



2029 COASTAL MASTER PLAN
COMMITTED TO OUR COAST

MASTER PLAN COMMUNITY CONVERSATIONS

TERREBONNE

GLENN LEDET AND BREN HAASE



APRIL 30, 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

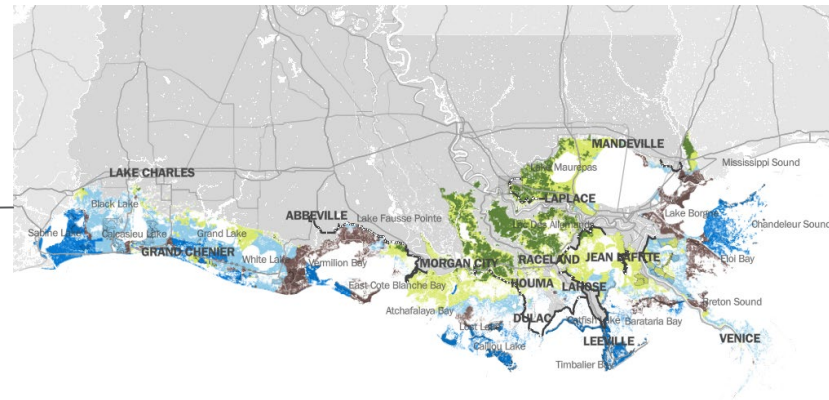
Identify Current & Future Coastal Challenges



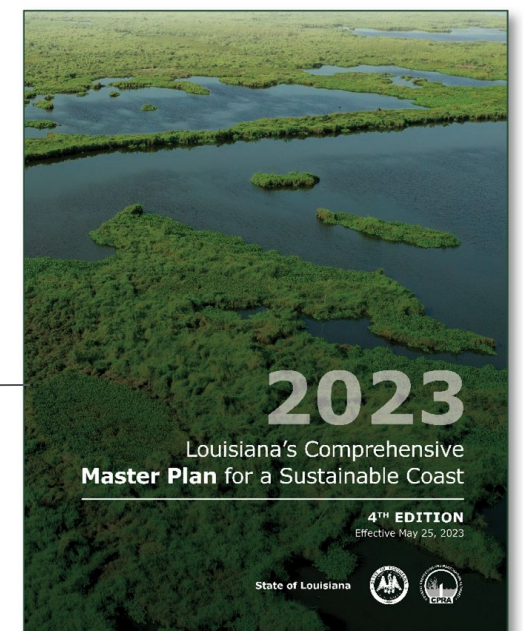
Develop Projects



Model, Refine & Select Projects



Draft Coastal Master Plan



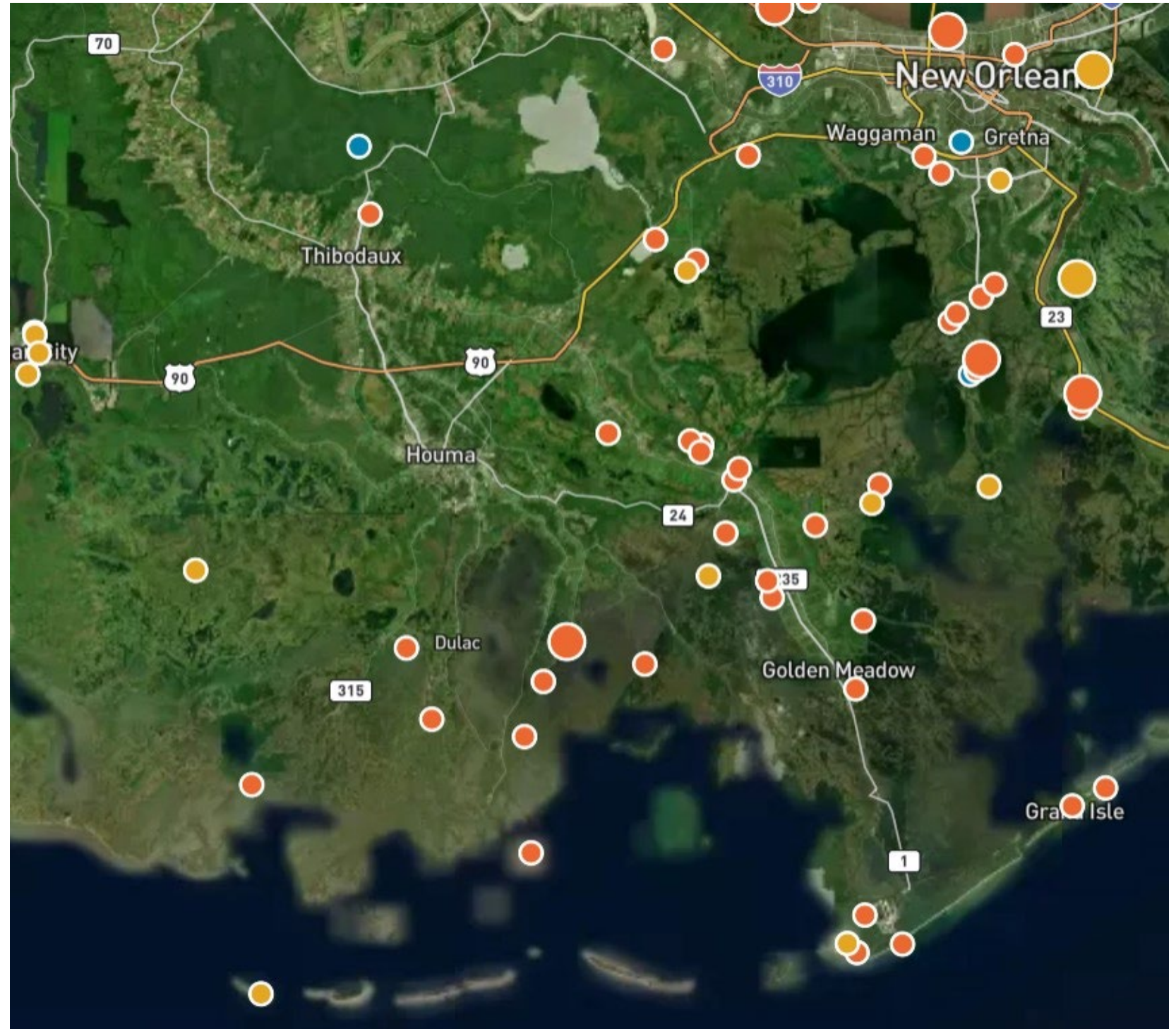
OUR WORK

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

- Total investment 2023-2024: \$3.1 billion
- 38 Active Projects
 - In construction: 15
 - In engineering & design: 20
 - In planning: 3

ACTIVE PROJECT TYPES INCLUDE:

- Marsh creation
- Ridges
- Flap gates
- Shoreline protection
- Island restoration
- Boat launches
- Education centers
- Flood protection
- Hydrologic restoration
- Locks & control structures
- Levee & drainage improvement



