BEST PRACTICES FOR SMALL SYSTEMS

League of Wisconsin Municipalities
December 6, 2021

Denise Schmidt, Administrator
Division of Water Utility Regulation and Analysis
Public Service Commission of Wisconsin

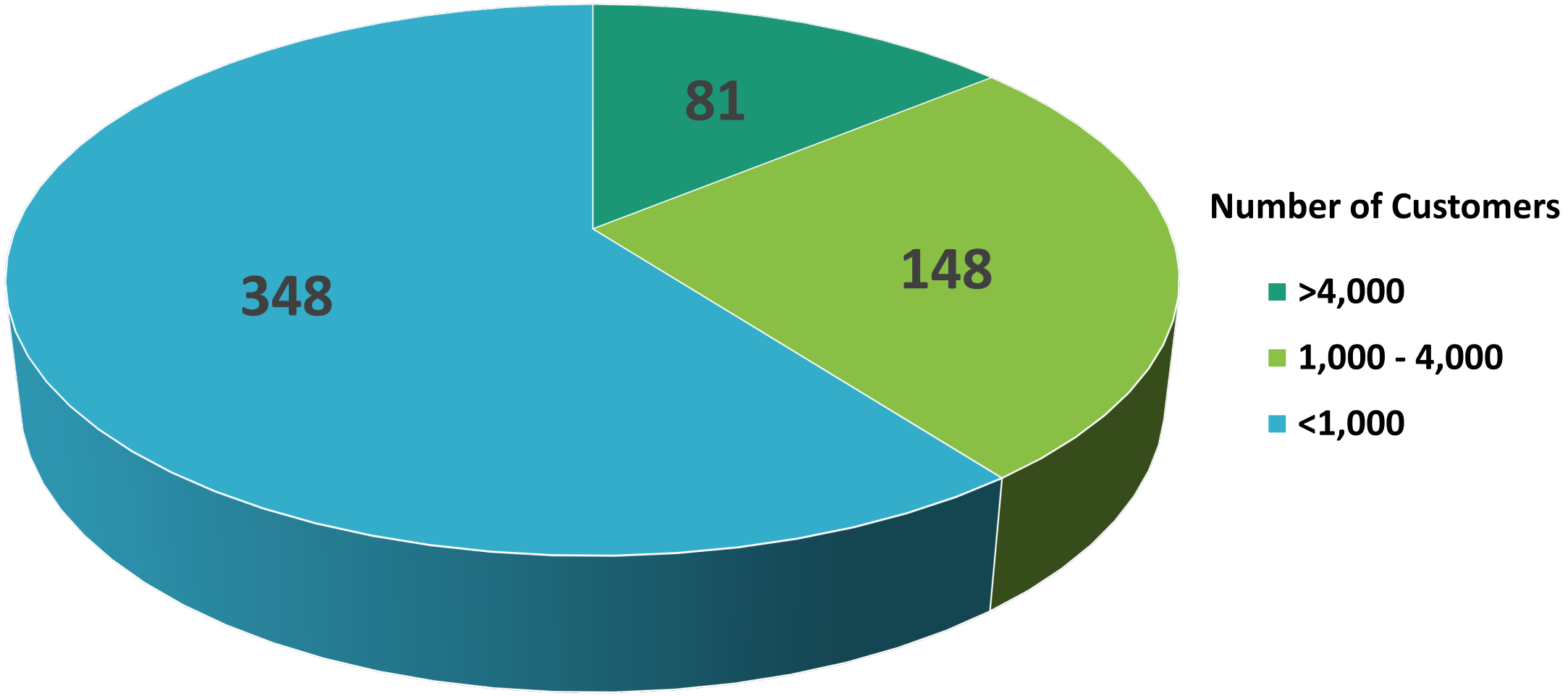
Economic Regulatory Commission Jurisdiction

Table 1. "Do you Regulate Rates for Municipal Water Utilities?"

	Number of Public Utility Commissions	States
Yes, Regulate Rates for All Municipal Water Utilities	1	WI
Yes, Regulate Rates for Certain Types of Municipal Water Utilities and/or Under Certain Conditions	9	AK, IN, ME, MD, MS, NJ, PA, RI, WV
No, Does Not Regulate Rates for Municipal Water Utilities	40	Remaining States

Source: "Investigation Into the Methods Used by Wisconsin's Water Utilities in Allocating P:ublic Fire Protection (PFP) Costs," Draft Staff Report, Docket 5-WI-104

WI Water Utilities: Size



WI Water Utilities: Ownership

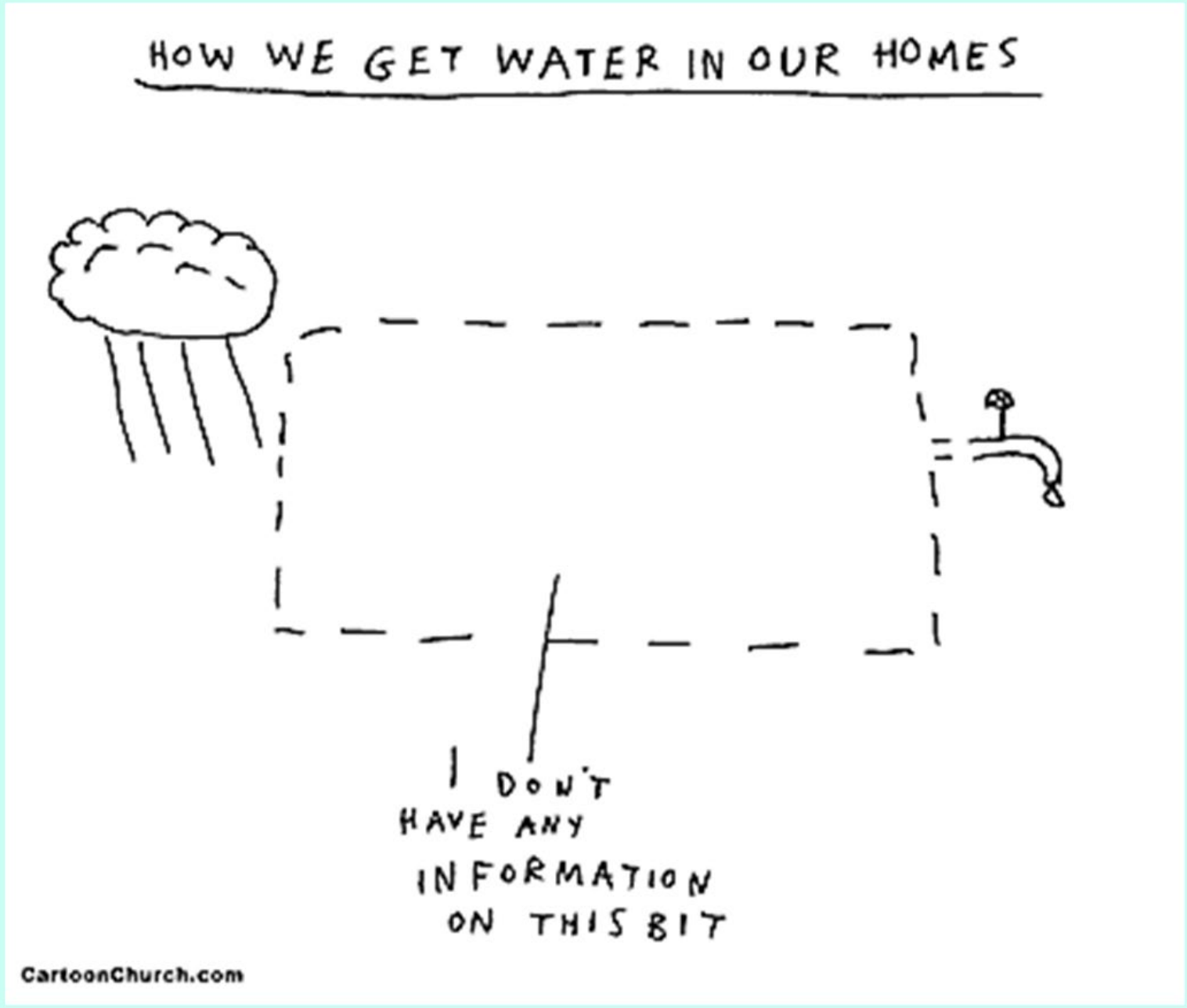
Number of Systems

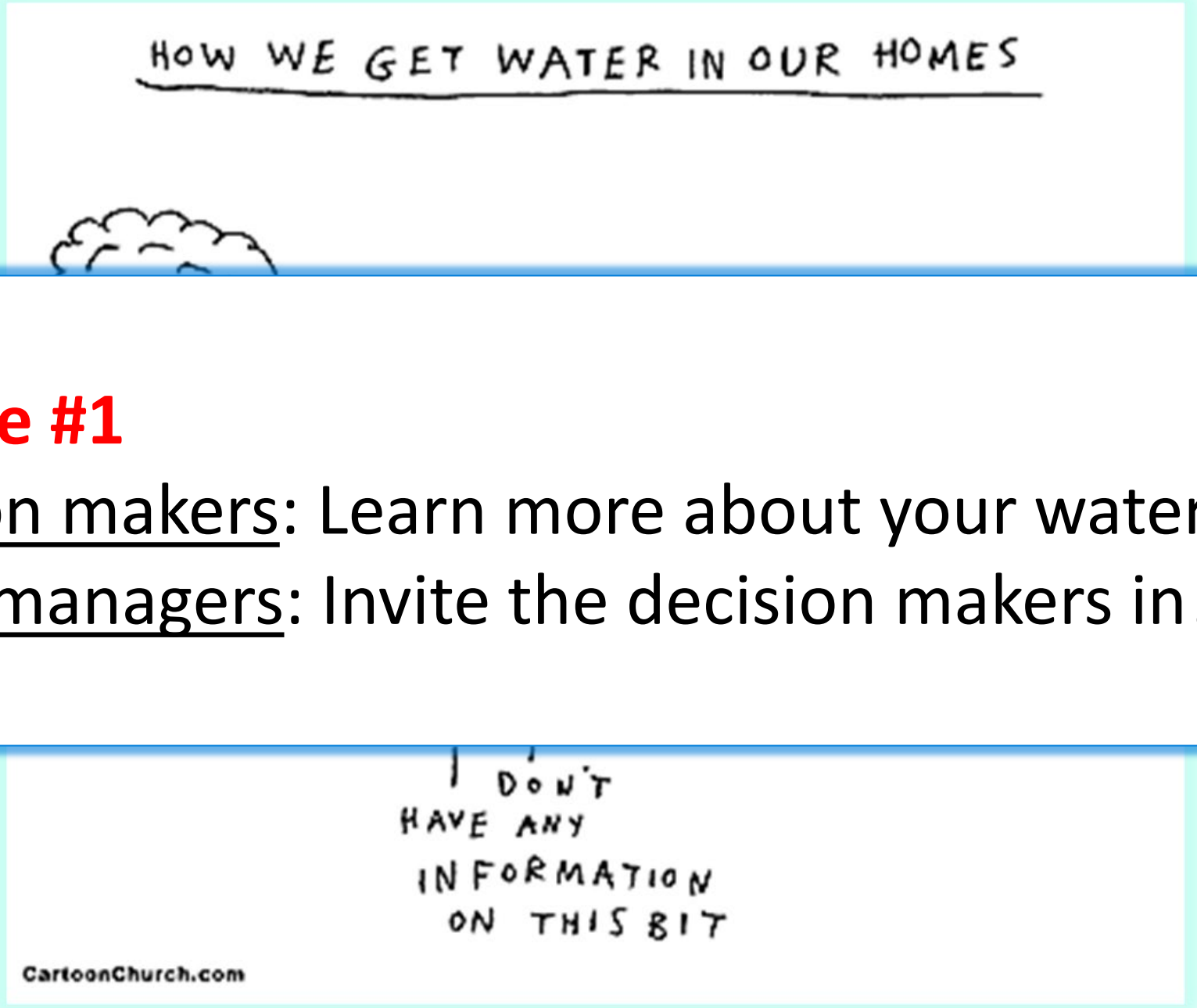
- Municipal (City or Village): 514
- Sanitary District (Town): 60
- Privately Owned: 2
- Investor Owned: 1

WI Utilities: Governing Authority

Number of systems reporting directly to:

- City/village council 301
- Utility board/commission 213
- District board/commission 52
- Town board 8
- Other board 3


HOW WE GET WATER IN OUR HOMES
I DON'T HAVE ANY INFORMATION ON THIS BIT
CartoonChurch.com



Practice #1

Decision makers: Learn more about your water system.

Utility managers: Invite the decision makers in!

