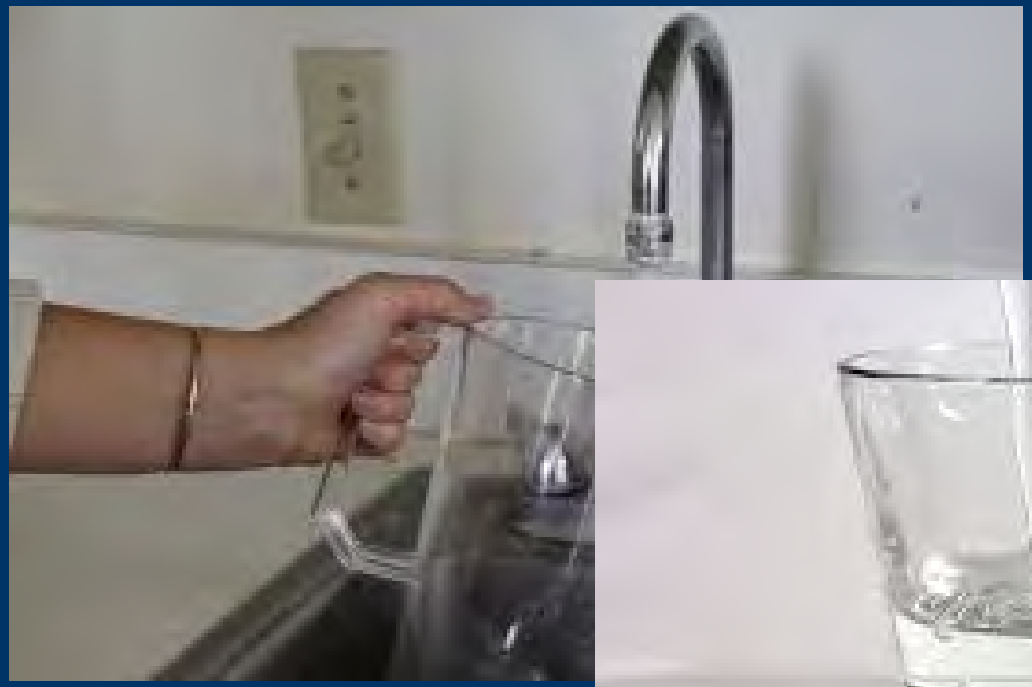
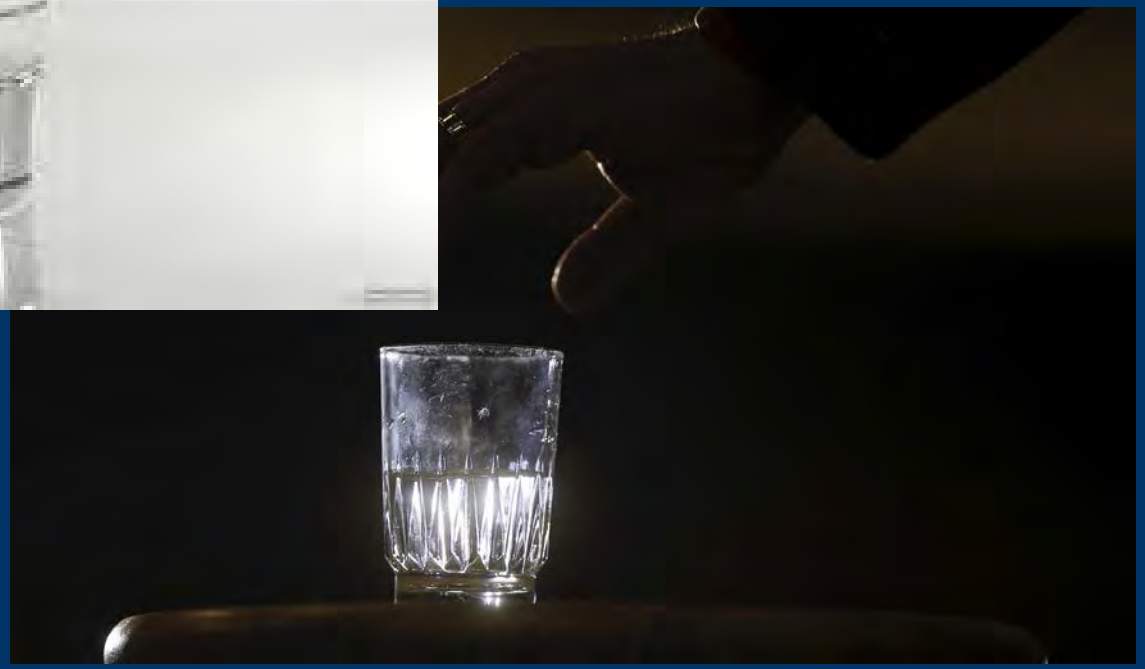
Water Infrastructure and Resiliency Finance Center

Investing in Your Infrastructure

John Covington
September 12, 2017






DWP


ROAD
CLOSED
AHEAD


FLINT WATER PLANT

Infrastructure Funding Needs

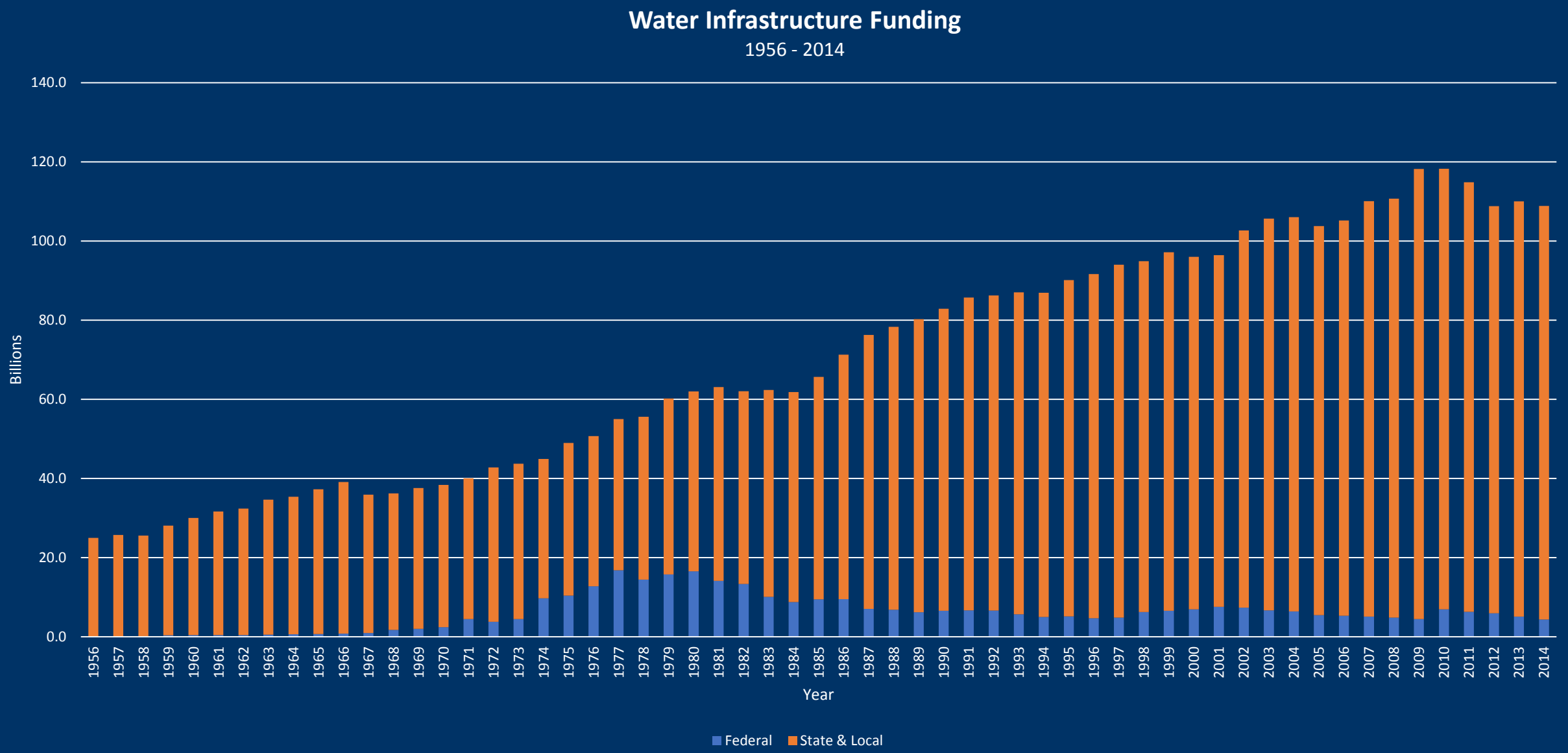
US EPA	$644 billion
American Society of Civil Engineers	$3.6 trillion
AWWA cost to replace pipe	$1 trillion
US Water Alliance	$123 billion a year
US Conference of Mayors	$2.8 trillion

