Tres Palacios
Watershed Protection Plan

Summer 2020 Newsletter

Thank you for your interest in the Tres Palacios Watershed Protection Plan (WPP) annual newsletter! The team at Texas Water Resources Institute (TWRI) hopes everyone and their families are staying healthy and safe during this time.

This newsletter serves as an avenue to keep Tres Palacios residents informed of water quality updates and activities that happen in the area.

Project Background

In 2006, the tidal portion of Tres Palacios Creek was listed as an impaired waterbody with elevated bacteria and depressed dissolved oxygen. Beginning in 2015, TWRI began collaborating with local landowners, business representatives, soil and water conservation districts and city and county personnel to develop strategies to best tackle these impairments. Those meetings resulted in the development of:

1. Tres Palacios Creek WPP

Accepted by the U.S. Environmental Protection Agency (EPA) in May 2018, the Tres Palacios Creek WPP comprehensively considers the potential pollutant sources in the watershed and describes several management measures to tackle the watershed impairments. Pollutant sources include urban runoff not covered by a permit, wildlife, failing on-site sewage facilities (OSSFs) and domestic pets. When implemented, the proposed management measures will reduce the pollutant levels in the most cost-effective manner. The overall goal of this WPP is to restore water quality in the tidal portion of Tres Palacios Creek though long-term conservation and stewardship of the watershed's resources.

2. Tres Palacios TMDL

Formally approved by the EPA in March 2018, the total maximum daily load (TMDL) document lays out the scientifically determined pollutant "budget" for the Tres Palacios Creek required to meet water quality standards. The Texas Commission on Environmental Quality (TCEQ) will use the TMDL to better allocate wastewater and industrial discharge permits in the future.

3. Tres Palacios TMDL I-Plan

Accepted by TCEQ in January 2018, the Tres Palacios implementation plan (I-plan), similar to the Tres Palacios Creek WPP, provides a roadmap to achieve the pollutant "budget" that meets water quality standards. This I-Plan emphasizes the importance of implementing management measures to reduce pollution levels in the tidal portion of Tres Palacios Creek.

Tres Palacios River at FM 1468 near Clemville, TX. Photo by Ed Rhodes, TWRI.

Keep up the good work!

Substantial local involvement and effort went into developing the previously mentioned documents. These documents alone won't solve the water quality problem. However, they provide a roadmap and resources for us to improve water quality.

Today, TWRI continues to work locally to implement the WPP and improve water quality in the Tres Palacios Creek. The constant support from local stakeholders and organizations is the foundation for improved water quality. Thank you to everyone who has taken time to participate in our project efforts. We hope you continue to tell your neighbors how important the Tres Palacios Creek is to you and how we can all contribute to improving water quality.

You can read the entire Tres Palacios Creek WPP, Tres Palacios TMDL and TMDL I-Plan, and subscribe to our mailing list on our website: http://matagordabasin.tamu.edu/tres-palacios/.

What is a management measure?

In a WPP, a management measure is a group of cost-effective practices implemented cooperatively to achieve more comprehensive goals, such as reducing sediment levels from lands to nearby bodies of water.[1] Management measures are used to guide the implementation of the Tres Palacios Creek WPP. They not only aim to reduce the pollutant loads in the Tres Palacios Creek but also to protect, conserve and restore the critical habitats and lands in the watershed.

The Tres Palacios Creek WPP is currently working on implementing nine management measures:

1. Develop and implement conservation plans in priority areas of Tres Palacios Creek
2. Remove and manage feral hog removal and management
3. Identify failing septic systems, prioritize problem areas and systematically work to bring systems into compliance
4. Reduce illicit dumping and proper disposal of animal carcasses
5. Plan and manage urban stormwater planning and management
6. Install urban best management practices
7. Develop and implement of pet waste programs
8. Plan and implement wastewater reuse program
9. Maintain and repair sanitary system overflows and infrastructures

Current Tres Palacios Creek Projects

Currently, TWRI is overseeing three projects in the watershed contributing to the continued implementation of the Tres Palacios Creek WPP:

Coordinating Implementation of the Tres Palacios Creek WPP

TWRI is providing stakeholders with updates and seeking input on needed activities that support the implementation goals of the Tres Palacios Creek WPP. TWRI continues developing education and outreach resources for Tres Palacios Creek and assisting with organizing and conducting water educational programs across the watershed.

Since July 2019, the Tres Palacios WPP implementation project included monthly water sampling to monitor ongoing water quality changes. TWRI is collecting water samples at four stations: two in the tidal portion and two in the above tidal portion of Tres Palacios Creek. The samples will tell us the concentration of *E. coli* and/or *Enterococcus* in the sample and the pH, temperature, dissolved oxygen level, specific conductance, nitrogen level, total suspended solids and streamflow in the rivers.

