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2029 COASTAL MASTER PLAN  
*COMMITTED TO OUR COAST*

# MASTER PLAN COMMUNITY CONVERSATIONS

## PONTCHARTRAIN/BRETON SOUND

**BRIAN LEZINA**



**MAY 7, 2024**

# GENERAL OUTLINE

- Welcome + Introduction
- CPRA + The Master Plan
  - What is CPRA?
  - Our Work
    - Projects in the region
  - What is the Master Plan?
- Future Projections for a Changing Coast
  - Land change
  - Flood depths
  - Local and regional damage estimates



**Established following the 2005 storm season, CPRA is the single state entity with authority to articulate a clear statement of priorities to achieve comprehensive coastal protection for Louisiana.**

**CPRA has a mandate to develop, implement, and enforce a comprehensive restoration and risk reduction coastal master plan. In 2023, the 4th update to the master plan was unanimously approved by the Louisiana Legislature.**





OUR  
HOMES



OUR  
JOBS



OUR  
CULTURE

# 2029 COASTAL MASTER PLAN PROCESS

A MULTI-STEP PROJECT PRIORITIZATION EFFORT

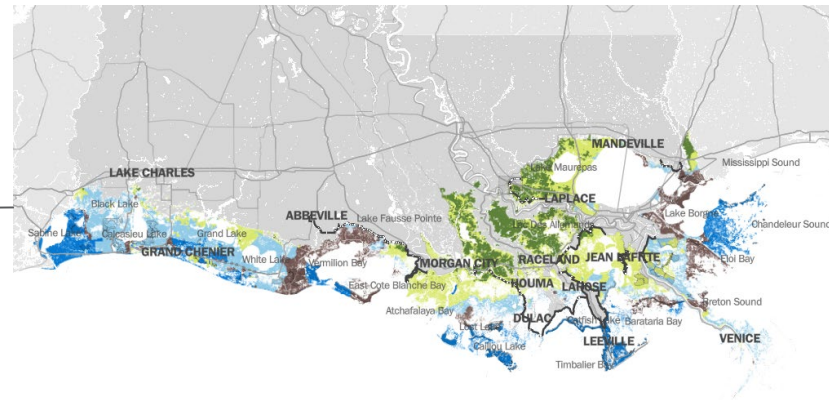
## Identify Current & Future Coastal Challenges



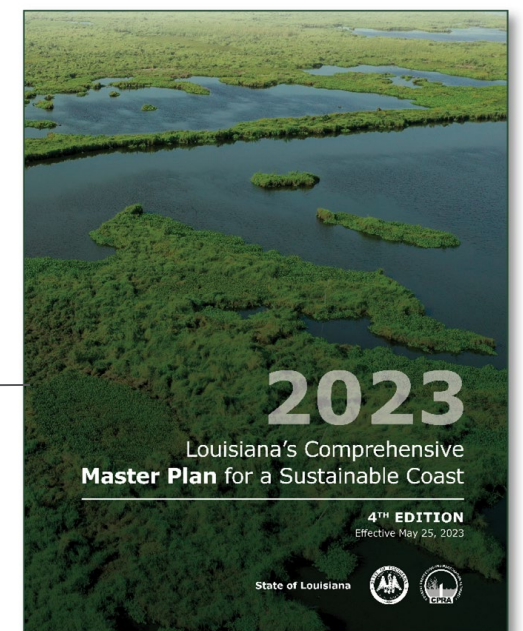
## Develop Projects



## Model, Refine & Select Projects



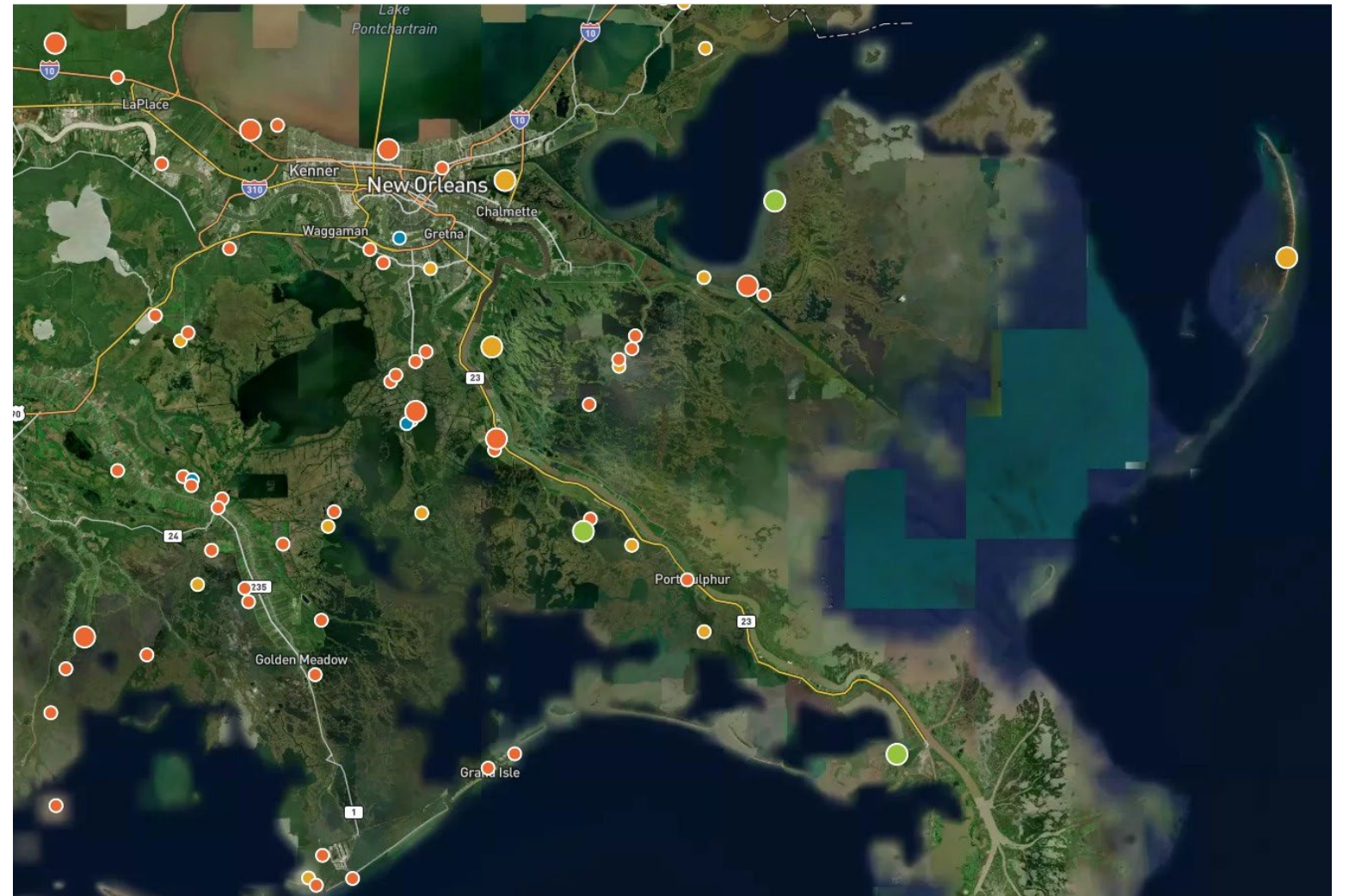
## Draft Coastal Master Plan



# OUR WORK

CPRA PROJECTS IN THE SOUTHEAST REGION (COMPLETED OR IN CONSTRUCTION/DESIGN)

- Total value of projects active in 2023-2024:
  - **\$8.85 billion**
- 60 Active Projects
  - In construction: 36
  - In engineering & design: 21
  - In planning: 3



## ACTIVE PROJECT TYPES INCLUDE:

Marsh creation  
Diversions

Ridge/Island/Swamp restoration

Shoreline protection

Nonstructural  
Feasibility studies

Pump stations

Boat launches

Education centers

Flood protection

Levee & drainage improvement

Lock & control structures

Terracing

# PROJECT TYPES

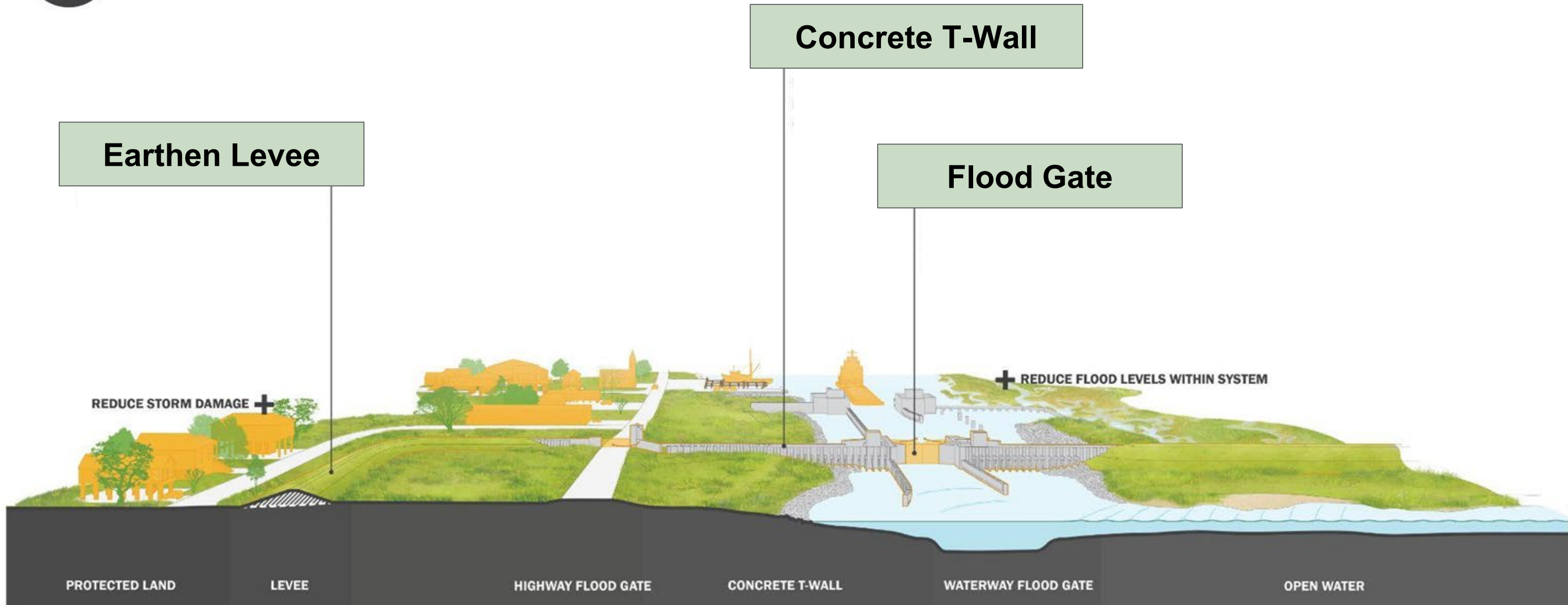
## RISK REDUCTION



### Structural Risk Reduction

Benefits:

- Reduce flood levels within system
- Reduce storm damage

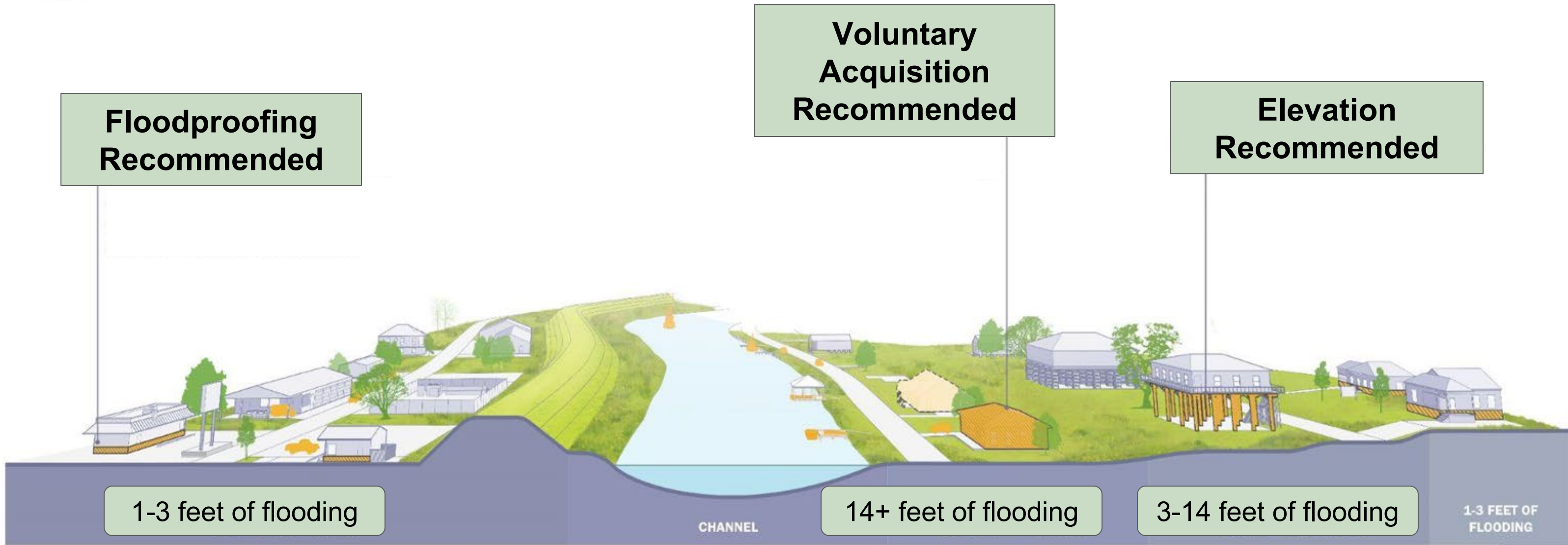


# PROJECT TYPES

## RISK REDUCTION



### Nonstructural Risk Reduction





# NONSTRUCTURAL RISK REDUCTION

## PROGRAMMATIC

Nonstructural Risk Reduction measures include:

- Floodproofing, elevation, or voluntary acquisition of at-risk properties
- Program is 100% voluntary

Status:

Planning (Southeast),  
Engineering & Design (Southcentral),  
and Construction (Southwest)



# PROJECT TYPES

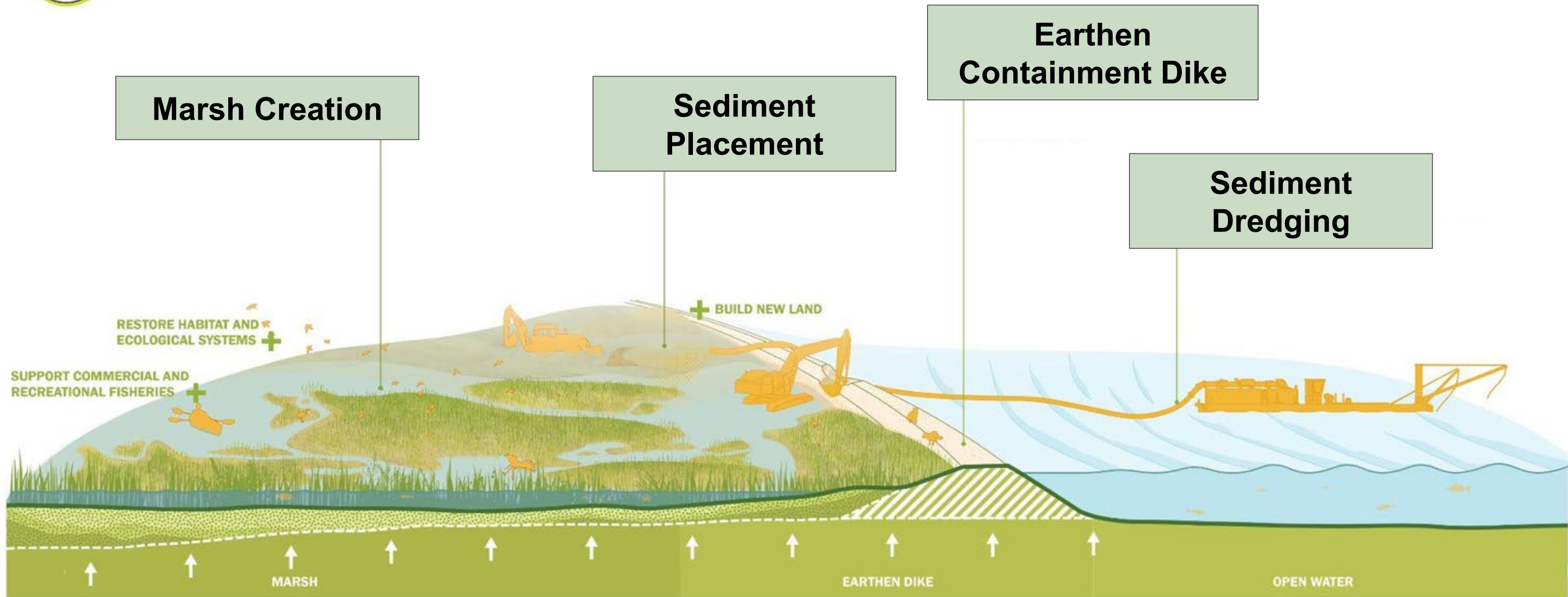
## RESTORATION



### Marsh Creation

### Benefits:

- Restore habitat and ecological systems
- Support new fisheries
- Build new land
- Dampen tropical storm intensity

