waternow alliance

Making the Case for Affordability: Tools for Fiscal Health & Keeping Rates Affordable

March 20, 10pm Pacific

Making the Case for Affordab
Tools for Fiscal Health & Keep
Rates Affordable

waternow alliance

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

March 20, 10pm Pacifi

Mute

Chat

Raise Hand

Q&A

Leave Meeting

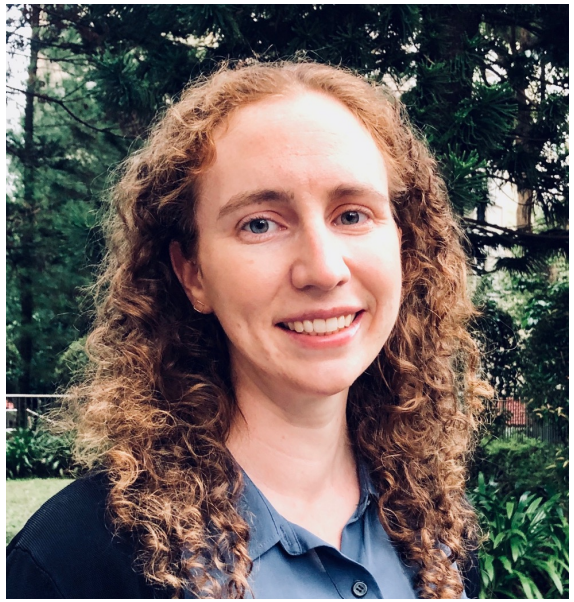
TODAY'S SPEAKERS

LARRY LEVINE
Urban Water Infrastructure &
Senior Attorney,
Natural Resources Defense Council

ROGER COLTON
Principal,
Fisher Sheehan & Colton

TODAY'S SPEAKERS

TONY SEARLS
Commercial Services Superintendent,
Greater Cincinnati Water Works



AMY WEINFURTER
Director of Strategic Projects,
WaterNow Alliance

Agenda

- About WaterNow Alliance
- Overview of Affordability and Business Case
- The Water Affordability Business Case Tool
- Case Study: Greater Cincinnati Water Works
- Affordable, Sustainable Distributed Infrastructure
- Polls & Brief Audience Q&A Throughout

PLEASE COMPLETE OUR WEBINAR EVALUATION!

waternow alliance
water leaders. resilient solutions.

OUR MISSION

A forum and network of local water leaders advancing sustainable, affordable, equitable and climate resilient water strategies

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.

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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.

waternow alliance

tap into resilience
A WaterNow Alliance Initiative

Join at menti.com | use code 8215 2844

Mentimeter

What types of affordability programs does your utility have?

W onses ...

Water Affordability Business Case Tool

Larry Levine, Natural Resources Defense Council (NRDC)

Roger Colton, Fisher Sheehan & Colton

Tony Searls, Greater Cincinnati Water Works

WaterNow Alliance
Water Webinar Wednesday
Mar. 20, 2024

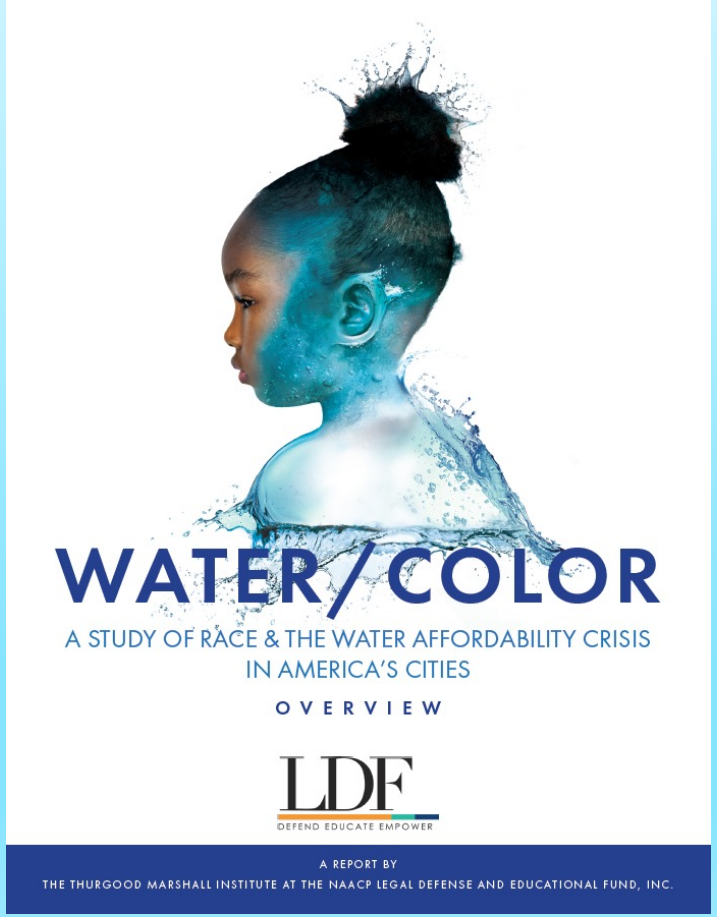
Why Does Affordability Matter?

Everyone needs and deserves ***safe water and sanitation***.

Every water/sewer utility needs sufficient and sustainable ***revenue***.

Water/Sewer Affordability is an Issue of Environmental Justice & Racial Justice

- For many people, the rising cost of water and sewer services jeopardizes access to water, health, housing, and even custody of children.
- These impacts are *not evenly distributed*.
- Lower-income communities and communities of color are especially hard hit.



AWWA Policy Statement on Affordability (2018)

- *"affordability challenges can occur in any community, regardless of size, location, demographic makeup, and income distribution"*
- *"strongly recommends the adoption of policies and procedures by utilities, regulators, and governmental entities to address the affordability challenges experienced by some of their residential customers"*
- **Addressing affordability challenges helps ensure that utilities are *"financially sustainable"***

The Business Case for Low-Income Discounts

Low-income discounts are <u>not</u> simply a cost to a utility.

They provide a financial benefit to the utility and <u>all</u> of its ratepayers.

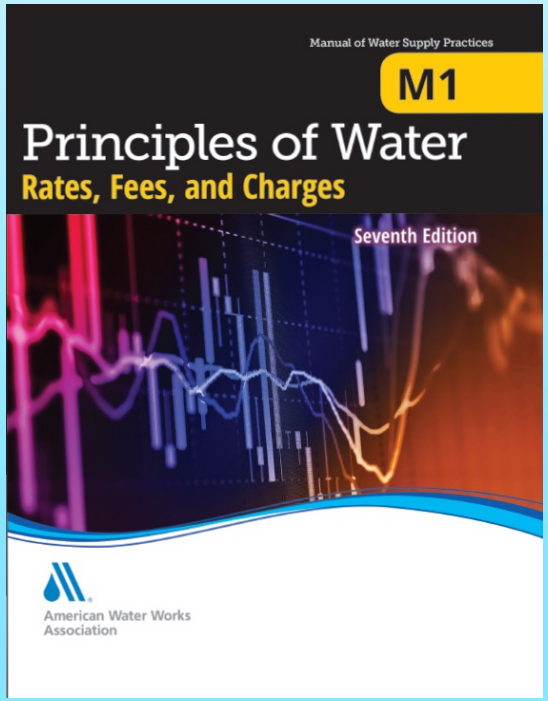
How do these financial benefits accrue?

- Well-designed low-income discount programs can improve customers' complete, timely, regular, unprompted payment of bills.
- Even though a portion of low-income customers' bills are discounted, payments can increase such that total cash collections may go up, while the costs of collecting that revenue go down.
- Financial benefits may exceed the costs, or at least significantly offset the costs.

By modeling these impacts, utilities can make a "business case" for offering a low-income discount program, treating the program as a collection device to improve overall revenue and strengthen the utility's financial position.

It's No Secret, But Utilities Need to Apply the Lesson

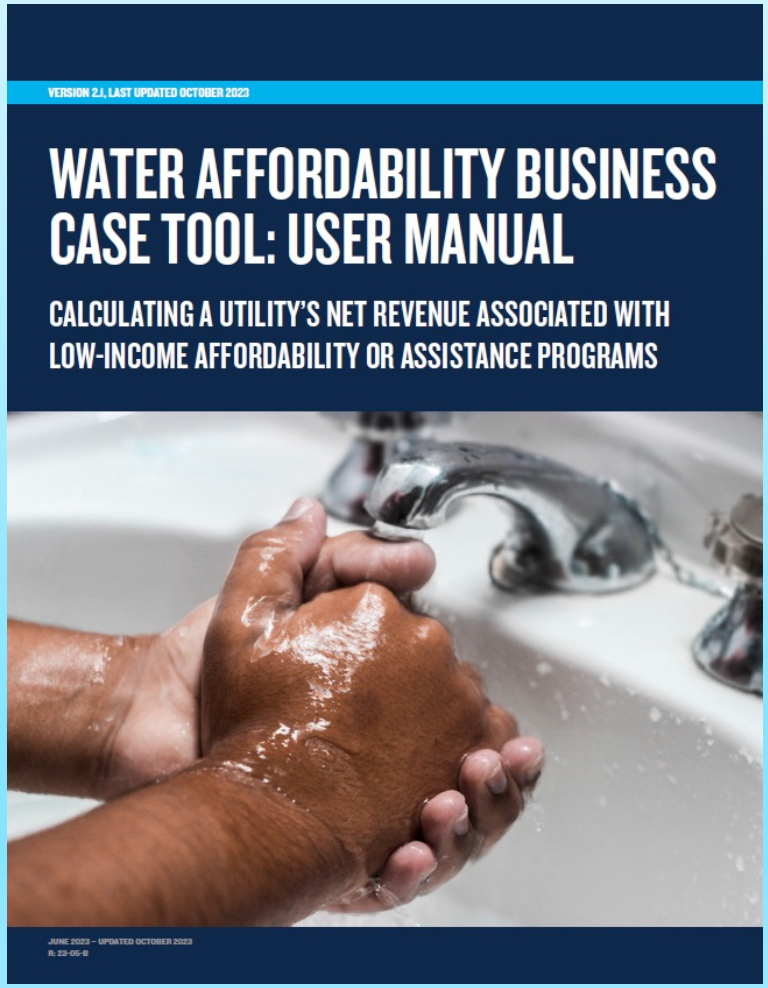
- **AWWA's rate-setting manual** states that benefits of low-income discount programs include "**reducing utility collection costs, arrearages, disconnects, and reconnects, which improves the utility's bottom line**."*
- **WEF's rate-setting manual:** "If the rates and charges are not affordable for a portion of the customers, a utility may experience…increasing levels of accounts receivables, rising expenses for uncollectable accounts….[Low-income discounts]…will **help ensure that…costs of bill collection and bad debts are minimized, and desired revenues can be collected to achieve other goals and objectives of the utility**."**
- **Water Research Foundation** study reported that low-income discount programs "**have been shown to be capable of producing more total revenue for the dollars expended**."***
- **Bond rating agencies** treat low-income discount programs as means to "**improve revenue certainty and stability**"****



