



SCHOOL OF GOVERNMENT  
Environmental Finance Center

# 2025 Wisconsin Cost of Water Dashboard

Dr. Ahmed Rachid El-Khattabi  
Research Director  
UNC SOG Environmental Finance Center

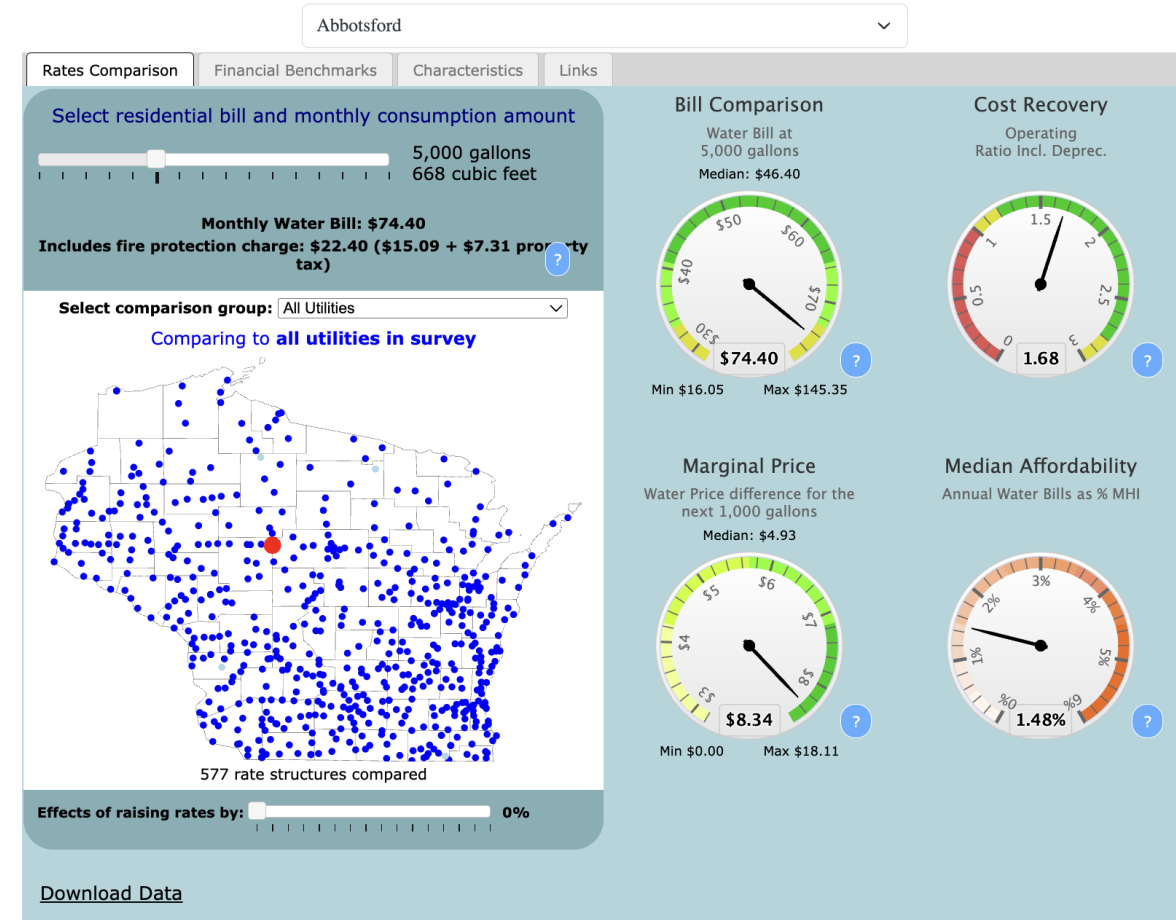
# Agenda

- Introduction
- Rates dashboard as decision support tool
- Data overview
- How to navigate the dashboard
- How to interpret information on dashboard
- Supplementary Information



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Government

Environmental  
Finance Center



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## INTRODUCTION

# UNC Environmental Finance Center

- The School of Government Environmental Finance Center (SOG EFC) supports North Carolina governments in providing financially sustainable water, wastewater, and stormwater utilities.
- We equip state and local leaders to make data-driven decisions through applied research, tools, teaching, and technical assistance.
  - Applied Research
  - Teaching and Outreach
  - Program Design and Evaluation



## INTRODUCTION

# UNC School of Government



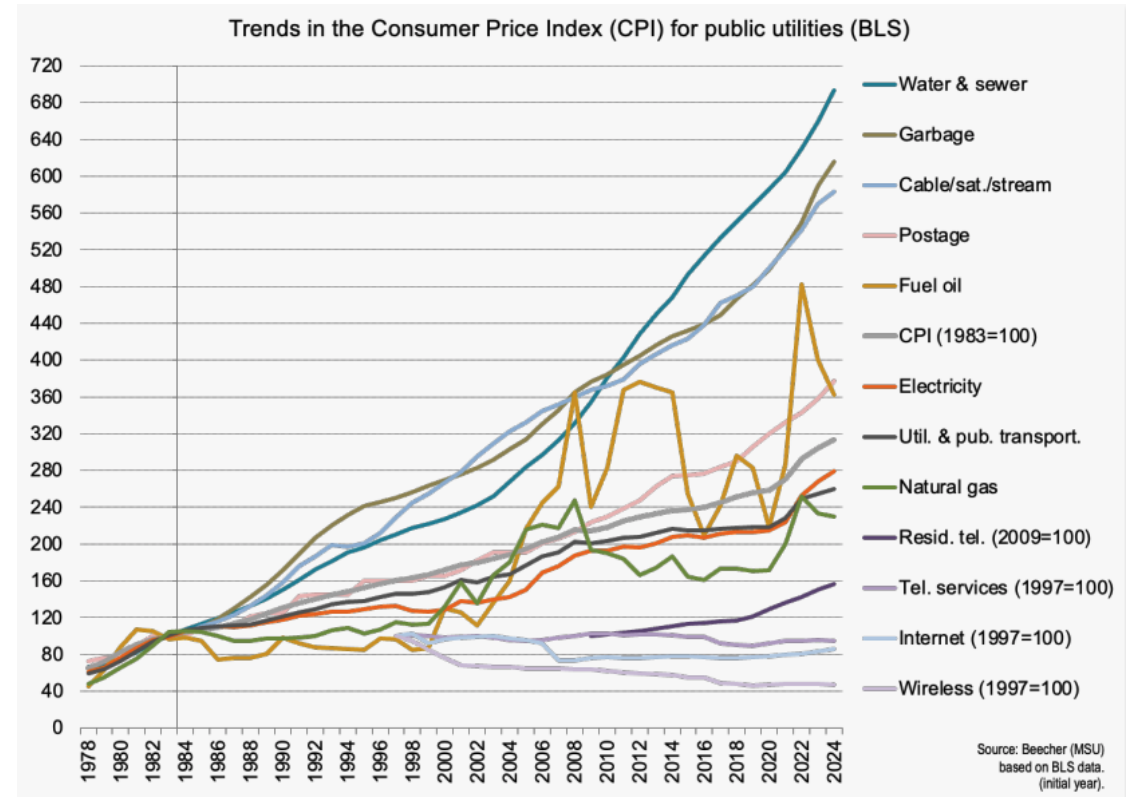
- The mission of the School of Government is to improve the lives of North Carolinians by engaging in practical scholarship that helps public officials and citizens understand and improve state and local government.
- Nonpartisan
- Policy-neutral
- Responsive

## INTRODUCTION

# National Trends Suggest Water Costs Rising Faster than Other Utility Costs

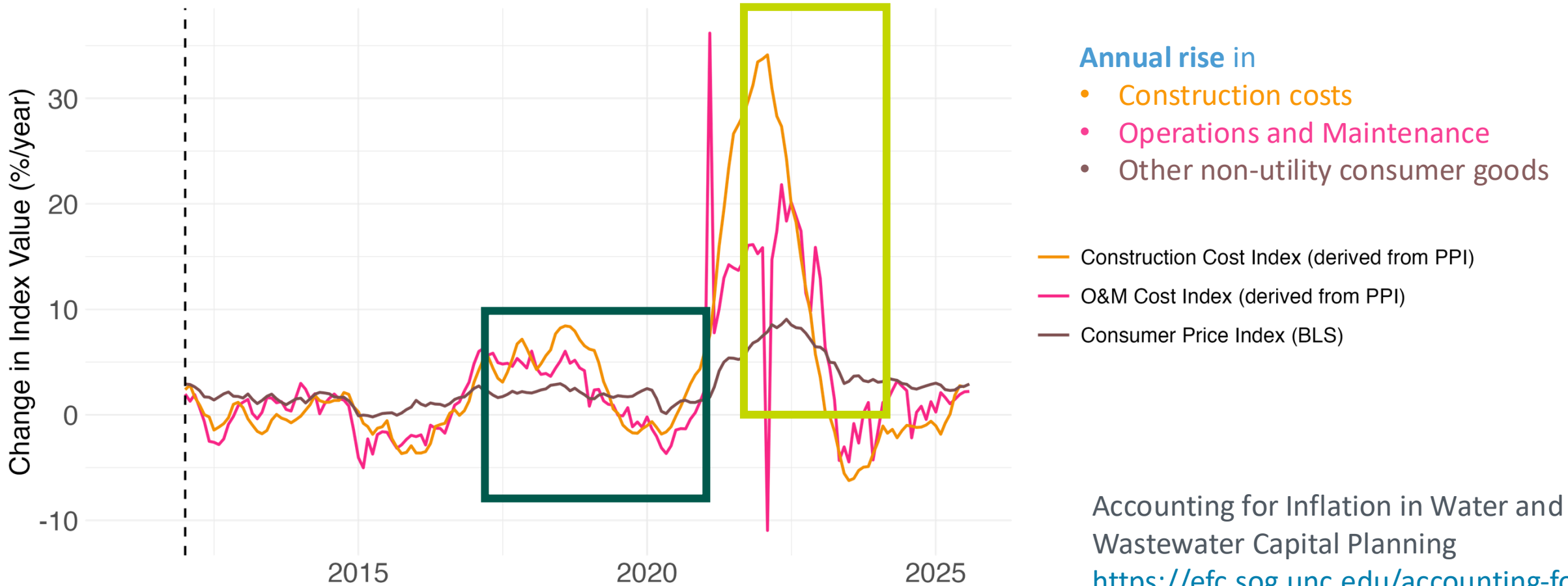
What's driving this trend?