Where’s The Money

EPA Clean Water and Drinking Water State Revolving Funds
USDA Rural Development
HUD Community Development Block Grant
Economic Development
State Funded Programs
Municipal Bonds
Local Funds

Most of this money has to be paid back

Who Pays



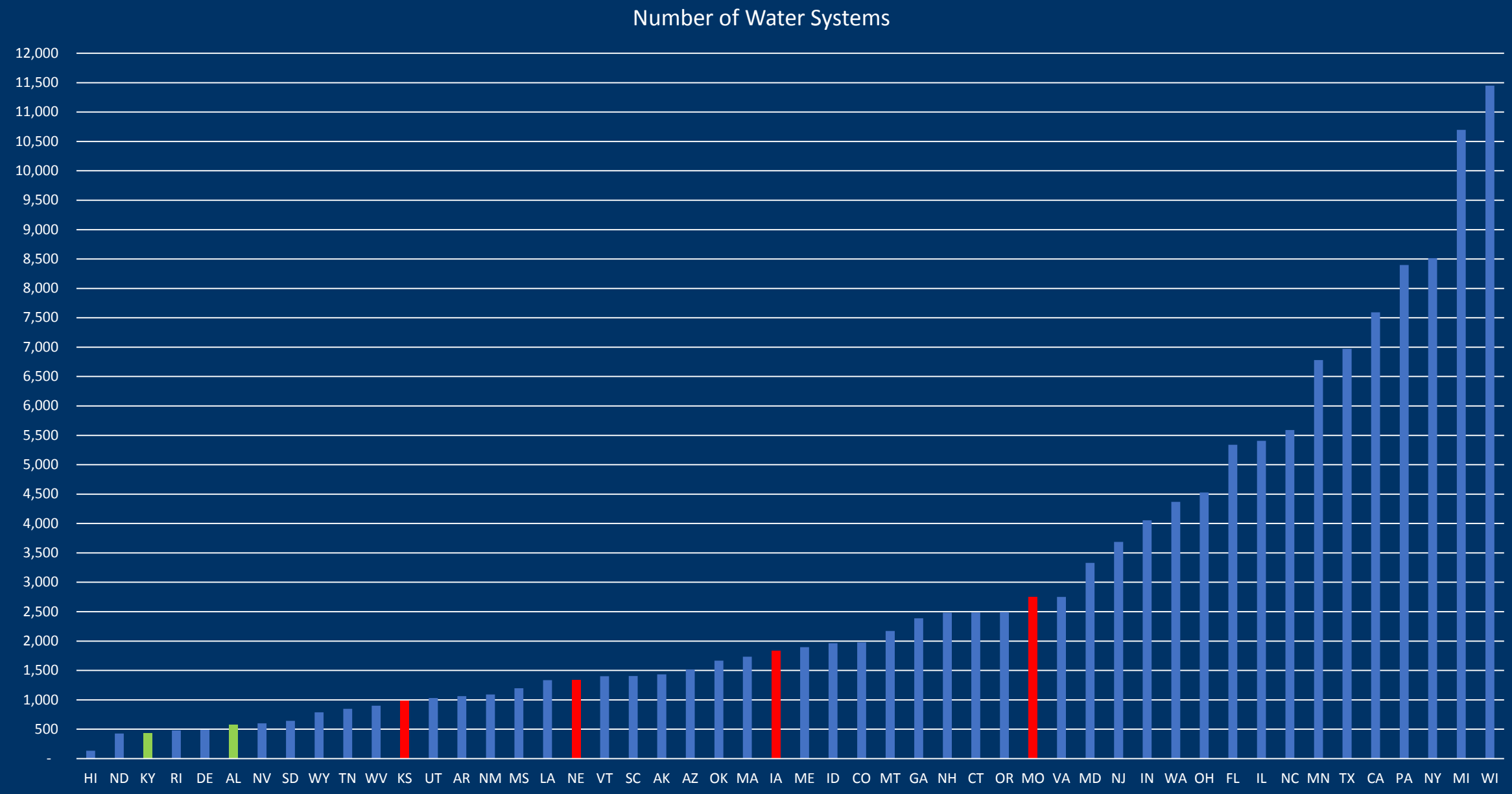
https://www.cbo.gov/publication/49910

You Need Capacity to Borrow

Technical
Managerial
Financial

Regionalization

Small Dying Communities


Number of Water Systems
12,000
11,500
11,000
10,500
10,000
9,500
9,000
8,500
8,000
7,500
7,000
6,500
6,000
5,500
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
-
HI ND KY RI DE AL NV SD WY TN WV KS UT AR NM MS LA NE VT SC AK AZ OK MA IA ME ID CO MT GA NH CT OR MO VA MD NJ IN WA OH FL IL NC MN TX CA PA NY MI WI

Small Systems

26 percent of systems with a service population under 500 have violations, compared to 17 percent of systems with a service population over 100,000

Do not normally have the capital reserves or other resources of a large system to address problems

For a system of less than 100 residential connections, the cost per connection for outstanding capital needs can top $19,000

For systems of 3,300 to 10,000 residential connections the cost per connection is can be over $4,000

Small System Rates

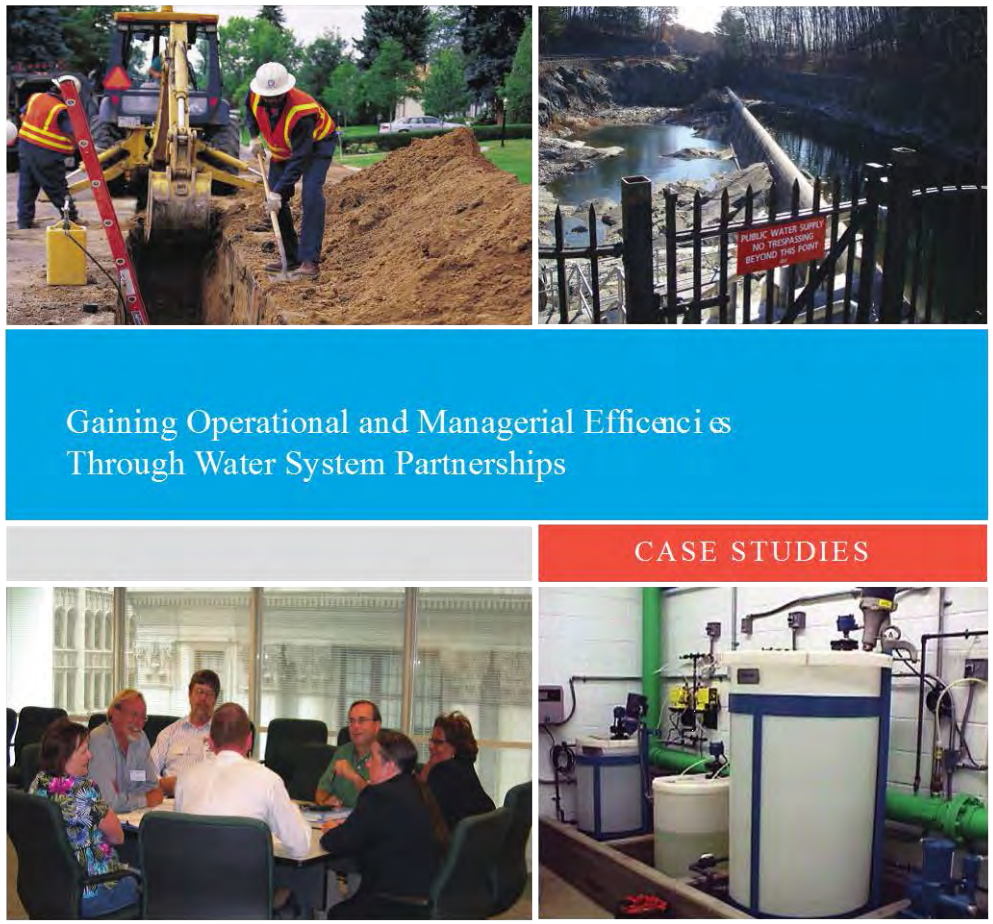
Group A utilities with water sales of more than 75 MGD
Group B utilities with water sales of between 20 and 75 MGD
Group C utilities with water sales of up to 20 MGD.