*AWWA M-1 Manual, Principles of Water Rates, Fees, and Charges (7th ed, 2017), pp. 217-18.
**WEF, Financing and Charges of Wastewater Systems, Manual of Practice No. 27, 4th Ed. (2018), Chapter 12.
***John Cromwell et al., Best Practices in Customer Payment Assistance Programs, Water Research Foundation, January 2010, p. 91.
****E. Burke, S&P Global Ratings, Rates and Affordability: A Ratings Agency Perspective, April 13, 2020

The *Water Affordability Business Case Tool*

- Downloadable Excel-based tool (free) – released June 2023; updated Oct. 2023 (v.2.1)
- Developed by nationally-recognized expert on water affordability and affordable utility rates
- Peer reviewed by water rate/affordability experts
- Beta tested with water and wastewater utilities before release (incl. Cincinnati, Toledo, Wisconsin PUC)
- Analysis tailored to individual utility



Who Should Use the *Tool*?

Welcome to the Water Affordability Business Case Tool

Version 2.1, last updated October 2023
Developed by Roger Colton (Fisher, Sheehan & Colton, Public Finance & General Economics) under contract to the Natural Resources Defense Council. Additional technical support provided by Synapse Energy Economics Inc.

The User Manual and Quick Start Guide are available at: https://www.nrdc.org/resources/water-affordability-business-case-downloadable-tool
Questions or feedback on the Tool can be sent to WaterTool@nrdc.org.

Fisher Sheehan & Colton
Public Finance & General Economics

Synapse
Energy Economics, Inc.

- Water, wastewater, stormwater, or combined service utilities
  - *Primarily for publicly-owned systems, but can be adapted for investor-owned*
- State and federal oversight agencies, community-based organizations, others
  - *Depends on public availability of information, making assumptions to fill data gaps*

Benefits of the Tool

- Identify financial benefits to utility of providing service to low-income customers at a cost they can afford
- Determine extent to which discounts can be justified as collection device to improve utility revenue
- Compare impacts of multiple discount program designs
- Assess relative significance of various factors contributing to results
- Determine extent to which external financial support might be needed
- Help develop legal and political rationale for funding low-income programs with rate revenues, based on financial benefits that accrue to ratepayers as a whole

3 Types of Programs Evaluated

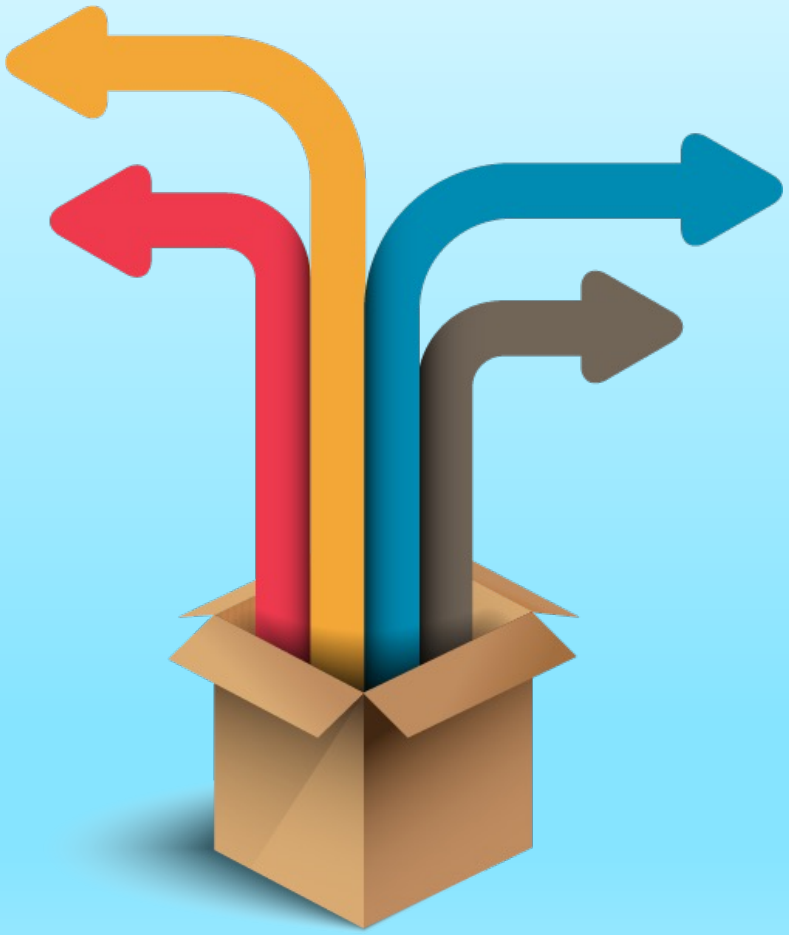
"Percentage-of-Income Program" (PIP): Bills capped at a percentage of income deemed by the User to be "affordable."

"Percentage of Bill" (POB) program: User sets a percentage discount applied to standard bill. Can be either:

- Tiered for larger discount to lowest-income customers, to achieve affordable bill; OR
- “Across-the-board” discount for all participants, without regard to the resulting bill burden.

"Fixed Dollar Discount" (FDD) program: User selects a set dollar-amount discount for all participants.

Additional User-Selected Options



- Whether to recover costs from non-participants
- Program design options (e.g., minimum bill)
- Range of assumptions on participation rates, administrative costs, etc.
- And more…

Data Inputs

Internal utility records

- # of residential accounts, billing, collections
- Disconnections/reconnections
- Other utility financial information (revenue, carrying costs of arrears)

U.S. Census data

- poverty and household size for the utility's service territory

Default values

- Pre-populated with certain assumptions, consistent with industry practices, for inputs that may lack utility-specific data
- Can be modified based on actual data (recommended if data available) or user's professional judgment

Data Inputs: Illustration

Glossary | Restart | Back | Next

Input Water Data

Line	Metric	Input value	Unit	Source	Information
	Basic Information to establish bill levels				
1	Annual residential* water revenue	$1,000,000	Dollars ($)	s	i
2	Number of residential* water accounts	1,000	Accounts (#)	s	i
3	Low-income water annual bill as a percentage of average residential bill	100%	Percent (%)	s	i
	Percentage of income data inputs				
4	Base affordable water annual bill burden	2.5%	Percent (%)	s	i
5	Incremental decrease in affordable water bill burden as incomes decrease	0.50%	Percent (%)	s	i
	Percentage of bill data inputs				
6	Distribution of customers with bill that is X% of average water bill			s	i
7	(0-50%)	10%	Percent (%)		
8	(51-75%)	20%	Percent (%)		
9	(76-100%)	30%	Percent (%)		
10	(100-125%)	30%	Percent (%)		
11	(126% or more)	10%	Percent (%)		
	Check	100%			
12	Across-the-board discount	25%	Percent (%)	s	i
	Note: The User selected the Across-the-board discount method on the Input Common Data tab. Lines 7-11 grayed out because they are not necessary when selecti				
	Fixed dollar discount data inputs				
13	Water annual fixed dollar discount: all FPG ranges	$150	Dollars ($)	s	i
	Expense/revenue offset data inputs				
14	Average monthly arrears per residential* water account in arrears	$75	Dollars ($)	s	i
15	Number of disconnections for nonpayment (annual)	75	Disconnections (#)	s	i
16	Disconnection notices for nonpayment (annual)	200	Notices (#)	s	i
17	Expected percent reduction in disconnection notices and disconnections from low-incom	10%	Percent (%)	s	i
18	Total water revenue (includes nonresidential sectors) (annual)	$1,200,000	Dollars ($)	s	i

Results (Outputs) (1 of 2)

- Revenue from participants, accounting for improved collectability of discounted bills
- Costs avoided through improved collectability
- Costs incurred for program administration
- Net program impacts (in absolute $$ and as a percentage of utility revenue)

Results (Outputs) (2 of 2)

- Effect of recovering program costs (or not) from non-participating customers
  - If not recovered, then tool shows how much $$ needs to be secured elsewhere
- Worksheets allow user to see whether the selected discount level(s) would result in affordable bills for customers at different income levels.

