



Improving Water Quality in Oso Creek A Project to Protect Recreational Uses

In 2002, water quality testing found that concentrations of bacteria are sometimes elevated in Oso Creek (Segment 2485A). Bacteria from human and animal waste may indicate the presence of disease-causing microorganisms that pose a threat to people who swim or wade in the creek and bay—activities called “contact recreation” in the state’s standards for water quality.

In response to these conditions, TCEQ developed a total maximum daily load (TMDL) for Oso Creek. The goal of a TMDL is to determine the amount (or load) of a pollutant that a body of water can receive and still support its beneficial uses. The allowable load is then allocated among categories of sources within the watershed.

Stakeholders develop a plan to implement the TMDL (I-Plan) with measures that reduce pollution. People who represent the various interests that have a stake in the watershed develop the I-Plan with advice and support from TCEQ.

The TMDL and I-Plan together are a road map for reducing bacteria loads and the risk to public health and for maintaining water quality in the future.

Learn more about water quality standards, monitoring, and TMDLs by reading [Preserving and Improving Water Quality](#)¹, available on our website and in print.

Oso Creek Watershed

The Oso Creek watershed is wholly contained within Nueces County in the Nueces-Rio Grande Coastal Basin. The creek is about 28 miles long. It flows southeasterly from near the western edge of Corpus Christi over flat to rolling terrain, emptying into Oso Bay. Oso Creek’s flow is dominated by regulated discharges.

Corpus Christi is the only major metropolitan area within the watershed’s boundaries. Robstown is about 3 miles northeast of the creek’s origin. Economic activities in the area include oil and gas refining and production, agriculture, manufacturing, and tourism.

Project Development

TCEQ began work on the Oso Creek TMDL in 2013. From 2004 to 2006, TCEQ collected a great deal of data and information in conjunction with its TMDL project for Oso Bay. TCEQ developed a TMDL for the



bay first, separately from the TMDL for the creek, with advice and consent from stakeholders in the area.

Since 2006, the Texas State Soil and Water Conservation Board (TSSWCB) and other agencies have completed several studies of bacteria sources and loading in the watershed. The results of these studies were considered in the development of the TMDL for the creek. The TSSWCB is already working to decrease bacteria loading from agriculture by assisting landowners in developing and implementing water quality management plans for their operations.

The Texas Institute for Applied Environmental Research (TIAER) at Tarleton State University completed several tasks in support of TMDL development. Their staff conducted a comprehensive review of historical data, along with other pertinent data and information, and identified any data gaps. They submitted a final technical report to support TMDL development.

In a separate but related project, TCEQ also developed a TMDL for bacteria concentrations in Oso Bay. Stakeholders are working with TCEQ to develop an I-Plan for both Oso Creek and Oso Bay.

¹ <https://www.tceq.texas.gov/publications/gi/gi-351>

Public Participation

In all its TMDL projects, 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.

Staff from the Center for Coastal Studies at Texas A&M University–Corpus Christi are working with stakeholders to develop a plan for watershed improvement.

For More Information

Contact one of the project managers listed following, or visit the project webpage at:

www.tceq.texas.gov/waterquality/tmdl/67-osocreekbacteria

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TMDL Status

Start Date: September 1, 2013

TCEQ Adoption: July 31, 2019

EPA Region 6 Approval: October 25, 2019

I-Plan Status

Start Date: June 2014

Projected TCEQ Approval: 2022

Highlights

- TIAER conducted a comprehensive review of historical bacteria and flow data, along with other pertinent data and information, to support TMDL development.
- The Commission adopted the TMDL w on July 31, 2019, and EPA approved it on October 25, 2019.
- In summer 2014, the Center for Coastal Studies at Texas A&M University–Corpus Christi began leading the stakeholder effort to develop an I-Plan for Oso Bay and Oso Creek.

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