Group C utilities pay the highest percentage of their income for water bills

Almost 15 percent of the Group C utilities already exceed, or are more than 75 percent of the way to, the EPA's 2 percent affordability threshold

None of the Group A systems and only 1 percent of the Group B systems are this close to the threshold

https://www.wateronline.com/doc/survey-reveals-water-and-wastewater-billing-stats-and-concerns-0001



EPA Water System Partnership Resources

- Webinars
- Case Studies

https://www.epa.gov/sustainable-water-infrastructure/water-system-partnerships

State Programs and Policies Supporting Cooperative Approaches for Drinking Water Systems

https://www.epa.gov/dwcapacity/state-programs-and-policies-supporting-cooperative-approaches-drinking-water-systems

WATER SYSTEM PARTNERSHIPS

STATE PROGRAMS AND POLICIES SUPPORTING COOPERATIVE APPROACHES FOR DRINKING WATER SYSTEMS

EPA

TMF Benefits of Partnerships

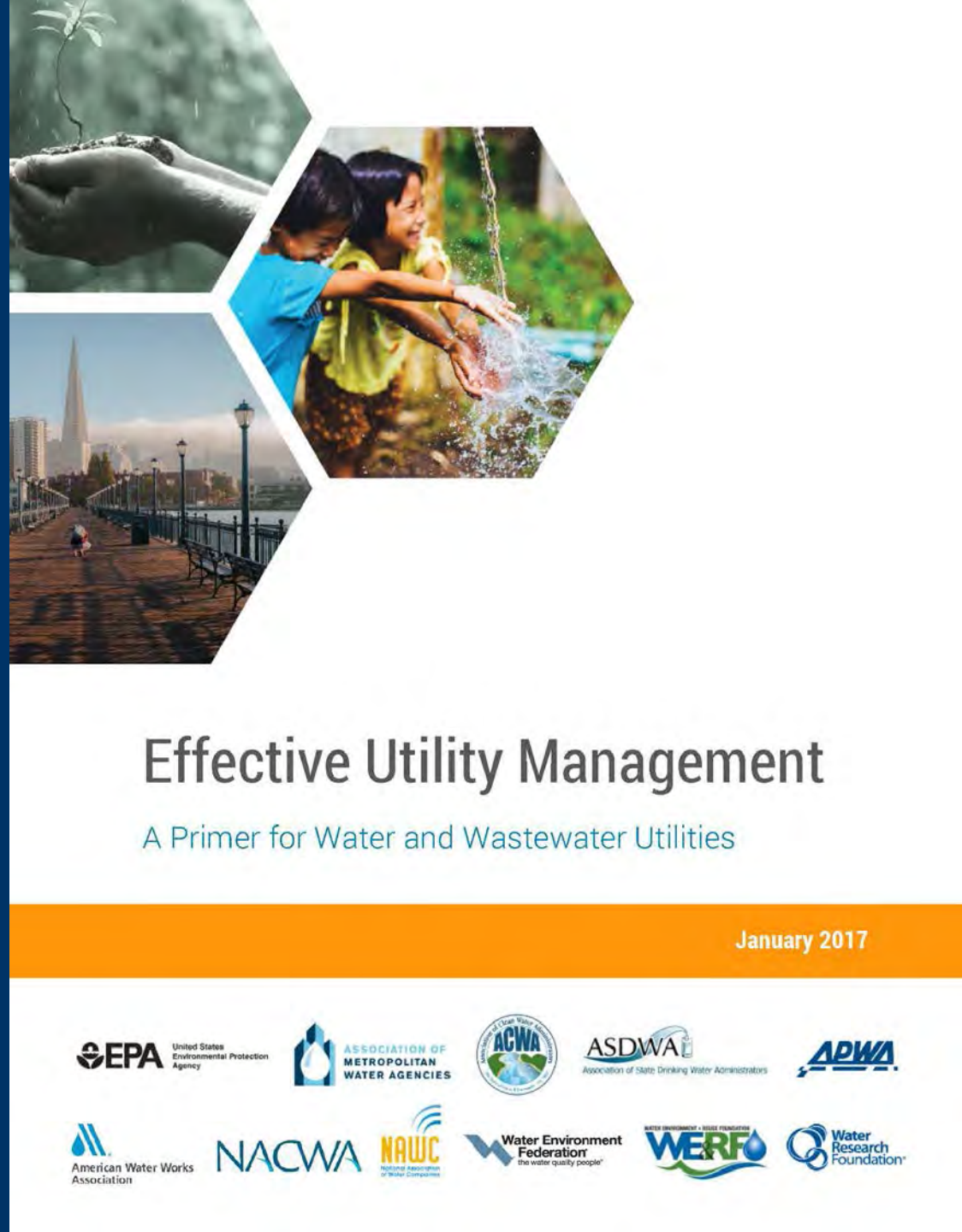
Technical capacity improvements can include increasing access to higher quality/quantity source water; sharing, upgrading, or building new infrastructure; developing more efficient treatment technologies; and opening access to a certified operator and additional expertise.

Managerial capacity improvements can include increasing expertise in water system planning/operations and enhancing systems' financial, accounting, and asset management practices.

Financial capacity improvements can include reducing costs, achieving greater economies of scale through shared services, and increasing a system's access to funds through new partnerships. In addition, systems that consider consolidation or restructuring may receive preferential treatment in loan or grant programs (e.g., higher priority for DWSRF loans).

Effective Utility Management

http://www.watereum.org/



Ten Attributes of Effectively Managed Utilities and Five Keys to Management Success

http://www.watereum.org/

EPA Effective Water Utility Management Practices Website

Webinars

Moving Toward Sustainability Webinar 1 (Community Sustainability)
Moving Toward Sustainability Webinar 2 (Operational Resiliency)
Moving Toward Sustainability Webinar 3 Stakeholder Understanding and Support)
From Aspirational to Operational: Sustainable and Effective Practices for Creating Your Water Utility Roadmap

https://www.epa.gov/sustainable-water-infrastructure/effective-water-utility-management-practices

Asset Management

Where are my assets

What are my most critical assets

What is the current state of my assets

When will I have to repair or replace my assets

How will I pay for maintaining my assets

Benefits of Asset Management

Prolonging asset life and improving decisions about asset rehabilitation, repair, and replacement

Meeting consumer demands with a focus on system sustainability

Setting rates based on sound operational and financial planning

Budgeting focused on critical activities for sustained performance

https://www.epa.gov/sustainable-water-infrastructure/asset-management-water-and-wastewater-utilities

Benefits of Asset Management

Meeting service expectations and regulatory requirements

Improving responses to emergencies

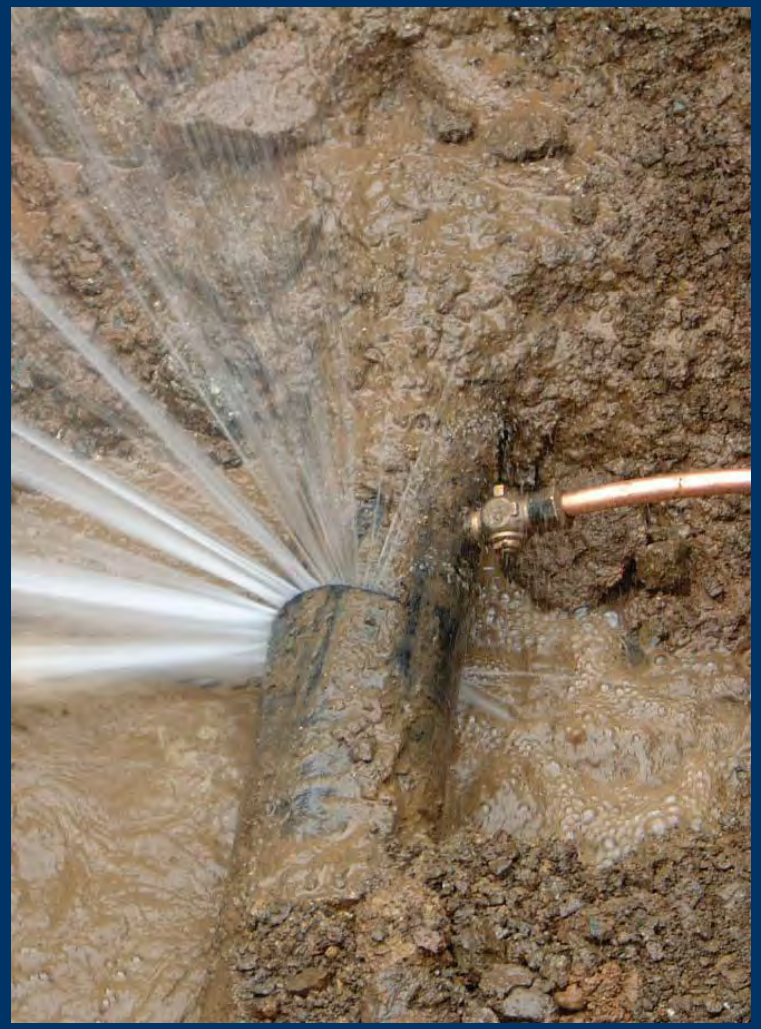
Improving the security and safety of assets

Reducing overall costs for both operations and capital expenditures

https://www.epa.gov/sustainable-water-infrastructure/asset-management-water-and-wastewater-utilities

Reduce Expenses

Water Loss Control



System-wide water loss accounting

Leak detection and repair

Pricing that encourages consumer water conservation

https://www.epa.gov/sustainable-water-infrastructure/water-efficiency-water-suppliers

