

TRES PALACIOS WATERSHED PROTECTION PLAN

*Michael Schramm – Texas Water Resources Institute
March 8, 2018*

Texas Water Resources Institute

- **Operating unit of:**
 - Texas A&M AgriLife Research
 - Texas A&M AgriLife Extension Service
 - Texas A&M University College of Agriculture and Life Sciences

Texas Water Resources Institute

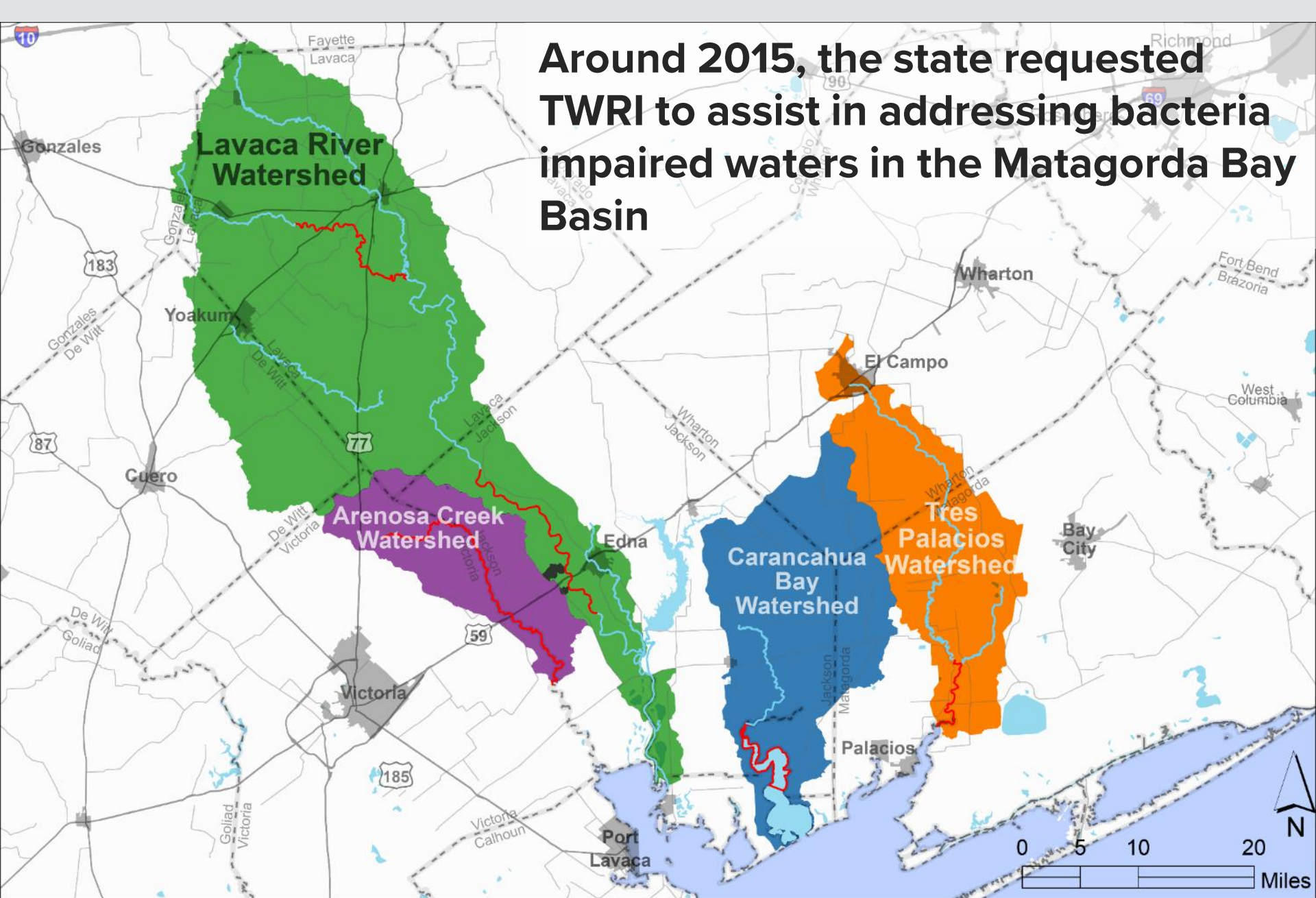
- Established in 1952 as the official state water resources institute.
- One of 54 National Institutes for Water Resources
- twri.tamu.edu

Why is TWRI here?

