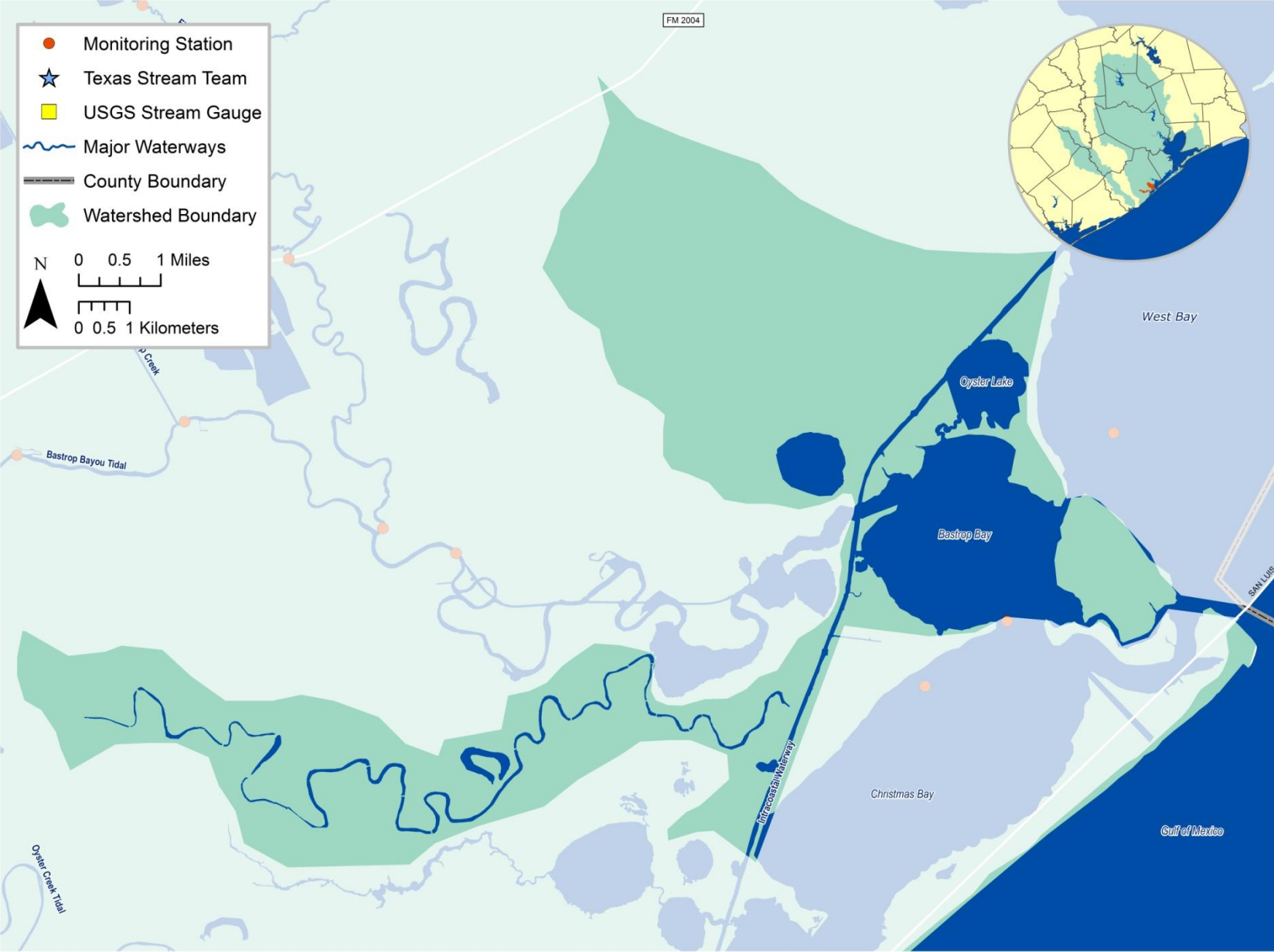
