

Watershed Protection Plans Lower Rio Grande Valley

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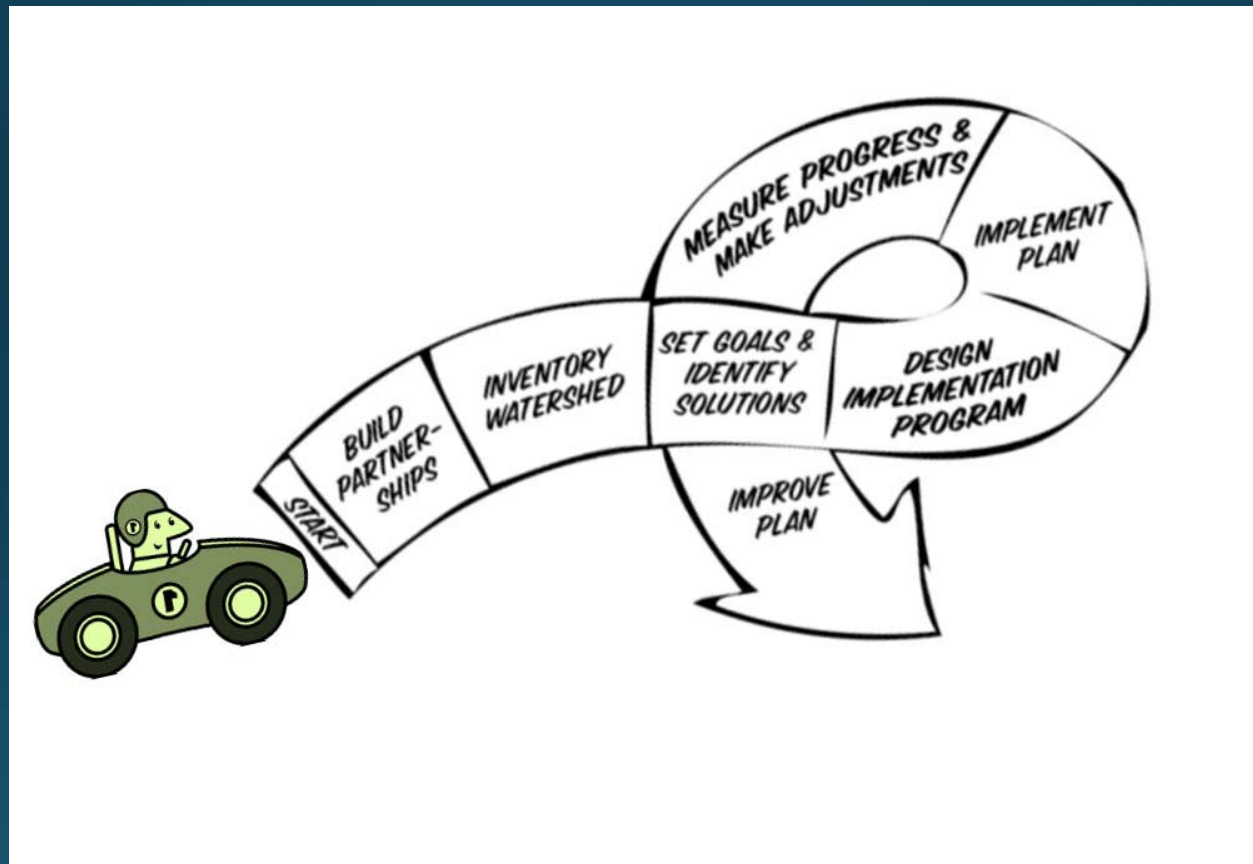


Watershed Protection Plans

- A voluntary, comprehensive planning document that is developed with stakeholder input
- Provides management measures to reduce nonpoint source pollution
- Nine-element WPPs prioritized for Clean Water Act Section 319(h) funding