Tres Palacios Creek OSSF repair and replacement

TWRI and the Texas A&M University Department of Biological amd Agricultural Engineering (BAEN) are working together to repair or replace failing OSSFs for families in Tres Palacios Oaks and Tidewater Oaks subdivisions in Palacios, Texas. These two subdivisions are the focus due to their proximity to Tres Palacios Creek and the number of OSSFs present in these two subdivisions.

Two rounds of request-for-applicants were conducted and TWRI has begun contacting local contractors in Matagorda County to start design and soil testing qualified applicants. If you would like to be considered to have your OSSF inspected, repaired or replaced,

[1] US EPA. (2008). Handbook for developing watershed plans to restore and protect our waters. Washington, DC: U.S. Environmental Protection Agency, Office of Water, Nonpoint Source Control Branch.

December 2018 Septic System Education Workshop in Bay City, TX. Photo by Nathan Glavy, TWRI.

please contact Nathan Glavy at nathan.glavy@ag.tamu.edu for an application.

Stormwater Education and Outreach in El Campo, Texas

In this newly funded project, TWRI will be working with the City of El Campo to implement, develop and install stormwater and water quality education signage and maintain five pet waste stations at Legacy Park in El Campo. El Campo is the largest municipality in the watershed, and Legacy Park is a priority location to reach the public. TWRI will also assist the City of El Campo with appropriate stormwater education materials for print or electronic distribution.

These three projects are funded by TCEQ through a Clean Water Act Section 319 grant from EPA and Supplemental Environmental Projects funds from TCEQ.

Resources

While some solutions require large-scale projects, many opportunities are available for individual residents to take part in and make a difference. Below is a list of available resources.

Feral Hogs

Texas A&M Natural Resource Institute's feral hog website: https://wildpigs.nri.tamu.edu/

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

Producer Assistance

The Texas State Soil and Water Conservation Board (TSSWCB), U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), and Texas A&M AgriLife Extension Service 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 the 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/.

Residential Landscapes

Your landscaped residential lawn can affect surface water quality. Proper landscaping, irrigation, nutrient management and water distribution reduce water waste and pollutant loads that reach waterways. Learn more about what you can do at: https://hlhw.tamu.edu/.

Events and Meetings

The Tres Palacios Creek WPP implementation project aims to bring high quality educational programs to the watershed, in addition to education materials that can be distributed to your friends, family and coworkers. In 2019, TWRI helped conduct a Texas Well Owner Network workshop to train Tres Palacios Creek residents regarding water quality and best management practices for protecting their well and surface waters. Program attendees also had the opportunity to have their well water samples screened for common contaminants such as fecal coliform bacteria, nitrates and high salinity.

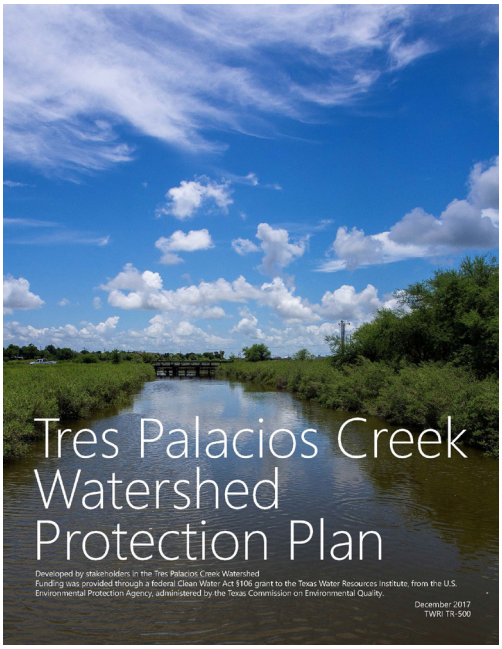
There are several other programs and topics available through TWRI, some of which are:

- OSSF Homeowner Operation and Maintenance workshop (https://ossf.tamu.edu/)
- Healthy Lawns and Healthy Waters program (https://hlhw.tamu.edu/)
- Texas Watershed Steward program (https://tws.tamu.edu/)
- Texas Riparian and Stream Ecosystem Education program (https://twri.tamu.edu/our-work/engaging-educating/texas-riparian-stream-ecosystem-education-program/)
- Rainwater Harvesting workshop (https://rainwaterharvesting.tamu.edu/)

Are there any that sound particularly interesting to you? Do you have other ideas for workshop or topics? Let us know!

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 Nathan Glavy at nathan.glavy@ag.tamu.edu to discuss how you can get involved.



Join the email list!

Use your phone camera to scan the QR code to sign-up for more Tres Palacios news.

Or you may type this link into your internet browser: https://bit.ly/2zfzcaI

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This project is funded through a Clean Water Act nonpoint source grant from the Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency.