

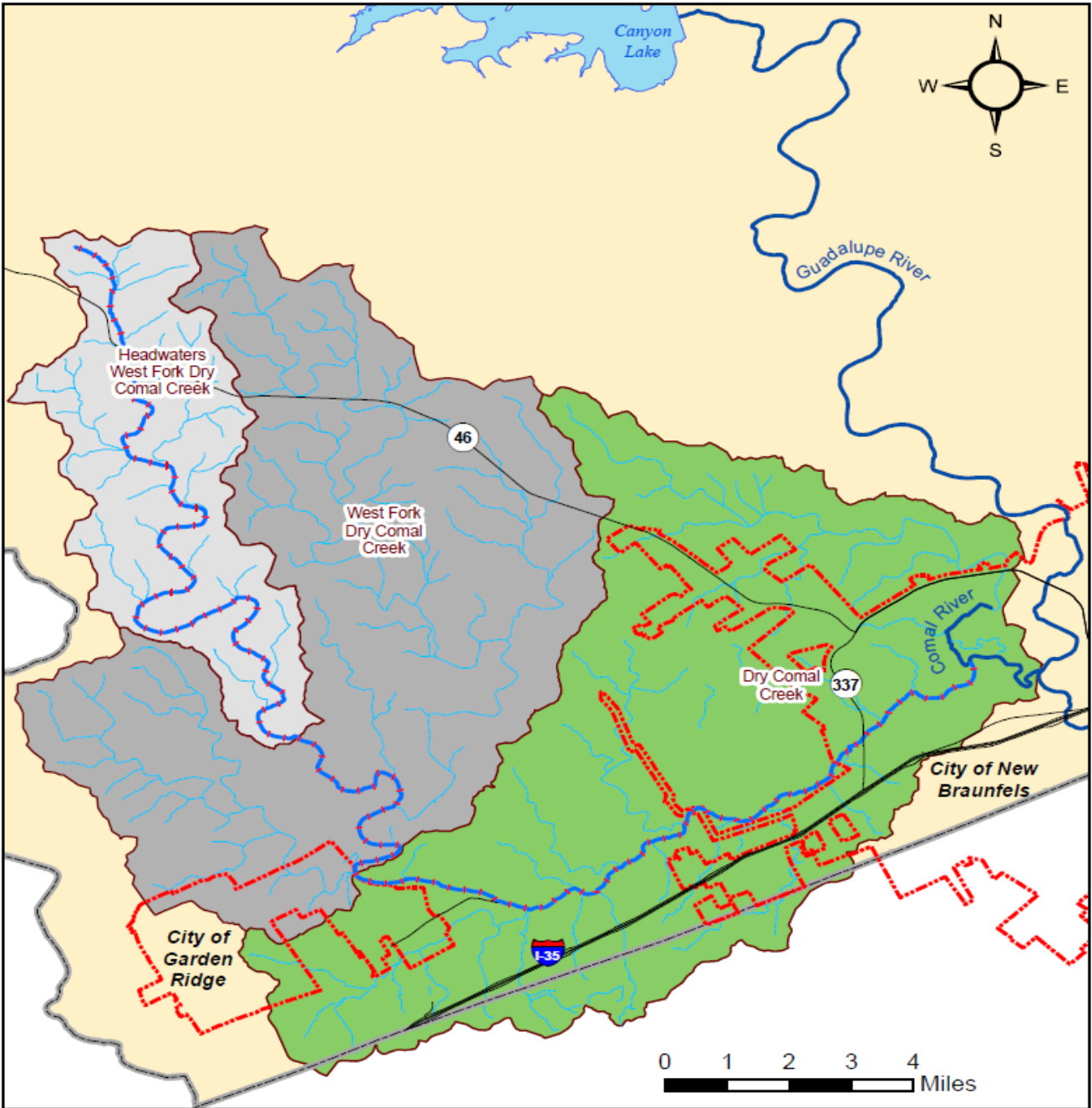


Dry Comal Creek & Comal River Watershed Protection Plan

Mark Enders
Watershed Program Manager
March 23, 2017

Watershed Protection Planning for the Dry Comal Creek and Comal River

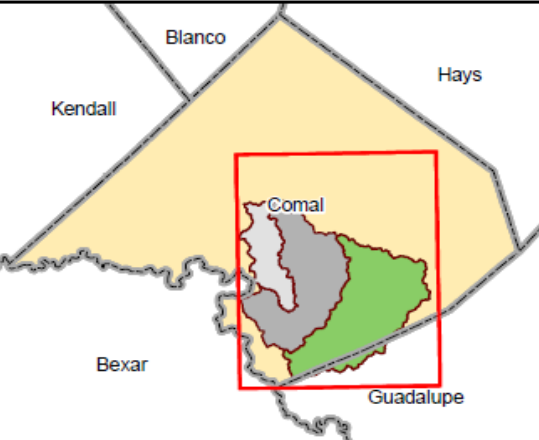
- Project Location
- Water Quality Issues
- Available Data
- WPP
- Proposed Bacteria Mgmt Measures



Dry Comal Creek and Comal River Watersheds

