



Mission and Aransas Rivers

TMDL I-Plan Implementation

Spring 2019 Newsletter

New Projects News

The Texas Water Resources Institute (TWRI) began two projects in Fall 2018 for the Mission and Aransas Rivers. The first project is the development of a watershed protection plan (WPP). Both the approved total maximum daily load (TMDL) and TMDL implementation plan (I-Plan) for the Mission and Aransas Rivers will be used as source material for development. The primary goal of developing the WPP is to become eligible for implementation funds for the management measures discussed in the TMDL I-Plan. The TMDL, TMDL I-Plan, and other supporting documents can be found at <https://www.tceq.texas.gov/waterquality/tmdl/42-copano.html>.

The second project is an 18-month long monthly monitoring project conducted at one station on the Mission River and two stations on the Aransas River. This project will provide additional data that will aid implementation and provide an updated condition of the water quality in the watersheds.

State of the Water

The State of the Texas establishes water quality standards to measure how suitable the Mission and Aransas Rivers are for safe recreation and how well they support aquatic life.

Fecal Bacteria

We measure *E. coli* and *Enterococcus* bacteria to evaluate the presence of fecal waste in the water. *E. coli* is typically measured in fresh water streams and rivers while *Enterococcus* is measured in tidal segments, both having different standards for safe recreation. Elevated levels of these bacteria

can indicate that the water is contaminated with fecal waste, increasing the risk of becoming ill if you swim in the water.

The tidal segments and the above tidal segment of Aransas River do not meet the water quality standard for fecal bacteria. Aransas and Poesta Creeks also do not meet the standard. Elevated bacteria comes from many sources. The TMDL identified failing septic systems, livestock, stormwater runoff, pet waste and feral hogs as some of the major contributors to bacteria that we can feasibly address.

Draft 2016 Texas Integrated Report

The Texas Commission on Environmental Quality (TCEQ) published the Draft 2016 Texas Integrated Report (https://www.tceq.texas.gov/waterquality/assessment/public_comment) in May. The Integrated Report evaluates if water bodies met water quality standards from December 2007 through November 2014. According to the data, the tidal segments and the above tidal segment of the Aransas River as well as Aransas and Poesta Creeks remained impaired as a result of elevated levels of

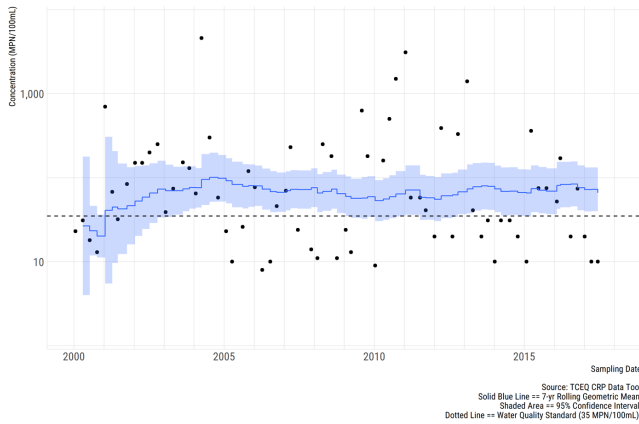
| Segment | 2014 Integrated Report average bacteria count (MPN/100mL) | Draft 2016 Integrated Report average bacteria count (MPN/100mL) | Recreation Standard for <i>E. coli</i> bacteria (MPN/100mL) | Recreation Standard for <i>Enterococcus</i> bacteria (MPN/100 mL) |
|---------------------------|---|---|---|---|
| Aransas River Tidal | 64 | 90 | - | 35 |
| Mission River Tidal | 71 | 68 | - | 35 |
| Aransas River Above Tidal | 166 | 181 | 126 | - |
| Poesta Creek | 310 | 306 | 126 | - |