- Restore, conserve, educate
- We work with local communities to develop science-based, community supported solutions to pressing water quality and quantity challenges

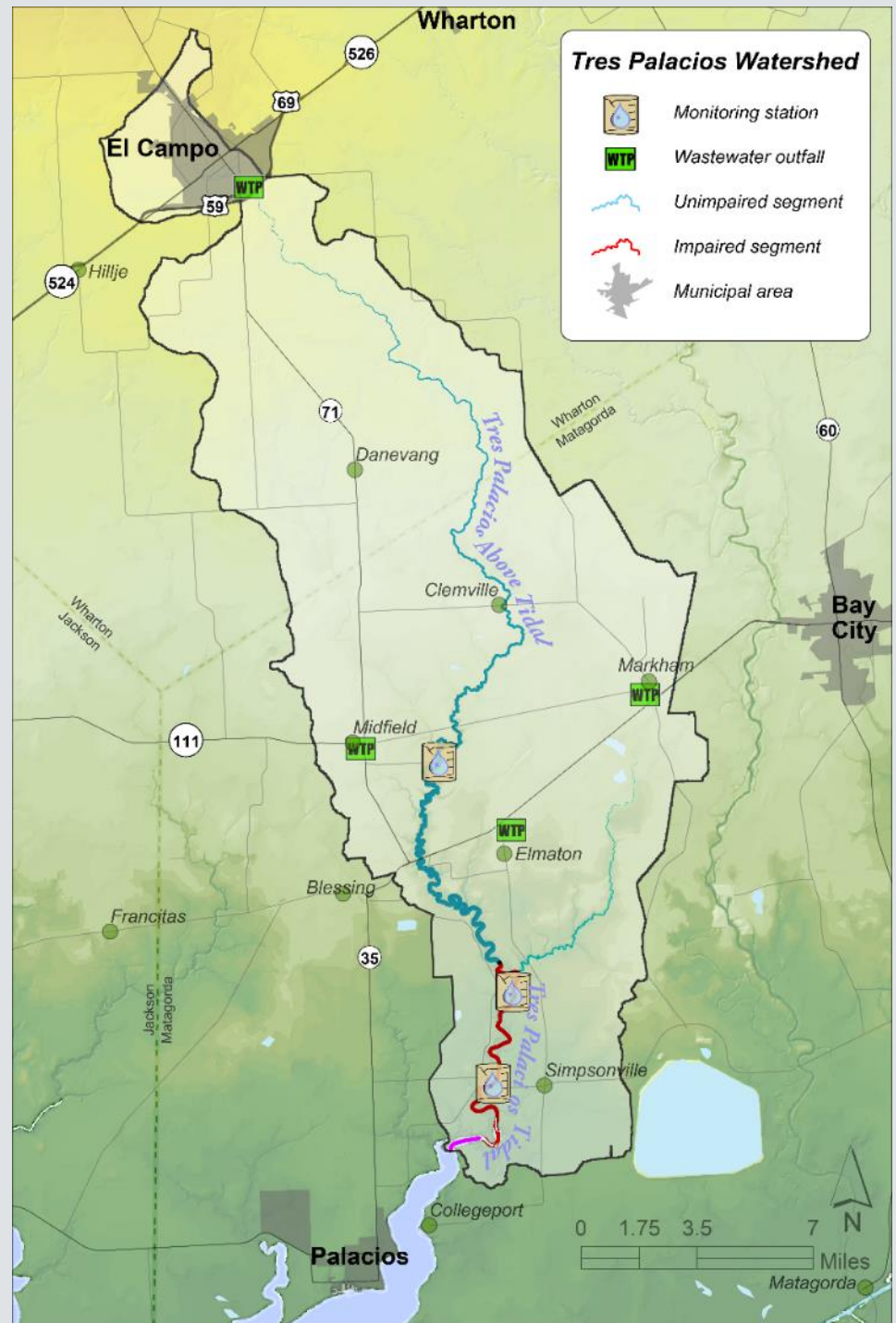


Around 2015, the state requested TWRI to assist in addressing bacteria impaired waters in the Matagorda Bay Basin