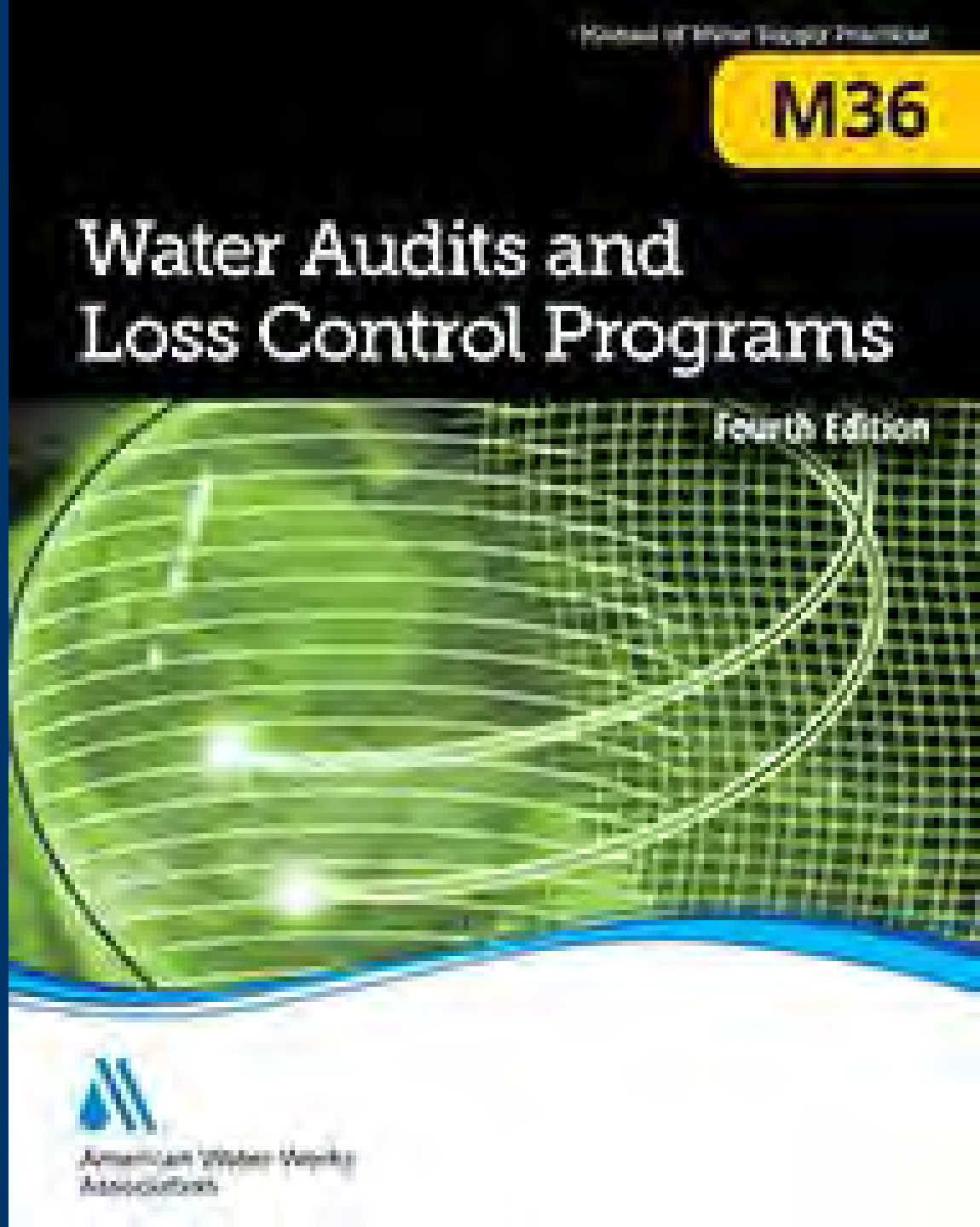
American Water Works Association

Free Water Audit Software

https://www.awwa.org/home/awwa-news-details/articleid/2641/awwa-free-water-audit-software-version-5-0-now-available.aspx

Water Loss Control Website

https://www.awwa.org/resources-tools/water-knowledge/water-loss-control.aspx



Drinking Water State Revolving Fund and Capacity Building in Action

Water Loss Management

Thursday, September 28th, 2017
1:00-2:30 PM Eastern

Water auditing and loss control programs provide effective ways for a utility to conserve water, save operating expenses, and increase revenues. DWSRF set-asides can be used to fund water loss management activities in order to build the capacity of systems.

This webinar will showcase results from states that have adopted programs under the American Water Works Association M36 Methodology, including Georgia, California, Utah, and Hawaii. The webinar will also include an overview of water loss regulatory developments, research on water loss data and widespread challenges faced by systems.

Registration Link:
https://attendee.gotowebinar.com/register/4454147278099119107

If you have questions, please contact Susanna Bains (bains.susanna@epa.gov) or Kiri Anderer (Anderer.Kirsten@epa.gov).

Upcoming EPA Water Loss Management Webinar

September 28th

Energy Savings

Energy Savings

For many municipal governments, drinking water and wastewater plants typically are the largest energy consumers, often accounting for 30 to 40 percent of total energy consumed. Overall, drinking water and wastewater systems account for approximately 2 percent of energy use in the United States.

As much as 40 percent of operating costs for drinking water systems can be for energy.

By incorporating energy efficiency practices into their water and wastewater plants, municipalities and utilities can save 15 to 30 percent, saving thousands of dollars with payback periods of only a few months to a few years.

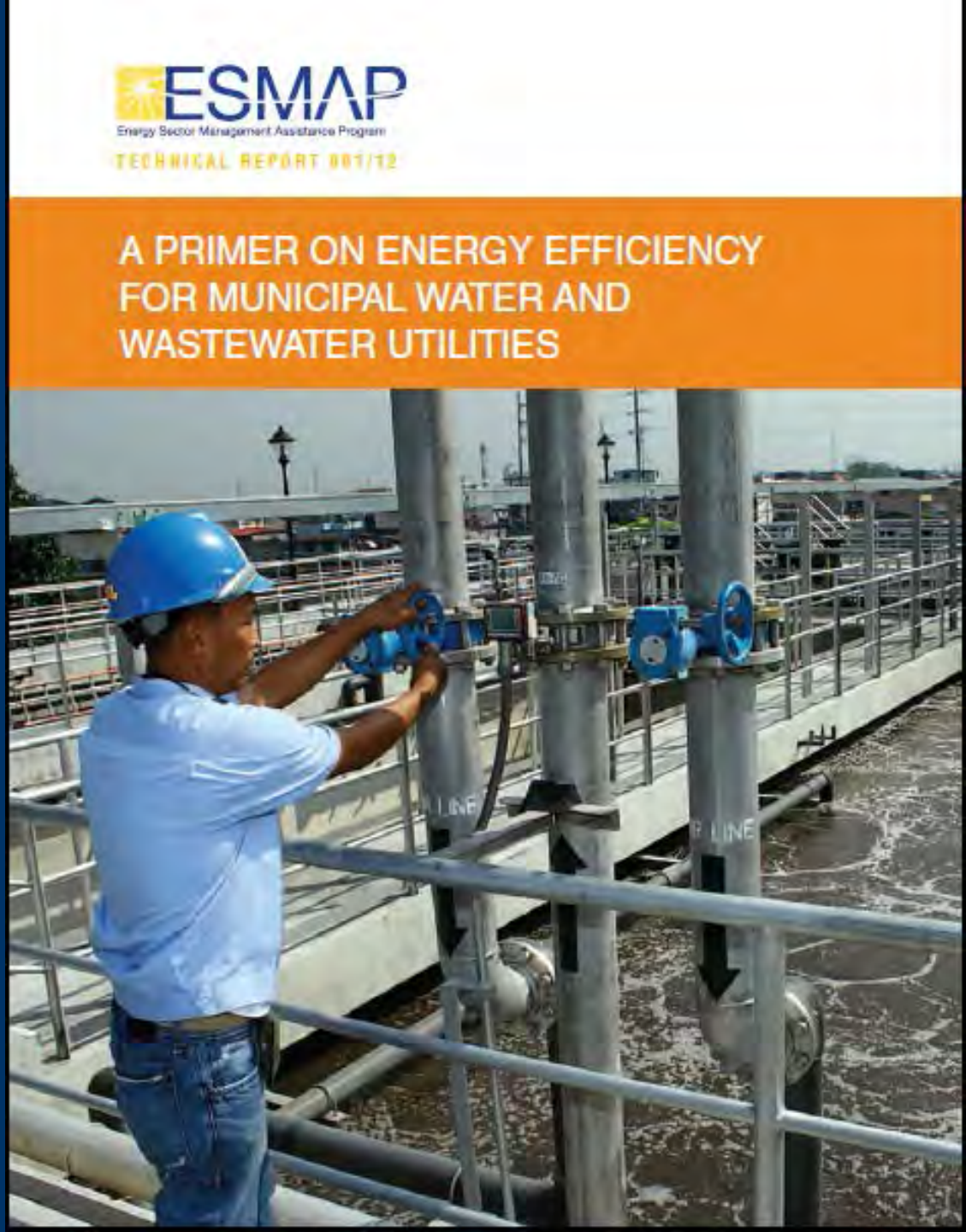
A Primer on Energy Efficiency For Municipal Water and Wastewater Utilities