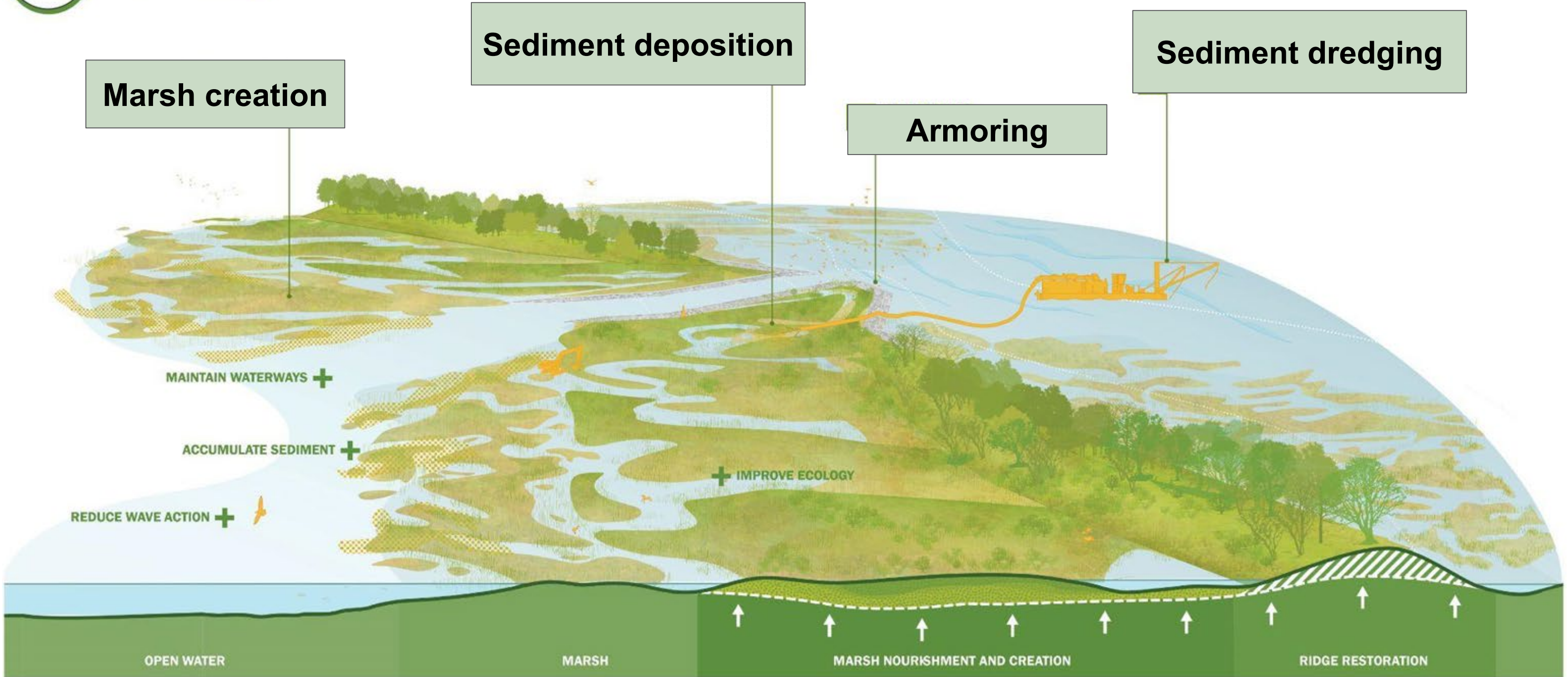


# PROJECT TYPES

## RESTORATION



### Landbridge



# MID BRETON LANDBRIDGE MARSH CREATION AND TERRACING, BS-0032

BRETON SOUND

Estimated Cost: \$37.4 Million

- 451 acres of marsh created
- 22,960 linear feet of terracing
- 1 of 5 marsh creation projects that will create the Mid Breton Landbridge

Status: Construction



# PROJECT TYPES

## RESTORATION



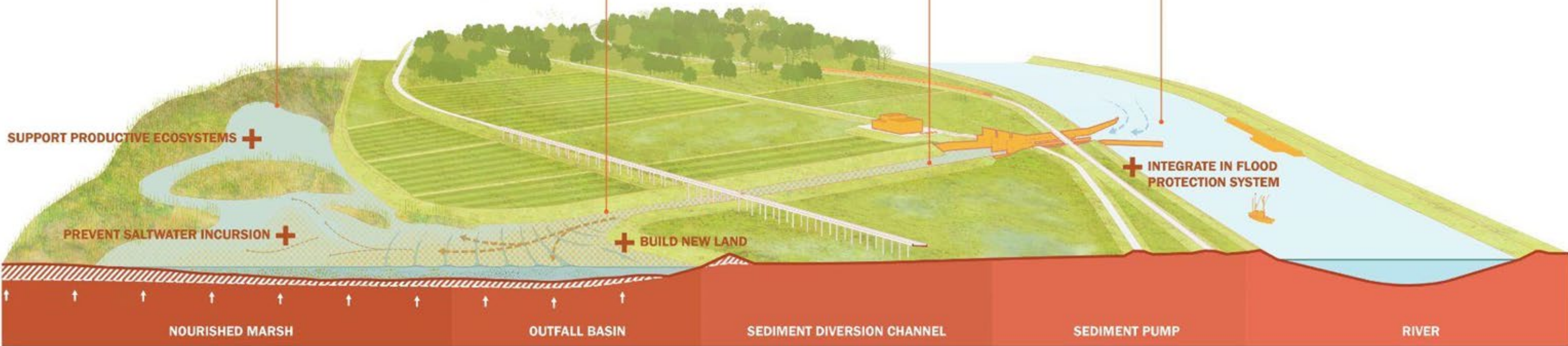
### Diversion

Nourish existing wetlands

Deposit sediment

Create conveyance channel

Redirect freshwater and sediment



# PROJECT TYPES

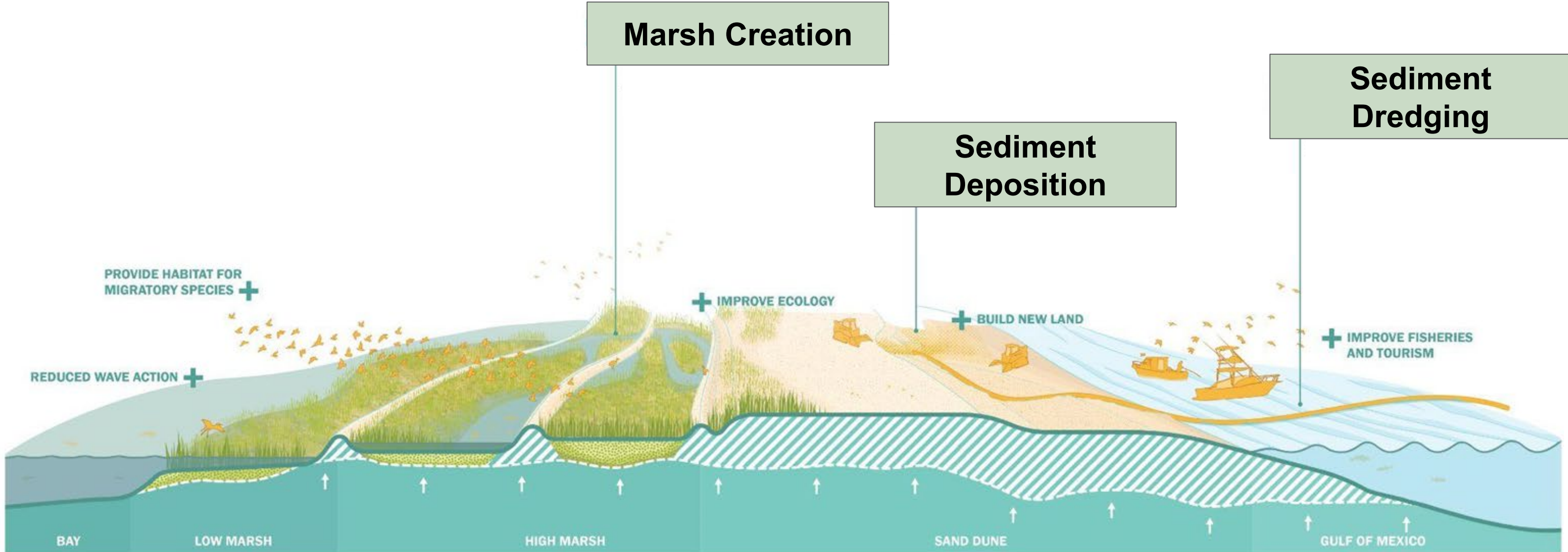
## PROGRAMMATIC RESTORATION



### Barrier Island Maintenance

#### Benefits:

- Provide habitat for migratory species
- Reduces wave action
- Improve ecology
- Build new land
- Improve ecology



# CHANDELEUR ISLAND RESTORATION PROJECT, PO-199

PONTCHARTRAIN/BRETON SOUND

Estimated Cost: \$257.7 Million

- 800 Acres of Land Benefitted
- Deepwater Horizon Natural Resource Damage Assessment (NRDA) funds
- This project will restore a portion of the Chandeleur Island chain for birds, sea turtles, and other coastal marine resources

Status: Engineering & Design



# **MASTER PLAN PROCESS**



# WHAT IS THE COASTAL MASTER PLAN?

SCIENCE-BASED, STAKEHOLDER INFORMED

- Prioritization effort
  - How can the state spend its money most cost-effectively over the next 50 years to reduce storm surge-based flood risk and restore and maintain coastal wetlands?
- Developed through a process that ensures adaptive management
  - Required by law to be updated every 6 years
- Built on world class science and engineering
- Advances a comprehensive and integrated approach to restoration and risk reduction
- Incorporates extensive public input and review
- Illustrates how people and communities will experience a changing coast to allow preparation and adaptation into the future.



# 2029 COASTAL MASTER PLAN PROCESS

A MULTI-STEP PROJECT PRIORITIZATION EFFORT

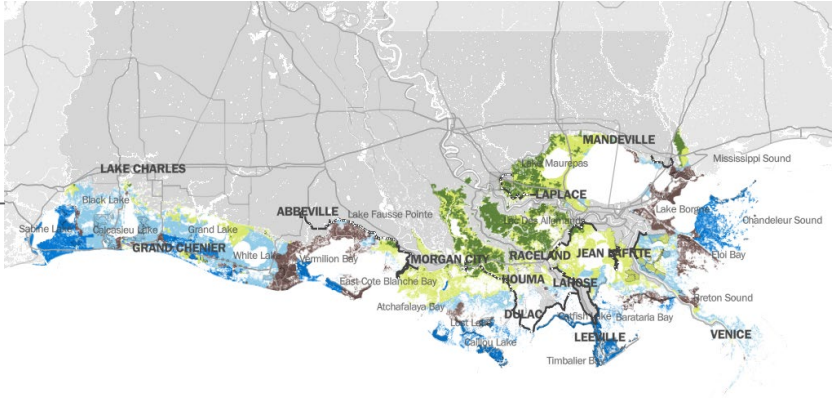
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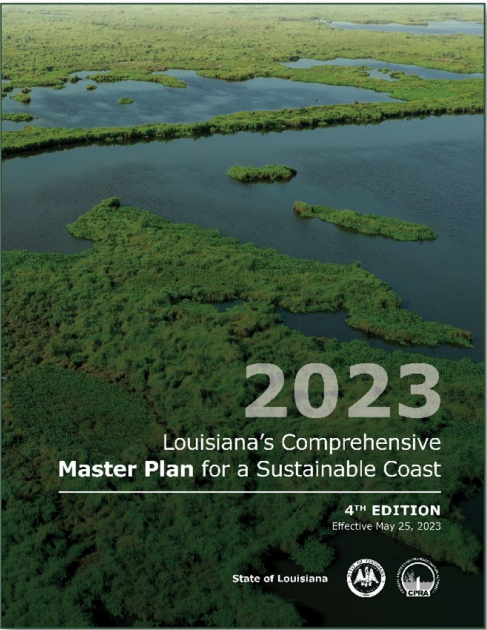
## Develop Projects



