Discovering Equity Insights in Water Data

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XYLEM INC

Why does the water sector need equity insights?

- water scarcity

- extreme weather and flooding

- acute water quality events

- Historical imbalances in capital allocation

- capacity and revenues

"While these water-related challenges affect all communities, those that are already overburdened with economic, environmental, and health challenges are especially vulnerable."

US Water Alliance, *An Equitable Water Future*

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Why is Water Equity important to PNW?

Distribution of LIHWAP funds

How do you track affordability & equitably distribute funds?
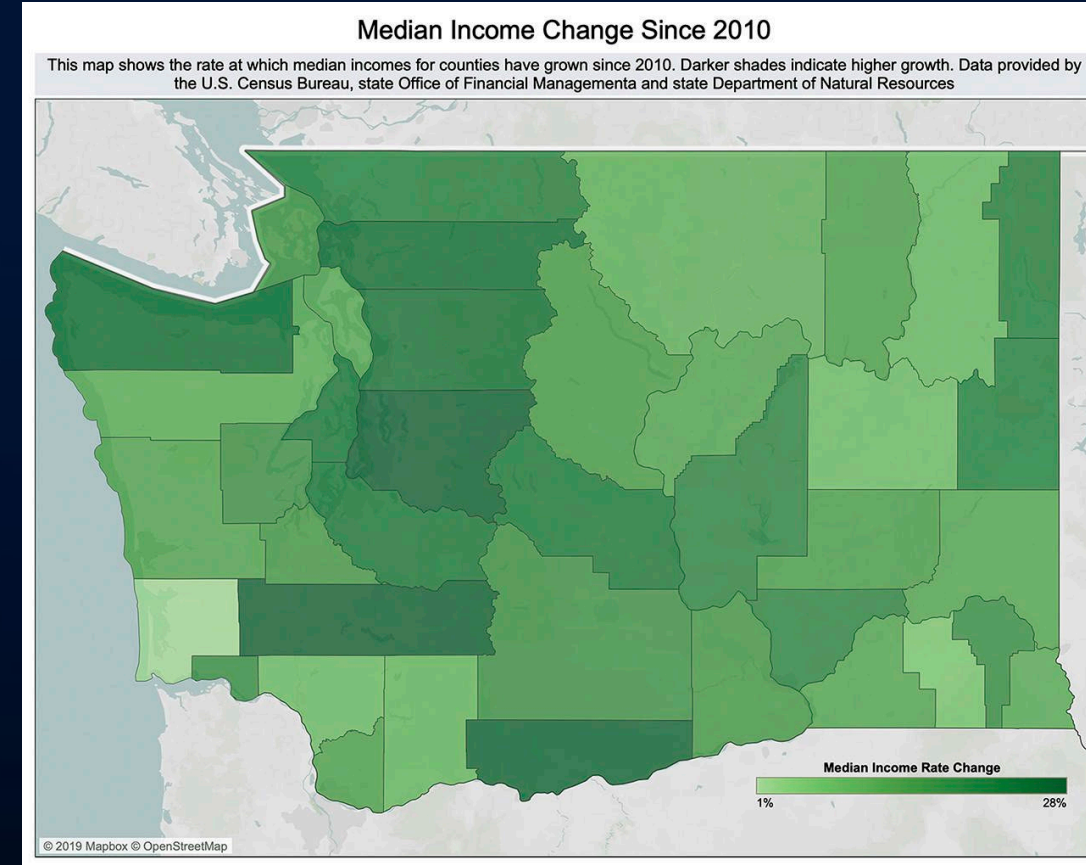
EPA's Water Equity Plan

Emerging water equity framework expected from EPA in 2022.