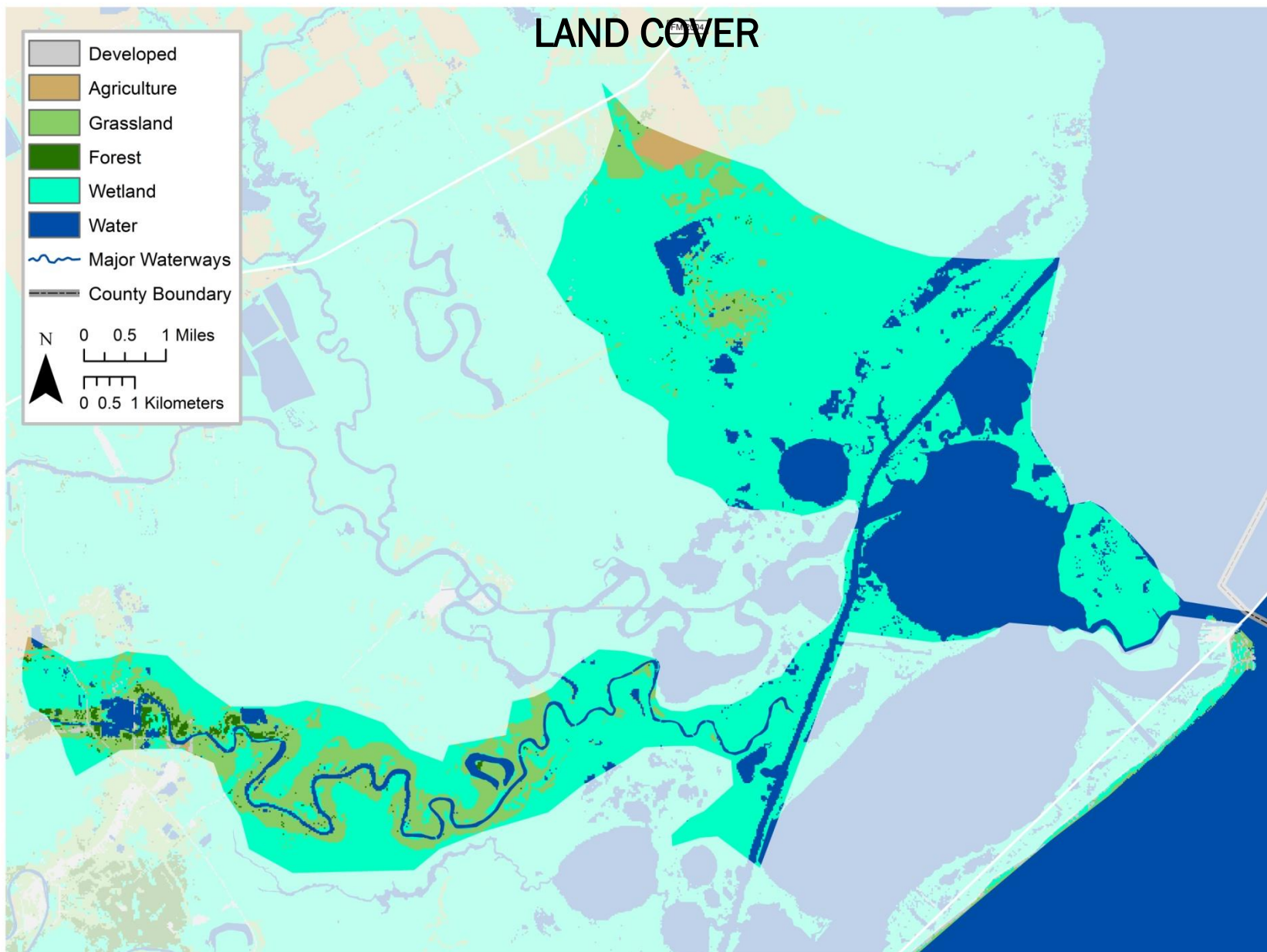