- Deferred maintenance
- Emerging contaminants
- Extreme weather events
- Rising construction costs



## INTRODUCTION

# National Trends in Capital and O&M Costs for Water Utilities



### Annual rise in

- Construction costs
- Operations and Maintenance
- Other non-utility consumer goods

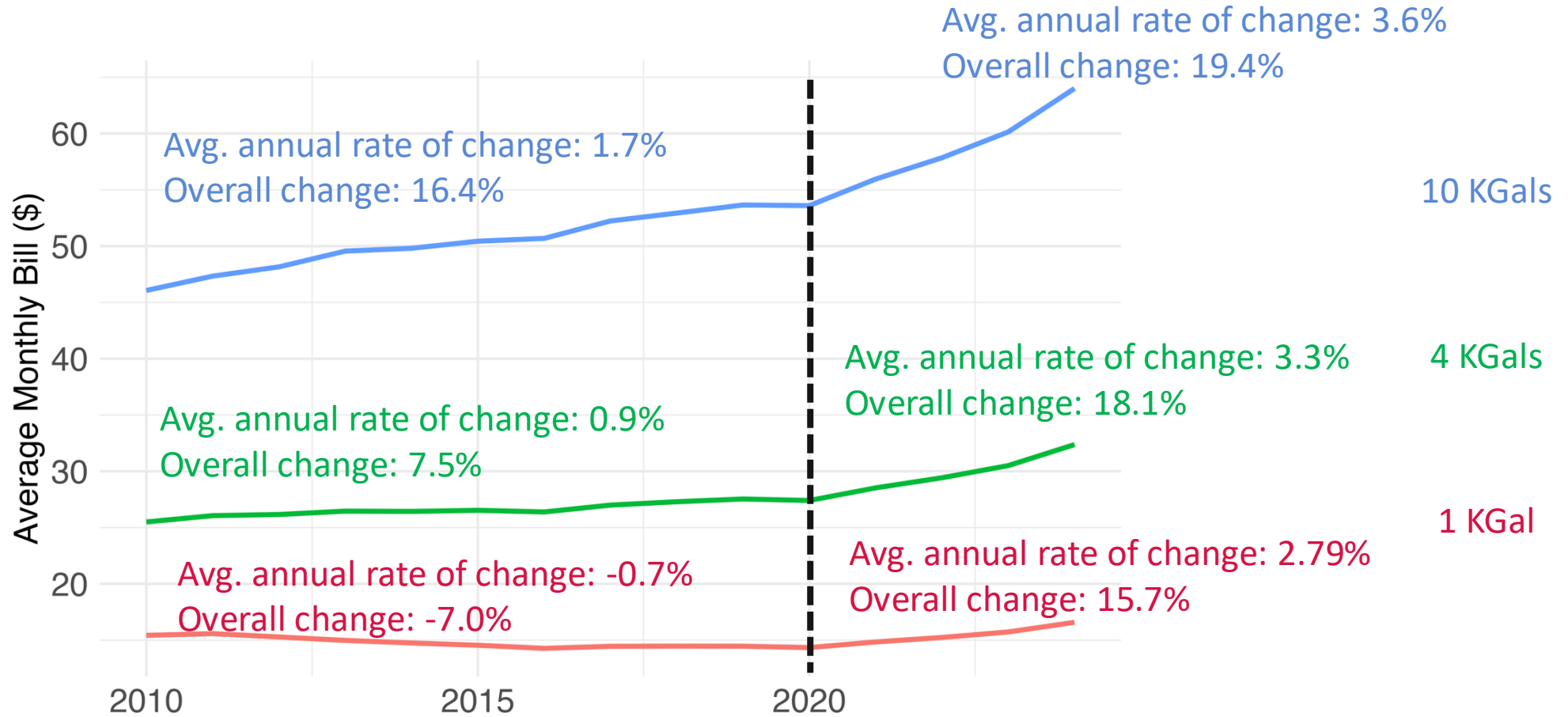
- Construction Cost Index (derived from PPI)
- O&M Cost Index (derived from PPI)
- Consumer Price Index (BLS)

Accounting for Inflation in Water and Wastewater Capital Planning

<https://efc.sog.unc.edu/accounting-for-inflation-in-water-and-wastewater-capital-planning/>

INTRODUCTION

# Trends in Cost of Water in Wisconsin



## INTRODUCTION

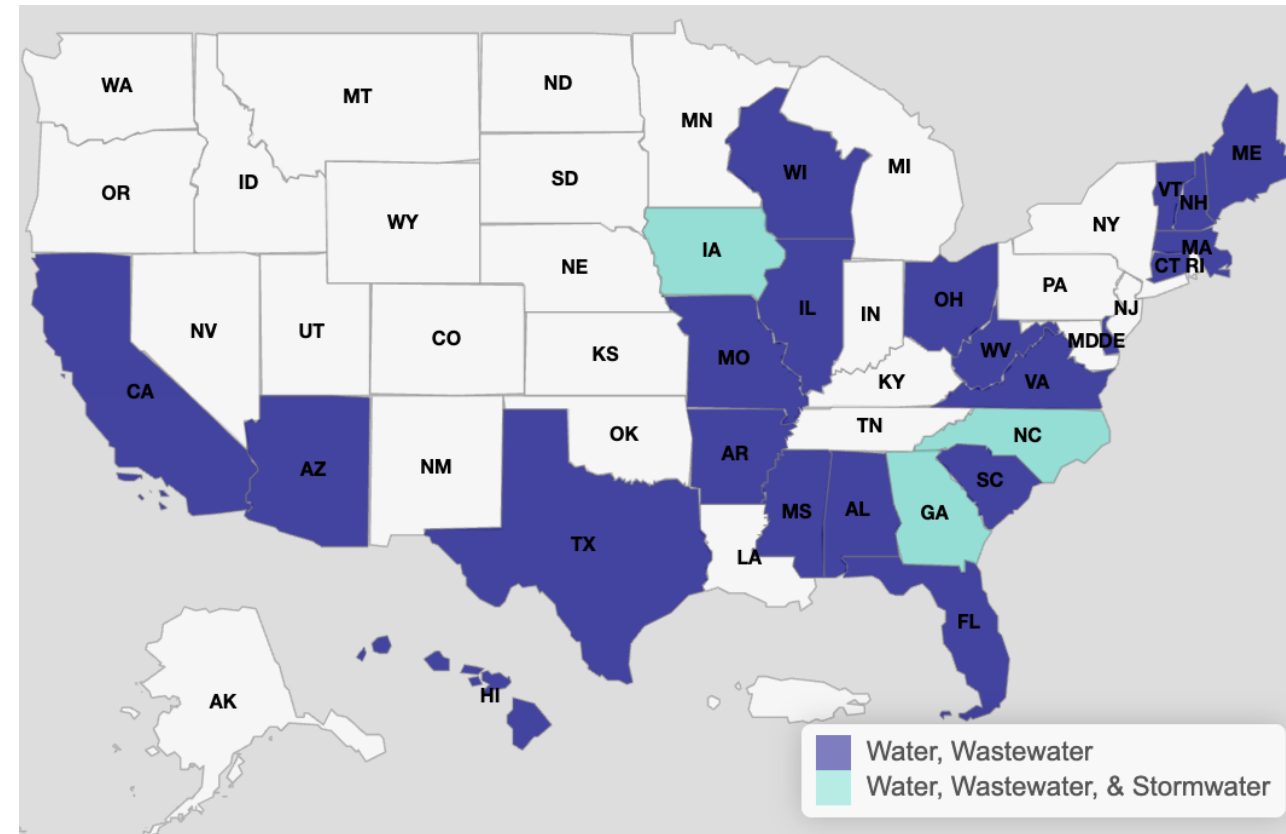
# Dashboard as a Public Decision Support Tool

- Data visualization tool
- Started over 15 years ago
- Helping address need to both do peer comparisons for rates, as well as self-evaluations and financial benchmarking



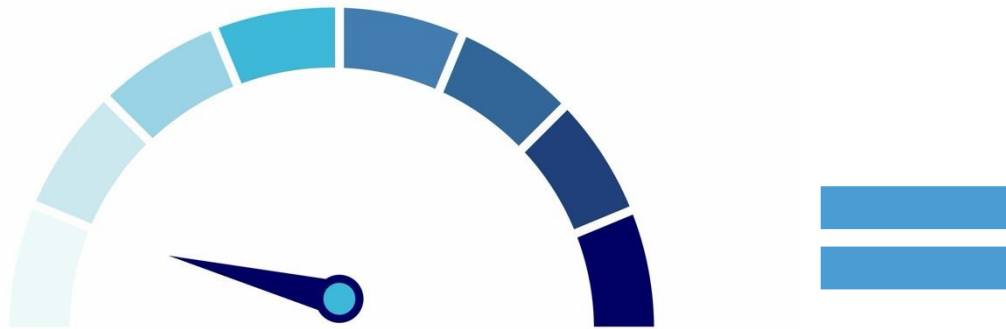
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## INTRODUCTION

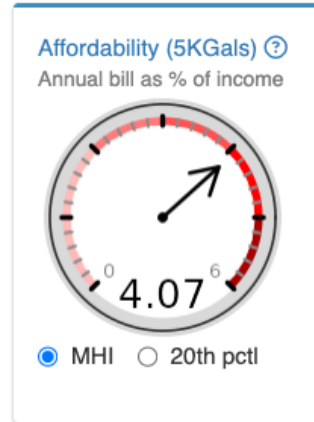
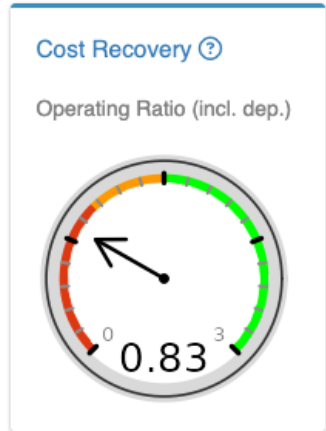
# Dashboard as a Public Decision Support Tool



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## INTRODUCTION

# Dashboard as a Public Decision Support Tool



“How much should you charge to remain financially healthy/viable?”

“How large a rate increase is socially tolerable?”

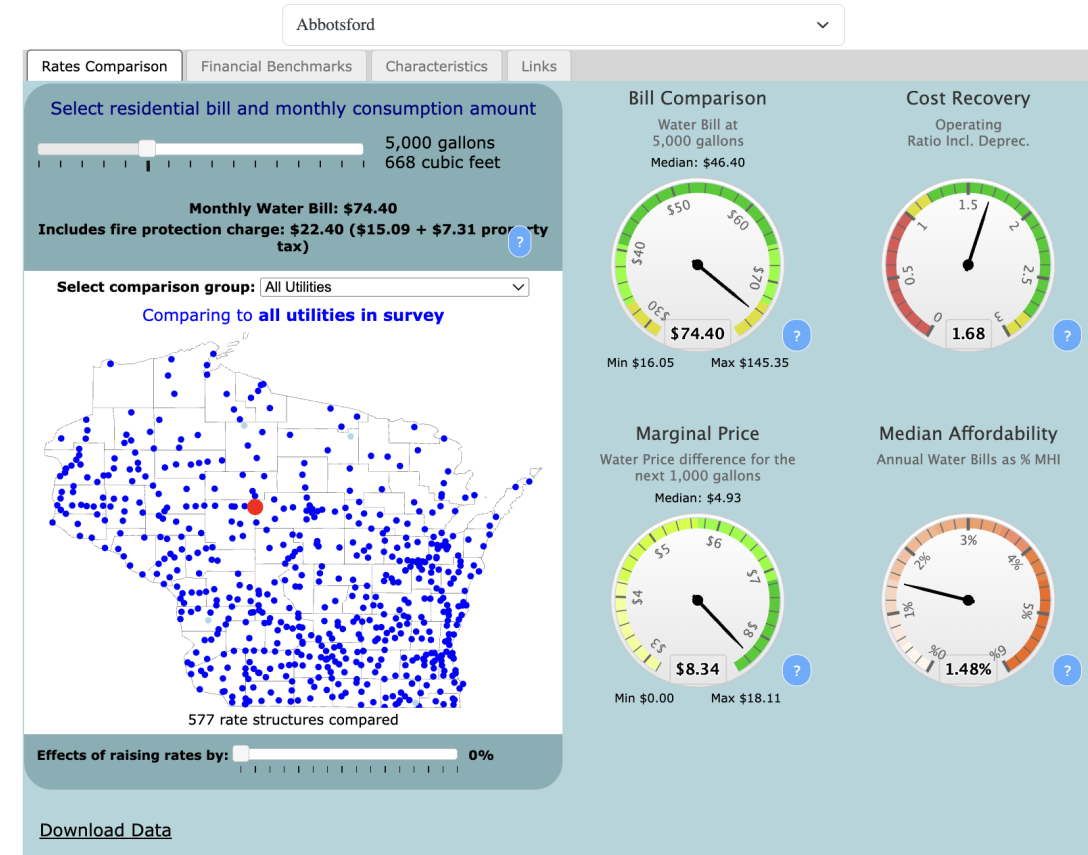
## Example use cases

- As part of your annual rate review
- When presenting to boards or other decision makers on the need to change rates
- When explaining rates to customers
- As part of your PSC rate case
- SRF applications