Tres Palacios Watershed

- Segments –
 - Tres Palacios Creek Tidal (1505_01)
 - Tres Palacios Creek Above Tidal (1505_02)
 - Wilson's Creek
- Approximately 268 sq miles
- 81% cropland (52%) or pasture (29%)
- Approximately 5% developed
- Permitted wastewater outfalls –
 - City of El Campo 2.62 MGD
 - Markham MUD 0.3 MGD
 - Midfield 0.03 MGD



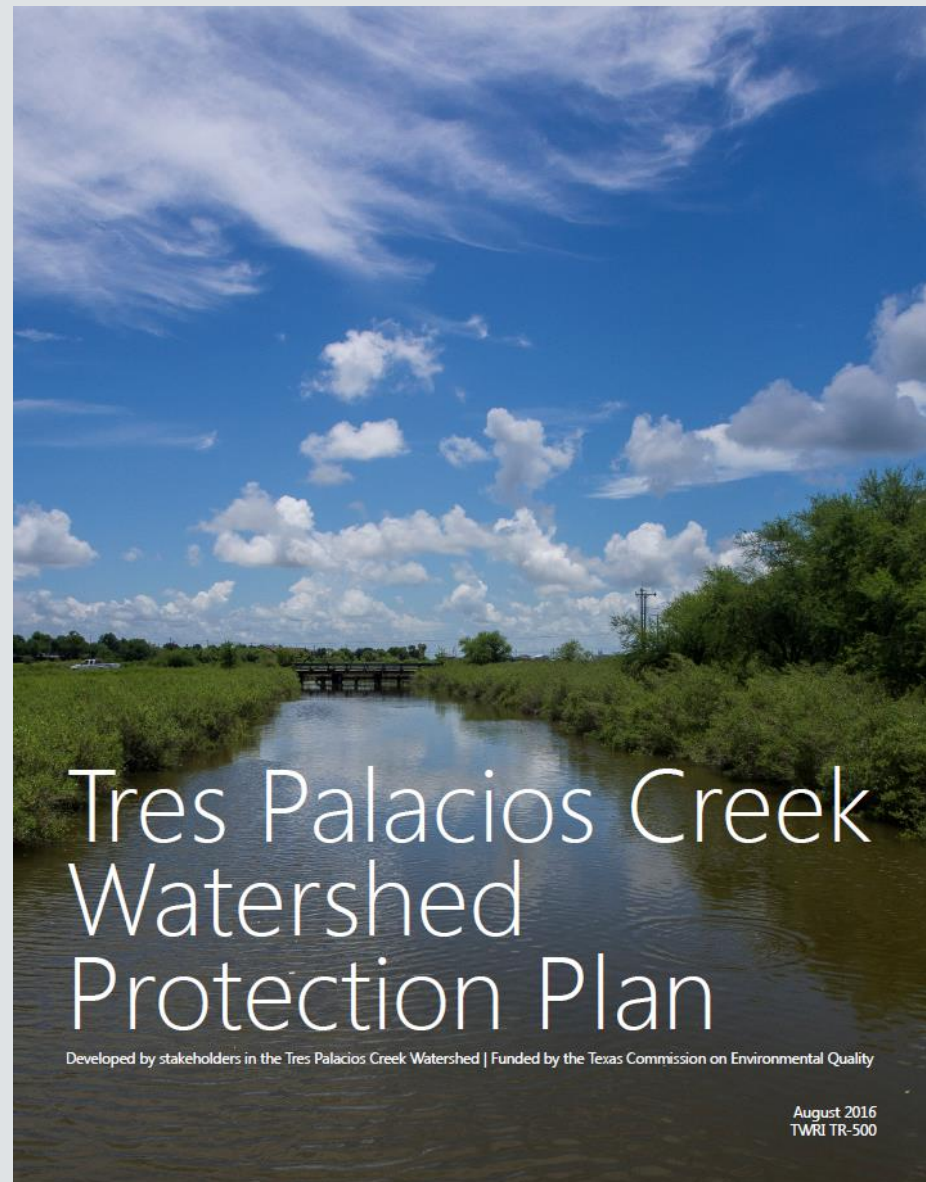
2014 Integrated Report: Assessment Results