Watershed Planning Process



Source: EPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters

Local Partnerships are key to developing stakeholder-driven plans

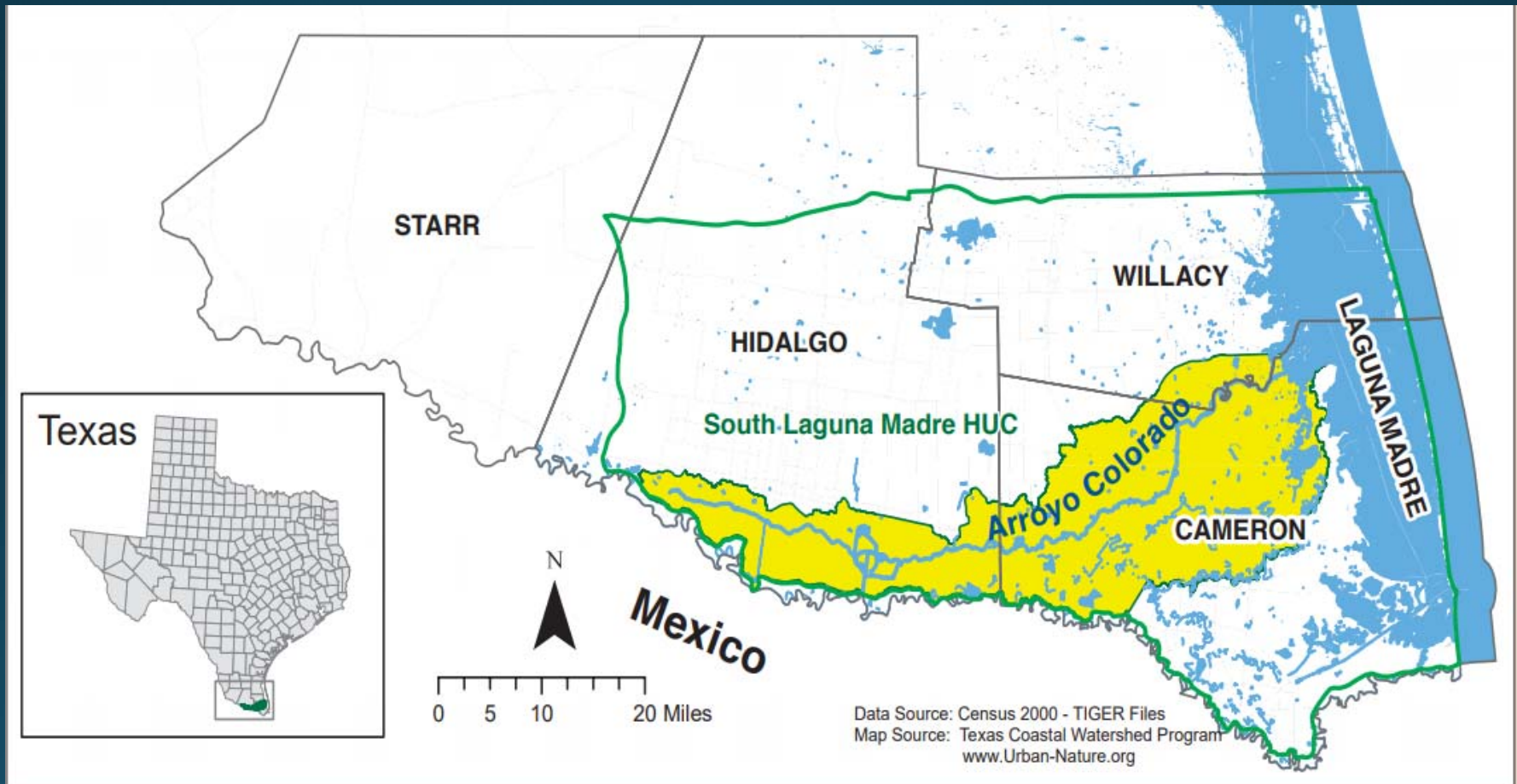


WPPs are Data-Driven

9-Elements

- A - Identify causes and sources of pollution
- B - Estimate pollutant loading into the watershed and the expected load reductions
- C - Describe management measures that will achieve load reductions and targeted critical areas
- D - Estimate amounts of technical and financial assistance and the relevant authorities needed to implement the plan
- E - Develop an information/education component
- F - Develop a project schedule
- G - Describe the interim, measurable milestones
- H - Identify indicators to measure progress
- I - Develop a monitoring component

It all started with the Arroyo Colorado



Brief History

- 2001 – Legacy pesticide TMDL
- 2002 – Dissolved Oxygen TMDL
 - Not established. WPP recommended.
- 2003 – Toxic organic compound TMDL
- 2006 – Arroyo Colorado WPP Completed to address low dissolved oxygen in Tidal segment and associated nutrient loadings.
 - 2nd WPP in Texas.