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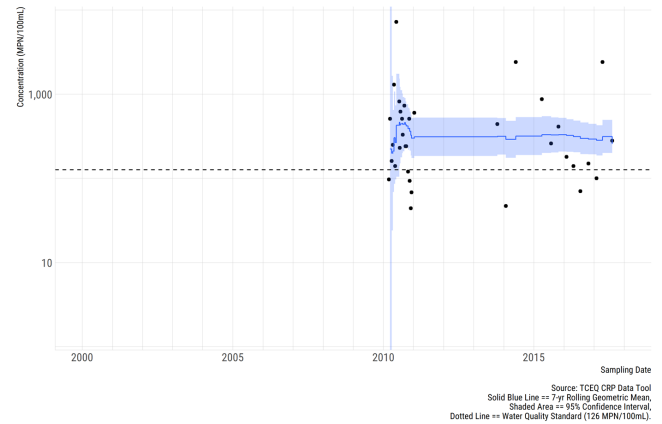
Enterococcus Bacteria Concentrations

2001_01 Mission River Tidal (January 2000 - December 2017)



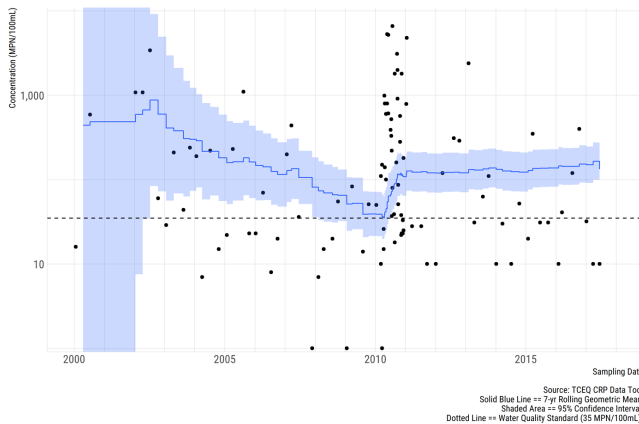
E. coli Bacteria Concentrations

2004B_02 Poesta Creek (January 2000 - December 2017)



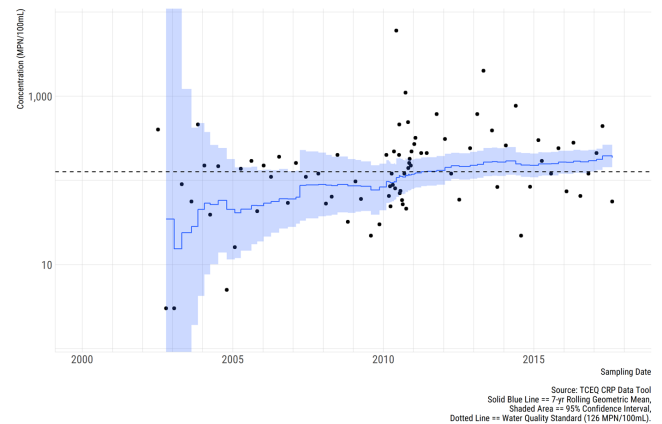
Enterococcus Bacteria Concentrations

2001_01 Aransas River Tidal (January 2000 - December 2017)



E. coli Bacteria Concentrations

2004_02 Aransas River Above Tidal (January 2000 - December 2017)



bacteria. The good news is that the average *E. coli* bacteria count decreased slightly for Poesta Creek as well as the average *Enterococcus* bacteria count for Mission River Tidal. However, the average *Enterococcus* bacteria count for Aransas River Tidal and the average *E. coli* bacteria count for Aransas River above Tidal have increased between the 2014 Integrated Report and the Draft 2016 Integrated Report. Values for all segments are still above the standard for recreation but vary greatly between measurements.

Updates

TWRI is working with local stakeholders to kick off implementation of the TMDL I-Plan thanks in part to grant funding from the Texas General Land Office and the Texas Commission

on Environmental Quality. We are already seeing progress towards milestones identified in the TMDL I-Plan.