## Model, Refine & Select Projects











## Draft Coastal Master Plan



**FUTURE PROJECTIONS  
OF A  
CHANGING COAST**

# ENVIRONMENTAL SCENARIOS + FLOODING

- MP23 scenarios were developed by varying values for environmental drivers in the landscape model

	CLIMATE DRIVERS					OTHER DRIVERS		
	 SEA LEVEL RISE (SLR)	 AVG. STORM INTENSITY	 PRECIPITATION	 TRIBUTARY FLOW	 EVAPO-TRANSPIRATION	 TEMPERATURE	 SUBSIDENCE	 MISSISSIPPI RIVER HYDROLOGY
HIGHER SCENARIO	+2.5 FT by Year 50	+10% over 50 years		Covary with SLR curve			Higher rates, by ecoregion	Moderate change
LOWER SCENARIO	+1.6 FT by Year 50	+5% over 50 years		Covary with SLR curve			Lower rates, by ecoregion	Moderate change

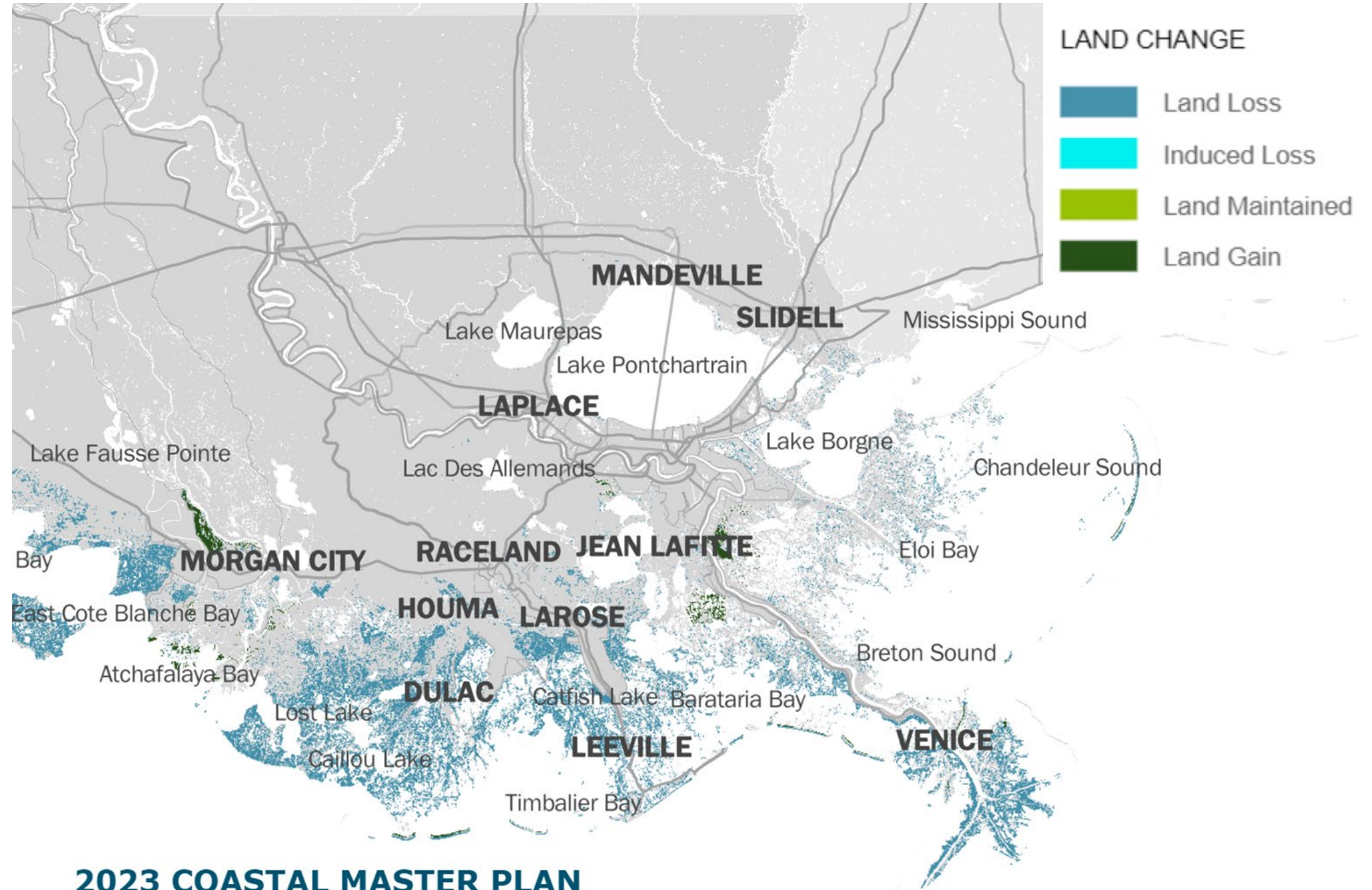
- Master Plan is tasked to respond to coastal land loss and threats from **storm surge-based** flooding - flooding generated by a hurricane or tropical storm