Business Case in Action: Philadelphia Water Dept. Tiered Assistance Program (TAP)

Completeness of Bill Payment (TAP and Non-TAP Low-Income [LI])				
	Percent Paid in 0 – 12 Months		Percent Paid in 0 – 24 Months	
	TAP	Non-TAP LI	TAP	Non-TAP LI
FY22	72.50%	34.30%	N/A	N/A
FY21	72.47%	46.12%	83.83%	62.64%
FY20	72.80%	45.92%	87.13%	59.45%
FY19	72.03%	48.71%	87.89%	61.80%
FY18	73.13%	36.06%	95.69%	45.12%
FY17	No TAP	42.74%	No TAP	54.80%
FY16	No TAP	45.96%	No TAP	59.69%
FY15	No TAP	45.63%	No TAP	59.77%

bit.ly/b-case-studies

Business Case in Action: PA Energy Utilities' Customer Assistance Programs (CAPs)

"Bill Payment Coverage Ratios" for CAP Participants				
	Test Year Enrollees			**Net Change Relative to Comparison Group**
	Pre-CAP	In CAP	Change	
PGW (2019)	72%	92%	20%	36%
PPL (non-htg) (2020)	84%	98%	15%	21%
PPL (heating) (2020)	83%	104%	21%	26%
Peoples Gas (2017)	85%	123%	39%	36%
First Energy (Met Ed) (non-htg/htg)	NA	91% / 93%	NA	NA
First Energy (PN) (Non-htg/htg)	NA	91% / 119%	NA	NA
First Energy (PP) (non-htg/htg)	NA	100% / 98%	NA	NA
UGI (electric) (2012)	60%	66%	5%	18%
Duquesne Light (non-htg) (2015)	77%	94%	17%	31%
Duquesne Light (htg) (2015)	75%	92%	17%	23%

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BRIEF Q&A

TIME FOR A ZOOM POLL

WATERNOW ALLIANCE

Case Study:
Greater Cincinnati Water Works

GCWW Background

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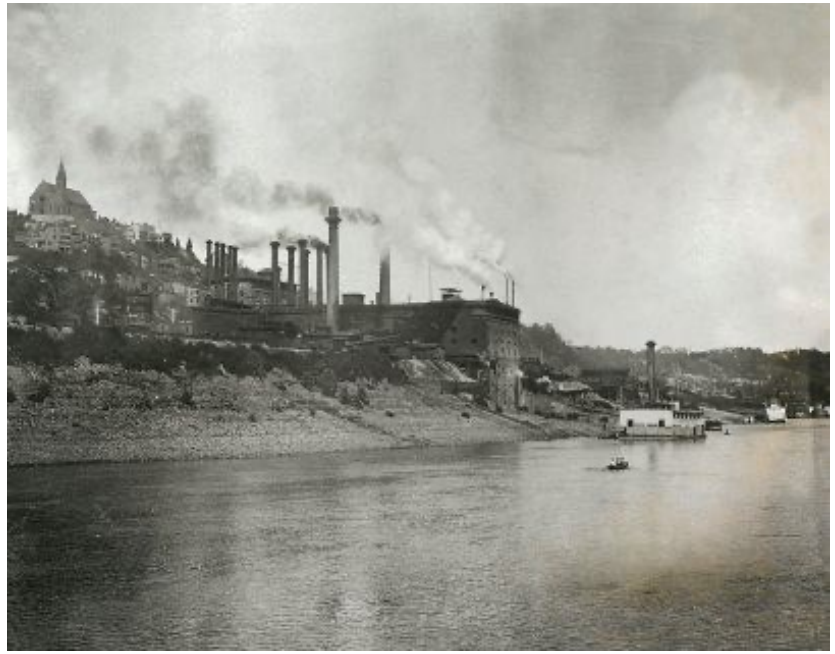
GREATER CINCINNATI WATER WORKS

Over 200 years of progress in the water industry

- 3,100 miles of water main
- 242,000 customer accounts
- Over 800 mi^2 service area
- 1.1 million served regionally
- >43 billion gallons of water supplied annually



Municipally owned by the City of Cincinnati

GCWW Billing

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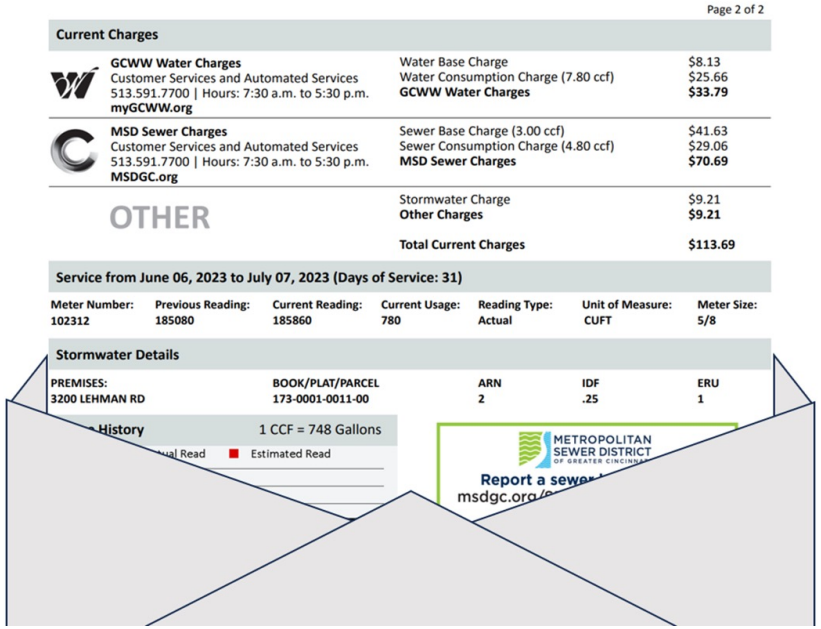
GCWW bills, collects revenue, and provides customer support for water and:

- Sewer
- Stormwater
- Trash
- Fire hydrant maintenance



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Current Charges

GCWW Water Charges Customer Services and Automated Services 513.591.7700 | Hours: 7:30 a.m. to 5:30 p.m. **myGCWW.org**	Water Base Charge Water Consumption Charge (7.80 ccf) **GCWW Water Charges**	$8.13 $25.66 **$33.79**
MSD Sewer Charges Customer Services and Automated Services 513.591.7700 | Hours: 7:30 a.m. to 5:30 p.m. **MSDGC.org**	Sewer Base Charge (3.00 ccf) Sewer Consumption Charge (4.80 ccf) **MSD Sewer Charges**	$41.63 $29.06 **$70.69**
OTHER	Stormwater Charge **Other Charges**	$9.21 **$9.21**
	Total Current Charges	**$113.69**

Service from June 06, 2023 to July 07, 2023 (Days of Service: 31)

Meter Number:	Previous Reading:	Current Reading:	Current Usage:	Reading Type:	Unit of Measure:	Meter Size:
102312	185080	185860	780	Actual	CUFT	5/8