## DASHBOARD OVERVIEW

# Wisconsin FY 2025 Water Dashboard

- 100% of **water utilities** regulated by PSC
- Includes municipalities, sanitary districts, townships, IOUs
- Range of service populations from 25 to 626,000
- ~67.4% of the state's population



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## DASHBOARD OVERVIEW

# Data Sources for Wisconsin Dashboard



- Water rates
- Direct PFP charges
- Municipal PFP charges
- Utility financials



Valuation information for municipal PFP charges



- Source water type
- Number of connections
- Service population



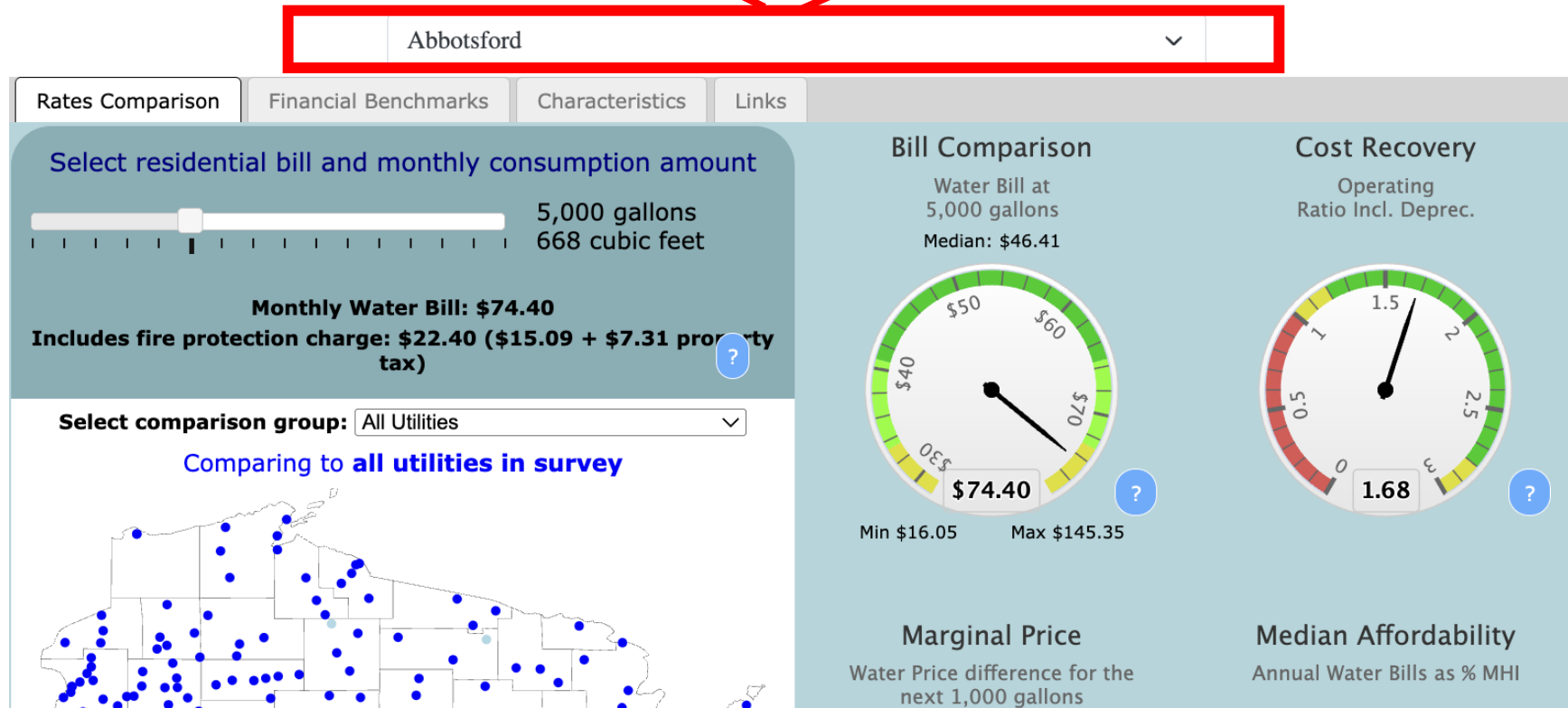
- Household income
- Poverty rates

## HOW TO NAVIGATE THE DASHBOARD

# Select your community

Select your community from the dropdown menu

Begin typing and utility names that match will appear

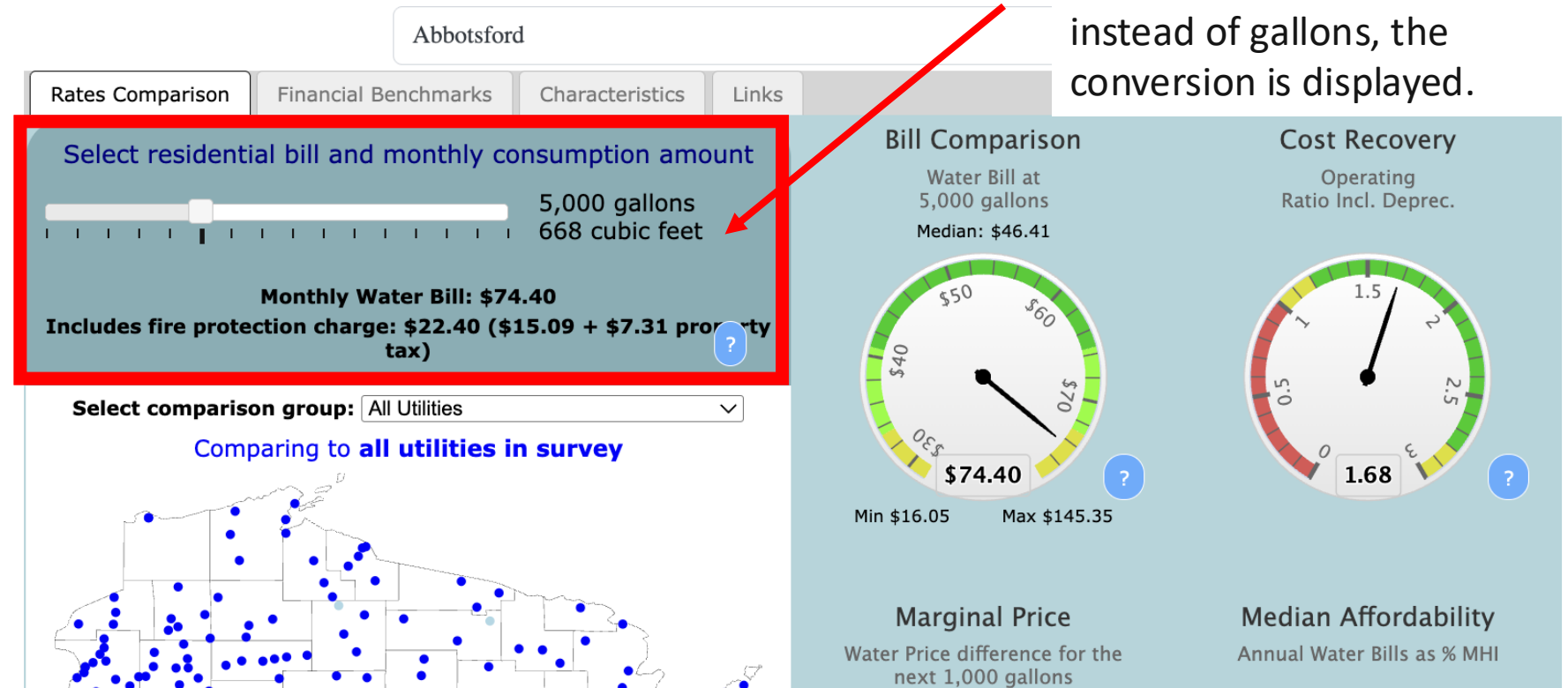


## HOW TO NAVIGATE THE DASHBOARD

# Select Consumption Amount

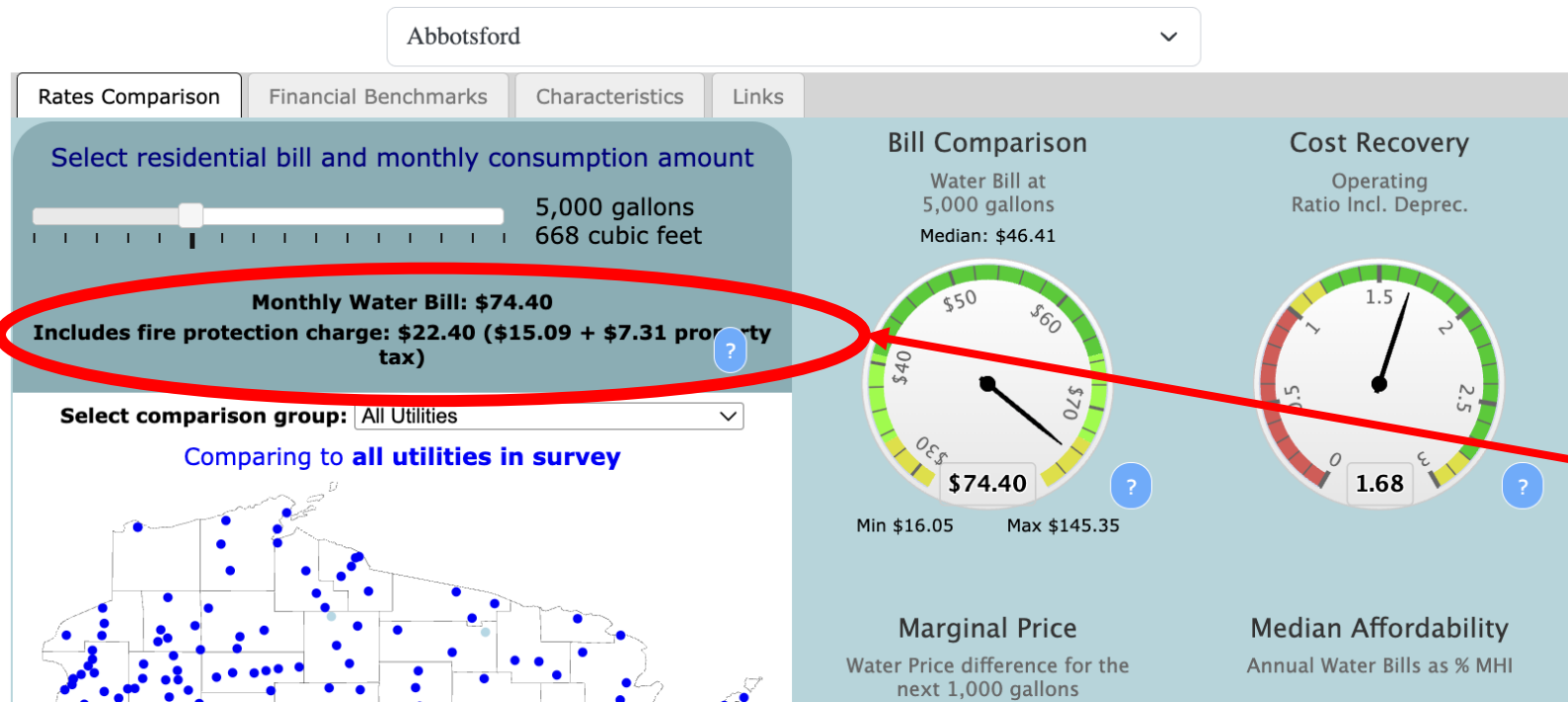
The consumption slider ranges from 0 gallons all the way up to 15,000 gallons, at 500-gallon increments.

