



# 71<sup>st</sup> Annual Meeting of the Southern Legislative Conference Biloxi, Mississippi

Coastal Restoration in Mississippi  
Where Have We Been and Where are We Headed?

*Mississippi Department of Marine Resources (MDMR)  
Office of Restoration and Resiliency  
[george.ramseur@dmr.ms.gov](mailto:george.ramseur@dmr.ms.gov)*



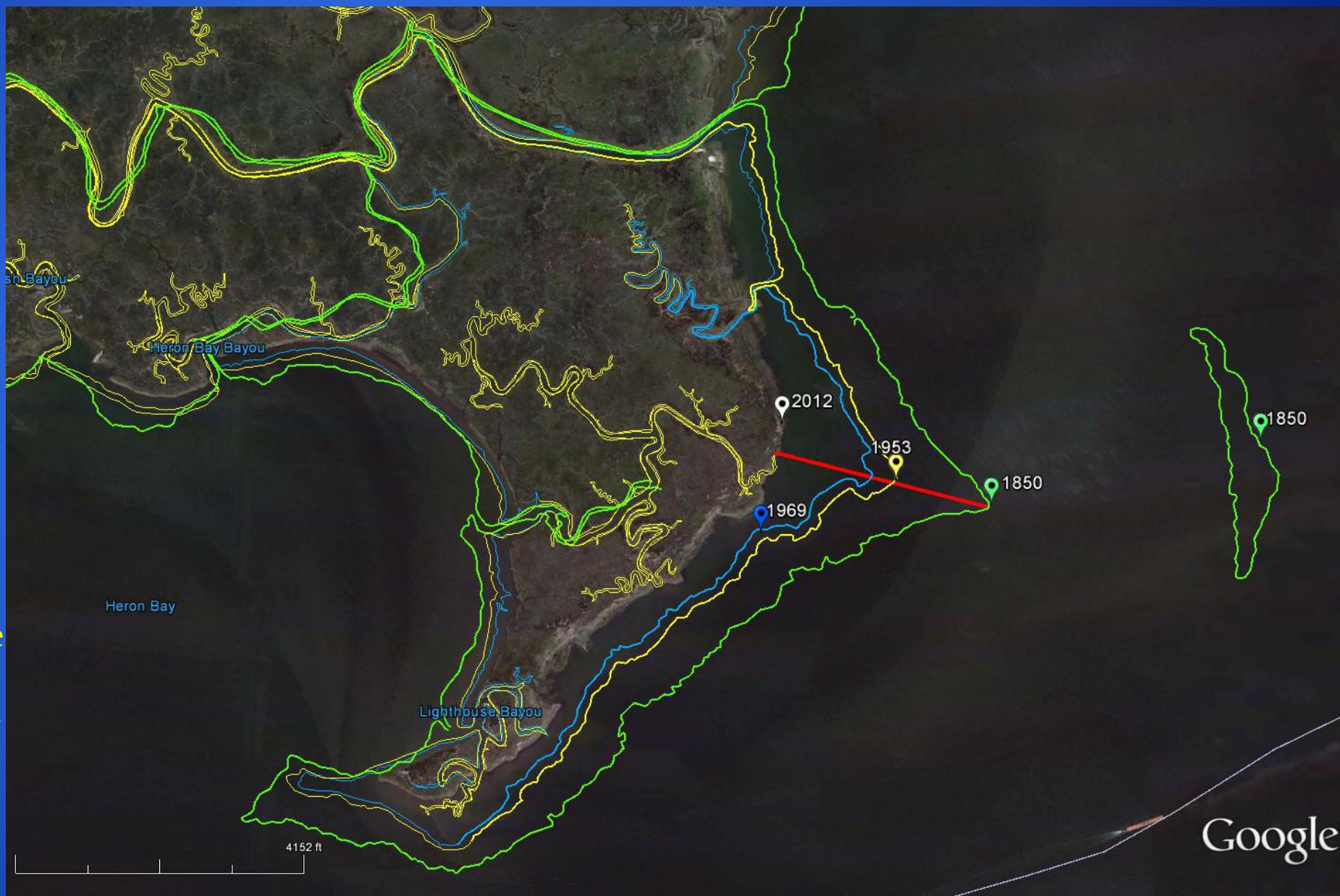
# Hancock County, MS

## Overview:

### Why Restore?

A major reason is that Mississippi has been losing over 200 acres of land every year for as long as we can measure.

This means about 12,000 acres have disappeared since the 1950s, much of it salt marsh and other ecologically valuable habitats that are vitally important for fisheries, coastal protection, water quality and our way of life.







Since the 1950s....  
A 12,000 acre loss in context





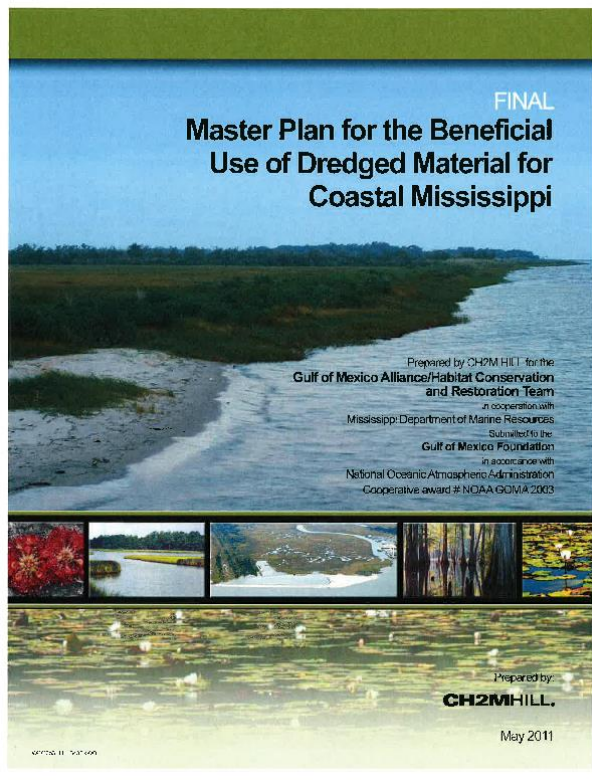
# MDMR Approach to Restoration

- Restore and maintain the ecological and protective functions of key coastal resources for the people of Mississippi.
- Focus forward. Historic islands and shorelines are natural restoration targets but have more value if designed with current and future conditions in mind.
- A two stage program approach that supports ongoing project implementation while building regional scale/long range strategies through partnerships and collaboration

