



## Improving Water Quality in the Upper San Antonio River Watershed

# Improving the Safety of Water Recreation

High concentrations of fecal indicator bacteria in the upper watersheds of the San Antonio River (Segments 1911, 1910 and 1910A) may pose a risk for people who swim or wade in them – activities referred to as “contact recreation” in the state’s standards for water quality.

In 2000, three segments—the Upper San Antonio River, Segment 1911; Salado Creek, Segment 1910; and Walzem Creek, Segment 1910A—did not meet the contact recreation standards. Bacteria are commonly found in the intestines of warm-blooded organisms such as humans, livestock, poultry, cats, and dogs. These bacteria in water sometimes indicate the presence of disease-causing microorganisms.

In response to these conditions, the TCEQ initiated a total maximum daily load (TMDL) project to determine the measures necessary to improve water quality in these waterbodies.

A TMDL is like a budget for pollution—it determines the amount (or load) of a pollutant that a body of water can receive and still be suitable for all its uses. The allowable load is then allocated among categories of sources within the watershed. Stakeholders work with the state to develop a plan to implement TMDLs (I-Plan) with measures that reduce pollution.

Learn more about water quality standards, 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/).

### Upper San Antonio River Watershed

The Upper San Antonio River, Segment 1911, is located in the central portion of the San Antonio River Basin. Its headwaters are in southeastern Bexar County within the City of San Antonio. The river runs north to south, from the southern end of San Antonio, past Floresville and Poth, to FM 791 near Falls City in Karnes County. The upper portion of the watershed is largely developed; land use in the lower portion is agricultural and rangeland.

Salado Creek, Segment 1910, is located in the upper portion of the San Antonio River Basin, with its headwaters in north-central Bexar County. It flows north to south for 35 miles along the north and east side of San Antonio. Salado Creek joins the San Antonio River south of the city between Losoya and Elmendorf. Walzem Creek, Segment 1910A, is a small tributary of Salado Creek.



The upper portion is largely undeveloped and the terrain is characterized by limestone hills and sparse vegetation.

### TMDL Development

The TCEQ initiated the project in 2004. The final TMDL report identified both regulated and unregulated sources of pollution. Possible sources and/or causes of contamination include:

- discharges from wastewater treatment facilities and other institutions
- discharges from urban storm sewer systems
- runoff from undeveloped lands
- wildlife deposition
- pets and livestock deposition
- leaking sewer infrastructure
- failing septic systems

A stakeholder committee called the San Antonio Bacteria TMDL Advisory Group assisted the TCEQ in developing the original TMDLs. The group included volunteer members who represented government, permitted facilities, agriculture, business, environmental, and community interests.

The TCEQ adopted TMDLs in 2007 for Segments 1910, 1910A, and 1911. The EPA approved the TMDLs on September 25, 2007.

### Implementation Plan Development

In 2013, Texas A&M AgriLife Research began working with communities, interest groups, and local organizations to involve stakeholders in developing a TMDL Implementation Plan with measures that reduce pollution. The Implementation Plan identifies the measures needed to reduce bacteria and a timeline for implementation. The draft Implementation Plan was submitted to TCEQ in spring 2015 and received final approval April 6, 2016.

### Public Participation

In all its projects, the TCEQ seeks to gather opinion and information from people who represent government, permitted facilities, agriculture, business, environmental, and community and private interests in the watershed. The TCEQ solicits advice and comment from

these stakeholders at meetings and through print and electronic media notices. AgriLife coordinated public participation in development of the Implementation Plan.

### For More Information

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

<[www.tceq.texas.gov/waterquality/tmdl/34-upper-sanantoniobac.html](http://www.tceq.texas.gov/waterquality/tmdl/34-upper-sanantoniobac.html)>

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### TMDL Development Status

TCEQ Adoption: July 25, 2007

EPA Region 6 Approval: September 25, 2007

### Implementation Plan Development Status

TCEQ Approval: April 6, 2016

### Highlights

- Stakeholders and SARA developed a watershed protection plan while the TMDLs and Implementation Plan were in development. The WPP helps the community address all pollutants that may be affecting water quality, in addition to bacteria. The WPP is consistent with measures that are included in the TMDL Implementation Plan.
- Stakeholders worked with AgriLife and the TCEQ to develop an I-Plan for the TMDLs. The stakeholders' Implementation Plan was submitted to TCEQ in spring 2015 and received TCEQ approval April 6, 2016.
- In August 2016, the EPA approved an addendum adding seven TMDLs for five segments. This addendum was submitted to the EPA in the state's April 2016 Update to the Texas Water Quality Management Plan.

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