Stakeholder-Driven Plan

- The Arroyo Colorado Partnership grew out of two smaller groups of local stakeholders formed in 1998 as part of the State's TMDL process.

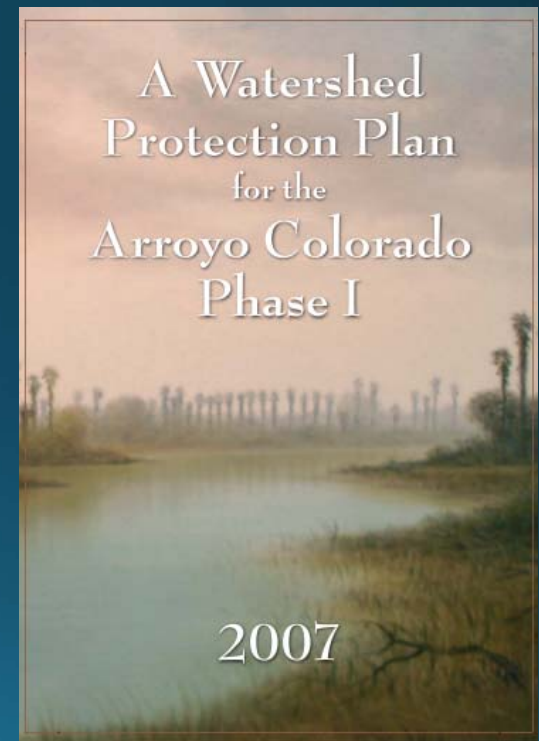


Steering Committee meeting at Harlingen Public Library



Phase I Implementation Progress

- Approximately \$120 million spent upgrading WWTFs from non-mechanical, lagoon treatment plants to modern mechanical plants
- BMPs adopted on 130,000 acres of irrigated cropland
- Centralized wastewater service provided to 17,054 residents in 42 colonias
- 22 stormwater management plans developed by the cities, counties and TxDOT
- 9 green infrastructure demonstration projects completed
- Residents reached through education and outreach efforts
- Much more...



Arroyo Colorado WPP Update

- Completed in 2017
- Active 319 projects being funded
 - Watershed Coordinator
 - Los Fresnos low impact development
 - Urban low impact development research
 - OSSF inventory and education
- Since 2010, over \$4.8 million CWA 319(h) federal funds awarded
- Lots of BMPs completed and ongoing!
 - Contact the Partnership to learn more
<http://arroyocolorado.org/>