Legend

- Roads
- Streams and Tributaries
- Dry Comal Creek
- Rivers
- HUC12: Dry Comal Creek
- HUC12: Headwaters West Fork Dry Comal Creek
- HUC12: West Fork Dry Comal Creek
- - - City Boundaries
- Comal County
- County Boundaries



Clean Rivers Program (CRP) Water Quality Monitoring Locations



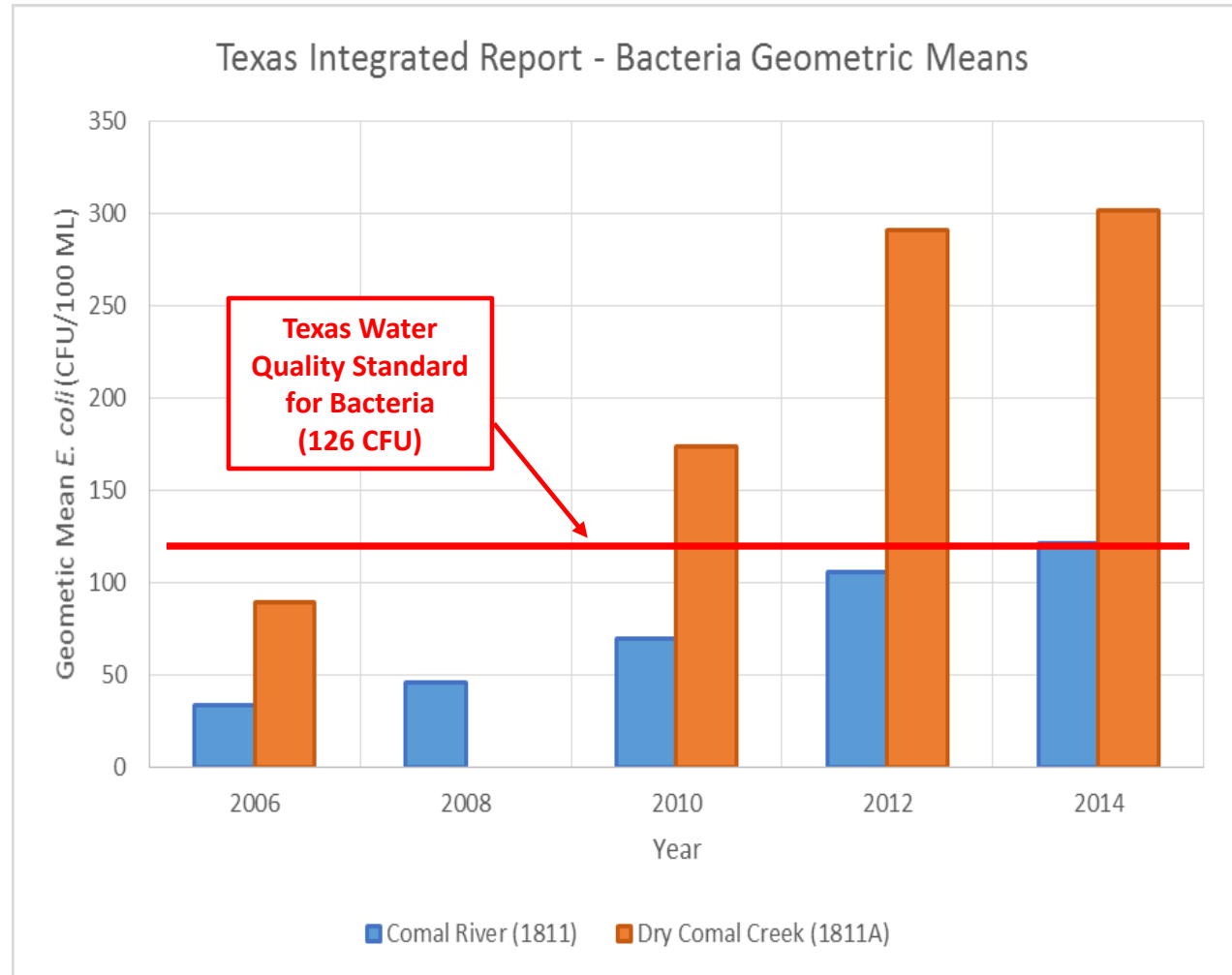
Bacteria Levels-Dry Comal Crk and Comal Rvr

