The Texas Water Development Board’s Texas Water Service Boundary Viewer

Presented to
Management Systems (WIMS) Workshop &
USGS National Water Use (USGS WU) Data Collaboration
September 16-19, 2019
Fort Collins, Colorado

Bill Billingsley
Manager, Water Use & Planning Data

The following presentation is based upon professional research and analysis within the scope of the Texas Water Development Board’s statutory responsibilities and priorities but, unless specifically noted, does not necessarily reflect official Board positions or decisions.
Mapping Application

To collect and provide the most up-to-date and best data available on the water service areas for all community Public Water Systems within Texas.
Overview

• Purpose
• Background
• Application Overview
• Response & Outreach
• Benefits
• Potential Future Plans
Purpose

• Create & maintain a clearinghouse of all drinking water service area boundaries
• Geographically display associated water data & system information to the public
• Better estimate future municipal water demands for the State Water Planning Process
Background

- Original boundary map snapshot produced in 2009 through a one-time TWDB research grant
- Grant from USGS Water Use Data & Research Program:
  - Identify, update, & maintain the retail water service area boundaries of all active community public water systems (4,500+) in Texas
  - December 2016 – Contract between USGS & TWDB
  - January 2019 – Application Deployed
Application Overview

Three Components

• **Public**: View, create a map, or download a shapefile of the water system boundaries & view linked reports
• **Editor**: Allow utility representatives to update or verify boundaries
• **Admin**: Review & provide customer support
Public
Public
## Public Reports

### Water System Detail

### Source Water Assessment Results
- **Sample Points:** Assistance Actions
- **Sample Schedules / FANLs / Plans:** Compliance Schedules
- **Site Visits / Milestones:** TOC/Alkalinity Results
- **Operators:** All POC
- **LRAA (TTHM/HAAS):** Glossary

### Water System Detail Information
- **Water System No.:** TX2270001
- **Water System Name:** CITY OF AUSTIN WATER & WASTEWATER
- **Principal County Served:** TRAVIS
- **Principal City Served:** AUSTIN
- **Population:** 981783
- **System Type:** C
- **Primary Source Type:** SW
- **System Status:** A
- **Activity Date:** 01-01-1913
- **System Recognition:** SUPERIOR

### Water System Contacts

<table>
<thead>
<tr>
<th>Type</th>
<th>Contact</th>
<th>Phone Type</th>
<th>Communication</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC - Administrative Contact</td>
<td>ADLER, STEVE PO BOX 1088 AUSTIN, TX 78767-1088</td>
<td>BUS - Business</td>
<td>512-972-0108</td>
<td></td>
</tr>
<tr>
<td>AC - Administrative Contact</td>
<td>ADLER, STEVE PO BOX 1088 AUSTIN, TX 78767-1088</td>
<td>BUS - Business</td>
<td>512-972-0101</td>
<td></td>
</tr>
<tr>
<td>AC - Administrative Contact</td>
<td>ADLER, STEVE PO BOX 1088 AUSTIN, TX 78767-1088</td>
<td>BUS - Business</td>
<td>512-974-2250</td>
<td></td>
</tr>
<tr>
<td>AC - Administrative Contact</td>
<td>ADLER, STEVE PO BOX 1088 AUSTIN, TX 78767-1088</td>
<td>FAX - Facsimile</td>
<td>512-974-2337</td>
<td></td>
</tr>
</tbody>
</table>

### Sources of Water

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Activity</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTAKE 2 - DAVIS SWTP</td>
<td>IN</td>
<td>A</td>
<td>P</td>
</tr>
<tr>
<td>INTAKE 4 - HANCOX SWTP / LAKE TRAVIS</td>
<td>IN</td>
<td>A</td>
<td>P</td>
</tr>
<tr>
<td>INTAKE 3 - ULLRICH SWTP</td>
<td>IN</td>
<td>A</td>
<td>P</td>
</tr>
<tr>
<td>INTAKE 1 - GREEN SWTP</td>
<td>IN</td>
<td>T</td>
<td>O</td>
</tr>
</tbody>
</table>