Stormwater Details

PREMISES:	BOOK/PLAT/PARCEL	ARN	IDF	ERU
3200 LEHMAN RD	173-0001-0011-00	2	.25	1

History — 1 CCF = 748 Gallons

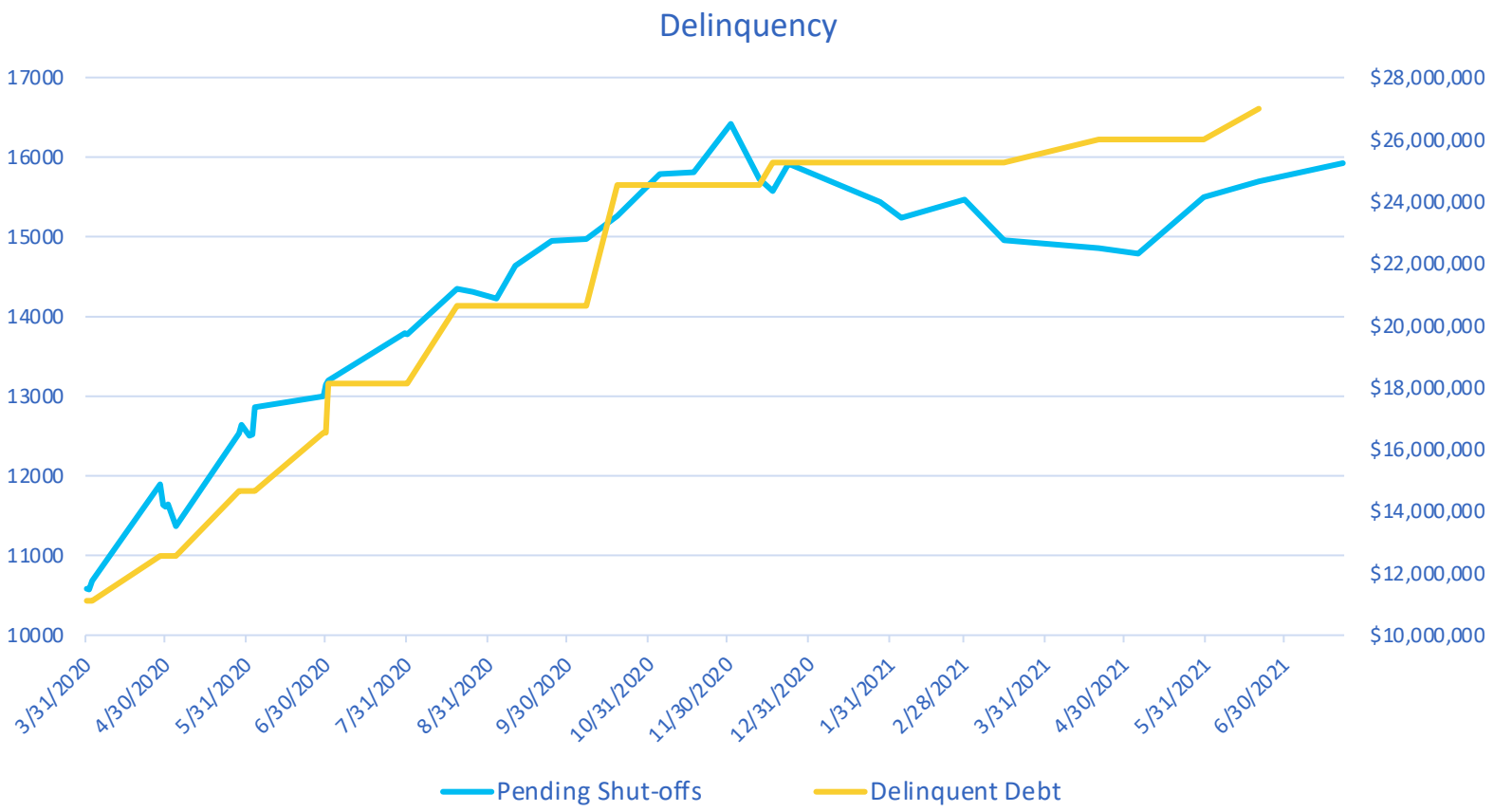
Estimated Read

METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

Report a sewer

msdgc.org/

Delinquency History



Responding to Increase in Past Due Debt

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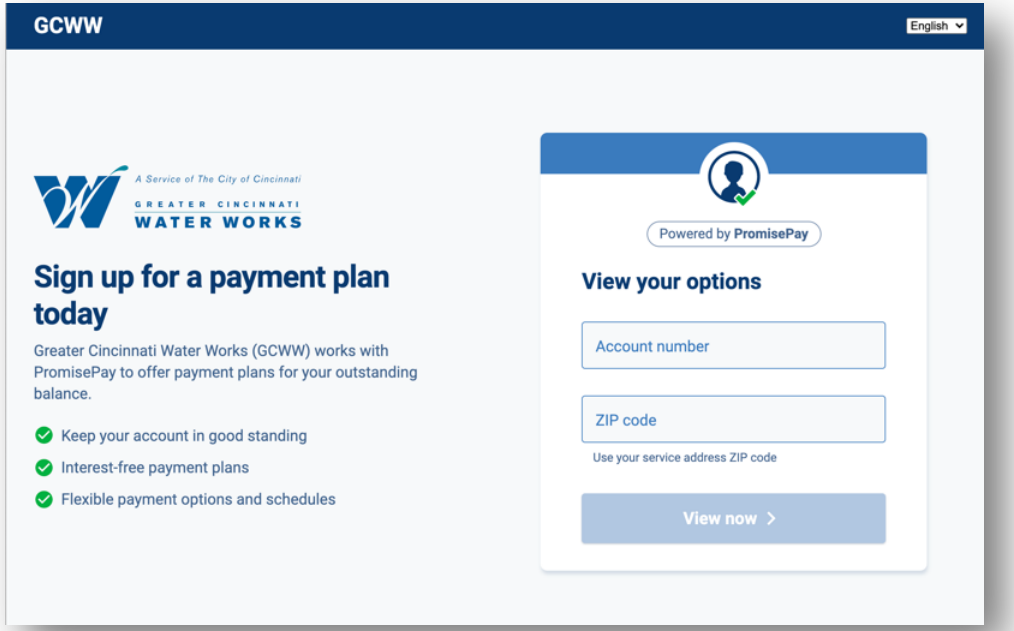
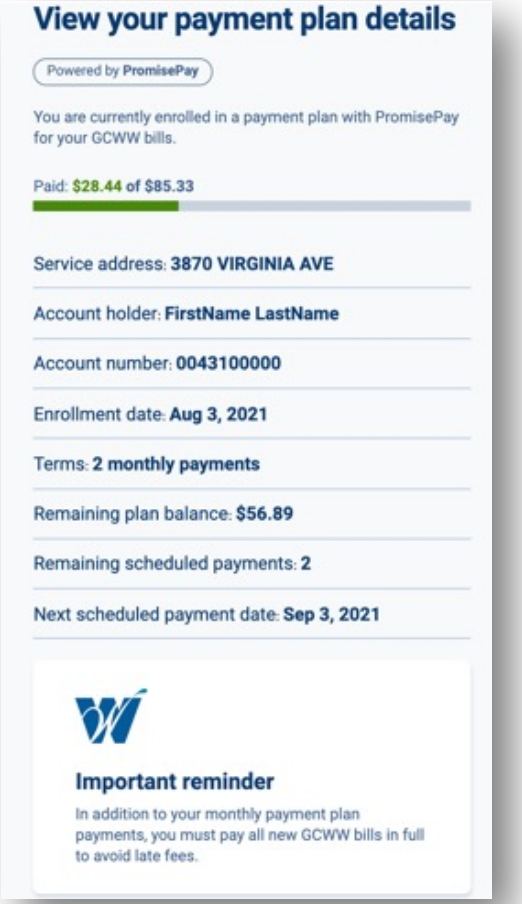
Developed payment plan portal

- Offered flexible, interest free plans





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Reinstituted Delinquent Shut-offs

- Used neighborhood economic data to schedule shut-offs

Neighborhood	Owner Count	Tenant Count	Foreclosure Count	Below Poverty	Average HH Income	Households Median Income	% Active Del	# Active Delinq.	Delinquent Charges	Pending SO
	14,449	1,546	0	236	$146,967.25	$111,819	11.87%	1,899	$650,086.38	55
Addyston	14	0	0	408	$110,474.00	$102,661	14.29%	2	$107.62	0
Amberley Village	1,435	44	0	159	$140,751.50	$140,735	9.53%	141	$40,139.06	4
Anderson Township	14,074	778	0	3,479	$112,164.34	$93,203	10.36%	1,539	$221,337.18	23
Arlington Heights	237	69	0	146	$47,650.00	$30,690	30.72%	94	$33,438.00	0
Avondale	2,377	423	27	5,318	$31,691.42	$15,615	37.29%	1,044	$807,215.50	51
Blue Ash	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

- Schedule shut-offs two weeks in advance with notification to customer
- Offering lenient options to re-establish water service after shut-off

Pointed Customers to Federal and Local Relief Funding

How the Process Is Working

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- 56.9% of accounts over the shut-off threshold are reached during additional outreach, including 13.9% reaching a person and 43% leaving a voicemail

- Due to the additional outreach prior to a shut-off, 73% of the accounts over the shut-off threshold are paid or enrolled in a pay plan, avoiding shut-off

- Because of the more lenient options to restore water for the accounts shut-off, 82% on average are turned back on

But…

- 17.8% of accounts on average are left off after shut-off
- 59% of accounts that received federal relief funding are delinquent again
- ~62% of customers enrolled in a pay plan become delinquent on current charges

Shut-offs in Low Income Areas

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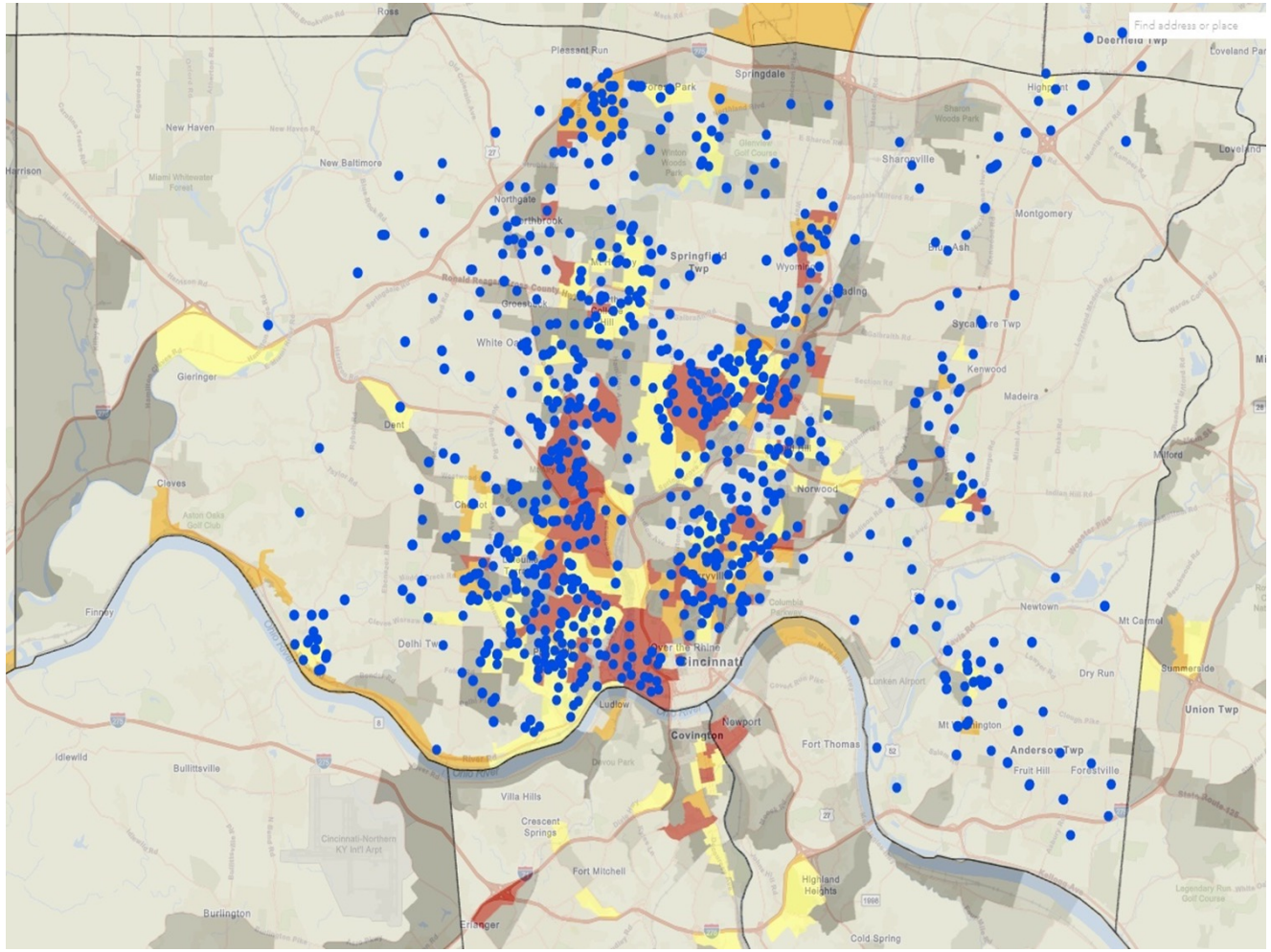

Using the Affordability Tool

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Input Combined Service Data

Line	Metric	Input value	Unit	Source	Information
	Basic Information to establish bill levels				
	Water				
1	Annual residential combined service revenue	$84,000,000	Dollars ($)	s	i
	Wastewater				
2	Total residential* wastewater revenue	$132,000,000	Dollars ($)	s	i
	Stormwater				
3	Total residential* stormwater revenue	$10,500,000	Dollars ($)	s	i
	All services				
4	Annual residential* combined service accounts	213,498	Accounts (#)	s	i
5	Low-income annual bill as a percentage of average residential bill	100%	Percent (%)	s	i
	Percentage of income data inputs				
	Water				
6	Base affordable annual bill burden	1.1%	Percent (%)	s	i
	Wastewater				
7	Base affordable annual bill burden	2.1%	Percent (%)	s	i
	Stormwater				
8	Base affordable annual bill burden	0.3%	Percent (%)	s	i
	All services				
9	Incremental decrease in affordable bill burden as incomes decrease	0.17%	Percent (%)	s	i
	Percentage of bill data inputs.				
10	Distribution of customers with annual bill that is X% of average annual combined service bill			s	i
11	(0-50%)	9%	Percent (%)		
12	(51-75%)	29%	Percent (%)		
13	(76-100%)	26%	Percent (%)		
14	(100-125%)	18%	Percent (%)		
15	(126% or more)	18%	Percent (%)		
	Check	100%			
16	Across-the-board discount	25%	Percent (%)	s	i

Note: The User selected the Income-based discount method on the Input Common Data tab. Line 16 grayed out because it is not necessary when selecting that option.

