

Joining the Map-Building Village for Water Utility Service Area Boundaries

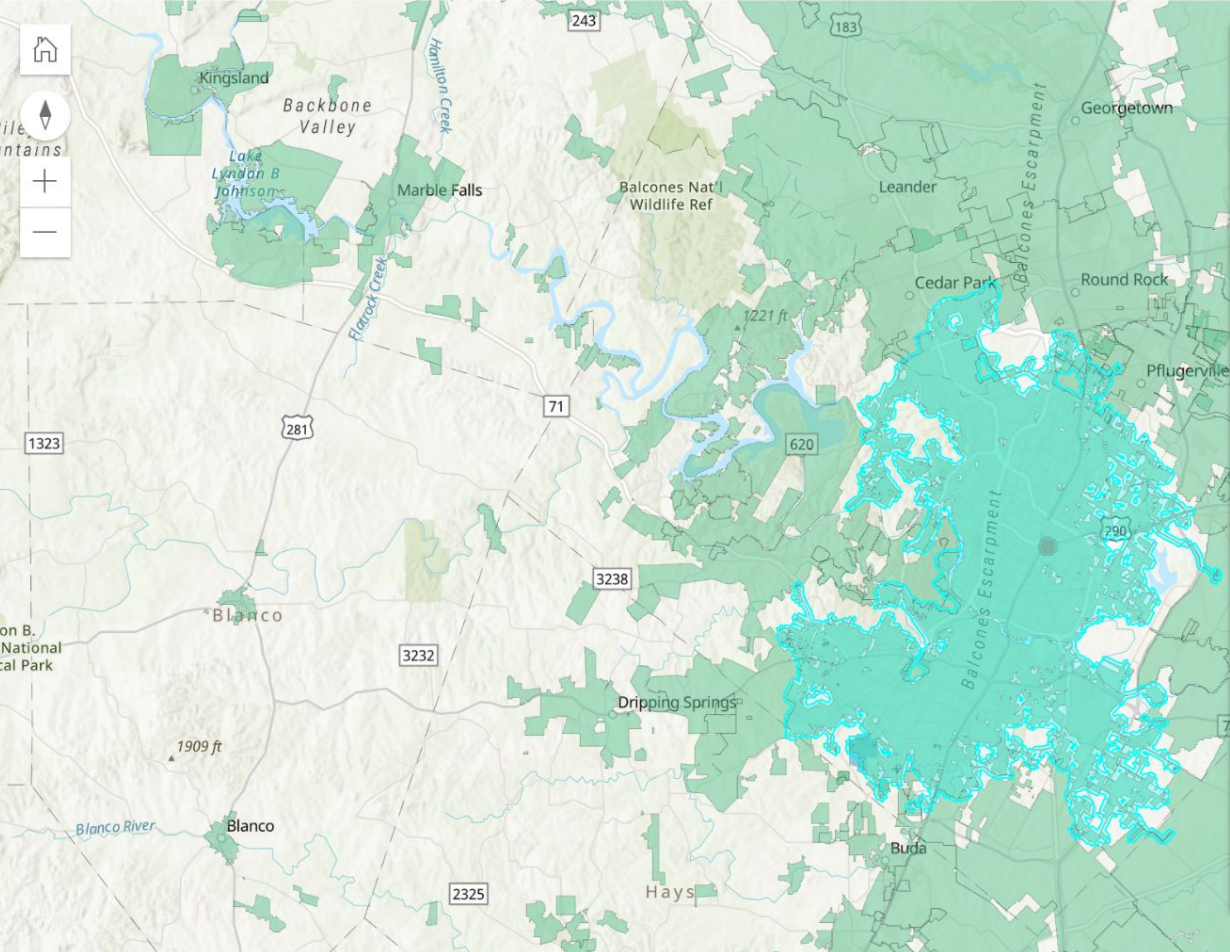
NASUCA Mid-Year Meeting 2023

Phil Cork



ENVIRONMENTAL POLICY
INNOVATION
CENTER

What are Drinking Water Utility Service Area Boundaries?