# PONTCHARTRAIN/BRETON SOUND REGION

## PROJECTED FUTURE LAND CHANGE

Future Without Action, Year 50 -

Projected land change without Coastal Master Plan projects on the landscape



### 2023 COASTAL MASTER PLAN FUTURE WITHOUT ACTION

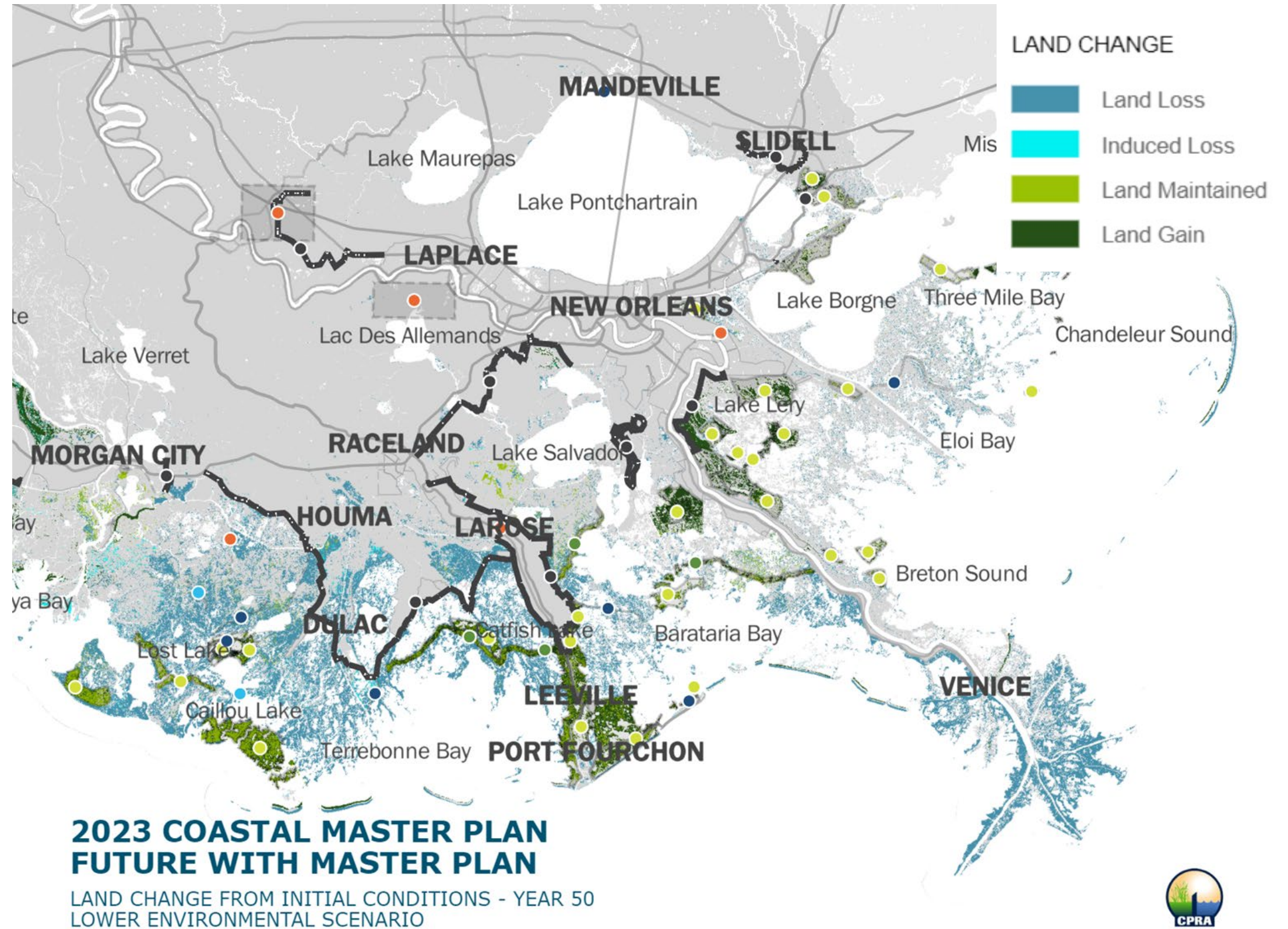
LAND CHANGE FROM INITIAL CONDITIONS - YEAR 50  
LOWER ENVIRONMENTAL SCENARIO

# PONTCHARTRAIN/BRETON SOUND REGION

## PROJECTED FUTURE LAND CHANGE

Future With Action,  
Year 50 -

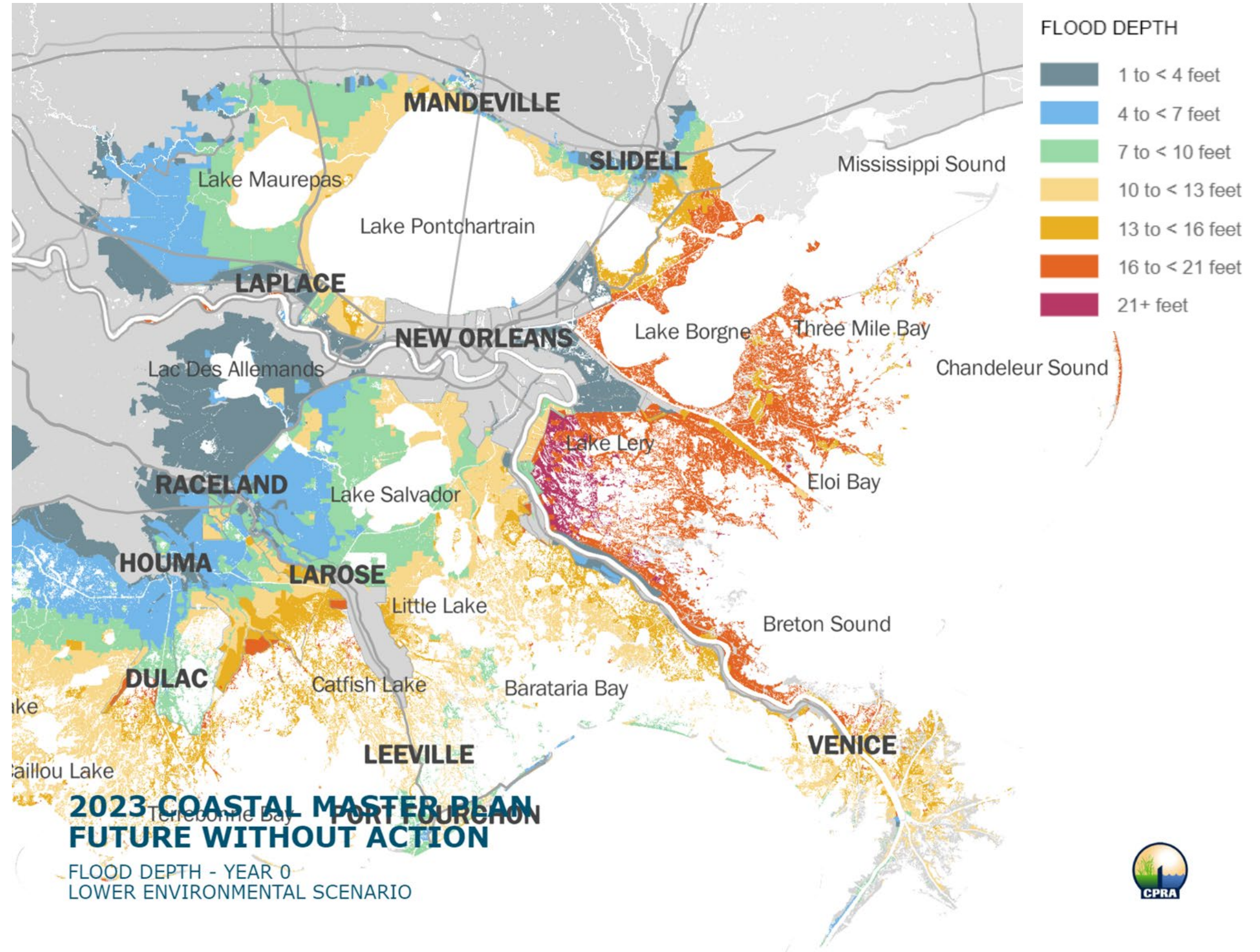
Projected land  
change with Coastal  
Master Plan  
projects on the  
landscape



# PONTCHARTRAIN/BRETON SOUND REGION

## PROJECTED STORM SURGE-BASED FLOOD DEPTHS

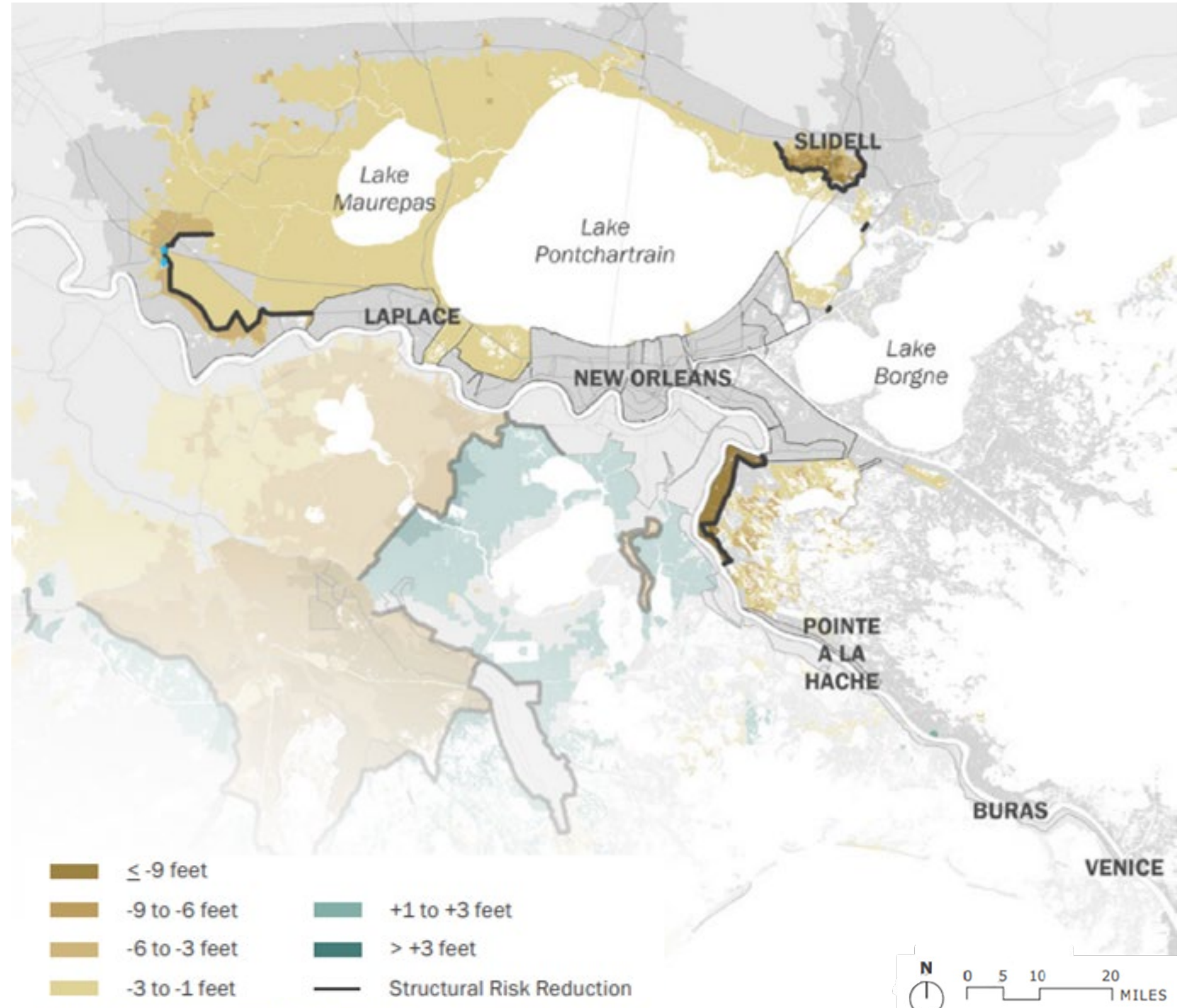
Flood depths projected with a 1% probability of occurrence (100-year flood) in Future Without Action



# PONTCHARTRAIN/BRETON REGION

## PROJECTED FLOOD DEPTHS

100-Year flood depth difference between Future With Action and Future Without Action



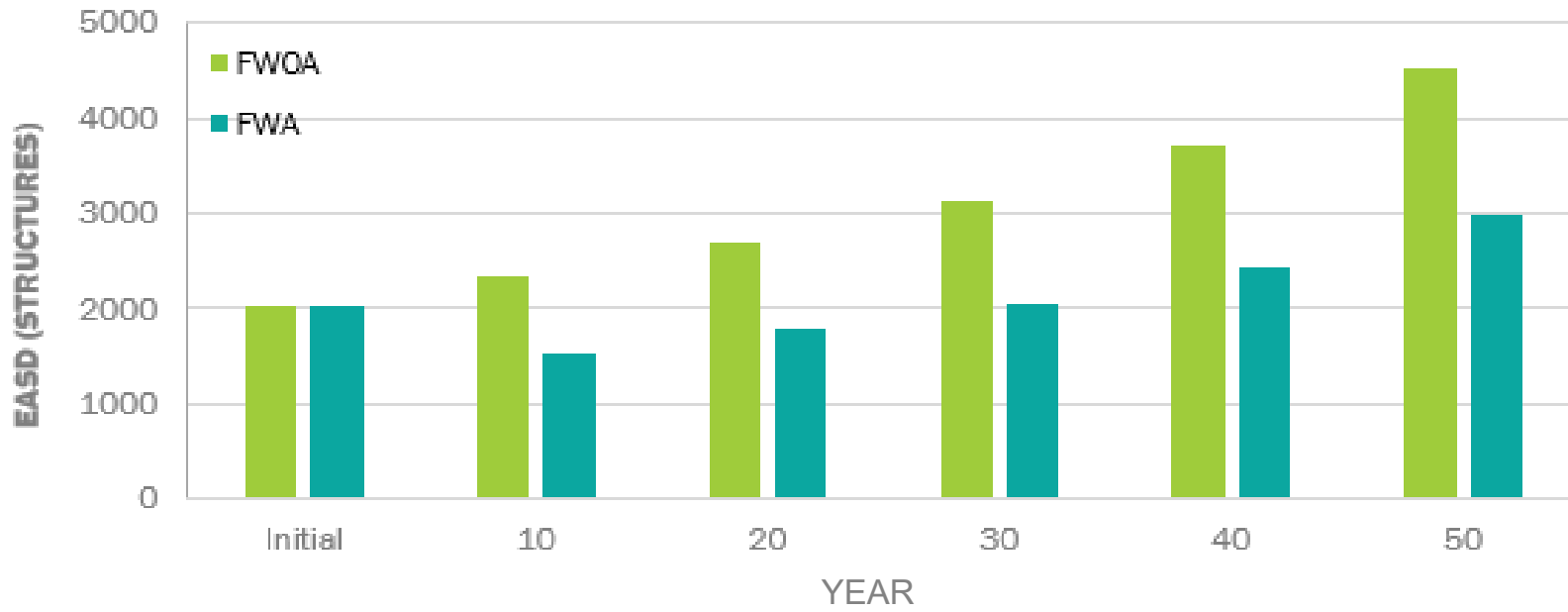
Map 6.20: Pontchartrain/Breton, Flood Depths Difference between FWA and FWOA, 1% Annual Exceedance Probability, Lower Scenario, Year 50.



