

# Water Service Area Boundaries

## A Playbook for States

There are nearly 50,000 community water systems in the United States that serve 90 percent of the population. And despite the importance of water to health, safety, economic mobility, and overall well being, we do not have a comprehensive, accurate map of who those systems serve. **We shouldn't have to wonder "who is responsible for my water?" We should know.**

States have a unique opportunity and responsibility: **facilitate the development of a high-quality map of the water service areas to improve the design and implementation of water infrastructure, rate design, drought planning, and numerous other programs.**

There are examples of states doing just that - **California** developed data in order to monitor excessive watering reports and in grant eligibility determinations; **North Carolina** is developing the data for water supply and population projections, emergency planning and notifications, and to identify water quality issues that need further state investment; and **New Mexico** is combining this data with the Climate Change Vulnerability Assessment to assess water risk.

While the creation of service area boundaries often starts with one particular program, the work has cascading, long term benefits for water management. Interviews with several state representatives revealed a **number of applications that would be improved** with accurate and accessible service boundary data, such as:

- Projecting populations to estimate future water supply and demand
- Estimating domestic well use in areas not served by community water systems
- Evaluating alternative water supply options
- Assessing climate change variability, including wildfire impacts on water supply
- Determining grant eligibility and prioritization of State Revolving Fund allocation
- Inter-agency collaboration

**A water system service area boundary is a spatial representation of the communities served by a water system.**



As a resource to state actors who want to improve water service area boundary data, EPIC created an online [State Playbook for Creating a Sharing Water Service Area Boundaries](#).

# STATE PLAYBOOK

To help states seize this opportunity, the State Playbook outlines some simple steps that leaders can take:

## 1 - STATE STATUS

Many states publicly share service area boundary data. Other states may have a smaller subset of service area boundary data available to the public, full datasets that are not publicly available, or lack a centralized repository of service area boundaries. The State Playbook includes a map to help users learn about the status of state-specific data, how it was created, and where there are opportunities to improve our understanding of drinking water.

## 2 - STATE CASE STUDIES

The agencies involved, the funding sources leveraged, and the policies used for both gathering and using service area boundary data vary from state to state. The State Playbook highlights state stories and presents a spectrum of options that could be adopted and adapted by other states hoping to produce and use service area boundary data.

## 3 - PLANNING & PARTNERSHIP

Interviews with states revealed a set of planning activities that could help efforts to develop water service area boundaries. The State Playbook includes information about how to "Clarify the Why" and other useful tips related to homeland security, in-house versus contracting options, and other issues.



The **State Playbook** includes a range of practical tips related to:

- Addressing homeland security concerns
- Working with tribal communities
- Distinguishing between service boundaries and pipe inventories
- Estimating costs for maintaining the data
- Considerations for in house v. contracting work
- Handling varying levels of accuracy
- Creating buy in
- Template language that states can adapt or adopt

# STATE PLAYBOOK (CONT.)

To help states seize this opportunity, we have outlined some simple steps that leaders can take:

## 4 - BUDGETING & RESOURCES

EPIC estimates the cost of initial service area boundary development between \$150 and \$300 per water system, i.e. from initial outreach to a set of quality-controlled, standardized maps available to the public. The marginal cost of updating depends on frequency of change at the system level, but an annual update could be accomplished for 10% of the time and cost of development. For tips on how to fund this work, see the State Playbooks ideas and resources.

## 5 - METHODOLOGIES

States should adopt and promote technical requirements that facilitate the creation of water service area boundaries - let's break down how. For a practical guidance on definitions, geospatial standards, metadata, and other data sources, see the State Playbook.

States can use approximations as a baseline for further refinement and use. We created a map to help states get started.

**Check out the map [here](#).**

## 6 - DATA SHARING & ACCESSIBILITY

States recognized the value in publishing data as it is available and improving the accuracy over time (as opposed to waiting to publish until the data was 95% accurate), so long as the data included disclaimers about the data quality and provision of metadata. The State Playbook highlights just a few ways that states can make service area boundary data more accessible.

## ABOUT EPIC / TECH PROGRAM

Technology can accelerate environmental progress and promote equity - but cultural and institutional barriers inhibit the use of data and technology throughout the design and implementation of environmental policies and programs. With the right people, processes, and tools, government agencies can ensure that technology supports programs that benefit all communities. EPIC is here to help.