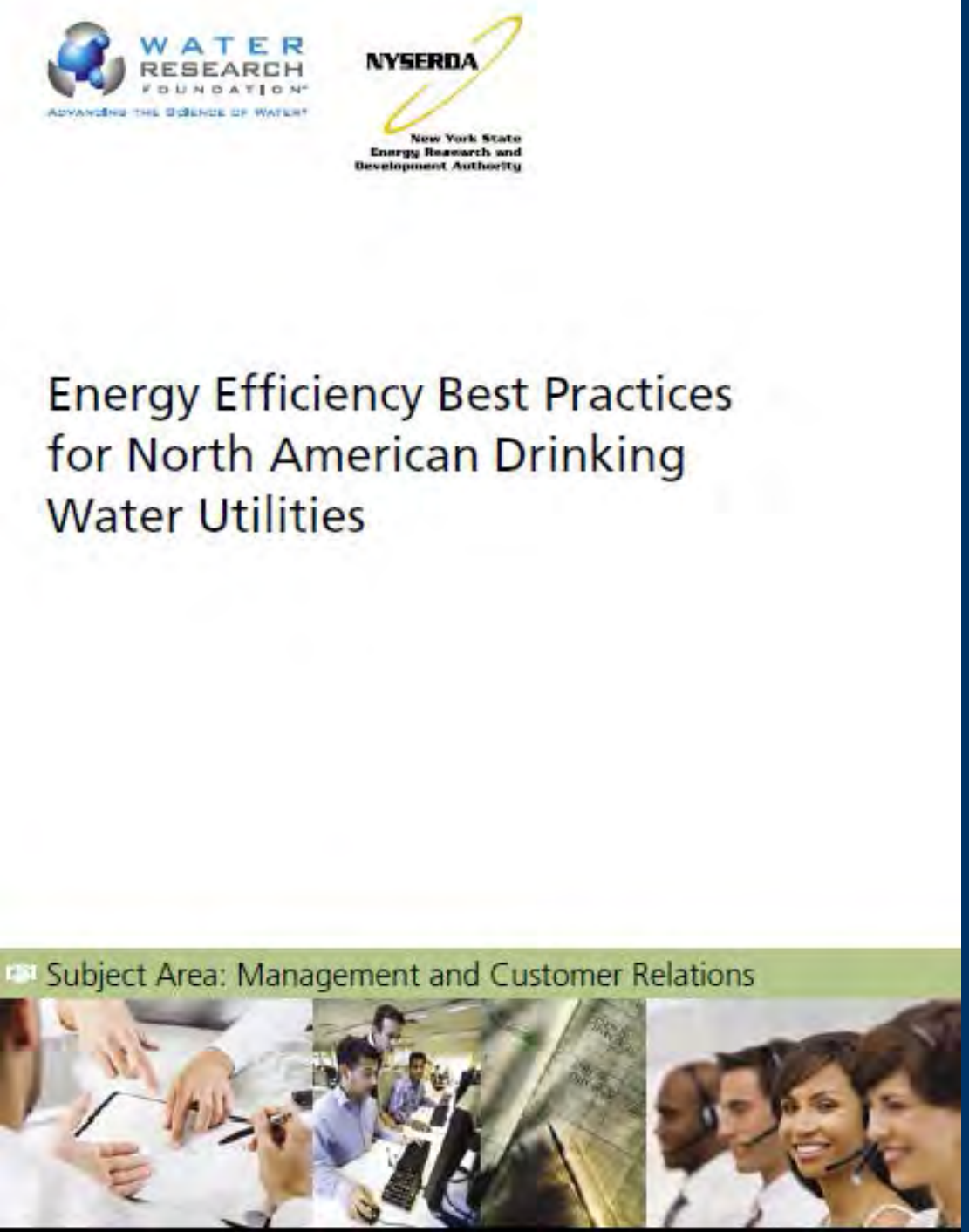
http://www.ifc.org/wps/wcm/connect/da52df004aabaace9784d79e0dc67fc6/ESMAP+EE+WASTEWATER.pdf?MOD=AJPERES

Finding Money in the Water System Budget: Energy Savings Performance Contracting (ESPC)

UNC Environmental Finance Blog

http://efc.web.unc.edu/2015/08/13/energy-savings-performance-contracting/





Energy Efficiency Best Practices for North American Drinking Water Utilities

https://www.nyserda.ny.gov/-/media/Files/Publications/Research/Environmental/EEBP-drinking-water-utilities.pdf

Full Cost Pricing of Water

Pricing of water services should accurately reflect the true costs of providing high-quality water and wastewater services to consumers to maintain infrastructure and plan for upcoming repairs, rehabilitation, and replacement of that infrastructure.

Affordability Considerations

Pricing Structures that Encourage Conservation

https://www.epa.gov/sustainable-water-infrastructure/pricing-and-affordability-water-services

EPA Resources

Setting Small Drinking Water Systems Rates for a Sustainable Future

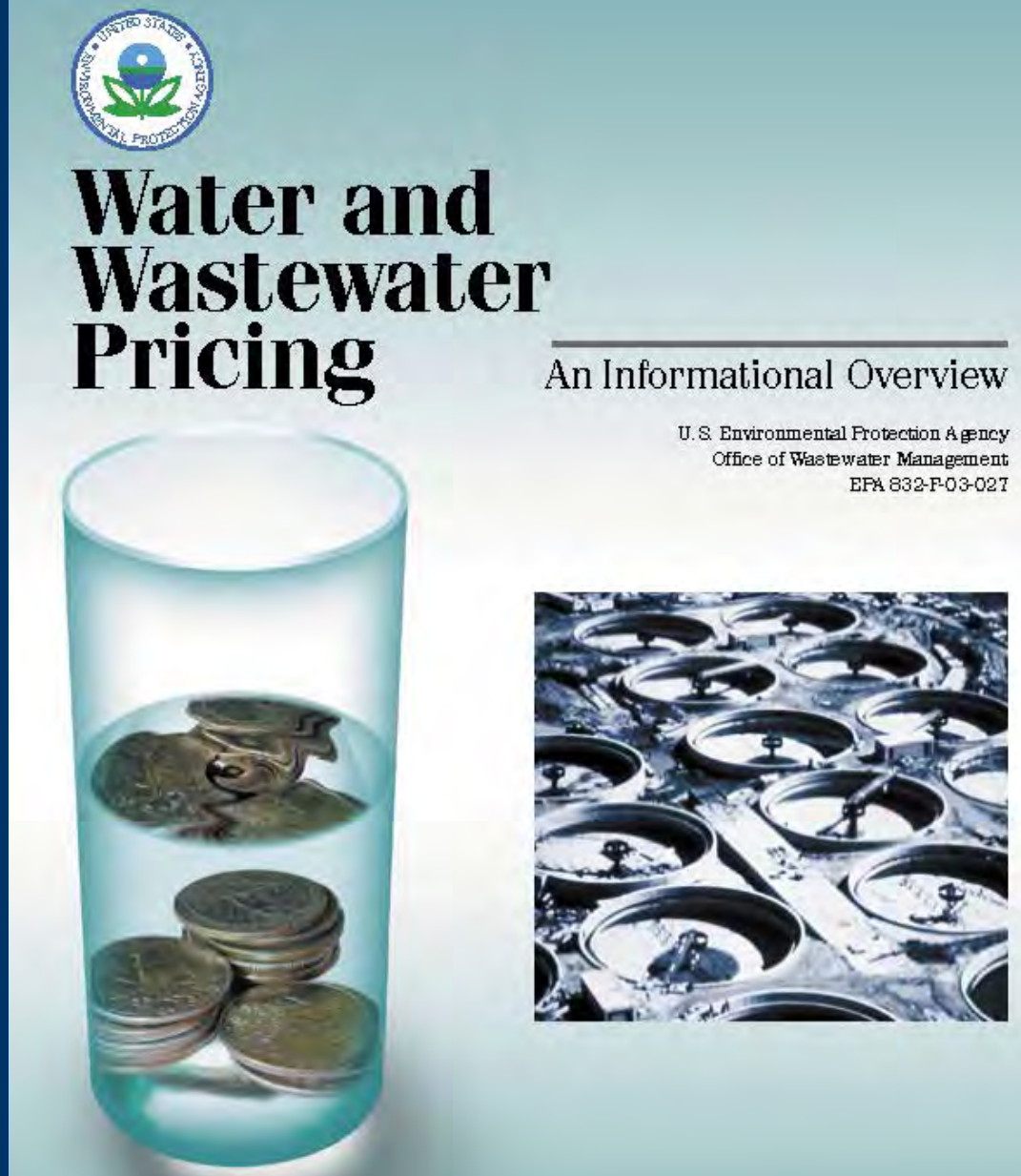
Case Studies of Sustainable Water and Wastewater Pricing

Pricing of Water and Wastewater: An Informational Overview

Consolidated Water Rates: Issues and Practices in Single Tariff Pricing

Expert Workshop on Full Cost Pricing of Water and Wastewater Service

https://www.epa.gov/sustainable-water-infrastructure/pricing-and-affordability-water-services#resources



Nebraska

MHI $60,474

2% Rate $100.79

50% Increase $50.40

$1.68 a day

Iowa

MHI $60,855

2% Rate $101.43

50% Increase $50.71

$1.69 a day

Kansas

MHI $54,865

2% Rate $91.44

50% Increase $45.72

$1.52 a day

Missouri

MHI $59,196

2% Rate $98.66

50% Increase $49.33

$1.64 a day

$0.62 per Bottle

Affordability
Customer Assistance Programs

Why are we Talking about CAPs?