Zoom to

CITY OF AUSTIN WATER & WASTEWATER

PWSID	TX2270001
System Name	CITY OF AUSTIN WATER & WASTEWATER
Tier	1
State	TX
Link to SDWIS Record	View
Service Population	1,044,405
Tier Description	Water Service Area - as specified in source_url
Source of service area boundary	System
Primacy Agency	TX
Primacy Type	State
Service Area Type	Residential Area', 'Dispenser', 'Wholesaler of Water

Service Area
Boundaries
Connect Data
to Communities



Service Area Boundaries Use Cases



Estimating future water supply and demand



Evaluating affordability, access, and quality of service



Determining grant eligibility and prioritization



Enhancing academic research

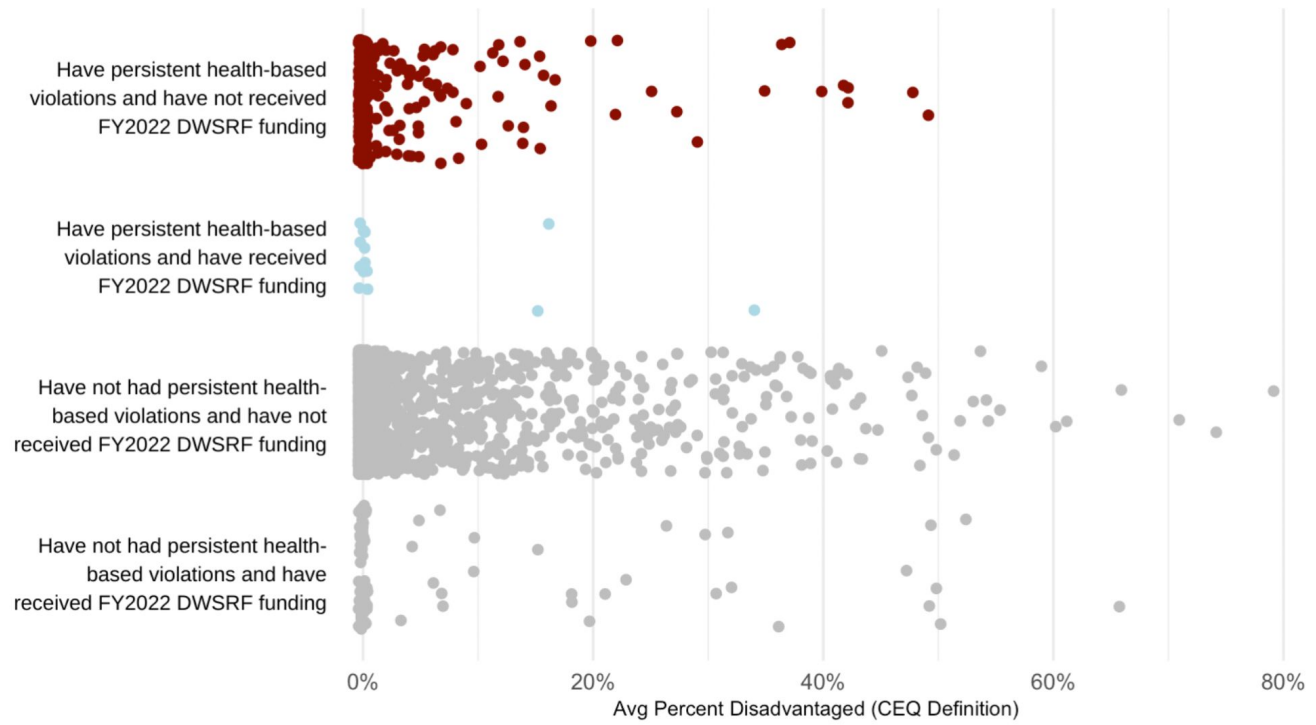


Facilitating inter-agency collaboration



Empowering public interest and advocacy

Example: Funding Water Systems with Health-based Violations

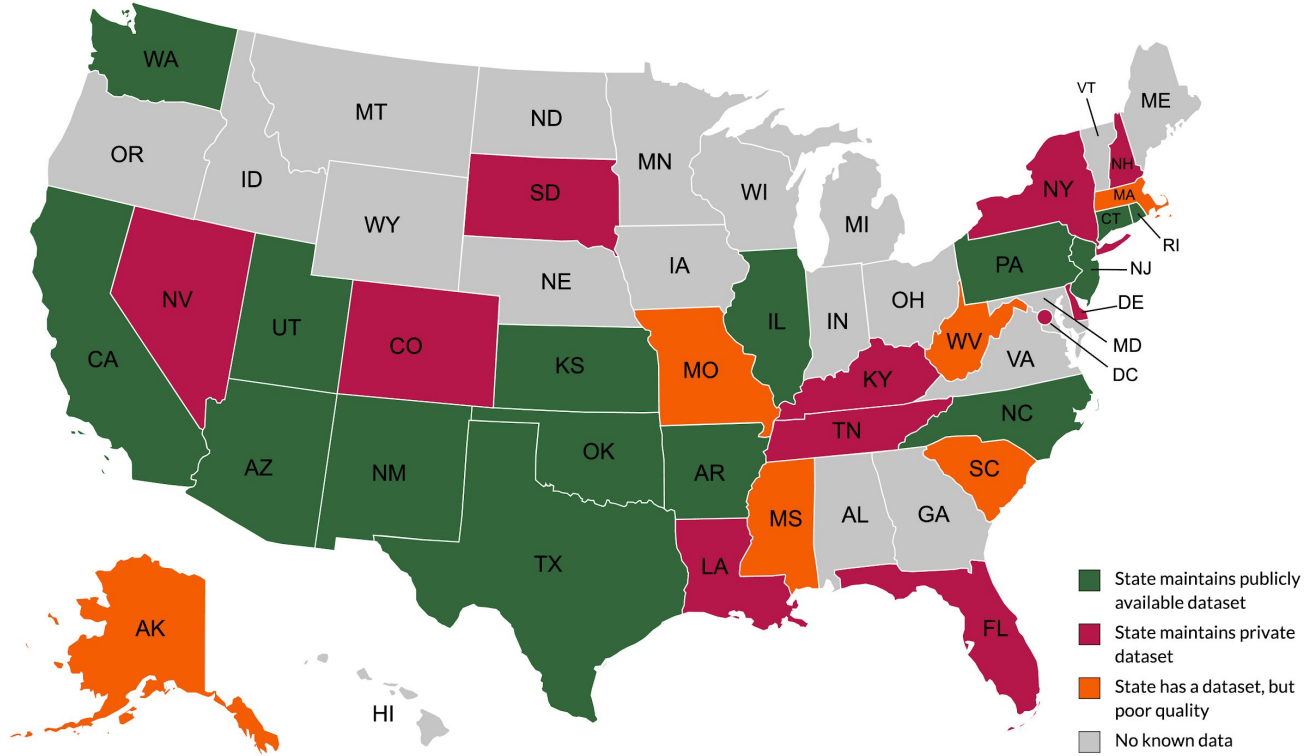


Each dot on this graph is a community water system in Texas. Water systems are then put into one of four categories based on those that have received DWSRF