Update to the
Arroyo Colorado
Watershed Protection Plan

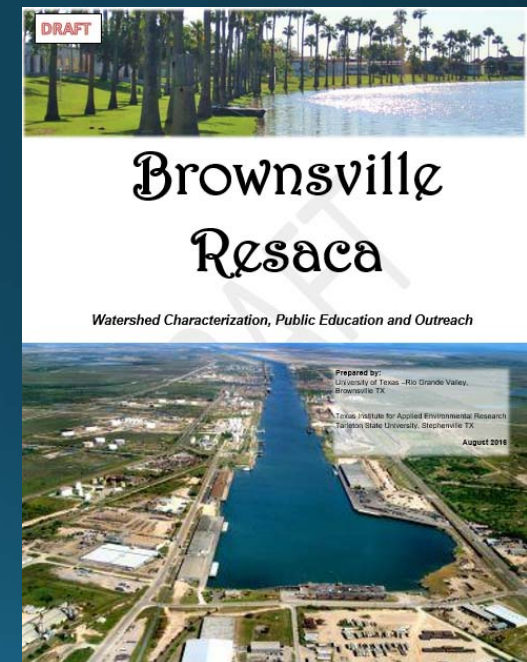
August 2017
TWRI TR-504

Efforts Beyond the Arroyo Colorado



Lower Laguna Madre/Brownsville Ship Channel

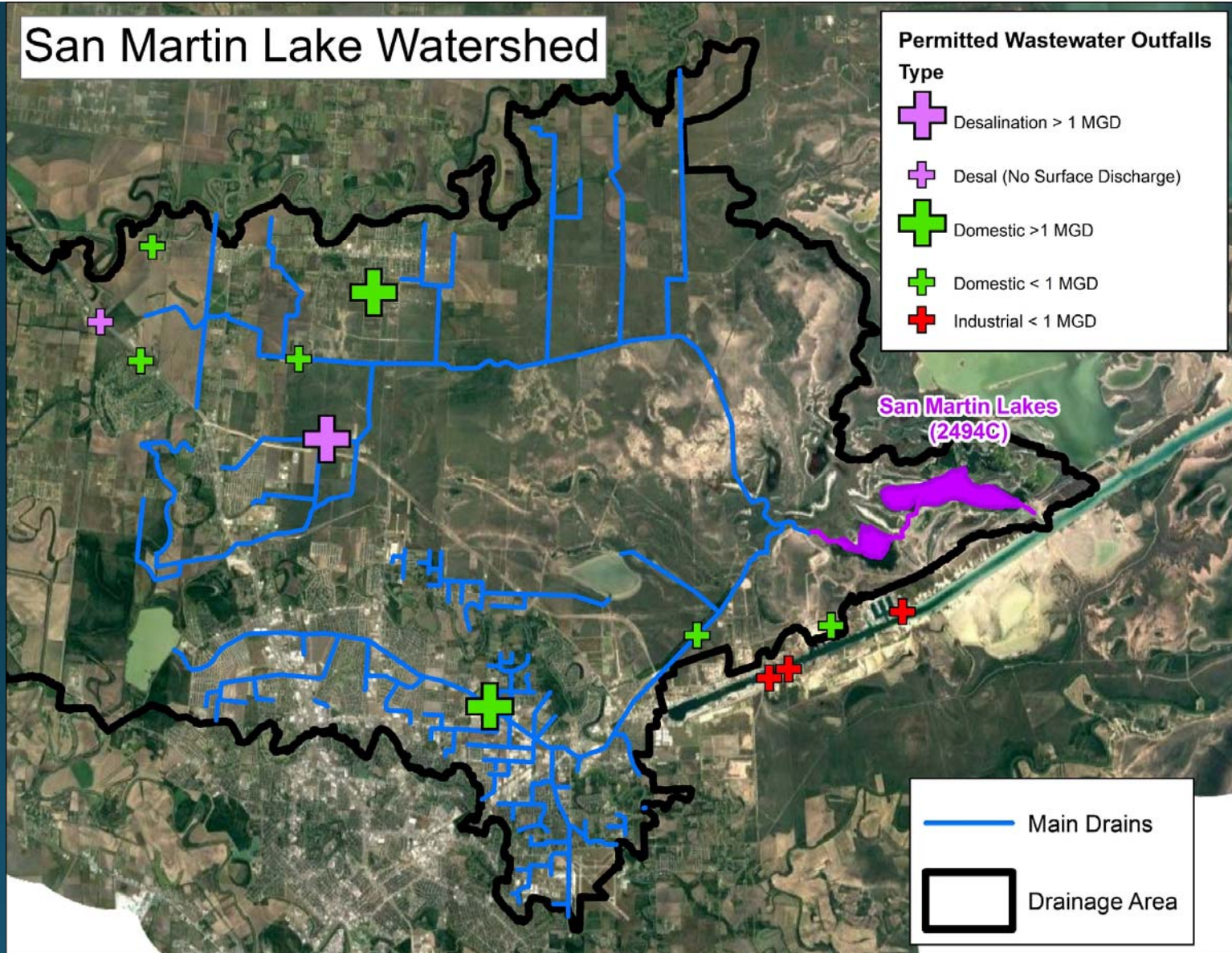
- Lower Laguna Madre/Brownsville Ship Channel Watershed Characterization began in 2014, completed in 2018
- Data Collection Recommendations to meet 9-elements
 - Start sampling for Enterococcus routinely
 - Establish water quality monitoring at San Martin Lake
 - Establish water quality monitoring on three main tributaries
 - Establish continuous flow monitoring stations to evaluate freshwater inflows.
- UTRGV is lead for development of the WPP



