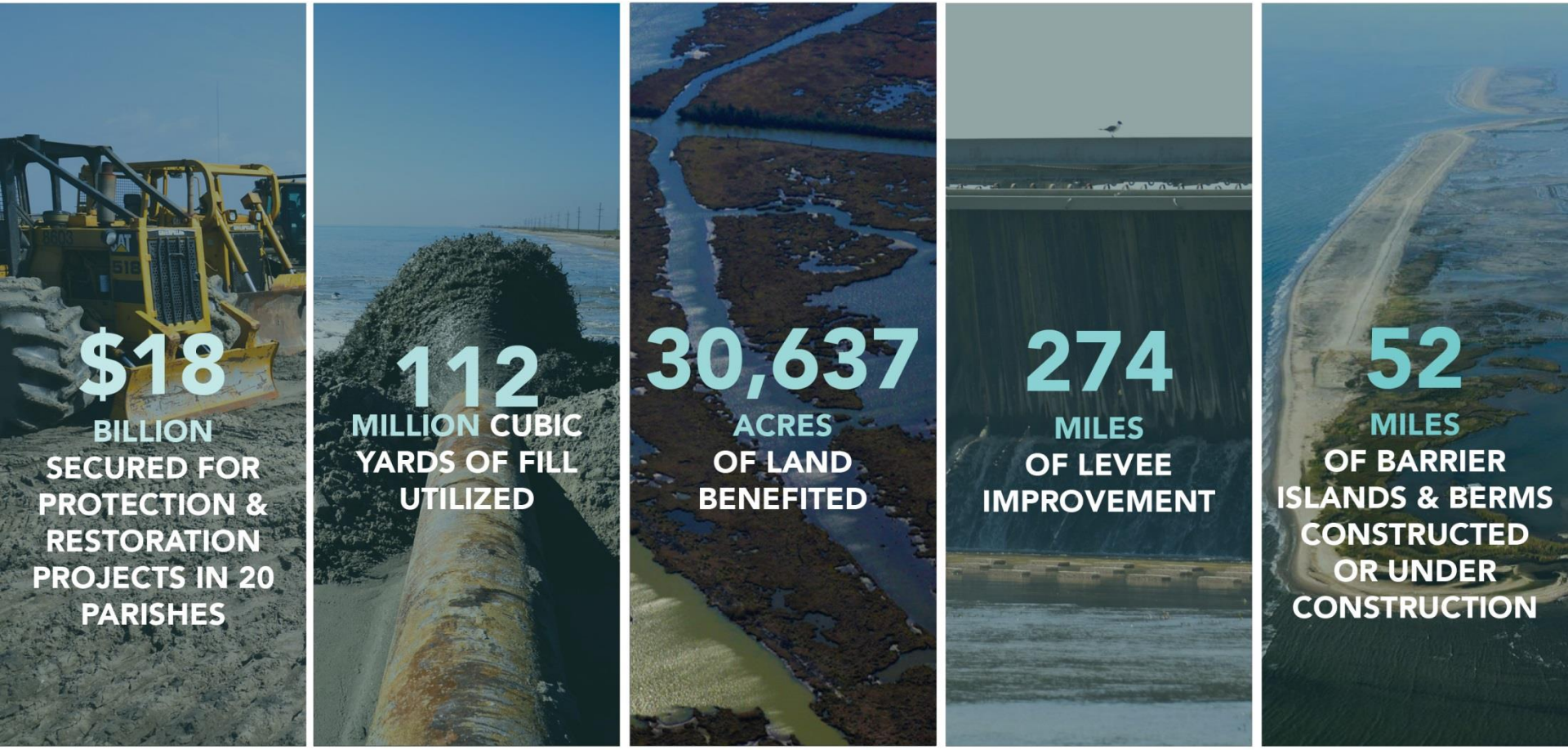
2017 COASTAL MASTER PLAN

BUILDING ON OUR COMMITMENT TO PROTECT AND RESTORE OUR COAST

NOAA Briefing

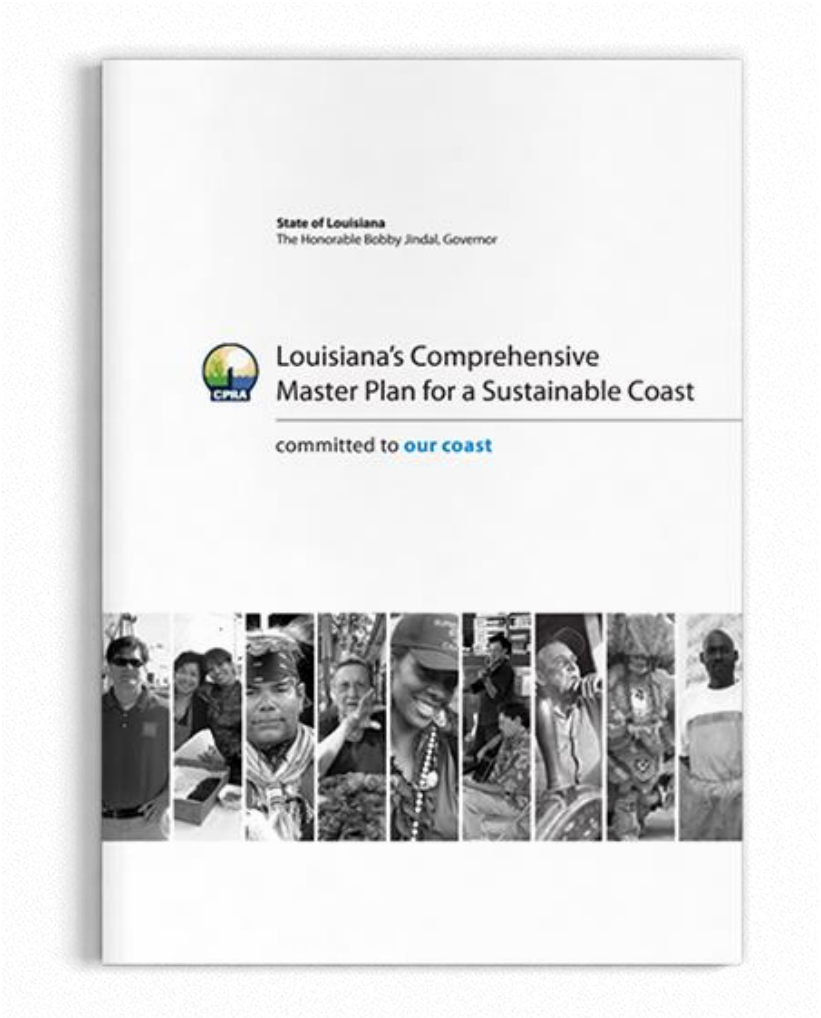
Bren Haase| September 8, 2016

RESPONDING TO THE CRISIS: LOUISIANA'S COASTAL PROGRAM SINCE 2007

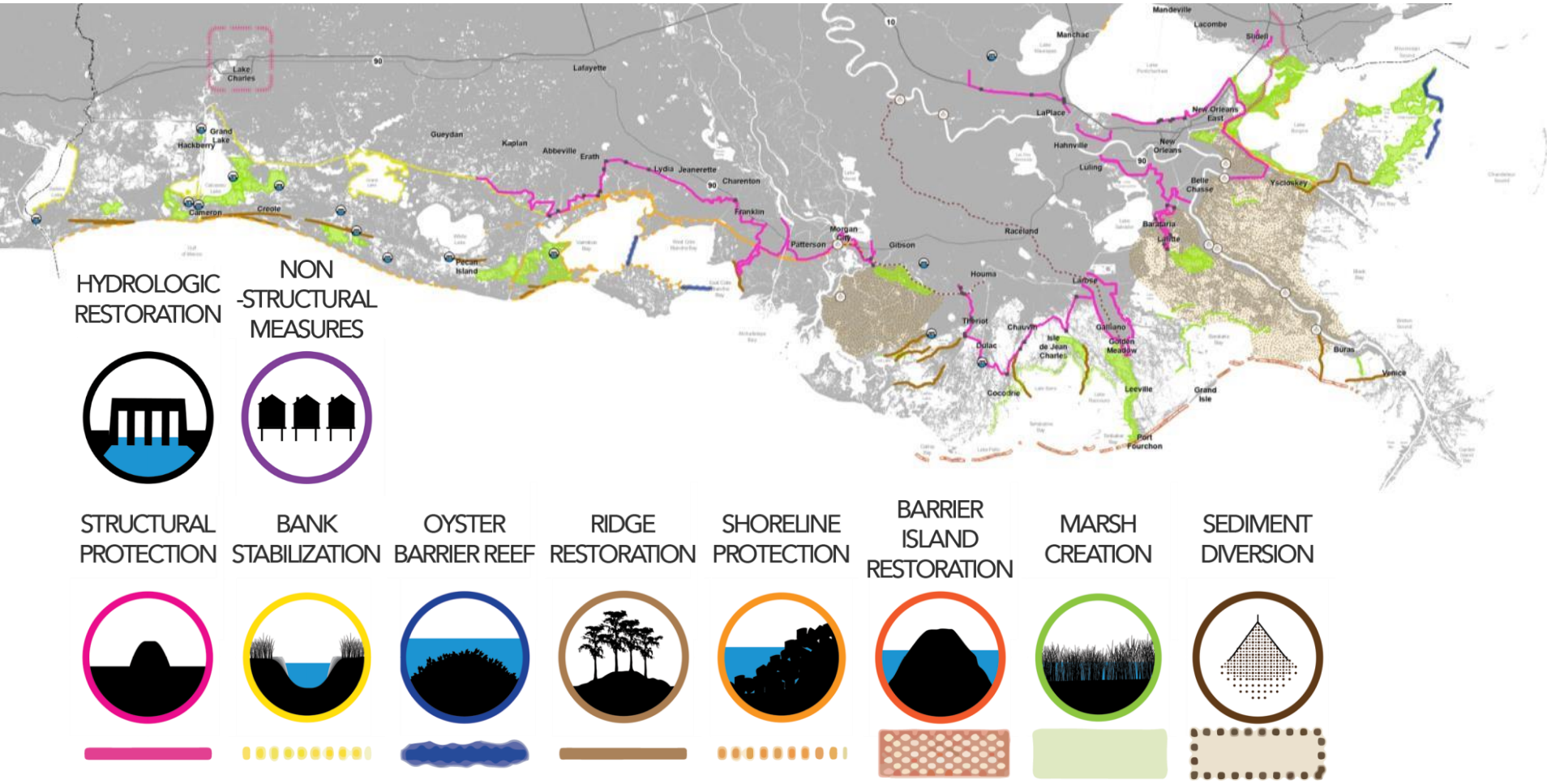


2012 COASTAL MASTER PLAN

- Built on world class science and engineering
- Evaluated hundreds of existing project concepts
- Incorporated extensive public input and review
- Resource constrained
  - Funding, water, sediment
- Identified investments that will pay off, not just for us, but for our children and grandchildren



LOUISIANA'S 2012 COMPREHENSIVE MASTER PLAN FOR A SUSTAINABLE COAST



A FRAMEWORK TO MAKE DECISIONS

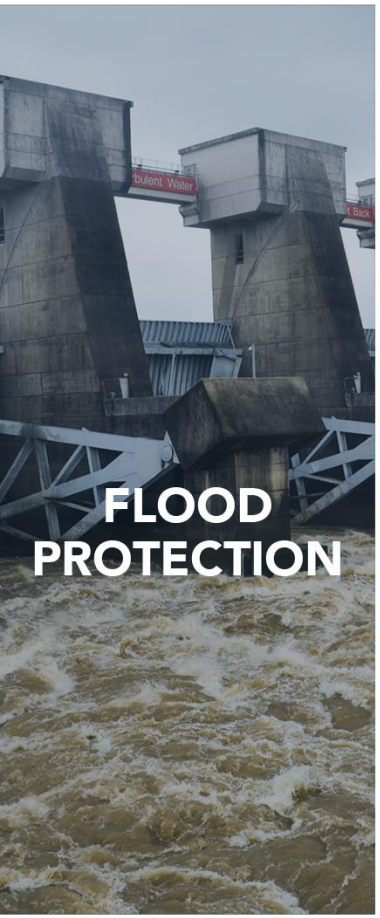
THE ANALYTICAL CHALLENGE

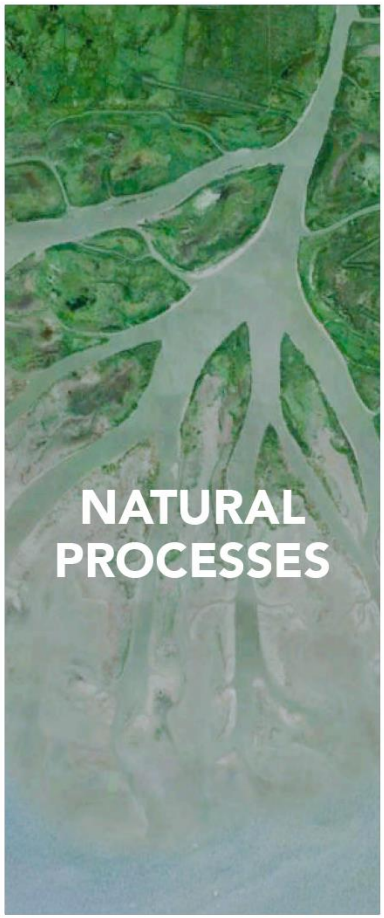
- Complex Coastal Environment
- 50 Year Planning Horizon
- Uncertain Future Scenarios
- Multiple Project Types
- Diverse Community Needs