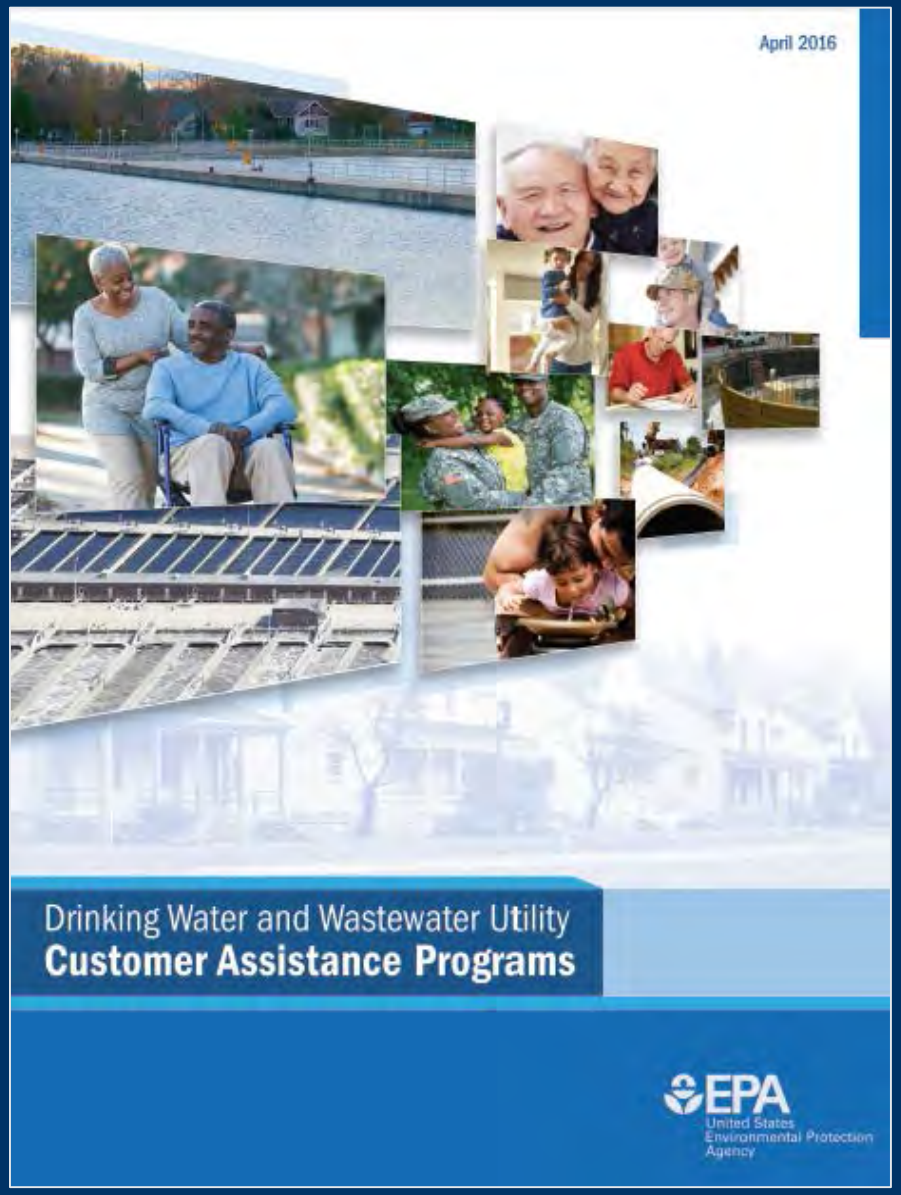
Customer Assistance Programs (CAPs) help all customers receive the public health benefits of drinking water and wastewater services, while also helping utilities meet their financial needs and obligations.

Many communities have pockets of low-income populations

Utilities want rates to reflect the cost of providing service to the whole community

These programs help utilities be fiscally sustainable and able to take out loans/finance infrastructure projects

Utility Customer Assistance Programs



CAPs are voluntary programs that utilities have created for customers having difficulty paying water and sewer bills

Developed a compendium to highlight CAPs offered by drinking water and wastewater utilities

Types of CAPs

- Bill Discount
- Flexible Terms
- Lifeline Rate
- Temporary Assistance
- Water Efficiency

These programs focus on individual household affordability

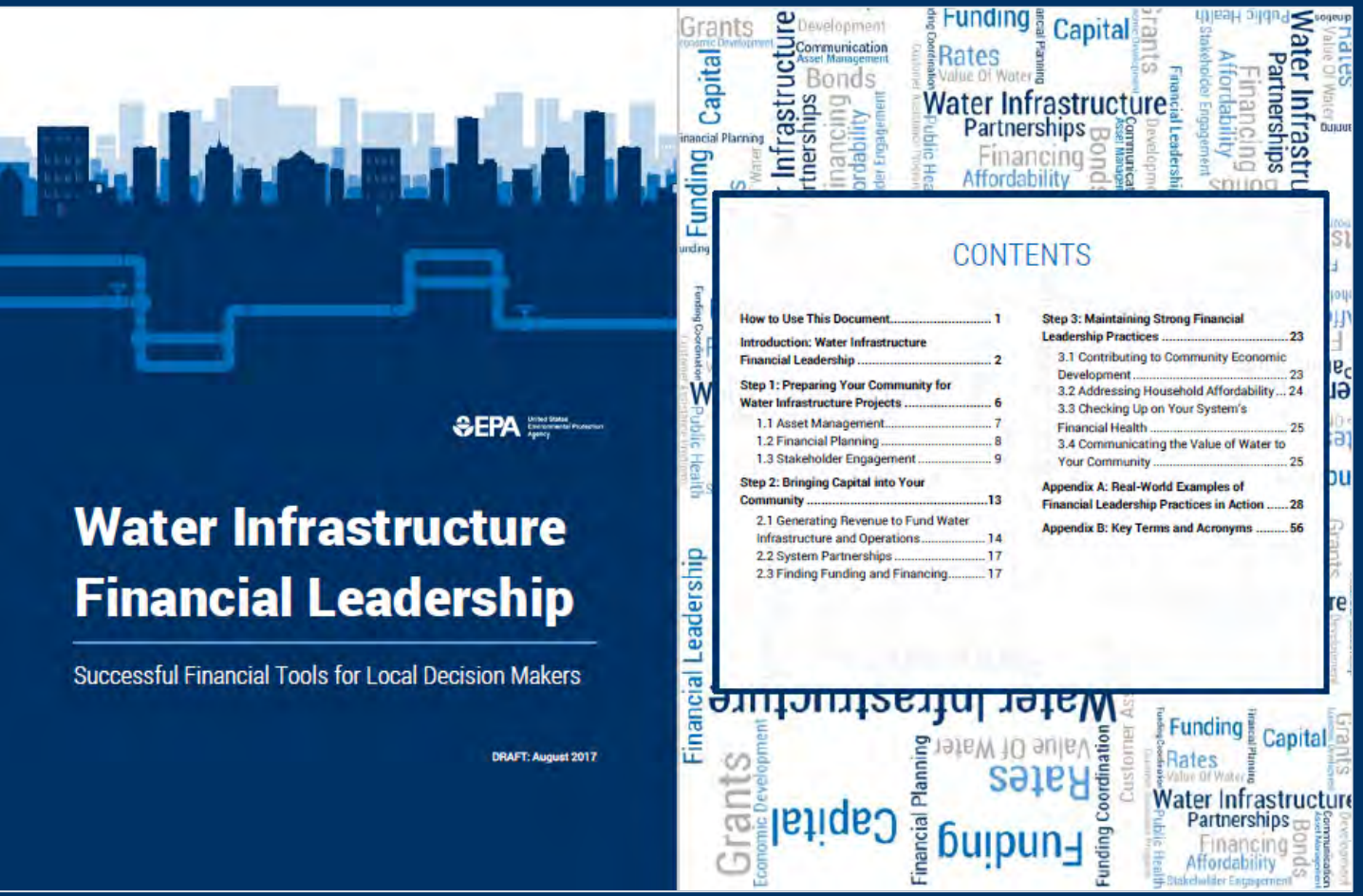
Compendium available at:
https://www.epa.gov/waterfinancecenter/compendium-drinking-water-and-wastewater-customer-assistance-programs

In 2014, 46.7 million people (14.8% of the U.S. population) lived in poverty (U.S. Census Bureau)

Utilities often find approximately 1% of their customers are unable to pay at any particular time (WRF 2010)

Water Infrastructure Financial Leadership

Successful Financial Tools for Local Decision Makers



Anticipated release: September/October 2017!