THE CITY OF KENOSHA
CHART A BETTER COURSE

CITY SERVICES | DEPARTMENTS | DEVELOPMENT | GOVERNMENT | VISITORS

EMPLOYMENT | NEWSROOM | CITY EVENTS | LICENSES & PERMITS | PAY ONLINE | AGENDAS & MINUTES | PROPERTY INFO | TRANSIT

WATER UTILITY

Explore The City of Kenosha SEARCH

★ // Departments // Water Utility // O. Fred Nelson Water Production Plant // Water Production Plant Field Trips

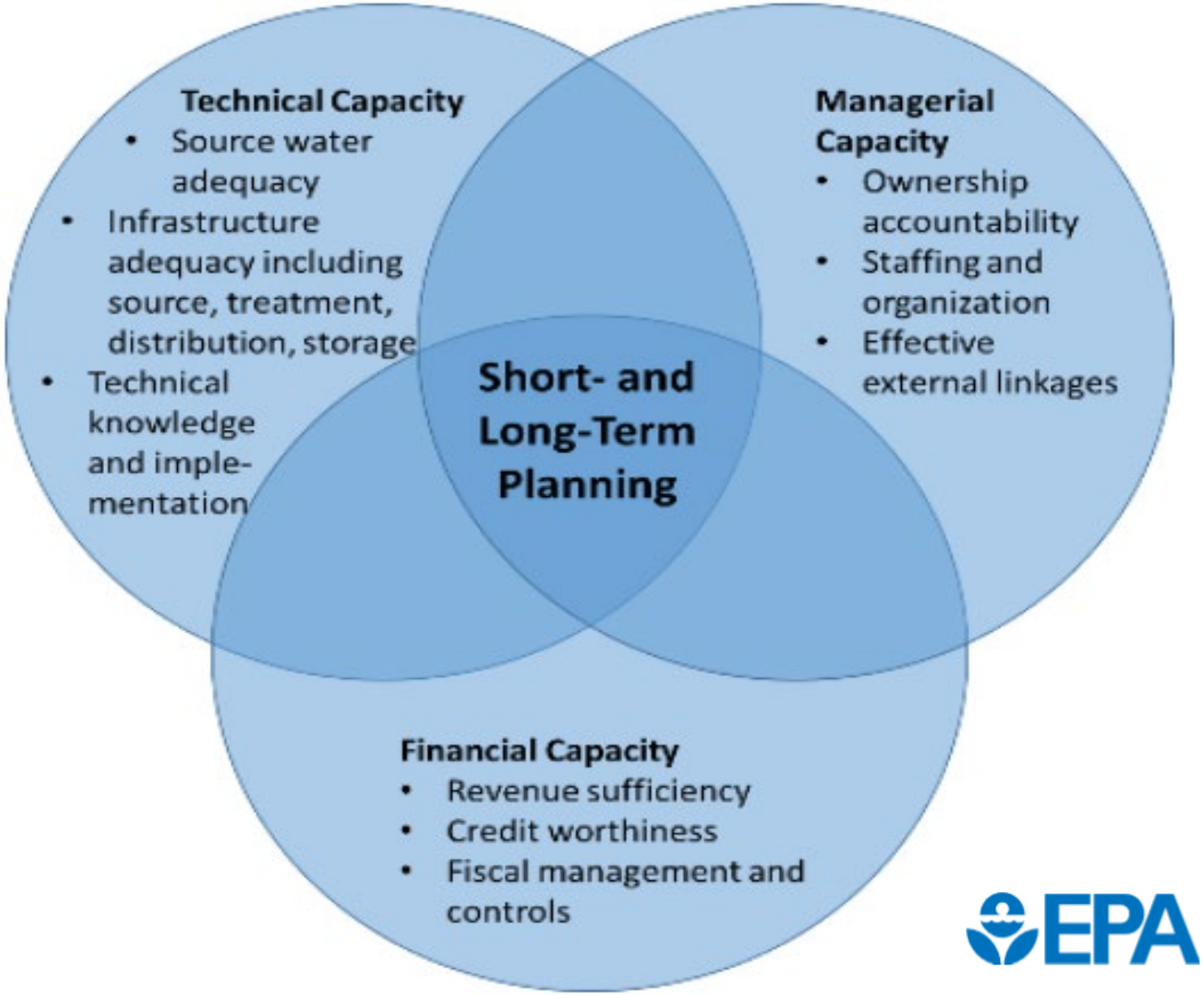
IN THIS DEPARTMENT

- Pay Online
- Customer Service
- Engineering Services
- O. Fred Nelson Water Production Plant

WATER PRODUCTION PLANT FIELD TRIPS

Schools and Organizations are welcome to contact us to schedule your group tour to learn about the water and wastewater treatment process.

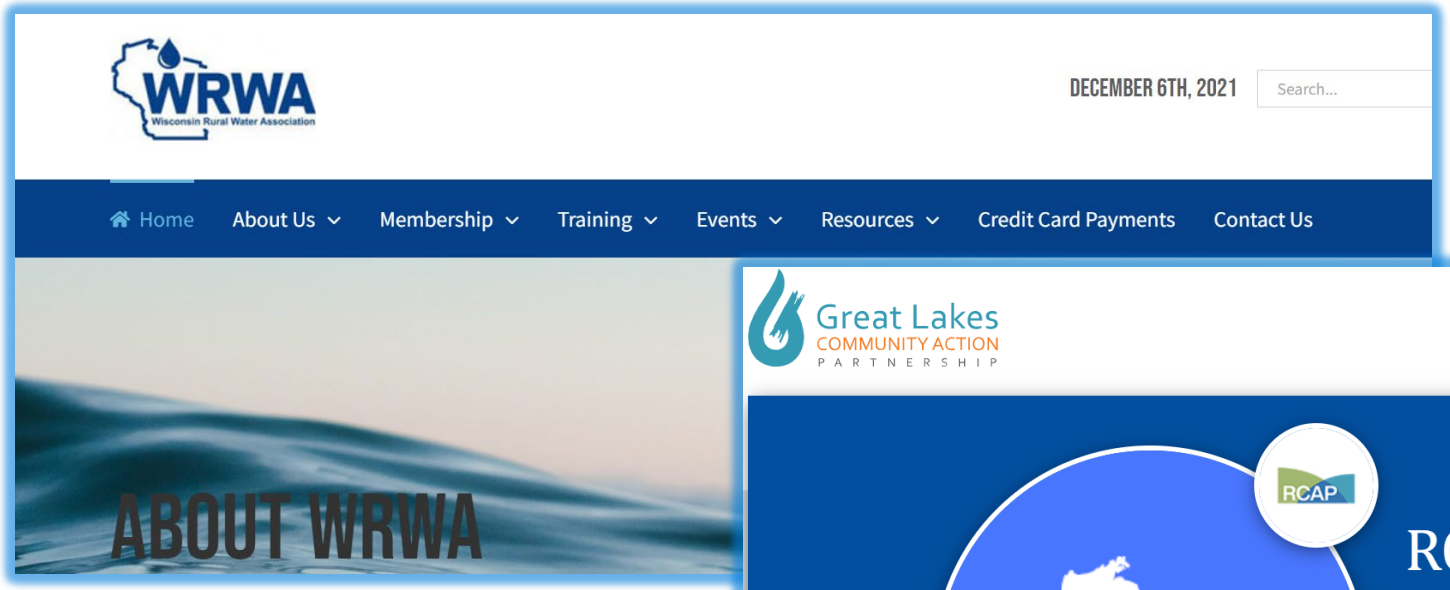
To schedule a tour of the O. Fred Nelson Water Production Plant, please contact Ryan Spackman, Director of Water Production at 262.653.4331 or email at rspackman@kenosha.org



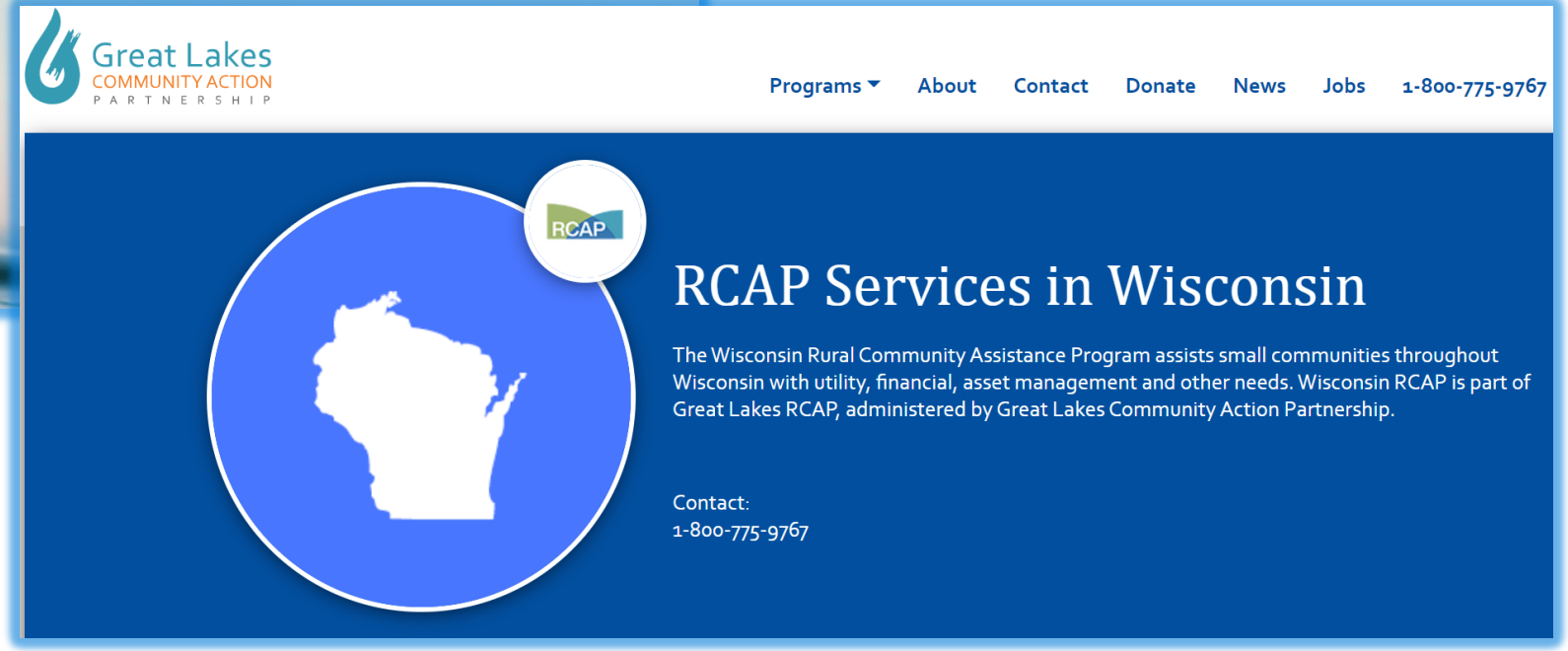
PSC of WISCONSIN

EPA United States Environmental Protection Agency

Practice #2: Tap into water association resources.