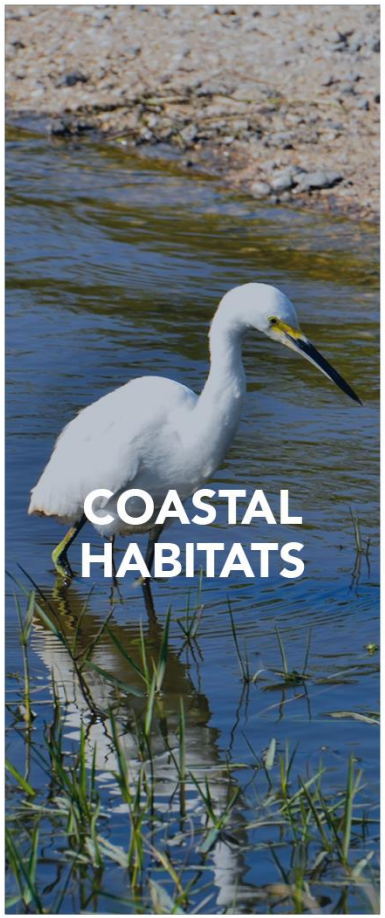
NO OPTIMAL SOLUTIONS

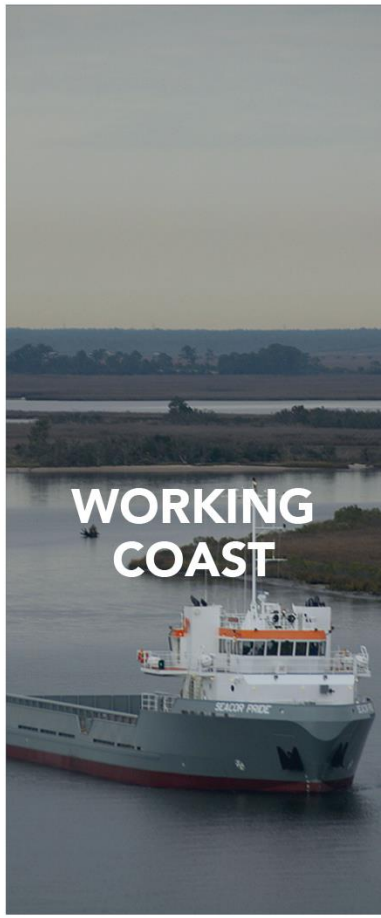
- Risk Reduction (Structural or Nonstructural) vs. Restoration
- Near-Term Benefits vs. Long-Term Sustainability
- Different Stakeholder Preferences

OBJECTIVES OF THE COASTAL MASTER PLAN







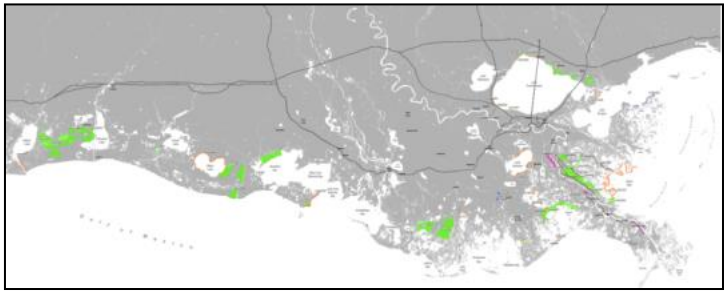


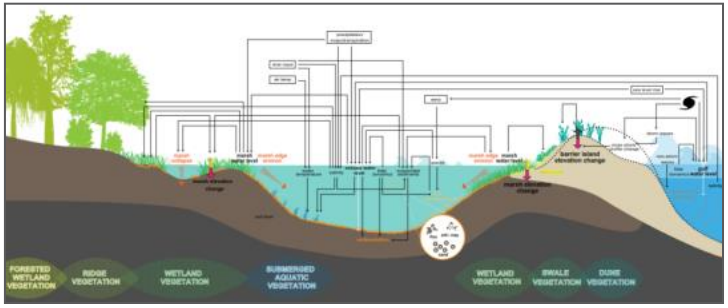
SO WHY ANOTHER PLAN?

- It's required by law to be updated every five years
- Allows the state to respond to changes on the ground and public input as well as innovations in science, engineering, and policy
- Advances a comprehensive and integrated approach to protecting and restoring the communities of Coastal Louisiana

WHAT WILL BE DIFFERENT ABOUT THE 2017 COASTAL MASTER PLAN?

- Improved science and technical analysis
- Incorporating new ideas and information
- Focus on flood risk reduction and resilience
- Emphasis on communities





PLANNING TEAM

- Karim Belhadjali
- Bren Haase
- Mandy Green
- Melanie Saucier
- Ashley Cobb
- Andrea Galinski
- Zach Rosen

SUPPORTED BY:

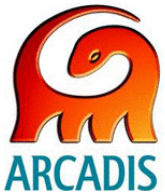
THE WATER INSTITUTE OF THE GULF™

RAND CORPORATION

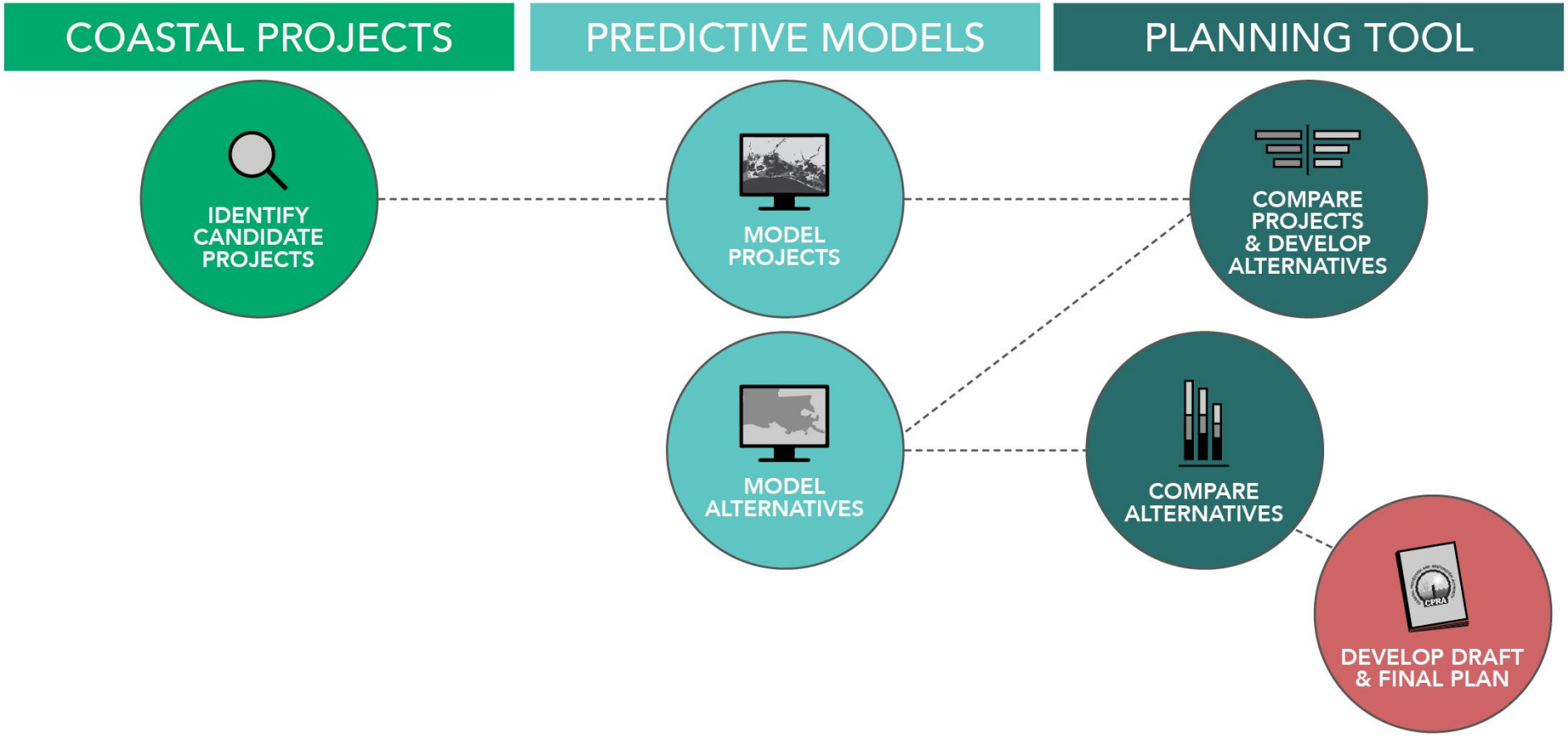
ARCADIS

EMERGENT METHOD

TECHNICAL TEAM
COLLABORATIVE TEAM OF OVER 70 EXPERTS



DEVELOPING THE COASTAL MASTER PLAN



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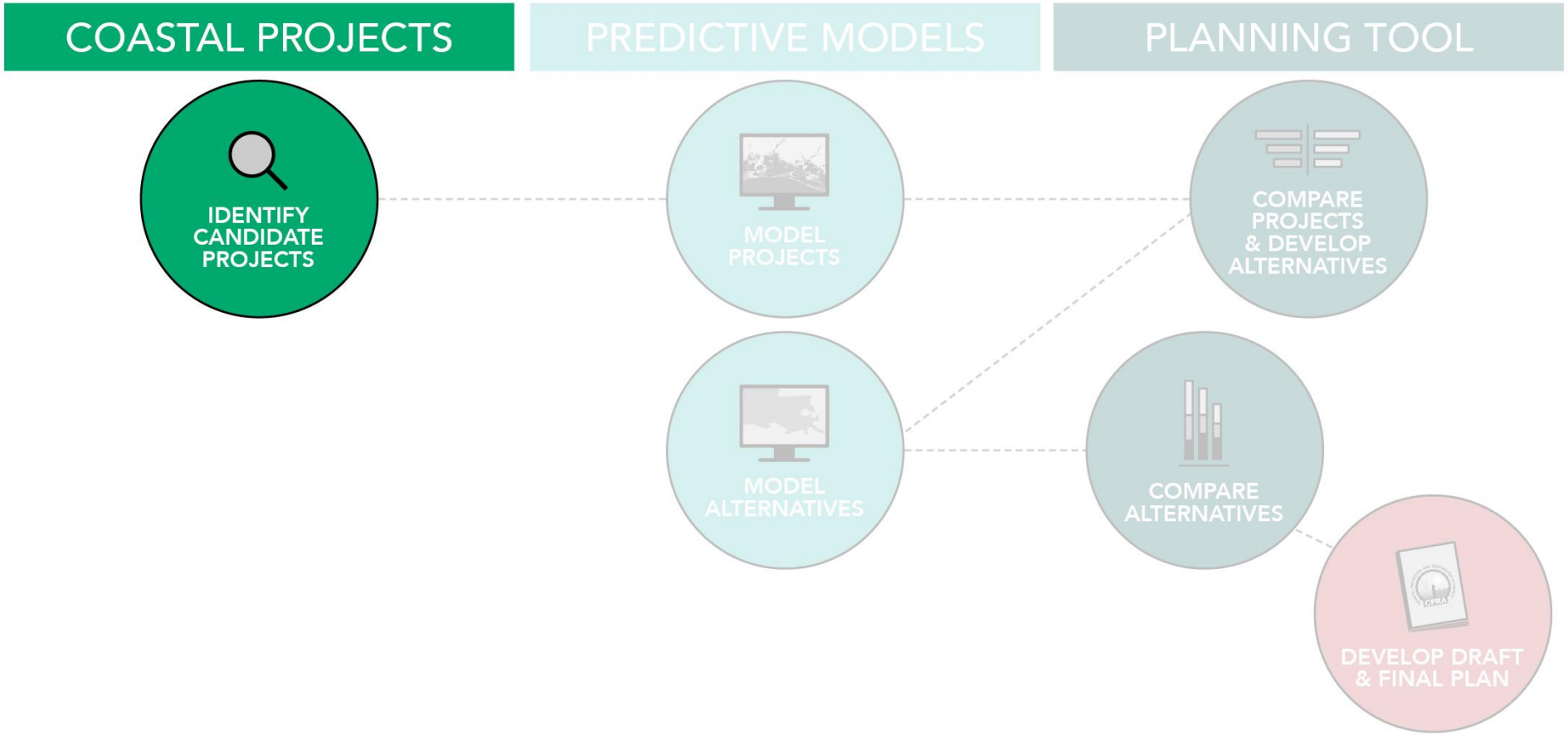
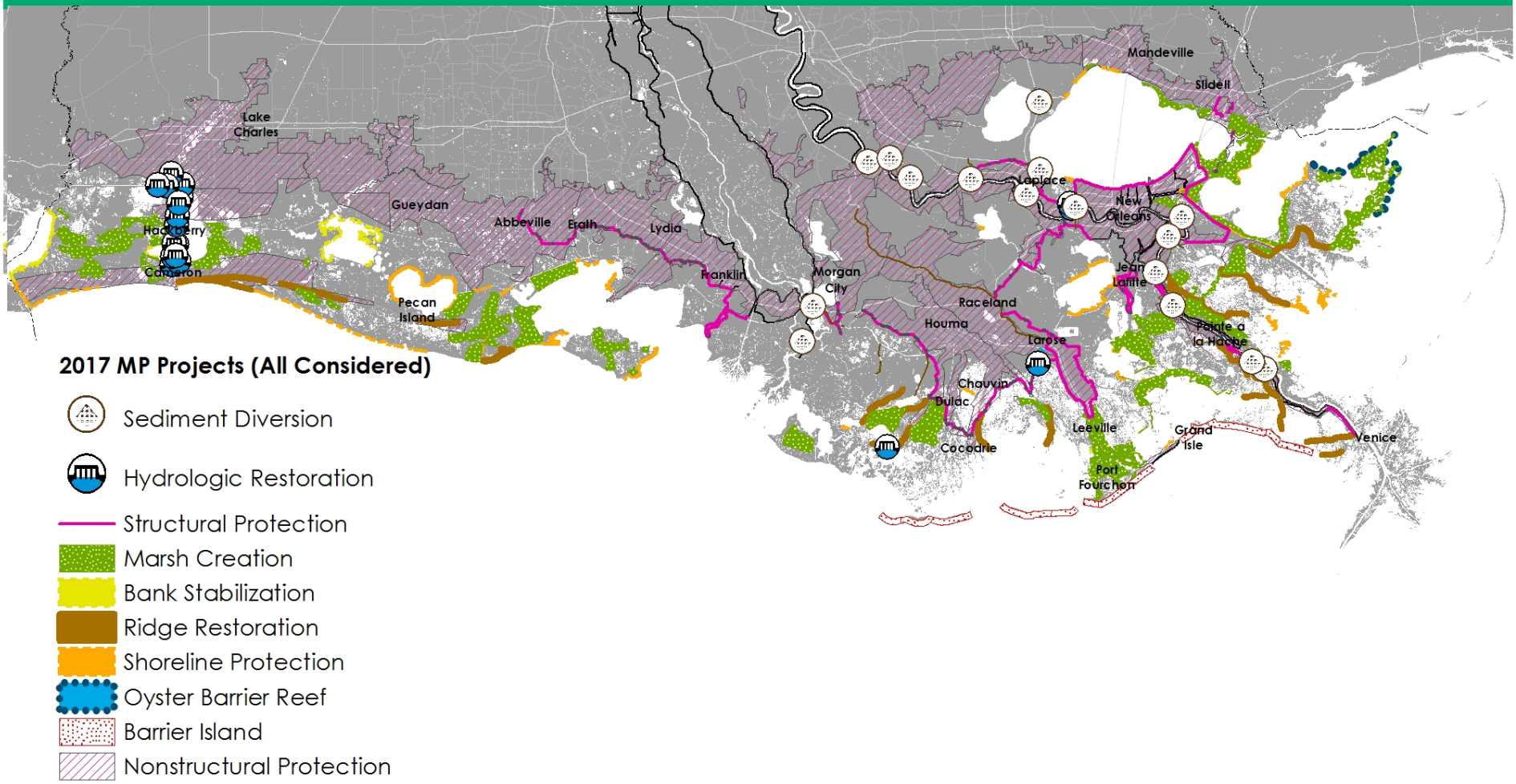