Fixed dollar discount data inputs.

Finding Standards

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GREATER CINCINNATI WATER WORKS

Average Non-discounted Bill: $88.42 per month

- Not recovering costs from non-participating rate payers
- Expect 20% program participation
- Set affordable bill burden at 3.5% of income, step-down
- Expect 40% decrease in disconnection costs for participants

Realizations

- The minimum bill set is not affordable
  - Base charges for sewer, water, and stormwater = $55
  - Set base at $40
  - 17,000 customers, 3,500 participants

6	Low-income bill	$1,061	$1,061	$1,061	$1,061	$1,061
7	Bill burden	13.2%	7.9%	5.7%	4.4%	3.6%
8	Bill discount					
9	Affordable burden	2.48%	2.99%	2.99%	3.50%	3.50%
10	Discounted bill as percentage of income	5.98%	3.58%	2.99%	3.50%	3.50%
11	Affordable payment	$199	$401	$560	$843	$1,030
12	Minimum annual bill	$480	$480	$480	$480	$480
13	Program participant's discounted bill	$480	$480	$560	$843	$1,030

- Collectability increases when bill is affordable - $55 vs $16

29	Receipts without program	$5,823,704	$5,823,704
30	Total receipts with program	$7,419,843	$8,643,307
31	Collectability without program	59%	59%
32	Collectability with program	75%	88%

Percentage of Income Analysis

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Percentage of Income Program (PIP)				
Metric	**Water**	**Wastewater**	**Stormwater**	**Combined Services**
Gross Revenue Results				
Program discounts				
Total bill discount applied for program participants ($)	-	-	-	$4,050,689
Total discount from receipts for program participants ($)	-	-	-	$545,298
Change in receipts				
Change in total receipts from participants before and after discount program ($)	-	-	-	($1,247,774)
Increase in receipts from nonparticipants (standard-rate customers) ($)	-	-	-	$0
Line 4: Results based on user input to not allow cost recovery from nonparticipants. See Common Inputs, Line 16 to modify.				
Change in total receipts from all customers before and after discount program ($)	-	-	-	($1,247,774)
Offset Results				
Reduced carrying costs				
Non-charged-off low-income arrearages ($)	-	-	-	$185,160
Charged-off low-income arrearages ($)	-	-	-	$13,428
Redirected collections ($)	-	-	-	$61,718
Reduced collection efforts				
Disconnections for nonpayment ($)	-	-	-	$79,488
Nonpayment disconnection notices ($)	-	-	-	$46,216
Lost revenues				
Reduction in revenue lost due to disconnections ($)	-	-	-	$24,741
Reduction in revenue lost due to customer mobility ($)	-	-	-	$266,773
Other				
Hard-to-quantify offsets (multiplier)	-	-	-	1.05
Administrative costs ($)	-	-	-	$405,069
Totals				
Sum of offsets (including hard-to-quantify) ($)	-	-	-	$711,400
Sum of offsets (less administrative costs) ($)	-	-	-	$306,331
Offsets (minus administrative costs) as percentage of total discount (%)	-	-	-	7.6%
Net Impacts				
Total program impact ($)	**-**	**-**	**-**	**-$941,443**
Total program impact as a percent of residential revenue (%)	**-**	**-**	**-**	**-1.49%**
Total program impact as a percent of system revenue (%)	**-**	**-**	**-**	**-0.26%**

Opportunities

- Projecting financial impacts when developing an affordability strategy
- Quantifying savings of resources by making bills more affordable
- Forecasting effects at different levels of assistance

Additional support for stakeholders

For more info….and to download the Tool & other resources

Email **WaterTool@nrdc.org**

- Register for updates to the Tool (can do automatically in the Tool)
- Receive notice of future webinars
- Ask questions, help with data challenges
- Request technical support
- Provide feedback
- Recommend improvements

Also available: Water Affordability Advocacy Toolkit

BRIEF Q&A

Affordable, Sustainable Distributed Infrastructure Investments

WATERNOW ALLIANCE

Distributed Infrastructure

Installations, appliances, and technologies located at or near the point of use and distributed across many properties, and generally employed in coordination with a utility's conventional infrastructure.

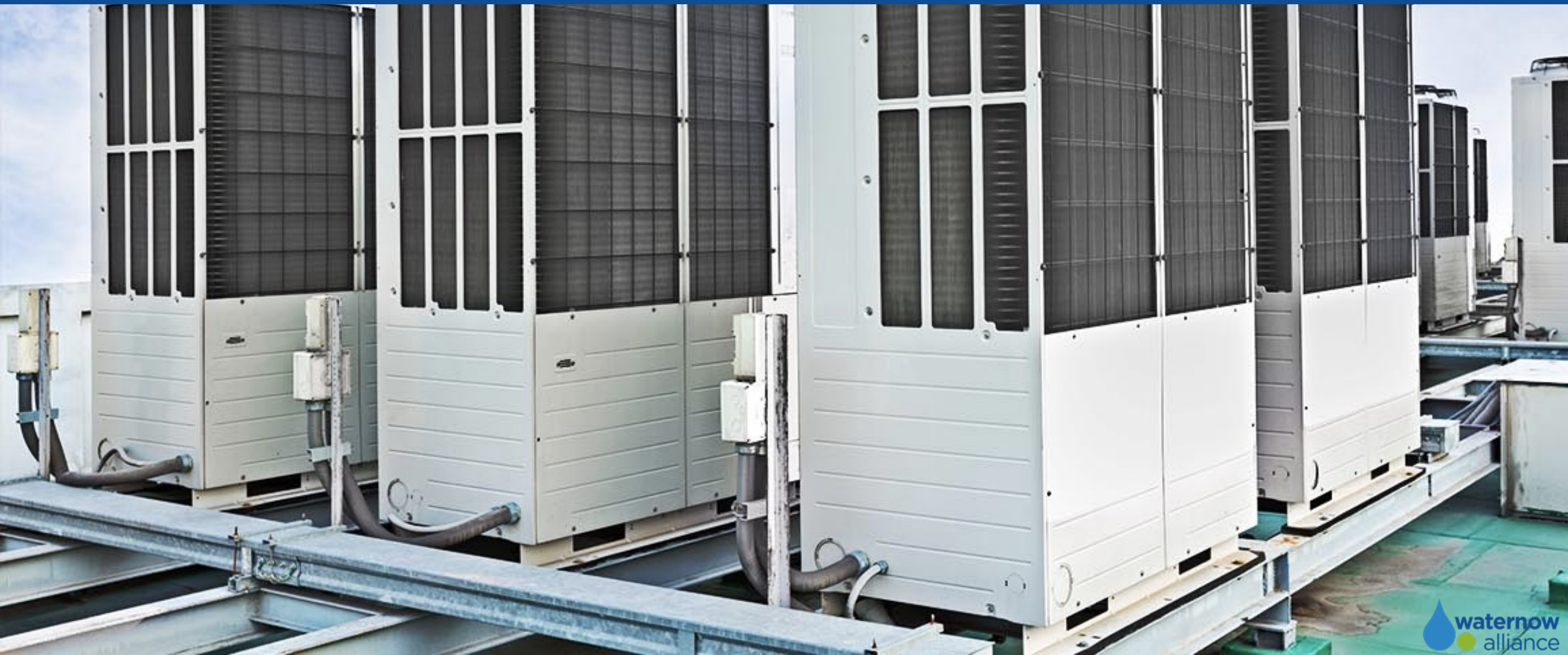
Big picture benefits of localized strategies

- More affordable than rebuilding or repairing centralized infrastructure
- Less time-intensive to install than centralized infrastructure
- Work with the natural environment to enhance water supply resilience and health
- Provide visibility, access, and direct economic benefits to ratepayers