Bipartisan Infrastructure Law

Can you access State Revolving Fund funding for disadvantaged and environmental justice communities?
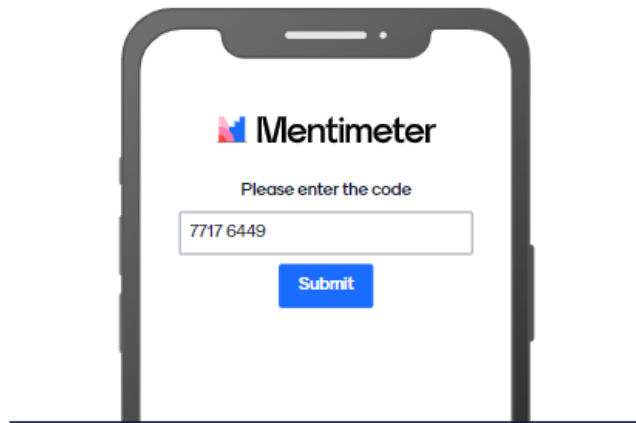
USWA An Equitable Water Future

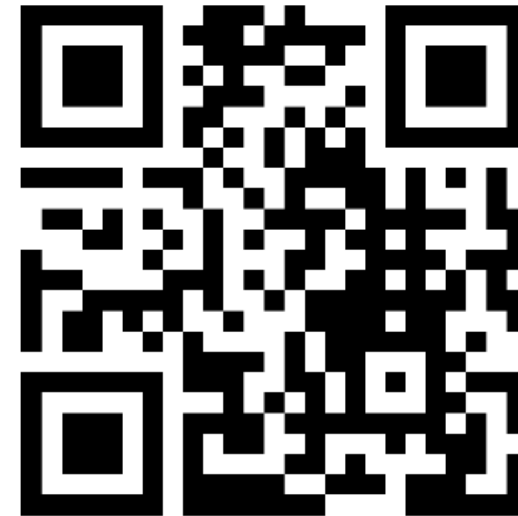*Are you setting and measuring progress towards organizational equity goals?*

Median Income Change Since 2010

This map shows the rate at which median incomes for counties have grown since 2010. Darker shades indicate higher growth. Data provided by the U.S. Census Bureau, state Office of Financial Managementa and state Department of Natural Resources

Median Income Rate Change

1%   28%

© 2019 Mapbox © OpenStreetMap

2019 Everett Herald; Change in Medi an Incomes per County

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Poll – www.menti.com

Go to www.menti.com and use the code 7717 6449

Mentimeter

Where is your organization on the water equity journey?

No / Unclear — Yes / Clearly

- Unaware
- Aware but unwilling
- Aware but unsure
- Willing but not measuring
- Measuring
- Establishing goals
- Integrating into strategy and processes

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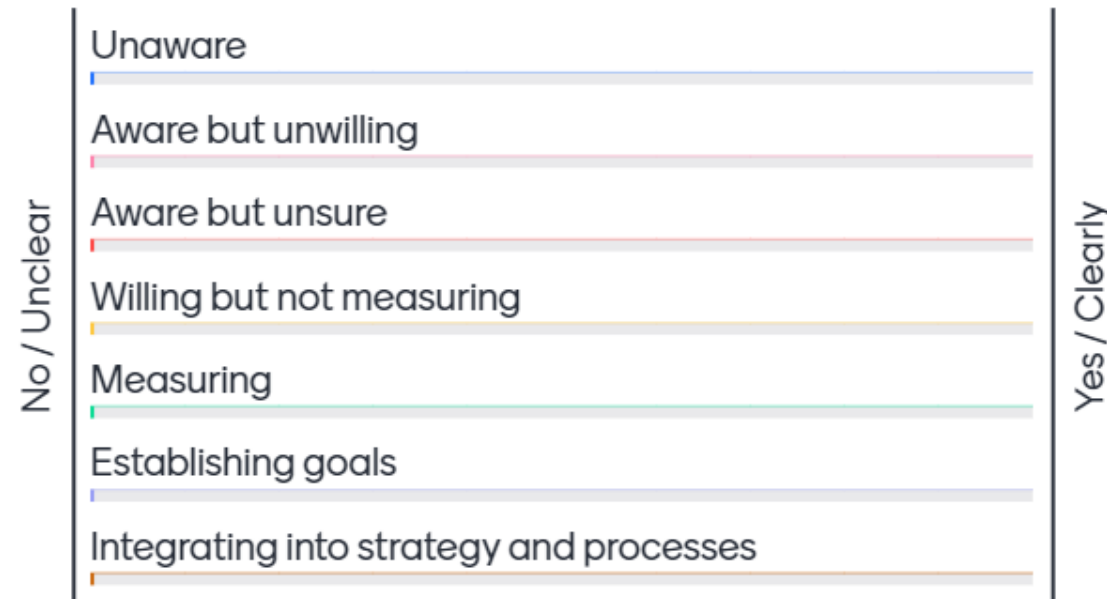
Xylem *Water Equity Lens* Solution Hypothesis

Indicators make water equity measurable, so that water and wastewater utilities can:

learn

decide

check

share

Theory of Change:

Water Equity Lens enables a utility to incorporate equity-based performance indicators into their operational and decision-making processes, so that all people in the community have access to dignified water and wastewater services, are resilient in facing water risk, and can benefit from the value of water and wastewater services.