Default starting amount is 5,000 gallons



## HOW TO NAVIGATE THE DASHBOARD

# Select Consumption Amount



Base charge (0 gallons) includes

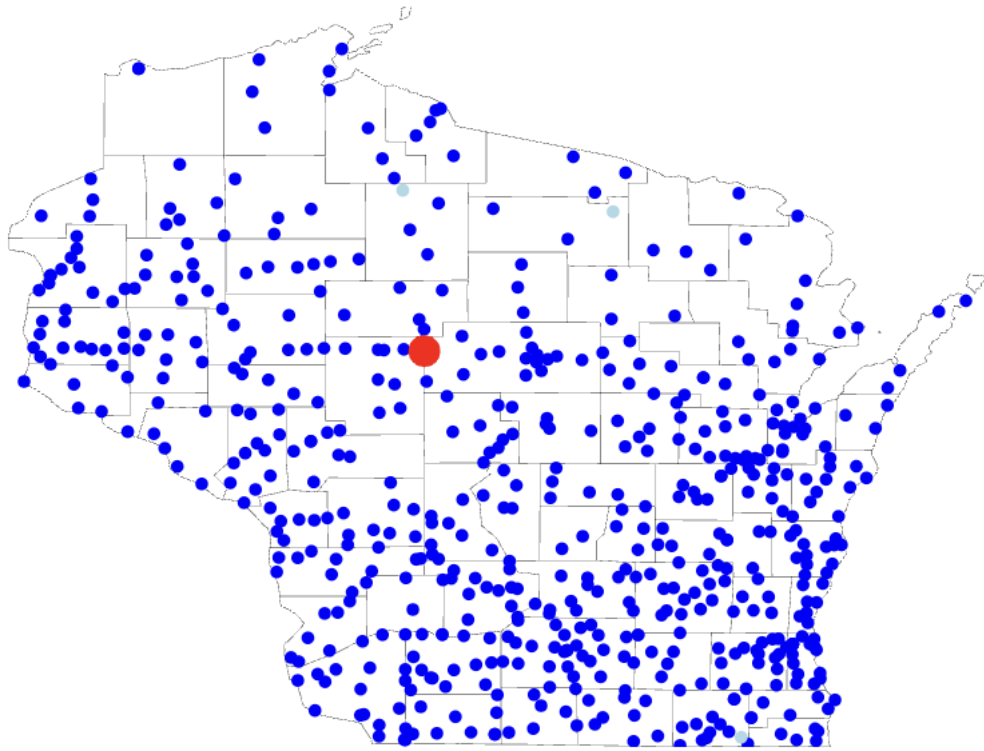
- Fixed meter charge for water
- Direct PFP charge (if applicable)
- Municipal PFP charge (if applicable)

## HOW TO NAVIGATE THE DASHBOARD

# Consider Comparisons

Select comparison group: All Utilities

Comparing to **all utilities in survey**



578 rate structures compared

### Comparison group options

- All utilities
- Similar revenue generation
- Similar customer income
- Same watershed
- Same water source (SW, GW, P)
- Same congressional district
- Same ownership type
- Same regional planning commission
- Same rate structure
- Within radius (25 and 50 miles)

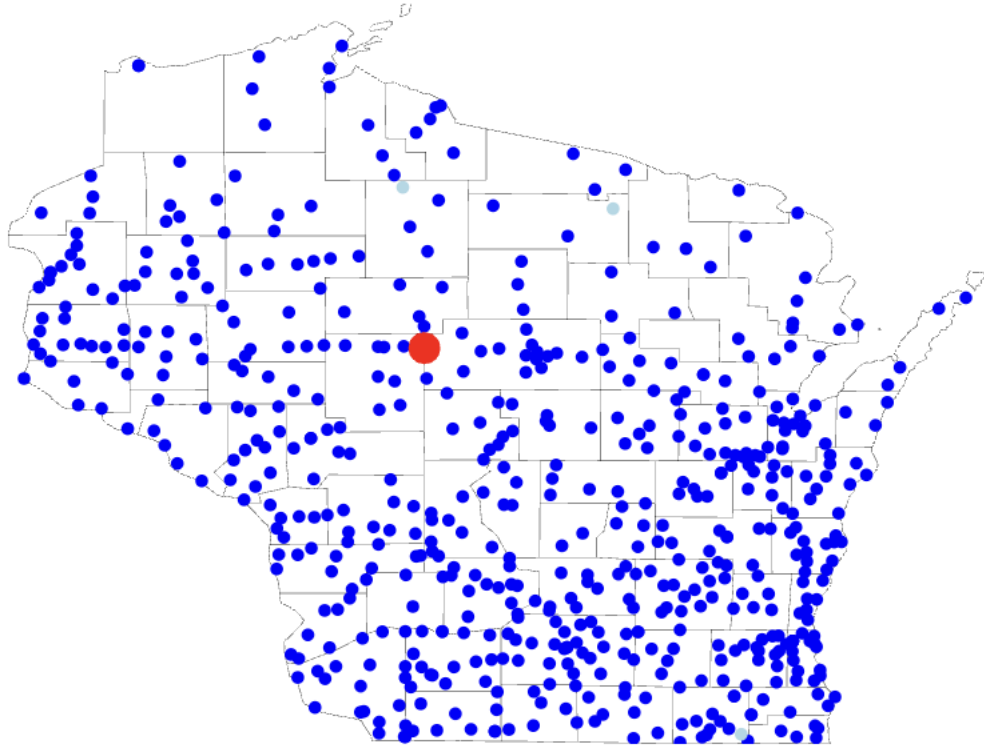
Map shows utilities' approximate locations

## HOW TO NAVIGATE THE DASHBOARD

# Consider Comparisons

Select comparison group: All Utilities

Comparing to **all utilities in survey**

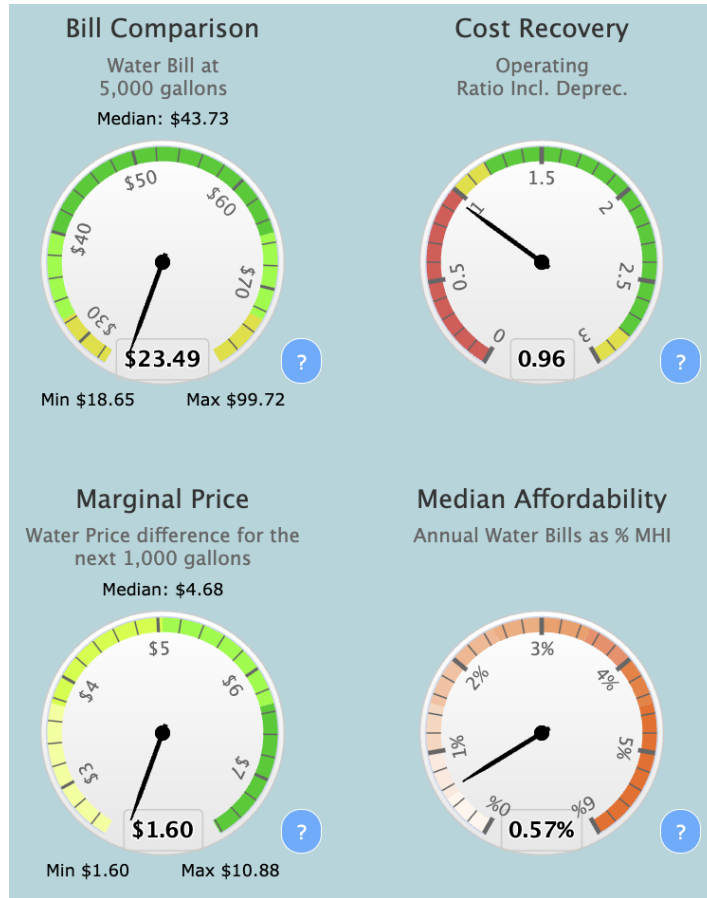


578 rate structures compared

When a comparison group in the dropdown menu is grayed out, that means there are insufficient utilities in the peer group for meaningful comparison.

## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

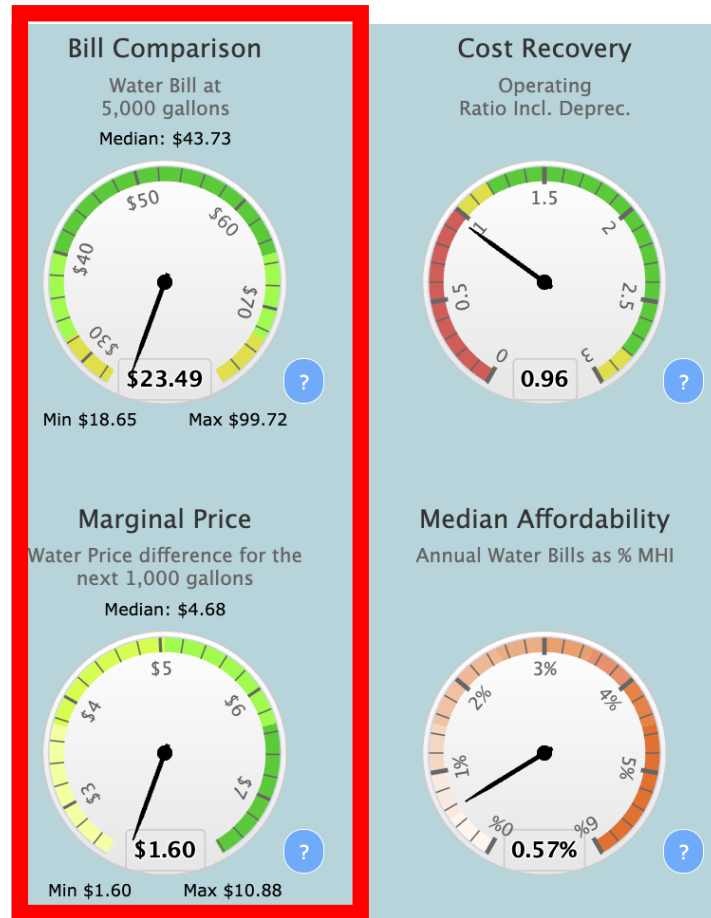
# Metrics to Consider



Bill comparison  
Marginal Price  
Cost recovery  
Median affordability

## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

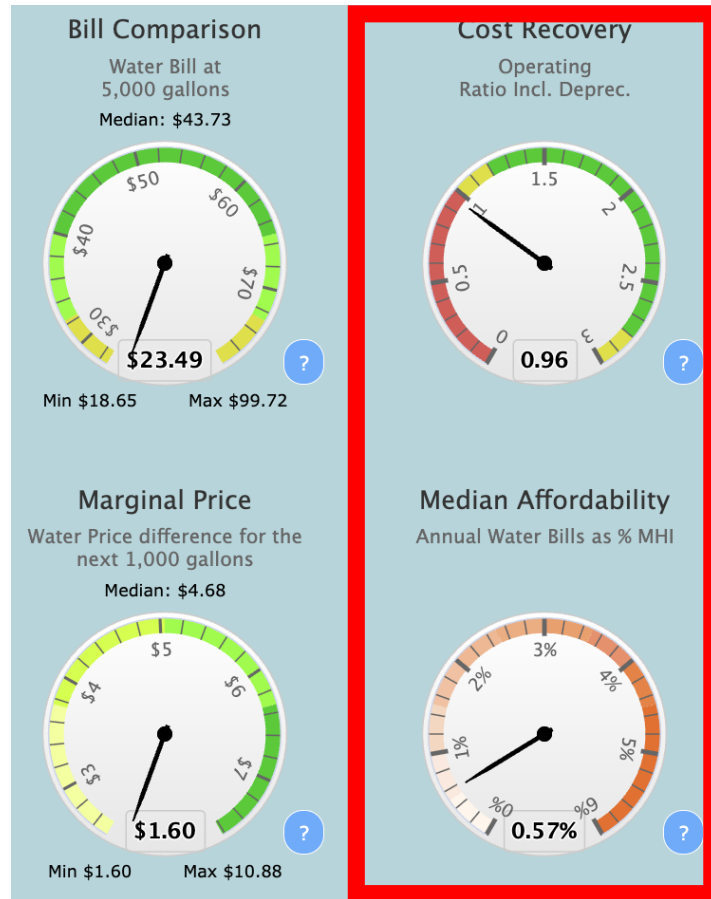
# Deeper Look at Dials



Based on where a utility stands in its peer group

## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

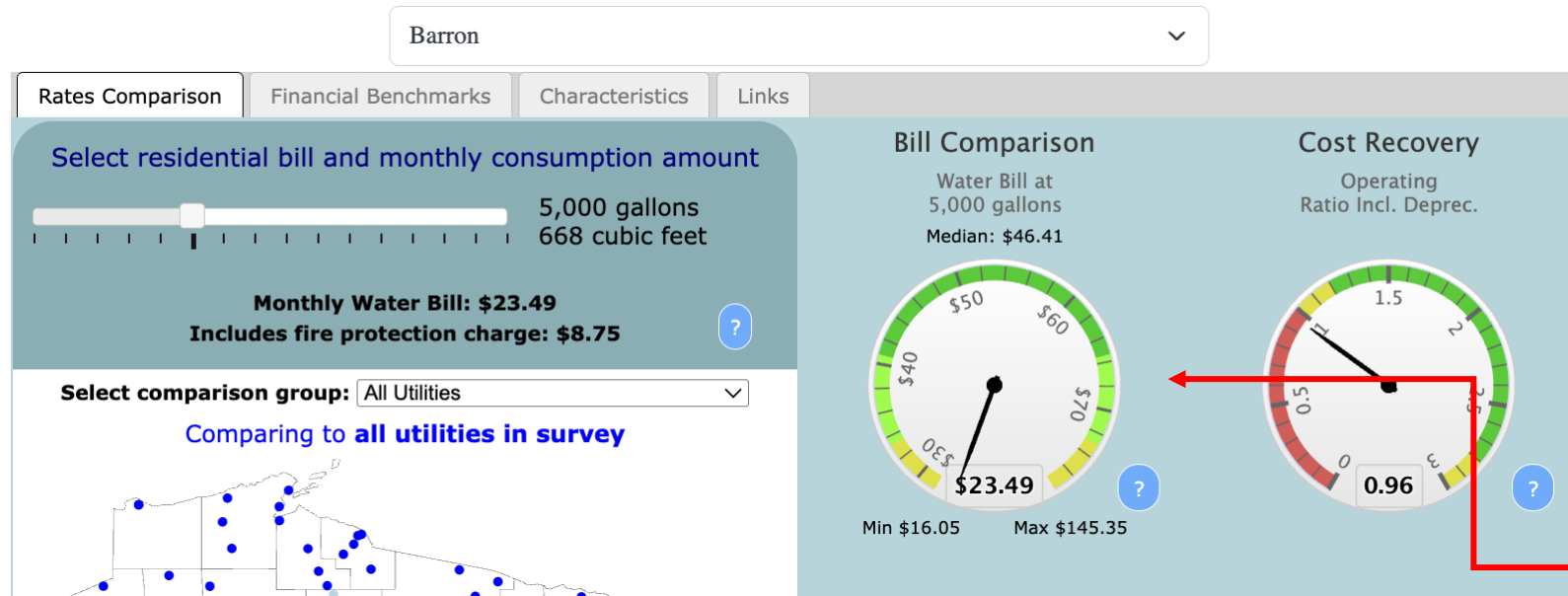
# Deeper Look at Dials



NOT based on where a utility stands in its peer group

## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

# Compare to your peer group

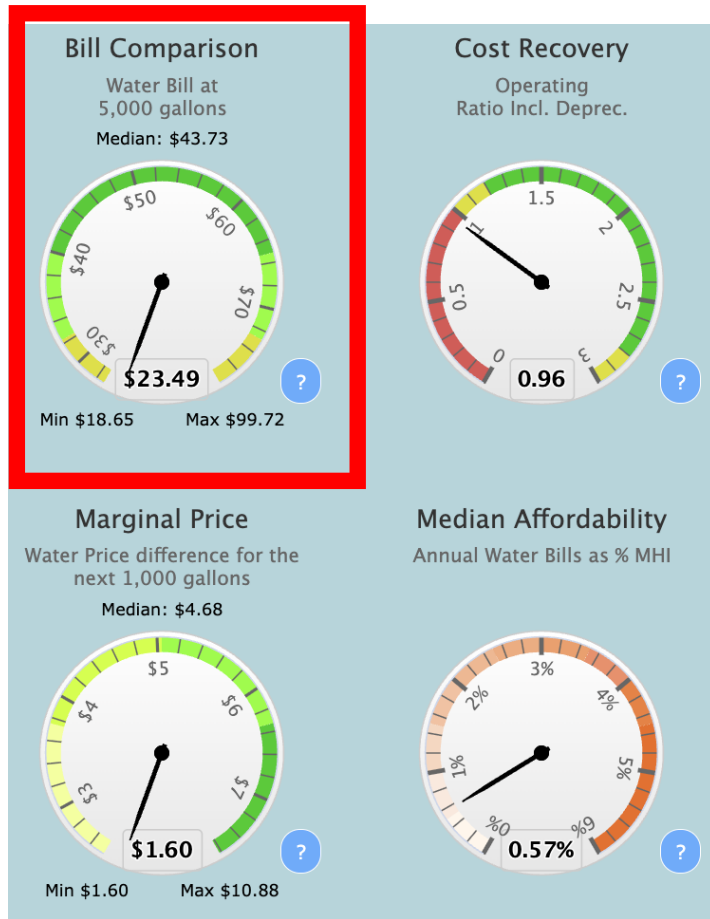


Dials will adjust according to how your utility compares to other utilities in the comparison group.

The left two dials (bill comparison and marginal price) are metrics that are relative to the selected comparison group.

## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

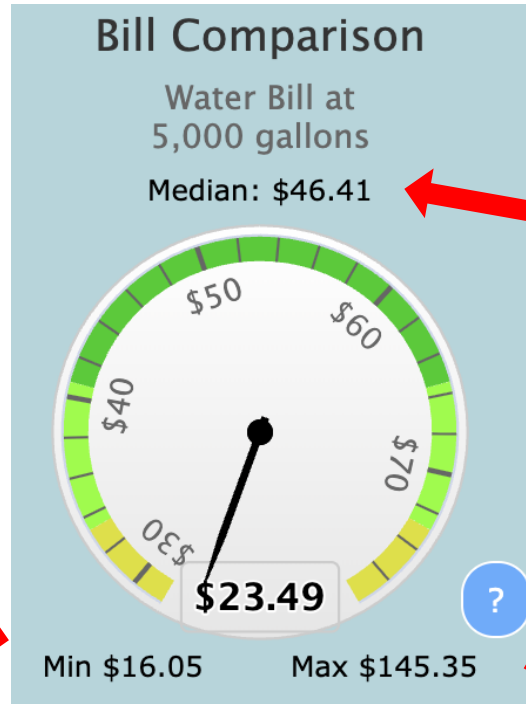
# Dial: Bill Comparison



- The bill comparison dial allows you to see how your water bill compares to others in the selected comparison group at the selected amount of usage.
- As you adjust the consumption slider, the bill comparison dial will adjust as well.

HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

# Dial: Bill Comparison



Min bill is \$16.05

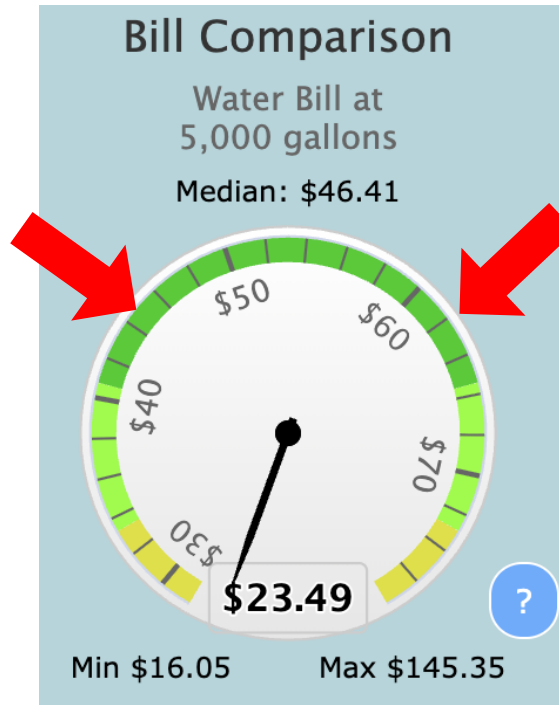
Median Bill in WI for 5,000 gallons across all utilities is \$46.41

Max bill is \$145.35

# Dial: Bill Comparison

Darkest green band = middle 50% of utilities

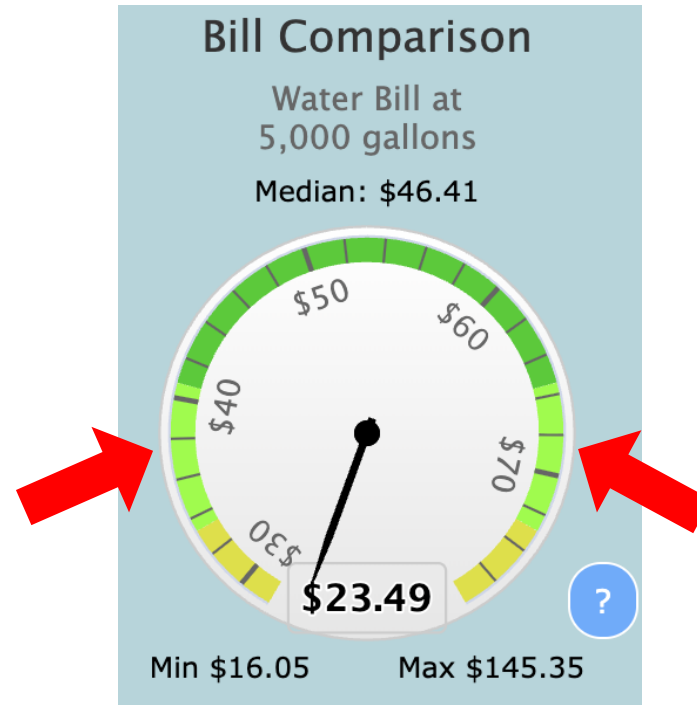
**Half** of all utilities in your peer group have bills that fall within this range



## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

# Dial: Bill Comparison

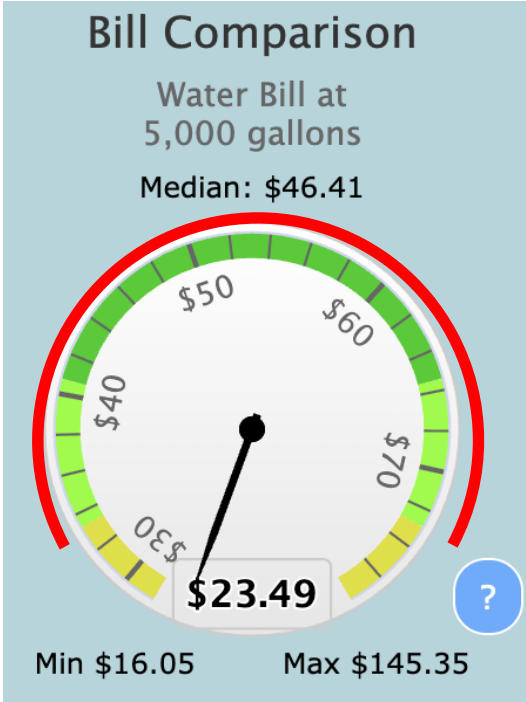
Light green bands = the 15% below and above the middle 50%