High efficiency appliances and fixtures

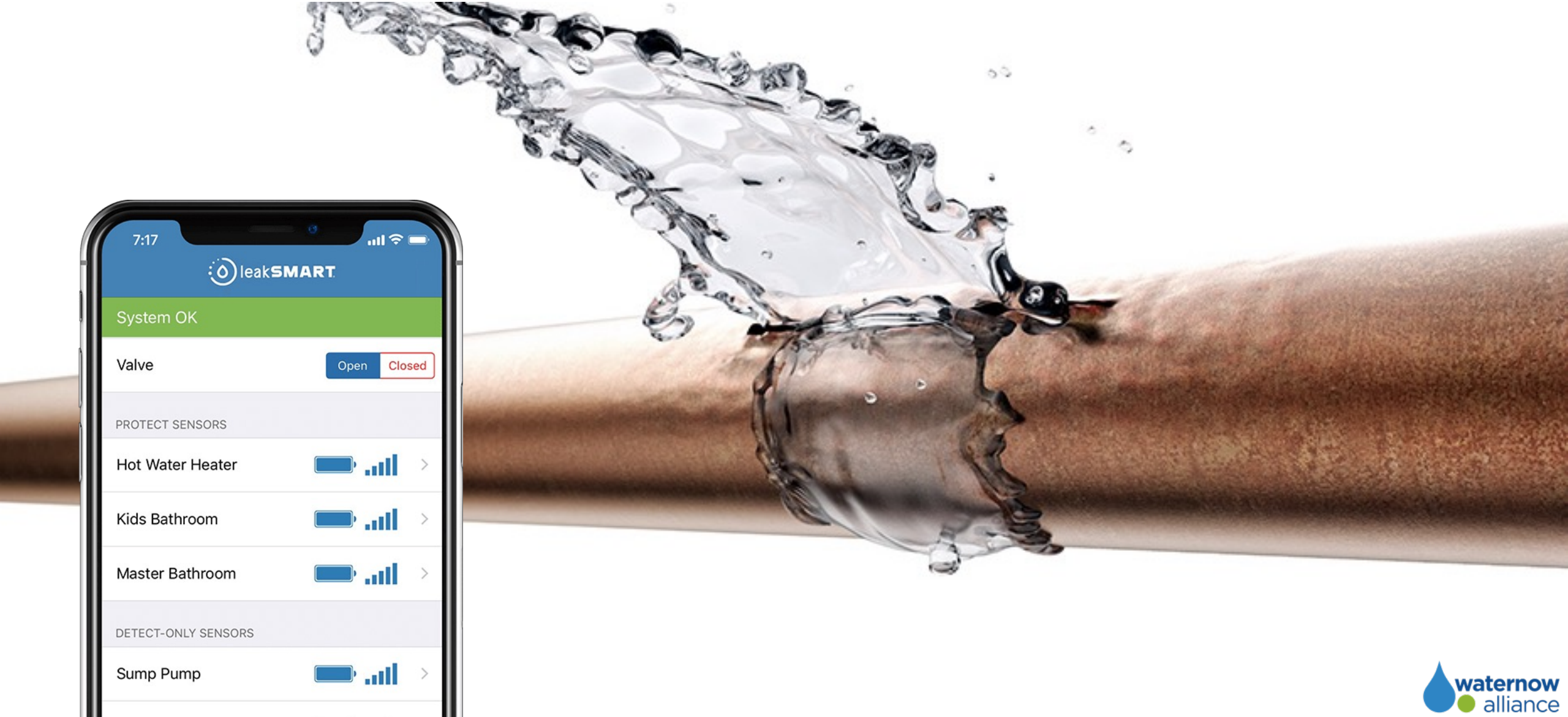
waternow alliance

Commercial, Industrial and Institutional Retrofits/Upgrades



waternow alliance

Leak detection devices



waternow alliance

Native landscaping + turf replacement

waternow alliance

Smart irrigation controllers

waternow alliance

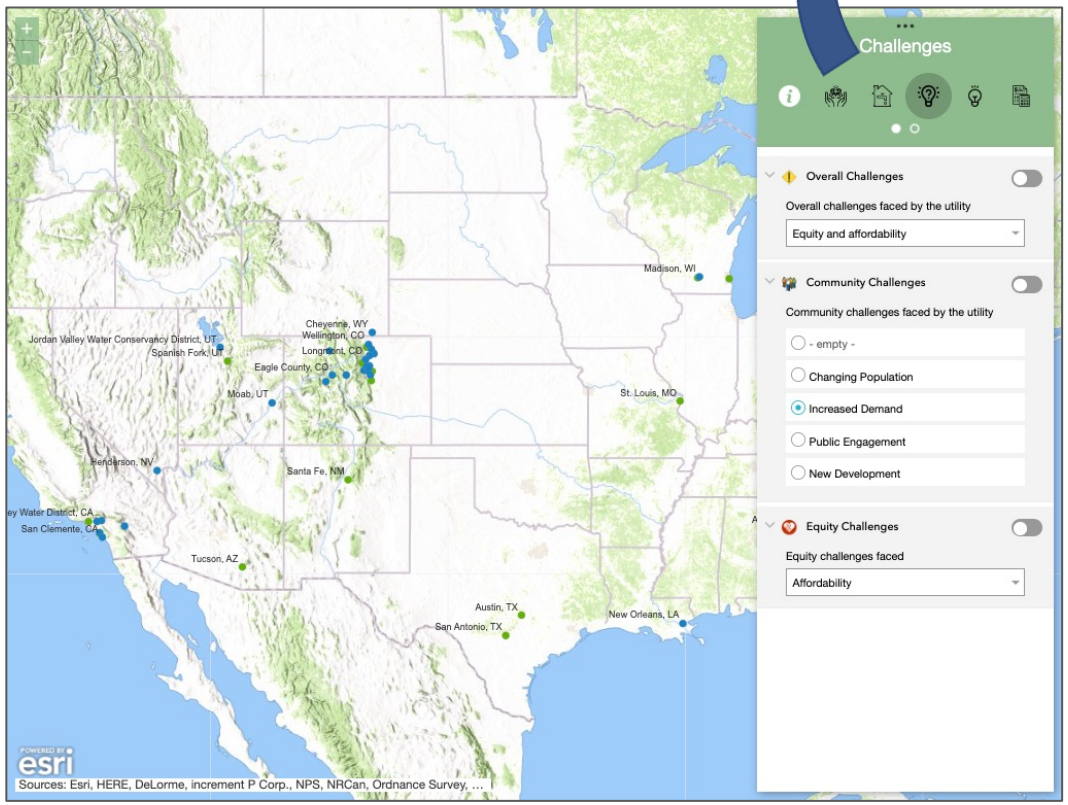
Green Stormwater Infrastructure

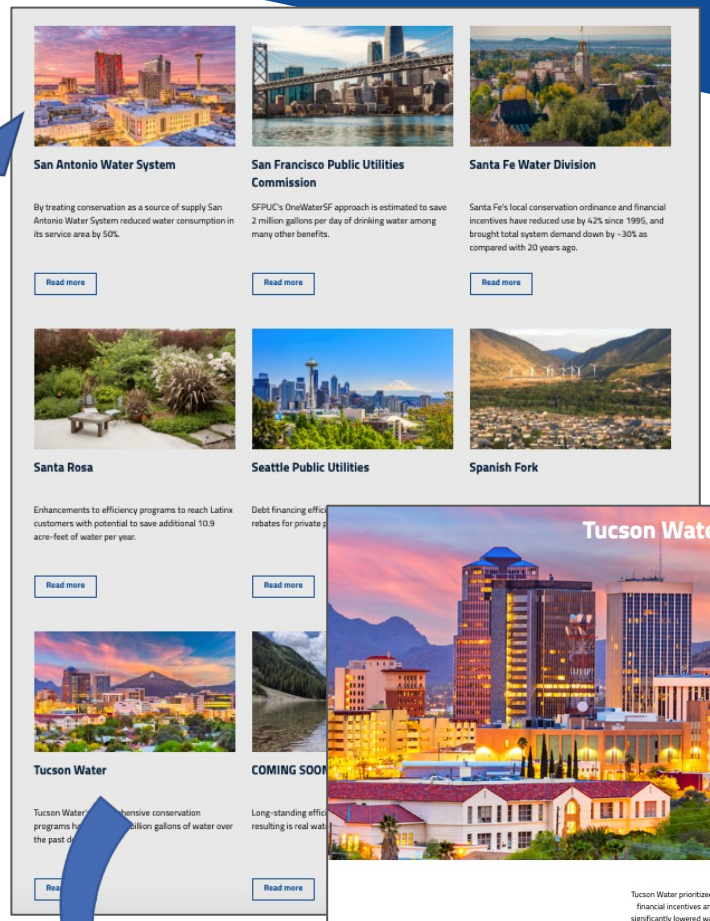
Onsite non-potable water reuse systems

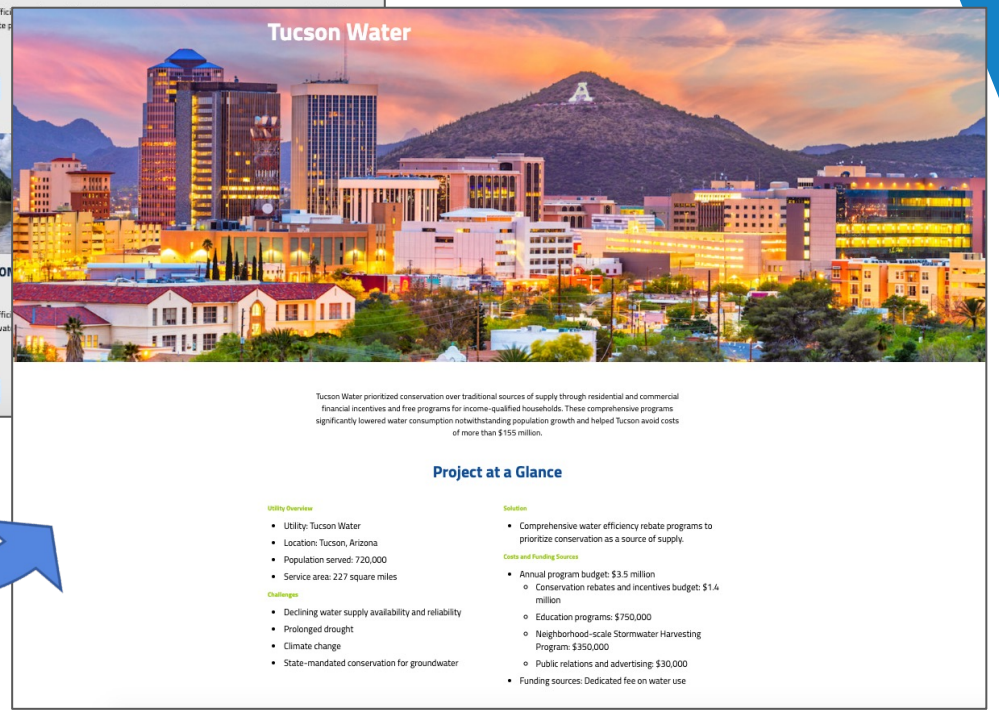
waternow alliance

Constructed wetlands

Case Studies





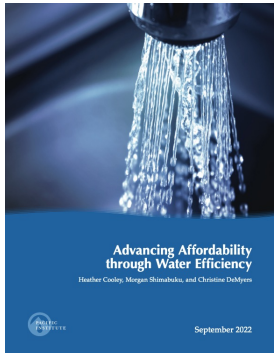


https://tapin.waternow.org/meet-communities/#casestudies

Water Conservation and Efficiency Solutions

Water conservation and efficiency measures reduce customer and utility costs

- Lower water, wastewater, and energy costs
- Reduced operations and maintenance needs
- Avoided need to build new infrastructure or develop new water sources



