

Examining the Water Quality Standards for the Atascosa River

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Water Quality Standards

A water quality standard consists of:

- A *use* such as aquatic life
 - There may be different use subcategories such as exceptional aquatic life
- The *criteria* by which attainment of the use is determined, such as levels of dissolved oxygen and pH.

Atascosa River (2107)

Water Quality Standards

- Selected designated uses and criteria (Appendix A, TSWQS) for the Atascosa River
 - High Aquatic Life Use
 - dissolved oxygen average of 5.0 mg/L
 - dissolved oxygen minimum of 3.0 mg/L
 - Contact Recreation
 - *E. coli* geometric mean of 126 MPN/100 mL
 - *E. coli* single sample of 394 MPN/100 mL

Purpose of current study

- Determine the appropriate aquatic life use and recreation use for the water bodies.

Use-Attainability Analysis

- A use-attainability analysis (UAA) is a multifaceted assessment of environmental and economic factors that affect the attainment of a use (in this case aquatic life use and recreational use) for a specific body of water.
- This assessment identifies and defines attainable, existing and current uses to determine whether state designated uses are appropriate. The process analyzes potential uses by examining physical, chemical, and biological characteristics of the body of water.

Types of UAA studies

- Aquatic Life Use-Attainability Analysis (ALUAA)
 - Two year study consisting of dissolved oxygen and streamflow measurements; fish and benthic macroinvertebrate surveys; and habitat assessments.
- Recreational Use-Attainability Analysis (RUAA)
 - Warm weather study consisting of streamflow and stream measurements, observation of bank access and actual use.

Why do an ALUAA now?

- Previous ALUAA (2003-2005) data collection was limited geographically to portions of the river in and just downstream of Pleasanton.
- In 2009, the TCEQ Water Quality Standards Group recommended conducting an ALUAA for the entire stream to fully understand the streamflow, biological, and habitat characteristics of the river.

Why do an RUAA now?

- Proposed changes to the Texas Water Quality Standards
 - Additional use categories
 - Revised numerical criteria
- Outcome of the RUAA process will inform if a bacteria TMDL is needed

Project Participants

- TCEQ TMDL Program – facilitating contracting and project management
- TCEQ Water Quality Standards Group – determine appropriate water quality uses and criteria for Texas bodies of water
- Texas Soil and Water Conservation Board – state agency with primary responsibility for programs to abate agricultural nonpoint sources of water pollution
- Texas AgriLIFE Research – TCEQ contractor tasked with coordinating public outreach efforts in the Atascosa River watershed
- Texas Institute for Applied Environmental Research – TCEQ contractor tasked with collecting water quality data as assigned by TCEQ

Contact Information

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