□ Dry Comal Creek

- Initially placed on the 303(d) list for bacteria in 2010.

□ Comal River

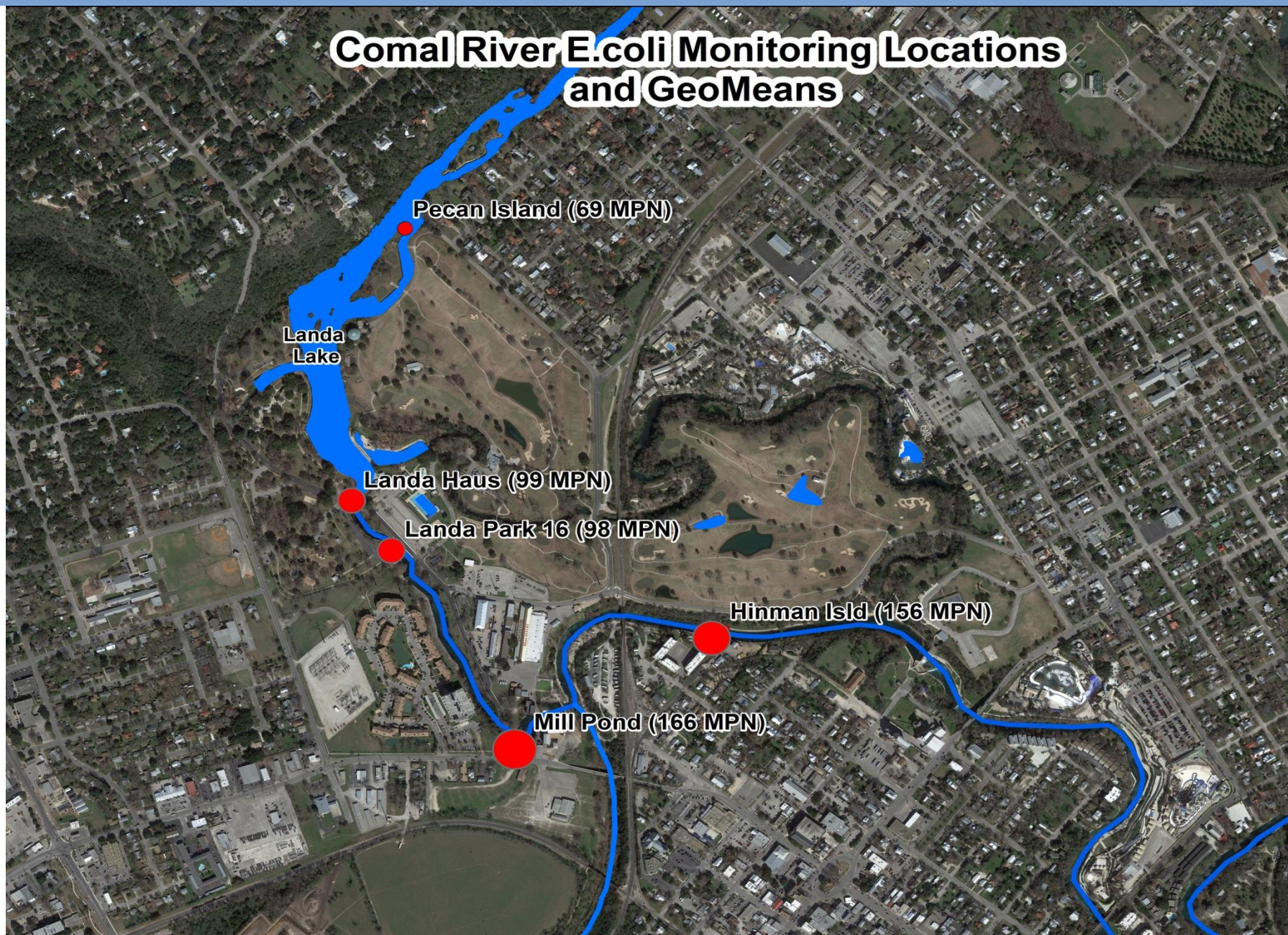
- Bacteria levels have been increasing over the past 10 years.