**15%** of utilities  
in your peer group  
have bills **lower** than  
the middle 50%,  
**15%** have bills **higher**  
than the middle 50%

# Dial: Bill Comparison

Both greens combined = 80% of utilities

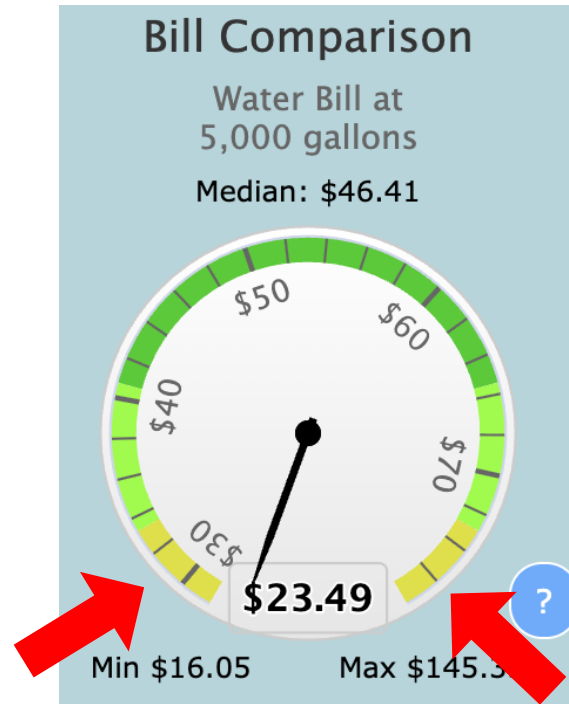


**The majority** of all utilities in your peer group have bills that fall within the range of the green bands

# Dial: Bill Comparison

Yellow = the lowest and highest 10% of utilities

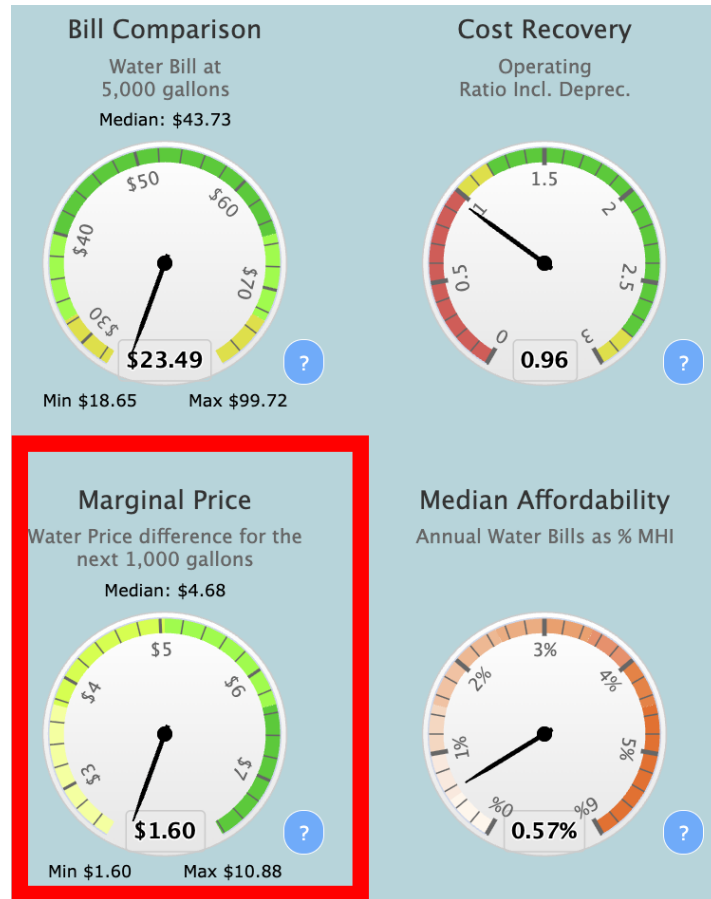
**10%** of utilities in your peer group have bills **lower** than 90% of other utilities, **10%** have bills **higher** than 90% of utilities



At \$23.49, this utility has a water bill in the lowest 10% of bills

## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

# Dial: Marginal Price



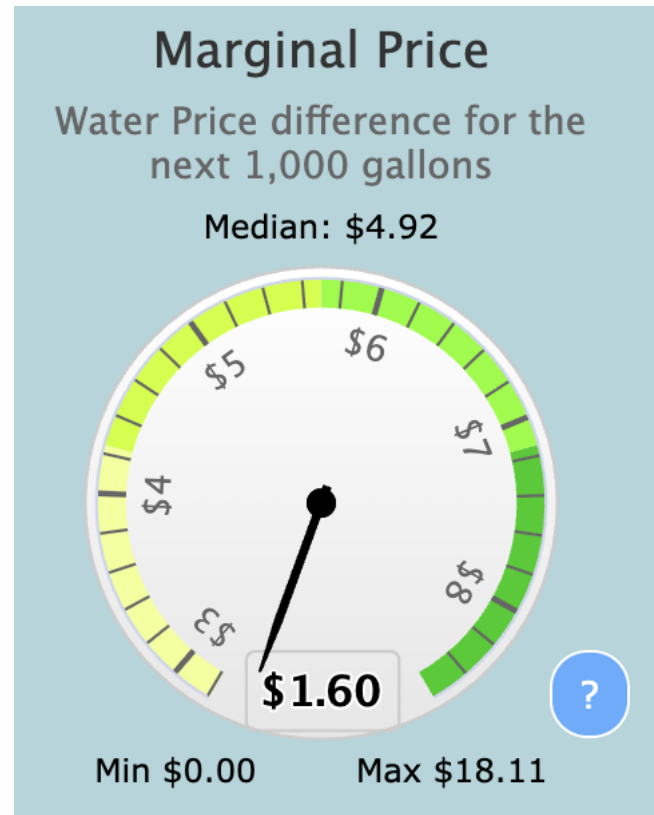
- The marginal price dial shows the water price per 1,000 gallons at the selected amount and how it compares to other utilities in the comparison group.
- If a utility wants to encourage water conservation, ideally the marginal price should increase as total consumption increases. This way, potentially wasteful water use will be discouraged, because high water use will be charged at a higher rate.

## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

# Dial: Marginal Price

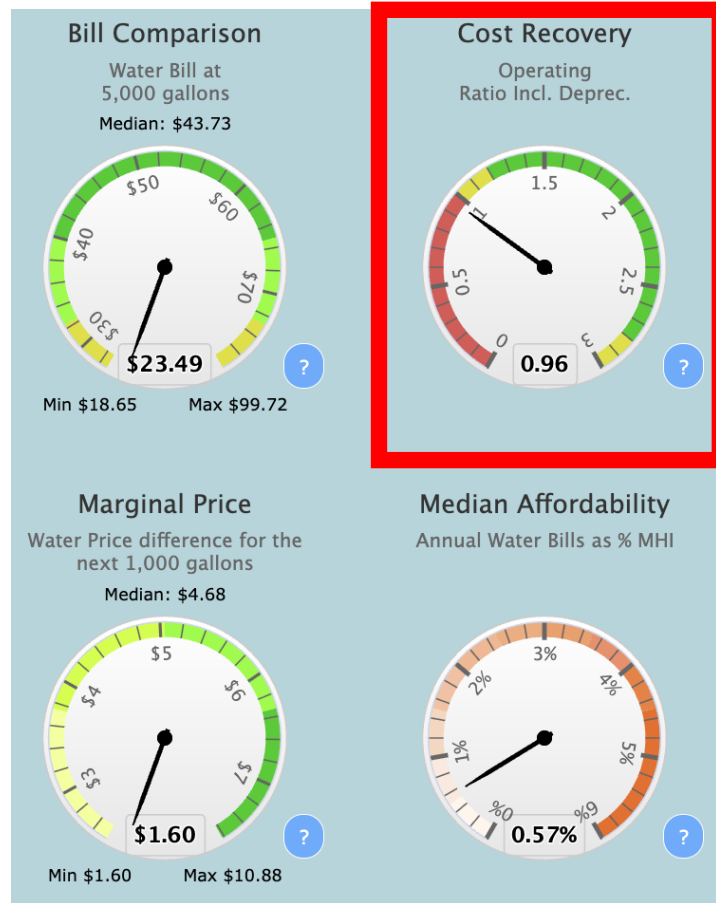
Colored bands = quartiles

In this example, the marginal price of 1,000 gallons at 5,000 gallons is in the 25<sup>th</sup> percentile among its peer group



## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

# Dial: Cost Recovery



Operating Ratio =

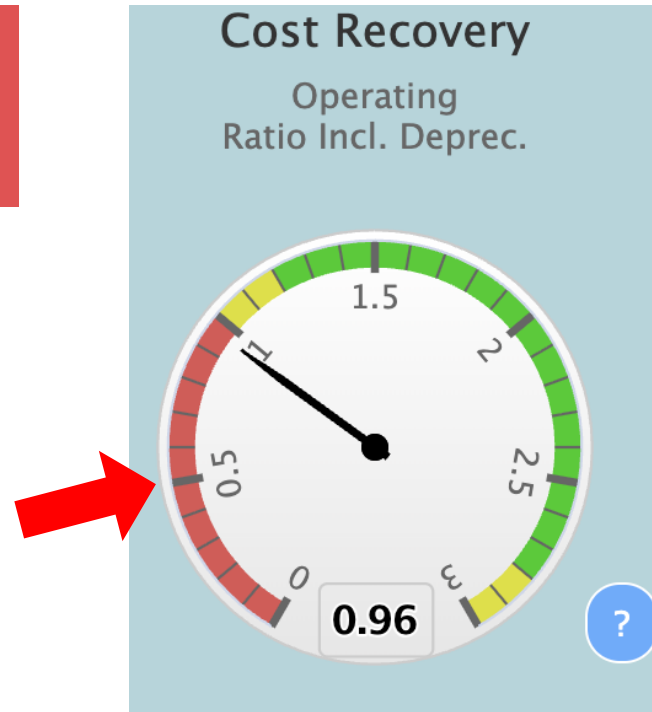
Operating Revenues

Operating Expenses (including Depreciation)

# Dial: Cost Recovery

Red = costs exceed revenues;  
a concern for financial sustainability

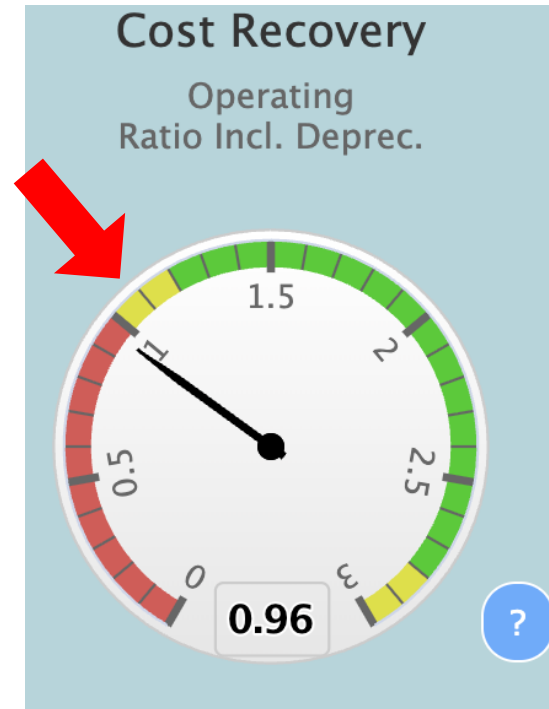
Suggests that a utility may have trouble meeting even day to day costs



# Dial: Cost Recovery

Yellow = revenues are sufficient to cover costs, but could be problematic in long-term

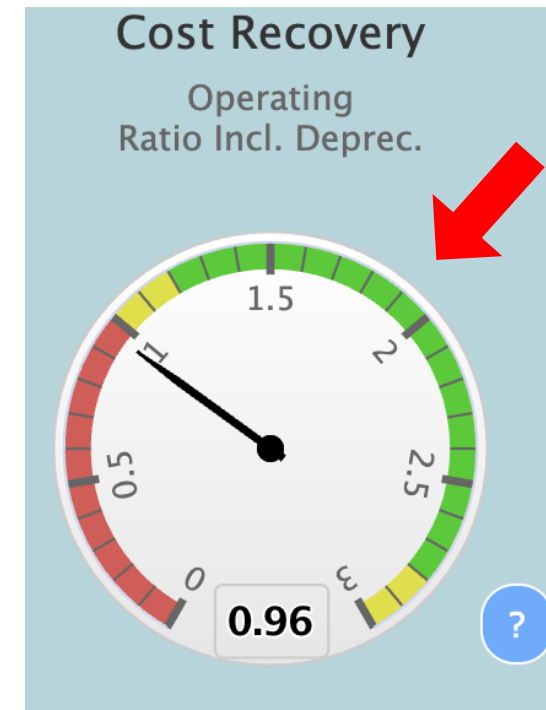
Day-to-day costs are currently being covered, but it could be problematic when it comes to paying for long-term expenses.