OUTREACH & ENGAGEMENT

PLANNING FRAMEWORK

COASTAL PROJECTS



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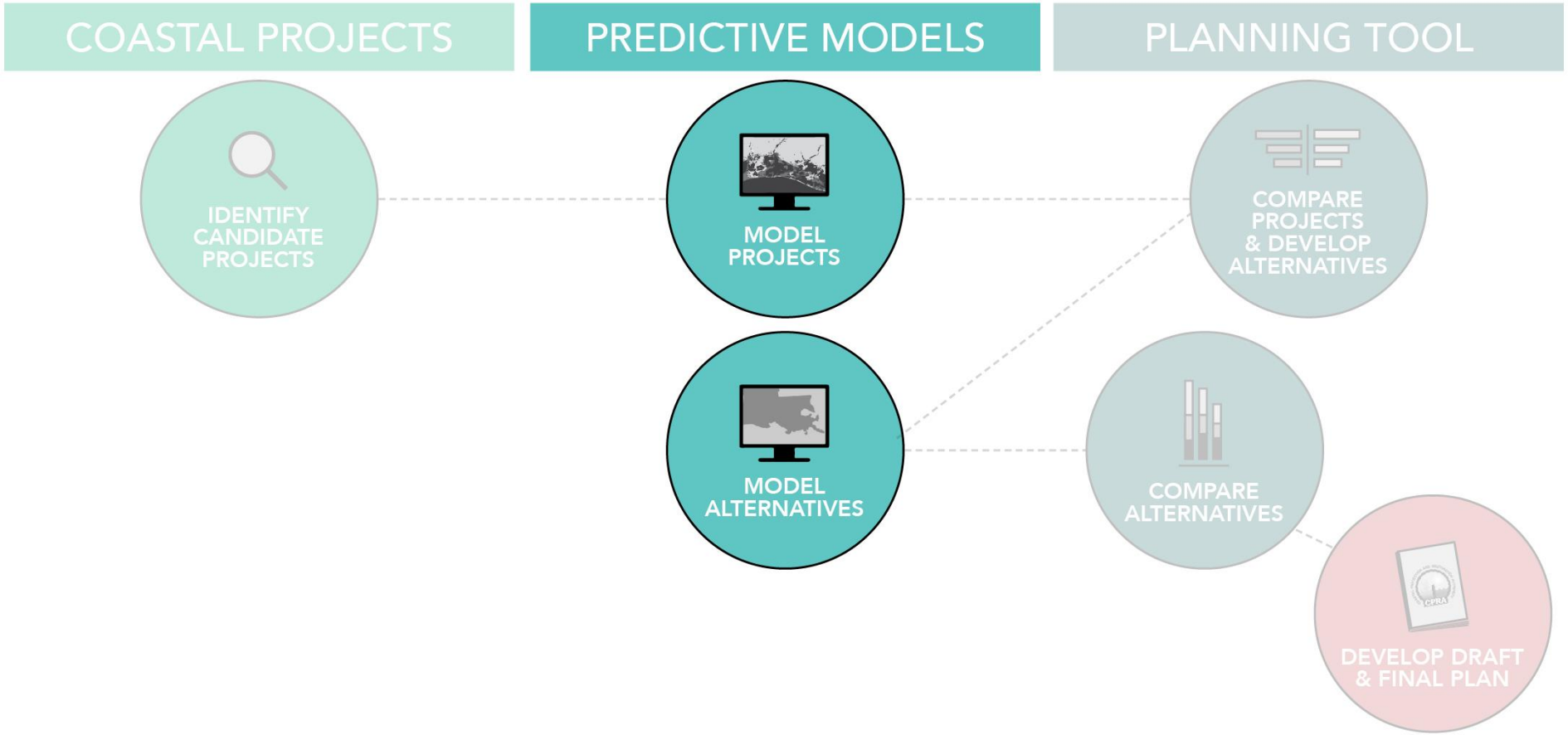
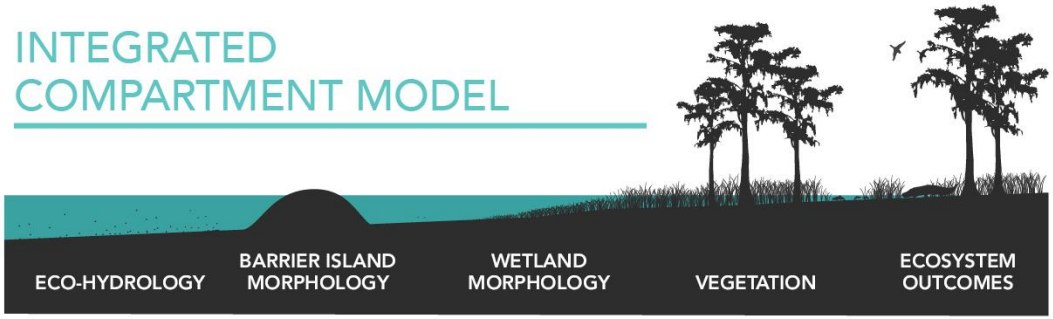


OUTREACH & ENGAGEMENT

PLANNING FRAMEWORK

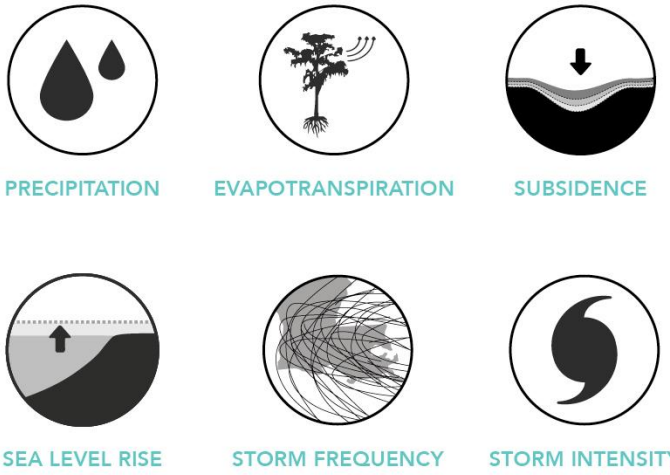
PREDICTIVE MODELS

INTEGRATED COMPARTMENT MODEL



SURGE/WAVES AND RISK ASSESSMENT MODEL

ENVIRONMENTAL AND RISK SCENARIOS



OUTREACH & ENGAGEMENT

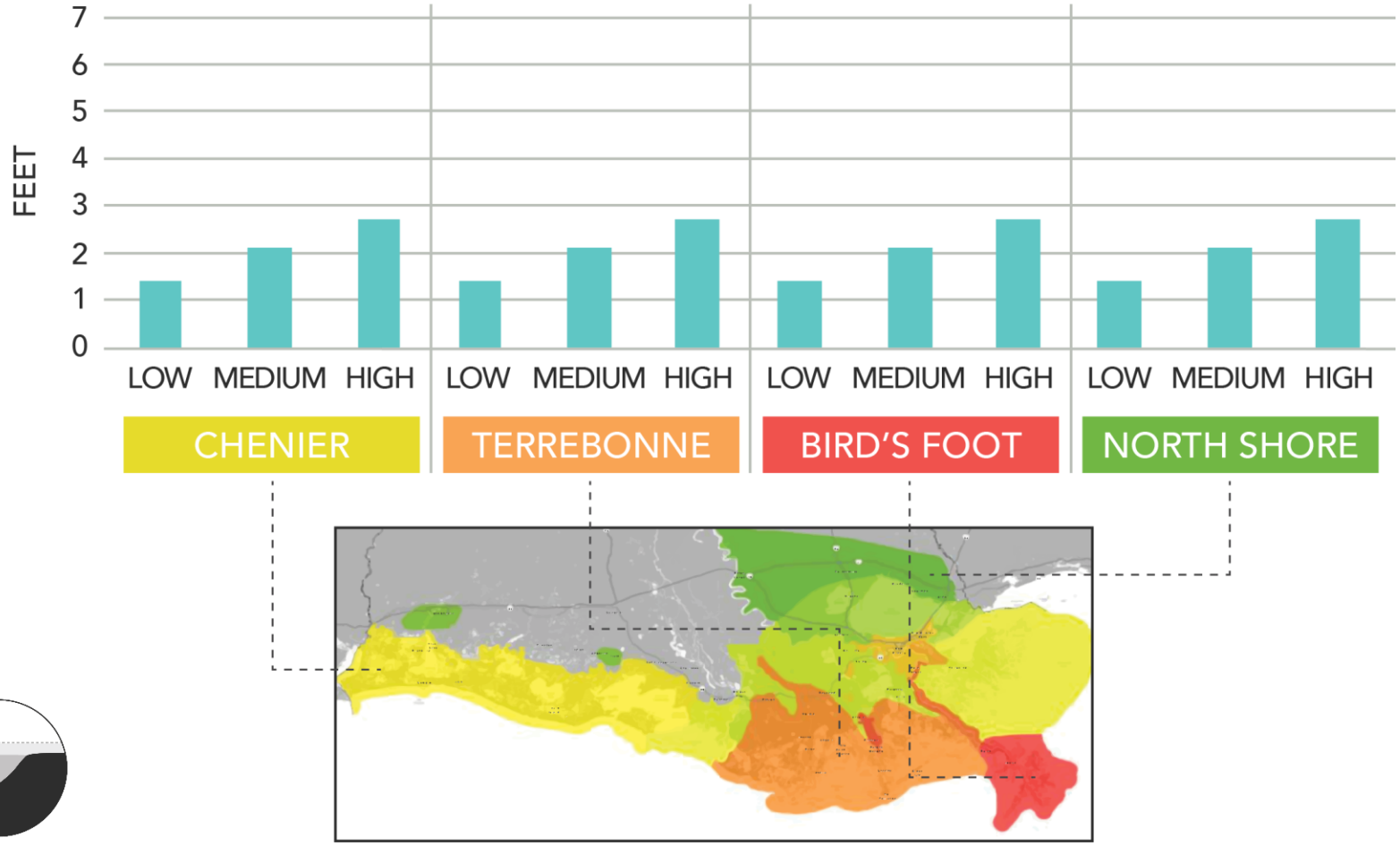
ENVIRONMENTAL SCENARIOS

SCENARIO	PRECIP	ET	SEA LEVEL RISE	SUBSIDENCE	STORM FREQUENCY	AVG. STORM INTENSITY
2017 COASTAL MASTER PLAN						
LOW	>HISTORICAL	<HISTORICAL	1.41’	20% OF RANGE	-28%	+10.0%
MEDIUM	>HISTORICAL	HISTORICAL	2.07'	20% OF RANGE	-14%	+12.5%
HIGH	HISTORICAL	HISTORICAL	2.72’	50% OF RANGE	0%	+15.0%
COMPARED TO 2012 COASTAL MASTER PLAN						
MODERATE	>HISTORICAL	HISTORICAL	0.89’	20% OF RANGE	0%	+10.0%
LESS OPTIMISTIC	HISTORICAL	>HISTORICAL	1.48’	50% OF RANGE	+2.5%	+20.0%