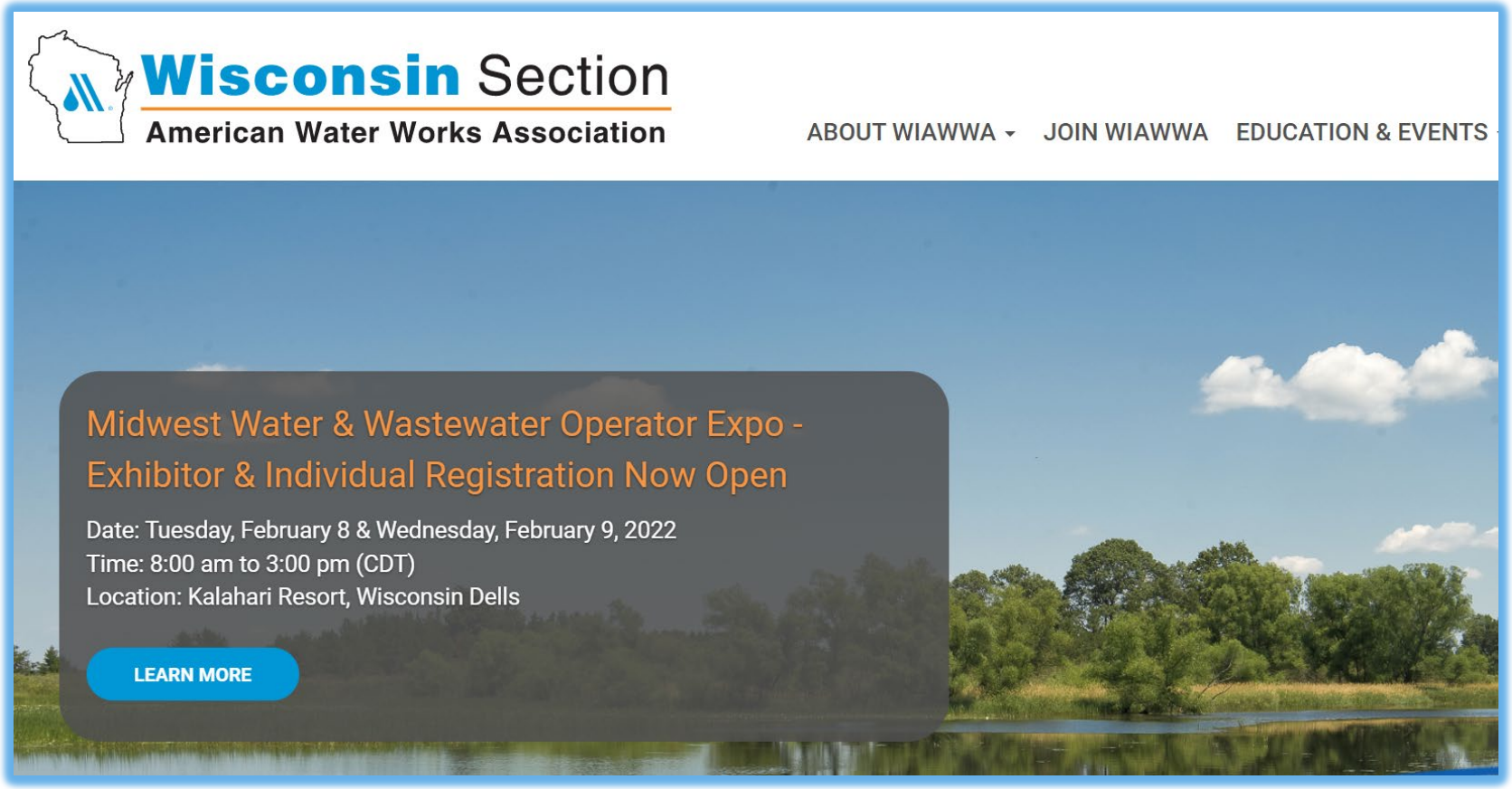


https://www.wrwa.org/



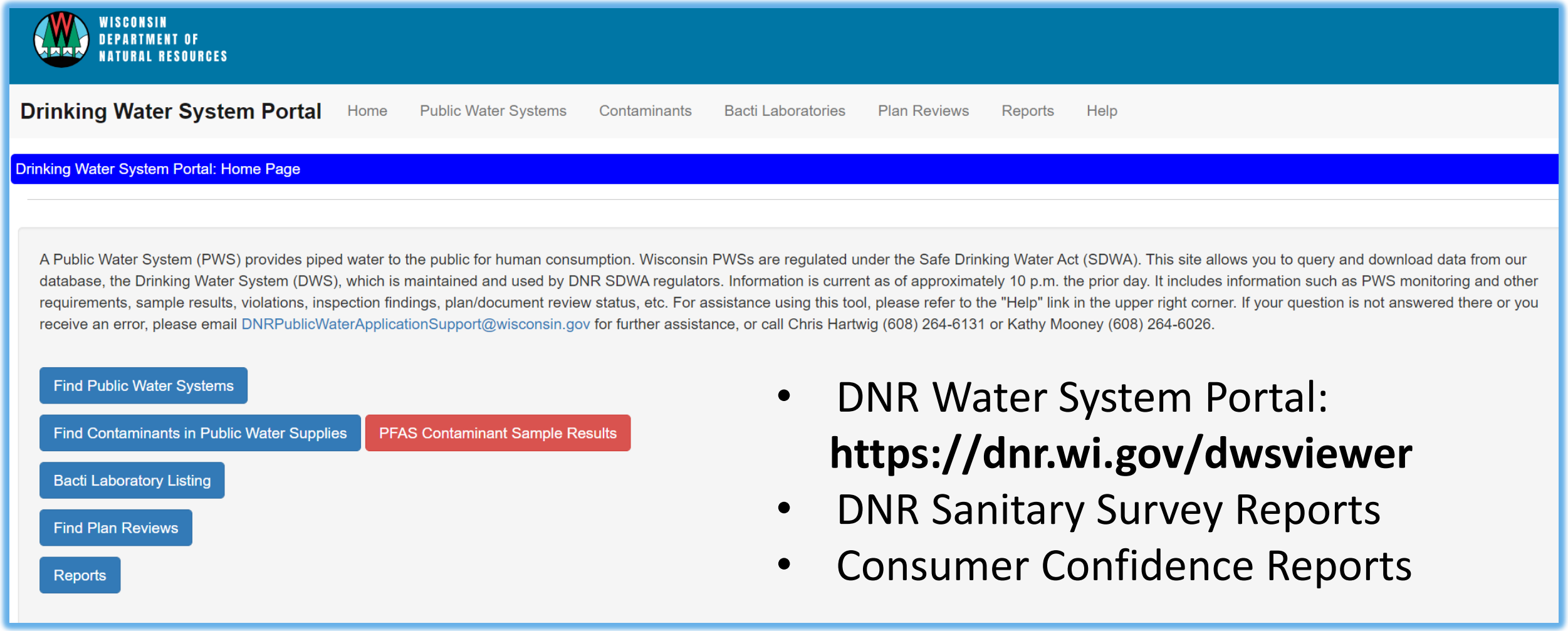
https://www.glcap.org/programs/community-rural-development/rural-community-assistance-program-rcap/rcap-services-in-wisconsin/

Tap into water association resources.



https://www.wiawwa.org/

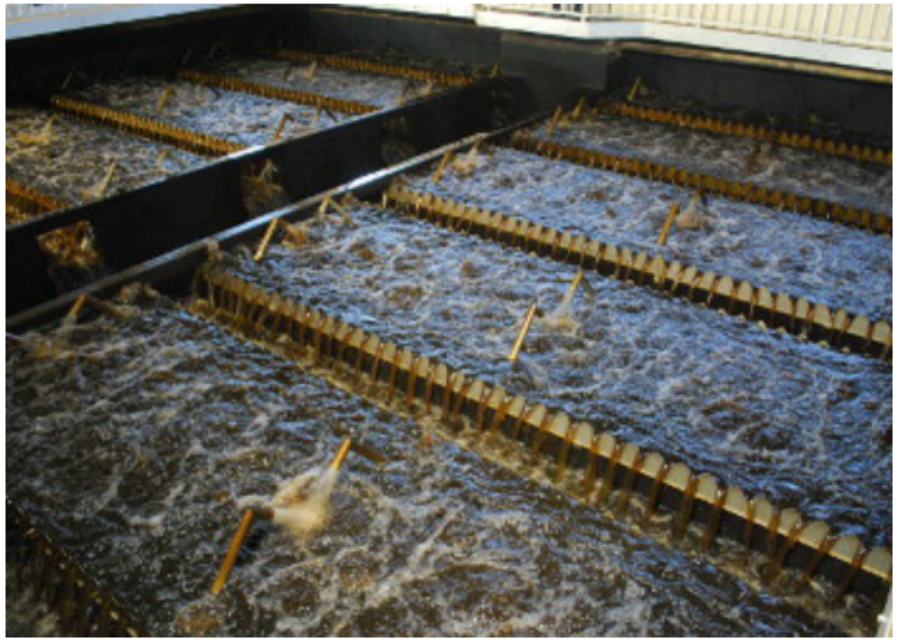
Practice #3: Familiarize yourself with State agency resources.



- DNR Water System Portal: **https://dnr.wi.gov/dwsviewer**
- DNR Sanitary Survey Reports
- Consumer Confidence Reports

DNR-SPONSORED FREE ONLINE TRAINING IN UTILITY MANAGEMENT

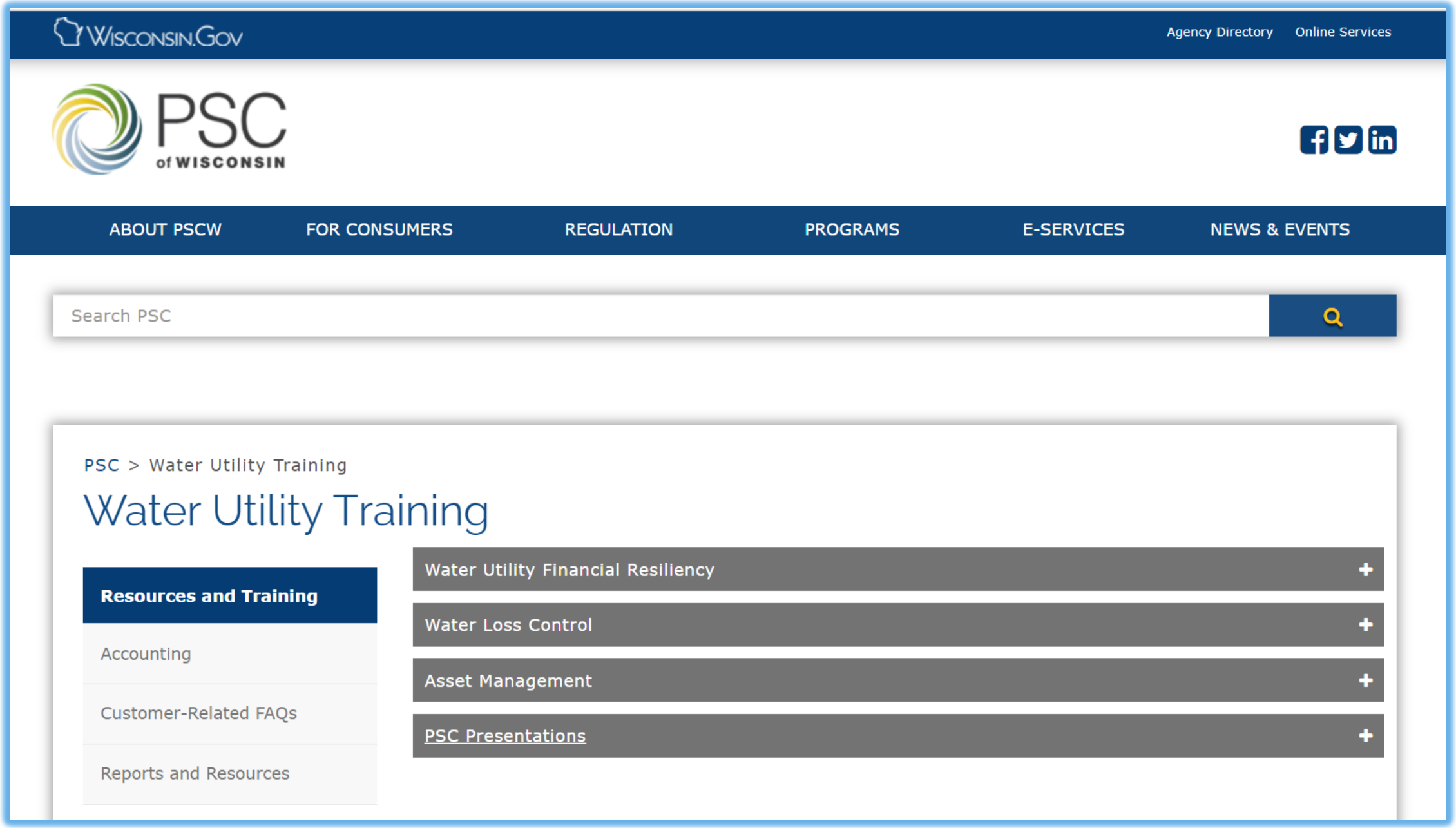
The DNR's Bureau of Drinking & Groundwater is offering three **free** online training courses [exit DNR] comprised of four unique learning modules for water utility governing bodies and for drinking water utilities professional staff who have decision making authority. These free online modules are management trainings intended for government bodies (village, city or town boards) as well as other utility governing boards (utility commissions) and professionals with decision authority as it pertains to drinking water utilities.



- **Learn more about the training**
- **FAQs**

https://dnr.wisconsin.gov/topic/DrinkingWater/CapacityDevelopment.html

https://psc.wi.gov/Pages/Home.aspx



https://psc.wi.gov/Pages/ForUtilities/Water/WaterUtilityTraining.aspx

PSC of WISCONSIN

E-Services Portal

Utility Tariffs

Utilities set out the rates, terms and conditions of service in Commission-reviewed filings referred to as tariffs. The tariffs on this page are available in Portable Document Format (PDF). You will need Adobe to read them.

The tariffs are in utility name order. If you can't find the tariff by name order or don't know the utility's name. Please use the Cannot find the Utility Name? link to search by either name or number.

Electric	Gas	Telecommunications	Water/Sewer

Water/Sewer Utility Name Listing

If you have any questions regarding the existing PDF tariffs, or ones that are not yet available on the web, please call us at (608)266-3766.

First Letter*

A B C D E F G H I J K L M N O P R S T U V W Y

Utility Name Listing - Start with : A...

Abbotsford Municipal Water Utility (10)	Adams Municipal Water And Sewer Utility (20)	Adell Municipal Sewer And Water Utility (30)
Albany Municipal Water And Sewer Utility (40)	Algoma Sanitary District No 1 (51)	Algoma Utility Commission (50)
Allenton Sanitary District No 1 (60)	Village of Allouez Water Department (70)	Alma Center Water Utility (90)
Alma Municipal Water Utility (80)	Almena Municipal Water Utility (100)	Altoona Municipal Water And Sewer Utility (120)
Amery Municipal Joint Water and Sewer Utility (140)	Village of Amherst Water Utility (160)	Antigo Utilities (180)
Appleton Water Department (190)	Applewood Hill Water Utility (200)	Arcadia Electric and Water Utility (210)
Arena Municipal Water Utility (220)	Argyle Municipal Electric and Water Utility (230)	Arlington Water Utility (240)
Ashland Water Utility (250)	Ashwaubenon Water And Sewer Utility (255)	Athens Municipal Water Utility (260)
City of Augusta Municipal Water and Sewer Utility (270)	Avoca Municipal Water Utility (280)	

** Only utility names' first letters that have tariffs are displayed.*

RATE FILE

Sheet No. 1 of 1
Schedule No. Mg-1
Amendment No. 11

Public Service Commission of Wisconsin

Adell Municipal Sewer and Water Utility

General Service - Metered

Bimonthly Service Charges:

⅝ -inch meter - $	20.00	3 -inch meter - $	78.00
¾ -inch meter - $	20.00	4 -inch meter - $	108.00
1 -inch meter - $	26.00	6 -inch meter - $	172.00
1¼ -inch meter - $	32.00	8 -inch meter - $	238.00
1½ -inch meter - $	38.00	10 -inch meter - $	328.00
2 -inch meter - $	54.00	12 -inch meter - $	418.00

Plus Volume Charges:

First	16,600	gallons used bimonthly - $5.85 per 1,000 gallons
Next	183,400	gallons used bimonthly - $5.35 per 1,000 gallons
Over	200,000	gallons used bimonthly - $4.50 per 1,000 gallons

Billing: Bills for water service are rendered bimonthly and become due and payable upon issuance following the period for which service is rendered. A late payment charge of 1 percent per month will be added to bills not paid within 20 days of issuance. This late payment charge shall be applied to the total unpaid balance for utility service, including unpaid late payment charges. This late payment charge is applicable to all customers. The utility customer may be given a written notice that the bill is overdue no sooner than 20 days after the bill is issued. Unless payment or satisfactory arrangement for payment is made within the next 10 days, service may be disconnected pursuant to Wis. Admin. Code ch. PSC 185.

Combined Metering: For a residential customer with more than one meter on a single service lateral, volumetric reading from all meters shall be combined for billing. For a nonresidential customer, volumetric readings may be combined for billing if the utility for its own convenience places more than one meter on a single water service lateral. Multiple meters placed for the purpose of identifying water not discharged into the sanitary sewer are not considered for utility convenience and may not be combined for billing. This requirement does not preclude the utility from combining readings where metering configurations support such an approach. Volumetric readings from individually metered separate service laterals may not be combined for billing purposes.