- Segment 1501 – Tres Palacios Creek Tidal
 - Category 5b:
 - Dissolved oxygen grab minimum
 - Dissolved oxygen 24-hr average*
 - Dissolved oxygen 24-hr minimum*
 - Category 5c:
 - Enterococcus bacteria
 - Concerns:
 - Dissolved oxygen grab screening level
 - Chlorophyll-a
- Segment 1502 – Tres Palacios Creek Above Tidal
 - Concerns:
 - Chlorophyll-a
 - Dissolved oxygen grab screening level*

* Listings carried forward from previous assessments due to inadequate data

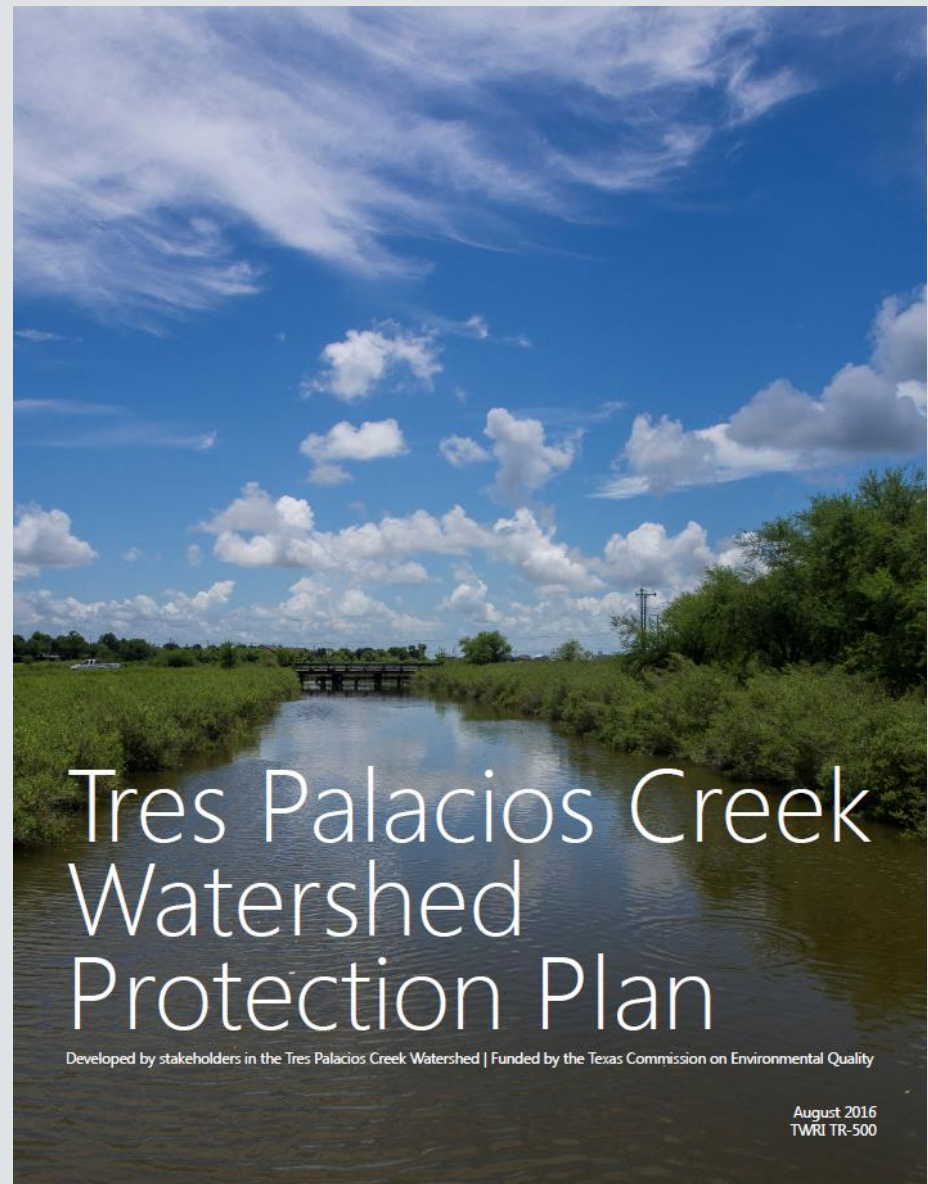
Tres Palacios Watershed Protection Plan

- Developed in coordination with Tres Palacios bacteria TMDL and TMDL I-Plan
- TIAER provided water quality modeling used in both documents
- Heavy focus on bacteria nonpoint source reductions