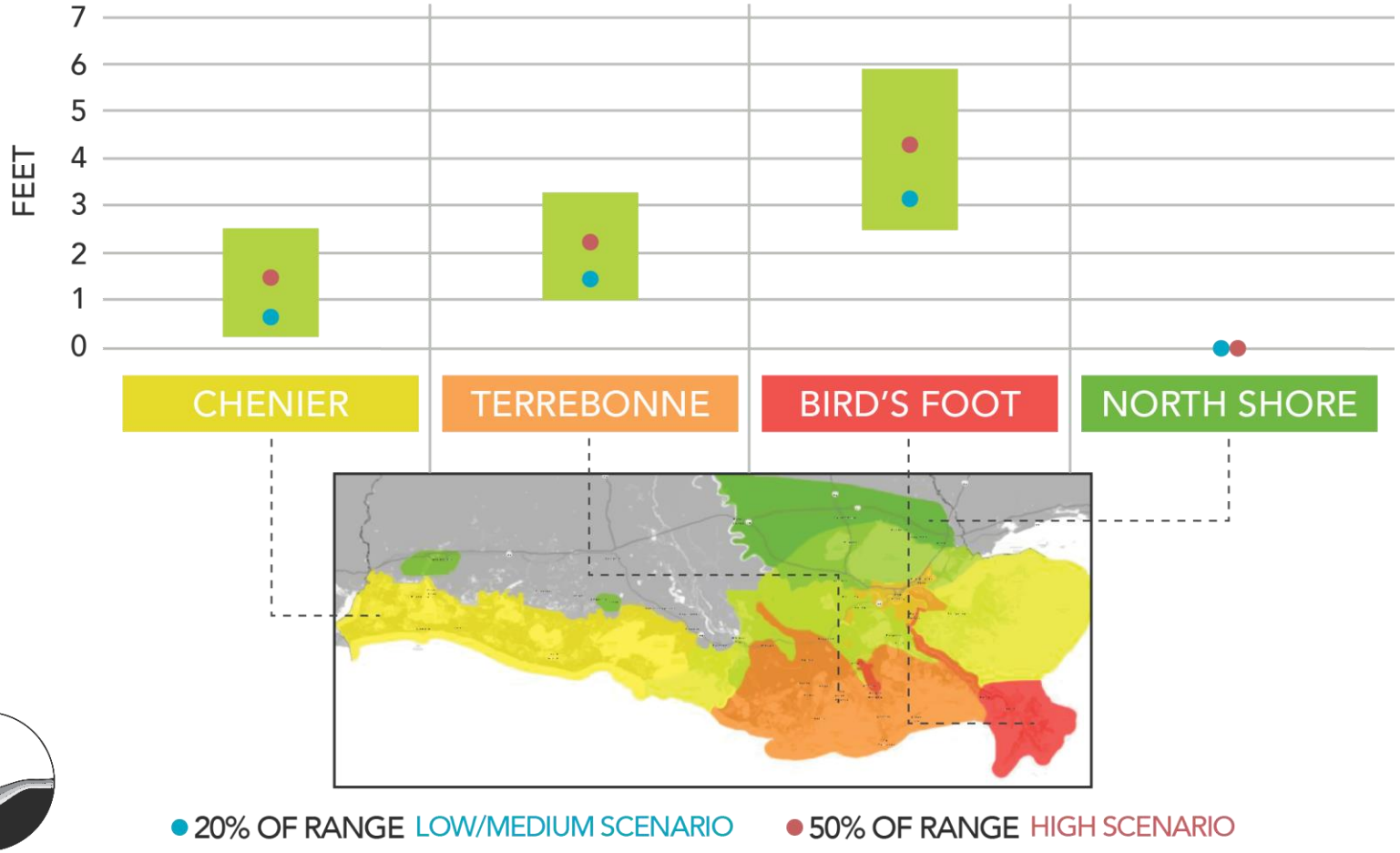
(FEET/50 YEARS)