PROJECT TYPES

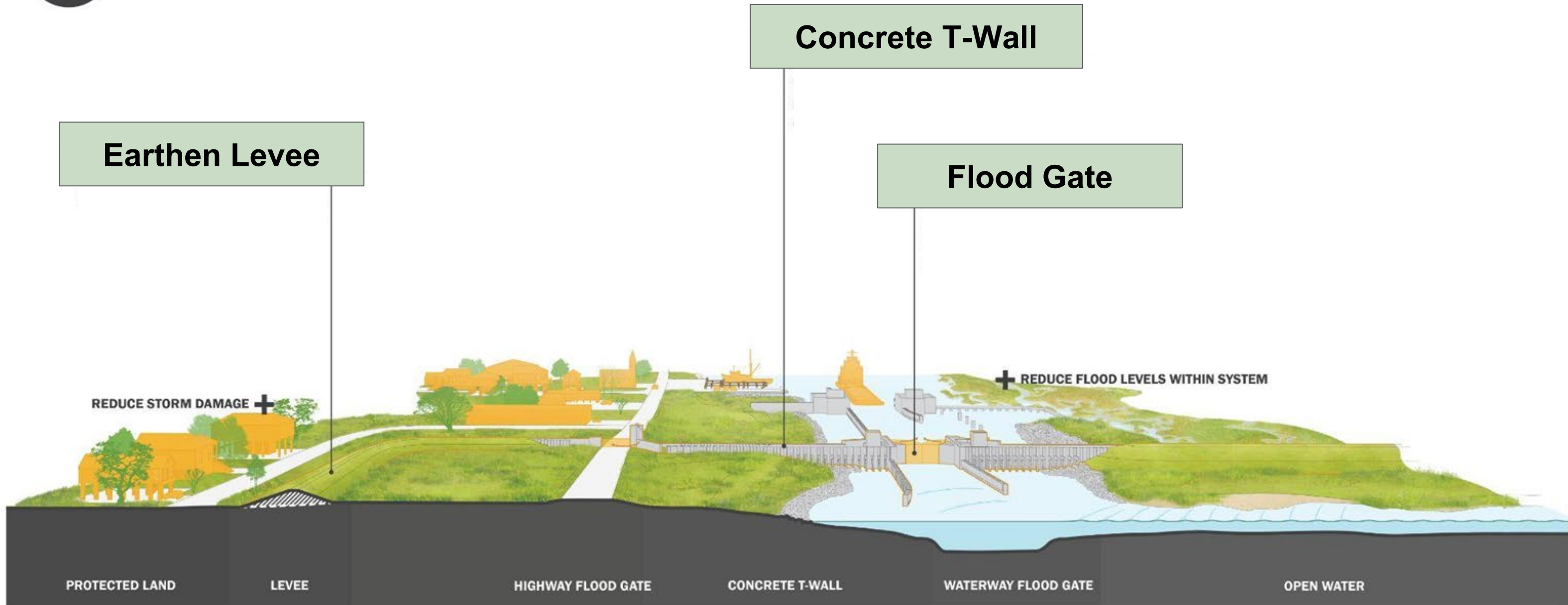
RISK REDUCTION



Structural Risk Reduction

Benefits:

- Reduce flood levels within system
- Reduce storm damage



MORGANZA TO THE GULF HURRICANE RISK REDUCTION PROJECT, TE-64

TERREBONNE

State and Parish funding in excess of \$1 billion invested to date. Project features include:

- 80 of 98 miles of levee and T-walls constructed to 100-year protection level
- 22 navigation floodgates & the HNC Lock Complex
- 23 water control structures
- 9 road gates
- Pump Station Fronting Protection

Status: Construction

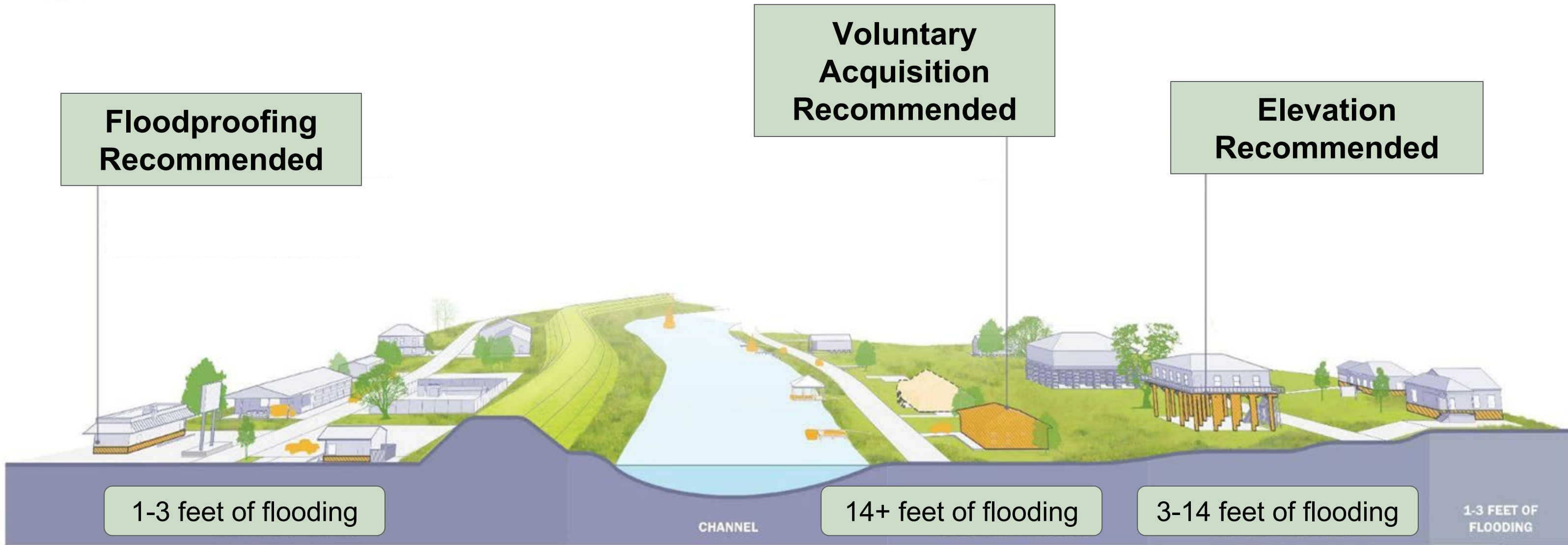


PROJECT TYPES

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 (South
Central), and Construction
(Southwest)



PROJECT TYPES

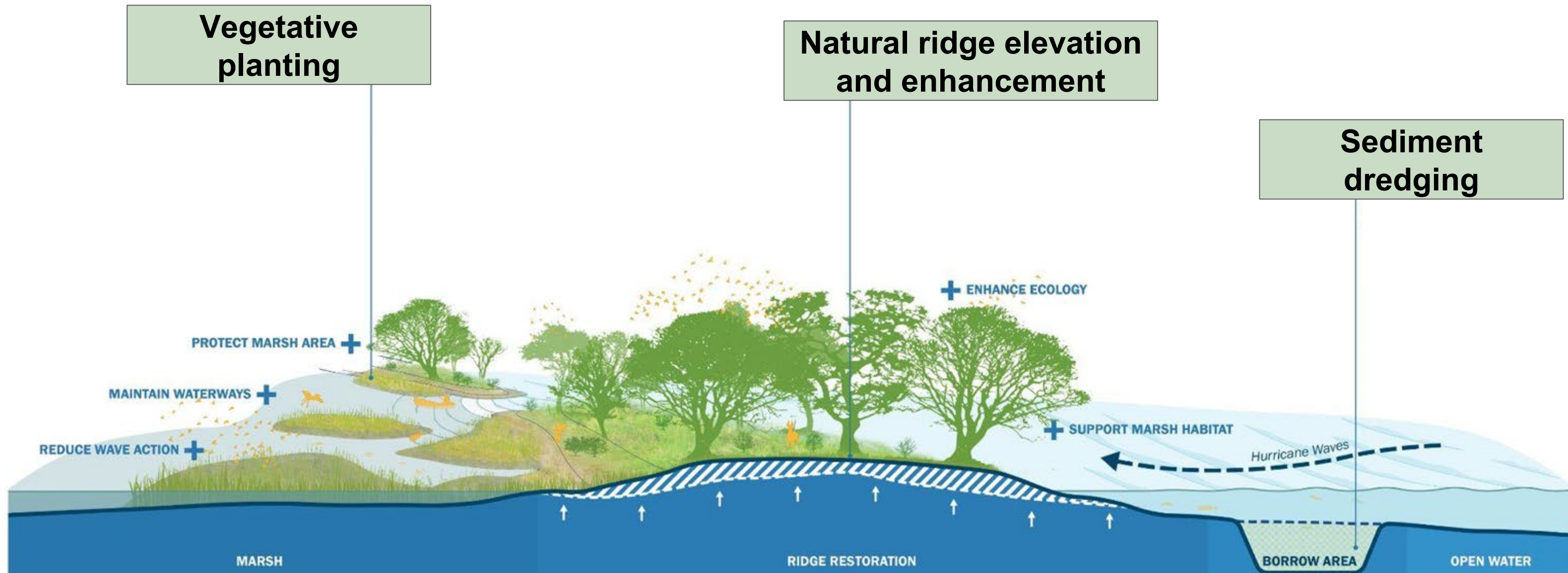
RESTORATION



Ridge Restoration

Benefits:

- Reduce wave action
- Maintain waterways
- Support marsh habitat
- Protect marsh area
- Enhance ecology