EFFECTIVE: October 30, 2014
PSCW AUTHORIZATION: 30-WR-101

RATE FILE

Sheet No. 1 of 1
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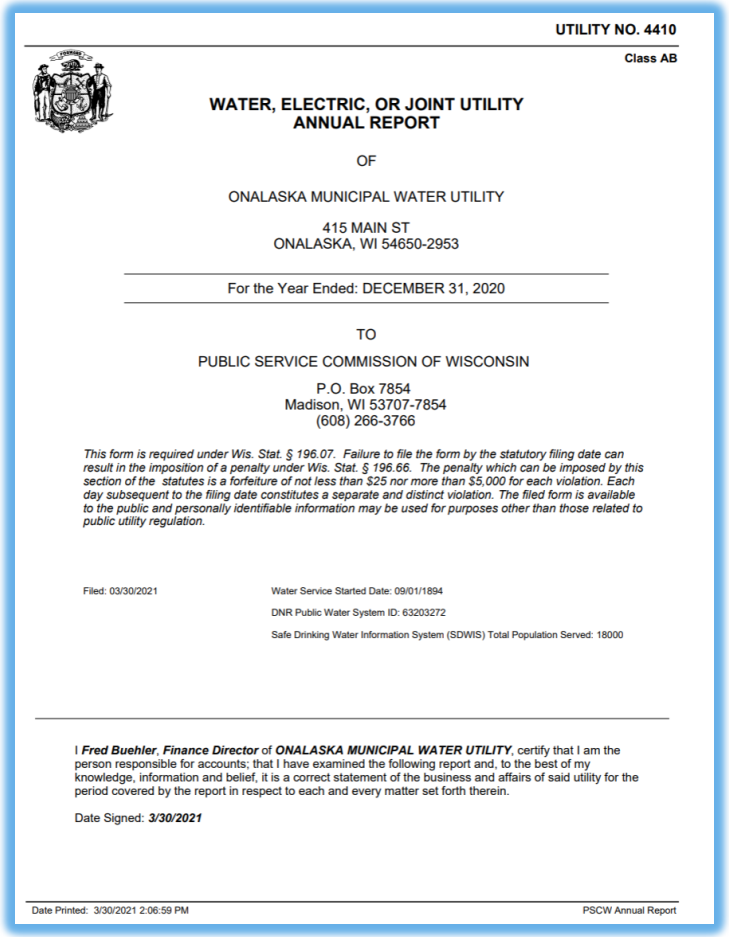
Practice #4: Assess your utility's financial capacity.

Combined Metering: For a residential customer with more than one meter on a single service lateral, volumetric reading from all meters shall be combined for billing. For a nonresidential customer, volumetric readings may be combined for billing if the utility for its own convenience places more than one meter on a single water service lateral. Multiple meters placed for the purpose of identifying water not discharged into the sanitary sewer are not considered for utility convenience and may not be combined for billing. This requirement does not preclude the utility from combining readings where metering configurations support such an approach. Volumetric readings from individually metered separate service laterals may not be combined for billing purposes.

EFFECTIVE: October 30, 2014
PSCW AUTHORIZATION: 30-WR-101

“Provide information annually about the utility’s financial condition and the revenues necessary to provide service and maintain utility assets on a sustained basis.” - AWWA



UTILITY NO. 4410

Class AB

WATER, ELECTRIC, OR JOINT UTILITY ANNUAL REPORT

OF

ONALASKA MUNICIPAL WATER UTILITY

415 MAIN ST
ONALASKA, WI 54650-2953

For the Year Ended: DECEMBER 31, 2020

TO

PUBLIC SERVICE COMMISSION OF WISCONSIN

P.O. Box 7854
Madison, WI 53707-7854
(608) 266-3766

This form is required under Wis. Stat. § 196.07. Failure to file the form by the statutory filing date can result in the imposition of a penalty under Wis. Stat. § 196.66. The penalty which can be imposed by this section of the statutes is a forfeiture of not less than $25 nor more than $5,000 for each violation. Each day subsequent to the filing date constitutes a separate and distinct violation. The filed form is available to the public and personally identifiable information may be used for purposes other than those related to public utility regulation.

Filed: 03/30/2021

Water Service Started Date: 09/01/1894

DNR Public Water System ID: 63203272

Safe Drinking Water Information System (SDWIS) Total Population Served: 18000

I ***Fred Buehler***, ***Finance Director*** of ***ONALASKA MUNICIPAL WATER UTILITY***, certify that I am the person responsible for accounts; that I have examined the following report and, to the best of my knowledge, information and belief, it is a correct statement of the business and affairs of said utility for the period covered by the report in respect to each and every matter set forth therein.

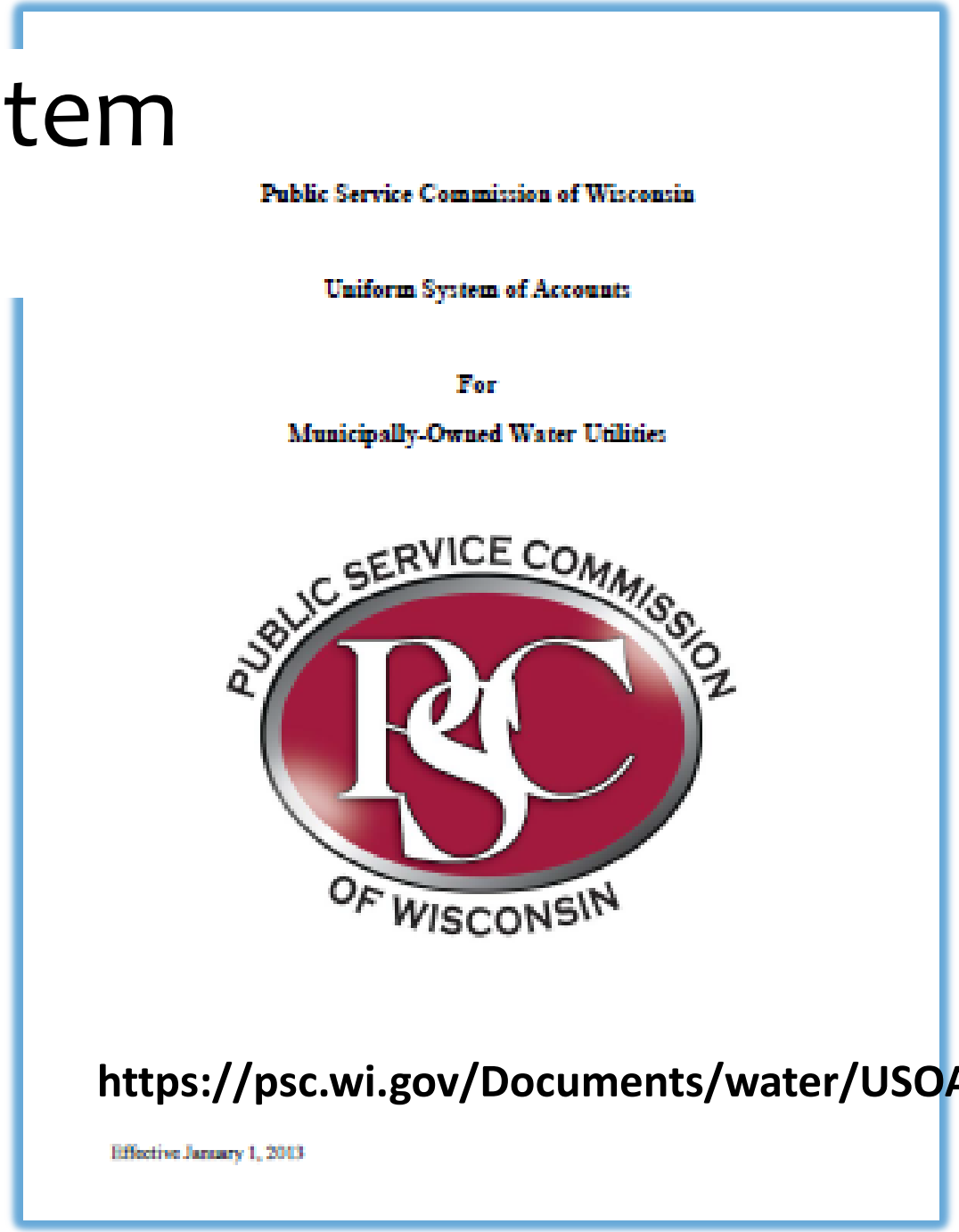
Date Signed: ***3/30/2021***

Date Printed: 3/30/2021 2:06:59 PM

PSCW Annual Report

https://apps.psc.wi.gov/ARS/annualReports/content/listingWEGS.aspx

“Adopt a uniform system of accounts.” - AWWA



Public Service Commission of Wisconsin

Uniform System of Accounts

For

Municipally-Owned Water Utilities

PUBLIC SERVICE COMMISSION OF WISCONSIN

Effective January 1, 2013

https://psc.wi.gov/Documents/water/USOAWater.pdf

“Do not divert revenues for unrelated purposes.”

- AWWA

“Collect sufficient revenues to finance all operating/maintenance expenses and capital costs.” - AWWA

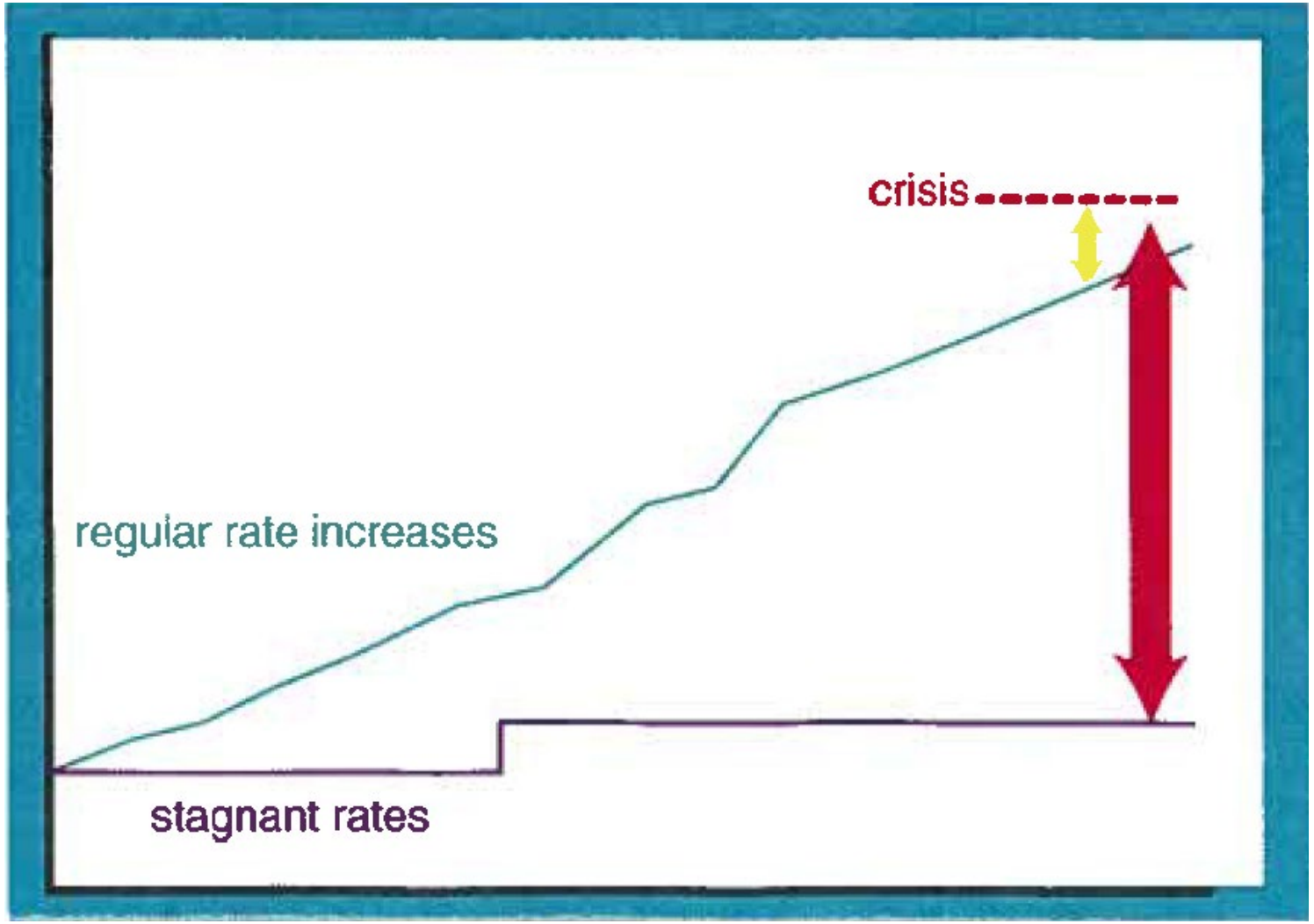
Are Utilities that Need to Raise Rates Actually Raising Rates?