Being above 1.2 helps account for increased cost of materials (inflation) in the future.

# Dial: Cost Recovery

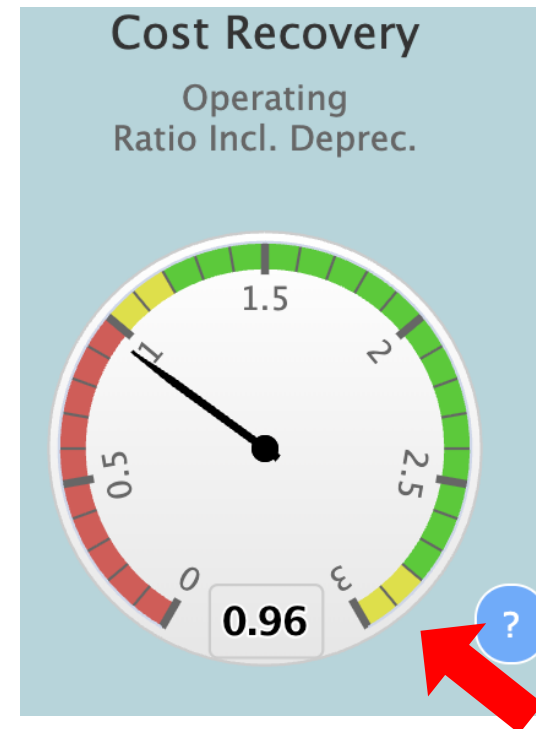
Green = revenues are likely enough to pay for day-to-day costs as well as long-term goals



HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

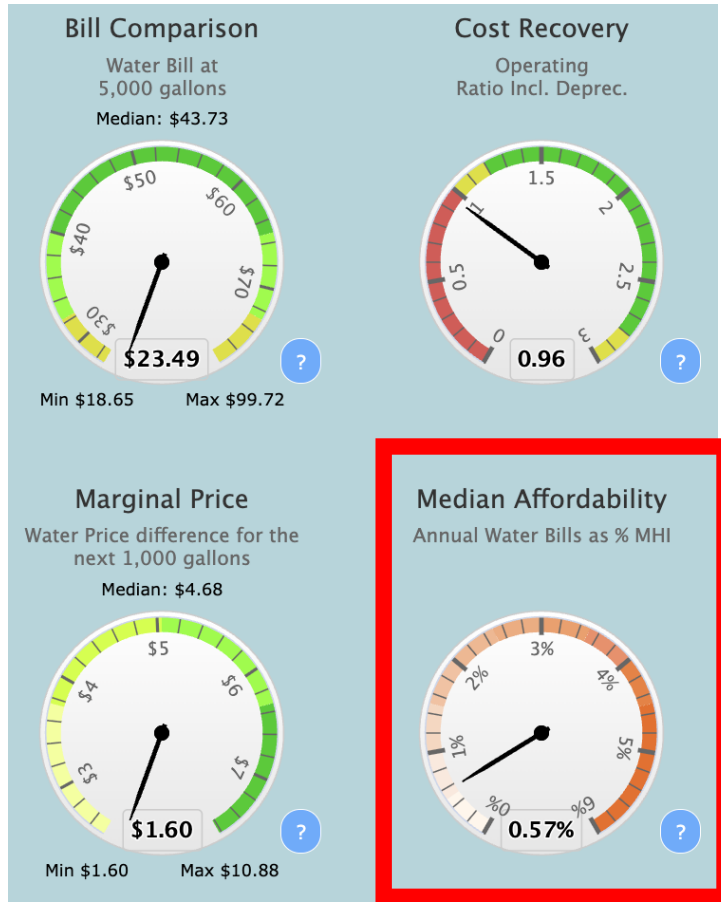
# Dial: Cost Recovery

Yellow = revenues may be “too” good



## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

# Dial: Affordability



**Affordability Ratio =**

**Annual Water Bills (\$)**

**Median Household Income (\$)**

Measuring affordability is complicated....

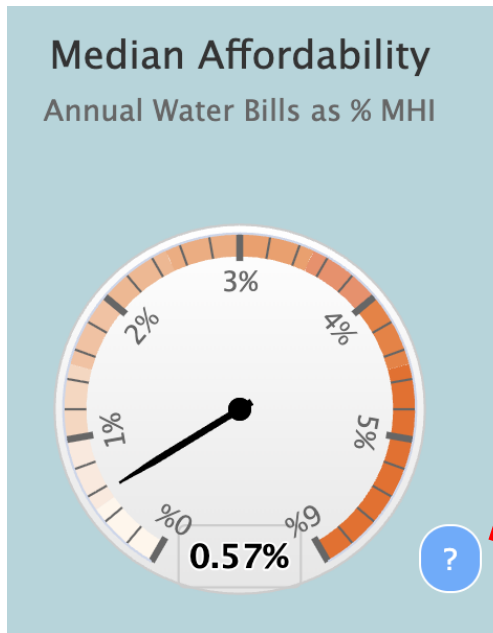
Read more about affordability metrics:

<https://efc.sog.unc.edu/using-the-federal-poverty-level-to-quantify-affordability/>

# Dial: Affordability

Darker shades of orange indicate a higher percentage of MHI spent annually on bills

The percentage of median household income (MHI) spent annually on water and wastewater bills



Click the **question mark** to open a **help box** to help interpret the affordability dial

BRIEF DETOUR ON AFFORDABILITY

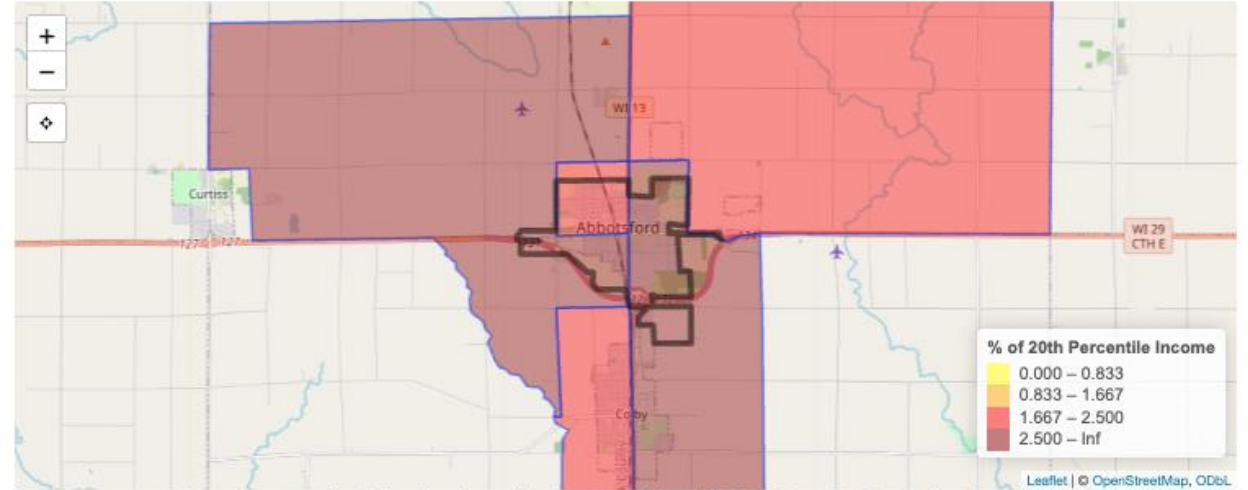
# Affordability Dashboard

## Other metrics

- % of 20<sup>th</sup> percentile
- % of federal poverty level

## Localized impacts – Percentage of 20<sup>th</sup> Percentile by Block Group

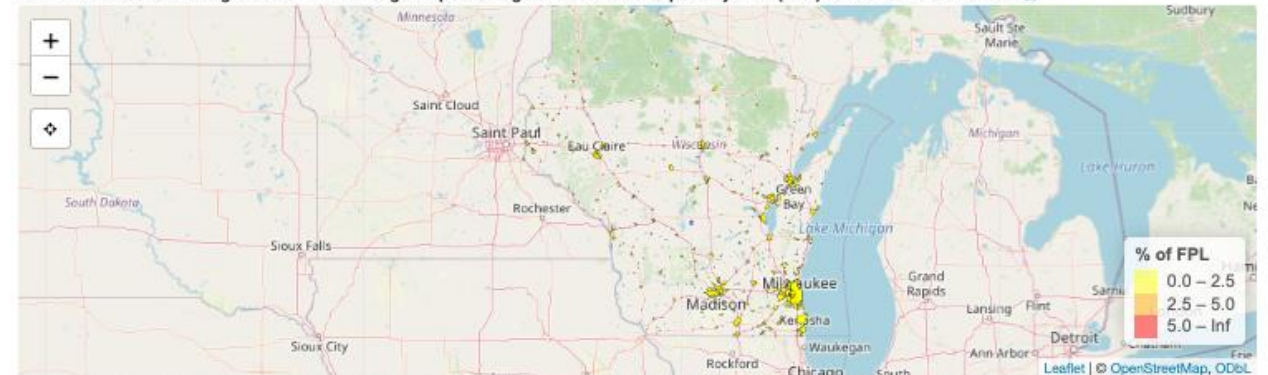
Proposed Bill as a Percentage of 20th Percentile Income by Block Group



Boundary representations and corresponding information about utilities are obtained from US EPA's Community Service Area Boundaries Map. Service areas indicates the community water system that serves the census place selected.