### Source Water Percentages
- **Surface Water:** 0
- **Ground Water:** 0
- **Ground Water UDI:** 0
- **Surface Water Purchased:** 0
- **Ground Water Purchased:** 0
- **Ground Water UDI Purchased:** 0

### Water Purchases

| Water System / Treatment Status | No Water Purchases |
## Public Reports

### Texas Water Development Board

**Water Use in Calendar Year:** 2017

<table>
<thead>
<tr>
<th>Water Type</th>
<th>County</th>
<th>Basin</th>
<th>Reservoir / River</th>
<th>Water Right #</th>
<th>% Consumed</th>
<th>Metered or Estimated</th>
<th>Brackish / Saline (Y or N)</th>
<th>% Treated Prior to Intake</th>
<th>Total Volume (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURFACE WATER SELF SUPPLIED</td>
<td>TRAVIS</td>
<td>COLORADO</td>
<td>TOWN LAKE/RESERVOIR</td>
<td>05417-0-A</td>
<td>100.00</td>
<td>M</td>
<td>N</td>
<td>0.00</td>
<td>34,273,525,559</td>
</tr>
<tr>
<td><strong>Jan</strong></td>
<td></td>
<td><strong>Feb</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mar</strong></td>
<td></td>
<td><strong>Apr</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>714,135,052</td>
<td>718,143,019</td>
<td>644,996,613</td>
<td>765,300,610</td>
<td>981,202,551</td>
<td>1,357,052,106</td>
<td>1,740,321,313</td>
<td>2,490,615,055</td>
<td>2,130,055,166</td>
<td>919,631,754</td>
</tr>
</tbody>
</table>

*Dates and times are subject to change.*

---

[www.twdb.texas.gov](http://www.twdb.texas.gov)  [www.facebook.com/twdboard](http://www.facebook.com/twdboard)  [@twdb](http://twitter.com/twdb)
Editor
Editor

2. Verify

Review your boundary and upload to replace or edit as needed
Editor
Editor

When satisfied with the boundary on the map click Submit (even if no changes have been made)
Admin
Response

• 4,523 of the 4,573 system boundaries on file
• Of these, 31% have verified their boundaries this initial year
Outreach

• Mailout, email blasts, & social media
• Conference presentations
• Publication in periodicals
• Statewide workshops
• More than 8,500 Internet Hits
Agency Benefits

• Estimate water use more accurately in various geographic areas (river basins & watersheds)
• Connect water use & water source locations
• More accurate system population estimates lead to more accurate gallon per capita daily (GPCDs) data critical for calculating future water demand for water planning
Agency Benefits

Visually evaluate characteristics of a system’s service area for:

• existing developed/undeveloped areas
• potential build-out of the area
• locations of special populations including prisons
• locations of the existing infrastructure by overlaying the satellite imagery (help with infrastructure planning and review)
Agency Benefits

• During the legislative session, review new district boundaries for Water Impact Statements

• Water use survey data including connections, population, & water used to review or justify historical growth of the system’s boundary
Stakeholder Benefits

• Groundwater Conservation Districts can check & verify system data within their district boundaries
• One-stop data portal for users to access information
• Identify possible interconnections with neighboring systems
• Potential resource for public health professionals
• Potential resource for emergency response to natural disasters to identify impacted systems
Potential Future Plans

• Determine system socioeconomic characteristics by overlaying other data layers such as Census data (income, age, household size, population density, etc.). Such information can be used to:
  – Study relationships between water use patterns, trends, & demographics characteristics of the communities
  – Identify systems that might need financial assistance for water infrastructure improvements
Potential Future Plans

• Link Water Conservation Plans, Annual Conservation Reports, & Water Loss Audit Data
• Collect Federal Drinking Water Infrastructure Needs Survey data through the application
• Display TWDB-funded infrastructure project data associated with a system
Application Administrator (GIS Analyst)

http://www.twdb.texas.gov/jobs/
Questions?

Bill Billingsley
Manager, Water Use & Planning Data
Office: 512-936-0885
Email: Bill.Billingsley@twdb.texas.gov
Texas Water Development Board