funding, as well as those that have persistent health-based violations. The x-axis then shows how many census tracts within a water utility's service area boundary are considered disadvantaged per CEQ's definition.

Service Area Boundaries, 2021

2021

35 states did not have data or did not make their service area boundaries publicly available



Approximating Service Area Boundaries

EPIC used a three-tiered approach to approximate service area boundaries in all US states

- Tier 1: High quality data provided by states or utilities
- Tier 2: Matching systems and municipalities by name and location
- Tier 3: Using facility addresses to approximate boundaries

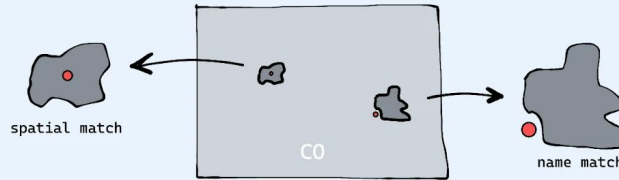
TIER 1

Use explicit "labeled" water service boundary geometries, else ...



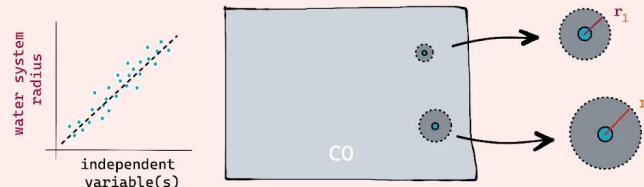
TIER 2

... use proxy water service boundary geometry from TIGER Place match on location & name, else ...

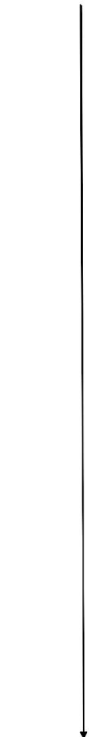


TIER 3

... use modeled water service boundary geometry from linear regression.