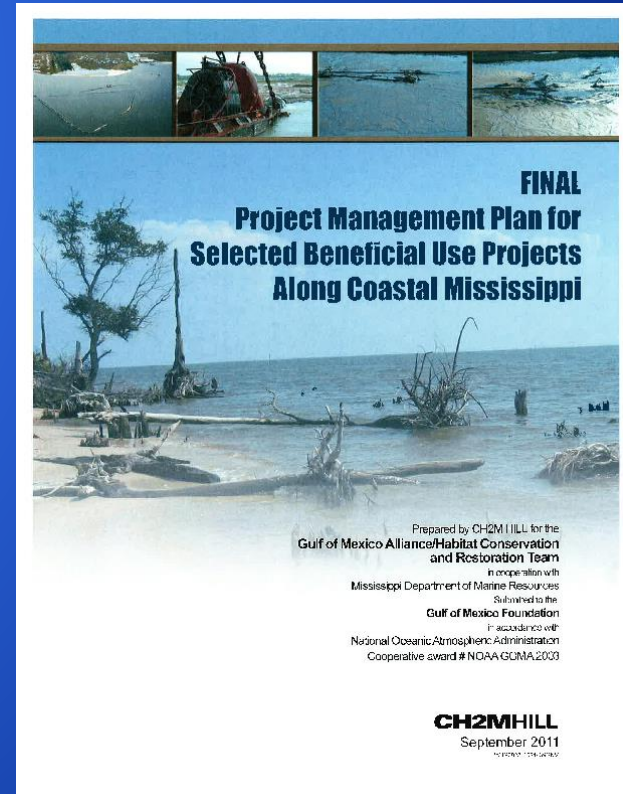


# MDMR Program I

Since 2002 MDMR's Beneficial Use of Dredged material (BU) program has been restoring coastal habitats in coordination with partners like the USACE (Mobile District) and the Mississippi Department of Environmental Quality (MDEQ)



Deer Island BU + MsCIP







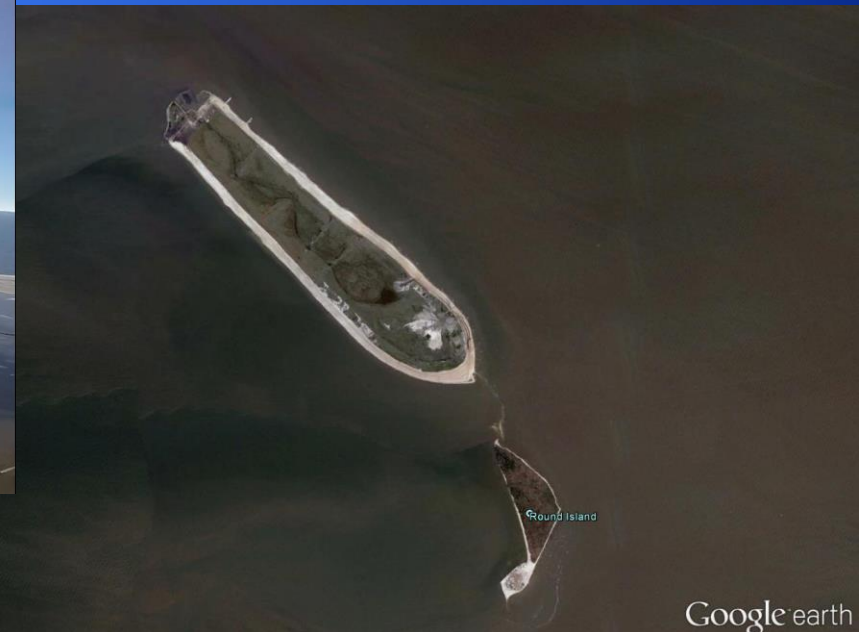
# MDMR Program I

## Round Island Cooperative:

MDEQ, MDMR, Mobile District, Port of Pascagoula,  
NFWF & Federal Navigation Funds

220 acre project built from 3.3 Million cubic yards (2/3rds of a Superdome) of material dredged during the Pascagoula Ship Channel expansion. This material was originally to be discarded off-shore at an additional cost of \$2 million in Federal Navigation funds.

**Yes... this project built 220 acres and saved \$2,000,000.**





# MDMR Program II

Since 2015, MDMR's Office of Coastal Restoration and Resiliency (CRR) has supported restoration planning and implementation by coordinating with many partners including:

- MDEQ and Deep Water Horizon related resources
- Louisiana Master Plan Framework Development Team (FDT)
- The Gulf of Mexico Alliance
- Alabama and Louisiana - Agencies and Non-Governmental Organizations
- Federal Agencies

This process has yielded new planning and restoration goals for Mississippi based upon an expanded functional area called the Louisiana, Mississippi, Alabama Coastal System (LMACS).