San Martin Lake

- Critical understudied Estuary
- New TCEQ designation as Assessment Unit 2494C
- Over half the watershed drains to Lake
- Contact recreation
 - Kayking , fishing, and wade fishing
 - Paddling Trail
- How much freshwater inflow from San Martin Lake to Ship Channel?
- 6 permitted outfalls in watershed (20.75 MGD total)

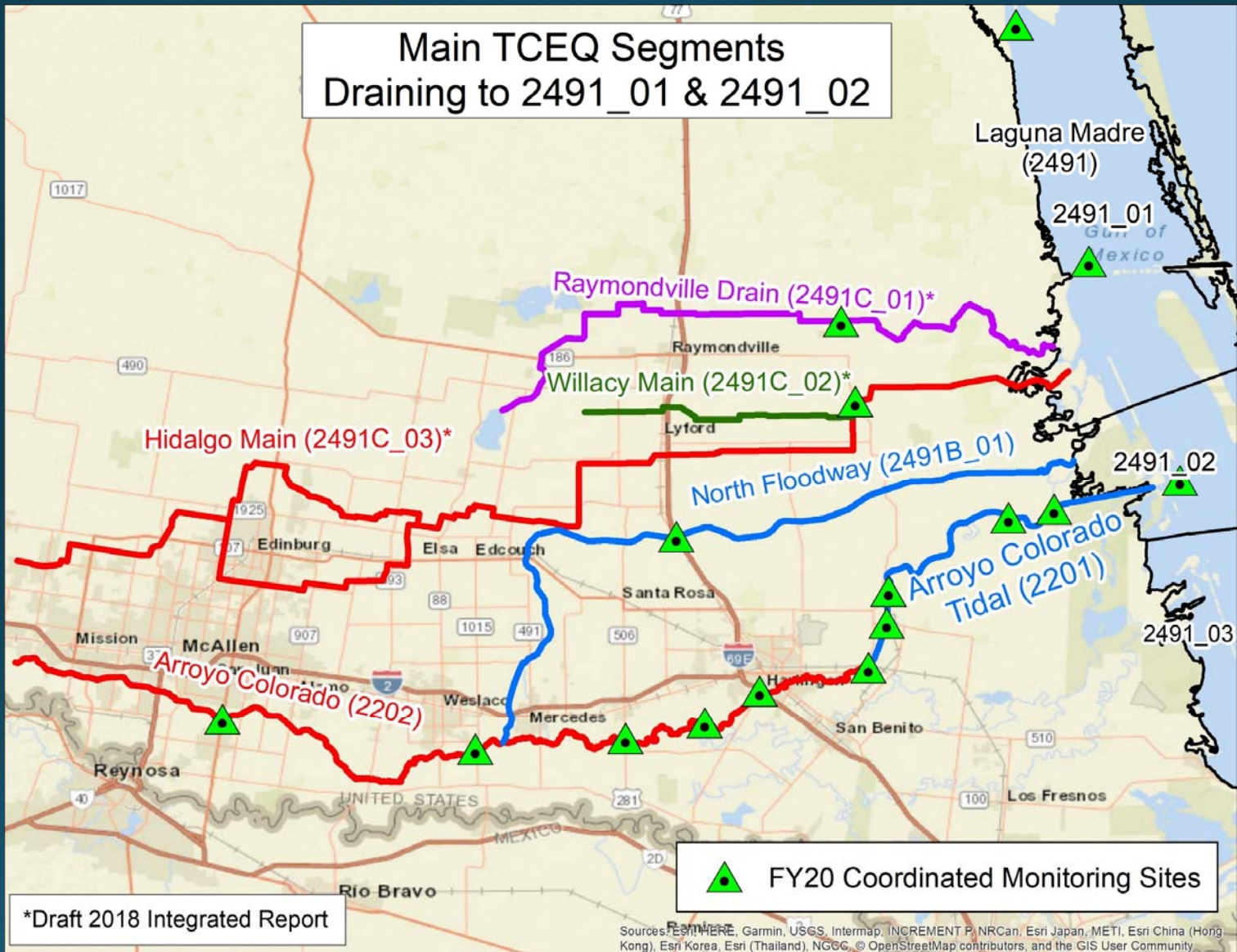
San Martin Lake Watershed



North Tributaries Characterization

- Initial characterization and stakeholder coordination for 3 watersheds.
 - North Floodway
 - Hidalgo Main
 - Raymondville Drain
- UTRGV is the lead researcher
- Project began September 2018
- Additional data needed for 9-element WPP development