Most Confidence

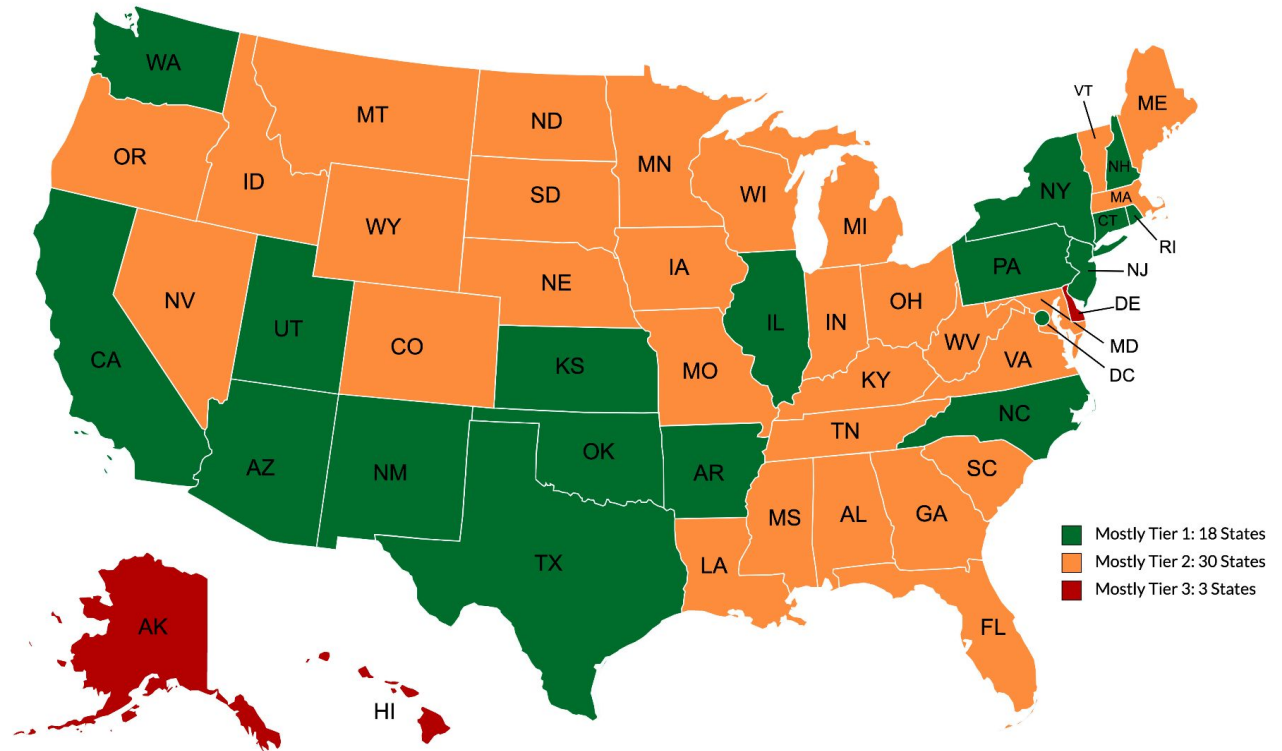


Least Confidence

Provisional Service Area Boundaries, 2023

2023

We now have a high quality understanding of where 173 million people – more than half of the US population – gets their water from.

