



## *Improving Water Quality in the Lower Leon Creek* **Evaluating Water Quality to Protect Aquatic Life**

In 2006, TCEQ assessment indicated that in portions of Lower Leon Creek, low dissolved oxygen concentrations were not optimal for aquatic life. Oxygen gas, 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 chronically low dissolved oxygen levels.

In response to these conditions, the TCEQ examined the causes of low dissolved oxygen in the stream to update and add to the data available for evaluating the aquatic life use.

Learn more about water quality standards and monitoring by reading *Preserving and Improving Water Quality*, available on the TMDL Program's Web pages at [www.tceq.texas.gov/goto/tmdl](http://www.tceq.texas.gov/goto/tmdl).

### Lower Leon Creek Watershed

Lower Leon Creek, Segment 1906, drains an area of 228 square miles and has a total continuous length of 57 miles. It originates as a spring-fed stream in the Edwards Plateau region of south central Texas. The creek runs from its headwaters in northern Bexar County to its confluence with the Medina River. The creek generally flows south and enters the main portion of the Kelly Air Force Base (AFB) from the northwest, near the intersection of Billy Mitchell Road and Westover Road.

Leon Creek drains a highly urbanized residential area and the Kelly and Lackland AFBs. Water quality in the creek is affected by industrial and municipal wastewater discharges and storm water. The project watershed included the municipalities of San Antonio, Cross Mountain, Helotes, and Leon Valley.

### Project Development

The University of Texas at San Antonio (UTSA), under contract with the TCEQ TMDL Program, collected dissolved oxygen data to update and add to the data sets available for evaluating the aquatic life use.

Samples were taken at several stations in portions of the stream segment with few or older data sets. Segment 1906 has six assessment units (AUs). Only four of the AUs were sampled under this project.

- AU\_01 – Lower three miles of the segment, from the confluence with Medina River to 4,000 feet west of Applewhite Road.



- AU\_03 – From the confluence with Indian Creek to Highway 353.
- AU\_05 – From two miles upstream of Highway 353 to Highway 90.
- AU\_06 – Remainder of segment, from Highway 90 to 100 meters upstream of State Highway 16.

### Public Participation

TCEQ staff informed stakeholders about this project by consulting with the San Antonio River Authority, the Clean Rivers Program partner for the basin.

### For More Information

Visit the project page at:

[www.tceq.texas.gov/waterquality/tmdl/84-lowerleonoxigen](http://www.tceq.texas.gov/waterquality/tmdl/84-lowerleonoxigen)

E-mail us at [tmdl@tceq.texas.gov](mailto:tmdl@tceq.texas.gov) or call us at 512-239-6682.

### Assessment Dates

**Start Date:** September 2013  
**End Date:** September 2014

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### **Project Highlight**

- UTSA completed additional data collection in 2014.

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