Document is designed for local decision makers to navigate the process of investing in water infrastructure.

Helps identify:

- what is needed for financial planning,
- determine how to fund and finance a project, and
- how to consider strategic approaches to protect investments based on specific local needs.

Specific examples of Communities in Need (e.g., disadvantaged communities, economically challenged communities) are included to show how communities with limited resources can achieve water infrastructure financial leadership.

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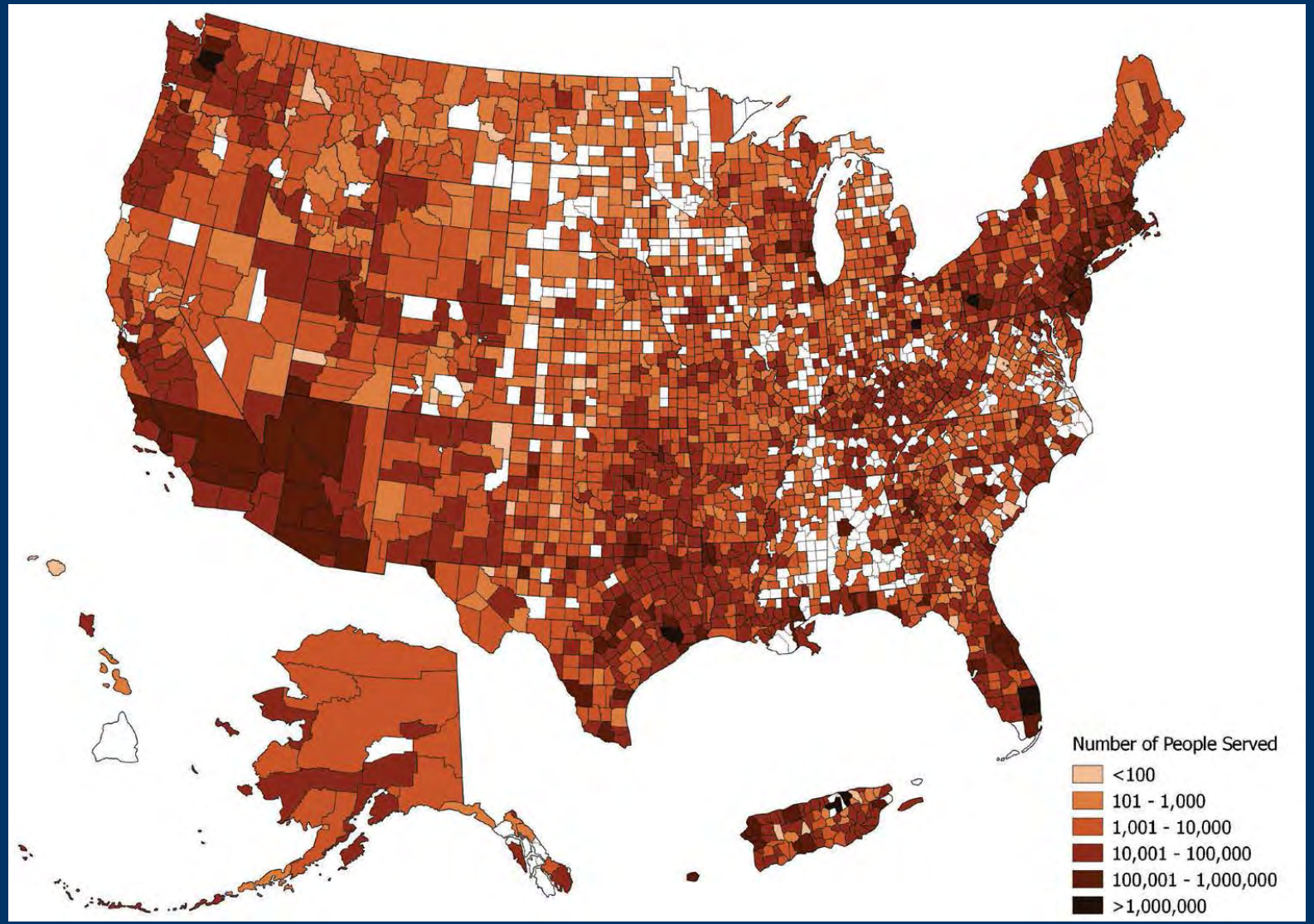
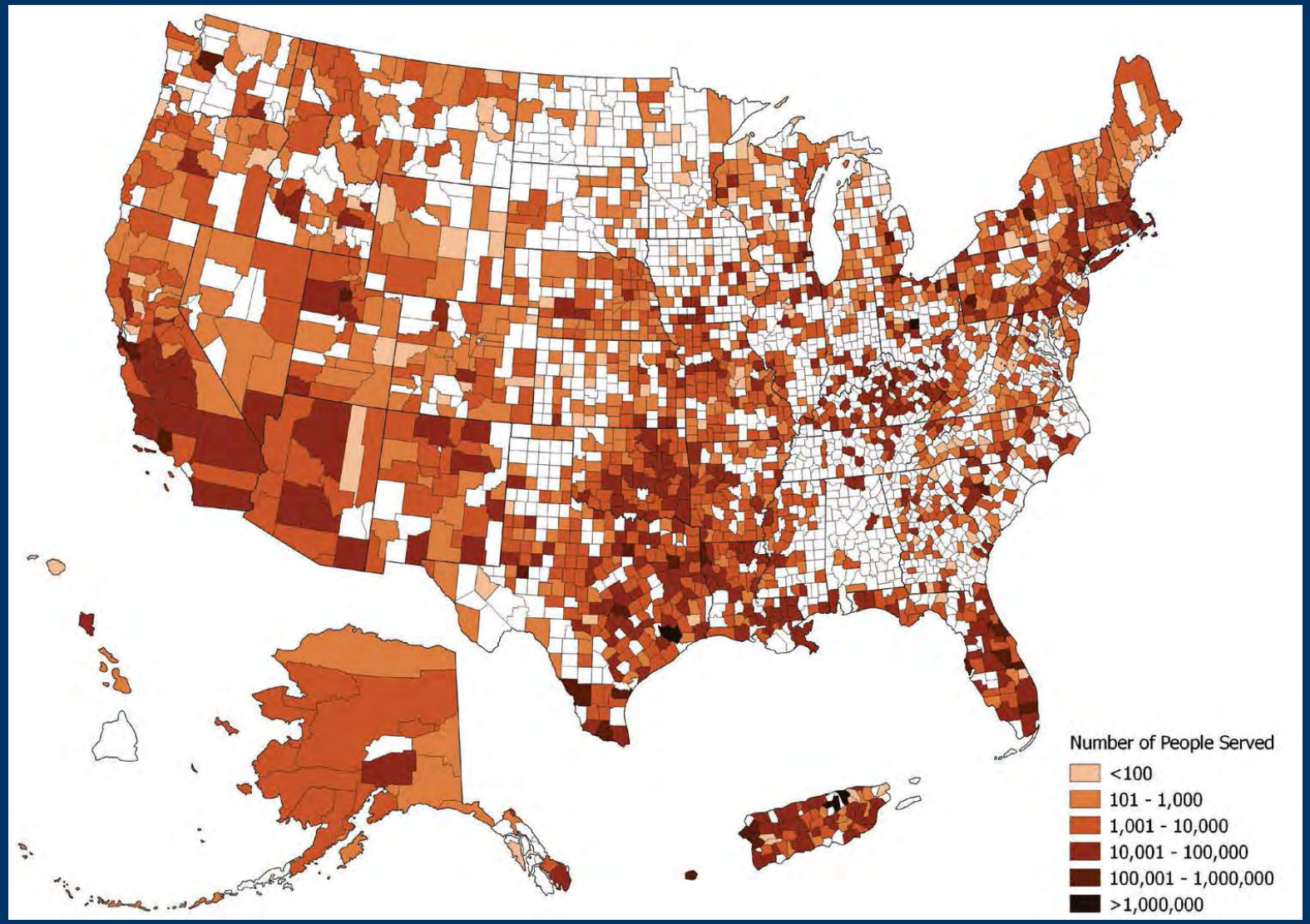
Marketing
Selling Your System

76.9 MILLION PEOPLE SERVED BY COMMUNITY WATER SYSTEMS WITH AT LEAST ONE REPORTED VIOLATION OF THE SAFE DRINKING WATER ACT (2015)



NRDC THREATS ON TAP:
WIDESPREAD VIOLATIONS HIGHLIGHT NEED FOR INVESTMENT IN WATER INFRASTRUCTURE AND PROTECTIONS

27.4 MILLION PEOPLE SERVED BY COMMUNITY WATER SYSTEMS WITH AT LEAST ONE REPORTED HEALTH-BASED VIOLATION OF THE SAFE DRINKING WATER ACT (2015)



