Tres Palacios
Watershed Protection Plan

Fall 2018 Newsletter

Watershed Plan News

The Tres Palacios Watershed Protection Plan received official acceptance in May 2018. A big thank you to all the individuals and organizations who helped develop the plan. Now, we need to make the goal of improved water quality in the Tres Palacios happen. This newsletter is an update on the efforts made by local and regional partners to meet that goal.

State of the Water

The State of Texas establishes water quality standards to measure how suitable the Tres Palacios is for safe recreation and how well it supports aquatic life.

Fecal Bacteria

We measure *E. coli* and Enterococcus bacteria to evaluate the presence of fecal waste in the water. Elevated levels of these bacteria can indicate the water is contaminated with fecal waste, increasing the risk of becoming ill if you swim in the water. The tidal section of Tres Palacios does not meet the water quality standard for fecal bacteria. The above tidal section (above the confluence with Wilson's Creek) currently meets state water quality standards.

Elevated bacteria comes from many sources. The watershed plan 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.

Dissolved Oxygen

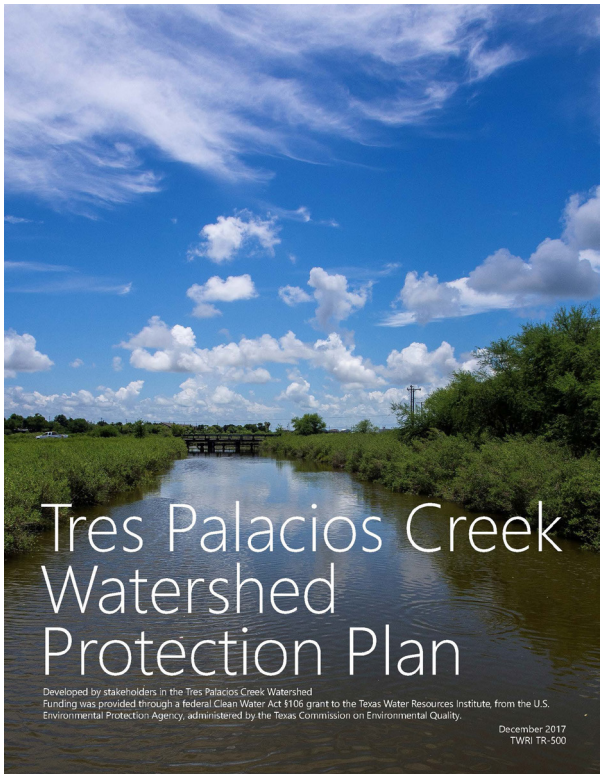
When dissolved oxygen becomes too low, aquatic organisms (such as fish, shellfish and aquatic insects) cannot survive. Currently, the tidal section of Tres Palacios does not meet water quality standards for dissolved oxygen.

A mix of natural factors and human activity influence dissolved oxygen. Some natural factors can include temperature swings, decreased flows, salinity, aquatic plant growth and much more. Excessive fertilizer or sediment in runoff can increase nutrients reaching the Tres Palacios, resulting in excessive algae growth and decreased dissolved oxygen. Removal of vegetation along stream banks can increase water temperature and allow more nutrients to reach the Tres Palacios, contributing to decreased dissolved oxygen.

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 segment of Tres Palacios remained impaired due to elevated bacteria and depressed dissolved oxygen. The good news is that the average bacteria count decreased slightly from the 2014 Integrated Report. The dissolved oxygen impairment remained the same because there was no new data for TCEQ to assess.



The Tres Palacios Watershed Plan Implementation project is funded in part by a Texas Coastal Management Program grant pursuant to National Oceanic and Atmospheric Administration Award No. NOS4190139.