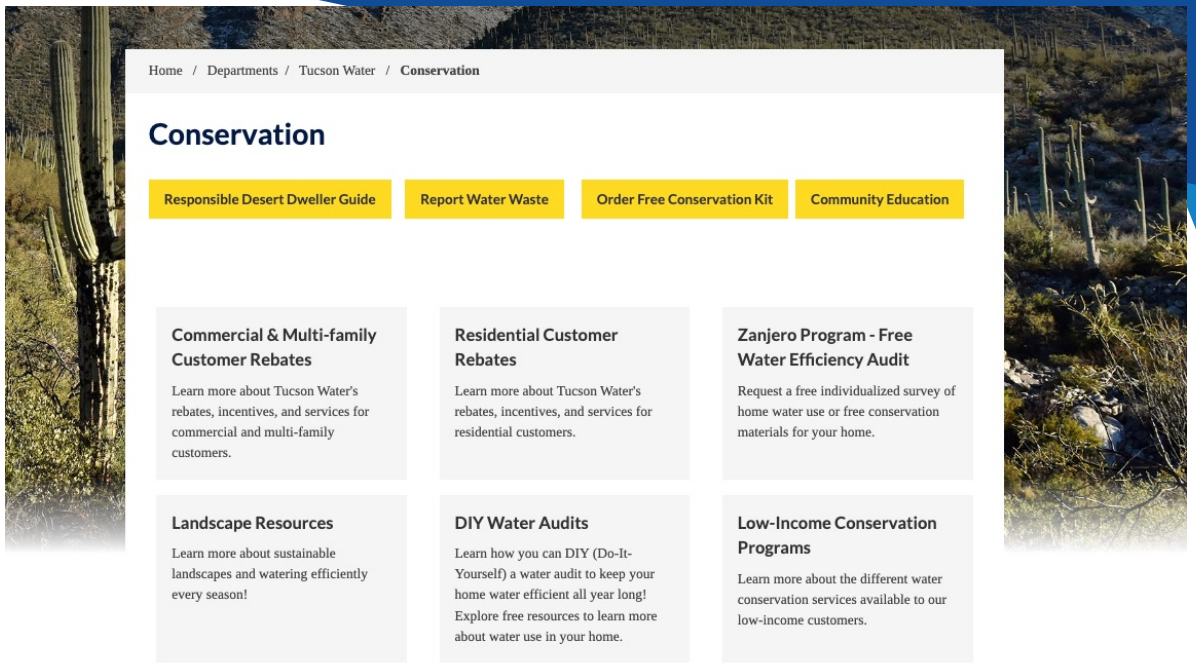
Pacific Institute, 2022

TABLE 2. Summary of Avoided Cost Estimates for Four Utilities in the Western United States

	City of Westminster (Feinglas, Gray, and Mayer 2013)		Tucson Water (Mayer 2017b)		Town of Gilbert (Mayer 2017a)		Los Angeles Department of Water and Power (Chesnutt, Pekelney, and Spacht 2018)	
Years Compared	1980	2010	1989	2015	1997	2015	1990	2016
Population	Not Reported		512,000	717,875	75,144	247,542	3,650,000	4,100,000
Water Use (gpcd)	180	149	188	130	244	173	180	110
Costs Avoided by Water Conservation and Efficiency Improvements								
Avoided Capital Costs	$591,850,000		$350,862,732		$340,807,075		$9,455,060,179	
Avoided Operations and Maintenance Costs	$1,238,000 per year		$29,387,158 per year		$3,671,346 per year		$1,600,448,745	
Bill Impacts without Conservation								
Additional Charges on Annual Customer Bills	$596		$133		$38		$13.48 per Hundred Cubic Feet	
% Increase in Customer Bills	91%		13.3%		6.1%		36.4%	
Additional Connection Fees	$16,952		Not Reported		$7,733		Not Reported	
% Increase in Connection Fees	80%		Not Reported		81.7%		Not Reported	

Notes: Water and wastewater costs are included for all agencies except the Los Angeles Department of Water and Power (LADWP). Avoided costs shown for Los Angeles are for water supply and do not include wastewater. Previous studies show that avoided costs for wastewater were at least as large as for water supply, suggesting that actual bill savings for water and wastewater would be at least twice as high as is shown in the table. LADWP uses an increasing tiered billing structure, and the estimate provided for additional charges on customer bills is for the Tier 4 billing rate.

Water Conservation and Efficiency Solutions

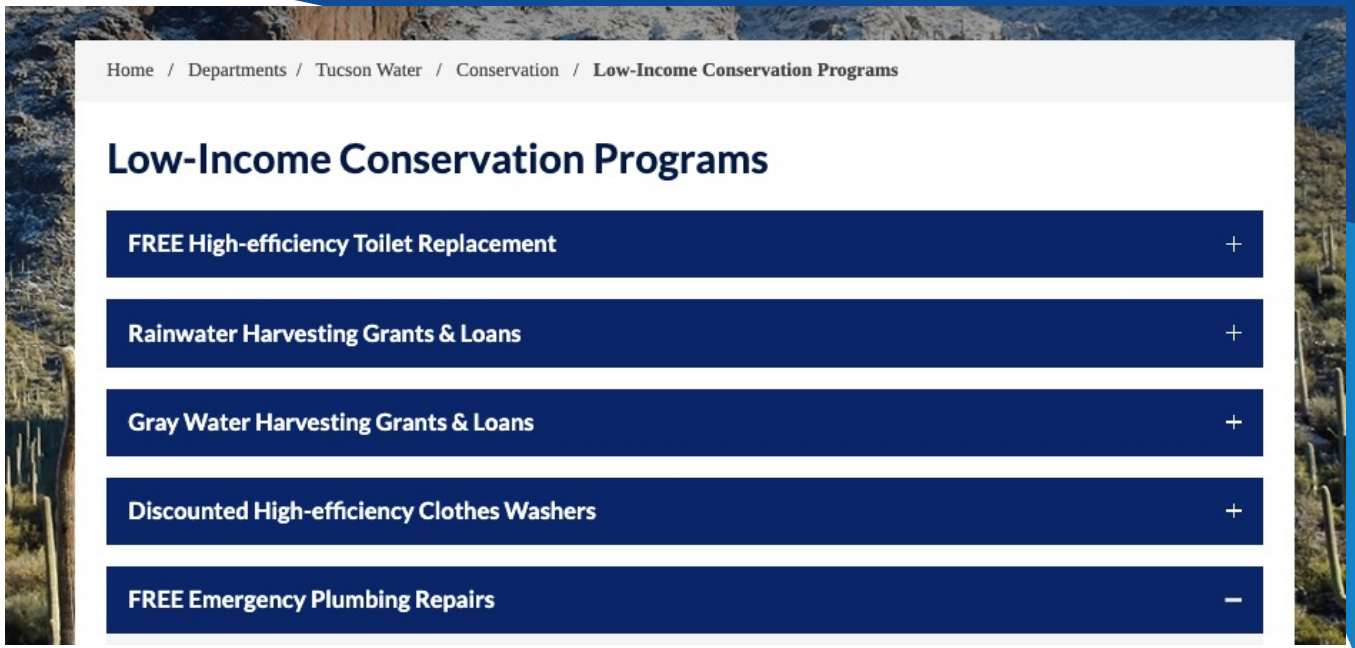


TUCSON WATER

Benefits

- Significantly lowered water consumption notwithstanding population growth
- Avoided costs of more than $155 million
- Conserved more than 2.1 billion gallons over 10 years
- Urban greening, shading, and native landscaping benefits to Tucson
- Improved climate change resilience
- Improved drought resilience

Water Conservation and Efficiency Solutions



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Water Conservation and Efficiency Solutions

West Basin Municipal Water District

Grass Replacement

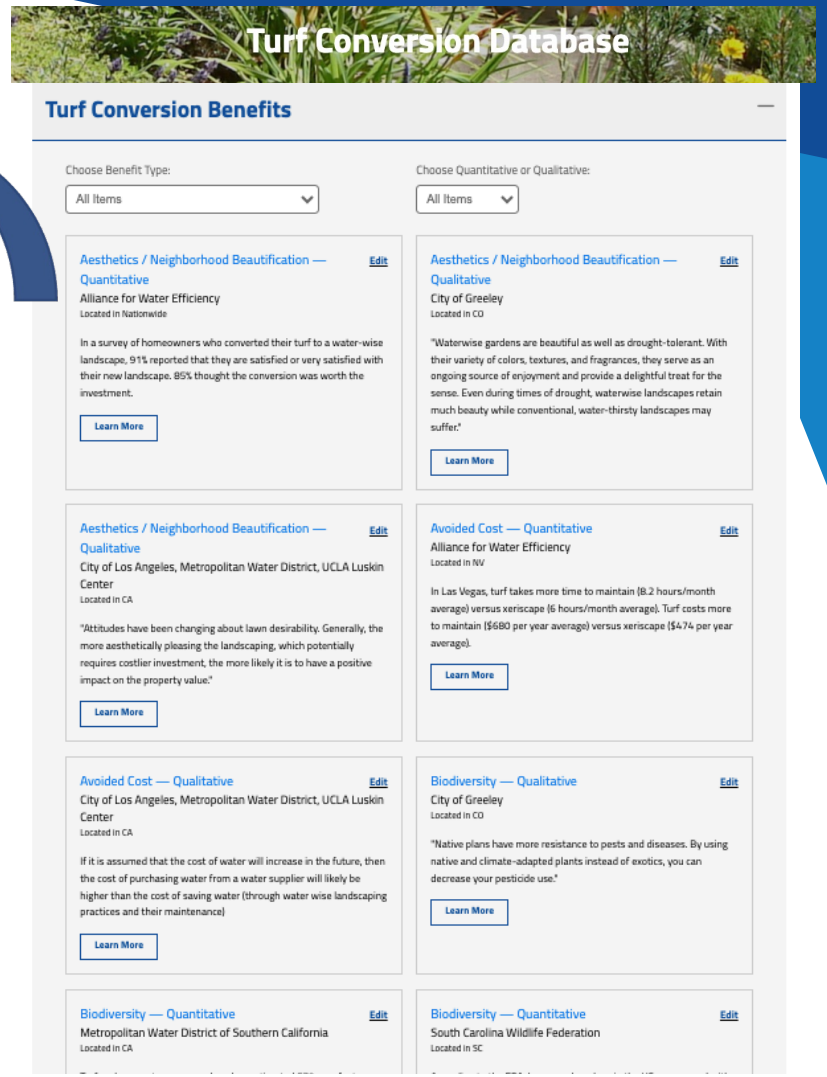
Free climate appropriate tree

Free custom landscape design

Increased rebate! $5 per square foot of grass replaced up to $25,000

PROGRAM FLYER (ENGLISH) ›

PROGRAM FLYER (SPANISH) ›



Turf Conversion Database

Turf Conversion Benefits

Choose Benefit Type: All Items

Choose Quantitative or Qualitative: All Items

Aesthetics / Neighborhood Beautification — Quantitative (Edit)
Alliance for Water Efficiency
Located in Nationwide
In a survey of homeowners who converted their turf to a water-wise landscape, 91% reported that they are satisfied or very satisfied with their new landscape. 85% thought the conversion was worth the investment.
Learn More