NRDC THREATS ON TAP:
WIDESPREAD VIOLATIONS HIGHLIGHT NEED FOR INVESTMENT IN WATER INFRASTRUCTURE AND PROTECTIONS

Public Awareness and Outreach Initiatives

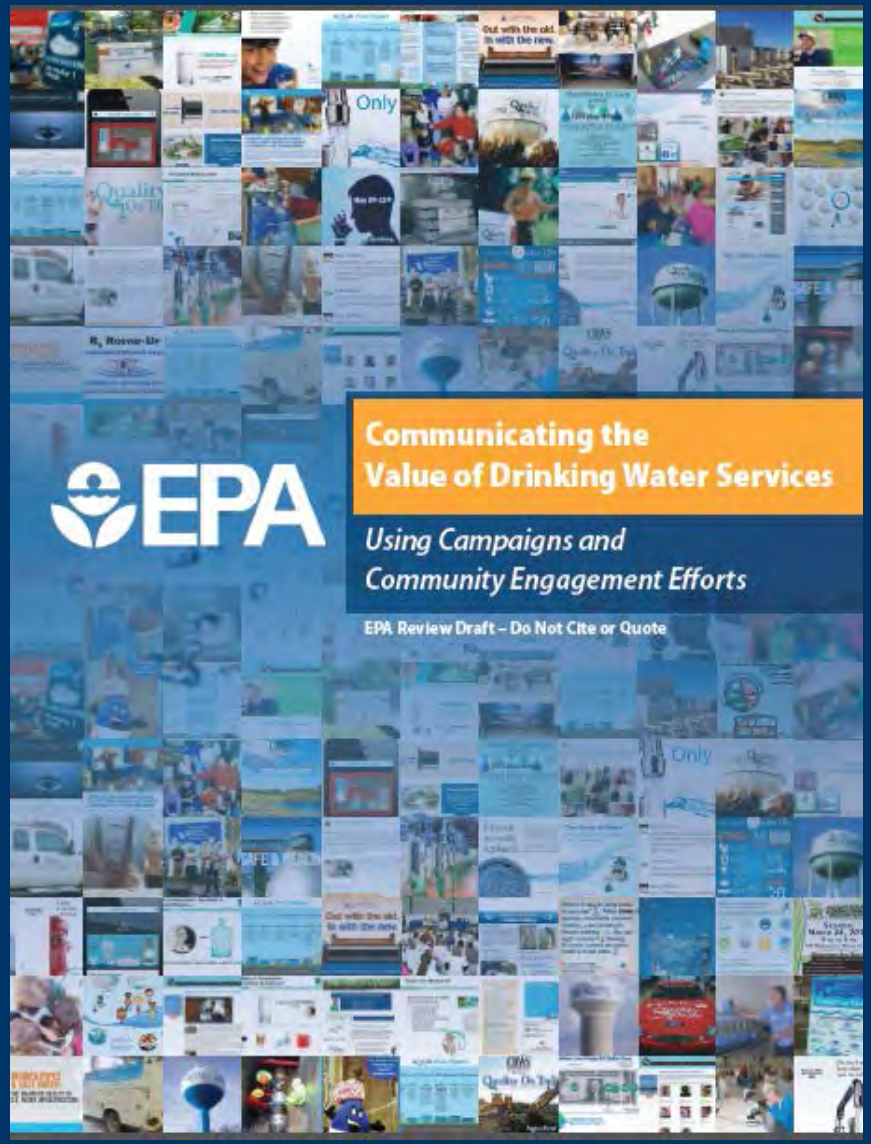
Value of Water Campaigns

Local Initiatives

Outreach Strategies:

- Print Ads
- Bill stuffers
- Op-Eds
- Social Media
- Community Events

http://www2.epa.gov/sites/production/files/2015-06/documents/epa810s15001_0.pdf



The Best Deal Around

On average, a gallon of California tap water costs two-tenths of a cent. When compared with the cost of other products we use every day, tap water is clearly one of the best deals around.

A Gallon of **TAP WATER**
$0.002

A GALLON OF	A GALLON OF	A GALLON OF	A GALLON OF	A GALLON OF
				
$45.00	$16.00	$11.35	$4.00	$2.49

*(*Prices based on California averages.)*

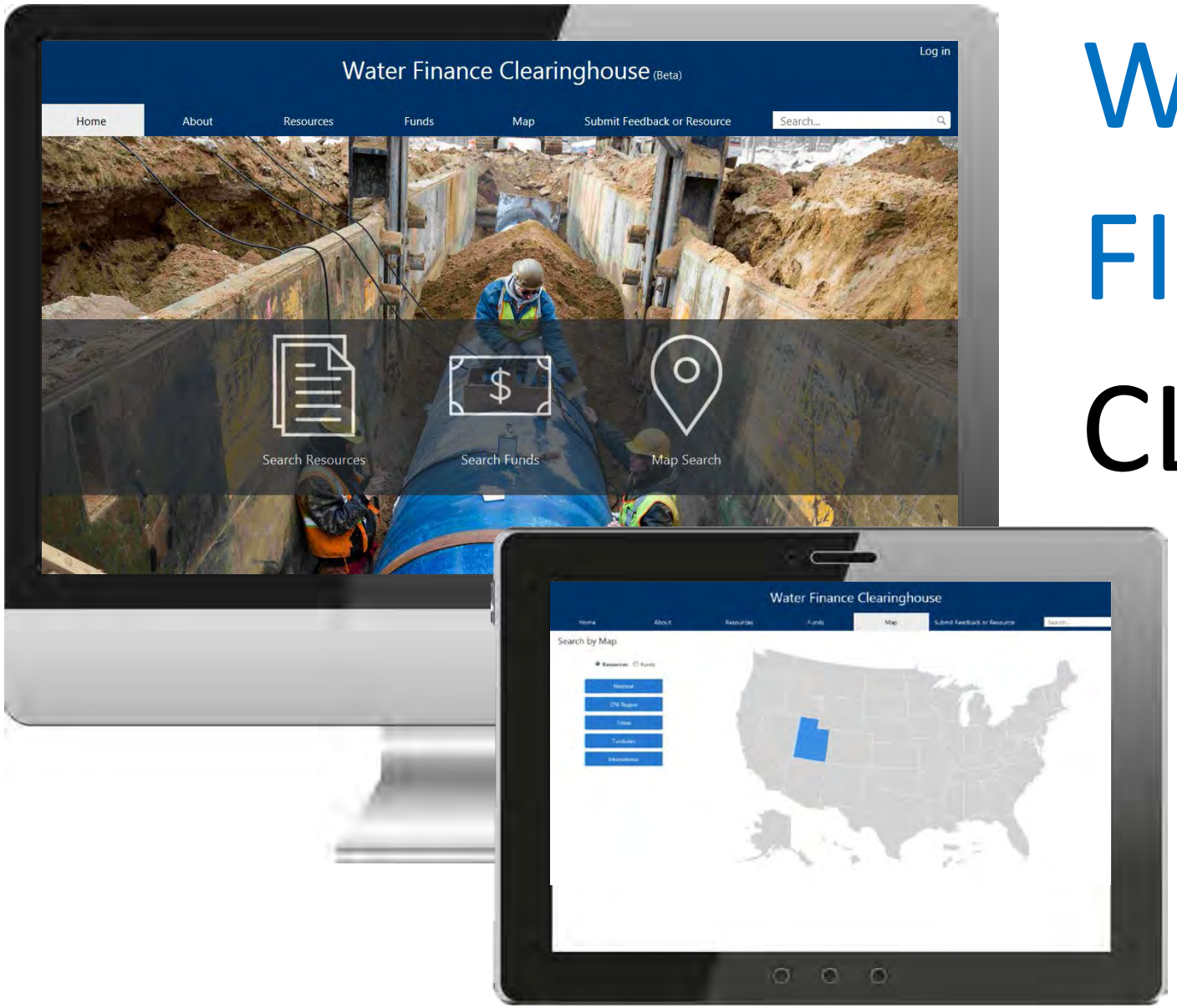
910 K Street, Ste. 100 • Sacramento CA 95814
www.acwa.com • 916.4414545

Communicate the Value of Tap Water


68¢ BUYS
16 OUNCES
460 GALLONS
1 GALLON
PERRIER WATER
LOUISVILLE WATER
BOTTLED WATER


CAT
Your water bill
at work.
Another system improvement by
NEW JERSEY
AMERICAN WATER

Water Is Life



WATER FINANCE CLEARINGHOUSE

Meeting the Needs of Key Stakeholders

The Water Finance Clearinghouse is an **easily navigable web-based portal** that helps communities locate **information** and **resources** that will assist them in making **informed decisions** for their drinking water, wastewater, and stormwater **infrastructure needs**.

CONTENT

WATER FINANCE RESOURCES

Reports, websites, trainings, and other types of information about water infrastructure financing.

WATER FUNDING SOURCES

Current federal, state, local, private, or other sources of funding for water infrastructure projects.

CONTACT

Visit the Site

https://www.epa.gov/waterfinancecenter/water-finance-clearinghouse

EPA Clearinghouse Contact

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Phone

202.566.2730

www.epa.gov/waterfinancecenter

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