## Comparison across state – Percentage of Federal Poverty Level

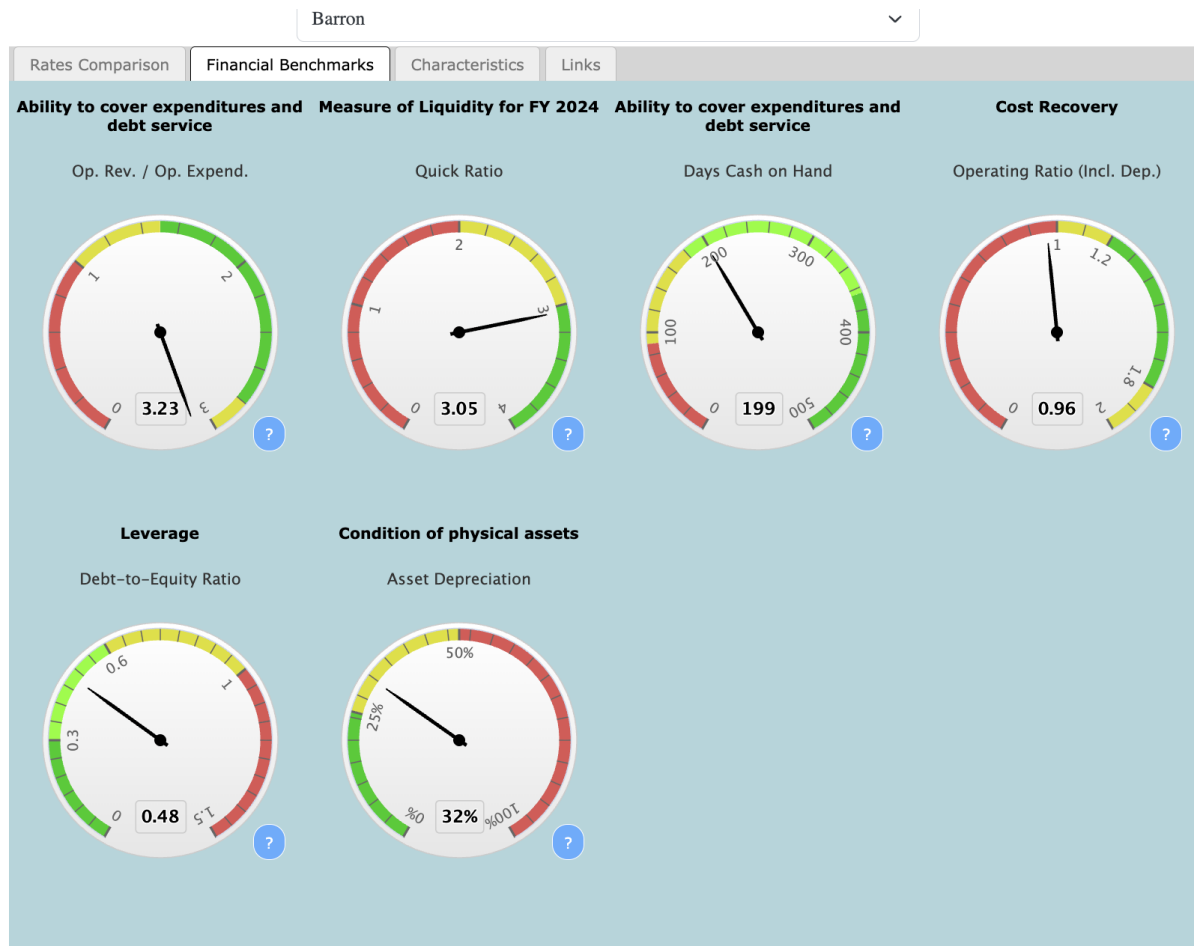
Annualized cost of 2000 gallons of Water usage as percentage of 100% federal poverty limit (FPL) for household size of 3



Boundary representations and corresponding information about utilities are obtained from US EPA's Community Service Area Boundaries Map. Service areas with blue boundaries indicate the community water system selected in the dropdown menu.

## HOW TO INTERPRET THE INFORMATION ON THE DASHBOARD

# Financial Benchmark Tab



THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL  
ENVIRONMENTAL FINANCE CENTER



[Watch this video for an in-depth overview of financial benchmarking](#)

<https://www.youtube.com/watch?v=QkwTJe-Nbuk>

Financial Health Checkup Tool:  
[https://uncsog.shinyapps.io/efc\\_fhcu/](https://uncsog.shinyapps.io/efc_fhcu/)

SUPPLEMENTARY INFORMATION

# Characteristics Tab

Additional details on demographics, system characteristics, and financials for the chosen utility.

Barron

Rates Comparison | Financial Benchmarks | **Characteristics** | Links

**Utility Owner**

Ownership type	Municipality
Primary County	Barron
Primary service area	Barron city
Date Rates Effective	02/21/2025

Select comparison group: All Utilities

**Barron city Median for all utilities in survey Statewide Stats**

Number of Systems	1	578	582
Est. Number of Connections	1,364	569	
Est. Service Population	3,423	1,524	
Operating Revenue	\$672,629	\$475,685	
Operating Expense	\$698,904	\$413,338	
Current Assets	\$4,982,790	\$745,005	
Census Year	2023		2025
Average Household Size	2.34	2.32	2.35
Median Household Income	\$49,715	\$68,541	\$75,670
Poverty Rate	12.30%	9.62%	10.58%

From EPA  
SDWIS

Can adjust by  
**comparison group**

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## SUPPLEMENTARY INFORMATION

# Links Tab

- Details on how municipal PFP charges were calculated
- Useful links
  - Wisconsin specific
  - Other relevant EFC tools/resources

Abbotsford

Rates Comparison | Financial Benchmarks | Characteristics | **Links**

This Rates Dashboard is designed to assist utility managers, finance directors, Board members, local officials, reporters, and customers to compare their utility's residential water rates against multiple attributes, including system characteristics, customer base demographics, and geography. Rates and financial data for this dashboard are provided by the Division of Water Utility Regulation and Analysis at the Wisconsin Public Service Commission (PSC).

The PSC oversees more than 580 drinking water utilities operating in Wisconsin, including municipal and investor-owned utilities. The PSC's authority extends to any water system that provides water to the public for domestic, commercial, or industrial purposes. However, regional water authorities, cooperatives, water trusts, and private wells are generally not subject to PSC regulation. To help ensure that the state's water utilities have sufficient financial capacity to provide public health and safety, the PSC establishes and approves rates and monitors utilities' financial sufficiency. The rate-setting process typically addresses multiple objectives, including cost recovery, affordability, economic development, resource sustainability, and other community-specific factors.

This Water Rates Dashboard was created by the Environmental Finance Center at the University of North Carolina at Chapel Hill, and funded by the Wisconsin Public Service Commission. The Rates Dashboard is updated periodically to provide the most accurate data for decision-making and analysis. Additional free resources for water utilities are provided below.

### Fire Protection Charges

Municipal PFP charges are calculated by allocating each municipality's total annual public fire protection (PFP) cost across its residential tax base. The approach used to determine municipal charges assumes that PFP costs are allocated in proportion to property value and are only applicable to households within municipal limits. Property values are proxied using median housing value for each local government unit using values from ACS 5-year estimates for 2023. The annual municipal PFP charge for each utility are obtained from the utility's rate sheet and represents the total amount to be recovered from households within local government boundaries. The share of the total cost attributable to a representative household is then determined using the municipality's residential tax base (total tax excluding Tax Increment Financing districts). These values are derived from the Department of Revenue. Municipal PFP charges are calculated using the following formula:

$$\text{AnnualTax} = \text{PropertyValue} \left( \frac{\text{TotalPFP} \text{Cost}}{\text{TaxBase} (\text{excl. TIF})} \right)$$
$$\text{MonthlyPFP} \text{Tax} = \frac{\text{AnnualTax}}{12}$$

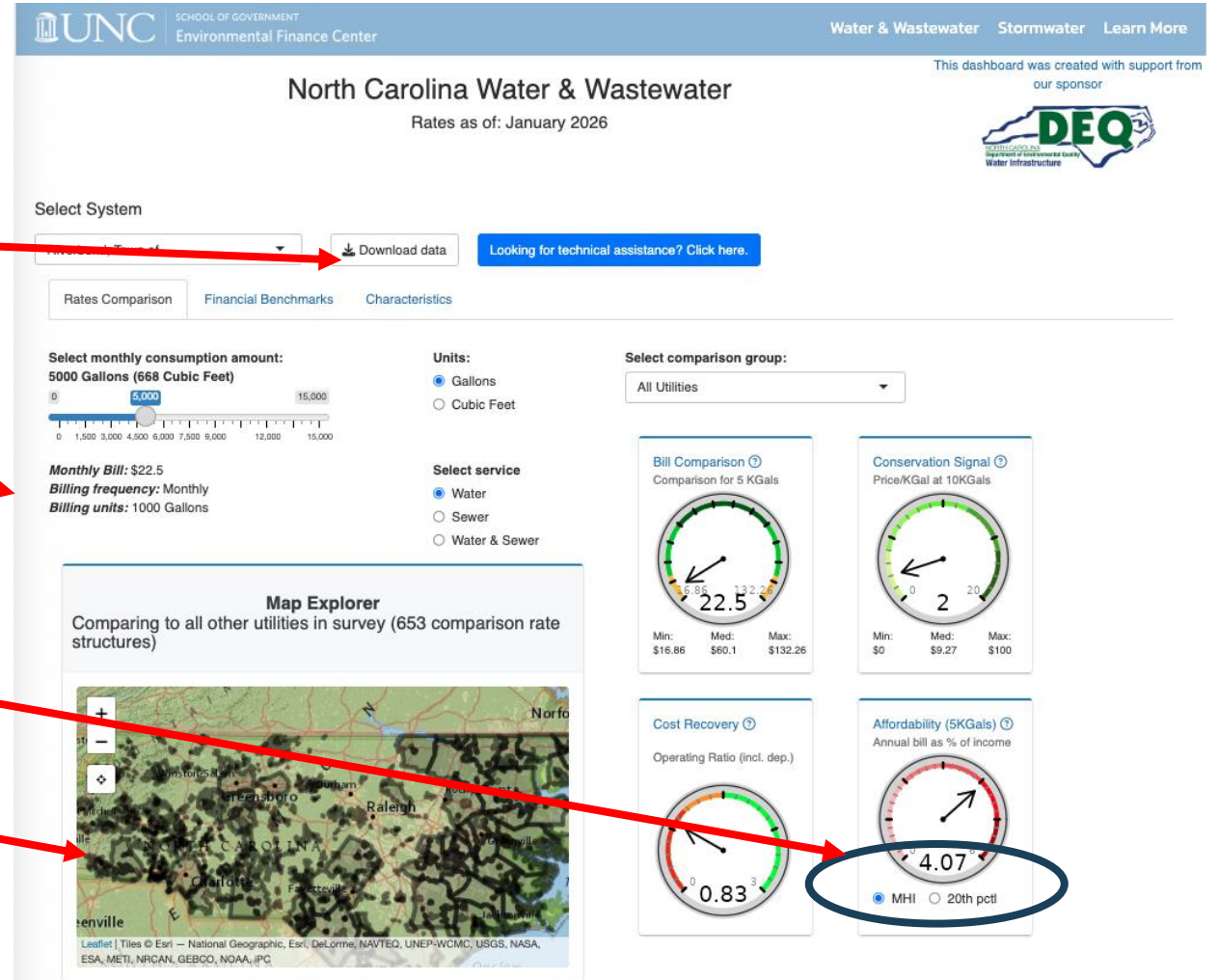
### Resources for Wisconsin

- [PSC Quarterly Water Bill Comparison Tool](#)
- [PSC Water Reports & Resources](#)
- [DNR Water & Wastewater Funding Sources](#)
- [DNR Capacity Development Program](#)
- [EPA Water Finance Clearinghouse](#)

# Something to Look Forward to in Future Updates

Future updates would include:

- Easier access to data
- More info, e.g., rate structure, billing cycle, allowance
- Additional affordability metrics
- Map of water systems
- Benchmarking of PFP charges



*Note: NC dashboard on new interface is shown for reference only*

# Questions?

Dr. Ahmed Rachid El-Khattabi

Research Director

UNC Environmental Finance Center

[arelkhattabi@sog.unc.edu](mailto:arelkhattabi@sog.unc.edu)