MARCH 2, 2017 / SHADI ESKAF / 0 COMMENTS

Print PDF

What happens if a water utility collects less in revenues than it pays in expenditures in one year? It will raise some alarms, but some utilities might be able to weather that shortfall by dipping into their reserves and bounce back the following year. But what happens if a water utility collects less in revenues than it pays in expenditures in *three consecutive years*? That is probably a strong indication that the rates it is charging its customers are too low. Assuming that expenses cannot be significantly reduced, a rate increase is almost certainly necessary. So are utilities in this position raising rates the following year, or are

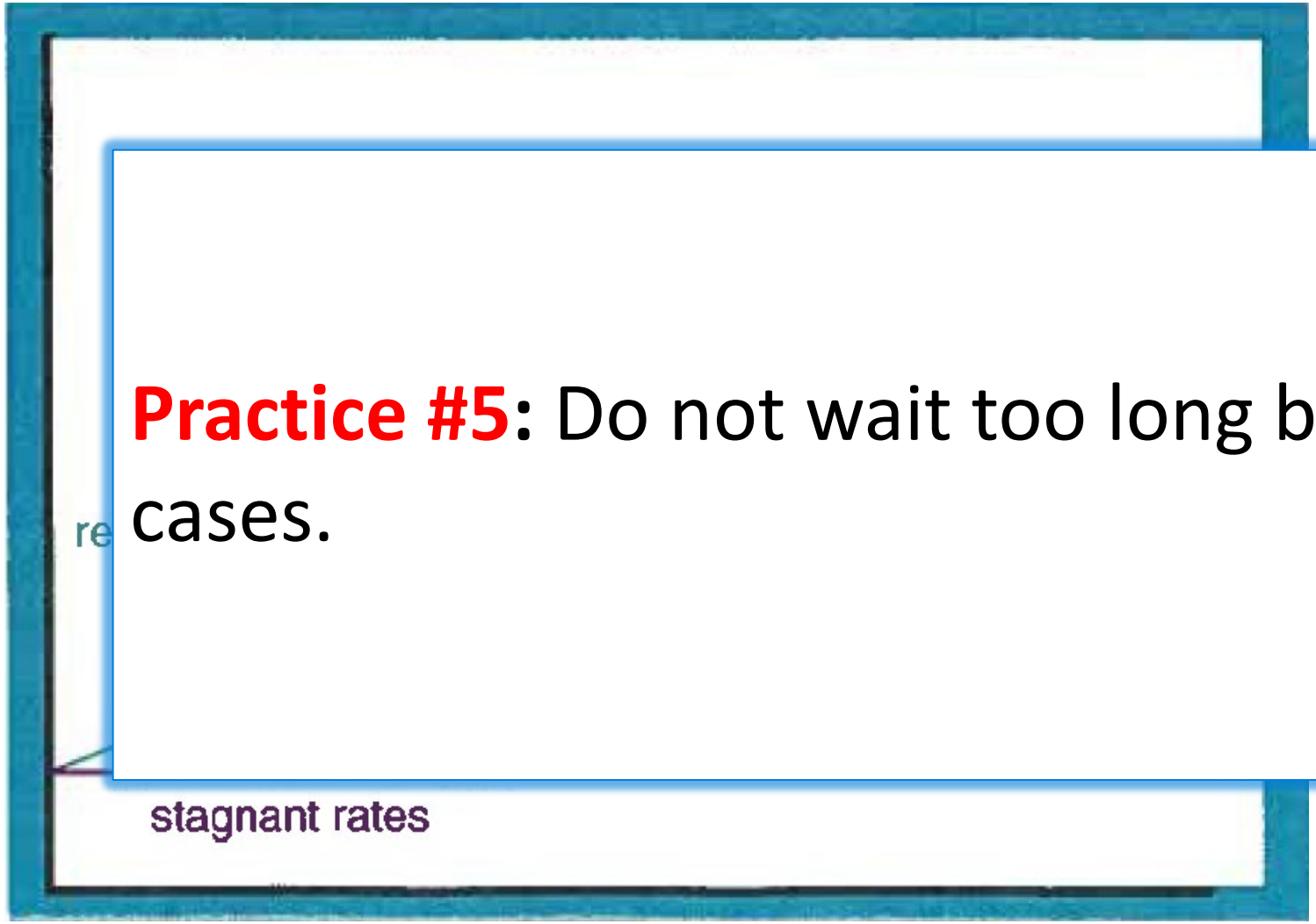
Rate Case Frequency



- Options
  - Multi-year rates
  - Rate phase-ins
  - Abbreviated process to allow for smaller, inflationary adjustments

Source: AWWA, "Avoiding Rate Shock: Making the Case for Water Rates"

Rate Case Frequency



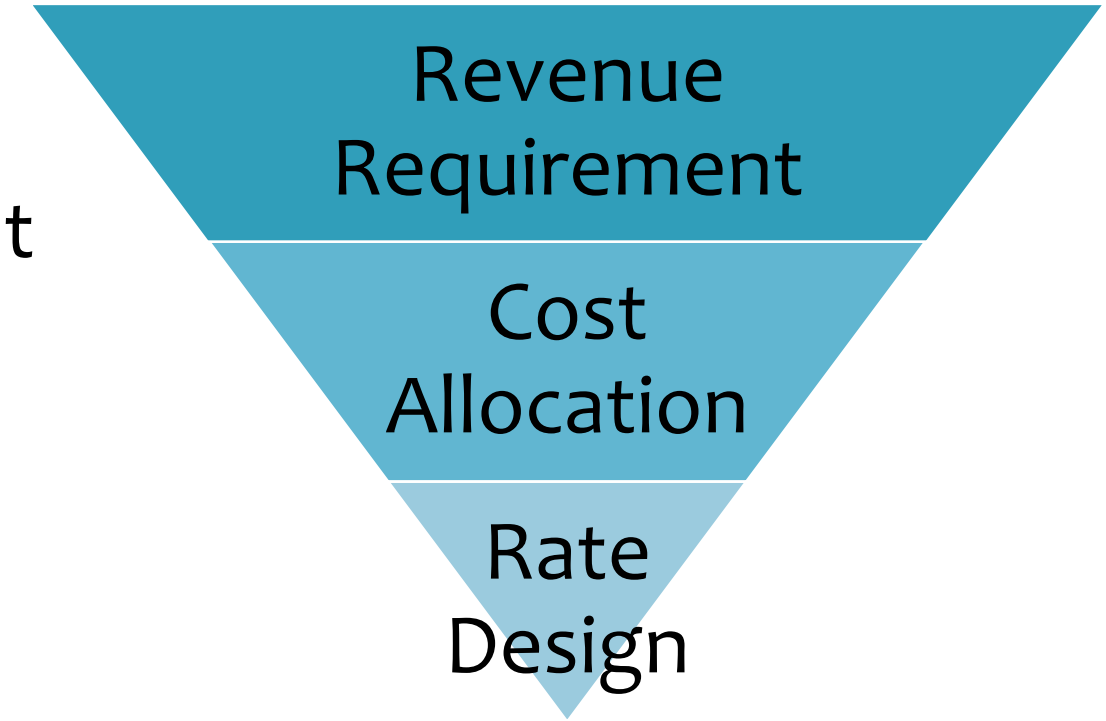
Practice #5: Do not wait too long between rate cases.

Source: AWWA, "Avoiding Rate Shock: Making the Case for Water Rates"

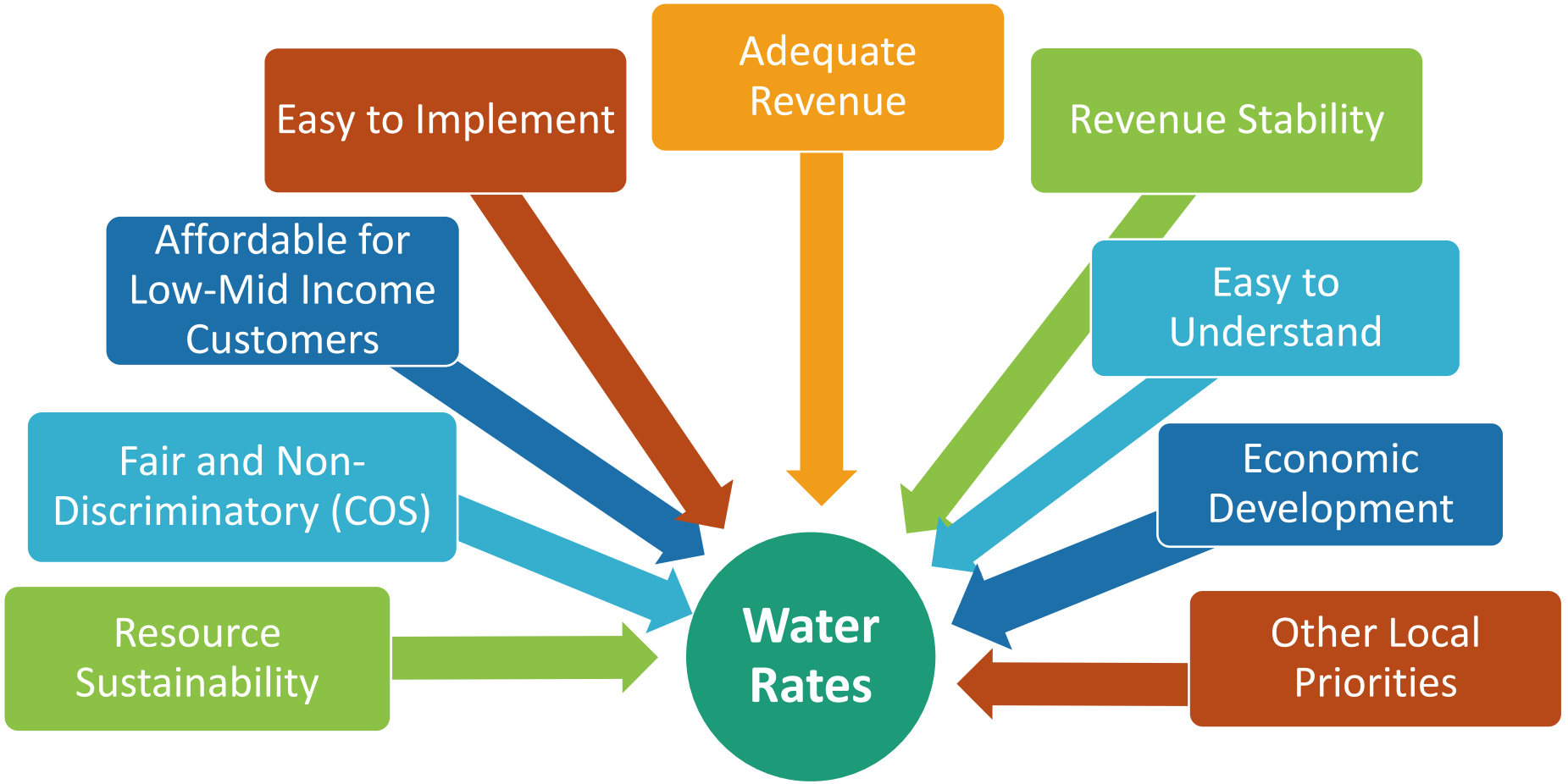
“Rates should be based on cost and avoid subsidizing customers.” - AWWA

What’s included in rates?

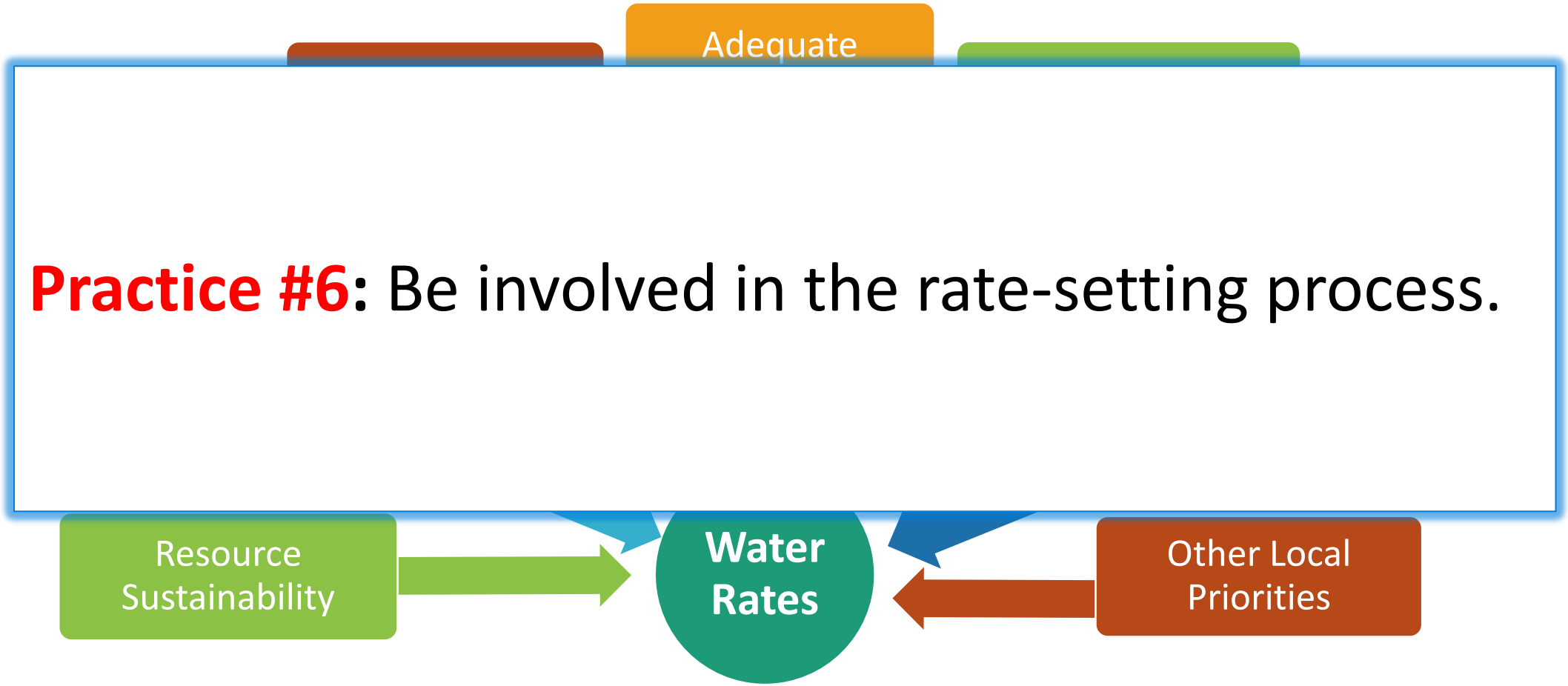
- O&M expenses
- Depreciation as a way to recover capital investment
- Return on average net investment rate base
- Taxes, including PILOT to municipality