## The Louisiana / Mississippi / Alabama Coastal System “LMACS”

Chandeleur Sound

Mississippi-Alabama Shelf



Maryland

Delaware

Virginia

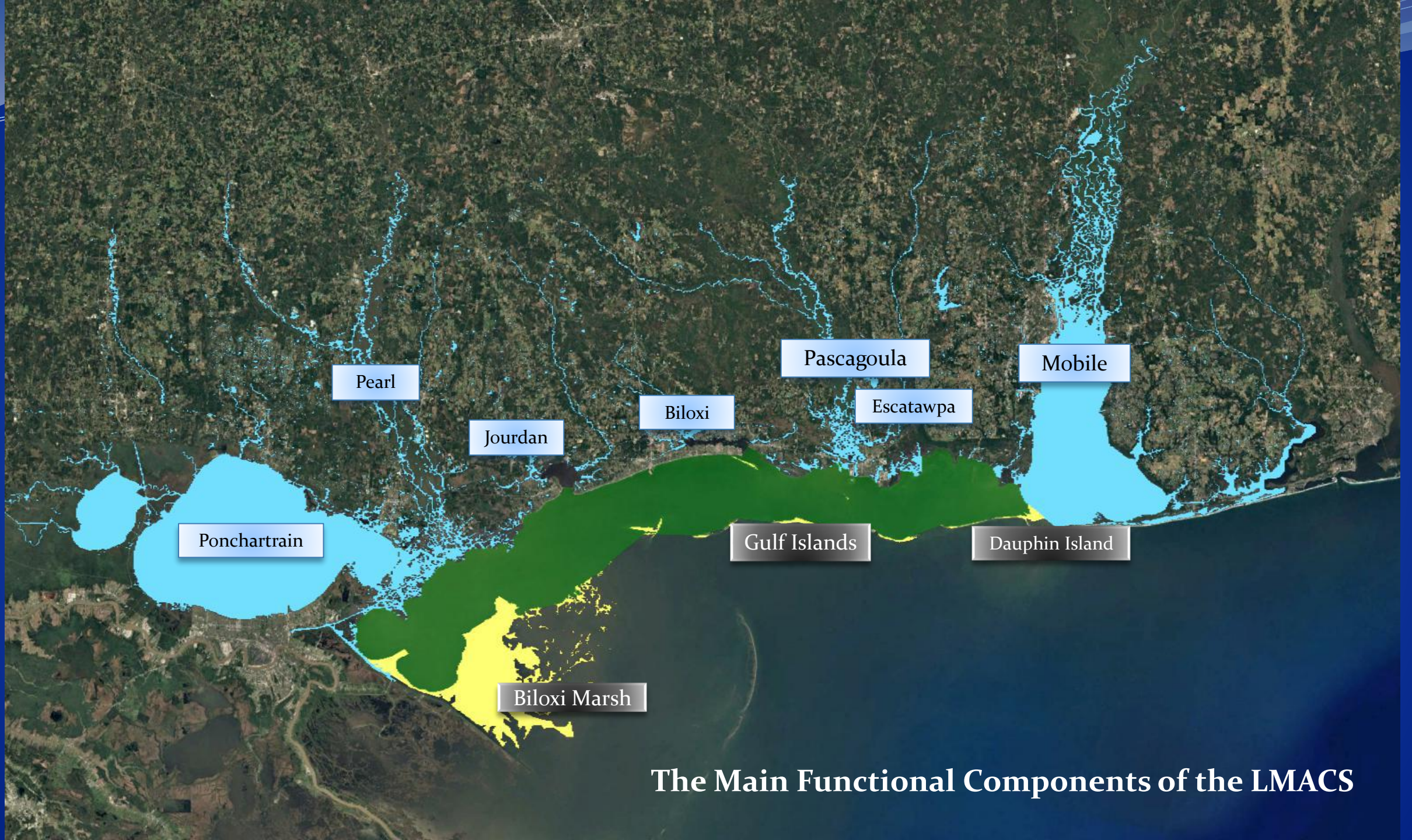
Chesapeake Bay

Our “Sister” System

Image Landsat / Copernicus

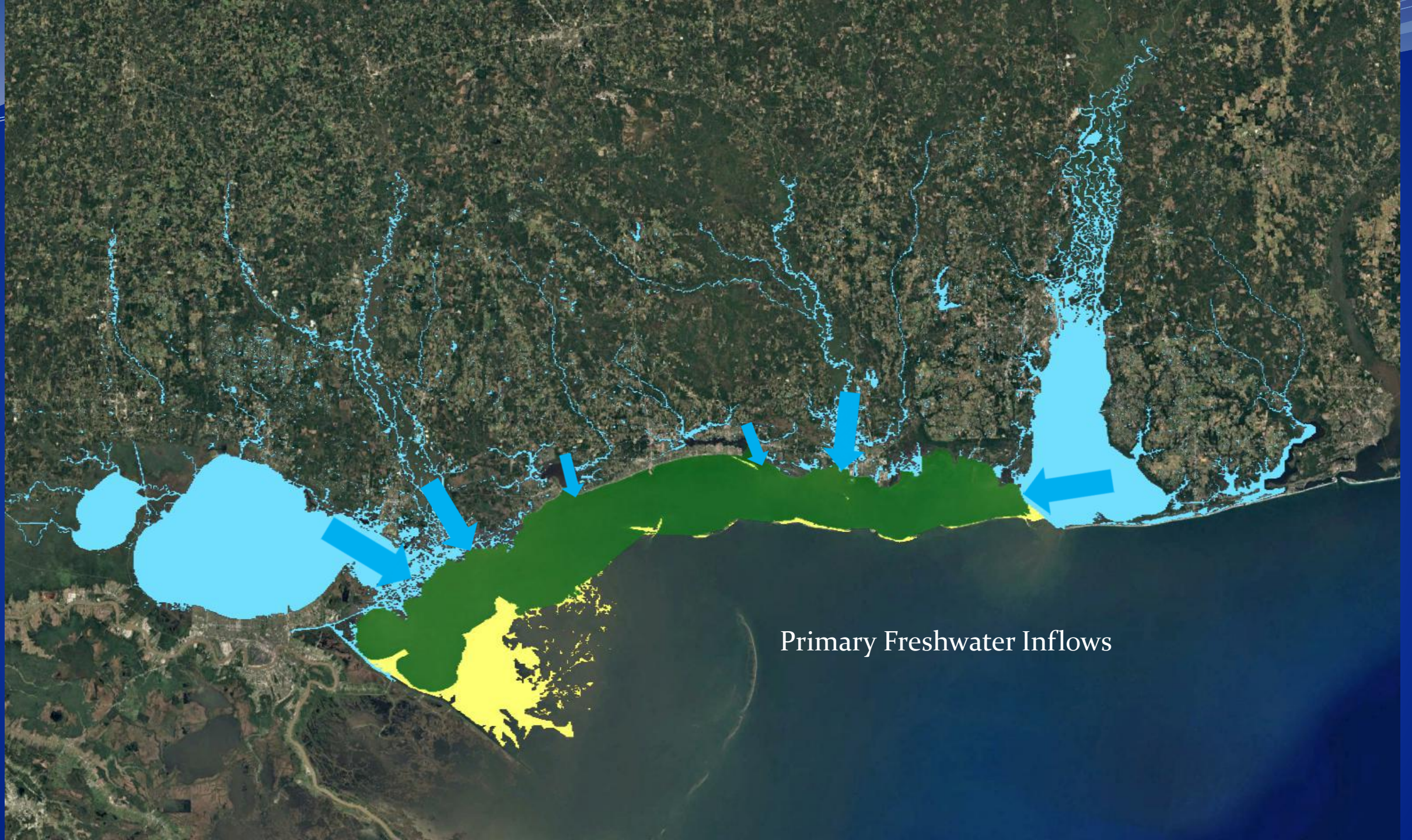
Google™ earth





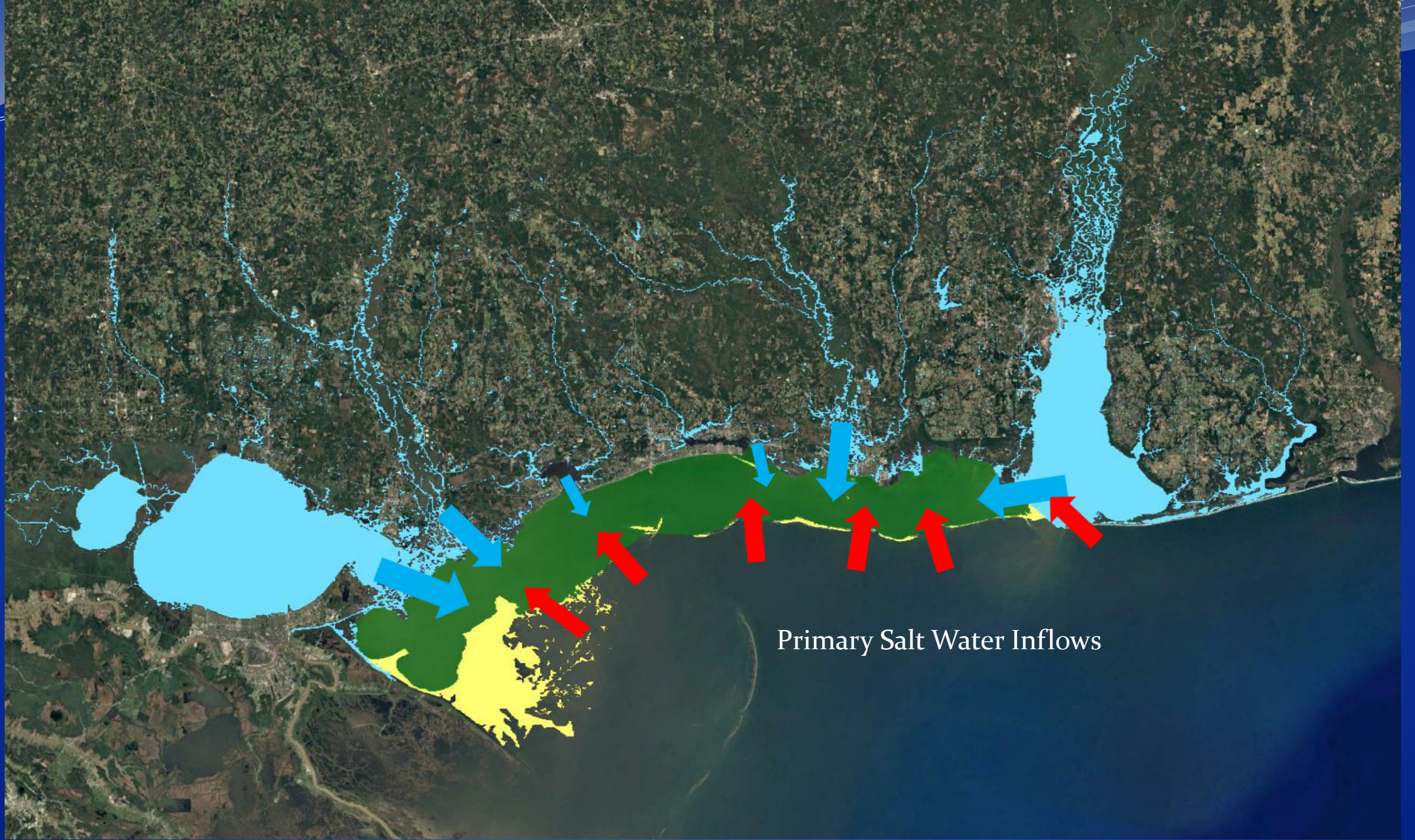
**The Main Functional Components of the LMACS**





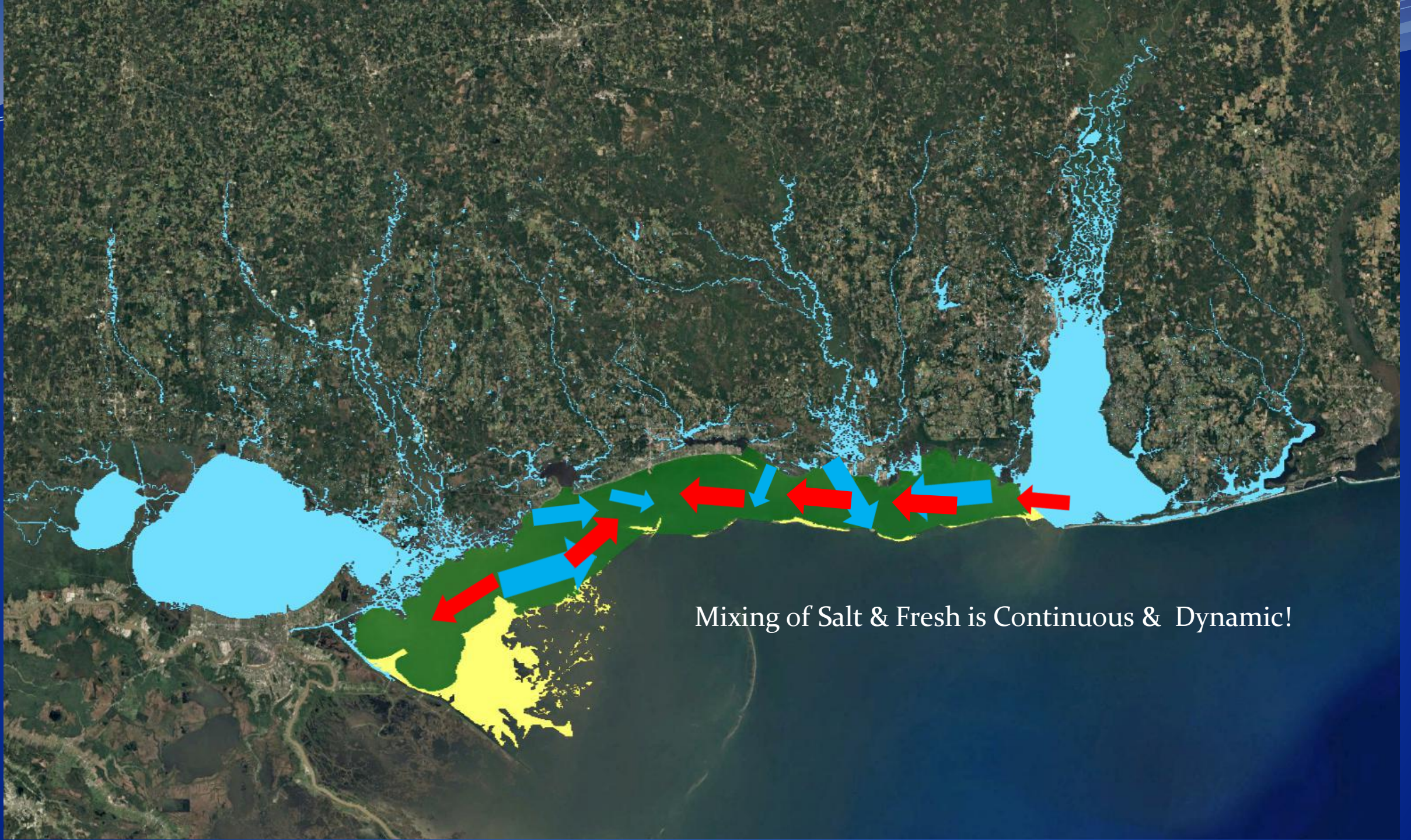
Primary Freshwater Inflows





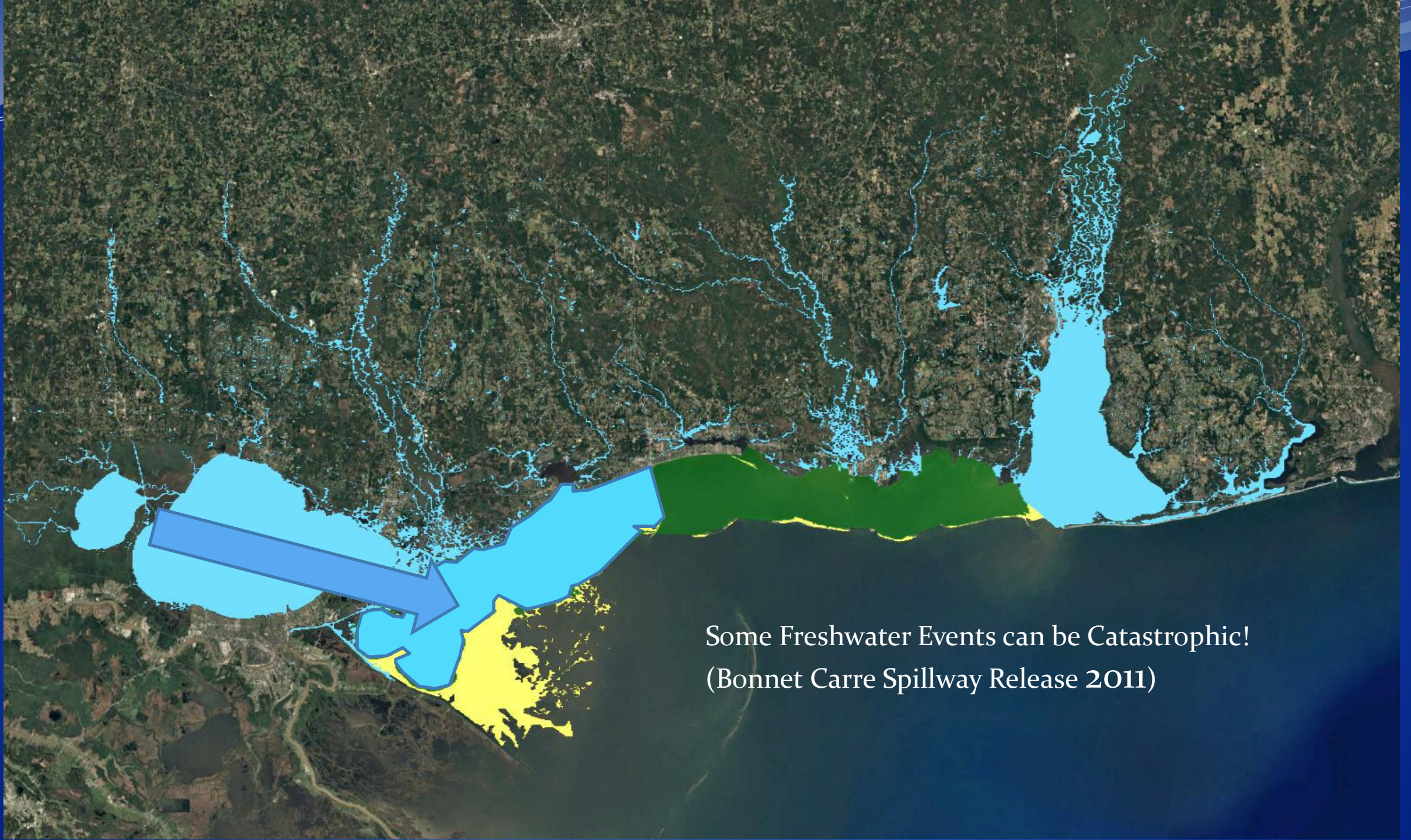
Primary Salt Water Inflows





Mixing of Salt & Fresh is Continuous & Dynamic!





Some Freshwater Events can be Catastrophic!  
(Bonnet Carre Spillway Release 2011)