PROJECT TYPES

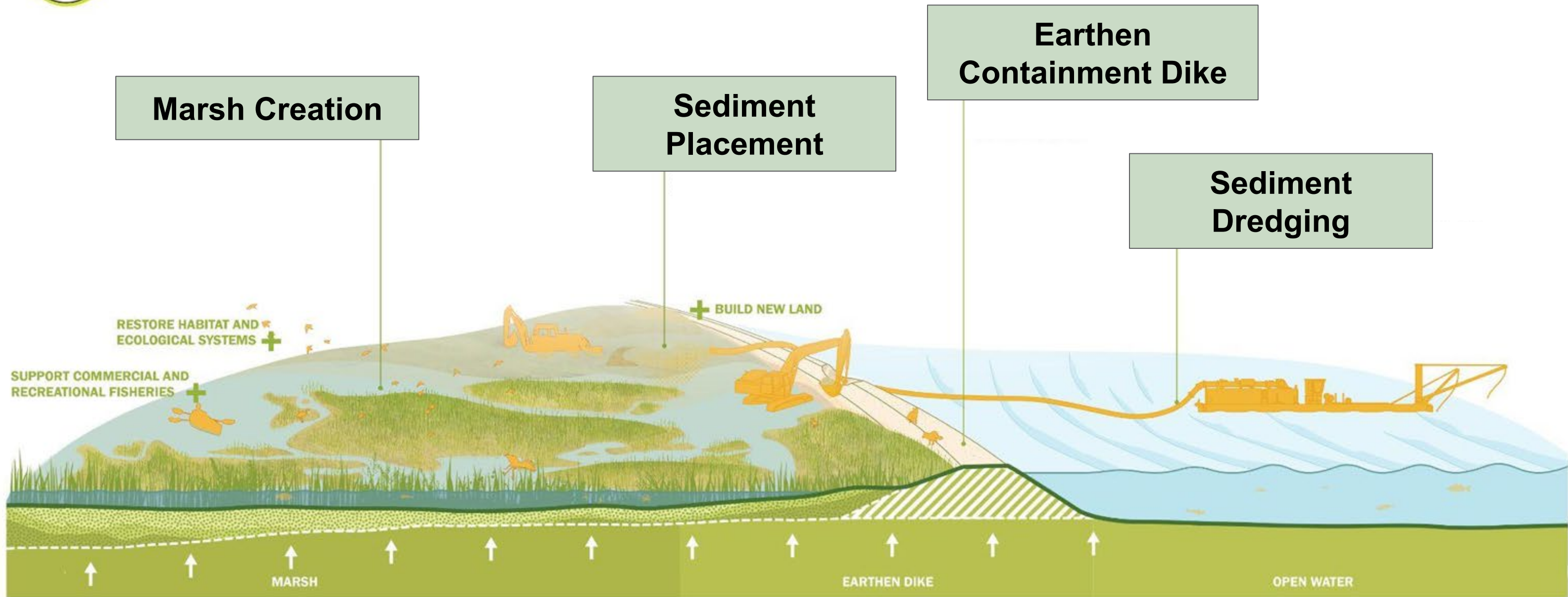
RESTORATION



Marsh Creation

Benefits:

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



BAYOU DE CADE RIDGE RESTORATION & MARSH CREATION, TE-138

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Estimated Cost: \$24.8 Million

- 378 Acres of Land Benefitted
- Hydraulically dredged material from Lake De Cade used to create and nourish 465 acres of intermediate marsh
- Restored 11,131 linear feet of Bayou De Cade's northern ridge to a crown elevation of +5.0 feet and planted with woody species

Status: OM&M



PROJECT TYPES

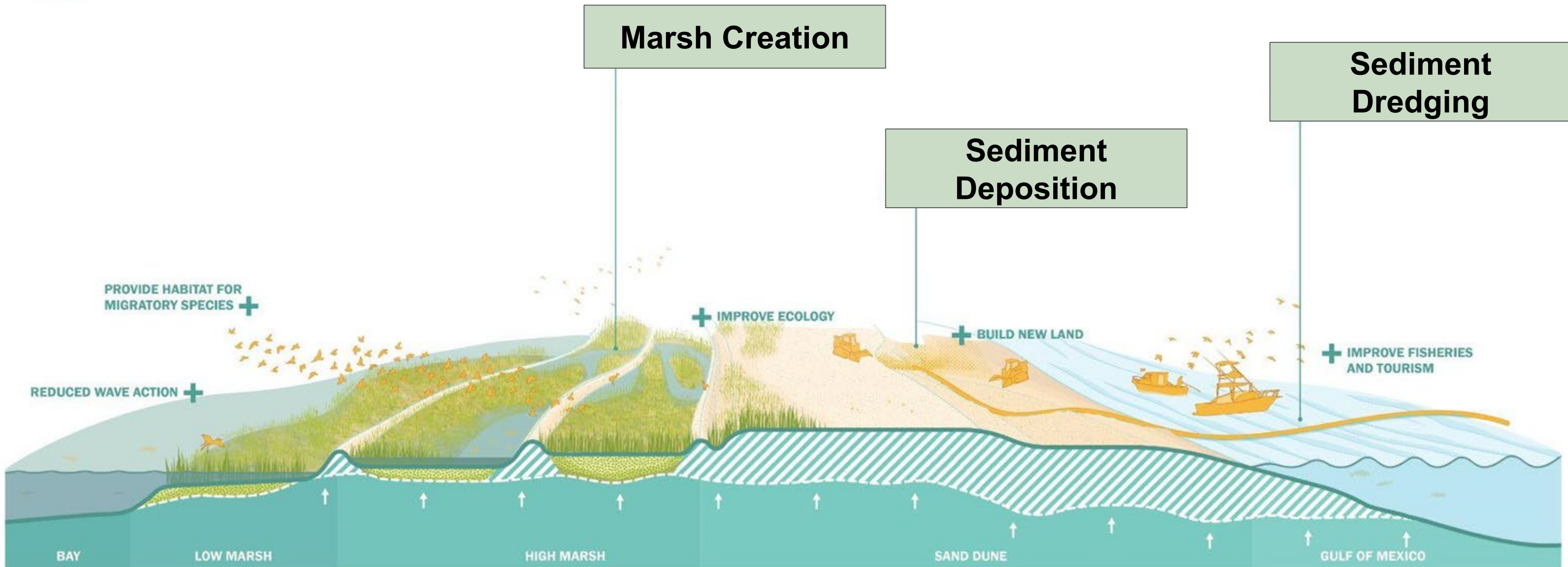
PROGRAMMATIC RESTORATION



Barrier Island Maintenance

Benefits:

- Reduced wave action
- Provides habitat for migratory species
- Improves ecology
- Builds new land
- Improves fisheries and tourism



TERREBONNE BASIN BARRIER ISLAND & BEACH NOURISHMENT, TE-0143

TERREBONNE

Estimated Cost: \$160.1 Million

- 7 miles of beach restored and 1,100 acres of wetland habitat benefitted
- National Fish & Wildlife Foundation (NFWF) funds
- This project restored beach, dune, and marsh habitat on West Belle Headland, Timbalier Island, and Timbalier-East Island, protecting critical infrastructure and essential coastal habitat



Status: OM&M

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

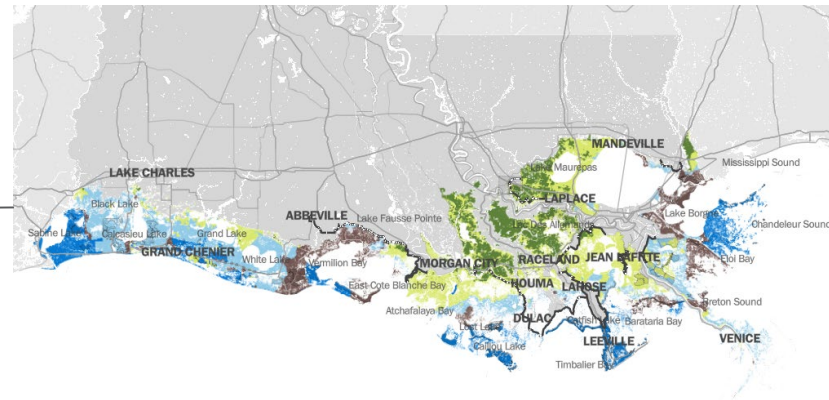
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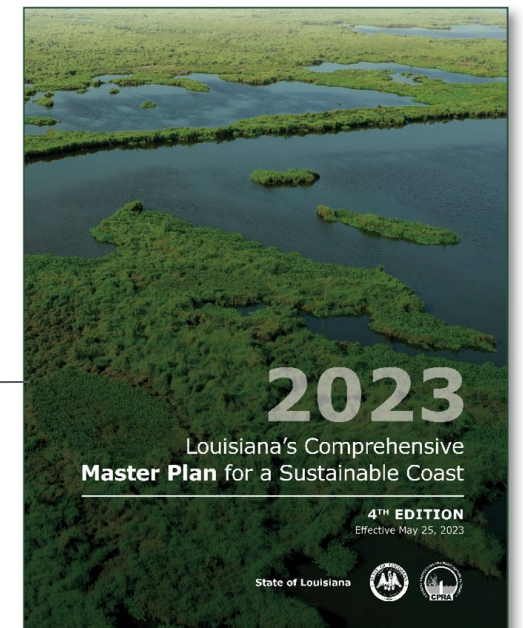
Develop Projects