Tres Palacios Watershed Protection Plan

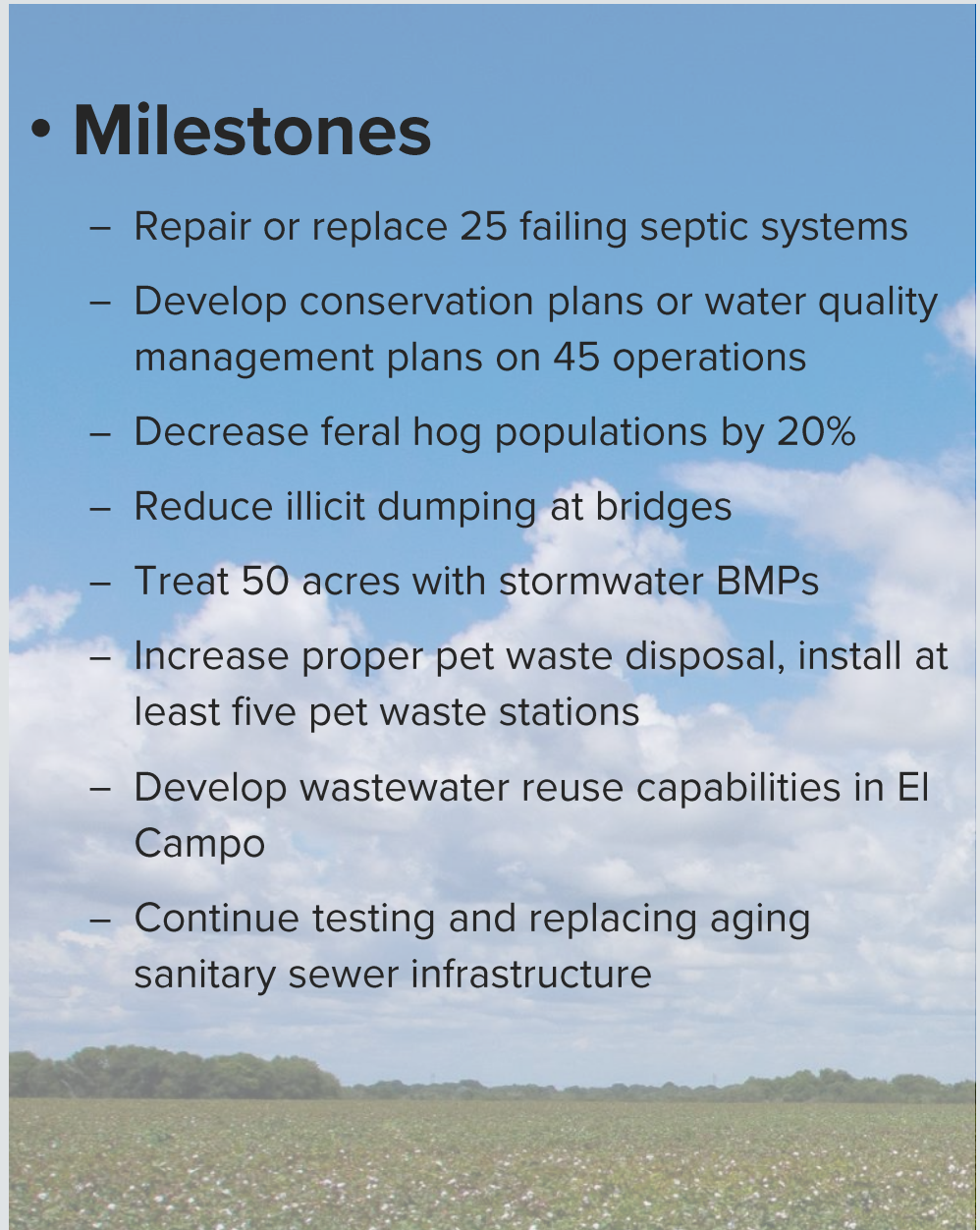
- Submitted to TCEQ
summer of 2016
- Submitted to EPA January
2017
- Summer 2017 – EPA
requests revisions
- January 2018 – TWRI
submitted requested
revisions



