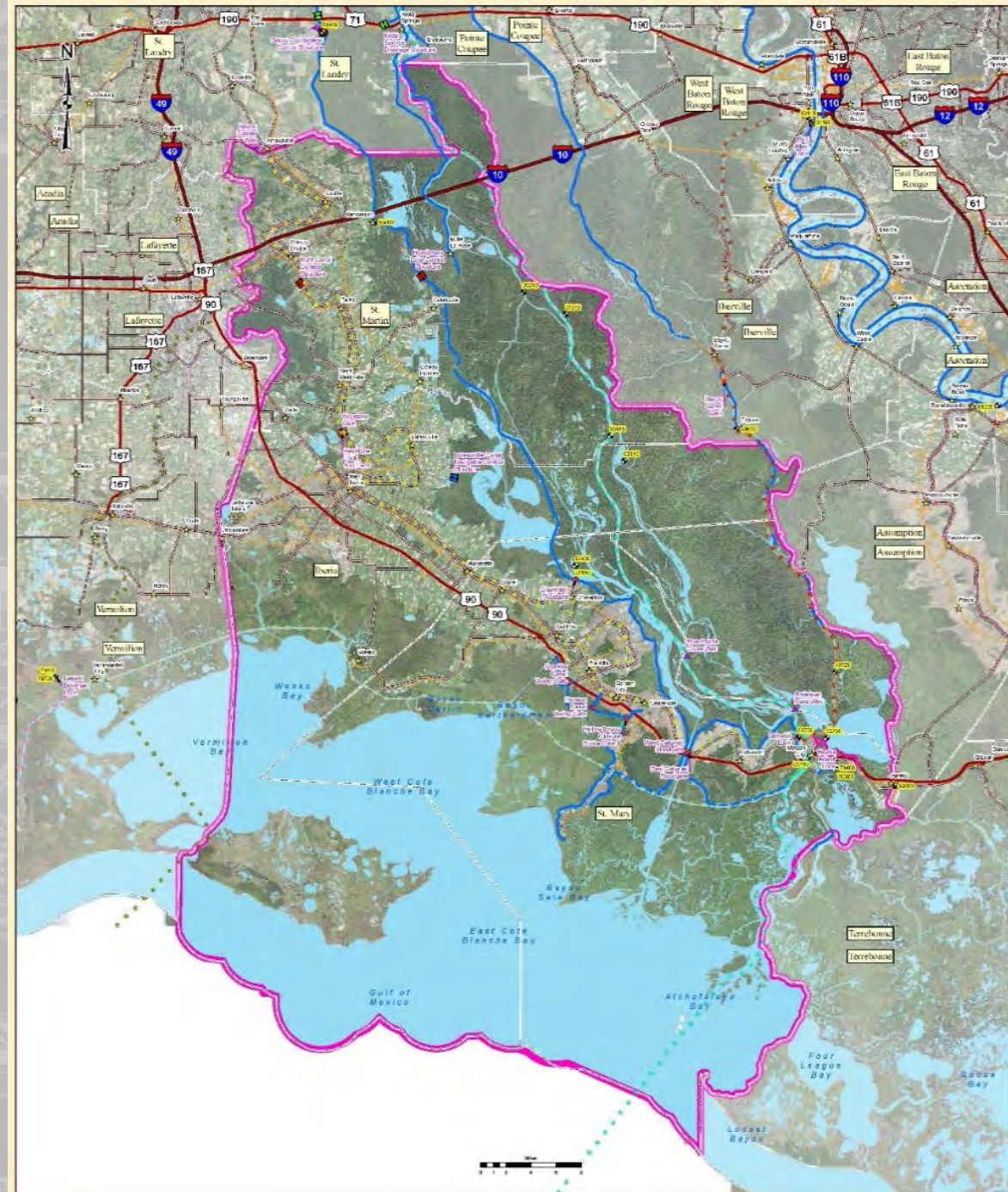


SOUTH CENTRAL COAST LOUISIANA FLOOD PROTECTION AND COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."



US Army Corps
of Engineers®





I. Welcome

III. Planning Steps

II. Project Overview

IV. Comments

- Authority
- Study Area
- Coordination
- Schedule
- Planning Process

AUTHORITY

H.R. Docket 2767 (20 September 2006)

- Southeast Coastal Louisiana, LA, Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, that, in accordance with section 110 of the River and Harbor Act of 1962

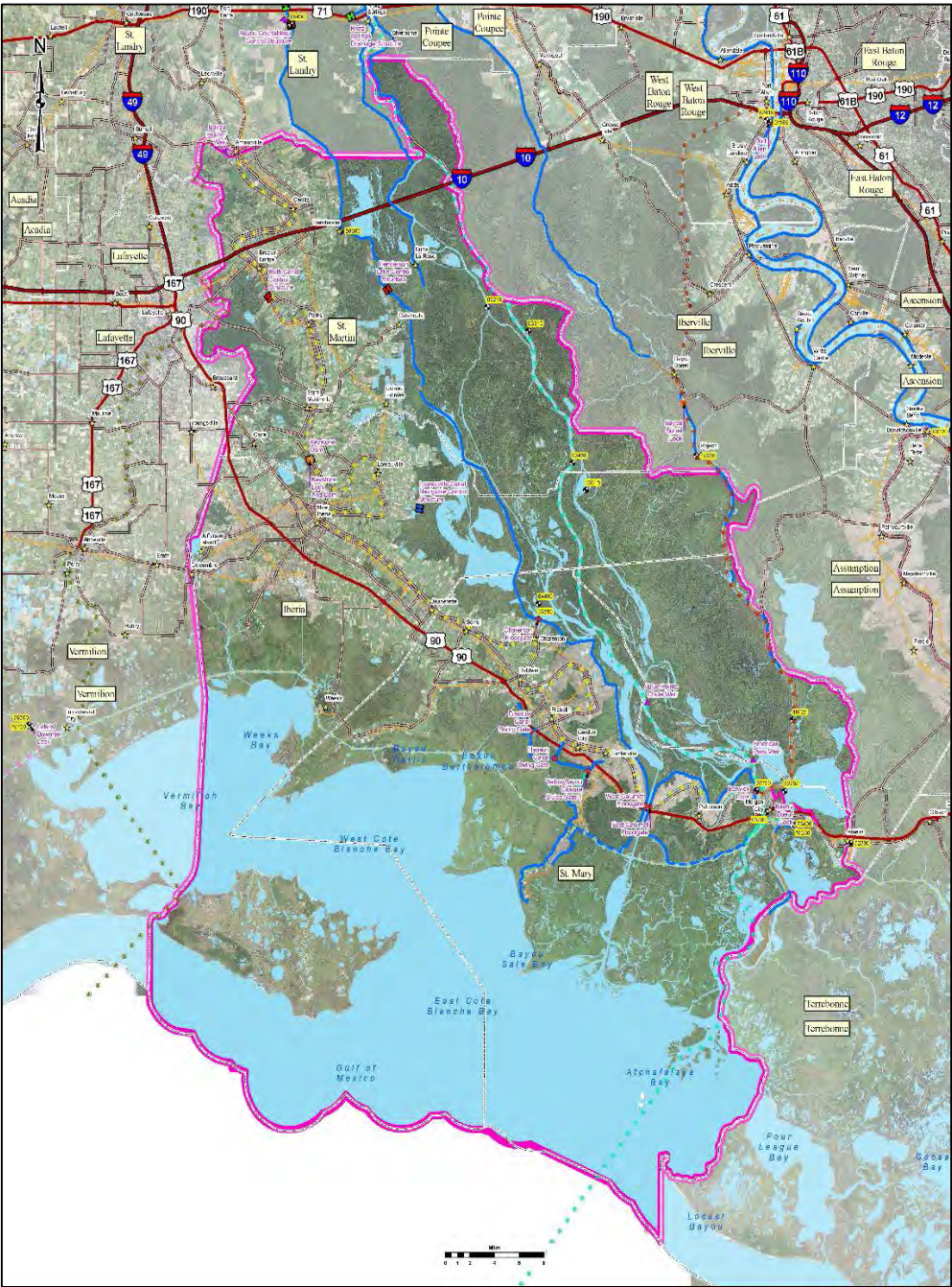
“Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, that, in accordance with section 110 of the River and Harbor Act of 1962, the Secretary of the Army is requested to survey the coast of Louisiana in Iberia, St. Martin, and St. Mary parishes with a view to determine the feasibility of providing hurricane protection and storm damage reduction and related purposes.” Southeast Coastal Louisiana, LA was effectively renamed South Central Coast Louisiana, LA to avoid confusion with the Southeast Louisiana urban flood control project covering Jefferson, Orleans, and St. Tammany Parishes.”

Bipartisan Budget Act of 2018

- (Public Law 115-123), Division B, Subdivision 1, H. R. 1892—13, TITLE IV, CORPS OF ENGINEERS—CIVIL, DEPARTMENT OF THE ARMY, INVESTIGATIONS
- Limits scope to the flood risk management



SOUTH CENTRAL COAST LA STUDY AREA





GOALS & OBJECTIVES



Goal 1: Increase sustainability and resiliency of communities to flood events.

Objective 1a. Reduce risk to life safety from hurricanes and storm swells

Objective 1b. Reduce economic loss/damages to structures (i.e. residential, commercial, agricultural, and industrial from hurricanes, storm swells, and interior flooding within the Project area.

Goal 2: Maintain and sustain the resiliency of natural ecosystem to reduce flood damages.

Objective 2a. Minimize degradation to vulnerable coastal habitat and wetland areas.

Objective 2b. Increase sustainability of existing natural flood barriers such as wetlands.

Above all, the goal is reducing the risk to the people, the culture and a way of life that is uniquely Louisiana



AGENCY PARTNERSHIP AND COORDINATION



Non-Federal Sponsor

- Louisiana Coastal Protection and Restoration Authority(CPRA)

Permitting Agencies include:

- U.S. Fish and Wildlife
- LA Department of Wildlife and Fisheries
- LA Department of Natural Resources
- National Marine Fisheries Service

Planned Tribal Coordination

- Reservation for the Chitimacha Tribe of Louisiana



We are here Today

**DEC 2018 to
OCT 2019**

**Future Opportunity for
Public Input DEC 2019**

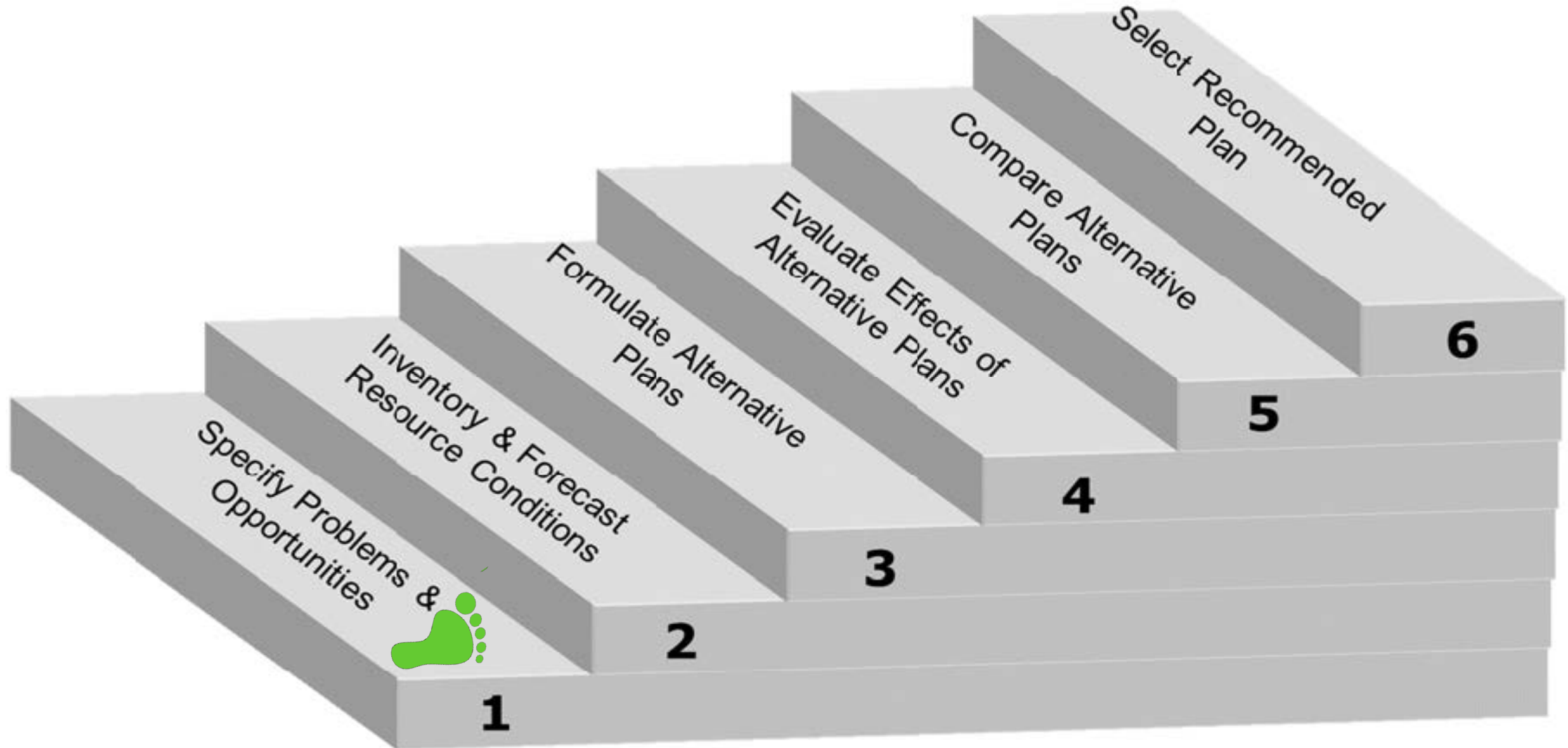
SEP 2020

SEP 2021





SIX-STEP PLANNING PROCESS





PLANNING PROCESS

STEP 1. **PROBLEMS** & OPPORTUNITIES



Flood Risk

- Likelihood of storm surge and riverine flooding in the area

Lack of Risk Reduction

- Several existing levees in the study area do not meet the 1% hurricane and storm damage risk reduction criteria

Environmental Challenges

- Previous hurricanes had adverse economic impacts to key infrastructure and the Atchafalaya floodway
- Land loss and coastal area changes
- Sea Level Rise



PLANNING PROCESS

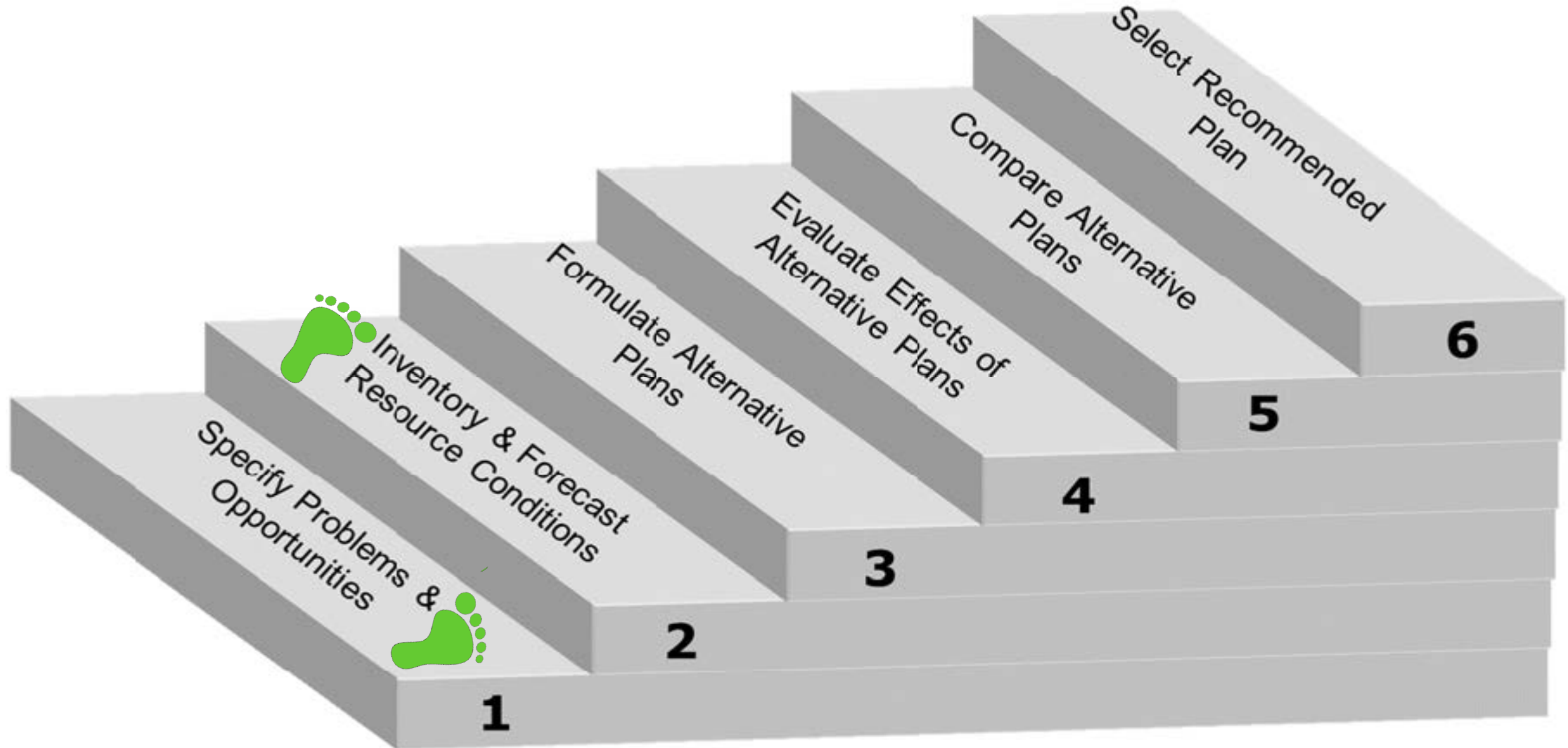
STEP 1. PROBLEMS & OPPORTUNITIES



- The safety of the public is the Corps' top priority
- Reduce flood damage risks to land, property by providing non-structural solutions
- Leverage local, state and federal efforts to manage flood risk
- Reduce flood risk to commodities and critical infrastructure
- Ensure Hwy 90 (future I-49 Corridor) is a reliable evacuation route
- Stem coastal land and wetland loss



SIX-STEP PLANNING PROCESS





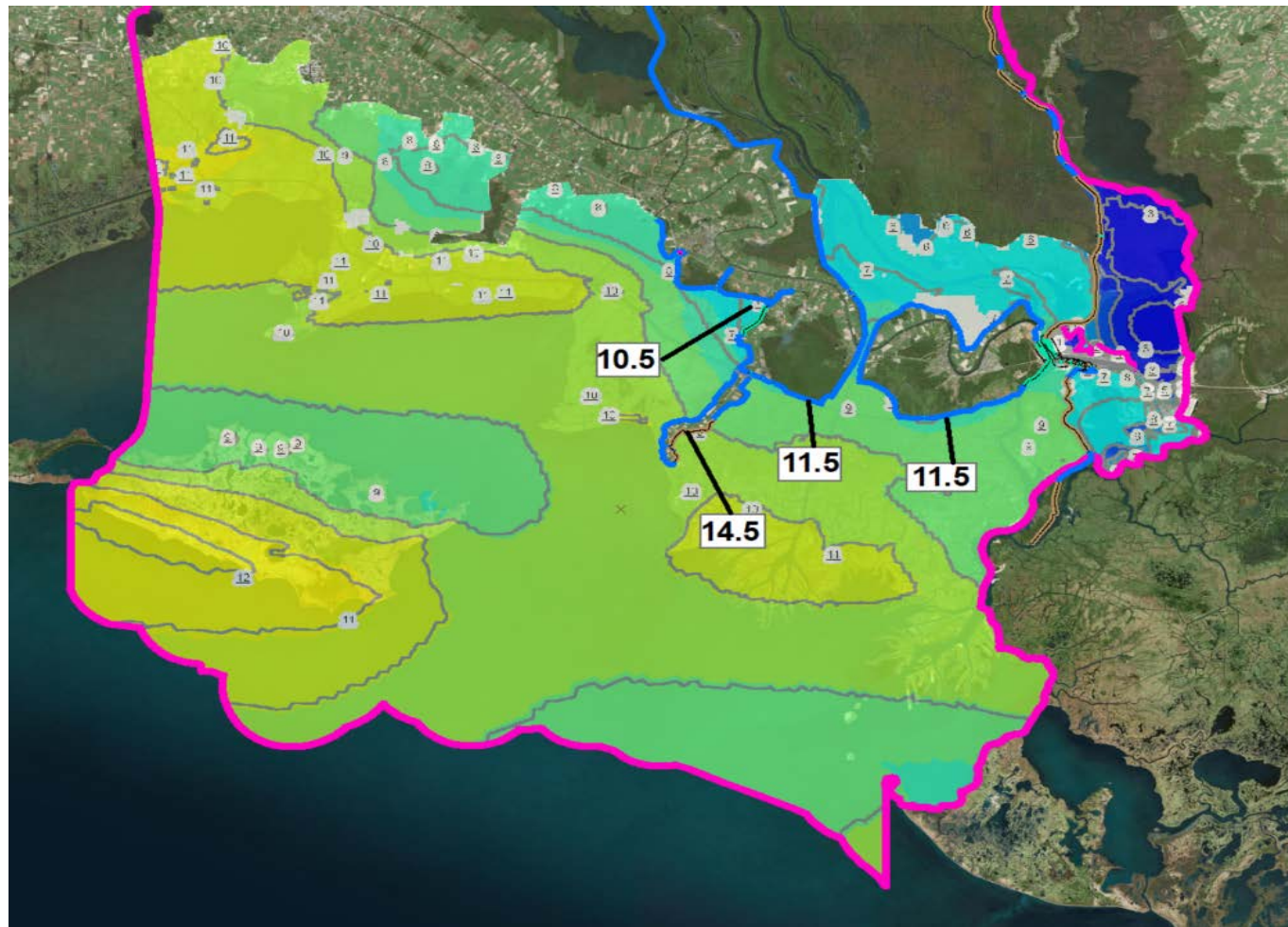
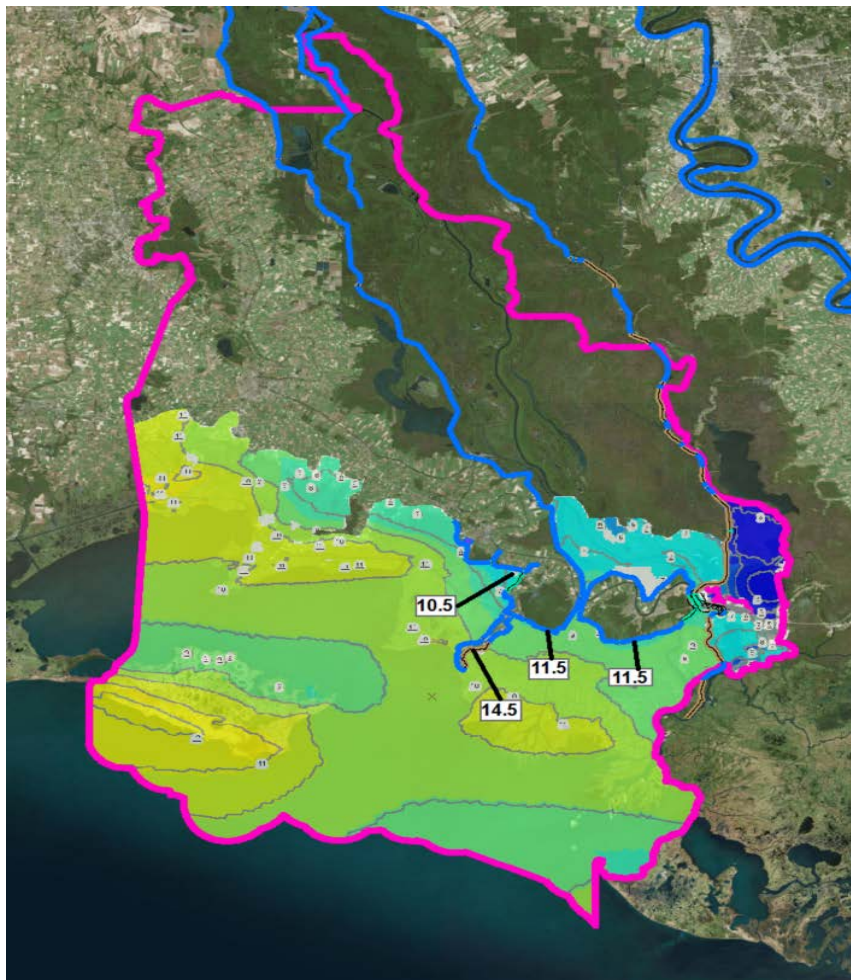
PLANNING PROCESS

STEP 2. INVENTORY AND FORECASTING

12



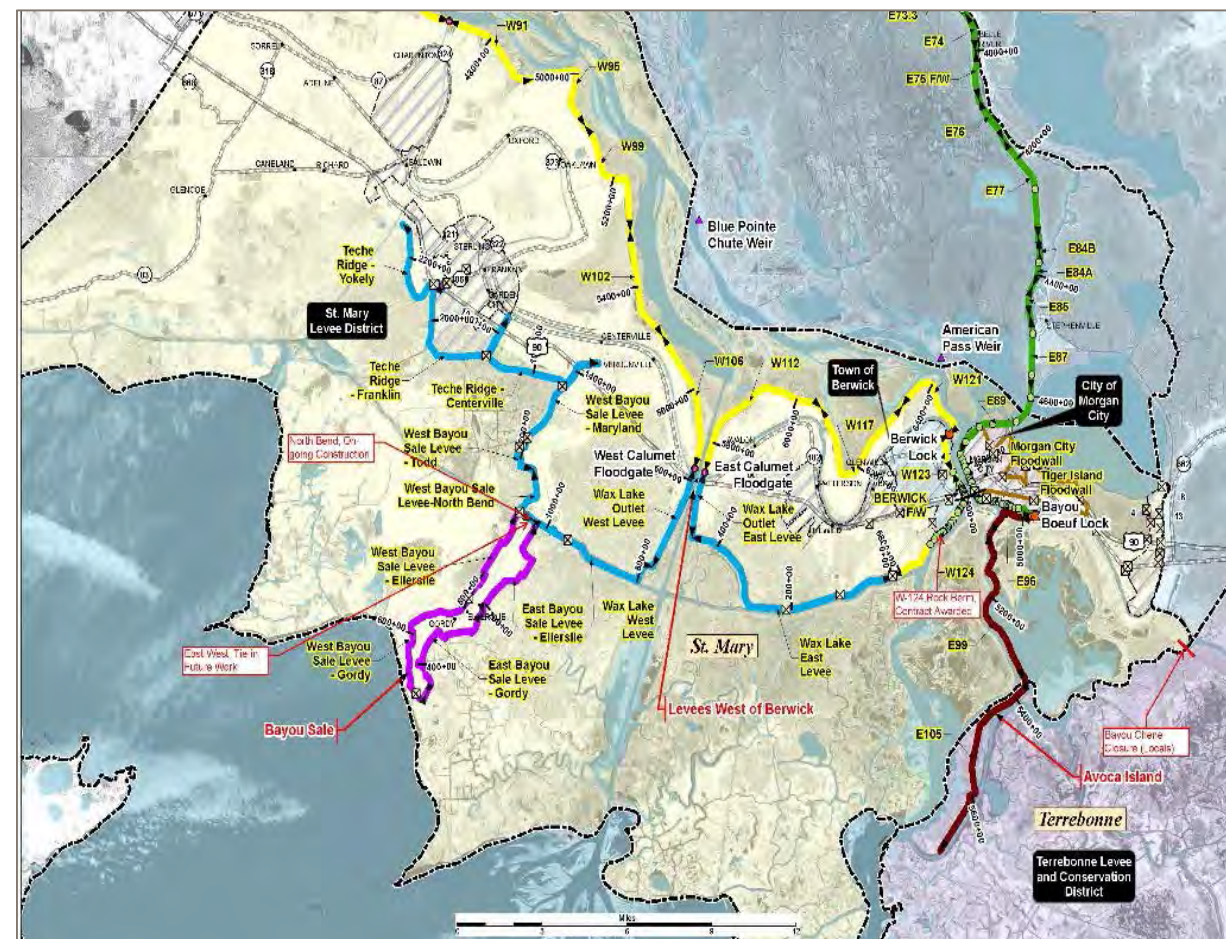
1% STORM SURGE STILL WATER ELEVATION WITH LEVEE DESIGN ELEVATIONS



*Including design levee elevations for Wax Lake Area West, Wax Lake Area East, and Bayou Sale

ATCHAFALAYA BASIN REACH OVERVIEW

Upper Basin





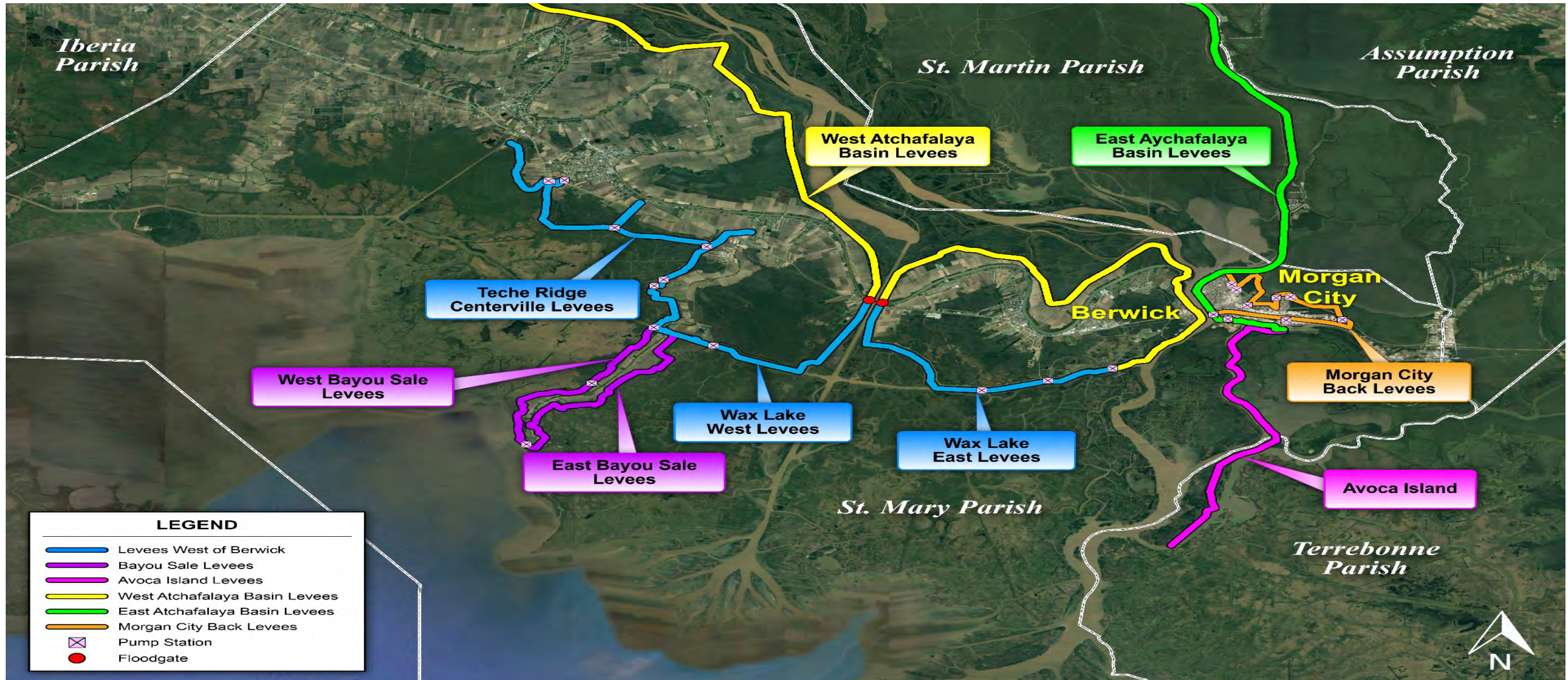
PLANNING PROCESS

STEP 2. INVENTORY AND FORECASTING

14

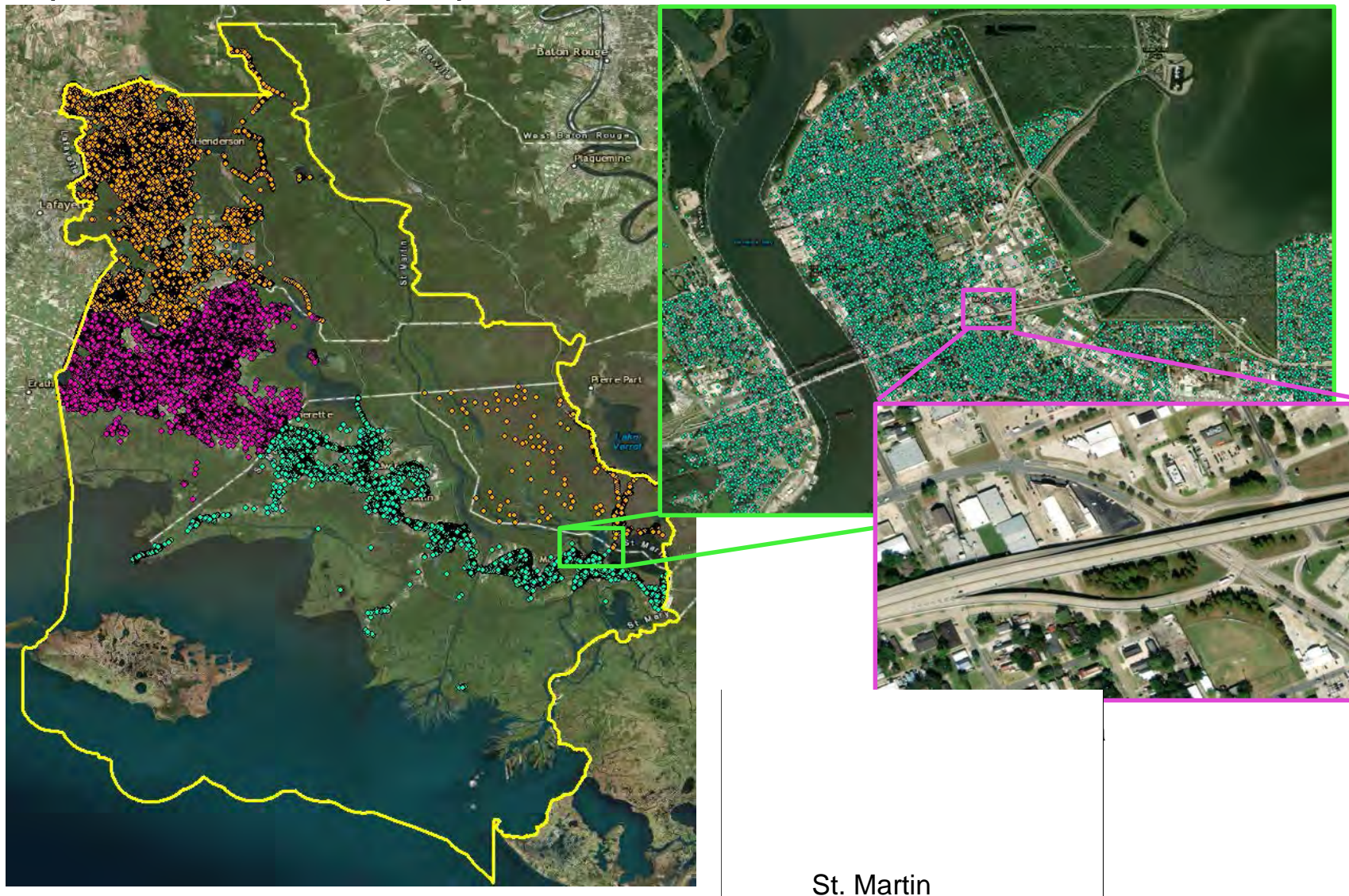


EXISTING FLOOD MANAGEMENT INFRASTRUCTURE

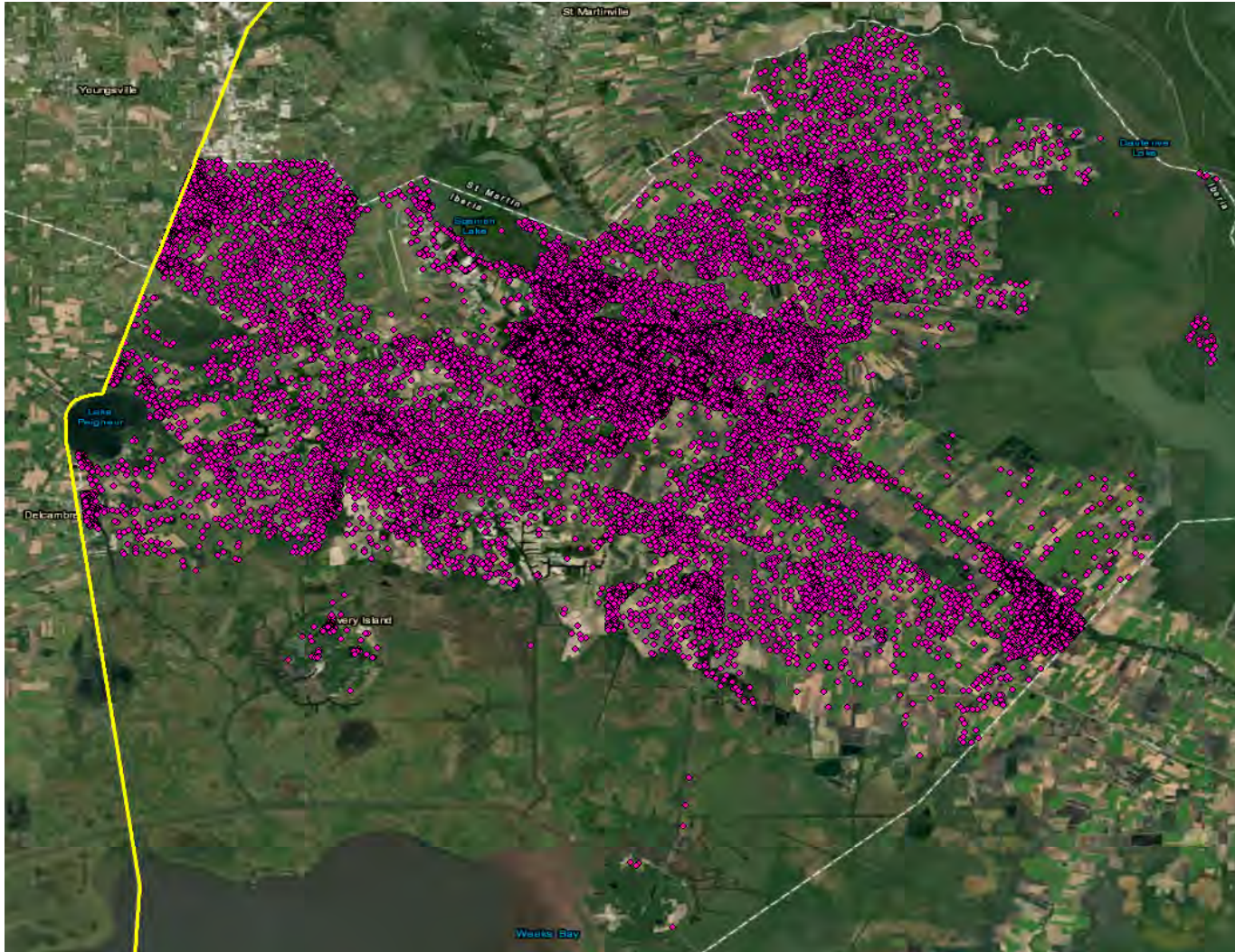




Population of ~177k people and 75,263 structures valued at \$18.6 billion



Population
of ~72k
people and
29,656 total
structures
valued at
\$7.8 billion



- ▶ 26,997 residential structures
 - \$196,280 average value
 - 2.05' average foundation height
- ▶ 2,659 nonresidential structures
 - \$925,852 average value
 - 1.02' average foundation height



PLANNING PROCESS

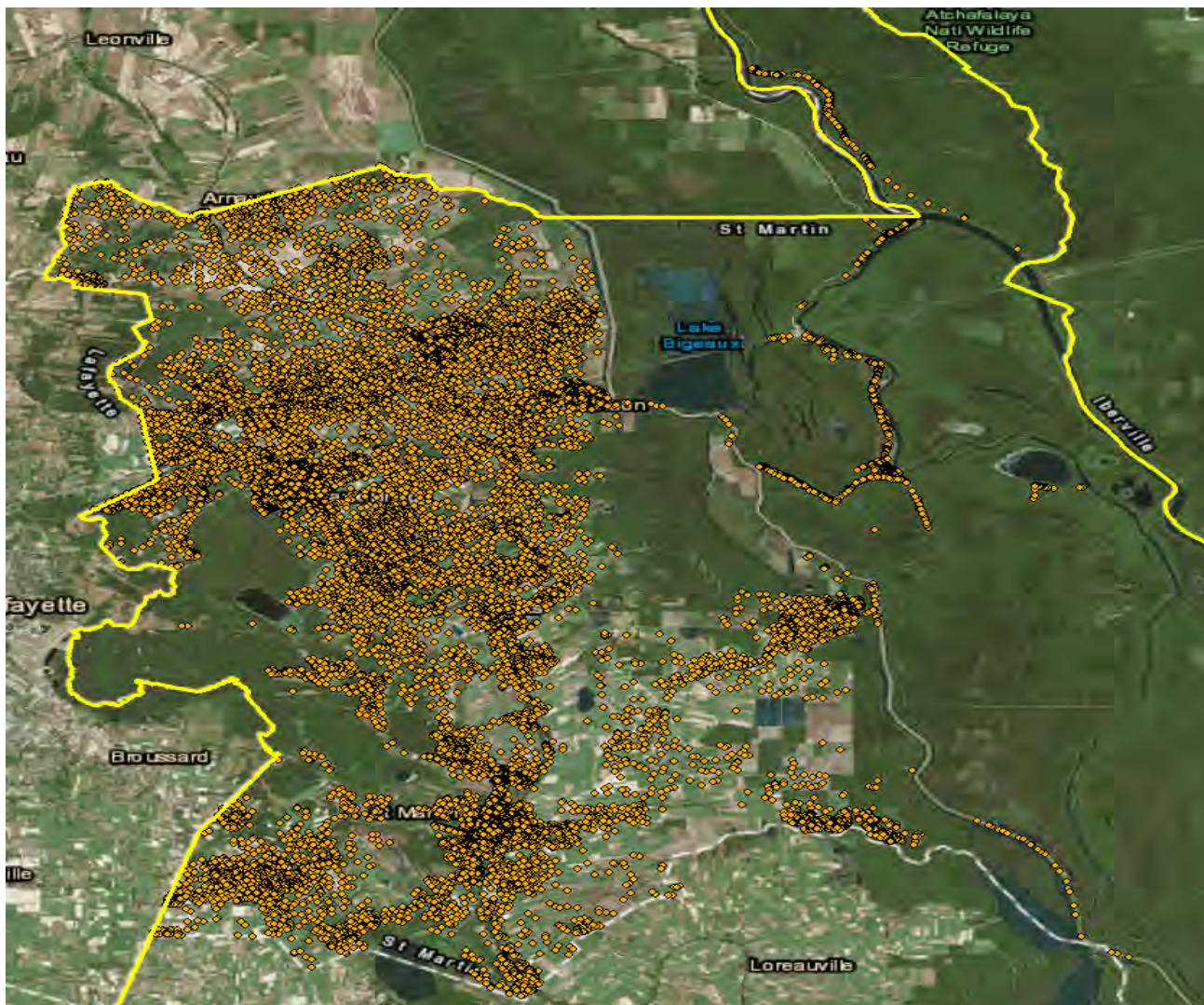
STEP 2. INVENTORY AND FORECASTING

17



ST. MARTIN PARISH

Population
of ~54k
people and
22,499 total
structures
valued at
\$5.0 billion



- ▶ 1,399 nonresidential structures
 - \$728,576 average value
 - 1.00' average foundation height
- ▶ 21,100 residential structures
 - \$187,935 average value
 - 2.04' average foundation height

Population
of ~51k
people and
23,108 total
structures
valued at
\$5.9 billion



- ▶ 20,950 residential structures
 - \$190,597 average value
 - 2.04' average foundation height
- ▶ 2,158 nonresidential structures
 - \$887,410 average value
 - 1.02' average foundation height



PLANNING PROCESS

STEP 2. INVENTORY AND FORECASTING



FEMA Flood Claim Statistics (JAN 1978 to SEP 2018)

| PARISH NAME | COMMUNITY NAME | TOTAL LOSSES | CLOSED LOSSES | OPEN LOSSES | CLOSED WITHOUT PAYMENT LOSSES | TOTAL PAYMENTS |
|-------------------|--------------------------------|-----------------|------------------|----------------|--|----------------------|
| IBERIA PARISH | DELCAMBRE, TOWN OF | 517 | 459 | | 58 | \$18,744,366 |
| | JEANERETTE, CITY OF | 47 | 31 | | 16 | \$1,135,748 |
| | LOREAUVILLE, VILLAGE OF | 4 | 3 | | 1 | \$21,834 |
| | NEW IBERIA, CITY OF | 568 | 469 | 1 | 98 | \$7,961,104 |
| | UNINCORPORATED | 1,949 | 1,721 | 2 | 226 | \$66,784,094 |
| | IBERIA PARISH TOTAL | 3,085 | 2,683 | 3 | 399 | \$94,647,146 |
| ST. MARTIN PARISH | BREAUX BRIDGE, TOWN OF | 83 | 63 | | 20 | \$1,411,911 |
| | HENDERSON, TOWN OF | 51 | 40 | | 11 | \$1,181,800 |
| | PARKS, VILLAGE OF | 7 | 7 | | | \$107,800 |
| | ST. MARTINVILLE, CITY OF | 49 | 36 | | 13 | \$888,003 |
| | UNINCORPORATED | 1,133 | 947 | 2 | 184 | \$15,473,956 |
| | ST. MARTIN PARISH TOTAL | 1,323 | 1,093 | 2 | 228 | \$19,063,470 |
| ST. MARY PARISH | BALDWIN, TOWN OF | 49 | 35 | 1 | 13 | \$348,904 |
| | BERWICK, TOWN OF | 78 | 60 | | 18 | \$479,856 |
| | FRANKLIN, CITY OF | 555 | 401 | 1 | 153 | \$6,546,494 |
| | MORGAN CITY, CITY OF | 434 | 286 | | 148 | \$1,762,063 |
| | PATTERSON, CITY OF | 63 | 52 | | 11 | \$394,737 |
| | UNINCORPORATED | 1,167 | 960 | 2 | 205 | \$21,934,206 |
| | ST. MARY PARISH TOTAL | 2,346 | 1,794 | 4 | 548 | \$31,466,260 |
| | STUDY AREA TOTAL | 6,754 | 5,570 | 9 | 1,175 | \$145,176,876 |

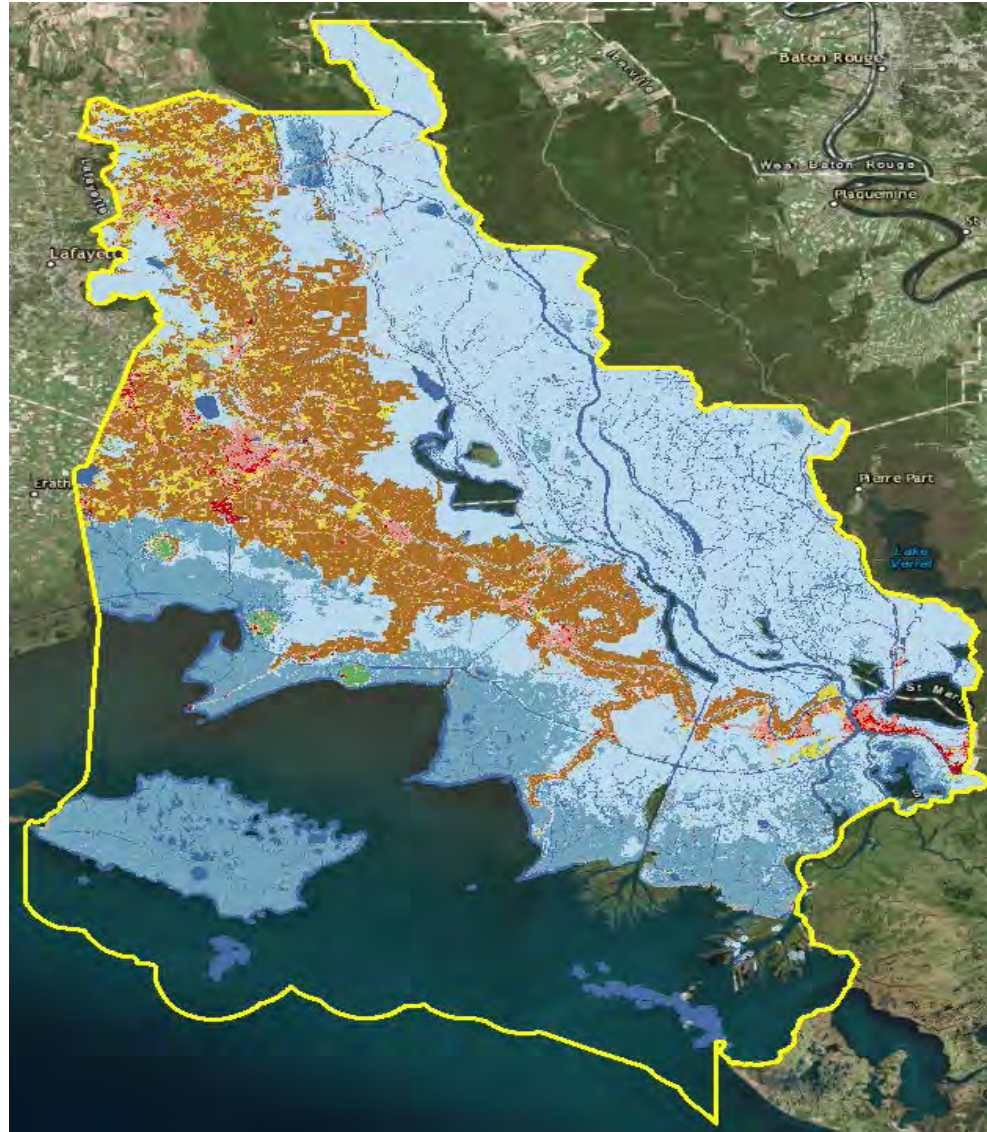


PLANNING PROCESS

STEP 2. INVENTORY AND FORECASTING



**Land
use
within
study
area**



Open Water 10%

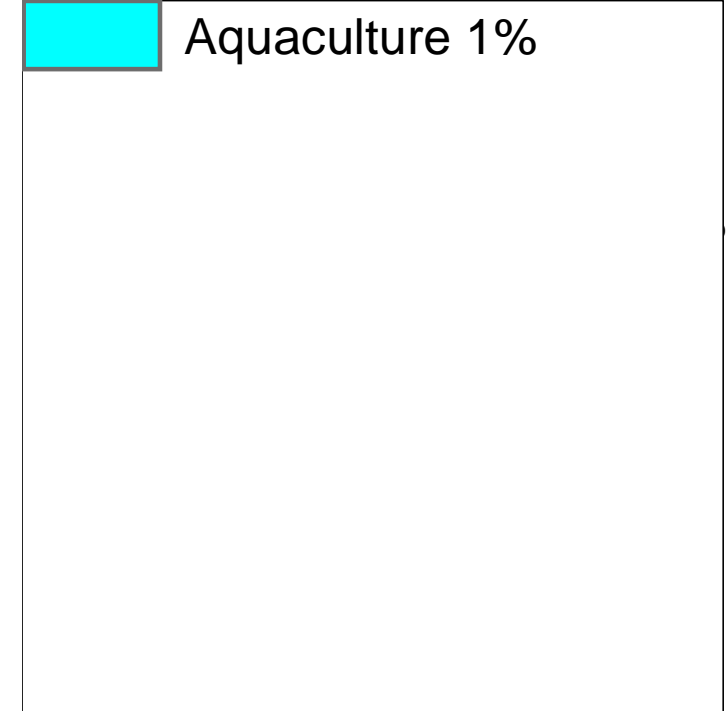
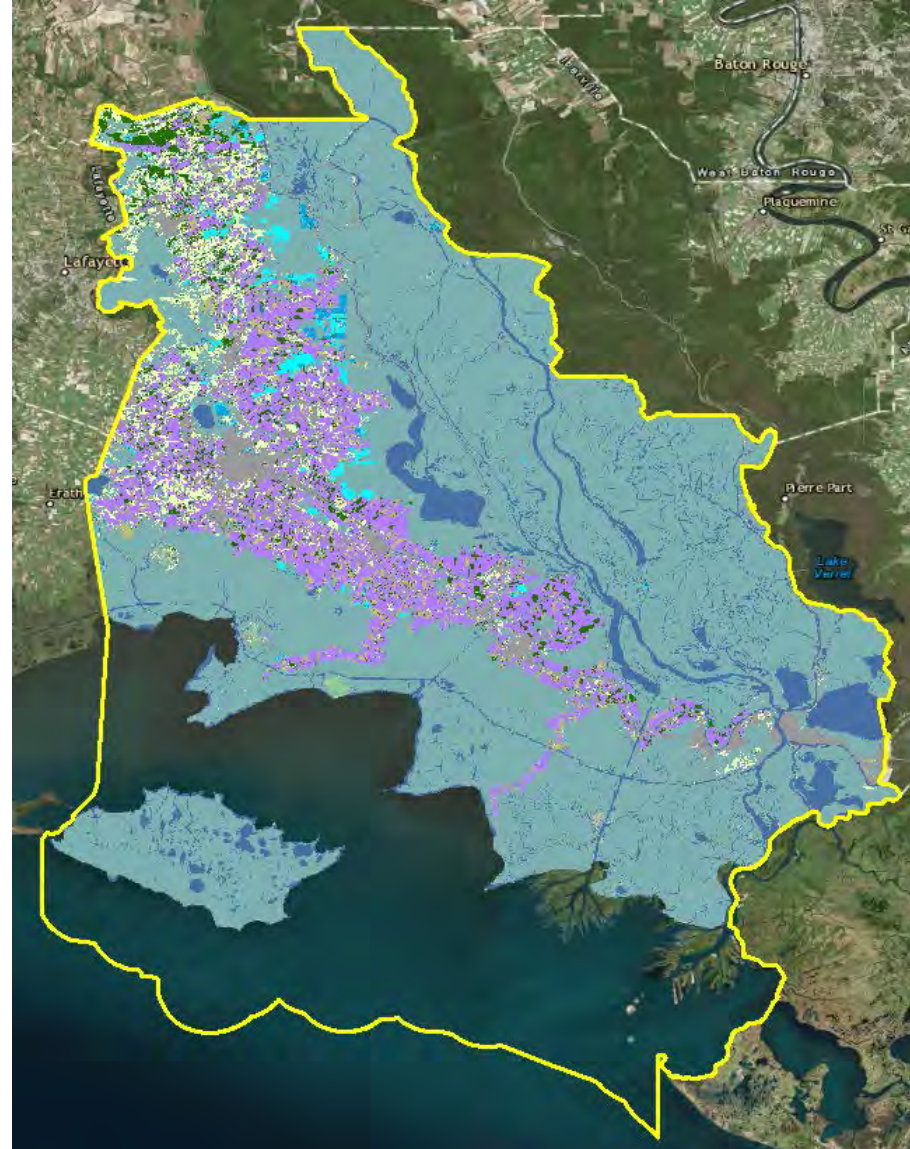