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

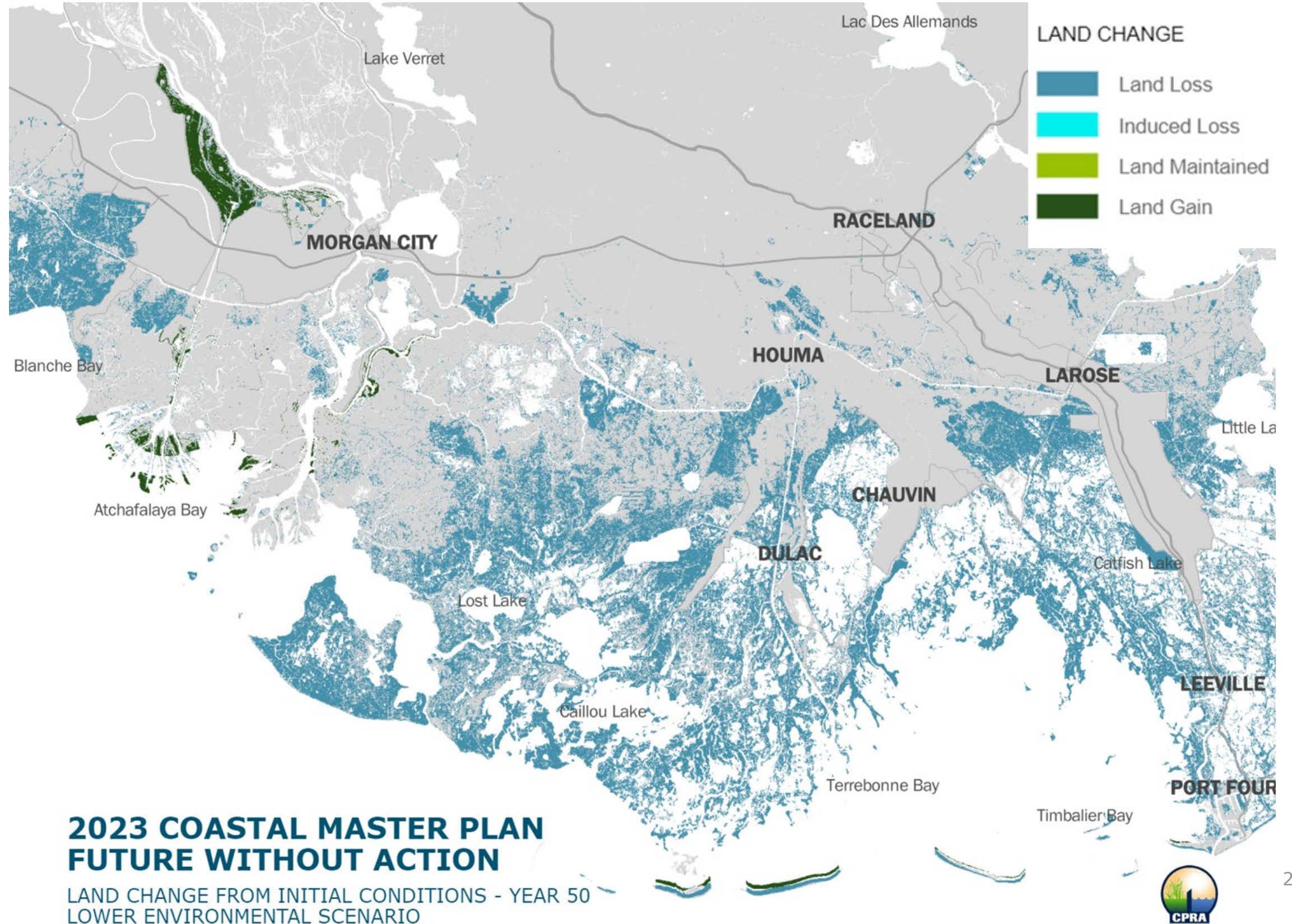
- Master Plan is tasked to respond to coastal land loss and threats from **storm surge-based** flooding - flooding generated by a hurricane or tropical storm

