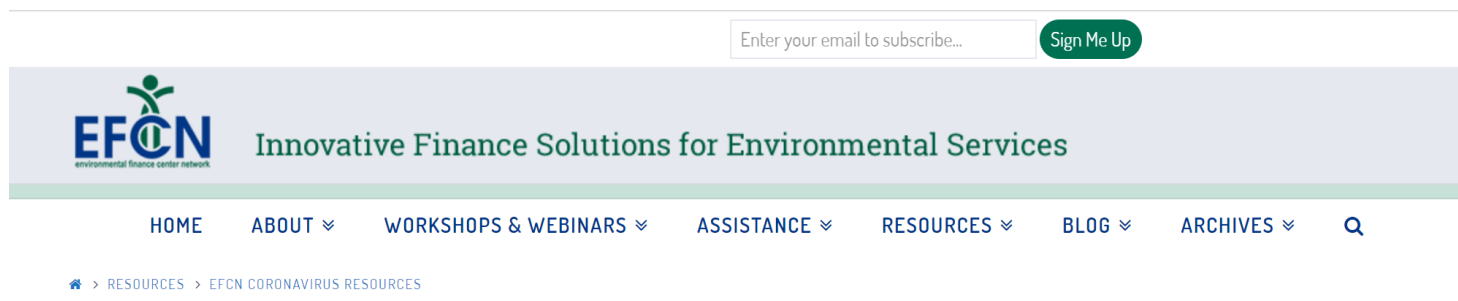
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<https://www.epa.gov/coronavirus/water-utility-resources-covid-19-pandemic#checklist>



Resources From the EFC Network (efcnetwork.org)

<https://efcnetwork.org/resources/efcn-coronavirus-resources/>



EFCN Coronavirus Resources

Last Updated March 30, 2020

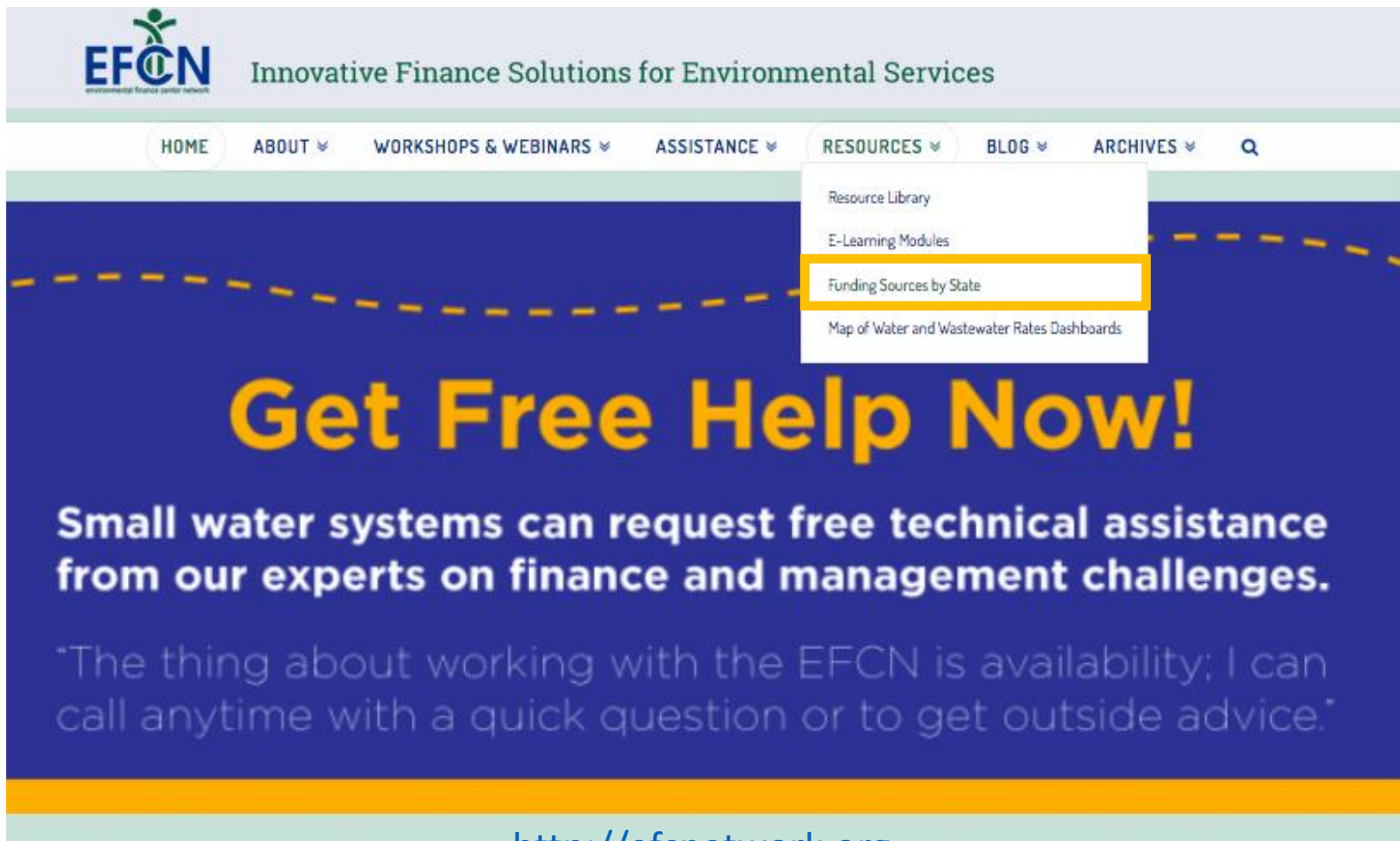
In these uncertain times, small water systems are facing difficult decisions about how to maintain operations and ensure financial sustainability, while providing essential services to the public and limiting personal interactions during the COVID-19 outbreak. We've heard your concerns and are doing all we can to address your questions. While we have suspended our in-person trainings indefinitely, we want to take a minute to remind you of the numerous other resources we provide:

- [Upcoming Webinars](#) on a host of challenges that small water systems face, and how to best address those challenges
- [Free technical assistance](#) related to asset management, financial planning and rate setting, capital planning, energy use, identifying funding, water system collaboration, resiliency planning, and workforce planning to water systems serving a population of less than 10,000 people.



Funding Tables By State

Select “Funding Sources by State” under the Resources Tab.



The screenshot shows the EFCN (Environmental Finance Center Network) website. The header includes the EFCN logo and the tagline "Innovative Finance Solutions for Environmental Services". The navigation bar contains links for HOME, ABOUT, WORKSHOPS & WEBINARS, ASSISTANCE, RESOURCES, BLOG, and ARCHIVES. The RESOURCES dropdown menu is open, and the option "Funding Sources by State" is highlighted with a yellow box. Below the navigation bar, there is a large blue banner with the text "Get Free Help Now!" in yellow, followed by "Small water systems can request free technical assistance from our experts on finance and management challenges." and a quote: "The thing about working with the EFCN is availability; I can call anytime with a quick question or to get outside advice."

<http://efcnetwork.org>



Small Systems Blog

Learn more about water finance and management through our Small Systems Blog! Blog posts feature lessons learned from our training and technical assistance, descriptions of available tools, and small systems “success stories.”

efcnetwork.org/small_systems_blog/

Blog

<https://efcnetwork.org/financial-implications-of-covid-19-for-water-and-wastewater-utilities/>

March 30, 2020 / Allison Perch



Financial Implications of COVID-19 for Water and Wastewater Utilities

Written by: Shadi Eskaf, Research Director, EFC at UNC Water and wastewater utilities are adapting to the rapidly changing conditions imposed across the country and the world by the COVID-19 pandemic. With stay-at-home orders, closures of schools, restaurants, and other businesses, and major disruptions to the workforce and operations, utilities ...

