

Updating Key Metrics Regarding Outdoor Water Use in Texas Community Water Systems

Background & Purpose

The Texas Water Development Board (TWDB) is looking to update and improve upon a technical note published in 2012 (Technical Note 12-01) that studied outdoor residential water use patterns in Texas. The report analyzed 259 public community water systems (CWS) for the period of 2004 – 2008 with a limited selection of CWS analyzed for the period of 2004 – 2011 to determine how outdoor water use fluctuates seasonally. The report concluded that the statewide average outdoor use was about 30% of total household water use. The results of Technical Note 12-01 are utilized in the estimations of municipal water use and projections of municipal demands.

The original report is over ten years old and largely did not incorporate water use changes during the 2011 – 2015 drought and subsequent periods. Finally, the report did not establish any significant correlation between precipitation patterns and outdoor water use. Therefore, this research project will seek to reassess the methods and findings of the report and develop updated outdoor water use data and metrics. The TWDB has contracted with the UT Bureau of Economic Geology with an estimated study completion date of Summer 2026. The results will inform the projections process for the 2031 Regional and 2032 State Water Plans.

Project Summary

This contract consists of the following 3 subtasks:

- **Data Assessment and Collection:** The research team will assess the data needs for project completion and secure necessary data. Anticipated data needs fall principally into two categories: CWS data and climate data.
- **Methodology Development and Water Use Analysis:** The research team will review the methods applied in the 2012 report and will evaluate new methodologies using available data to accomplish the research goals.
- **Climate Driver Assessment:** The research team will seek to evaluate the relationship between CWS outdoor water use and climate drivers. A range of climate driver variables may be considered, including: precipitation, temperature, and evapotranspiration. Also, the research team may seek to correlate CWS outdoor water use data, climate driver data, and TCEQ data describing CWS drought restrictions and draw relevant conclusions. Finally, relevant socioeconomic data may be linked to outdoor water use to support further study.

Project Deliverables

- Compilation of relevant source data for the research project.
- Data results generated by the CWS outdoor use methodology and climate driver assessment.
- Final report including documented research methodology and research findings for CWS outdoor water use and climate driver assessment.

For more information, contact Heather.Rose@twdb.texas.gov