TERREBONNE REGION

PROJECTED FUTURE LAND CHANGE

Future Without Action, Year 50 -

Projected land change without Coastal Master Plan projects on the landscape

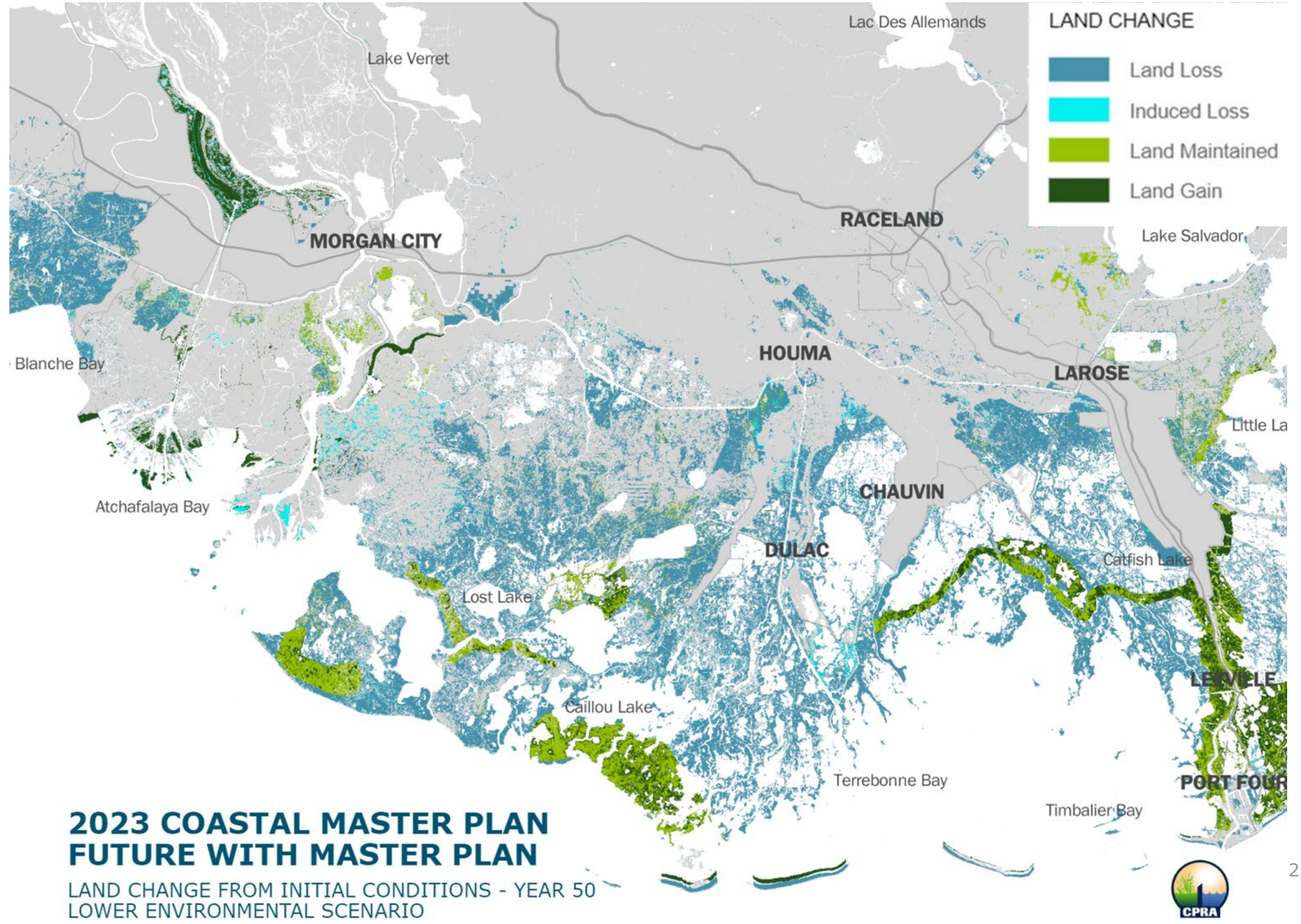


TERREBONNE REGION

PROJECTED FUTURE LAND CHANGE

Future With Action,
Year 50 -

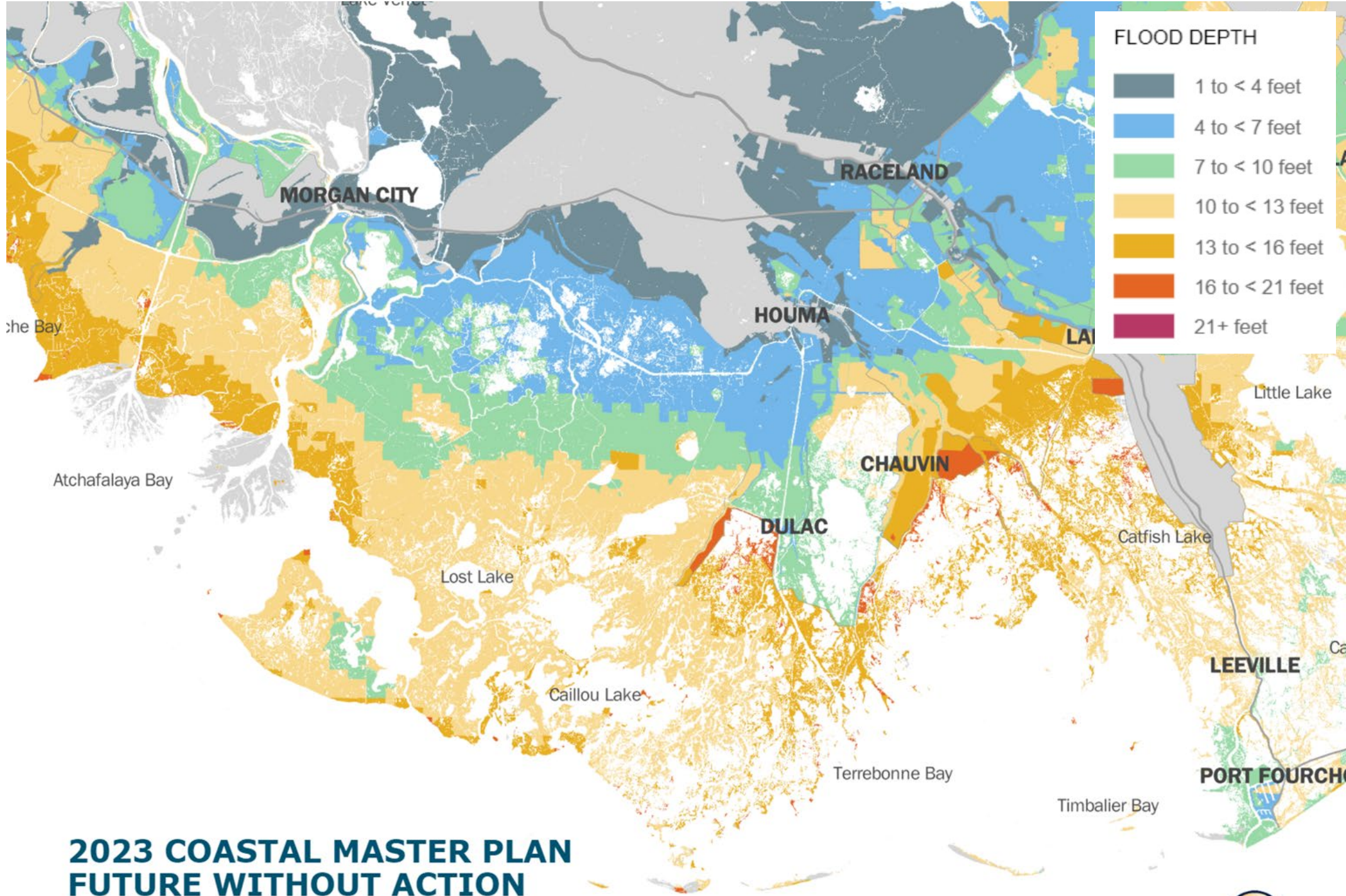
Projected land
change with Coastal
Master Plan
projects on the
landscape



TERREBONNE REGION

PROJECTED STORM SURGE-BASED FLOOD DEPTHS

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



2023 COASTAL MASTER PLAN FUTURE WITHOUT ACTION

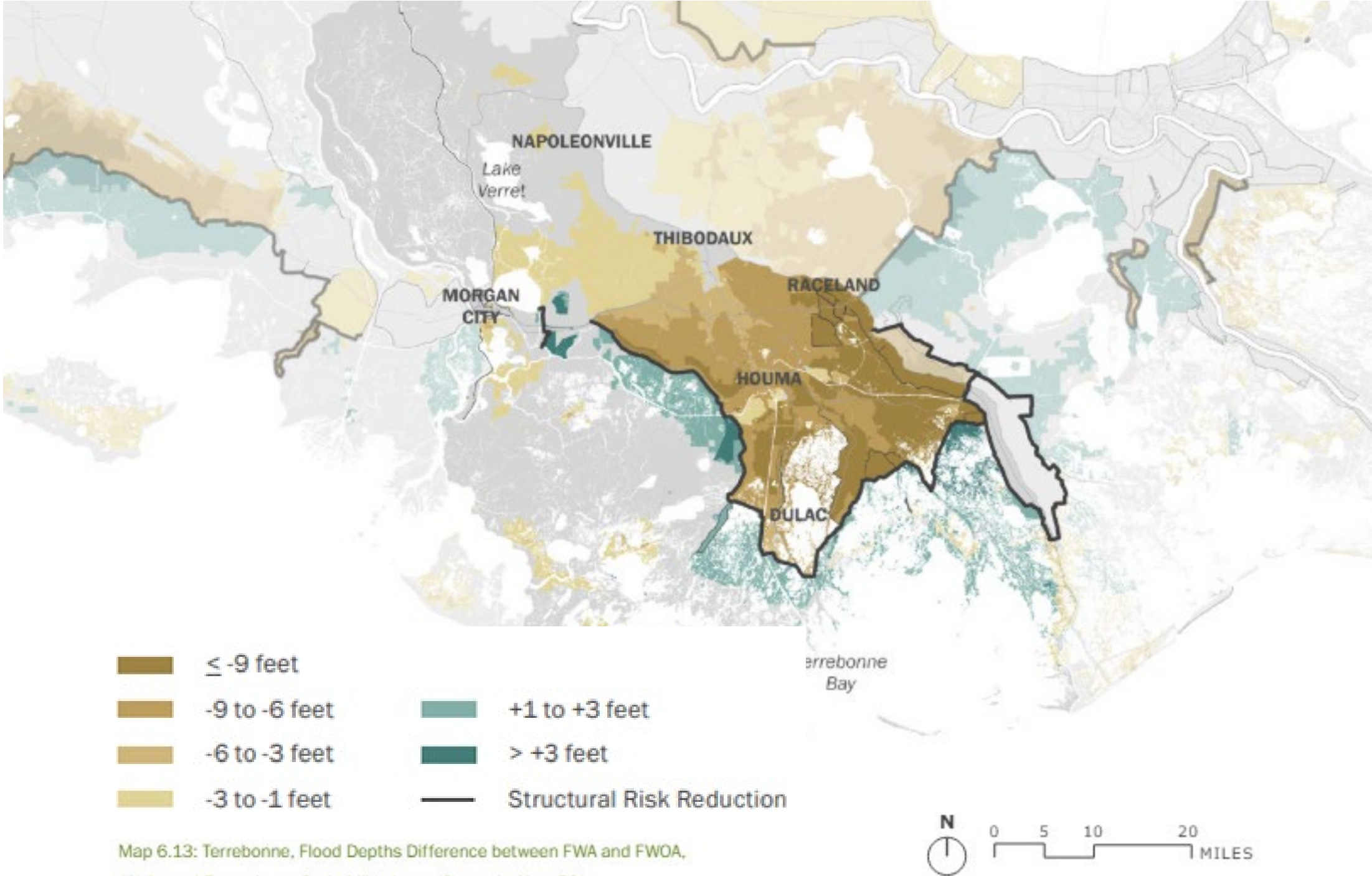
FLOOD DEPTH - YEAR 0
LOWER ENVIRONMENTAL SCENARIO