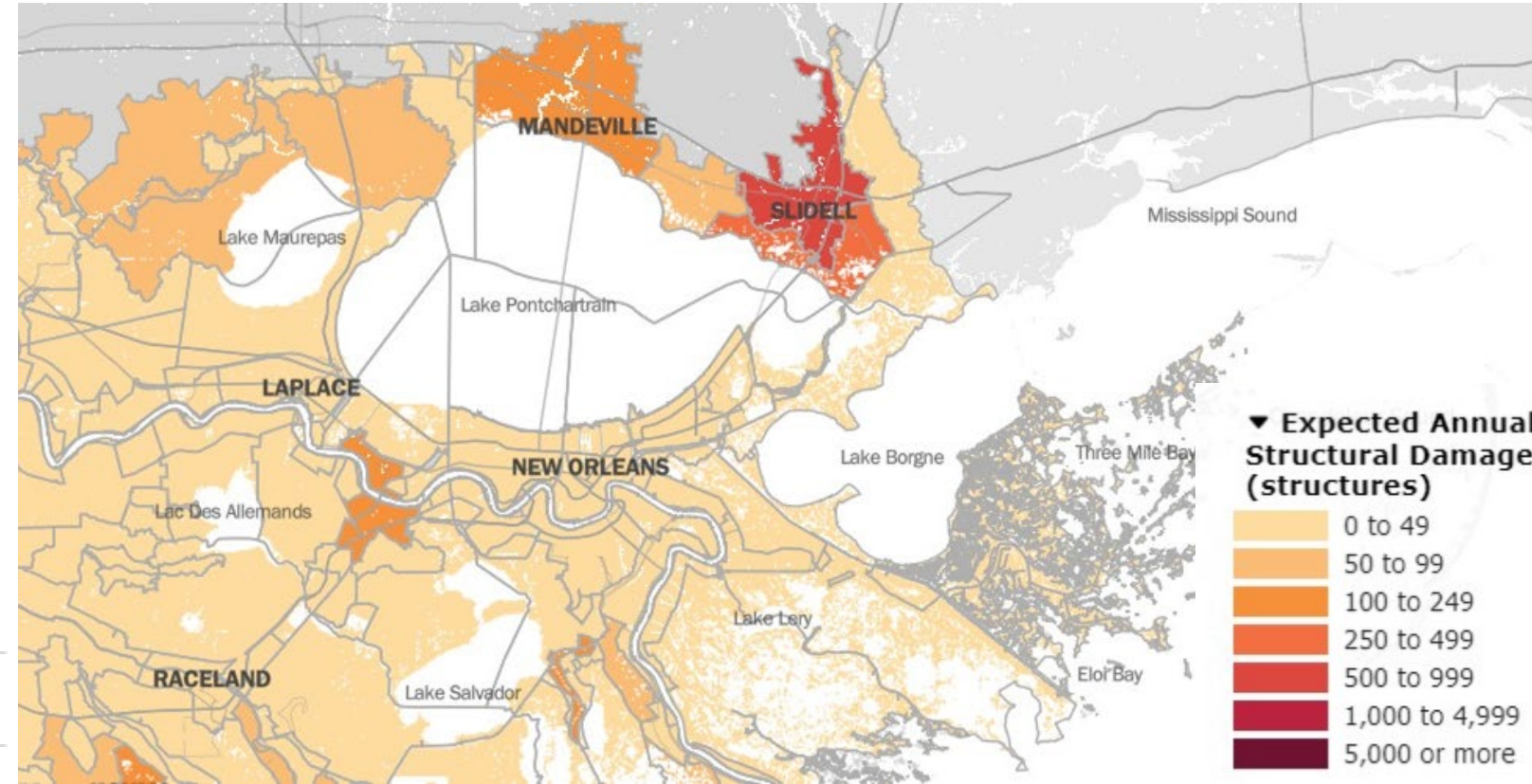
# PONTCHARTRAIN/BRETON REGION

## PROJECTED FUTURE DAMAGES FROM TROPICAL EVENTS

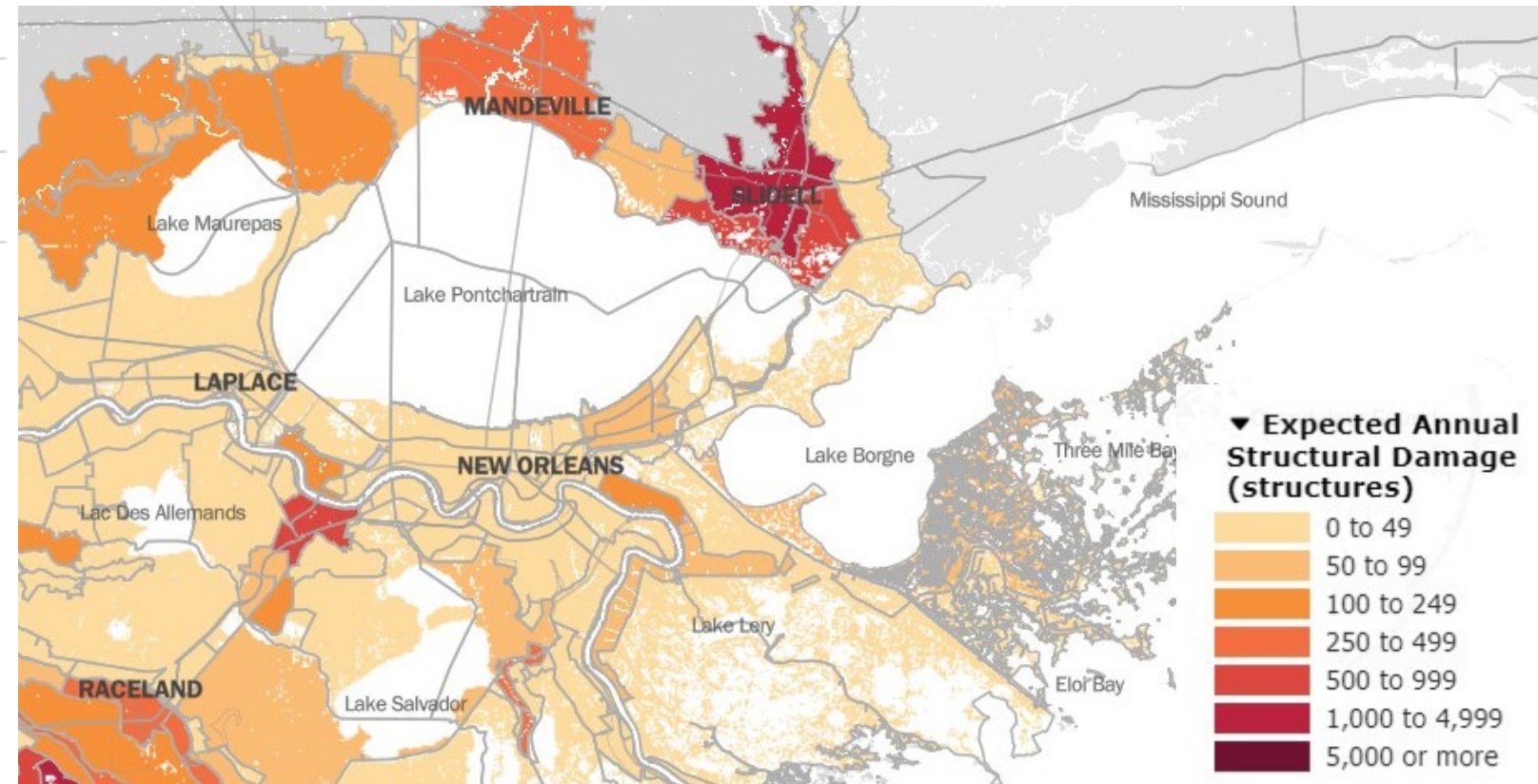
**Expected Annual Damage, Structural Equivalents: Lower Scenario**



\*Note: Areas showing damage are based on existing structures as of that year; later years may have fewer structures remaining on the landscape, which is reflected in the magnitude of damages.