# What is at Stake?

## Primary Ecological Function

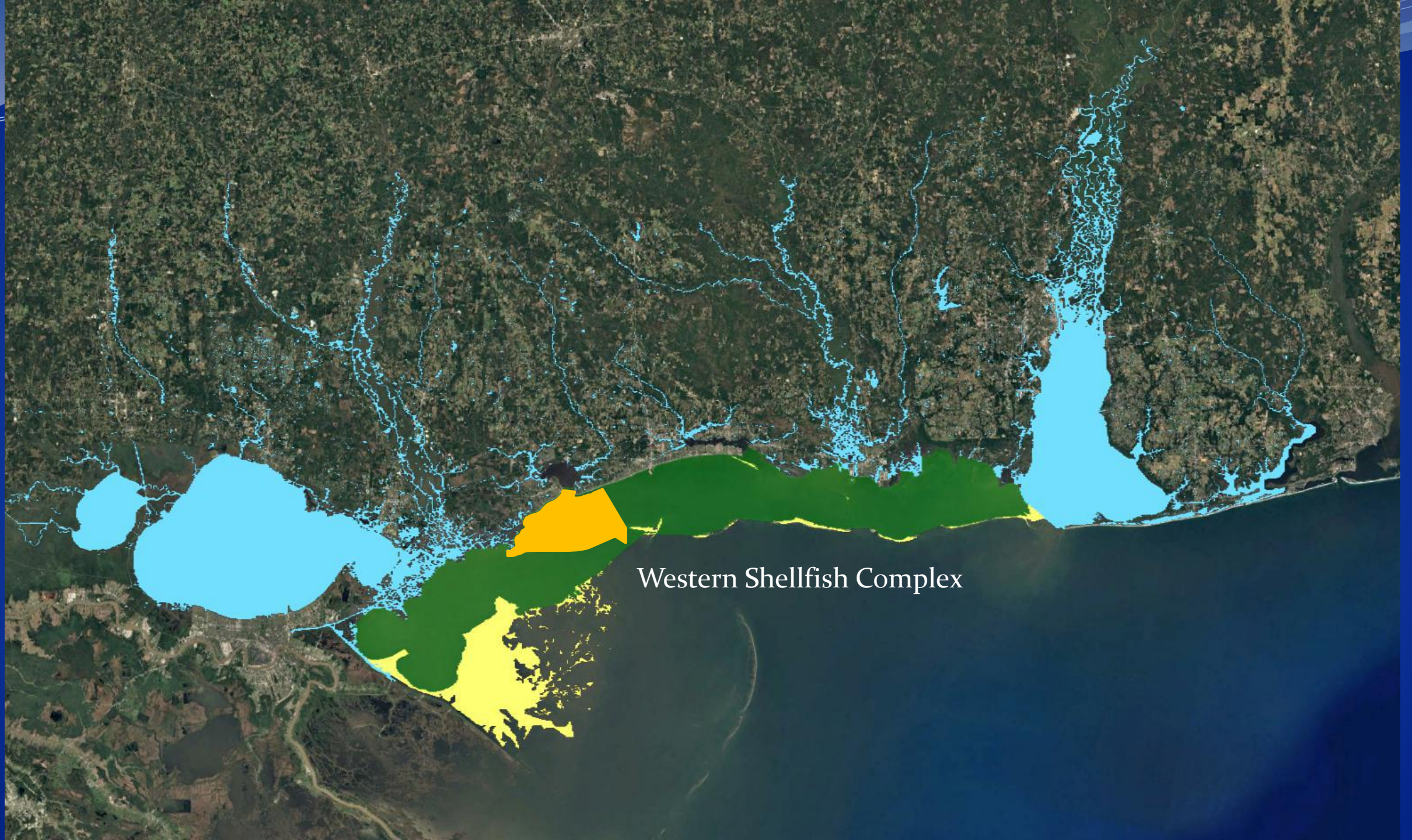




# Shellfish Growing Areas - Western MS Sound







Western Shellfish Complex



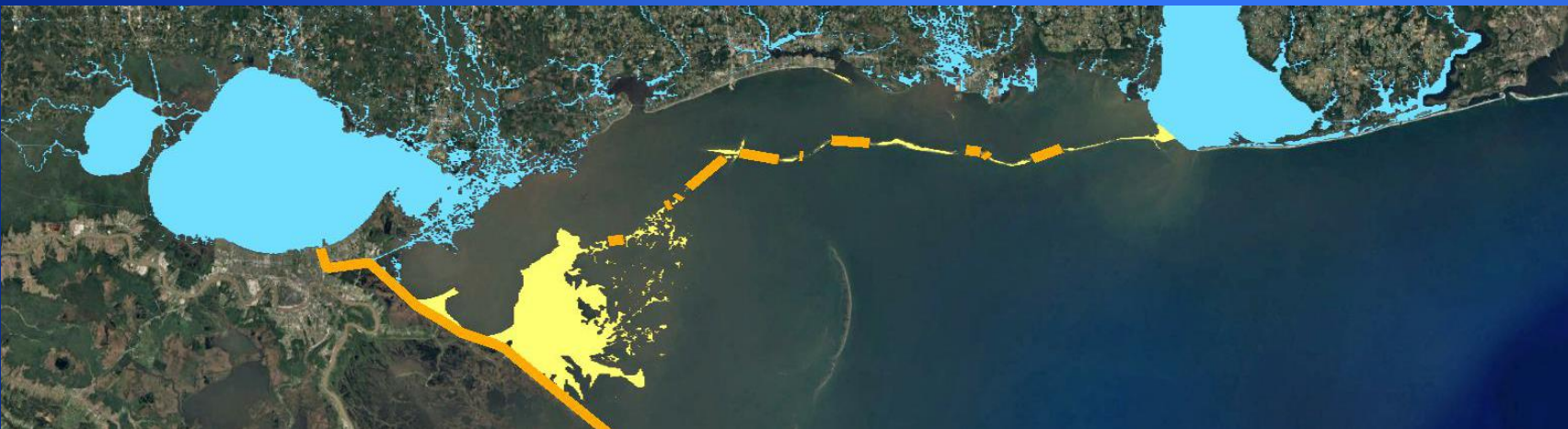




# GAPS OVER TIME



1850



2004



2017





1850

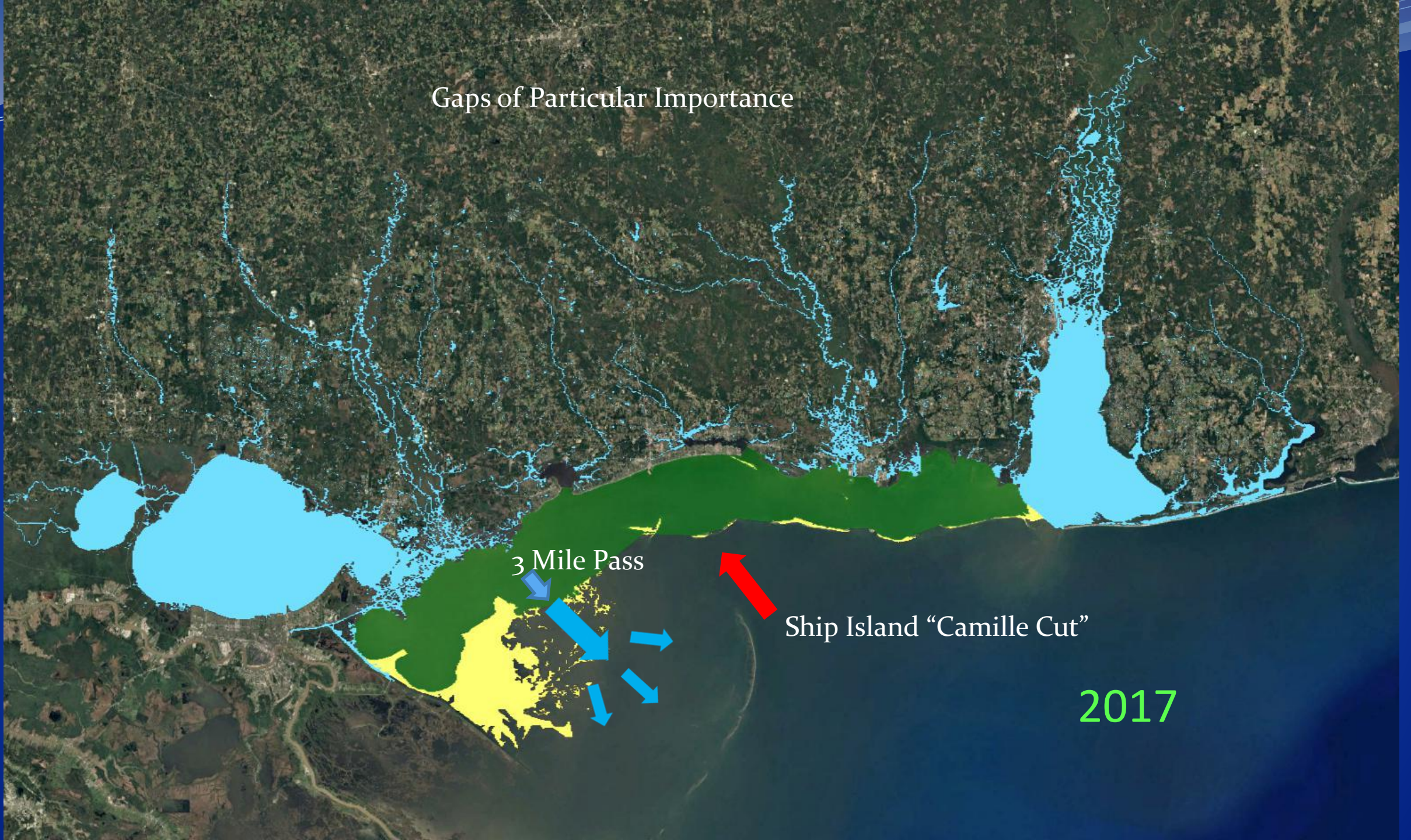


## Gaps of Particular Importance

3 Mile Pass

Ship Island "Camille Cut"

2017







3 Mile Pass

This is an aerial photograph of a coastal region. A large area of land, primarily in the center and right, is highlighted in green. To the left of this green area is a large body of water. Several arrows are overlaid on the map: a red arrow points from the right towards the green area; four blue arrows point from the bottom towards the green area. The year '2017' is written in green in the bottom right corner.