TERREBONNE REGION

PROJECTED FLOOD DEPTHS

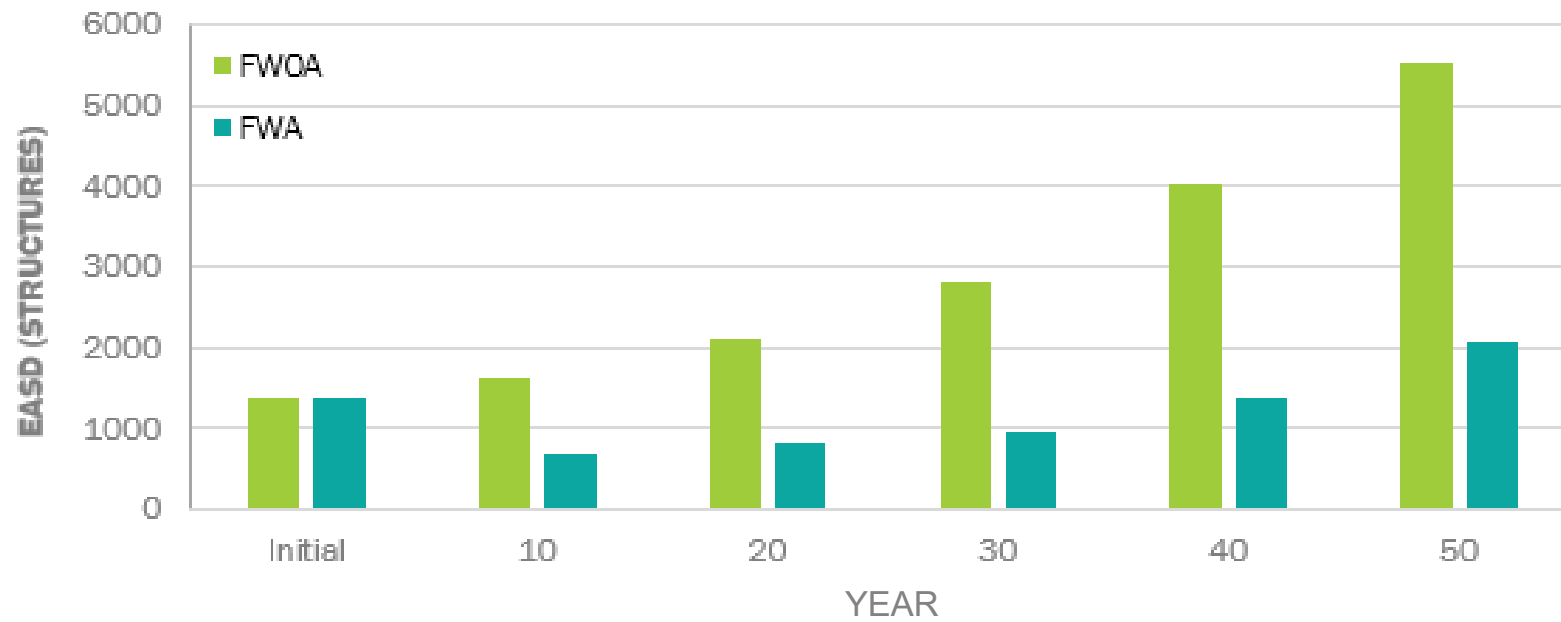
100-Year flood depth difference between Future With Action and Future Without Action



