



## Improving Water Quality in the Atascosa River

# Evaluating the Aquatic Life and Recreational Uses

In Segment 2107 of the Atascosa River, dissolved oxygen levels are less than optimal for support of a rich, healthy aquatic ecosystem. Oxygen, which dissolves in water, is essential for the survival of aquatic life. While the amount of dissolved oxygen in water fluctuates naturally, various human activities can cause unusually or chronically low dissolved oxygen levels.

High concentrations of bacteria, which are found in both human and animal waste, have also been observed in the river. The presence of these bacteria may indicate a health risk to people who swim or wade in the rivers—activities referred to as “contact recreation” in the state’s standards for surface water quality.

In response to these conditions, the TMDL Team is managing a study to produce two technical reports needed to support a *recreational use attainability analysis* (RUAA) and an *aquatic life use attainability analysis* (ALUAA). *Use attainability analyses* (UAAs) assess the physical, chemical, and biological factors that determine whether a particular use is attainable in a particular water body.

The primary contact recreation use currently designated for Segment 2107 is presumed, not based on actual site-specific characteristics. This study will survey how people actually use the stream for recreation, and evaluate stream characteristics that inhibit or promote water recreation.

Similarly, the high aquatic life use currently assigned to the river is presumed. This study will also evaluate characteristics that influence the stream’s suitability for aquatic habitat.

Depending on the results of these UAAs, the recreational and aquatic life use standards may be modified. If the Standards Team finds the current standards to be appropriate, the TCEQ will consider development of TMDLs for Segment 2107.

Learn more about water quality standards and monitoring, and TMDLs by reading *Preserving and Improving Water Quality*, available on our website at [www.tceq.texas.gov/goto/tmdl/](http://www.tceq.texas.gov/goto/tmdl/).

### Atascosa River Watershed

The main portion of the Atascosa River (Segment 2107) is formed by the union of the north and west prongs of the river in extreme northwest Atascosa



County, southeast of Lytle. From its origin, the Atascosa River flows approximately 103 miles into Live Oak County between Choke Canyon Reservoir and Three Rivers, where it joins the Frio River.

The Atascosa is part of the Nueces River Basin, and is the setting for Atascosa River Park in Pleasanton. The project watershed includes the communities of Lytle, Poteet, Pleasanton, Jourdanton, and Christine.

The watershed is characterized by level to rolling land dominated by open grasslands, as well as cacti, weeds, thorny shrubs, and trees such as mesquite, live oak, and post oak. The area is important for recreational deer and quail hunting.

### Project Development

The TCEQ contracted with the Texas Institute for Applied Environmental Research (TIAER) to conduct the two UAA studies and prepare technical reports. Previous studies in watershed from 2002-2004 collected a substantial amount of data. Review of that data and changes to the state’s contact recreation standards in 2010 prompted initiation of the RUAA. The agency decided to evaluate the aquatic life use at the same time to gain a fuller understanding of the biological and flow conditions for the entire stream.

## Public Participation

Texas AgriLife is coordinating public participation in this project. Public meetings will be held in the watershed to seek advice and comment from people who represent government, permitted facilities, agriculture, business, environmental, and community and private interests. The TCEQ will also encourage local involvement with the help of the Basin Steering Committee of the Nueces River Authority.

## For More Information

Contact one of the people listed following, or visit the project website at:

< [www.tceq.texas.gov/waterquality/tmdl/31-atascosa.html](http://www.tceq.texas.gov/waterquality/tmdl/31-atascosa.html) >

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## Project Development Status

**Started:** March 2009

**Projected End:** August 2012

Project Development: Percent Complete

	10	20	30	40	50	60	70	80	90	100
Watershed Surveys	█	█	█	█	█	█	█	█	█	█
RUAA Technical Report	█	█	█	█	█	█	█	█	█	█
ALUAA Technical Report	█									

## Project Highlights

- AgriLife Research is coordinating outreach activities to promote local participation in the project.
- TIAER began monitoring in June 2010 to collect data for its report on aquatic life uses. They will complete aquatic life monitoring in October 2011.
- TIAER completed and submitted the final report on recreational uses in December 2010. The TMDL Team submitted the report to the Water Quality Standards Group for their use in determining the appropriate recreational use category for Segment 2107.
- On August 2, 2011, a public meeting meeting was held at the Pleasanton Volunteer Fire Department to update stakeholders on the project
- The TCEQ released the technical RUAA report for a 30-day public comment period in August 2011.
- Contact the Standards Group at [standards@tceq.texas.gov](mailto:standards@tceq.texas.gov) or 512-239-6682 to ask about status of the use at-tainability analyses.

Visit our website at: <[www.tceq.texas.gov/goto/tmdl/](http://www.tceq.texas.gov/goto/tmdl/)>