Tres Palacios Watershed Protection Plan

• Milestones

- Repair or replace 25 failing septic systems
- Develop conservation plans or water quality management plans on 45 operations
- Decrease feral hog populations by 20%
- Reduce illicit dumping at bridges
- Treat 50 acres with stormwater BMPs
- Increase proper pet waste disposal, install at least five pet waste stations
- Develop wastewater reuse capabilities in El Campo
- Continue testing and replacing aging sanitary sewer infrastructure



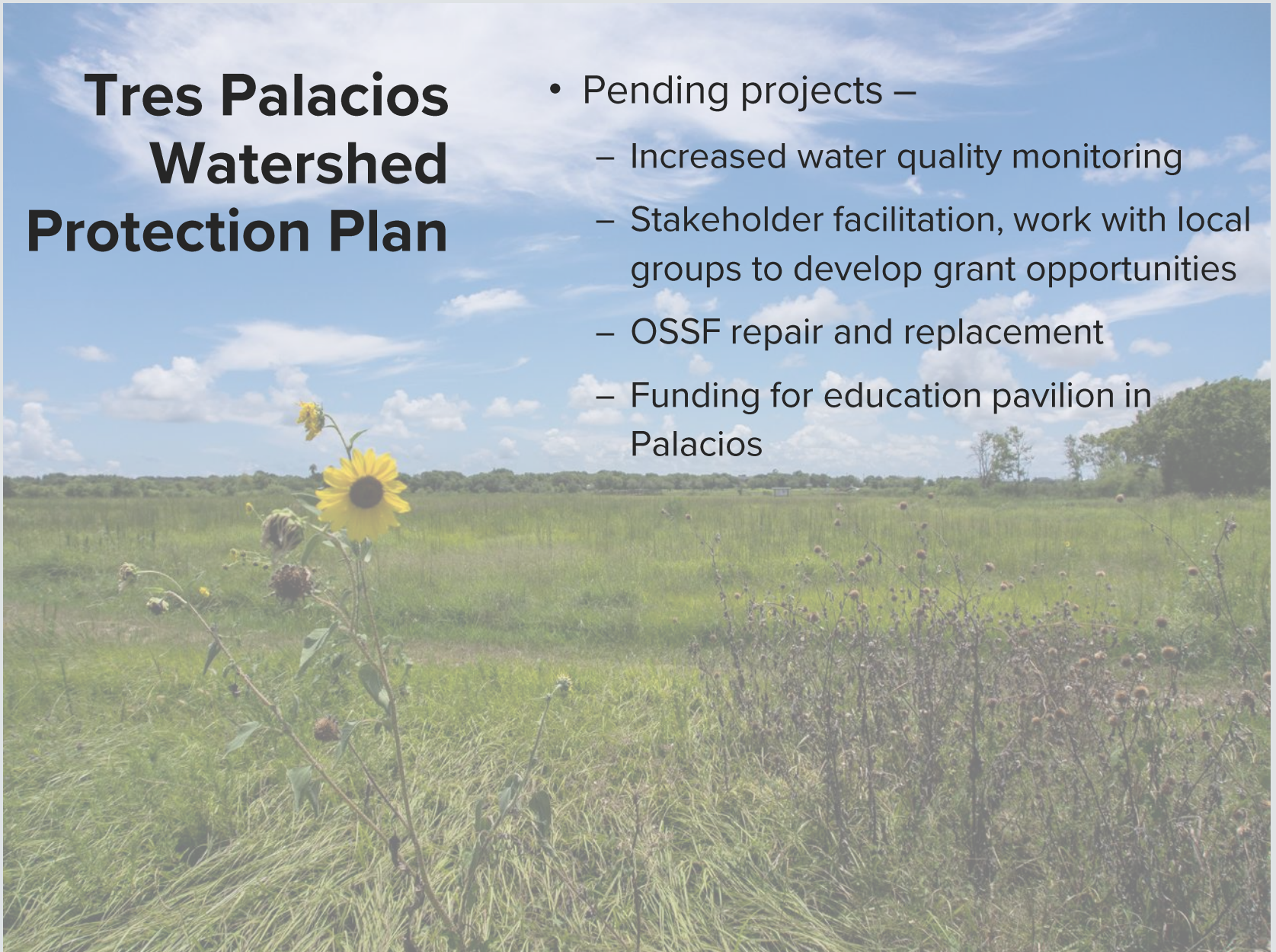
Tres Palacios Watershed Protection Plan

- Working with TGLO to bring education events and CEU opportunities related to water quality to local residents
 - May 8th: Riparian Workshop at Matagorda County Birding Nature Center
 - Early June (Tentative) – Biannual stakeholder meeting