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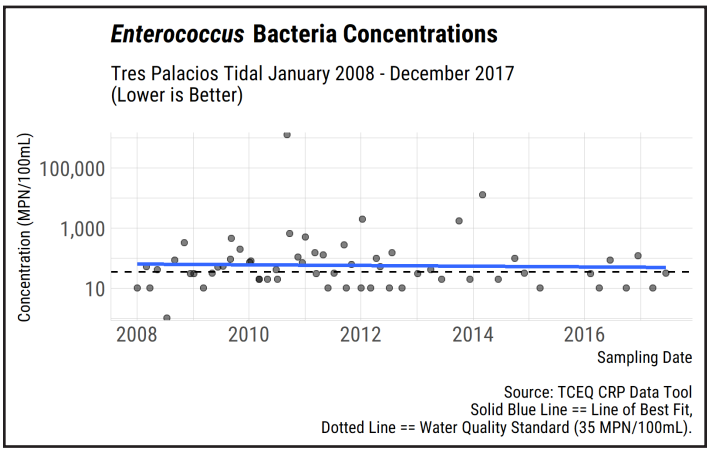
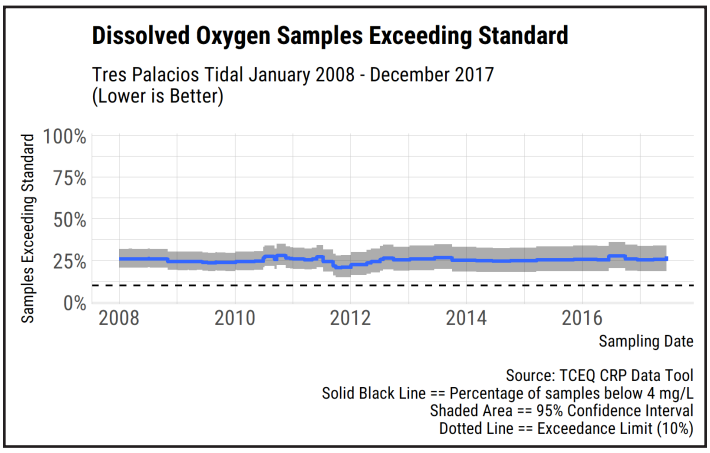
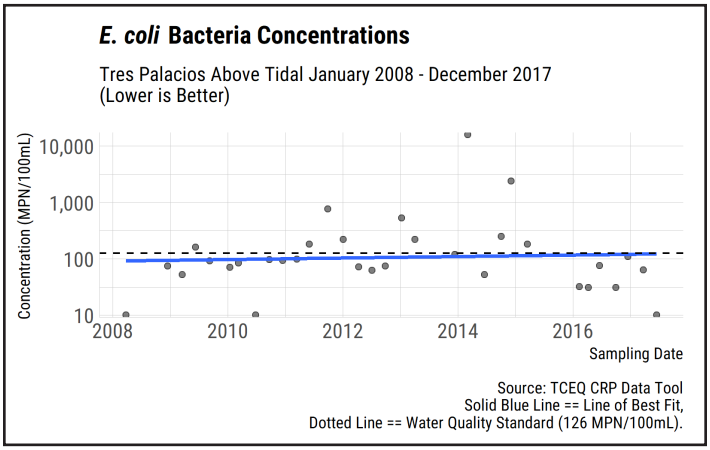
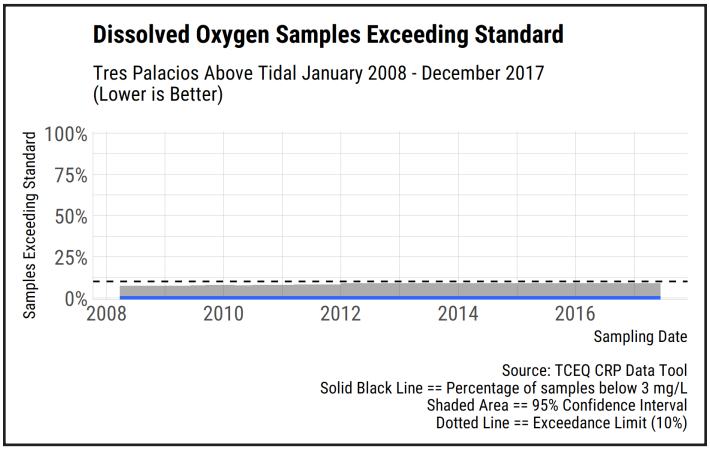








The above tidal segment of Tres Palacios remains unimpaired for *E. coli* bacteria. The bad news is that the average *E. coli* bacteria count increased from 73 MPN/100mL in the 2014 Integrated Report to 120 MPN/100mL in the 2016 Integrated Report. The increase brings us close to exceeding the water quality standard of 126 MPN/100mL.