RELATIVE SEA LEVEL RISE OVER 50 YEARS

SEA LEVEL RISE

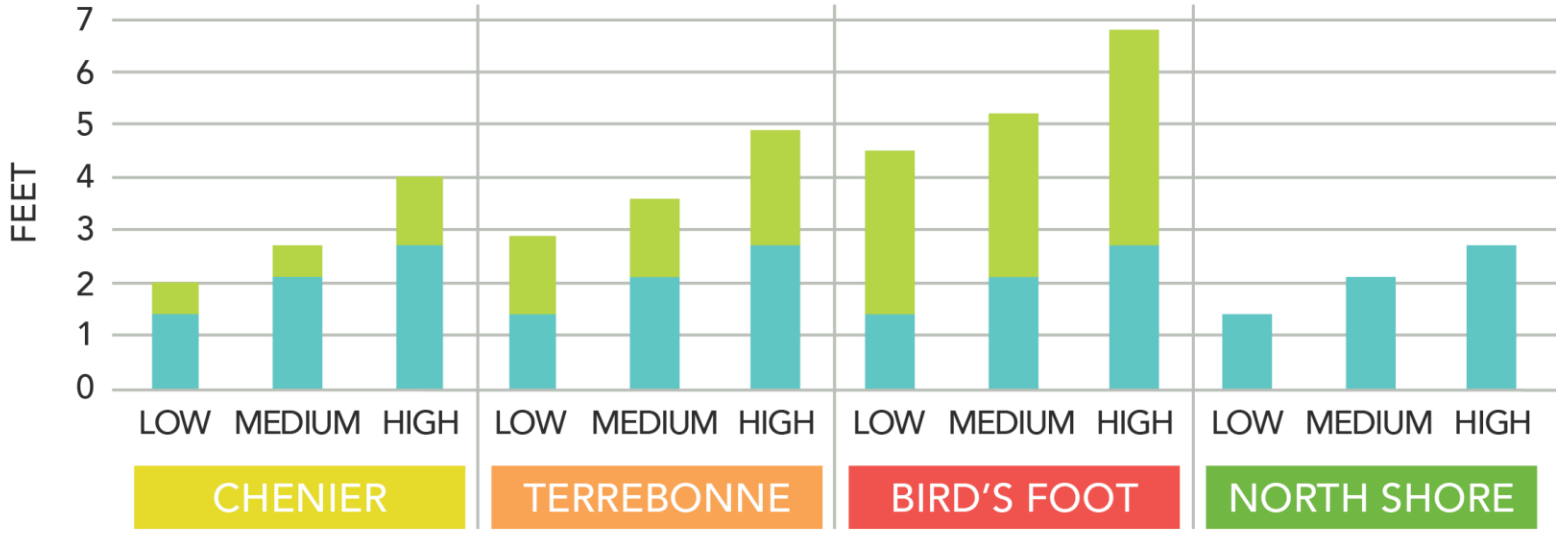


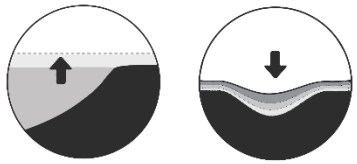
SUBSIDENCE RANGES

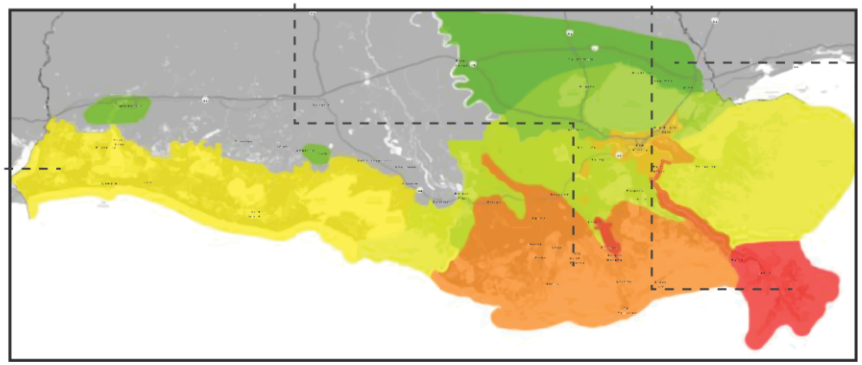


RELATIVE SEA LEVEL RISE OVER 50 YEARS

SEA LEVEL RISE + SUBSIDENCE

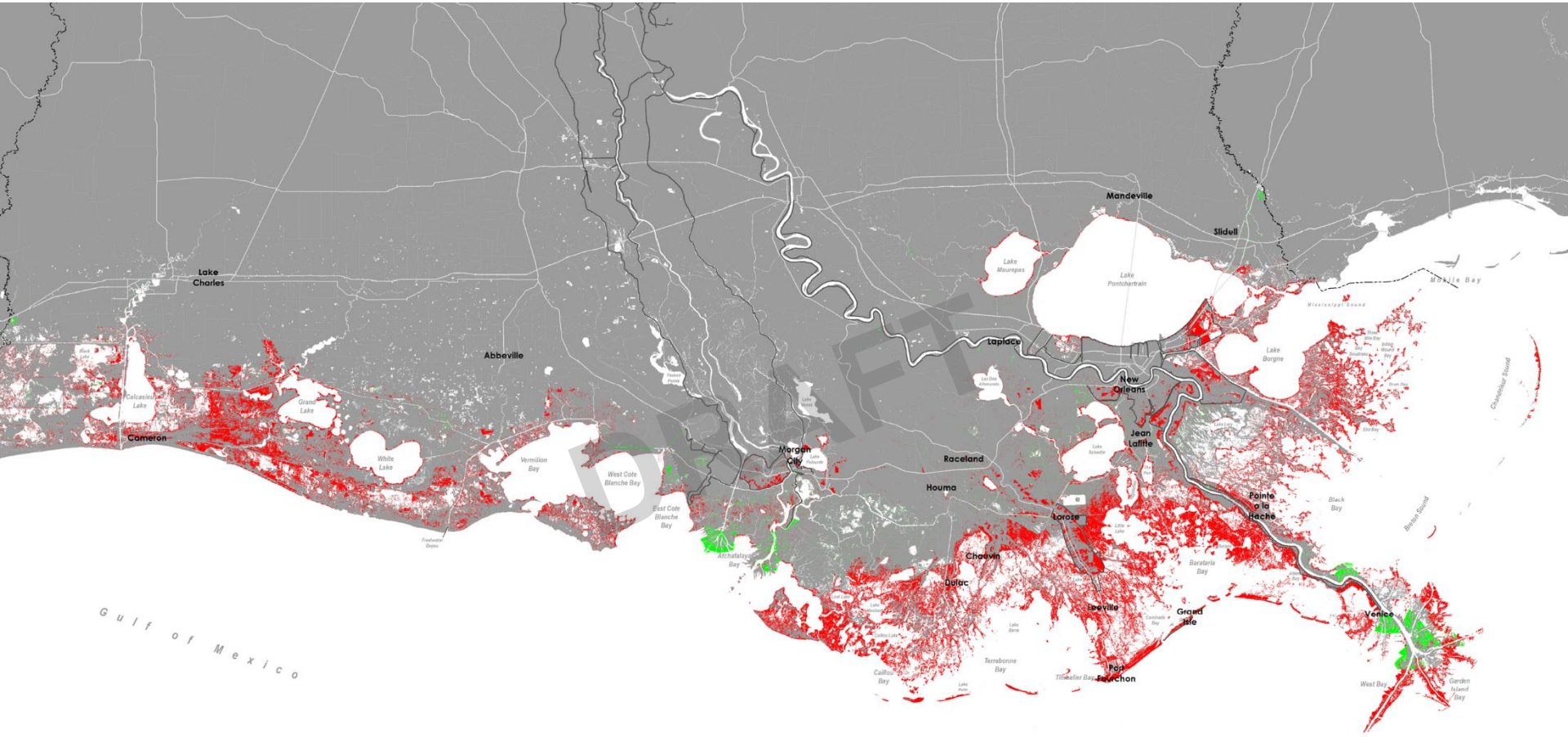






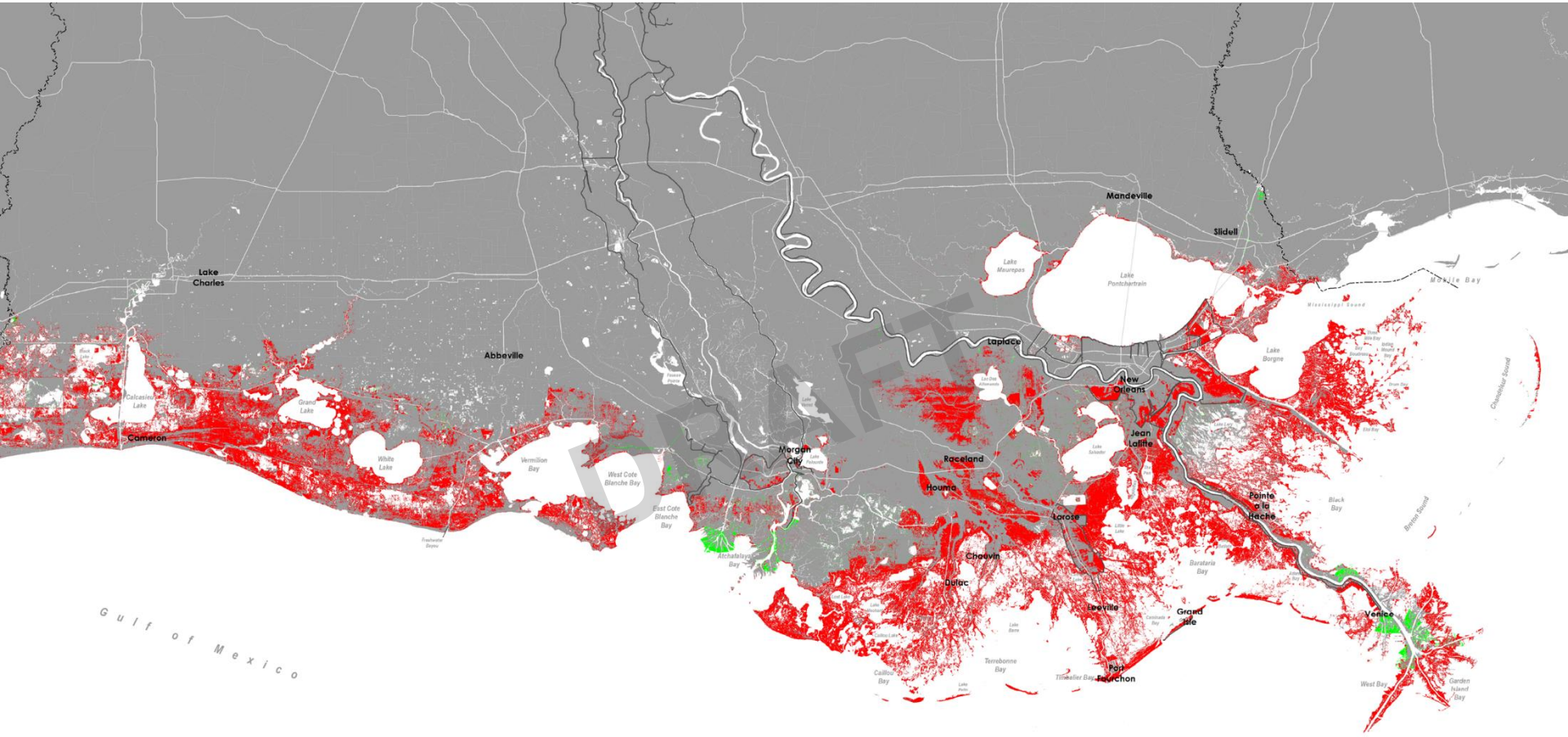
PREDICTED LAND CHANGE

FUTURE WITHOUT ACTION - YEAR 50, LOW SCENARIO



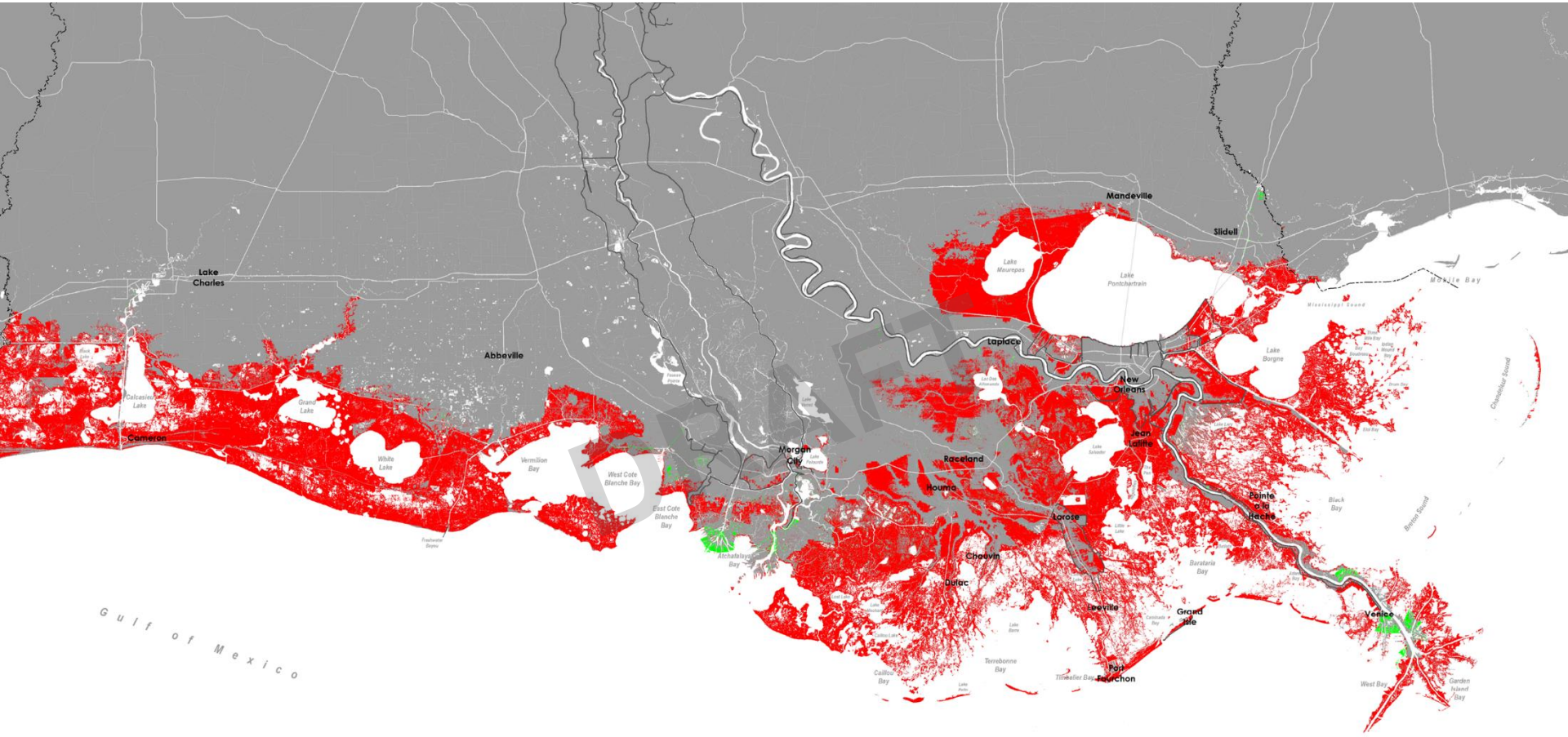
PREDICTED LAND CHANGE

FUTURE WITHOUT ACTION - YEAR 50, MEDIUM SCENARIO



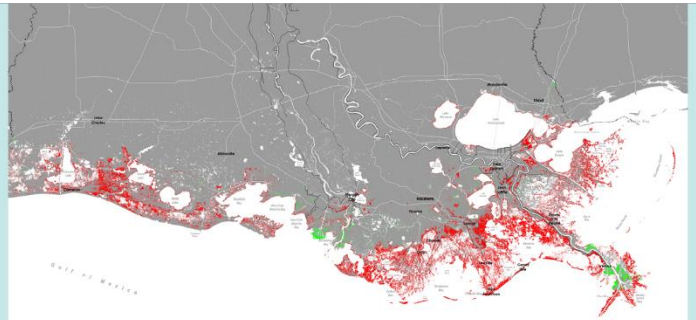
PREDICTED LAND CHANGE

FUTURE WITHOUT ACTION - YEAR 50, HIGH SCENARIO

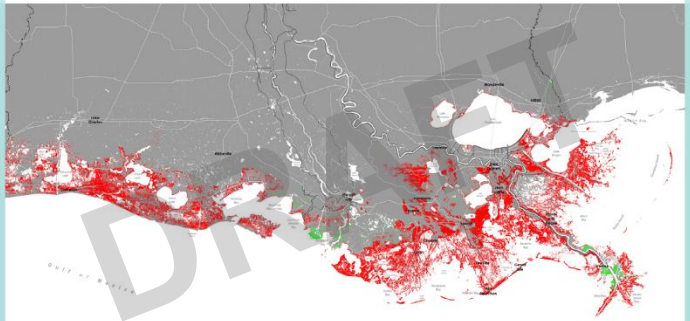


PREDICTED LAND CHANGE