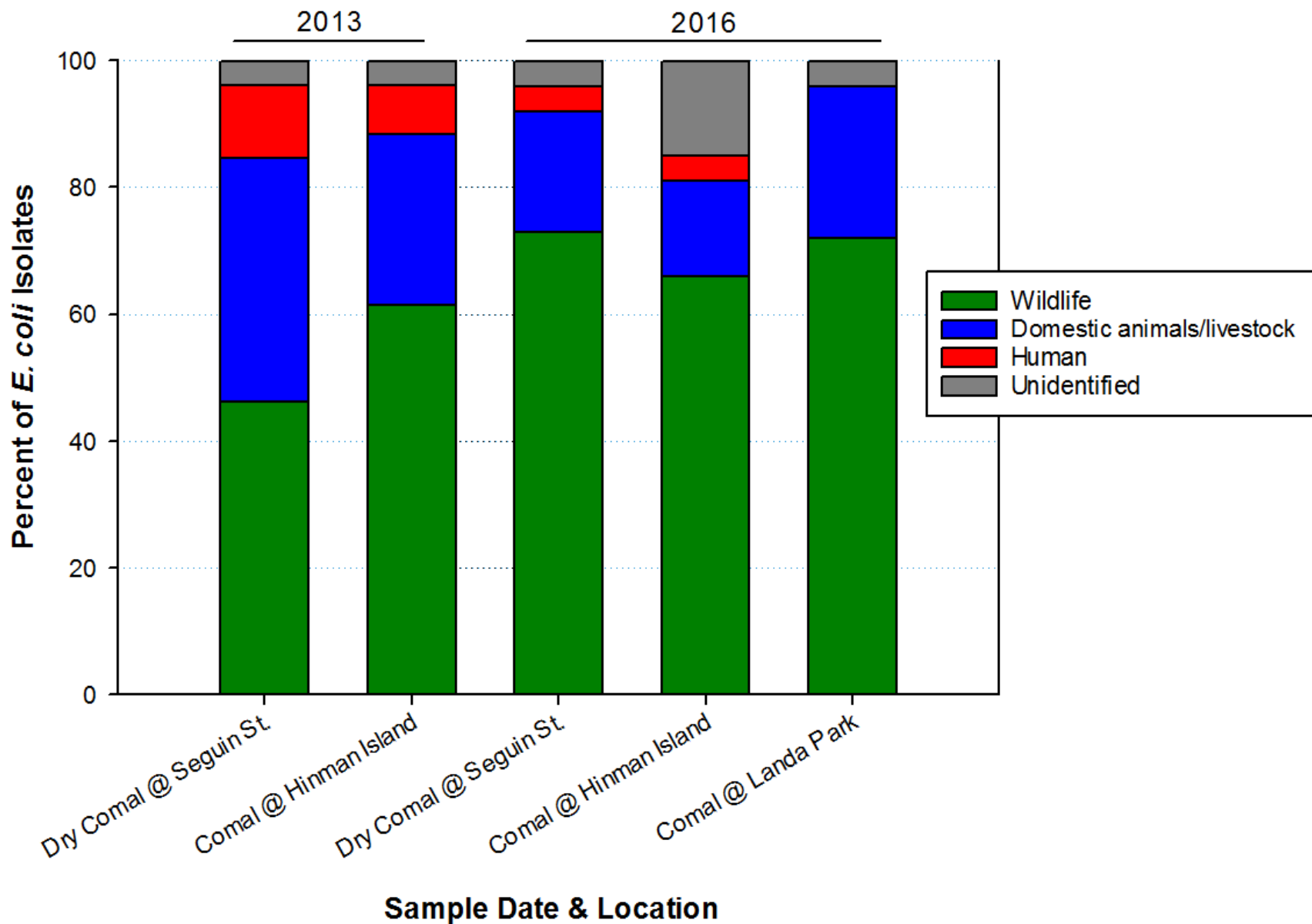
Additional *E.coli* Monitoring Locations -Dry Comal Creek