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Water Equity Framework
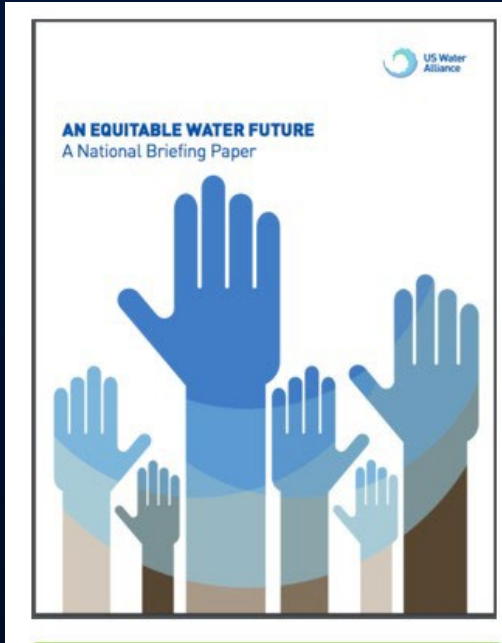
Pillar	Description	Focus
Access	Ensure all people have access to clean, safe, affordable water service	• Affordability • Water Quality • Access to Infrastructure
Benefit	Maximize the community and economic benefits of water infrastructure investment	• Workforce • Small business contracts • Community revitalization
Resilience	Foster community resilience in the face of a changing climate	• Planning & Assessment • Funding • Prioritized community projects

AN EQUITABLE WATER FUTURE
A National Briefing Paper

US Water Alliance

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Xylem *Water Equity Lens* Solution Hypothesis

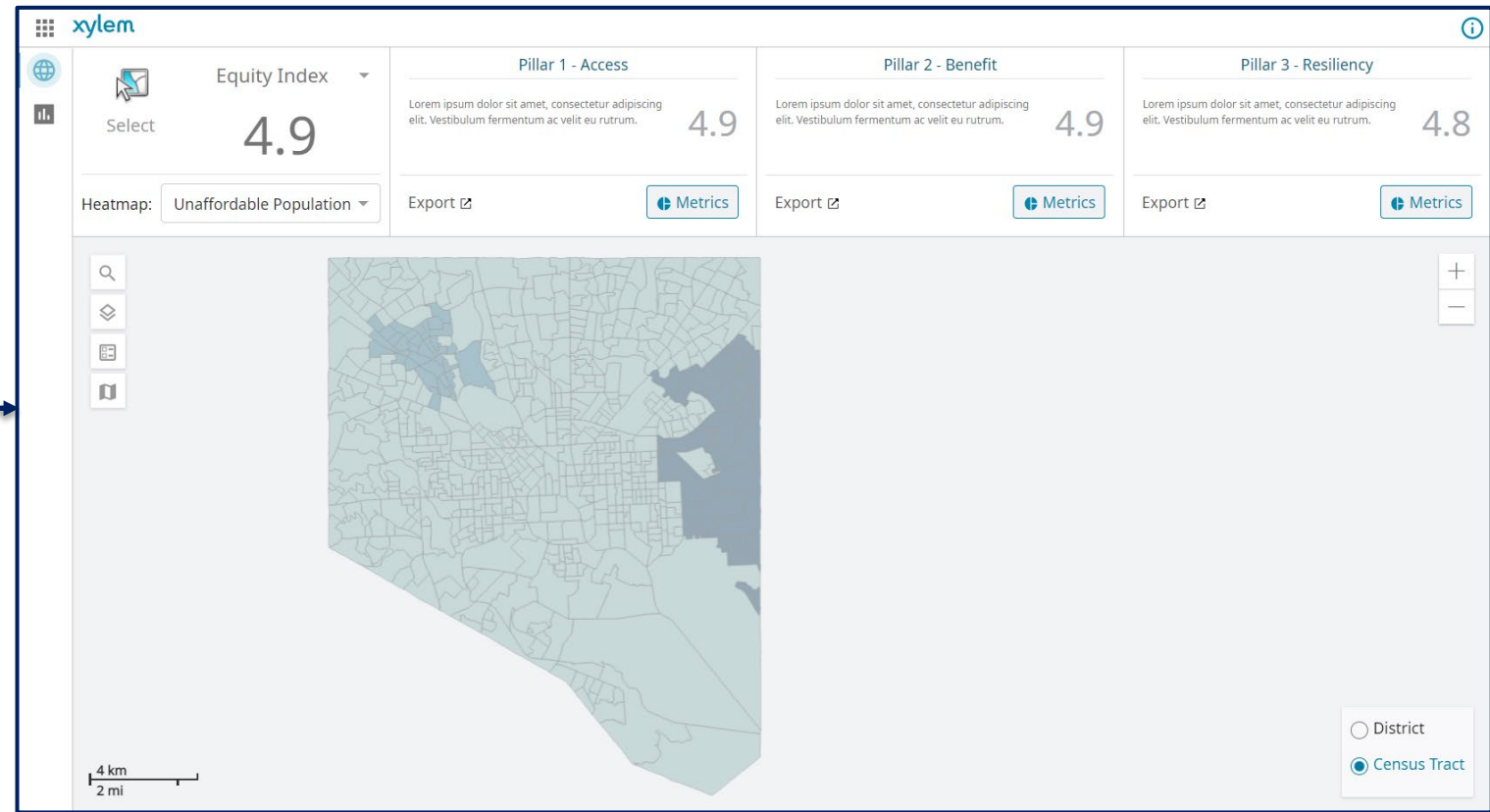Local District Data **+** U.S. Census Data