FUTURE WITHOUT ACTION - YEAR 50

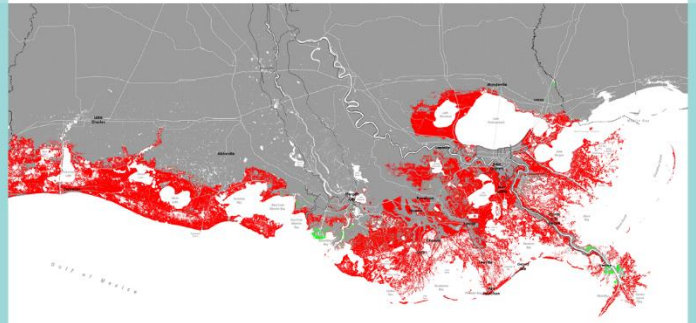
LOW



MEDIUM

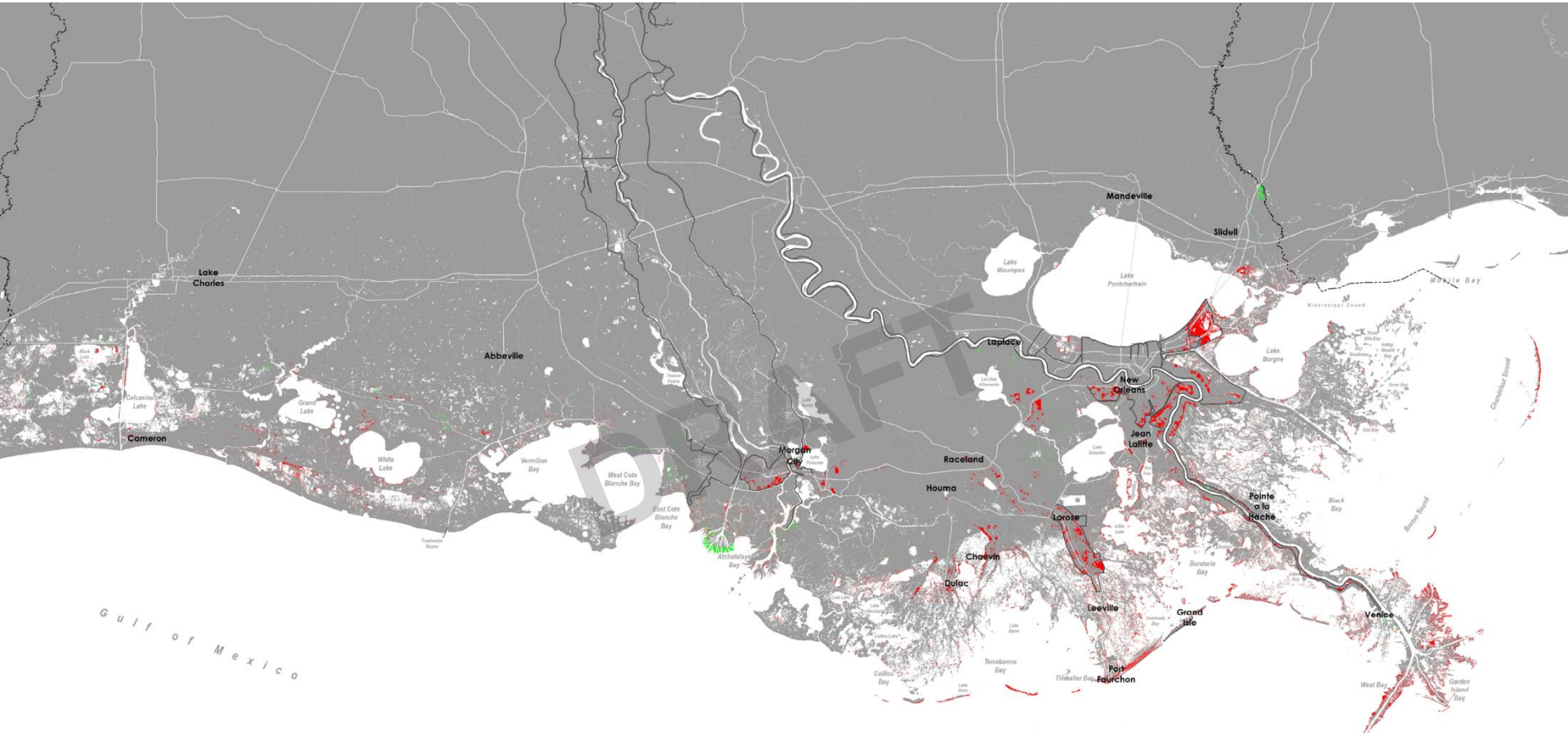


HIGH



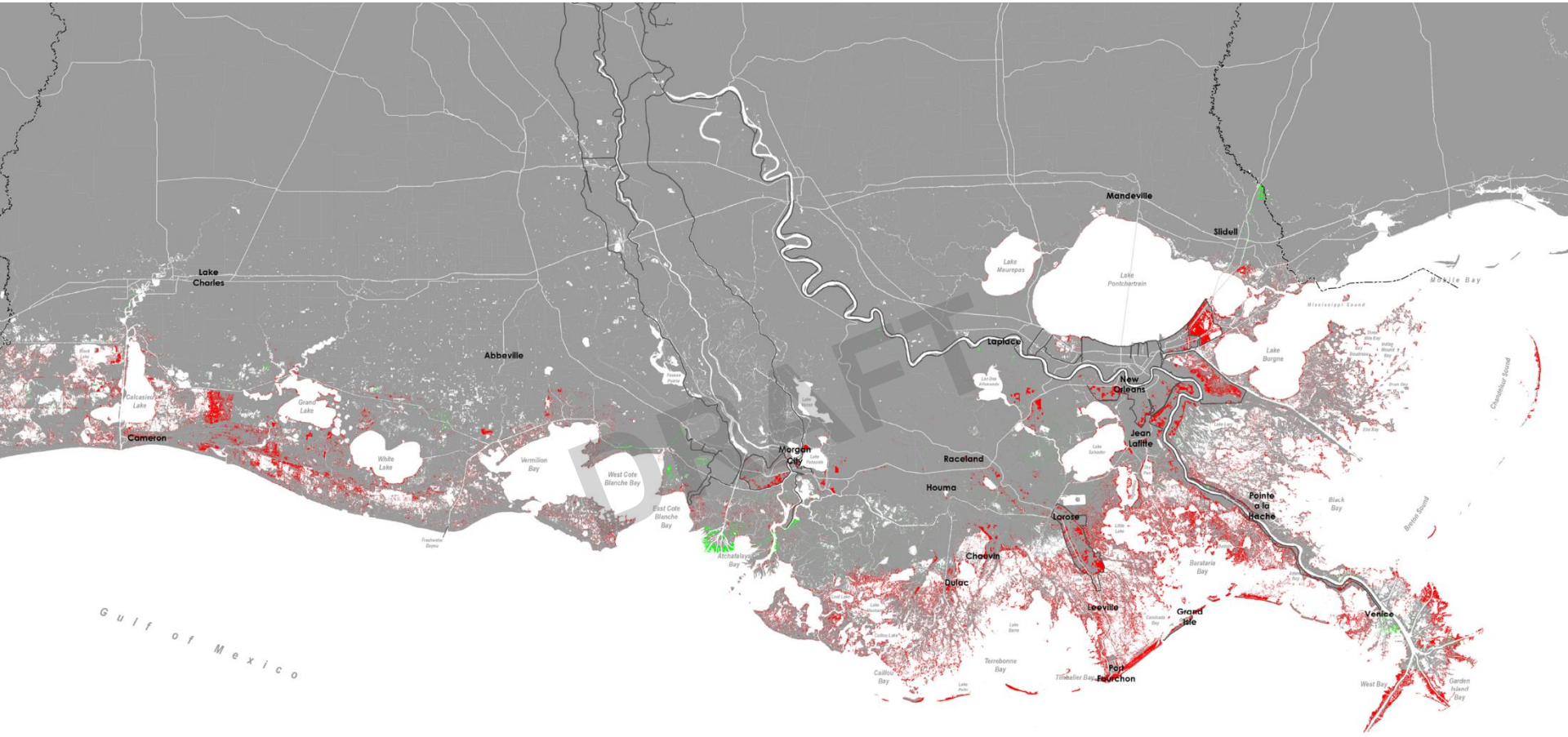
PREDICTED LAND CHANGE

FUTURE WITHOUT ACTION - YEAR 10, HIGH SCENARIO



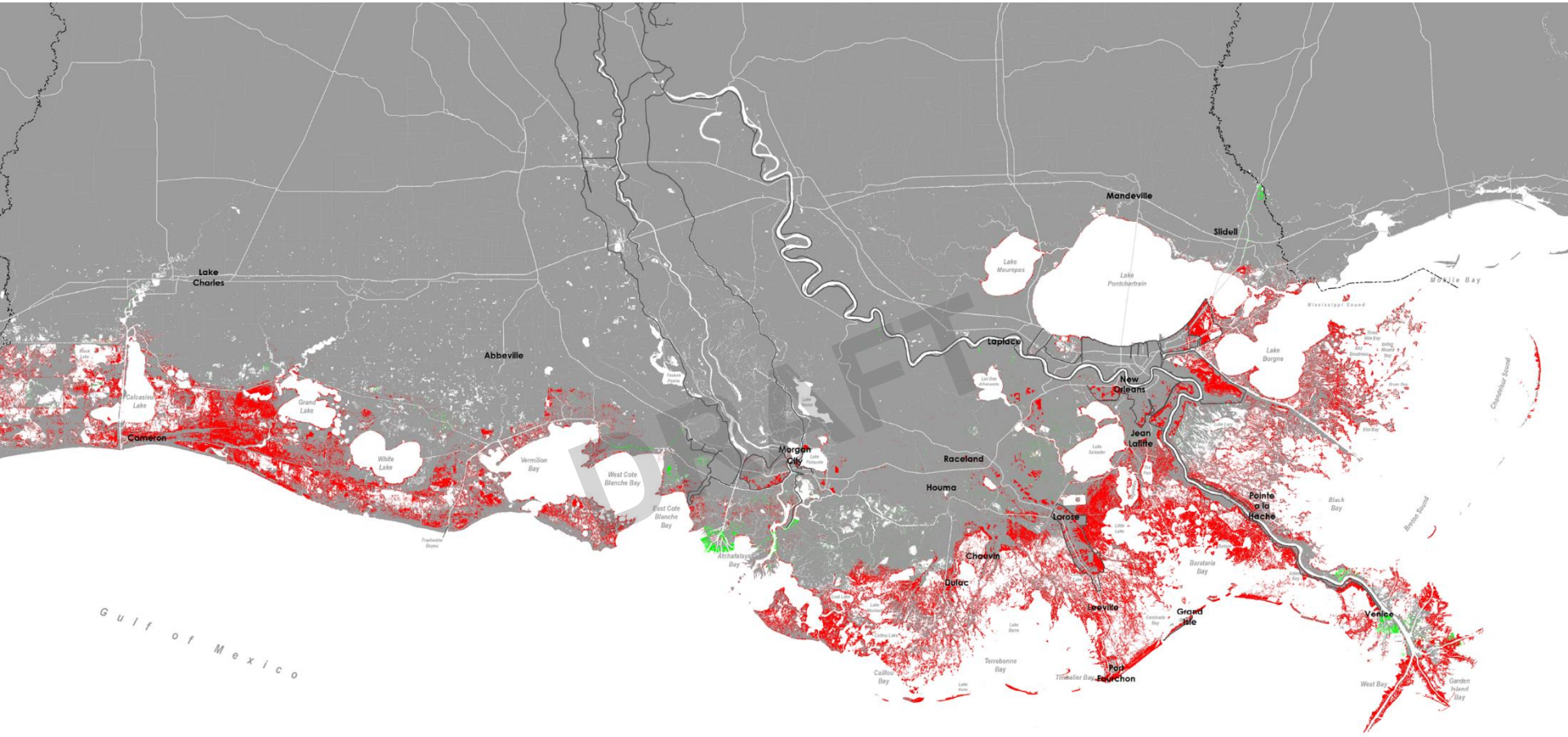
PREDICTED LAND CHANGE

FUTURE WITHOUT ACTION - YEAR 20, HIGH SCENARIO



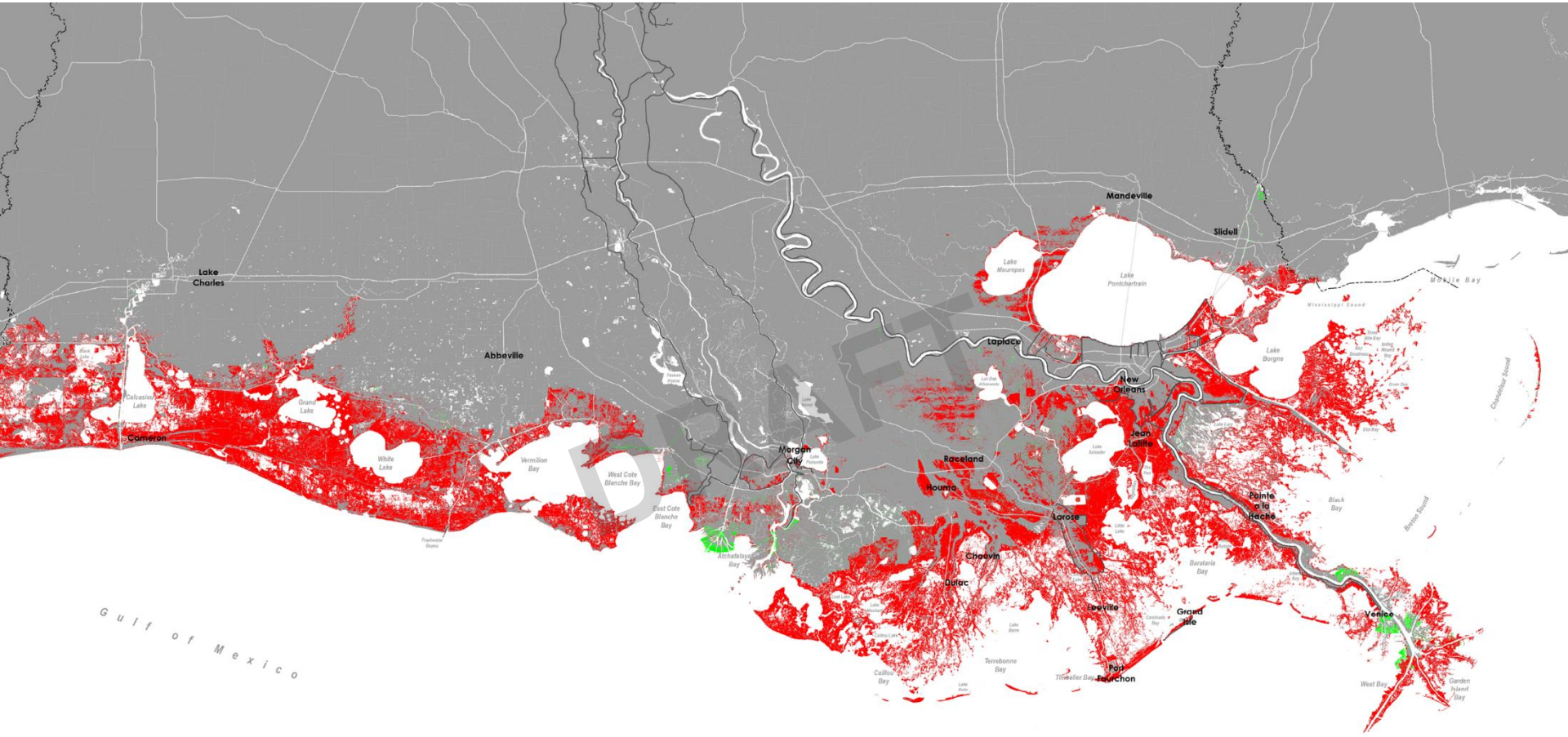
PREDICTED LAND CHANGE

FUTURE WITHOUT ACTION - YEAR 30, HIGH SCENARIO



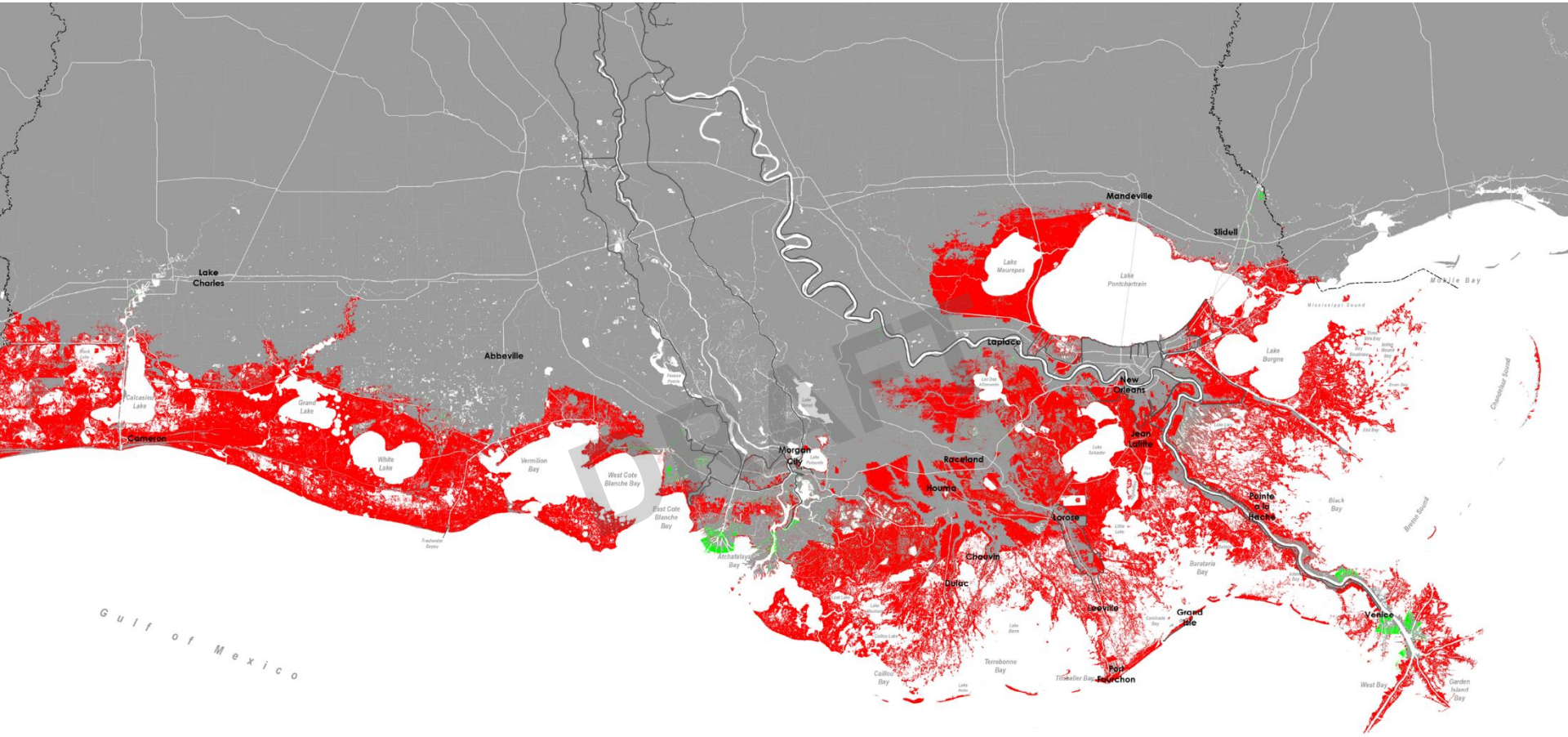
PREDICTED LAND CHANGE

FUTURE WITHOUT ACTION - YEAR 40, HIGH SCENARIO



PREDICTED LAND CHANGE

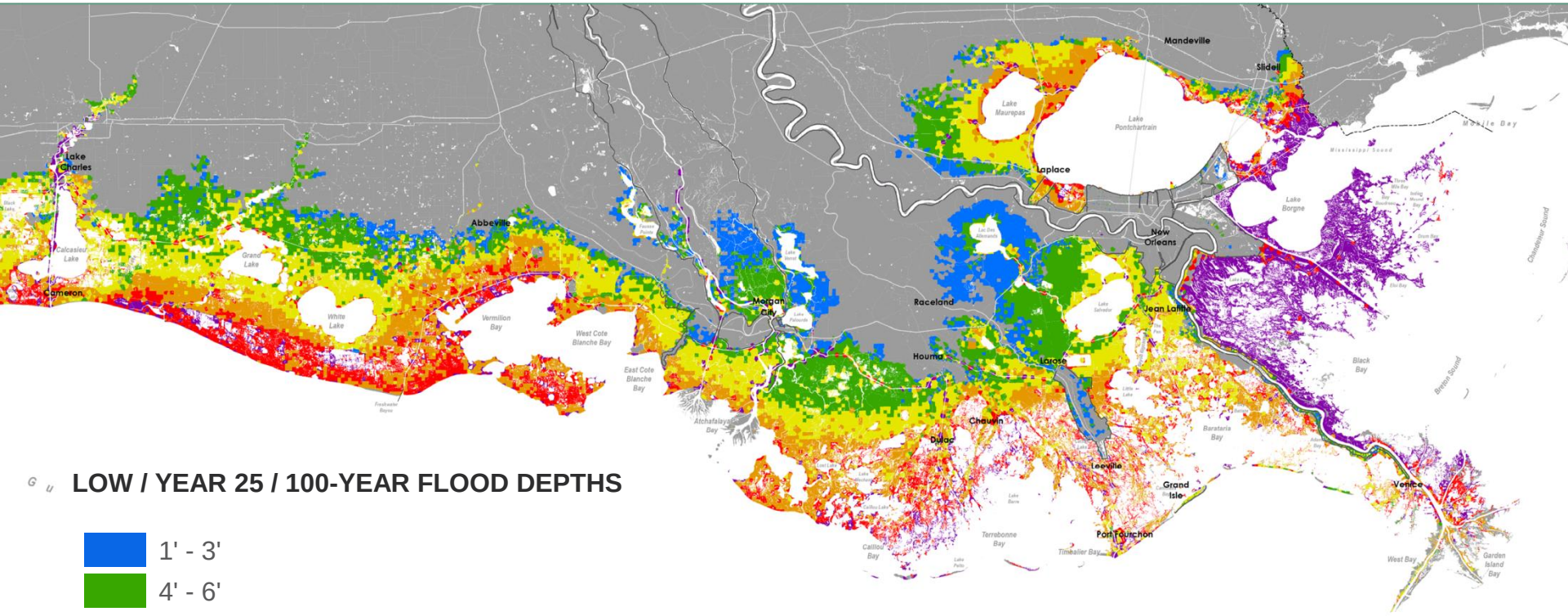
FUTURE WITHOUT ACTION - YEAR 50, HIGH SCENARIO