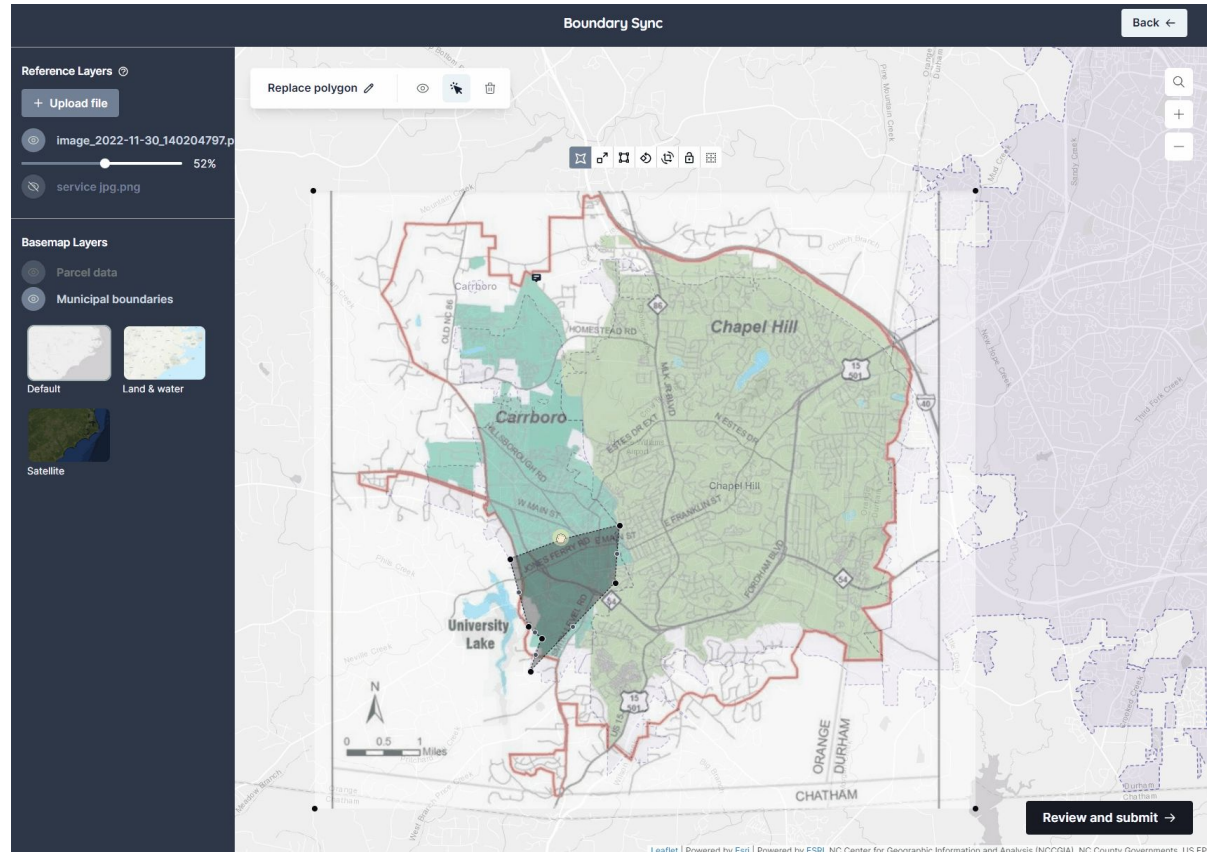


Map-Building Doesn't
Have to be Daunting



Next Steps: Utilize Boundary Sync

- Enables utilities to share and update data easily
- No GIS experience required; user friendly
- Ability to upload and georeference paper maps
- Requires approval process to ensure quality data



Next Steps: Emulate Maryland's SB-513

- Requires Service Area Boundaries data collection
- Ensures accessibility through online portal
- Allocates additional funds for the efforts
- Serves as important first step for water data policy

SENATE BILL 513

M3

3lr0342

By: **Senator Lam**
Introduced and read first time: February 3, 2023
Assigned to: Education, Energy, and the Environment

A BILL ENTITLED

1 AN ACT concerning
2 **Environment – Collection and Reporting of Drinking Water and Wastewater**
3 **Data and Information – Requirements**
4 FOR the purpose of requiring a water utility operating in the State to provide certain data
5 and information to the Department of the Environment and comply with certain
6 reporting requirements; requiring a certain local government to provide certain data
7 and information to a certain water utility; requiring the Department to develop a
8 certain protocol and form to provide and report certain drinking water and
9 wastewater data and information; requiring the Department to create, operate, and
10 maintain a statewide Open Water Data Reporting Platform that includes certain
11 data and information for each water utility operating in the State; requiring the
12 Department, on or before a certain date, to provide on its website a webpage for the
13 public to comment on the Platform; requiring the Department to collect and
14 consolidate certain water data and information reported by water utilities operating
15 in the State and make the data and information available on the Platform beginning
16 on or before a certain date; requiring the Department, on or before a certain date and
17 with a certain frequency, to perform a certain review of the Platform; and generally
18 relating to the collection and reporting of water data.

Next Steps: Explore the State Playbook



State Status: Check out the state-by-state status of the data in the national dataset.



State Case Studies: Learn about specific state efforts to develop water service area boundaries.



Planning & Partnership: Learn about planning and partnership, which includes working with tribes.



Budgeting & Resources: Learn about resources available to states that want to develop this data.



Methods: Learn about best practices and methodology for developing water service area boundaries.



Data Sharing & Accessibility: Learn ways to make water service area boundaries easily accessible.

Join the Map-Building Village

By sharing drinking water utility data,
we can help ensure equitable drinking water
access, affordability, and quality for communities
across the country.

Questions?



Phil Cork
pcork@policyinnovation.org