Access
- *Household Burden*
- *Affordability*
- *Cutoffs*
- *Customer Assistance Program Participation*
- *Taste & Odor Complaints*

Benefit
- *Workforce and Board Diversity*
- *Waterfront Access*
- *Procurement Diversity*
- *Training & Education Events*
- *Outreach Events & Community Meetings*

Resilience
- *Main Breaks & Leaks and Sewer Events*
- *Lead Service Lines*
- *Proactive Maintenance Ratio*
- *Flooding Events*

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Equity Index	Pillar 1 - Access	Pillar 2 - Benefit	Pillar 3 - Resiliency
Select	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vestibulum fermentum ac velit eu rutrum.	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vestibulum fermentum ac velit eu rutrum.	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vestibulum fermentum ac velit eu rutrum.
4.9	4.9	4.9	4.8

Heatmap: Unaffordable Population

Export — Metrics | Export — Metrics | Export — Metrics

4 km
2 mi

○ District
● Census Tract

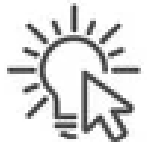### xylem
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Water Equity Lens Beta Program

How might we standardize assessment of water equity for the development of KPIs?

Form a Water Equity Community of Practice

Buffalo Sewer Authority

City of Sandusky Department of Public Works

City of Baltimore Department of Public Works

How might we turn water data into equity insights that empower decision-making?

Conduct User Experience design reviews

focus and prioritization

How might we enable equity-informed planning for action and impact?

Deploy Water Equity Lens Beta

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Water Equity Lens Observations

What works well

User Experience

- Few clicks provides breadth and depth for comprehensive learning about water equity baseline

- Analytical insights are key for prioritization and decision-making

- Mapping is visually effective internal communication tool

What doesn't work well

User Journey

- Water equity indicators require data input, ideally spanning several years. This can be a challenge for small utilities who do not have electronic data sets

  - Opportunity for Technical Assistance partnerships?

- "Another GIS platform"

  - Integration strategies – GIS export, ArcGIS Online/Pro data ingestion, Water Equity Lens as ArcGIS add-in

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Water Equity Charge

How to get started on your water equity journey:

- Build water equity into your organization's mission and measure your baseline

- Identify upcoming projects or investments that could be prioritized through combination of asset and social need

- Seek funding with equity or environmental justice requirements

- Join Xylem's Water Equity Lens Beta program to generate your baseline, project, and funding data

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