Water Rates – Policy Considerations



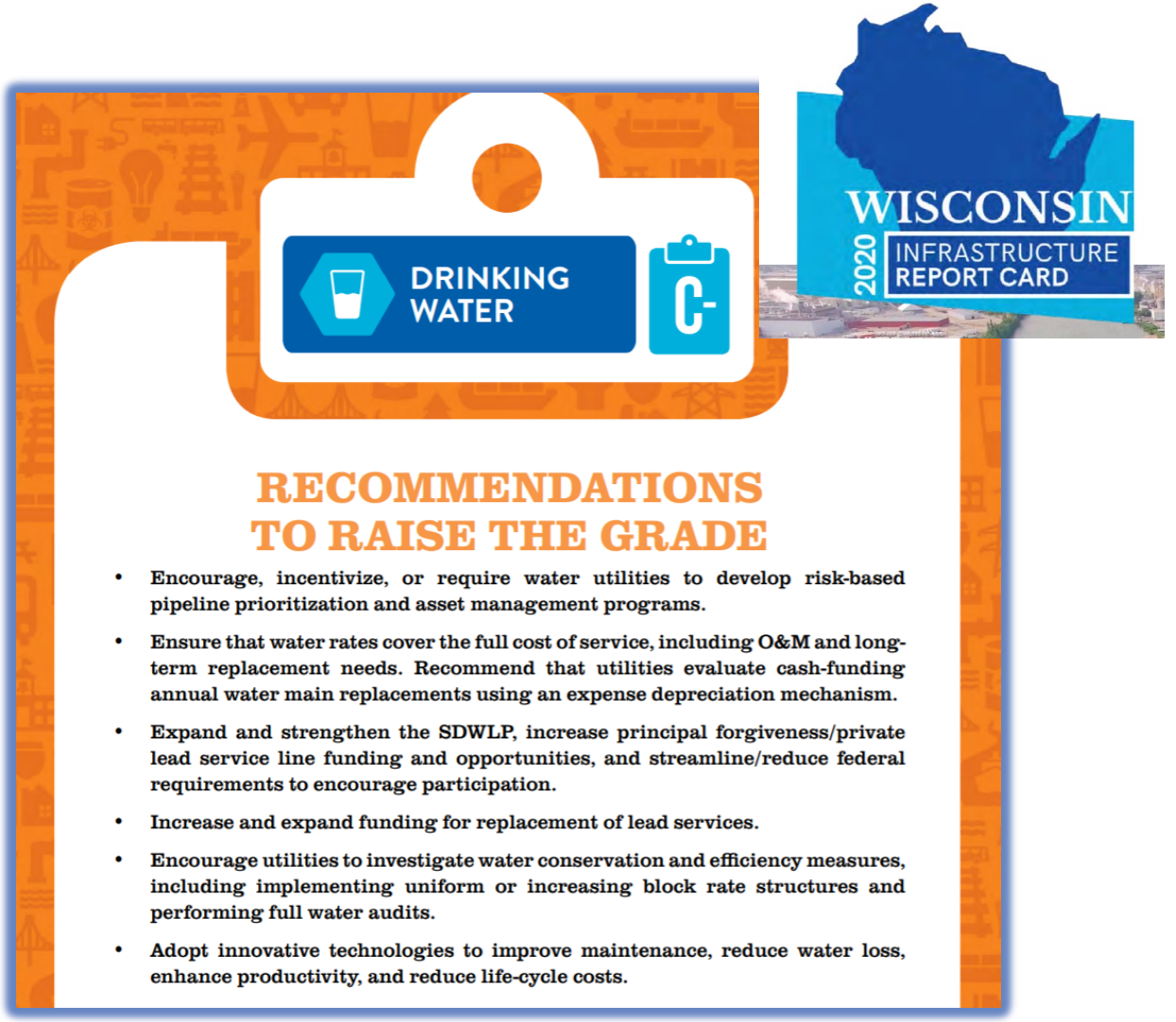
Water Rates – Policy Considerations



Practice #7: Learn about water utility challenges. Which ones apply to your system?

The infrastructure replacement era is upon us.

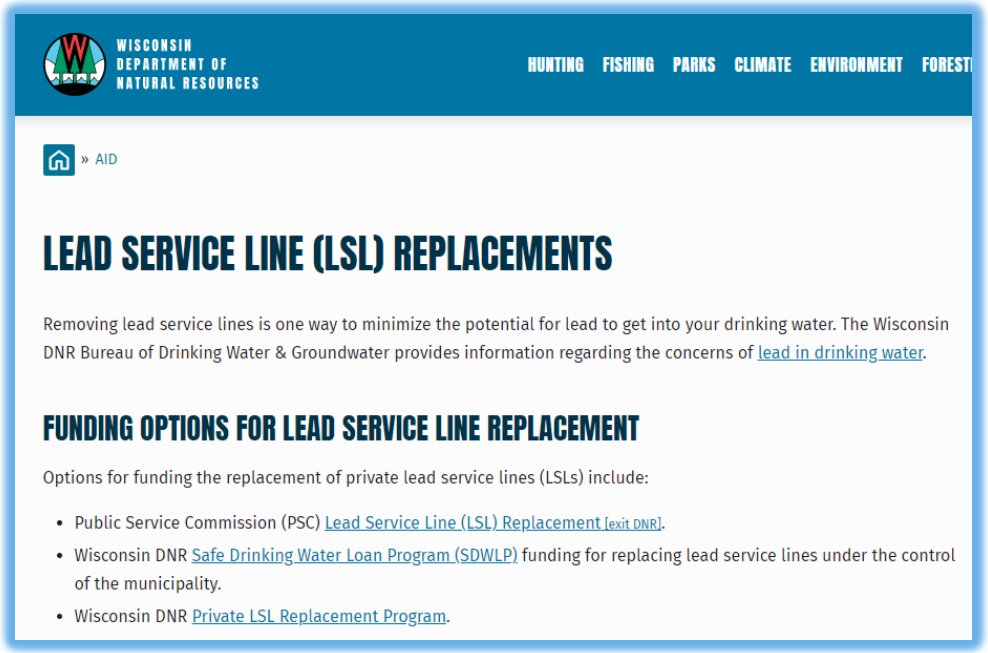
- There is a water main break every two minutes and an estimated 6 billion gallons of treated water lost each day in the U.S.
- The federal government's share of capital spending in the water sector fell from 63% in 1977 to 9% of total capital spending in 2017.
- The Bipartisan Infrastructure Bill represents a once-in-a-generation opportunity to make wise investments.



https://infrastructurereportcard.org/state-item/wisconsin/

Lead service lines need to be replaced.

https://www.epa.gov/sites/default/files/2020-12/documents/ej_lslr_funding_sources-final.pdf



https://dnr.wisconsin.gov/aid/documents/EIF/leadServiceLineFunding.html

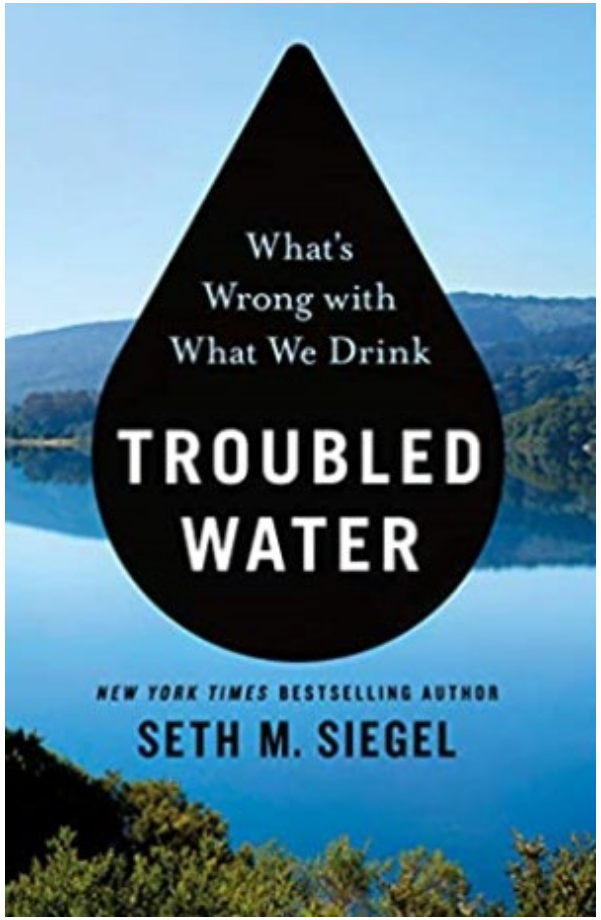
https://psc.wi.gov/Pages/ForUtilities/Water/Lead-Service-Line.aspx

Water suppliers are the only public utilities that provide a service that is ingested by their customers.

- Customer expectations:
  - Water should be cheap, if not free
  - Drinking water must be safe 24/7
  - Expectations regarding "safe" can vary from customer to customer

- Changes to existing regulations (Ex: revisions to Federal Lead and Copper Rule)

- Health advisories on contaminants not currently regulated under Safe Drinking Water Act (Ex: PFAS)



‘Dangerous Stuff’: Hackers Tried to Poison Water Supply of Florida Town

For years, cybersecurity experts have warned of attacks on small municipal systems. In Oldsmar, Fla., the levels of lye were changed and could have sickened residents.

JOINT
CYBERSECURITY ADVISORY

TLP:WHITE | Product ID: A21-042A

February 11, 2021

Co-Authored by:

Compromise of U.S. Water Treatment Facility

University of Missouri | Search this site

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POV: Focus on Water Cybersecurity Now, Before It’s Too Late

Written by Robert F. Powelson, President & CEO of National Association of Water Companies
April 14, 2021

Kansas Water System Hacking Highlights Risks

4/12/2021

(AP) – A former Kansas utility worker has been charged with remotely tampering with a public water system’s cleaning procedures, highlighting the difficulty smaller utilities face in protecting against hackers.

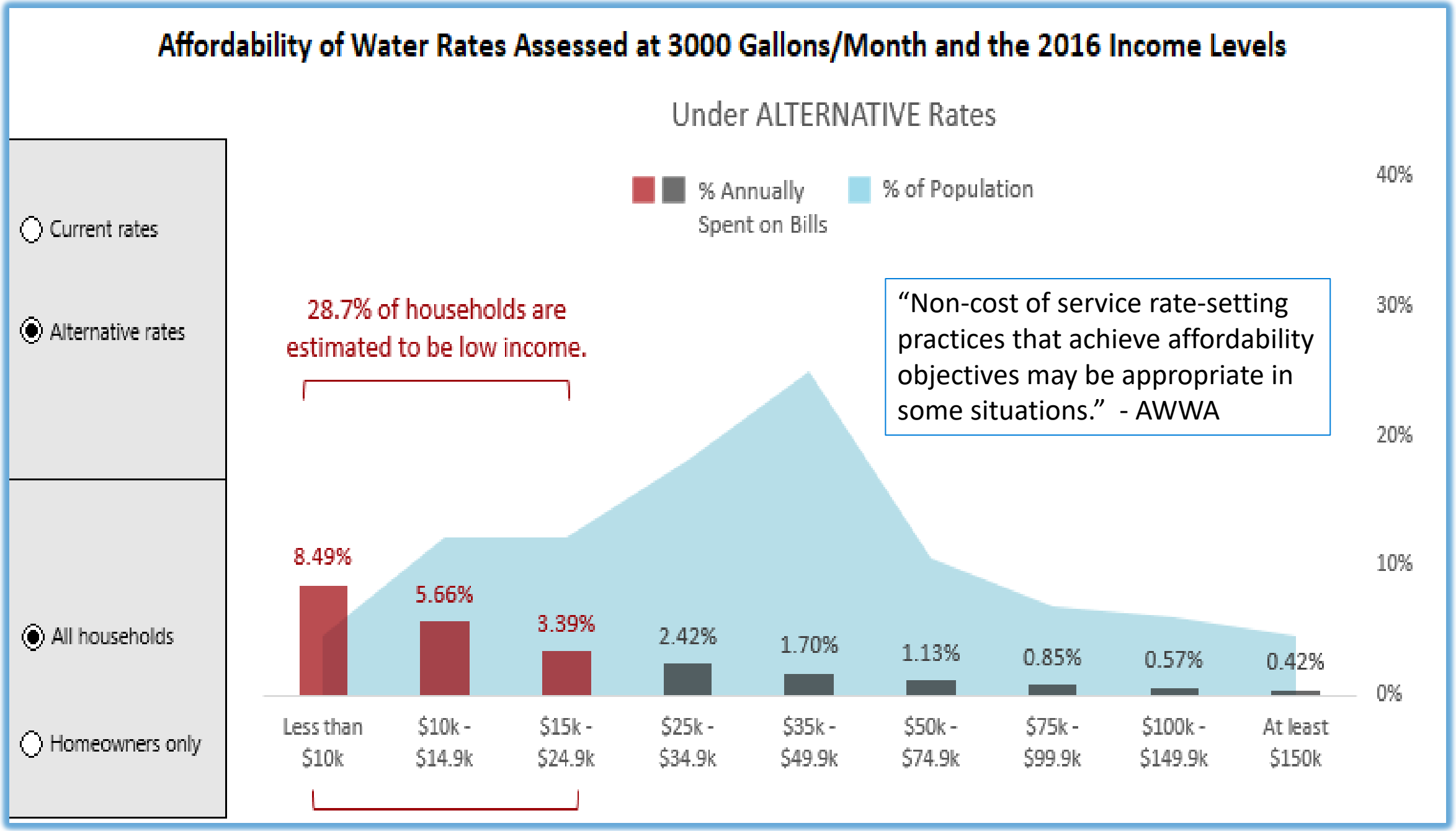
Water Workforce Issues

https://www.awwa.org/Membership-Volunteering/Diversity-Center#11285601-resources--tools