The Plan

The Tres Palacios Watershed Protection Plan recommends a range of structural and planning solutions to water quality. The plan also recommends increased education and outreach to inform people in the watershed how they can reduce their own impact on downstream water quality. The sources of water quality issues are diverse and require a diverse set of solutions. To download the Tres Palacios Watershed Protection Plan, visit: http://matagordabasin.tamu.edu/media/685704/tr-500.pdf

Updates

The Texas Water Resources Institute (TWRI) is working with local stakeholders to kick off implementation thanks in part to grant funding from the Texas General Land Office and TCEQ. We are already seeing progress toward milestones identified in the watershed protection plan.

- A kick-off meeting was held on June 21, 2018 to discuss the plan, upcoming projects and identify project needs.
- TCEQ, TWRI and Texas A&M AgriLife Extension Service are starting a septic system replacement project with a goal to replace 15 failing septic systems.
- TWRI is working with TCEQ to provide additional monthly water quality monitoring at three sites in the Tres Palacios.
- The City of El Campo obtained funding to install a stormwater pond south of town to manage stormflows entering the Tres Palacios.

- The Palacios Beautification Committee and TWRI obtained funding through a TCEQ nonpoint source grant to install education kiosks at the Palacios Pavilion. (See photo below for an example of the educational kiosks)
- The U.S. Department of Agriculture Natural Resources Conservation Service (USDA NRCS) and local producers have enrolled 11,317 acres of agricultural land into 47 conservation plans with water quality protection measures. NRCS also provided technical assistance for 37 additional conservation plans with water quality protection measures that did not receive financial incentives.
- There are 17 active Water Quality Management Plans thanks to efforts by the Texas State Soil and Water Conservation Board (TSSWCB) and local soil and water conservation districts.
- TWRI and El Campo applied for grant funding to obtain and install stormwater education signs and pet waste stations for Legacy Park.
- Houston-Galveston Area Council and Palacios will install six pet waste stations along the waterfront.
- Bill Balboa of Texas Sea Grant applied for funding to expand volunteer water quality monitoring efforts.

Resources

While some solutions require large-scale projects, many opportunities are available for individual residents 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/

Concept Drawing of Educational Exhibit

Report feral hogs: https://wildpigs.nri.tamu.edu/report-wild-pigs/

We plan to schedule a feral hog workshop for landowners in the watershed later this year.

Producer Assistance

TSSWCB, 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 producer 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 for 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/1297/wild-pig-newsletter-vol-32-summer-2018.pdf

Lower Colorado River Authority - Colorado River Basin Highlights Report: https://www.lcra.org/water/quality/texas-clean-rivers-program/Documents/2018_BasinHighlights_Report_FINAL.pdf

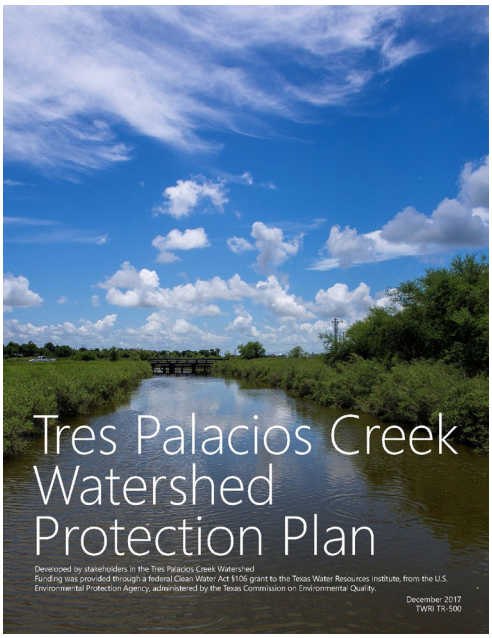
Get Involved

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:
Michael Schramm – michael.schramm@ag.tamu.edu
or Nathan Glavy – nathan.glavy@ag.tamu.edu

Acknowledgments

Thank you to the residents and landowners that made the Tres Palacios Watershed Protection Plan a reality. We also thank the following groups and agencies for taking part in the planning process:

- City of El Campo
- City of Palacios
- Matagorda County
- Matagorda Soil and Water Conservation District
- Palacios Chamber of Commerce
- Texas A&M AgriLife Extension Service
- Texas Commission on Environmental Quality
- Texas Parks and Wildlife Department
- Texas Sea Grant
- Texas State Soil and Water Conservation Board
- U.S. Department of Agriculture Natural Resources Conservation Service
- Wharton Soil and Water Conservation District



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Texas Water Resources Institute
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