Aesthetics / Neighborhood Beautification — Qualitative (Edit)
City of Greeley
Located in CO
"Waterwise gardens are beautiful as well as drought-tolerant. With their variety of colors, textures, and fragrances, they serve as an ongoing source of enjoyment and provide a delightful treat for the sense. Even during times of drought, waterwise landscapes retain much beauty while conventional, water-thirsty landscapes may suffer."
Learn More

Aesthetics / Neighborhood Beautification — Qualitative (Edit)
City of Los Angeles, Metropolitan Water District, UCLA Luskin Center
Located in CA
"Attitudes have been changing about lawn desirability. Generally, the more aesthetically pleasing the landscaping, which potentially requires costlier investment, the more likely it is to have a positive impact on the property value."
Learn More

Avoided Cost — Quantitative (Edit)
Alliance for Water Efficiency
Located in NV
In Las Vegas, turf takes more time to maintain (8.2 hours/month average) versus xeriscape (6 hours/month average). Turf costs more to maintain ($680 per year average) versus xeriscape ($474 per year average).
Learn More

Avoided Cost — Qualitative (Edit)
City of Los Angeles, Metropolitan Water District, UCLA Luskin Center
Located in CA
If it is assumed that the cost of water will increase in the future, then the cost of purchasing water from a water supplier will likely be higher than the cost of saving water (through water wise landscaping practices and their maintenance)
Learn More

Biodiversity — Qualitative (Edit)
City of Greeley
Located in CO
"Native plans have more resistance to pests and diseases. By using native and climate-adapted plants instead of exotics, you can decrease your pesticide use."
Learn More

Biodiversity — Quantitative (Edit)
Metropolitan Water District of Southern California
Located in CA

Biodiversity — Quantitative (Edit)
South Carolina Wildlife Federation
Located in SC

https://tapin.waternow.org/turf-conversion-database/

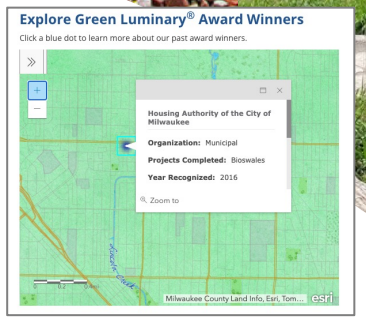
Stormwater Solutions

MMSD

PARTNERS FOR A CLEANER ENVIRONMENT

Benefits

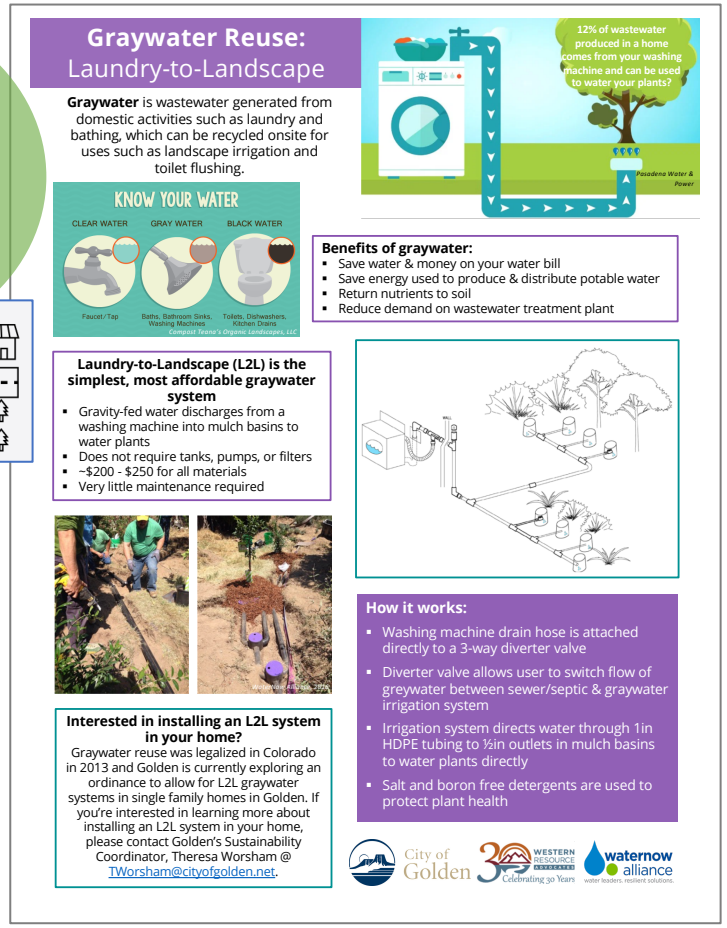
- Expected to save MMSD in traditional infrastructure upgrades
- Reduces sewer overflow incidences by 96%, from 50 to 60 per year to only 2.3 per year
- Creates 500 green maintenance jobs at full implementation
- Produces 160 construction jobs on average per year
- Increases property values by an estimated $667 million
- Educates the public about water resources and sustainable solutions
- Improves environmental health by reducing carbon emissions, conserving energy, and improving air and water quality
- Improves quality of life and aesthetics by providing additional green spaces and recreational opportunities

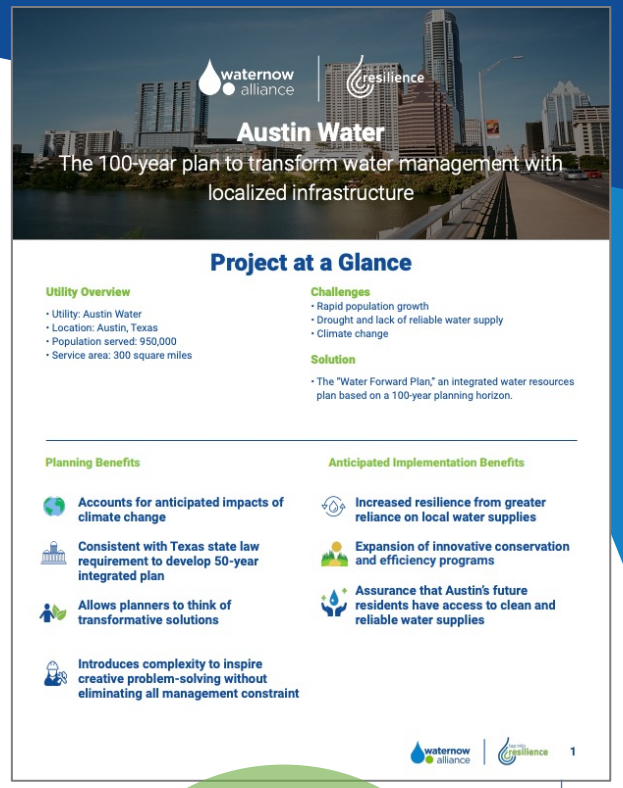


Wastewater Solutions

Los Angeles, CA: onsite water reuse can reduce MFR potable water demand **38%**

Golden, CO: **"Laundry-to-Landscape"** graywater ordinance

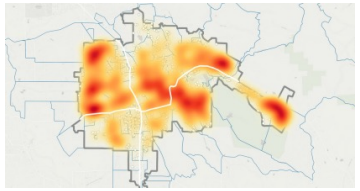




Austin, TX: Community-scale onsite water reuse to generate **10 MG/day** by 2040

Distributed Infrastructure and Affordability

An example from the Los Angeles Department of Water's outreach campaign for its Customer Assistance Program, which includes outreach materials tailored to the local community, in both English and Spanish.



- Program design
- Streamlined programs + processes
- Community partnerships + engagement
- Targeted outreach
- Inclusive communication + outreach

Resources for Funding and Financing

What are my financing options?

The financing sections cover

Accessing State, Federal, and Philanthropic Funding

In addition to operating budget funds and debt proceeds, utilities can access state, federal, and philanthropic dollars to help finance localized water infrastructure in their communities. These sources of funding are attractive because, although they may require more administrative work and advance planning to obtain, they can offer some very low-cost debt and, in some cases, grants or debt forgiveness.

Click through the sections below to learn about **State Revolving Funds**, the **Water Infrastructure Finance and Innovation Act**, the Bureau of Reclamation's **WaterSMART** program, Housing and Urban Development's **Section 108 Loan Guarantee Program**, and the **role philanthropy can play** in increasing investments in localized water infrastructure.

Explore for yourself to start implementing!

Visit tapin.waternow.org/toolkit to view full toolkit

Resources for Water Equity and Climate Resilience

Equitable & Affordable Water Infrastructure Investments

Water utilities serving frontline communities not only face water management challenges, but also encounter difficulties in accessing funding and financing mechanisms to invest in needed water infrastructure upgrades. Frontline communities' special challenges accessing the funding required to invest in vital water infrastructure range from **severely reduced federal financial support** for local water systems over the years, to **financially distressed rate bases** that cannot afford the cost of needed infrastructure, **declining populations** leading to a smaller number of customers within the utility service area, and/or **lack of internal capacity and expertise** to apply for the grant and support programs that are available. The COVID-19 pandemic intensified these already pressing issues as revenue losses hit urban areas hard.

Click through the sub-sections below to learn about available **federal and state grant and loan options for frontline communities** and how to **ensure inter-generational equity** when making water infrastructure investments.

tapin.waternow.org/toolkit/#frontline

BRIEF Q&A

TIME FOR A ZOOM POLL

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THANK YOU

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