- A Riparian Education Program was held April 25 in Goliad. This training focuses on promoting healthy watersheds and improving water quality.
- Texas Watershed Stewards workshop was held July 17 in Beeville. The workshop focuses on water quality and watershed management in Texas.
- A stakeholder meeting was held Aug. 15 in Refugio to discuss updates on the Mission and Aransas Rivers TMDL I-Plan. Water quality updates were also provided at the meeting.
- A Texas Well Owner Network (TWON) program was held Oct. 18 in Beeville. The



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training focuses on educating private Texas well owners to become familiar with septic systems and well maintenance as well as Texas groundwater resources.

- Two TWON programs will be held May 14 in Victoria and May 15 in Refugio.
- TWRI applied for grant funding to develop a small, new, and absentee landowner education program. This would include the Mission and Aransas Rivers watersheds.
- TWRI applied for grant funding to target key stakeholders in priority watersheds with direct mailings, including the Mission and Aransas Rivers watersheds.
- There are currently 81 active voluntary Water Conservation Plans in the Mission River watershed as well as 122 active plans in the Aransas River watershed.

Resources

While some solutions require large-scale projects, many opportunities are available for individual stakeholders to take part and make a difference. The following are resources available to help you take part.

Feral Hogs

Texas A&M Natural Resource Institute's new feral hog website:

<https://wildpigs.nri.tamu.edu/>

Report feral hogs:

<https://wildpigs.nri.tamu.edu/report-wild-pigs/>

Producer Assistance

The Texas State Soil and Water Conservation Board (TSSWCB), United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) and AgriLife Extension provide technical and/or financial resources for producers to implement practices that improve production and protect water quality.

Water Quality Management Plans - This program, administered by TSSWCB, is a site-specific plan developed through and approved by your local soil and water conservation district for agricultural land. The plan includes practices designed to protect water quality while meeting goals of the producer. Contact your local soil and water conservation district for more information.

Conservation Technical Assistance - NRCS can assist you with the development of conservation plans that include practices to improve land management, protect and improve water quality, improve wildlife production and help you meet other goals on your land. These plans serve as a gateway to NRCS financial incentive programs. Contact your local NRCS service office for more information.

Financial Assistance - NRCS administers a number of financial incentive programs for producers to implement best practices and conservation systems on their operations. Popular programs include Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP) that help producers install, maintain and improve practices by providing financial and technical assistance. Contact your local NRCS service office for more information.

Septic Systems

If you have a septic system, it is your responsibility to keep it maintained and running properly. Failing septic systems can discharge high concentrations of fecal bacteria and nutrients. AgriLife Extension provides a website about operations and maintenance, requirements and upcoming education programs: <https://ossf.tamu.edu/>.

In Case You Missed It

Texas A&M Natural Resources Institute — The Wild Pig Newsletter:

<https://wildpigs.nri.tamu.edu/media/1303/wild-pig-newsletter-vol-33-fall-2018.pdf>

Lower Colorado River Authority — Colorado River Basin Highlights Report:

https://www.lcra.org/water/quality/texas-clean-rivers-program/Documents/2018_Basin_Highlights_Report_FINAL.pdf

Get Involved

Successful water quality improvement requires everyone's assistance! Are you interested in volunteer water quality monitoring, expanding water quality education or implementing best management practices on your property?

Contact us to discuss how you can get involved:

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or Stephanie deVilleneuve - stephanie.devilleneuve@ag.tamu.edu

Acknowledgements

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- Texas A&M AgriLife Extension Service
- Texas A&M AgriLife Research
- Texas Commission on Environmental Quality
- Texas Parks and Wildlife Department
- U.S. Department of Agriculture Natural Resources Conservation Service
- Bee Soil and Water Conservation District
- Goliad Soil and Water Conservation District
- San Patricio Soil and Water Conservation District
- Copano Bay Soil and Water Conservation District
- Coastal Bend Bays and Estuaries Program
- Nueces River Authority



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