Damages of Structures (EASD) - FWOA, Lower Scenario, Year 0



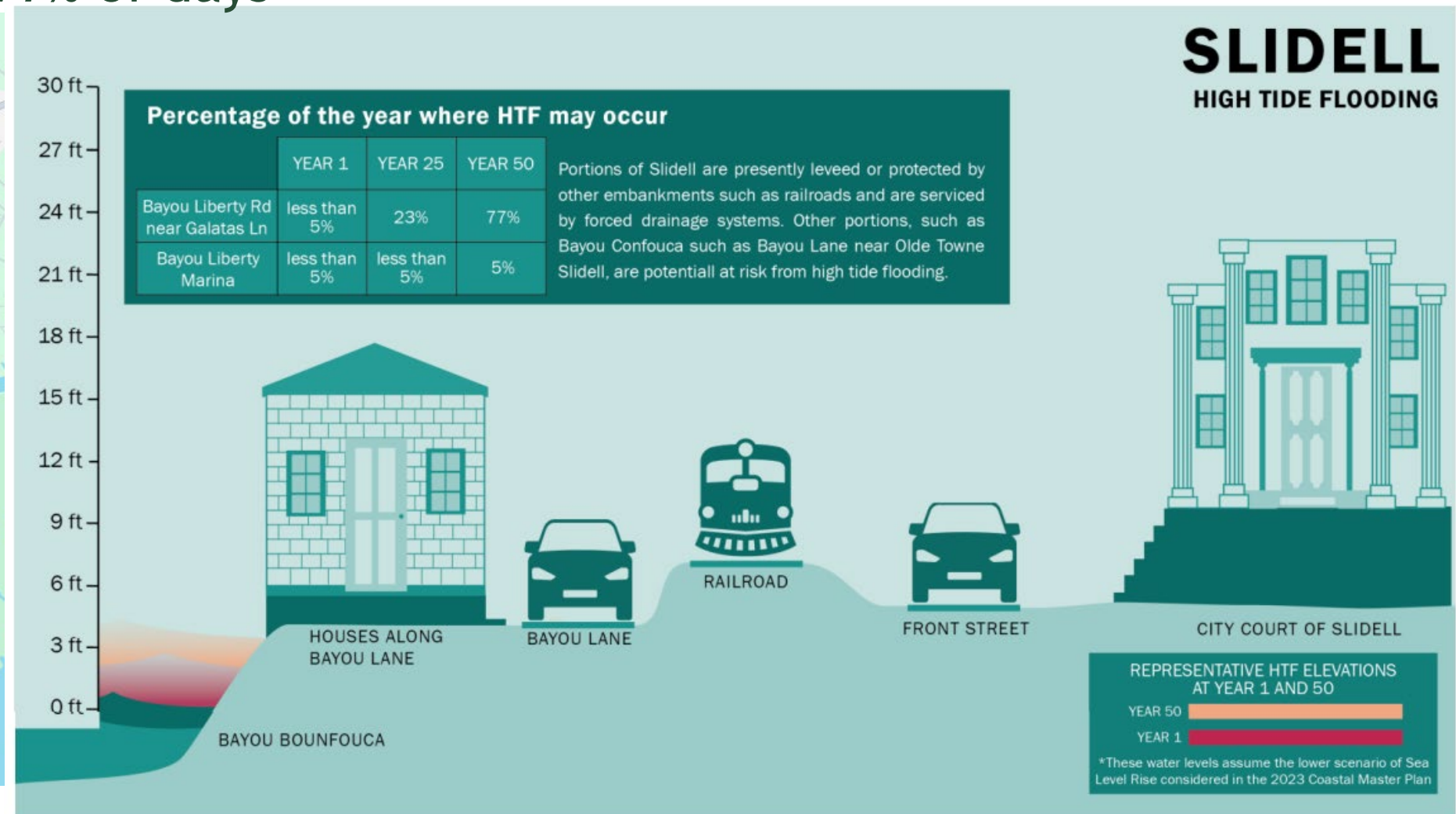
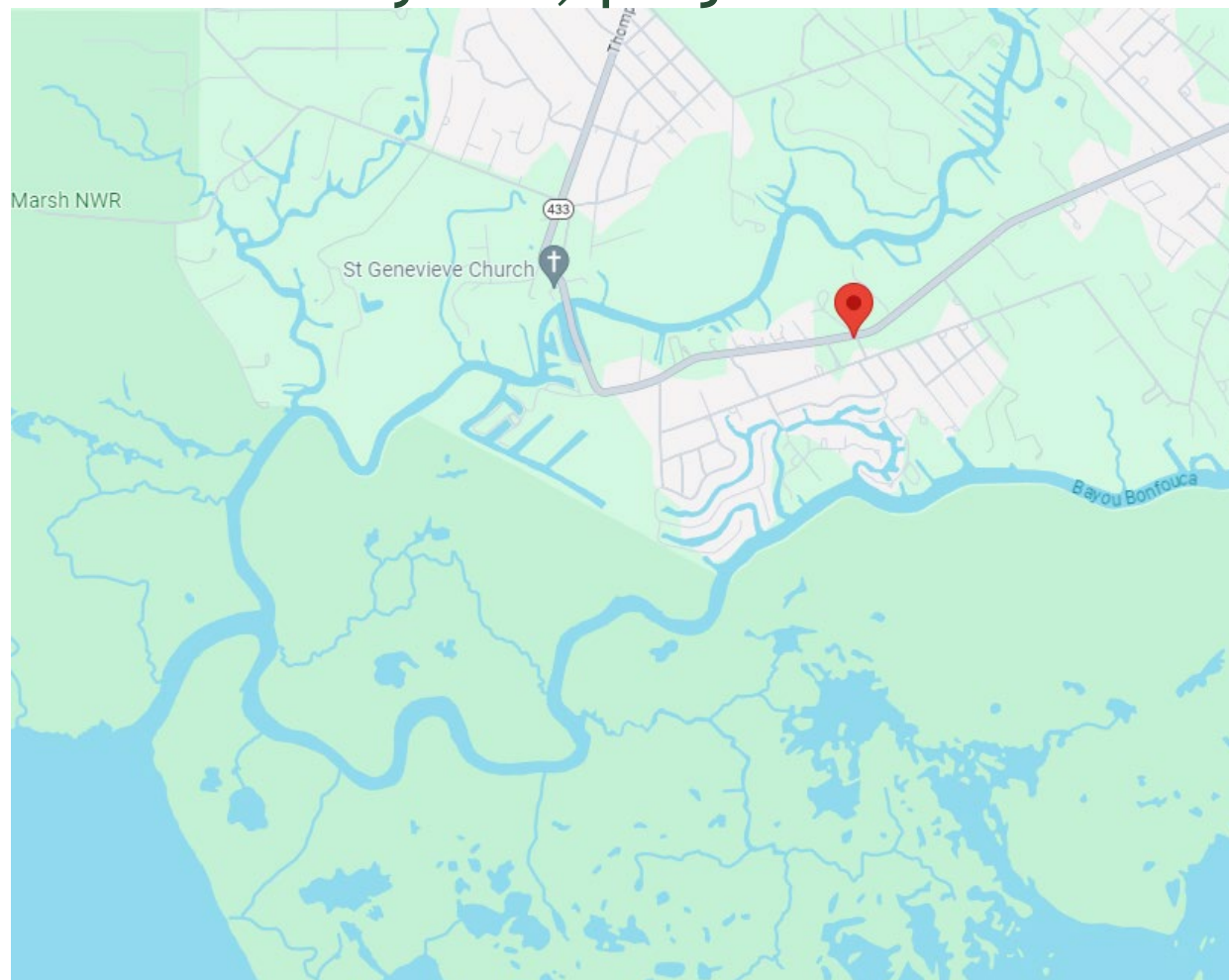
Damages of Structures (EASD) - FWOA, Lower Scenario, Year 50

# **EXPERIENCING COASTAL CHANGE**

# SLIDELL HIGH TIDE FLOODING - BAYOU LIBERTY RD., NEAR GALATES LN.

## FUTURE WITHOUT ACTION, PONTCHARTRAIN

- Currently floods less than 5% of days
- Future Without Action:
  - In 25 years, projected to flood ~23% of days
  - In 50 years, projected to flood ~77% of days