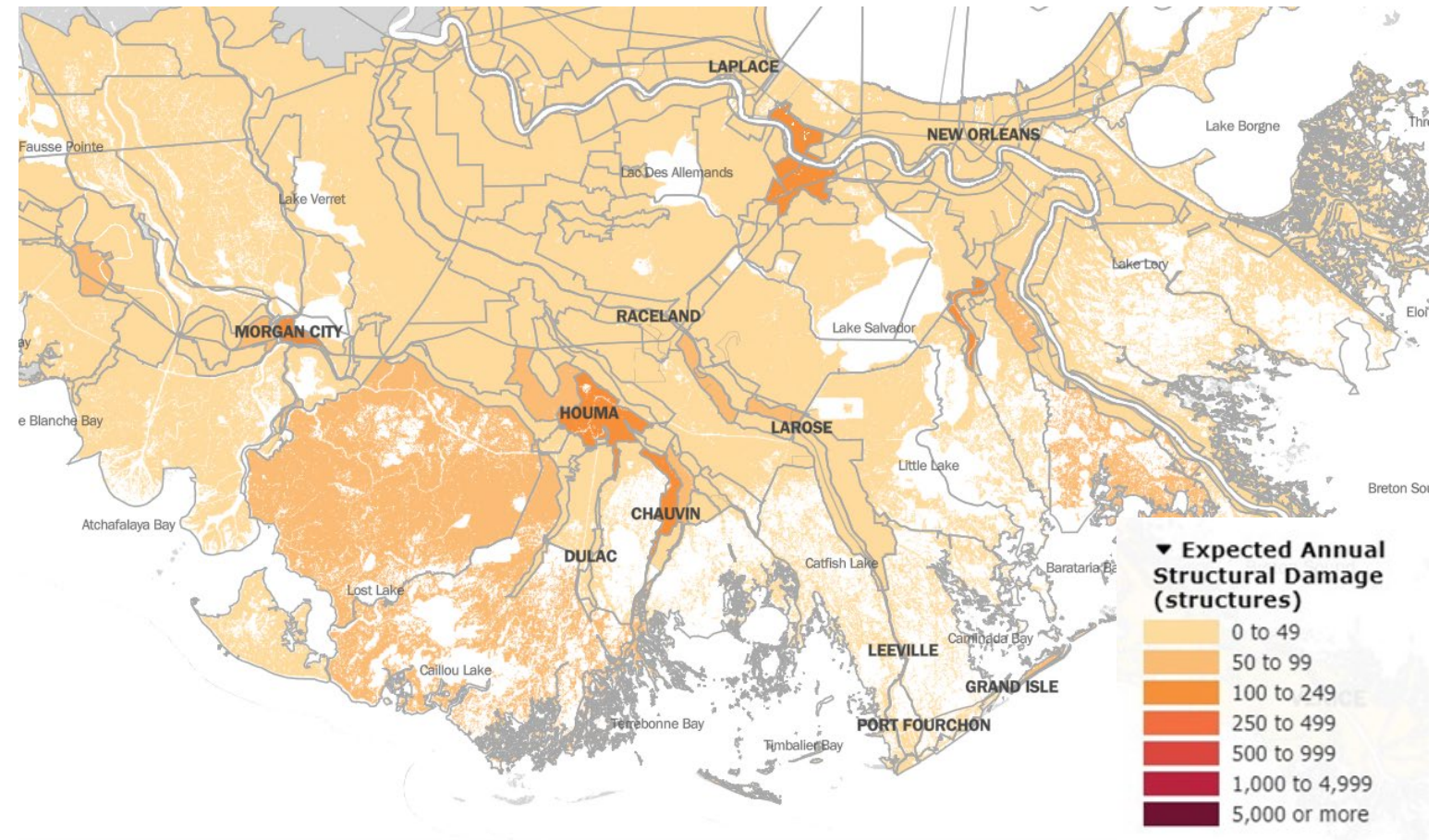
TERREBONNE REGION

PROJECTED FUTURE DAMAGES FROM TROPICAL EVENTS

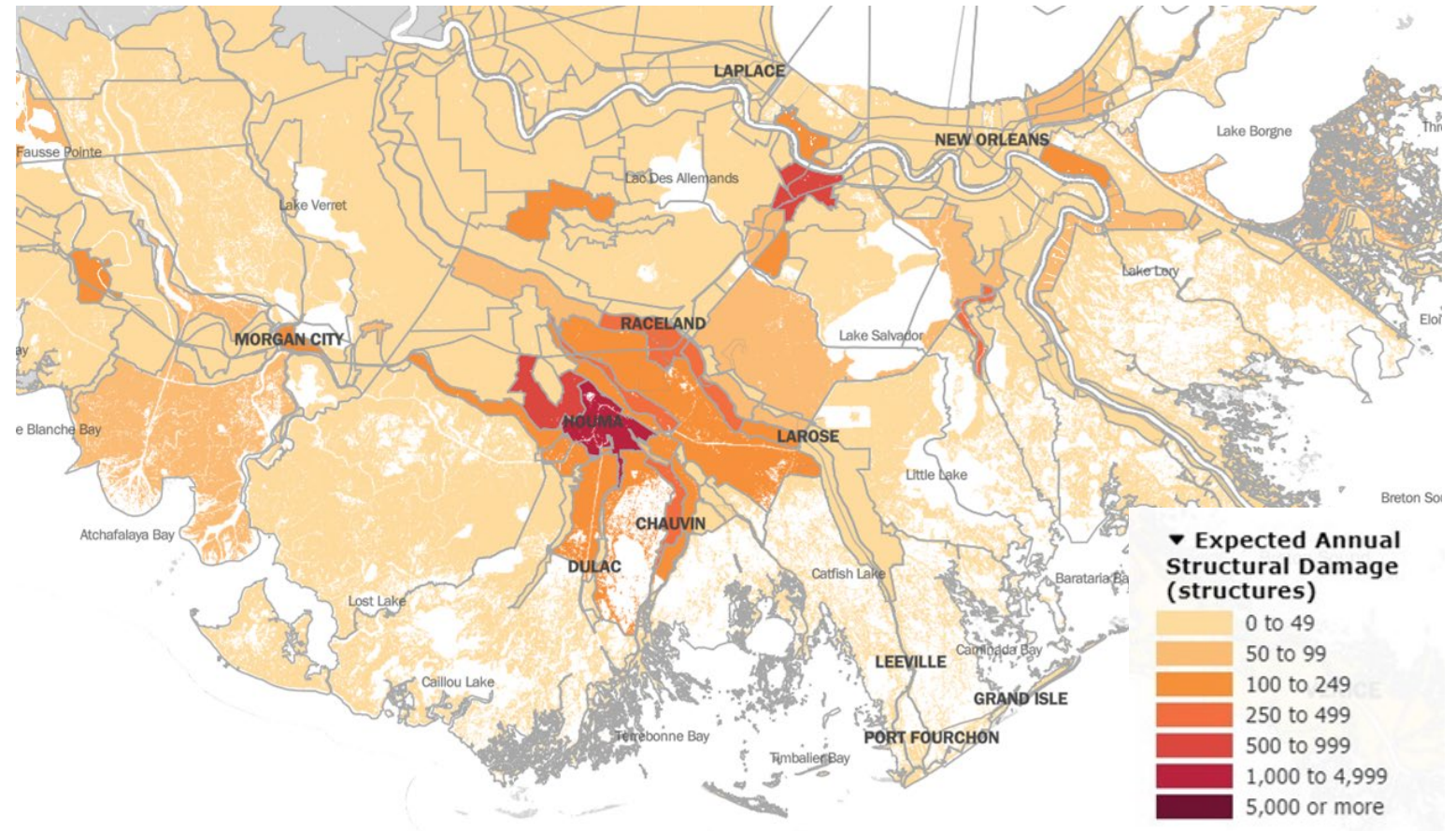
Expected Annual Damage, Structural Equivalents: Lower Scenario



*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

DULAC HIGH TIDE FLOODING - DULAC COMMUNITY CENTER

FUTURE WITHOUT ACTION

- Currently floods less than 17% of days
- Future Without Action:
 - In 25 years, projected to flood ~95% of days
 - In 50 years, projected to flood ~95% of days

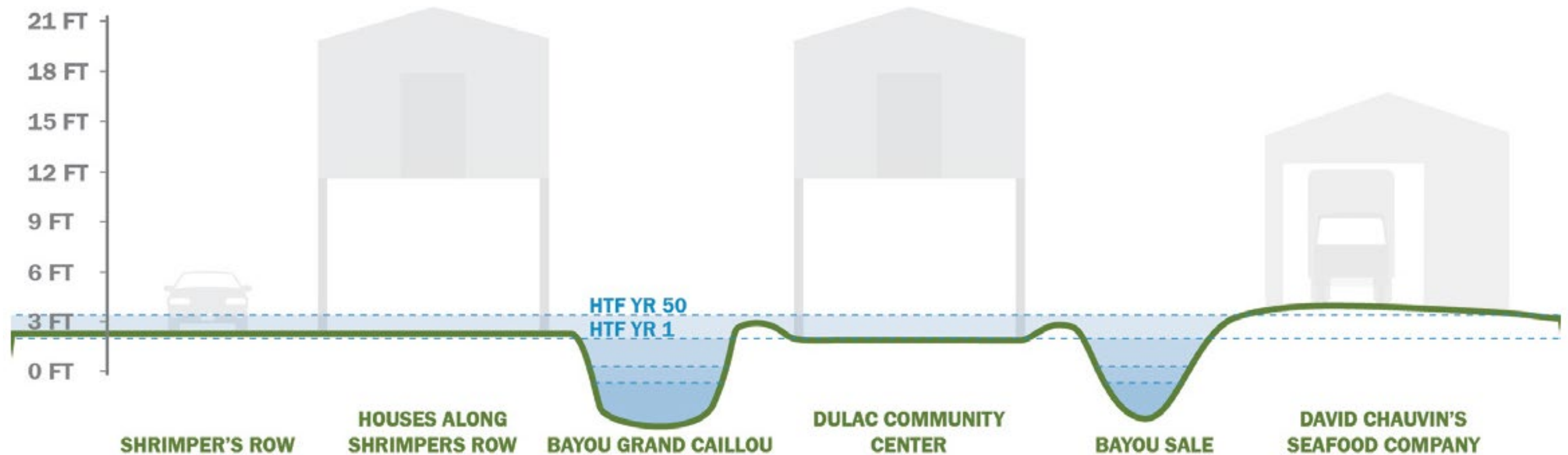


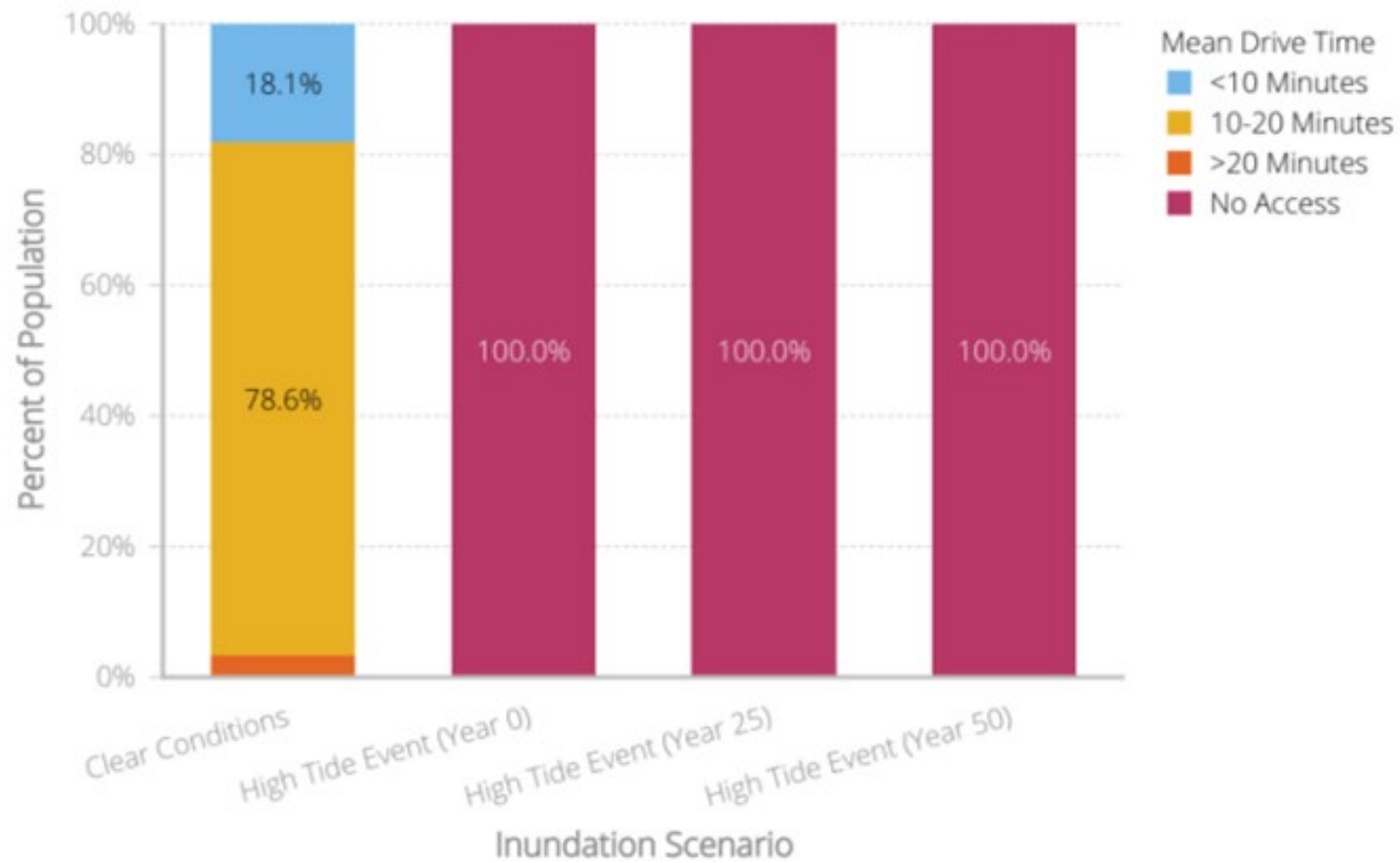
Figure 6.13: Representative HTF Elevations for Dulac at Year 1 and 50 in the Lower Scenario.