Main TCEQ Segments Draining to 2491_01 & 2491_02



The Lower Rio Grande/Río Bravo Water Quality Initiative

- Binational effort to restore and protect water quality in the Lower Rio Grande/Río Bravo
- Conducted under the auspices of the International Boundary and Water Commission (CILA/IBWC)
- Six agencies involved:



IBWC USEPA TCEQ



LRGWQI

US

Mexico

CILA CONAGUA CEAT

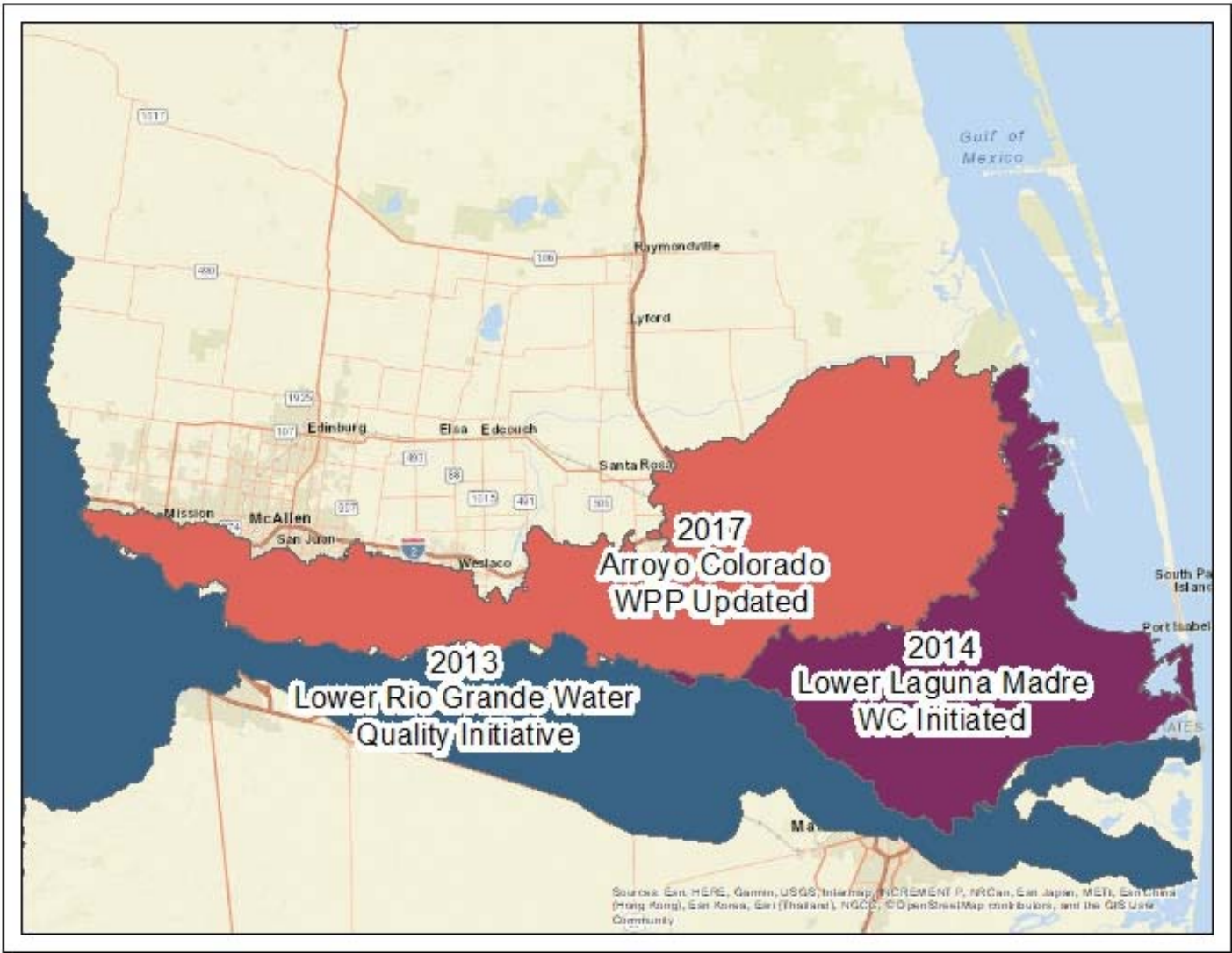


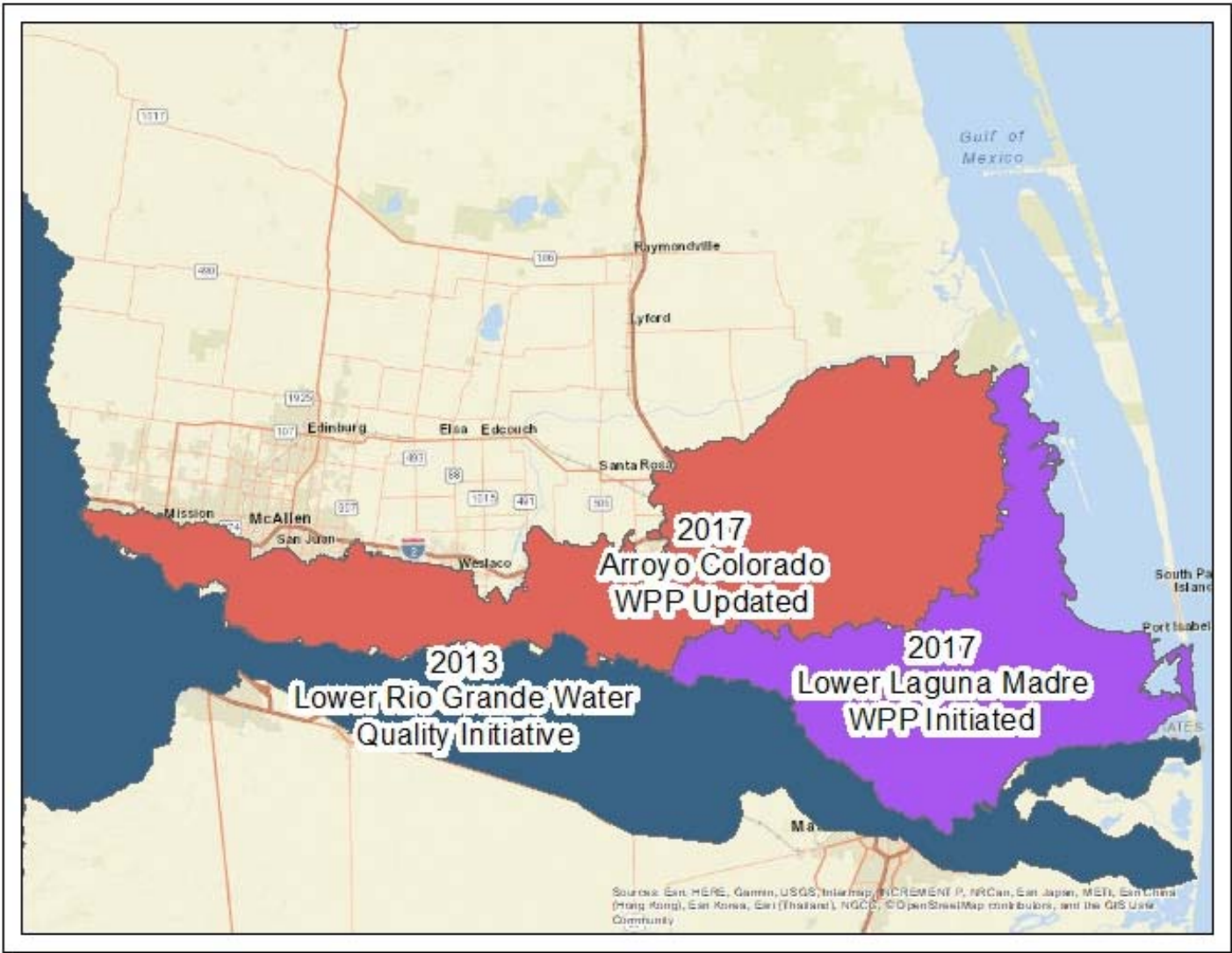


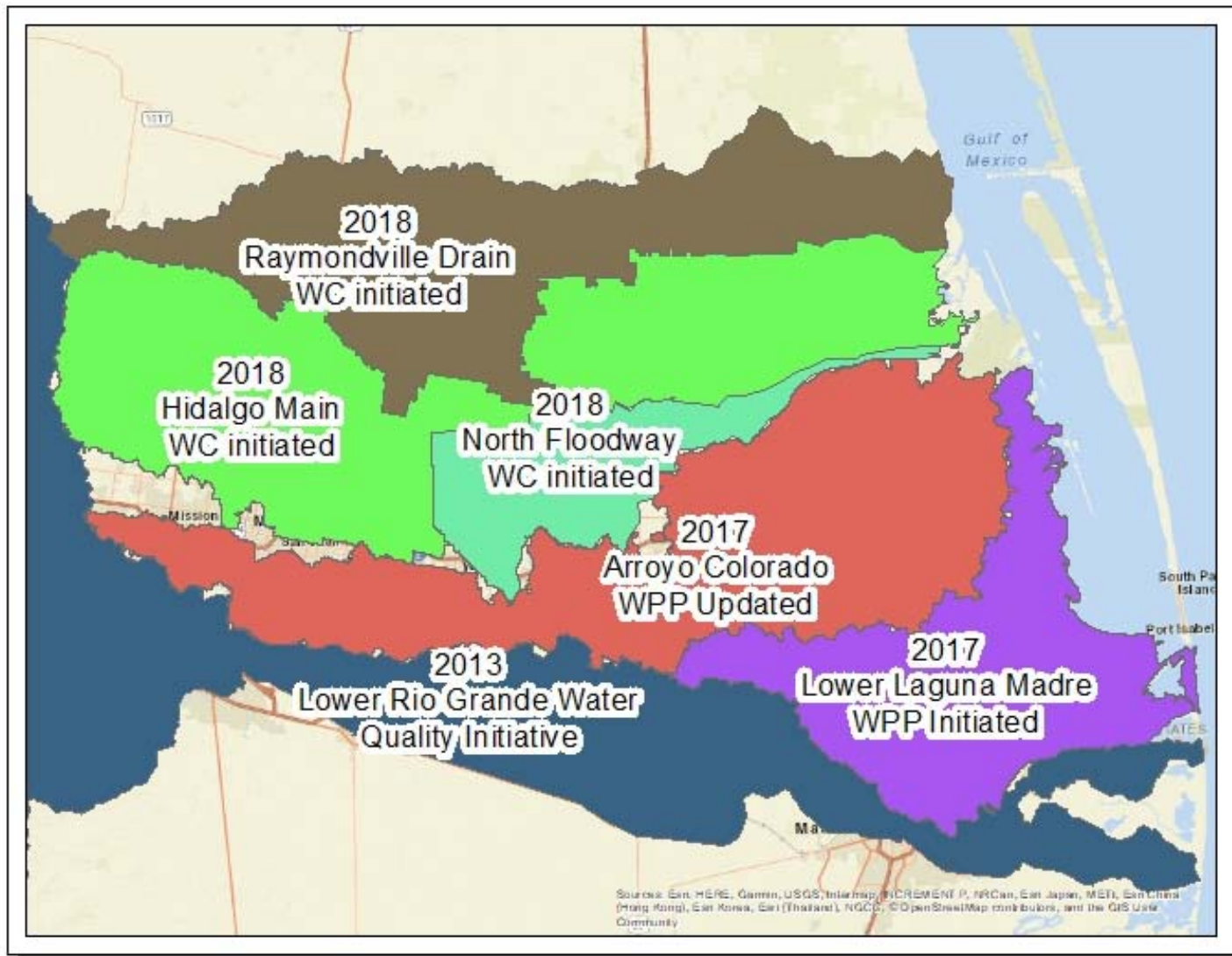












Questions?

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