Ship Island "Camille Cut"

2017



An aerial photograph of a coastal region. A large, irregularly shaped area in the center is highlighted in green. This green area is bordered by a yellow line. To the left of the green area is a large, irregularly shaped body of water. To the right is a large, irregularly shaped body of water. The surrounding land is covered in dense, dark green vegetation. Several blue arrows point from the green area towards the ocean on the right. The text "3 Mile Pass" is written in white over the green area. The text "2018?" is written in pink in the bottom right corner.

3 Mile Pass

2018?



**Pearl River**

**Cat Island**

**3 Mile Pass**



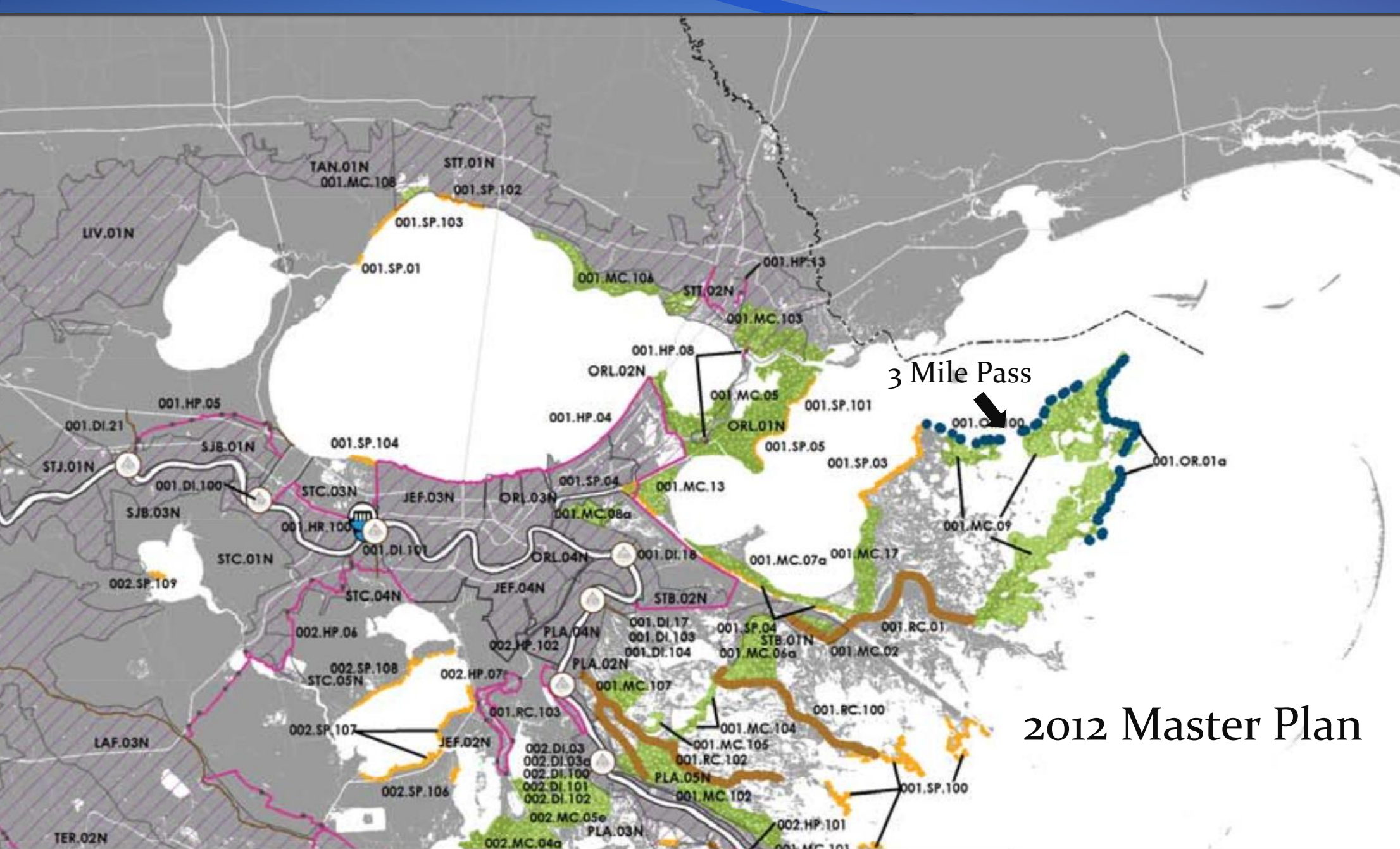




Biloxi Marsh/ Port of Gulfport BU

3 Mile Pass









# What Else is at Stake?

## Basic Physical Function

- The LMACS barrier buffers our coastline from the open Gulf
- There are always discussions about protection from major storms. However, consider the impact of day to day “offshore” conditions.

The screenshot shows the WLOX website header with the station's logo and a navigation bar. Below the navigation bar is a blue horizontal bar. The main content area features a "MARINE FORECAST - TONIGHT" section with a "WLOX FIRST ALERT" badge. The forecast is presented in a table with two columns: "MS SOUND" and "OFFSHORE". The background of the forecast section shows a sailboat and a yellow buoy.

	MS SOUND	OFFSHORE
WINDS	NW 5-10 KTS	NW 10-15 KTS
SEAS	1-2 FT	1-3 FT
CONDITIONS	LIGHT CHOP	SUNSET 7:55





# Next Steps

- Lay groundwork for a Mississippi Gulf Coast/ Master Plan based on the LMACS that incorporates modeling of physical, biological and chemical aspects of the estuary and relevant adjoining areas.
- Support established efforts particularly MsCIP
- Support ongoing restoration project and program development and implementation throughout the LMACS





Thank you!

[george.ramseur@dmr.ms.gov](mailto:george.ramseur@dmr.ms.gov)