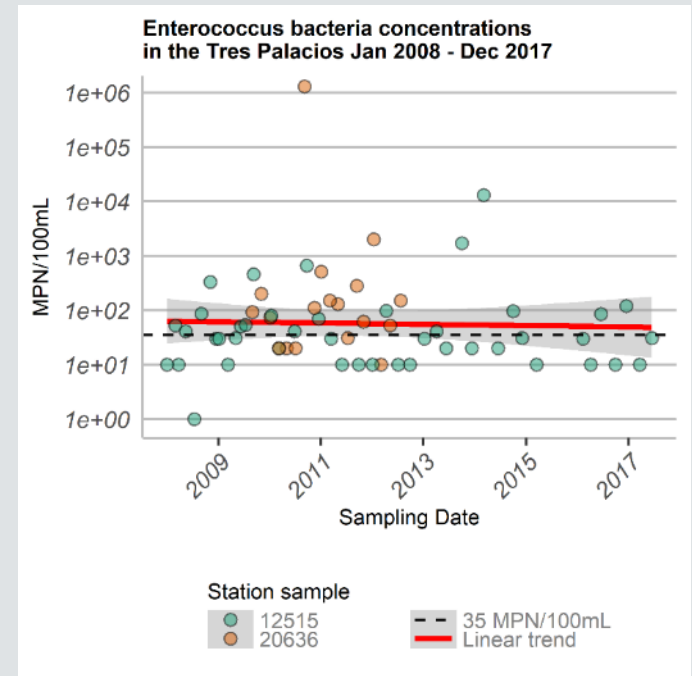
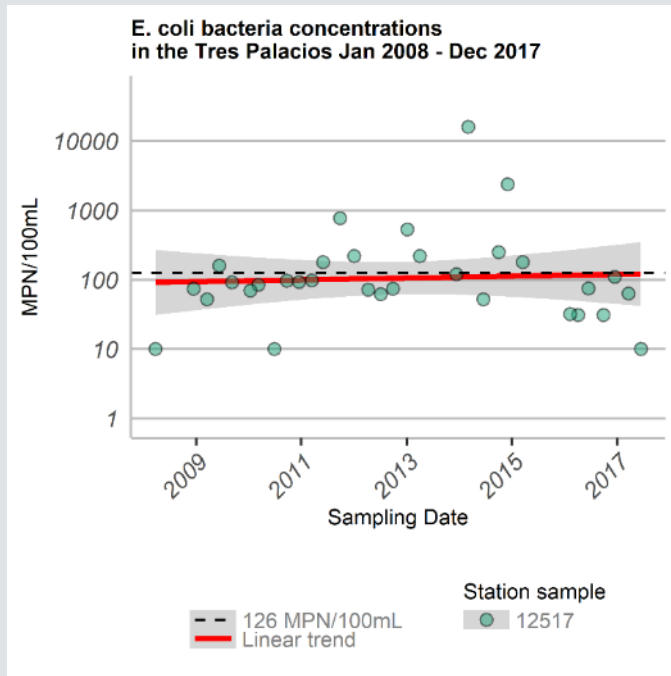


Tres Palacios Watershed Protection Plan

- Pending projects –
 - Increased water quality monitoring
 - Stakeholder facilitation, work with local groups to develop grant opportunities
 - OSSF repair and replacement
 - Funding for education pavilion in Palacios



Recent Trends



1. No significant increase or decrease in bacteria concentrations
2. *E. coli* remains near the primary contact recreation criterion in the above tidal segment
3. Enterococcus remains above the primary contact recreation criterion in the tidal segment

Keep up to date:

- Web site - matagordabasin.tamu.edu
- Sign up for emails notifications
- Attend upcoming meetings and stakeholder events

Contacts:

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Thank you!