March 24, 2020 / Jennifer Egan

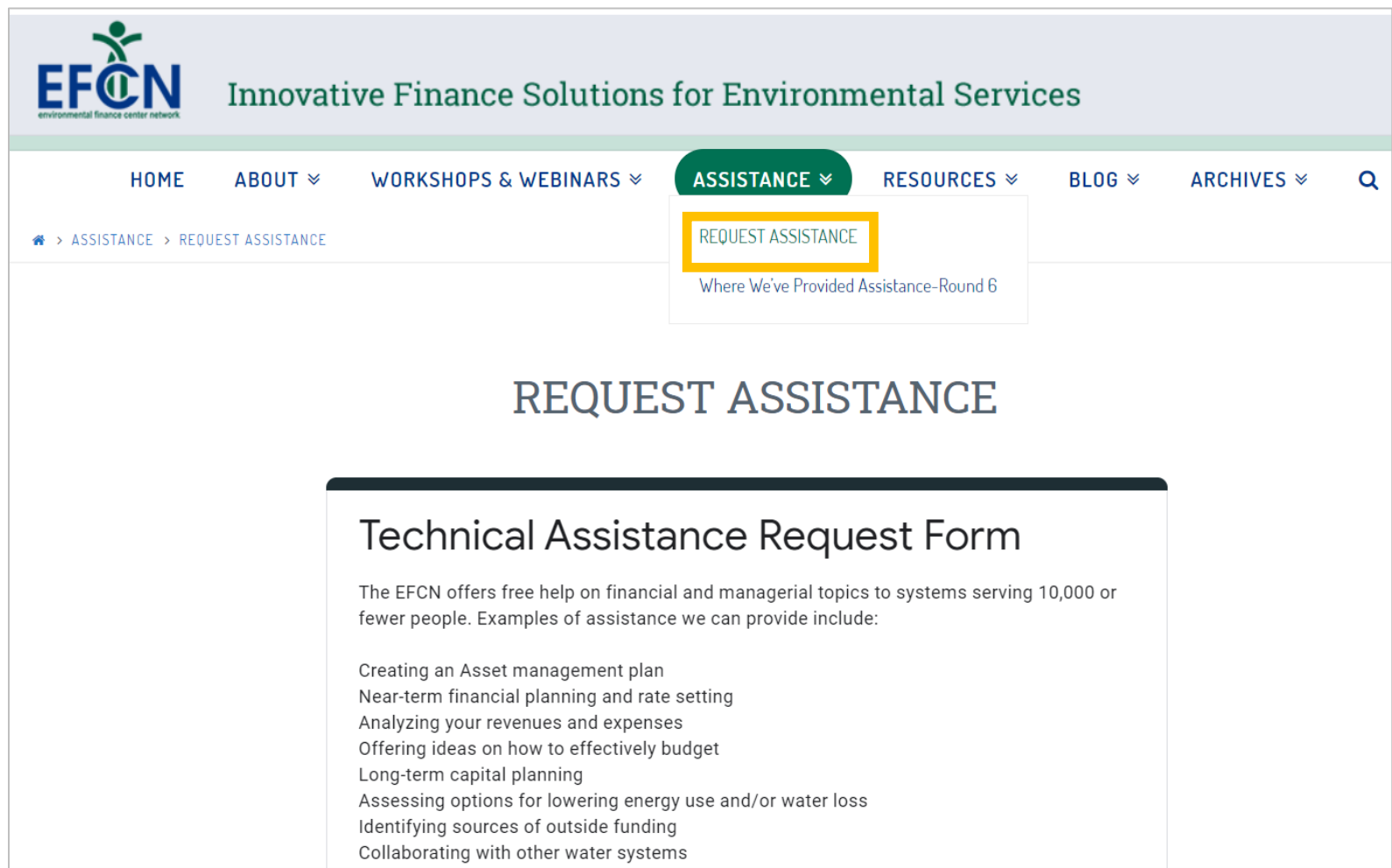


“One Water” Approach for Improvement in Water Resource Management

Written by: Jennifer Egan, PG, PhD- University of Maryland Environmental Finance Center In most U.S. water systems, drinking, waste, and stormwater, are managed separately and each have their own costs to safely provide clean water for

Request Technical Assistance

Select “Request Assistance” under the Assistance Tab off the EFCN homepage to access and submit the TA request form electronically. <http://efcnetwork.org>



The screenshot shows the EFCN website homepage with the 'ASSISTANCE' menu item highlighted. A dropdown menu is visible, showing 'REQUEST ASSISTANCE' as the selected option. Below the menu, the page title 'REQUEST ASSISTANCE' is displayed. The main content area features a section titled 'Technical Assistance Request Form' with a description of the service and a list of examples of assistance provided.

EFCN Innovative Finance Solutions for Environmental Services
environmental finance center network

HOME ABOUT ▾ WORKSHOPS & WEBINARS ▾ **ASSISTANCE ▾** RESOURCES ▾ BLOG ▾ ARCHIVES ▾ Q

🏠 > ASSISTANCE > REQUEST ASSISTANCE

REQUEST ASSISTANCE
Where We've Provided Assistance-Round 6

REQUEST ASSISTANCE

Technical Assistance Request Form

The EFCN offers free help on financial and managerial topics to systems serving 10,000 or fewer people. Examples of assistance we can provide include:

- Creating an Asset management plan
- Near-term financial planning and rate setting
- Analyzing your revenues and expenses
- Offering ideas on how to effectively budget
- Long-term capital planning
- Assessing options for lowering energy use and/or water loss
- Identifying sources of outside funding
- Collaborating with other water systems



Poll: would you like assistance?



Questions?

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Erin Riggs

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