DULAC HIGH TIDE FLOODING

FUTURE WITHOUT ACTION, TERREBONNE

Access to Nearest LERN Tier 1 Hospital

Dulac, Louisiana



Data Source: Louisiana Department of Health

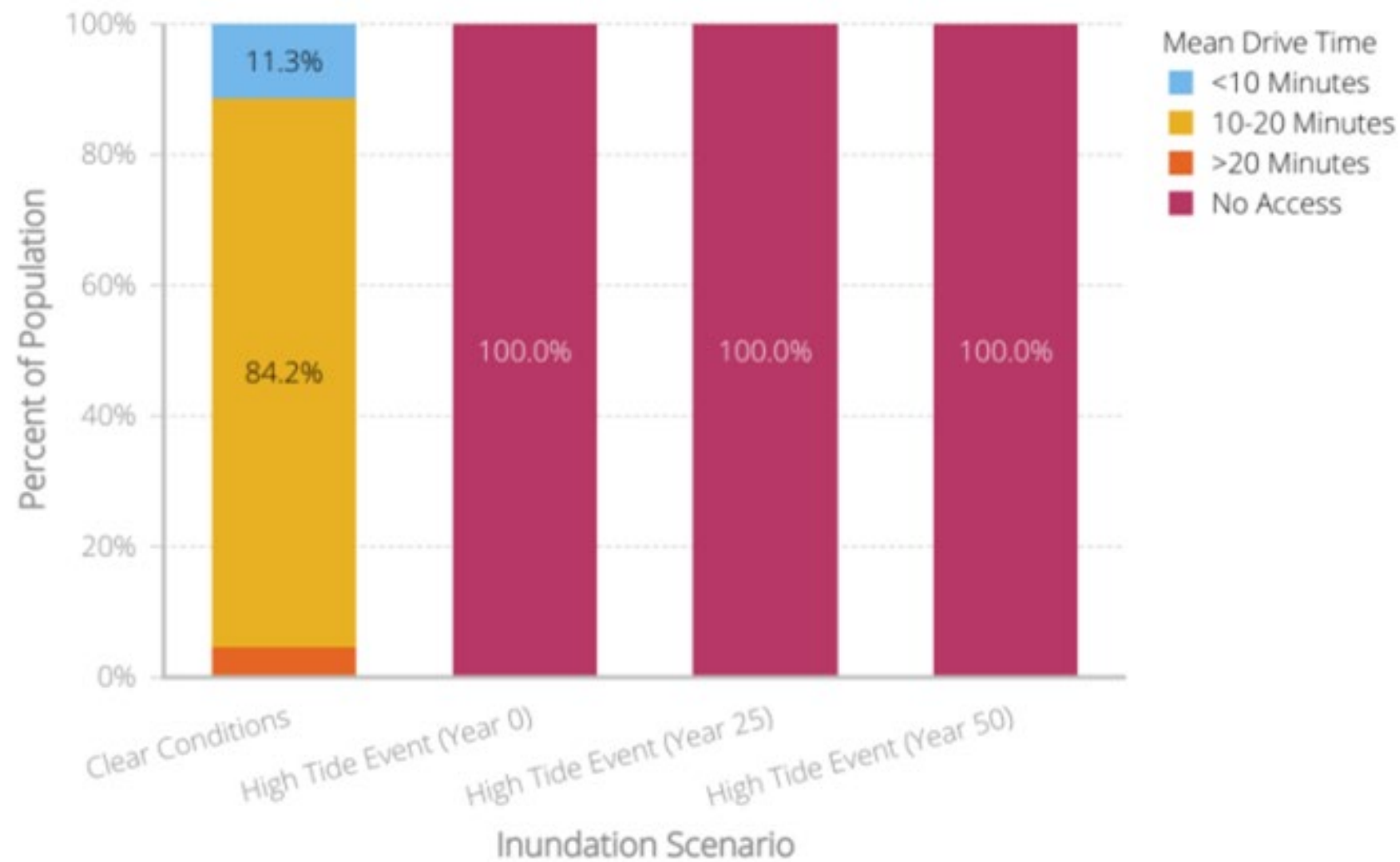
Drive time access to nearest Louisiana Emergency Response Network Tier 1 hospital by population

DULAC HIGH TIDE FLOODING

FUTURE WITHOUT ACTION, TERREBONNE

Access to Nearest Grocery Store

Dulac, Louisiana



Data Source: ESRI Community Analyst

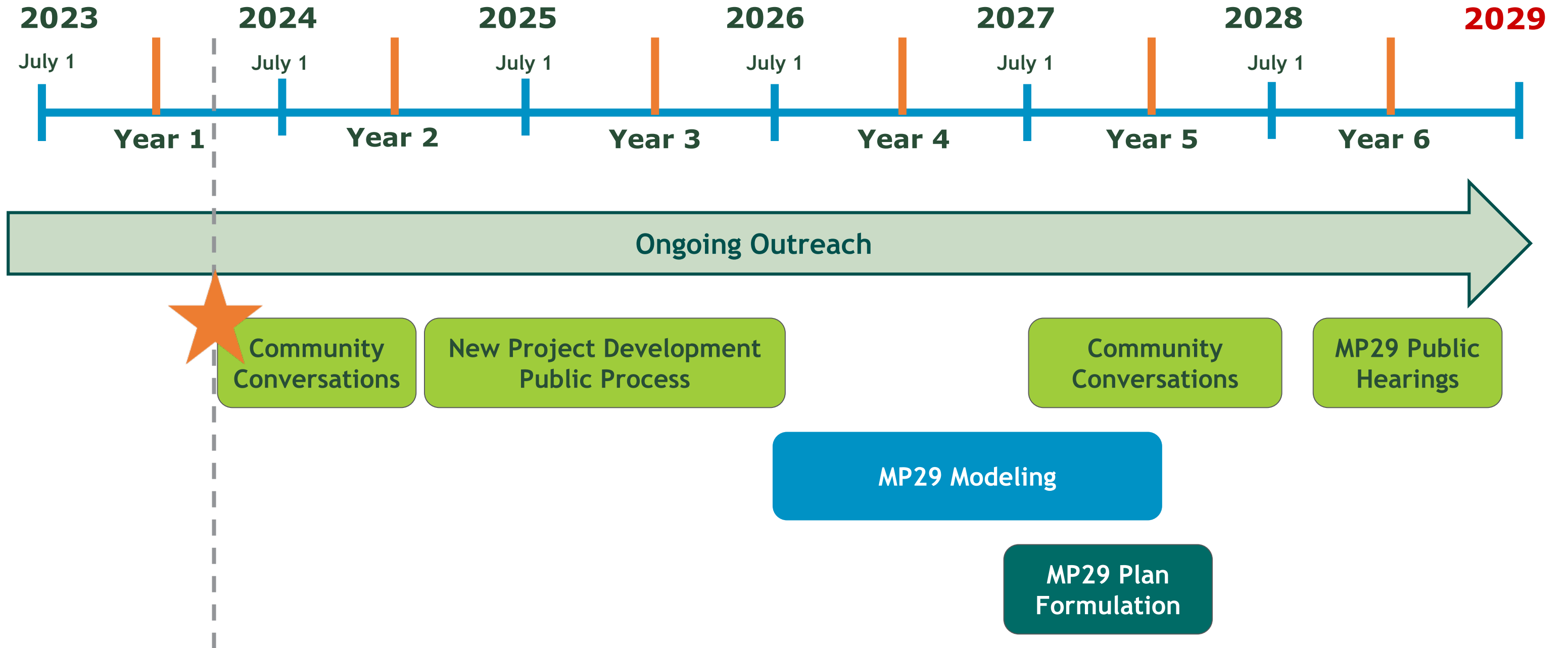
Drive time access to nearest grocery store by population

STAY INVOLVED

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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

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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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