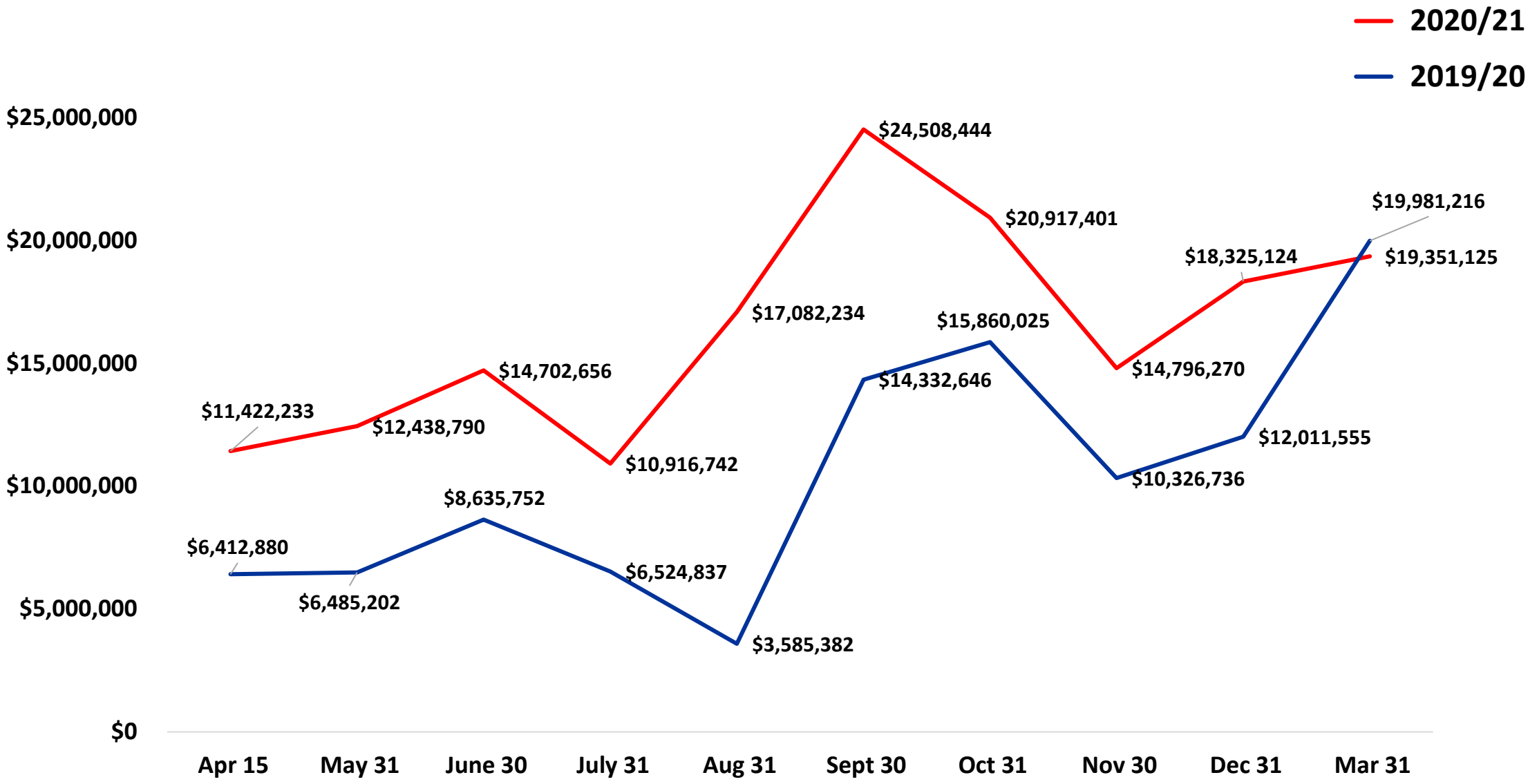
- Between 2016 and 2026, an estimated 10.6% of water sector workers will retire or transfer each year.
- Some utilities expecting as much as half of their staff to retire in the next five to 10 years.
- Some utilities have had operators and distribution system staff leave to take jobs with contractors.

https://www.awwa.org/Resources-Tools/Resource-Topics/Workforce/Veterans

Affordability of Water Rates Assessed at 3000 Gallons/Month and the 2016 Income Levels

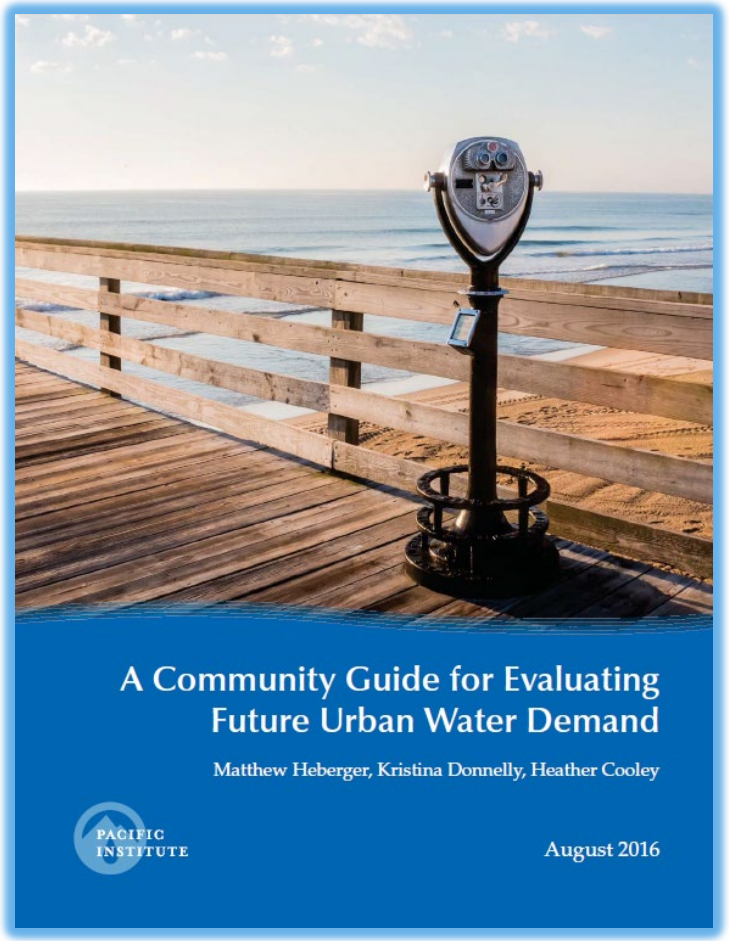


Wisconsin Residential Water Arrears Comparison



Practice #8: Think outside the box.

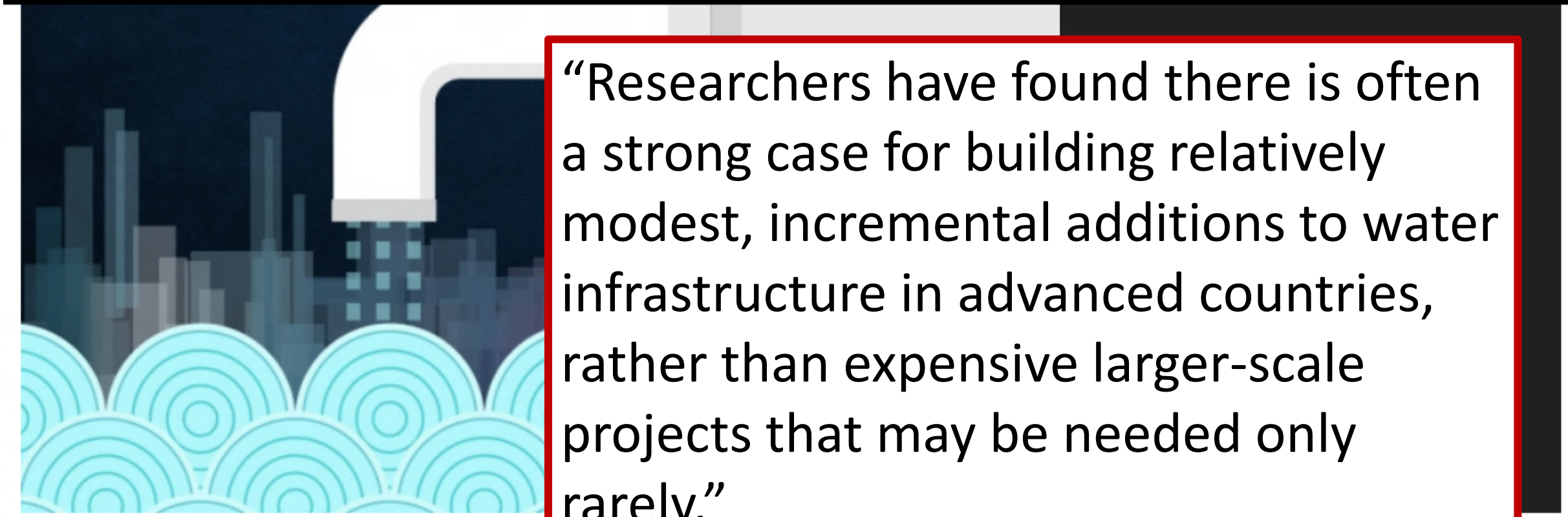
Strategies: Adopt an asset management plan. Take a new look at capital planning.



"The reality is that many water suppliers consistently overestimate actual water demand."

MIT News

Browse or Search



"Researchers have found there is often a strong case for building relatively modest, incremental additions to water infrastructure in advanced countries, rather than expensive larger-scale projects that may be needed only rarely."

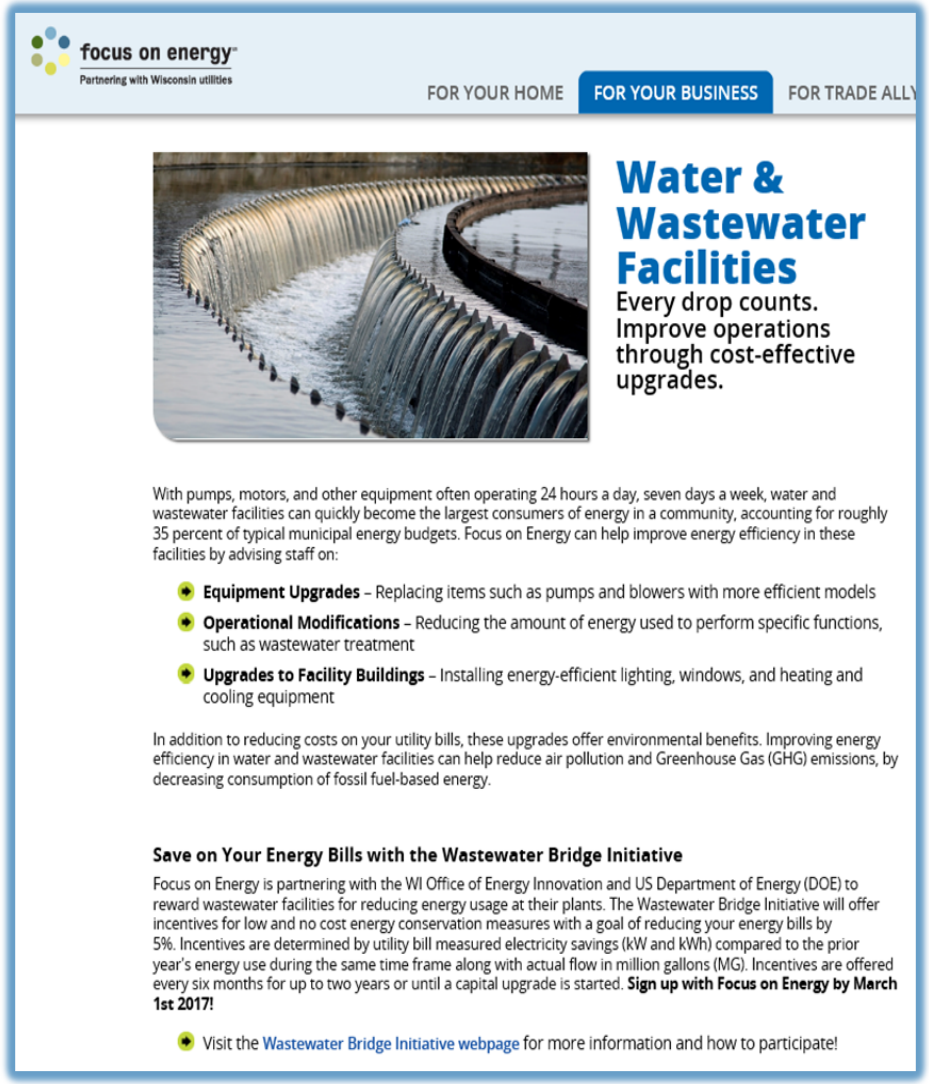
Case study suggests new approach to urban water supply

One drought remedy: Keep infrastructure fast, cheap, and under control.