PREDICTED FLOOD DEPTHS

FUTURE WITHOUT ACTION

YEAR 10, LOW SCENARIO, 100-YEAR EVENT



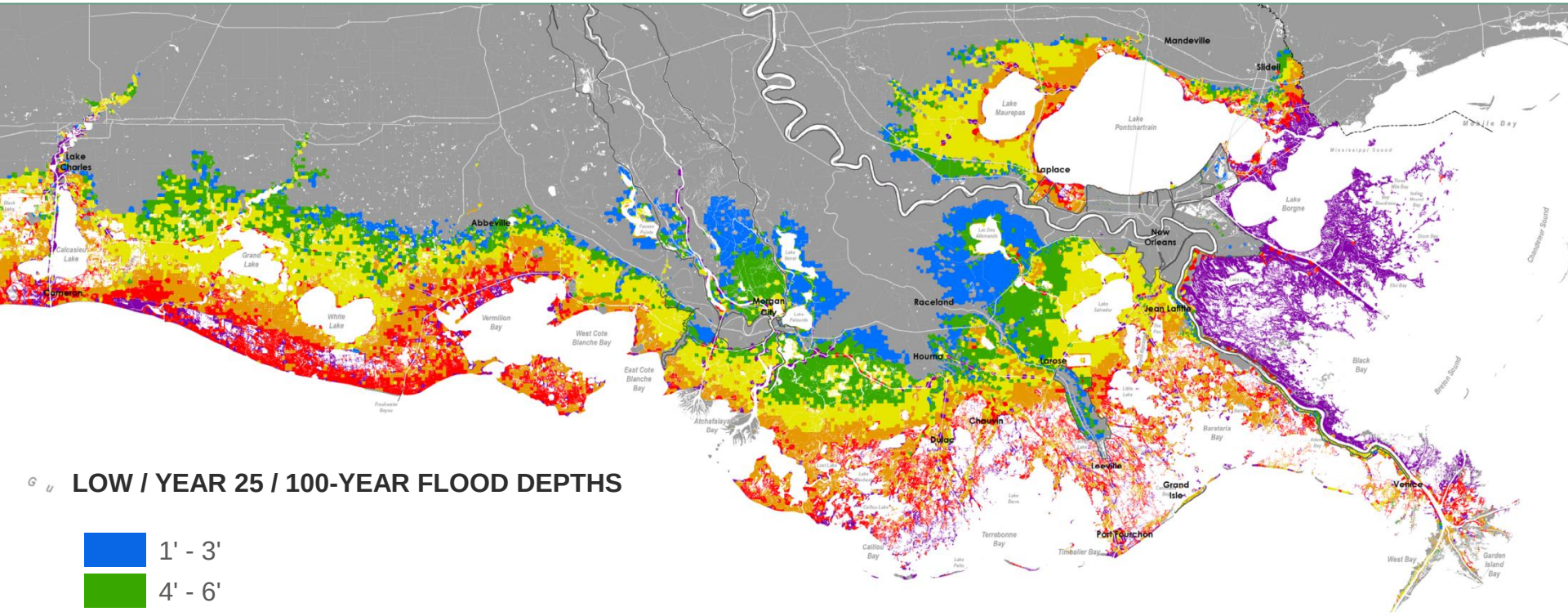
LOW / YEAR 25 / 100-YEAR FLOOD DEPTHS

- 1' - 3'
- 4' - 6'
- 7' - 9'
- 10' - 12'
- 13' - 15'
- Over 15'

PREDICTED FLOOD DEPTHS

FUTURE WITHOUT ACTION

YEAR 25, LOW SCENARIO, 100-YEAR EVENT



LOW / YEAR 25 / 100-YEAR FLOOD DEPTHS

- 1' - 3'
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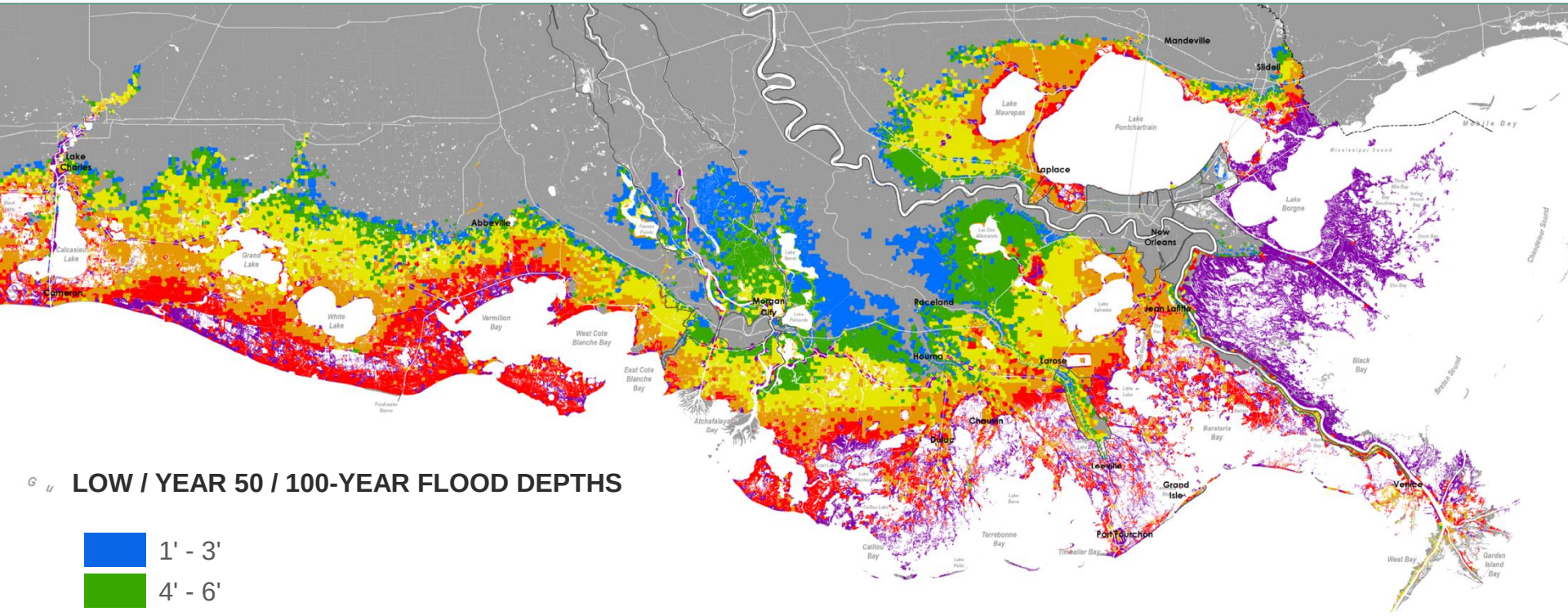
PREDICTED FLOOD DEPTHS

FUTURE WITHOUT ACTION

YEAR 50, LOW SCENARIO, 100-YEAR EVENT



LOW / YEAR 50 / 100-YEAR FLOOD DEPTHS

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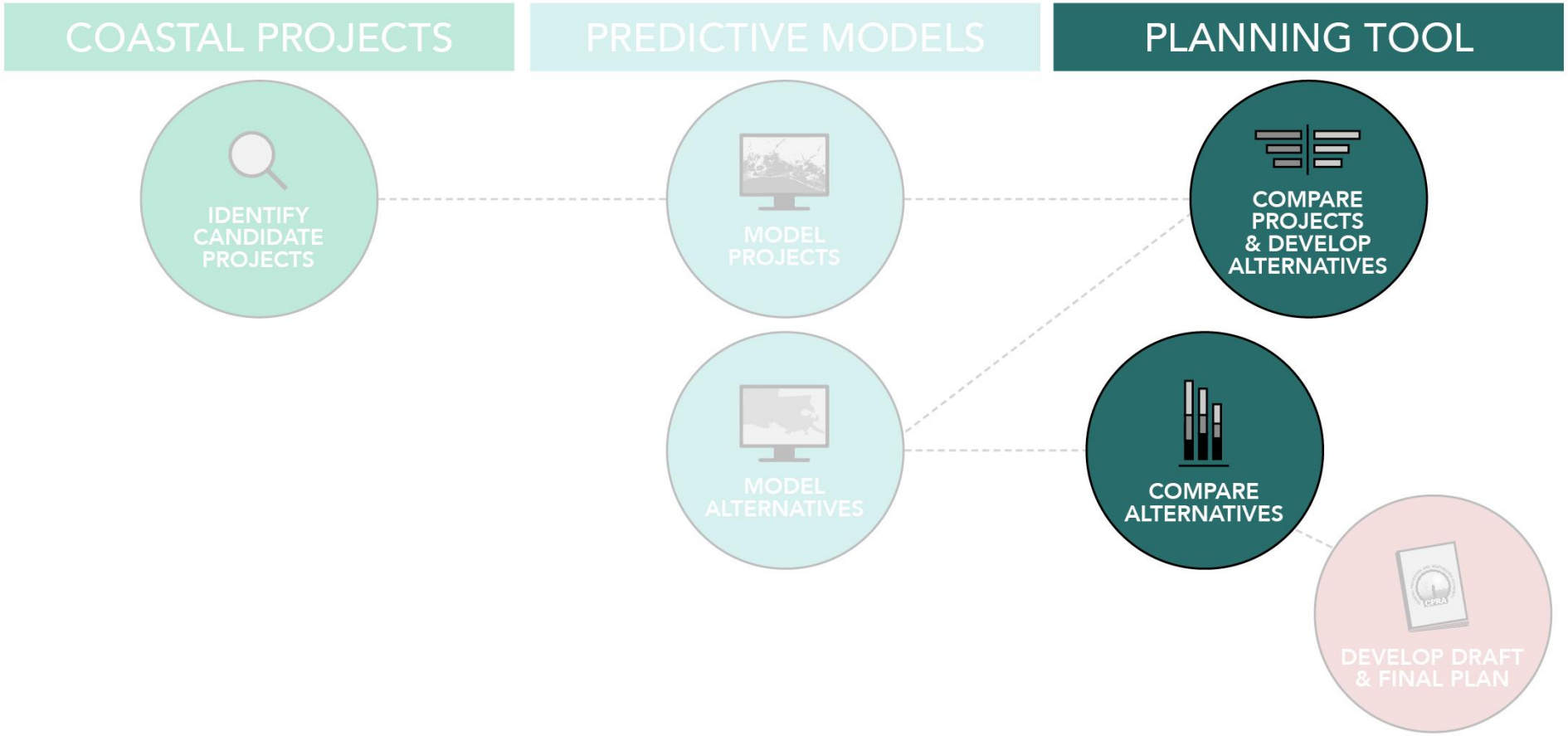
DEVELOPING THE COASTAL MASTER PLAN