# BASTROP BAY & OYSTER LAKE – SEGMENT 2433



# BASTROP BAY & OYSTER LAKE – SEGMENT 2433

## LAND COVER



<b>Segment Number:</b> 2433		<b>Name:</b> Bastrop Bay / Oyster Lake			
<b>Area:</b> 5 square miles	<b>Miles of Shoreline:</b> 18 miles	<b>Designated Uses:</b> Primary Contact Recreation 1; High Aquatic Life Use; Oyster Waters			
<b>Number of Active Monitoring Stations:</b> 0	<b>Texas Stream Team Monitors:</b> 0	<b>Permitted Outfalls:</b> 0			
<b>Description:</b>	Located immediately west and north of Mud Island at the western end of West Galveston Bay, Bastrop Bay is connected to Oyster Lake via the Gulf Intracoastal Waterway or directly to West Galveston Bay via a cut on the north end of Mud Island in Brazoria County. Assessment Unit 2433OW_01: Bastrop Bay (Oyster Waters) Assessment Unit 2433OW_02: Oyster Lake (Oyster Waters)				

Percent of Stream Impaired or of Concern						
Segment ID	PCBs/Dioxin	Bacteria	Dissolved Oxygen	Nutrients	Chlorophyll a	Other
2433	-	-	-	-	-	-
2433OW	-	100	-	-	-	-

Segment 2433			
Standards	Bays & Estuaries	Screening Levels	Bays & Estuaries
Temperature (°C/°F):	35 / 95	Ammonia-N (mg/L):	0.10
Dissolved Oxygen (24-Hr Average) (mg/L):	4.0	Nitrate-N (mg/L):	0.17
Dissolved Oxygen (Absolute Minima) (mg/L):	3.0	Orthophosphate Phosphorus (mg/L):	0.19
pH (standard units):	6.5-9.0	Total Phosphorus-P (mg/L):	0.21
Enterococci (MPN/100mL) (grab):	104	Chlorophyll a (µg/L):	11.6
Enterococci (MPN/100mL) (geometric mean):	35		
Fecal Coliform in Oyster Waters (CFU/100mL) (median/grab):	14/43		

## Water Quality Issues Summary

Issue	2014 Assessment <i>I – Impaired</i> <i>C – Of Concern</i>	Possible Causes / Influences / Concerns Voiced by Stakeholders	Possible Solutions / Actions To Be Taken
Elevated Levels of Indicator Bacteria in Oyster Waters	24330W I	<ul style="list-style-type: none"> <li>▪ Animal waste from agricultural production, ranchettes and hobby farms</li> <li>▪ Rapid urbanization and increased impervious cover</li> <li>▪ Constructed stormwater controls failing</li> <li>▪ Developments with malfunctioning OSSFs</li> <li>▪ Improper or no pet waste disposal</li> <li>▪ Waste haulers illegal discharges/improper disposal</li> <li>▪ Direct and dry weather discharges</li> <li>▪ Poorly operated or undersized WWTFs</li> <li>▪ WWTF non-compliance, overflows, and collection system by-passes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implement stream fencing or alternative water supplies to keep livestock out of or away from waterways</li> <li>▪ Encourage Water Quality Management Plans or similar projects for agricultural properties</li> <li>▪ Install and/or conserve vegetative buffer areas along all waterways</li> <li>▪ Improve compliance and enforcement of existing stormwater quality permits</li> <li>▪ Improve construction oversight to minimize TSS discharges to waterways</li> <li>▪ More public education regarding OSSF operation and maintenance</li> <li>▪ Ensure proper citing of new or replacement OSSFs</li> <li>▪ More public education on pet waste disposal</li> <li>▪ Add water quality features to stormwater systems</li> <li>▪ Increase monitoring requirements for self-reporting</li> <li>▪ Regionalize chronically non-compliant WWTFs</li> <li>▪ Require all systems to develop and implement a utility asset management program and protect against power outages at lift stations</li> <li>▪ Impose new or stricter bacteria limits than currently designated by TCEQ</li> </ul>

## Segment Discussion:

**Watershed Characteristics:** Bastrop Bay and Oyster Lake are surrounded by wetlands, coastal grasslands, and the Brazoria National Wildlife Refuge. There are also islands of forested lands and cultivated areas surrounding the bay. The area is home to many species of birds, fish, crustaceans, mollusks, and seagrass.

**Water Quality Issues:** Assessment unit 24330W\_02 Oyster Lake is listed in the 2014 IR as impaired for oyster waters due to elevated levels of fecal coliform bacteria. This assessment unity is closed by the Seafood Safety Division of the Texas Department of State Health Services for the harvesting of oysters and other shellfish for direct marketing. This segment completely supports the primary contact and high aquatic life use designations.

**Special Studies/Projects:** Bastrop Bay and Oyster Lake are included in the Oyster Waters I-Plan for bacteria which began in 2010 after the TMDL was approved by the EPA. The final draft I-Plan was submitted to the TCEQ in August of 2014 and final approval of the draft was given in August of 2015. For more information about this project, please refer to the detailed discussion located in the Public Involvement and Outreach section of the 2016 Basin Summary Report.

**Trends:** The most recent routine monitoring data in the TCEQ database was collected in 2001. Water quality trends in this watershed were not evaluated.

## Recommendations

Coordinate education efforts with other local TMDL and watershed protection plan efforts.

Look for a Clean Rivers Program partner to begin routine monitoring at least quarterly since there has been no regular sampling since 2001.

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