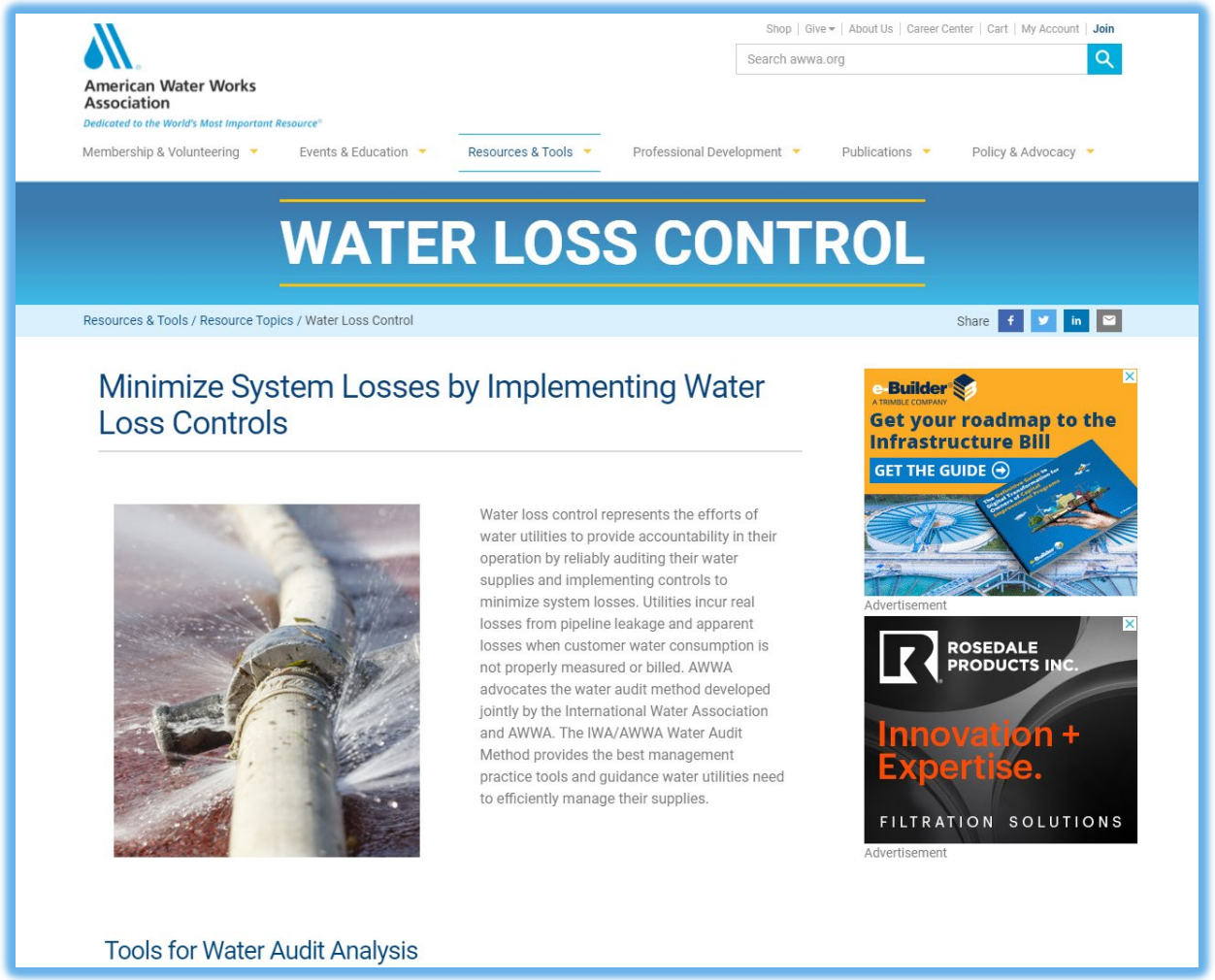
http://news.mit.edu/2017/drought-remedy-keep-infrastructure-fast-cheap-under-control-0814

Look for operational efficiency improvements.

- Controlling costs and improving efficiency can mitigate the impact of revenue shortfalls
  - Reduce water loss, non-revenue water.
  - Improve energy efficiency: water treatment, conveyance, facility management.
  - Revisit procurement and project management policies and practices.
  - Partner with other utilities to achieve scale economies.
- System optimization – flushing, meter reading, billing, etc.
- But be mindful of service quality, reliability, & public health.



https://www.focusonenergy.com/business/water-and-wastewater-facilities



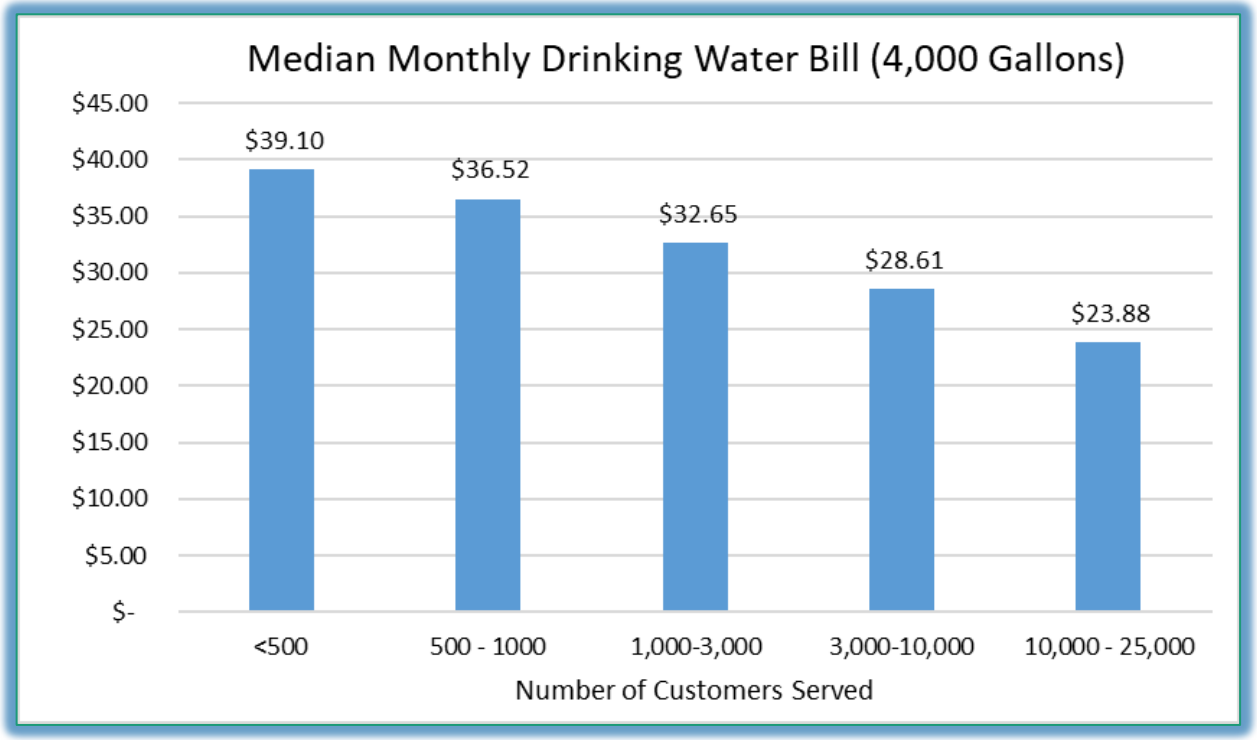
https://www.awwa.org/Resources-Tools/Resource-Topics/Water-Loss-Control

Conservation & Efficiency: Avoided/downsized infrastructure reduces rates in the long-term

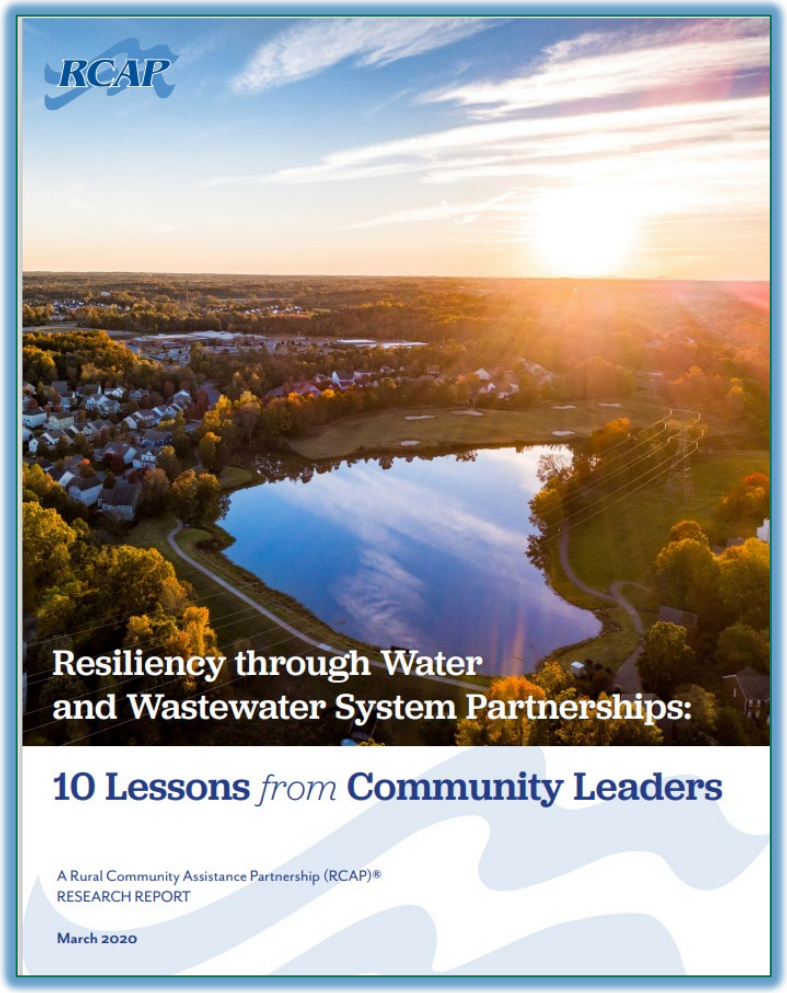
- Utilities reduced costs by:
  - Avoiding purchase of additional water supply
  - Deferring large-scale infrastructure projects
  - Reducing size of new facilities

- Reports available at:
  www.financingsustainablewater.org

Utility size matters.



Partnerships/Regionalization/Consolidation



https://efc.web.unc.edu/2020/03/18/regionalization-five-key-takeaways-with-resources/

https://www.rcap.org/wphttps://www.rcap.org/special-initiatives/regionalization/-content/uploads/2020/03/RCAP-Regionalization-Research-Report_March-2020_Pages.pdf

Increasing Transfer of Responsibility

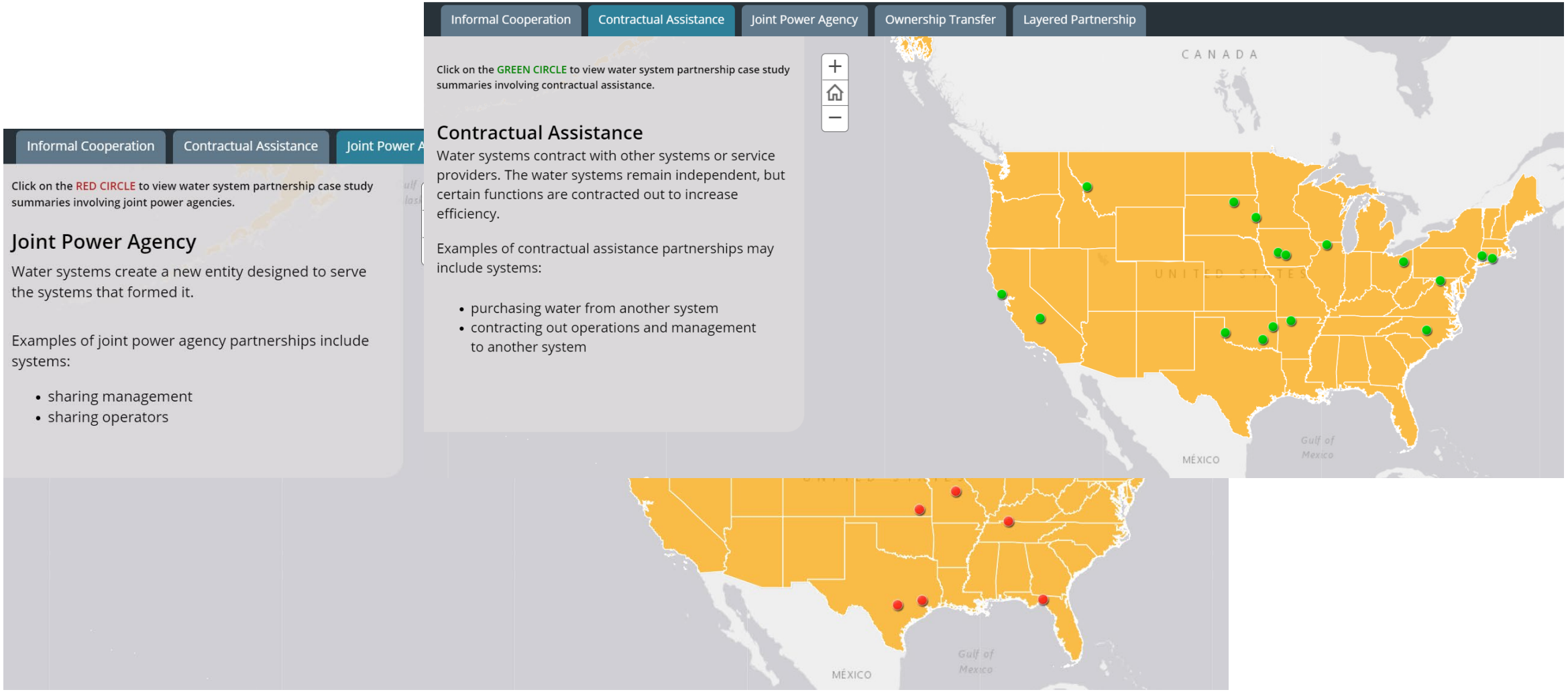
Informal Cooperation	Contractual Assistance	Shared Governance	Ownership Transfer
Work with other systems, but without contractual obligations	Requires a contract, but contract is under systems' control	Creation of a shared entity by several systems that continue to exist independently (e.g., regional water system)	Takeover by existing or newly created entity
Examples: • Sharing equipment • Sharing bulk supply purchases • Mutual aid agreements	Examples: • Contracting operation and management • Outsourcing engineering services • Purchasing water	Examples: • Sharing system management • Sharing leadership • Sharing source water • JPA	Examples: • Acquisition and physical interconnection • Acquisition and satellite mgmt • One system transferring ownership to another to become a larger existing system or a new entity

RCAP

Graphic adapted by RCAP and RCAC from U.S. Environmental Protection Agency resources

EPA Types of Partnerships & Examples

Map of Partnership Case Studies



https://www.epa.gov/dwcapacity/about-water-system-partnerships

Questions?

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