Additional *E.coli* Monitoring Locations –Comal River



Bacteria Source Tracking Results (3-Way Split)



Watershed Protection Planning for the Dry Comal Creek and Comal River

- The City and its project partners are developing a Watershed Protection Plan (WPP) to address bacteria levels in the Dry Comal Creek and Comal River watersheds. Effort began in Summer 2015.
- The WPP is funded through grants from EPA/ TCEQ:
 - Phase 1: \$200,000 (\$120,000 grant/ \$80,000 match)
 - Phase 2: \$475,000 (\$285,000 grant/ \$190,000 match)
- A large group of local stakeholders and technical advisors have been assembled to assist with the WPP.



WPP Development & Status

- The WPP includes analysis of WQ data, WQ modeling (SELECT and FDC/ LDC), bacteria source identification, education & development of bacteria management measures.
- Stakeholder Group: approx. 25 members, including technical advisors
- Work Groups
 - 1) Livestock and Ag
 - 2) Wildlife Management
 - 3) Urban Stormwater & Infrastructure
 - 4) Education & Outreach
- The WPP is expected to be completed in late 2017 and submitted to TCEQ & EPA for review.



Proposed Bacteria BMPs

• Overabundant Urban Wildlife

- ☐ Wildlife feeding restrictions & education
- ☐ Urban wildlife surveys – Deer & Ducks
- ☐ Deer & duck removal

• Urban Stormwater

- ☐ LID and Stormwater Treatment BMPs
- ☐ Enhance FOG Education Prgm
- ☐ Pet Waste BMPs – education, ordinances, pet waste stations

• Livestock

- ☐ Voluntary Water Quality Mgmt Plans (WQMPs) for individual ranches
- ☐ Education and Outreach – ex. Lone Star Healthy Streams

• Septic Systems/ OSSFs

- ☐ Septic system operation education
- ☐ Require inspection and maintenance be completed by trained professional

• Feral Hogs

- ☐ Mgmt workshops, bounty program, track trapping rates

Education and Outreach

- **Focus on students, kids, homeowners, & tourists**
- **Develop core message that will:**
 - Link wildlife feeding with protecting water quality
 - Teach that feeding wildlife is harmful to the wildlife
 - Communicate that the WPP is a proactive solution
 - Be a positive message (focus on the future, not impairment)
 - Focus on benefits of taking action
- **Work with TPWD Urban Wildlife Biologists on education and outreach associated w feeding.**

Questions?

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