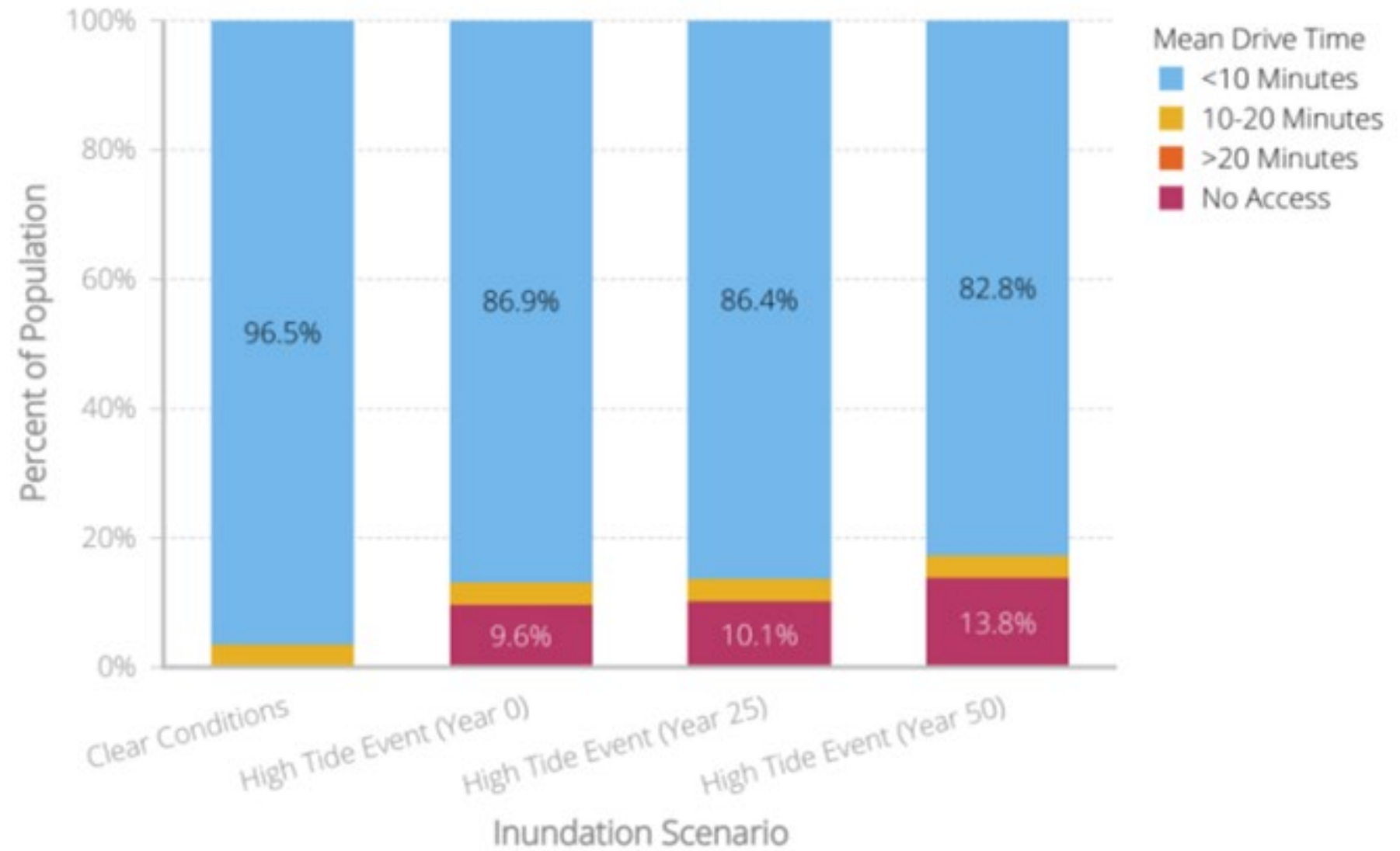
# SLIDELL HIGH TIDE FLOODING

FUTURE WITHOUT ACTION, PONTCHARTRAIN

Drive time access to nearest Louisiana Emergency Response Network Tier 1 hospital by population

## Access to Nearest LERN Tier 1 Hospital

Slidell, Louisiana



Data Source: Louisiana Department of Health

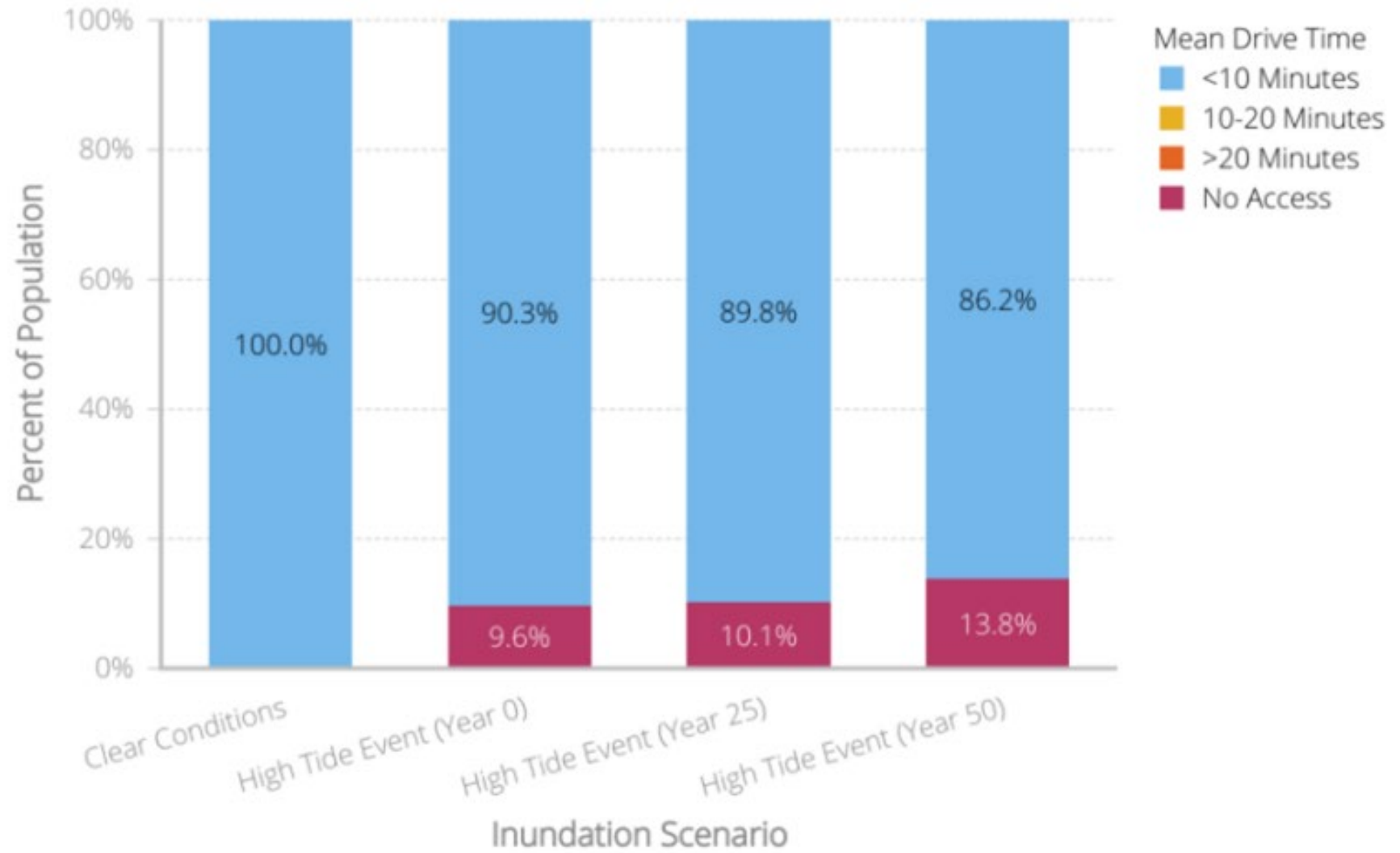
# SLIDELL HIGH TIDE FLOODING

FUTURE WITHOUT ACTION, PONTCHARTRAIN

Drive time access to nearest grocery store by population

## Access to Nearest Grocery Store

Slidell, Louisiana



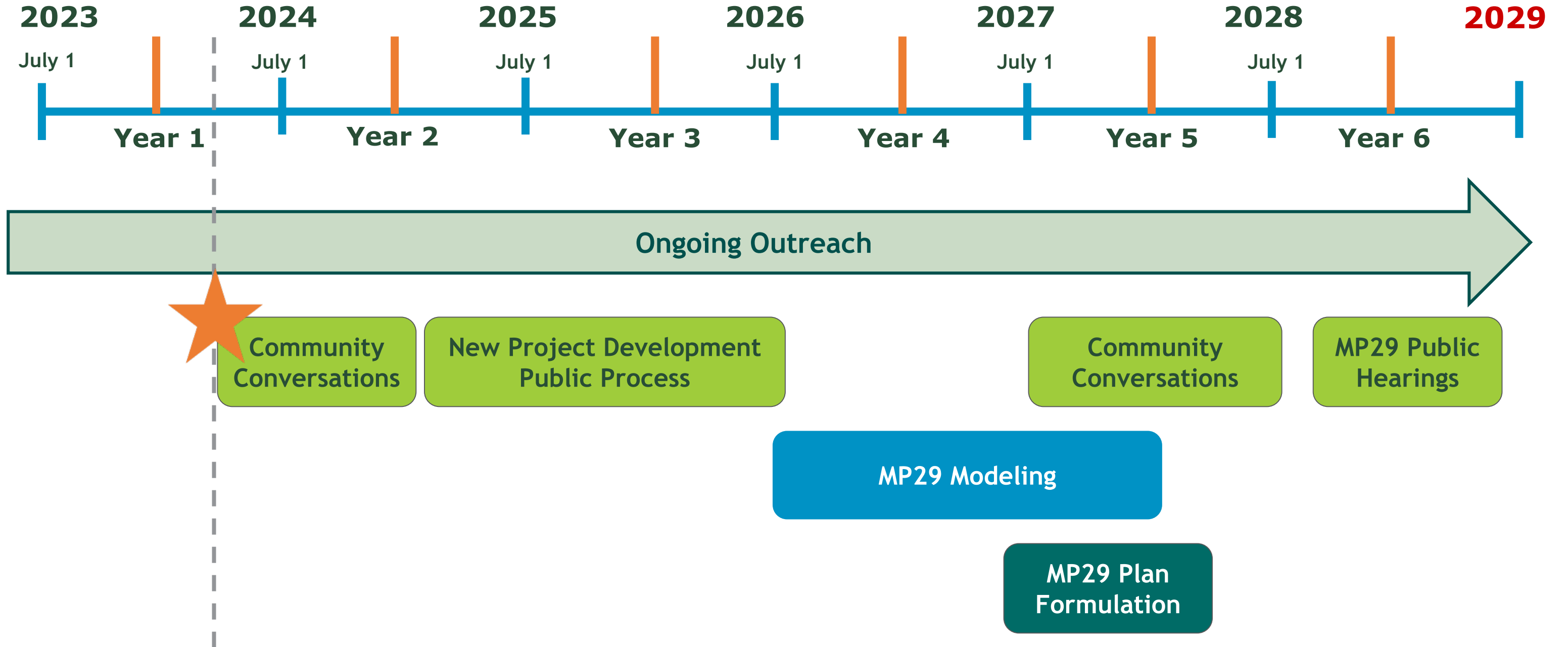
Data Source: ESRI Community Analyst

# STAY INVOLVED

[masterplan@la.gov](mailto:masterplan@la.gov)

# 2029 COASTAL MASTER PLAN TIMELINE

DEVELOPING THE MASTER PLAN FRAMEWORK



# UPCOMING COMMUNITY CONVERSATIONS

- Next MP29 Community Conversations roadshow in early 2025
- Focus on New Project Development + the public solicitation process
- Plan to do small group discussions and workshop projects concepts on maps to address community members' concerns and goals





# DISCUSSION

[masterplan@la.gov](mailto:masterplan@la.gov)

## SMALL GROUP TABLE DISCUSSION

- What are the most important coastal issues for you and your community, now and into the future?
- What sorts of environmental changes and resulting challenges have you seen in your community over the years?

### Identify Current & Future Coastal Challenges



**THANK YOU!**

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