PLANNING PROCESS

STEP 2. INVENTORY AND FORECASTING



**USDA
crops
within
study
area**





CURRENT REGIME – NO ACTION ALTERNATIVE



Future Without Project Condition- is a description of resources and human environment most likely condition if no additional actions are taken as a result of this study

- Increased flood risk
 - Sea level rise
 - Increased storm surges
- Increased storm damages
 - Frequency
 - Intensity
- Subsidence expected to continue at current rate
 - Coastal erosion will continue
 - Damages would likely increase
 - Salt water intrusion
- Loss of estuary fisheries and rearing grounds
- Delta forming at the Wax Lake outlet and Atchafalaya River



CONSTRAINTS



- Compliance with environmental laws
- Mitigation cost and bank availability
- Appropriation Authority- Not formulating for ecosystem restoration
- Seek to minimize the transfer of flood risk
- Minimize impacts to cultural and historic
- Seek to minimize coastal marsh loss
- Avoid and consider design constraints of local infrastructure and transportation (railroad, bridges, highways)
- Avoid impacts to critical infrastructure such as emergency responder corridors
- Avoid emergency responders and community support facilities
- Avoid impacts to navigation, ports and Gulf Intercostal Waterway (GIWW)
- Hazardous, Toxic, Radioactive Waste (HTRW) if found in project area



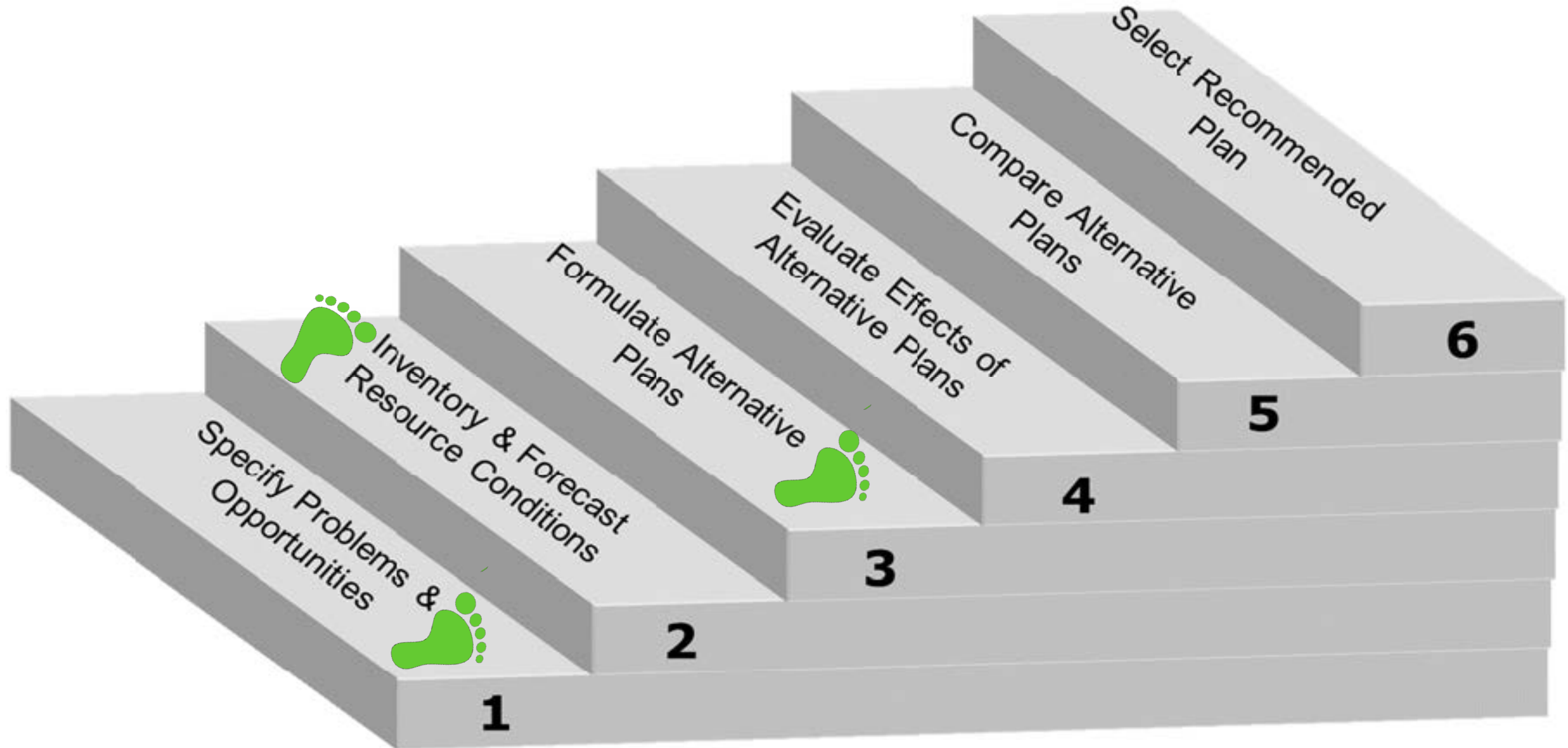
PRELIMINARY INVENTORY NEEDS



| Data Type | Potential Provider |
|--|--|
| Structure Inventory | Parish Assessor Databases |
| Damage Impacts from past storms | Public and agency feedback and Federal Emergency Management Agency (FEMA) data |
| Endangered Species and Critical Habitat Areas | US Fish and Wildlife and National Marine Fisheries Service |
| Mitigation Bank site locations and borrow areas | USACE Regulatory |
| Types of flooding that lead to damages | Public and agency feedback and Federal Emergency Management Agency (FEMA) data |
| Impacts to Commercial and Industrial Facilities | Public and agency feedback and Federal Emergency Management Agency (FEMA) data |
| Storm events that have resulted in damages across project area | Public and agency feedback and Federal Emergency Management Agency (FEMA) data |



SIX-STEP PLANNING PROCESS





ALTERNATIVE STRATEGIES



How

Strategy - No Action

*Strategy –Structural Focus
(CPRA)*

Strategy – Non- Structural

*Strategy – combination of structures and
non- structural alternatives*

Where

*Strategy – Reduce impacts to at risk
communities*

*Strategy –Reduce impacts to areas with
reoccurring damages*



NON STRUCTURAL MEASURES



Non-Structural Alternative- does not modify or restrict the natural flood. The term refers to the impact of the alternative on the flood. Construction activities may still be required.

Benefits of Non-Structural Alternative

- Minimal or no Operation and Maintenance
- Long-term risk reduction
- Reduce reoccurring flood damages
- Reduces environmental impacts of structural and need for mitigation

Types for Non-Structural Alternatives

- Elevating residential structures
- Flood proofing non-residential structures
- Relocate at risk structures
- Localized storm surge risk reduction measures around warehouses
- Wet flood proofing/Dry flood proofing
- Mitigation reduction measures



ALTERNATIVE EVALUATION & COMPARISON



Initial Alternative Comparison Criteria may include:

- Reduction in Average Annual Damages
- Reduction in risk to life loss
- Reduction of flood risk based on flood frequency
- Preliminary costs
- Preliminary benefits to National Economic Development Account
- Mitigation costs and bank availability



WHAT WE NEED FROM YOU

1. Are the problems identified capturing what is being experienced in the communities?
2. Are there additional problems related to storm damages and flooding in the project area that are not captured?
3. What flood event did your community see the most damages?
4. Are there alternative strategies that would address the problems more effectively?
5. Are there additional constraints the planning team should consider?
6. Is there any data/studies or other information that is available?



COMMENTS

South Central Coastal Study Website –

<http://www.mvn.usace.army.mil/About/Projects/BBA-2018/studies/South-Central-Coastal/>

Comments or information can be provided to:

U.S. Army Corps of Engineers, New Orleans District

C/O Carrie Schott

CEMVN-PM-B

7400 Leake Avenue

New Orleans, LA 70118

Or by email to

Carrie.G.Schott@usace.army.mil