Examining the Water Quality Standards for the Atascosa River

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August 2, 2011

Water Quality Standards

A water quality standard consists of:

- A *use* such as aquatic life
  - There may 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 (DO) is an indicator of stream health
      - DO average of 5.0 mg/L
      - DO minimum of 3.0 mg/L
  - Contact Recreation
    - *E. coli* geometric mean of 126 MPN/100 mL

Purpose of current study

- Evaluate if the current aquatic life use and recreational use for the Atascosa River are appropriate
- Why are we conducting this study?
  - Depressed DO levels have been measured in the Atascosa since 1996.
  - Elevated bacteria levels have been measured in the Atascosa since 1996.
- How will we evaluate the uses?
  - Use-attainability analyses

Use-Attainability Analysis

- A use-attainability analysis (UAA) is an assessment of environmental and economic factors that affect the attainment of a use for a specific body of water.
- The goal is to ensure that appropriate uses are assigned to a particular water body.
- Conducting an UAA does not mean that a change in the water quality standard will/must occur.

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 current and historical uses.

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?

- 2010 Texas Water Quality Standards
  - Expanded recreational use categories
- Outcome of the RUAA process will inform if a bacteria TMDL is needed.

2010 Contact Recreation Standards

Recreation Category	Definition Summary	Geometric Mean Criteria (colonies/100mL)
Primary Contact	Significant risk of ingestion (swimming, diving, wading by children, whitewater rafting, etc.)	126
Secondary Contact 1	No significant risk of ingestion (wading by adults, fishing, etc.)	630
Secondary Contact 2	No significant risk of ingestion; recreational activities occur less frequently because of physical characteristics or limited access	1030
Noncontact Recreation	No significant risk of ingestion and contact recreation should not occur because of unsafe conditions	2060

Texas Water Quality Standards Revisions

- Standards are revised every three years to address:
  - new information about pollutants,
  - additional data about water quality in specific waters, and
  - new state regulatory requirements
- Next revision to occur 2013
- Standards home page: www.tceq.texas.gov/waterquality/standards/eq_swqs.html

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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