PLANNING FRAMEWORK

PLANNING TOOL

DECISION DRIVERS

REDUCING FLOOD RISK

BUILDING LAND

CONSTRAINTS

SEDIMENT

FUNDING

METRICS

COMMUNITY METRICS

AGRICULTURAL COMMUNITIES

FLOOD PROTECTION OF STRATEGIC ASSETS

OIL & GAS COMMUNITIES

SOCIAL VULNERABILITY

FLOOD PROTECTION OF HISTORIC PROPERTIES

NAVIGATION

TRADITIONAL FISHING COMMUNITIES

ENVIRONMENTAL METRICS

ALLIGATOR

FRESHWATER FISHERIES

OYSTERS

SUSTAINABILITY OF LAND

BLUE CRAB

NITROGEN UPTAKE

SALTWATER FISHERIES

USE OF NATURAL PROCESSES

BROWN PELICAN

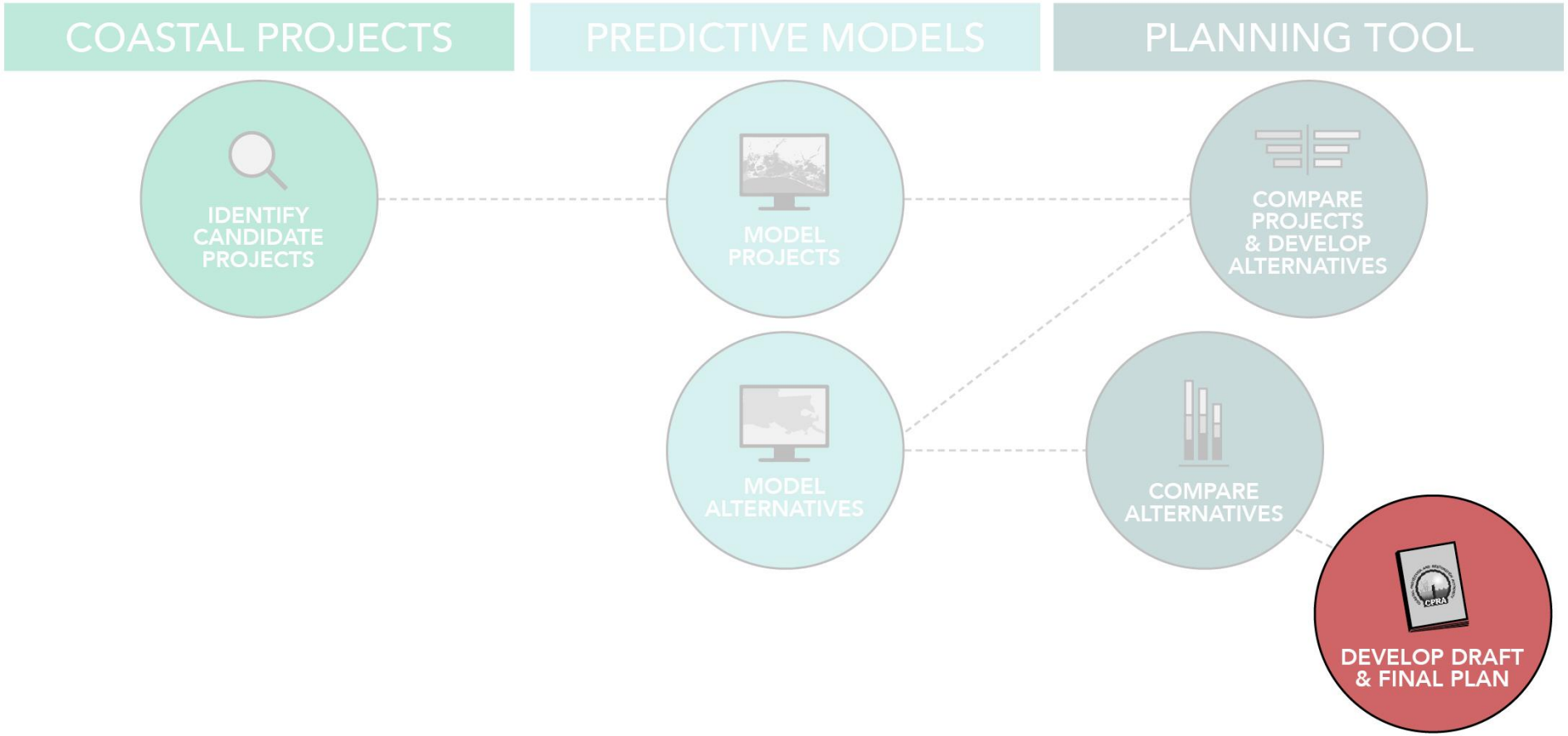
OPERATION & MAINTENANCE COSTS

SHRIMP

WATERFOWL

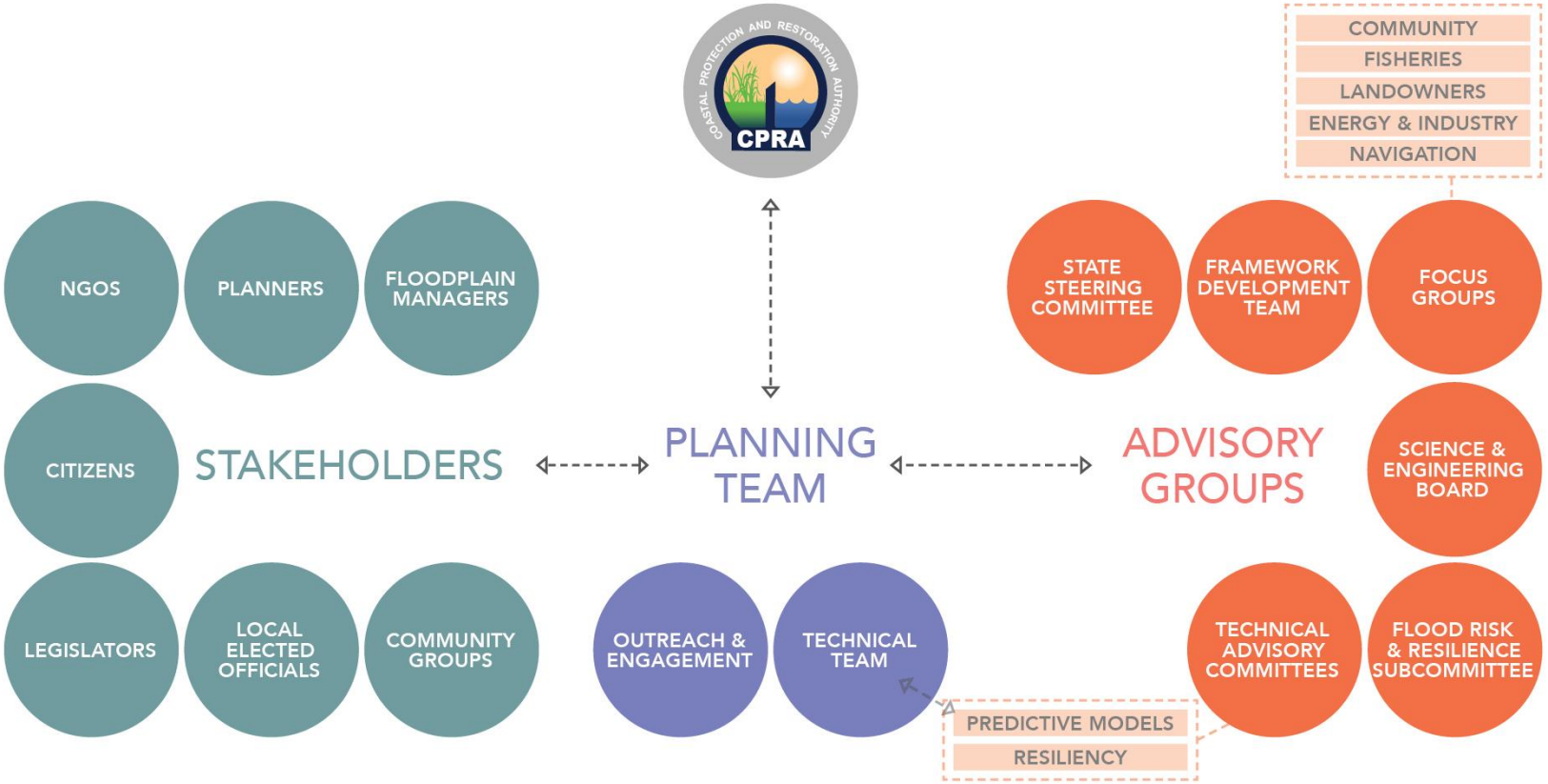
CRAWFISH

DEVELOPING THE COASTAL MASTER PLAN



OUTREACH & ENGAGEMENT

OUTREACH & ENGAGEMENT



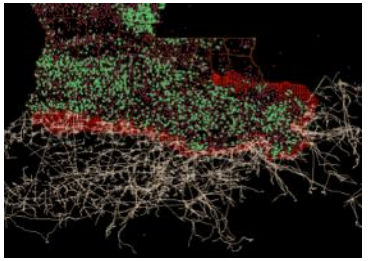
FRAMEWORK DEVELOPMENT TEAM

FOCUS GROUPS

- Key industries or stakeholder groups that are impacted by land loss and large scale protection and restoration efforts
- Focus Groups:
  - Community
  - Energy and Industry
  - Fisheries
  - Landowners
  - Navigation







SCIENCE AND ENGINEERING BOARD

NAME	ORGANIZATION	EXPERTISE
Carl Friedrichs	VIMS, William & Mary	Coastal Geoscience
Dan Childers	Arizona State University	Wetlands
Ed Houde	University of Maryland	Fisheries
Jen Irish	Virginia Tech	Risk
Len Shabman	Resources for the Future	Economics
Margaret Davidson		Natural Resource/Economic Policies
Marius Sokolewicz	Royal Haskoning	Coastal Modeling
Michael Orbach	Duke University	Socio-Economics
Sandra Knight	WaterWonks, LLC	Water Resources
William Fulton	Rice University	Urban Planning

TECHNICAL ADVISORY COMMITTEES

PREDICTIVE MODELS

- John Callaway, University of San Francisco
- Scott Hagen, Louisiana State University
- Courtney Harris, Virginia Institute of Marine Sciences
- Wim Kimmerer, San Francisco State University
- Mike Waldon, US Fish and Wildlife Services (retired)

RESILIENCY

- Daniel Aldrich, Northeastern University
- Diane Austin, University of Arizona
- Gavin Smith, University of North Carolina
- Dan Zarrilli, City of New York, Mayor’s Office of Recovery & Resiliency

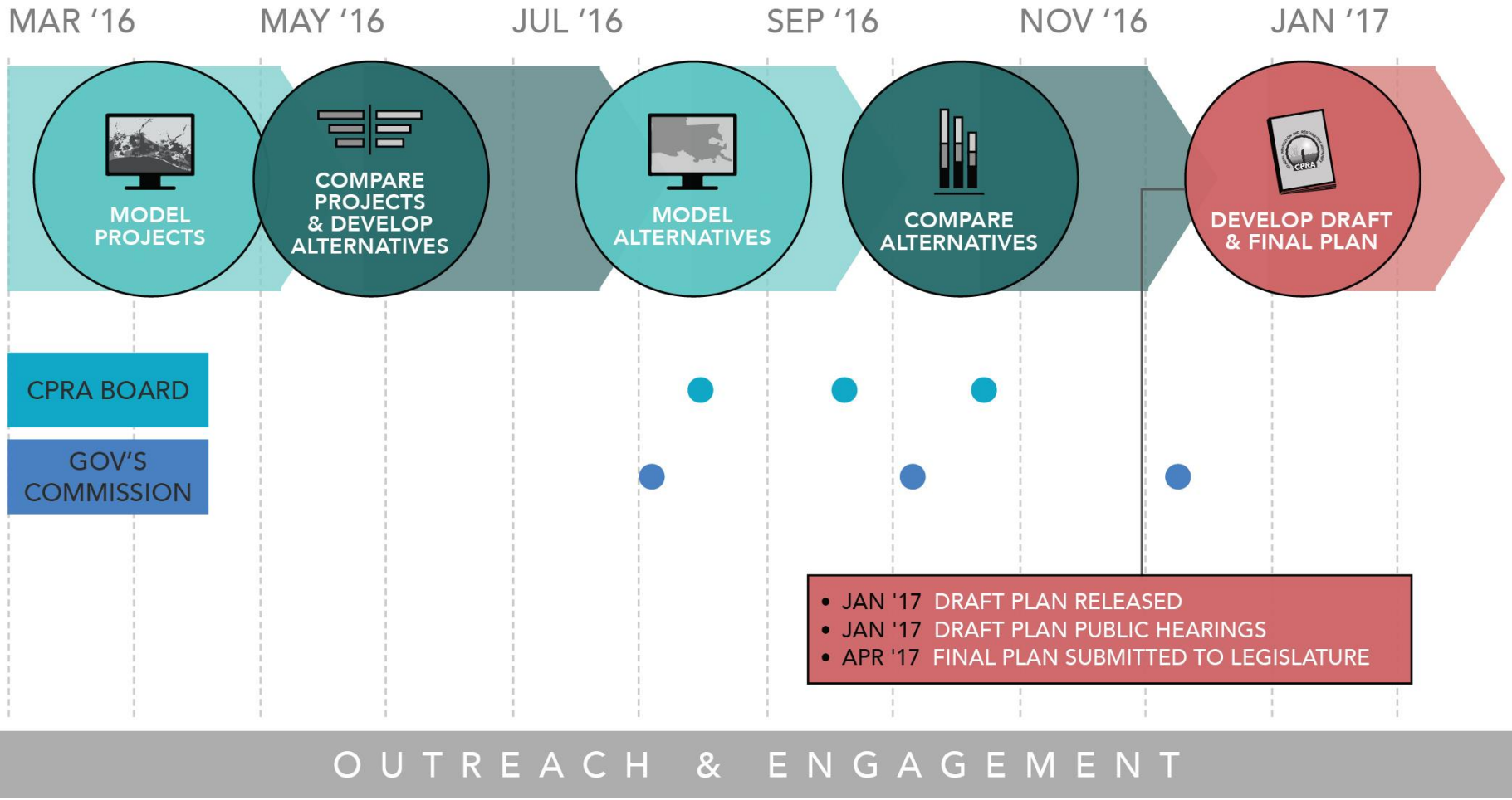
CITIZEN ENGAGEMENT
EARLY FALL 2016

- Host 4 community meetings across coastal Louisiana
  - Partner with local organizations when possible
- Focus on receiving feedback on draft lists of potential projects at the basin scale
- Use information from project modeling and alternative formulation to inform facilitated discussions
- Use feedback to inform development of the draft plan

PARISH ENGAGEMENT

- Roundtable format in multiple locations
- Targeted attendees
  - Parish Presidents
  - Chief Administrative Officers
  - Floodplain Managers
  - Coastal Zone Managers
  - Public Works Directors
  - Levee Districts
- Schedule:
  - Round 1: May 25 and 26, 2016
  - Round 2: October 2016
  - Round 3: January 2017

TIMELINE


MAR '16
MAY '16
JUL '16
SEP '16
NOV '16
JAN '17
MODEL PROJECTS
COMPARE PROJECTS & DEVELOP ALTERNATIVES
MODEL ALTERNATIVES
COMPARE ALTERNATIVES
DEVELOP DRAFT & FINAL PLAN
CPRA BOARD
GOV'S COMMISSION
• JAN '17 DRAFT PLAN RELEASED
• JAN '17 DRAFT PLAN PUBLIC HEARINGS
• APR '17 FINAL PLAN SUBMITTED TO LEGISLATURE
OUTREACH & ENGAGEMENT

QUESTIONS?

coastal.la.gov