THANK YOU FOR JOINING US

Our presentation will begin momentarily

St. Tammany Parish, Louisiana Feasibility Study Revised Draft Integrated Feasibility Report and Environmental Impact Statement is available for Public Review and Comment July 21 – September 6, 2023.

View and Download the report:

https://www.mvn.usace.army.mil/Missions/Environmental/ NEPA-Compliance-Documents/Bipartisan-Budget-Act-2018-BBA-18/BBA-18-Projects/

U.S. ARMY

US Army Corps of Engineers®

ST. TAMMANY PARISH, LOUISIANA FEASIBILITY STUDY

Optimized Draft Integrated Feasibility Report and Draft Environmental Impact Statement

Public Meetings
August 15&16, 20213

U.S. ARMY

US Army Corps of Engineers®

COASTAL PROTECTION AND RESTORATION AUTHORITY
CPRA

PRESENTATION AGENDA

- Meeting Purpose
- The NEPA Process
- Project Introduction
- Objective
- Conclusion
- Potential Issues
- Opportunities to Comment

MEETING PURPOSE

- Present the Revised Draft Report
  - ❖ Provide background on the USACE Study
  - ❖ Study updates on alternative analysis
  - ❖ Optimized Tentatively Selected Plan (TSP)

- Receive Comments
  - ❖ Comments received through September 6, 2023
  - ❖ Full participation is encouraged.

WHAT IS NEPA?

The National Environmental Policy Act (NEPA) is a law that requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.

- Part of that process is obtaining public input and hearing comments

Goals of NEPA?

- Requires Federal agencies to consider their actions and decisions with respect to the environment.
- Ensure public and other agency involvement in the decision-making process

How will USACE comply with NEPA?

- By acting as the lead Federal Agency in drafting this revised draft EIS and gathering your input.

WHAT IS AN EIS?

Purpose and Need

- What is the purpose of this project? What is the goal trying to be achieved?
- Why is this project needed? Is there a reasonable, foreseeable need for the proposed project?

Alternatives

- What alternatives will be looked at in the EIS?
- Informed by the scoping process of the EIS

Affected Environment

- What are the baseline conditions of the human and natural environment that could potentially be affected?
- Informed by the scoping process of the EIS

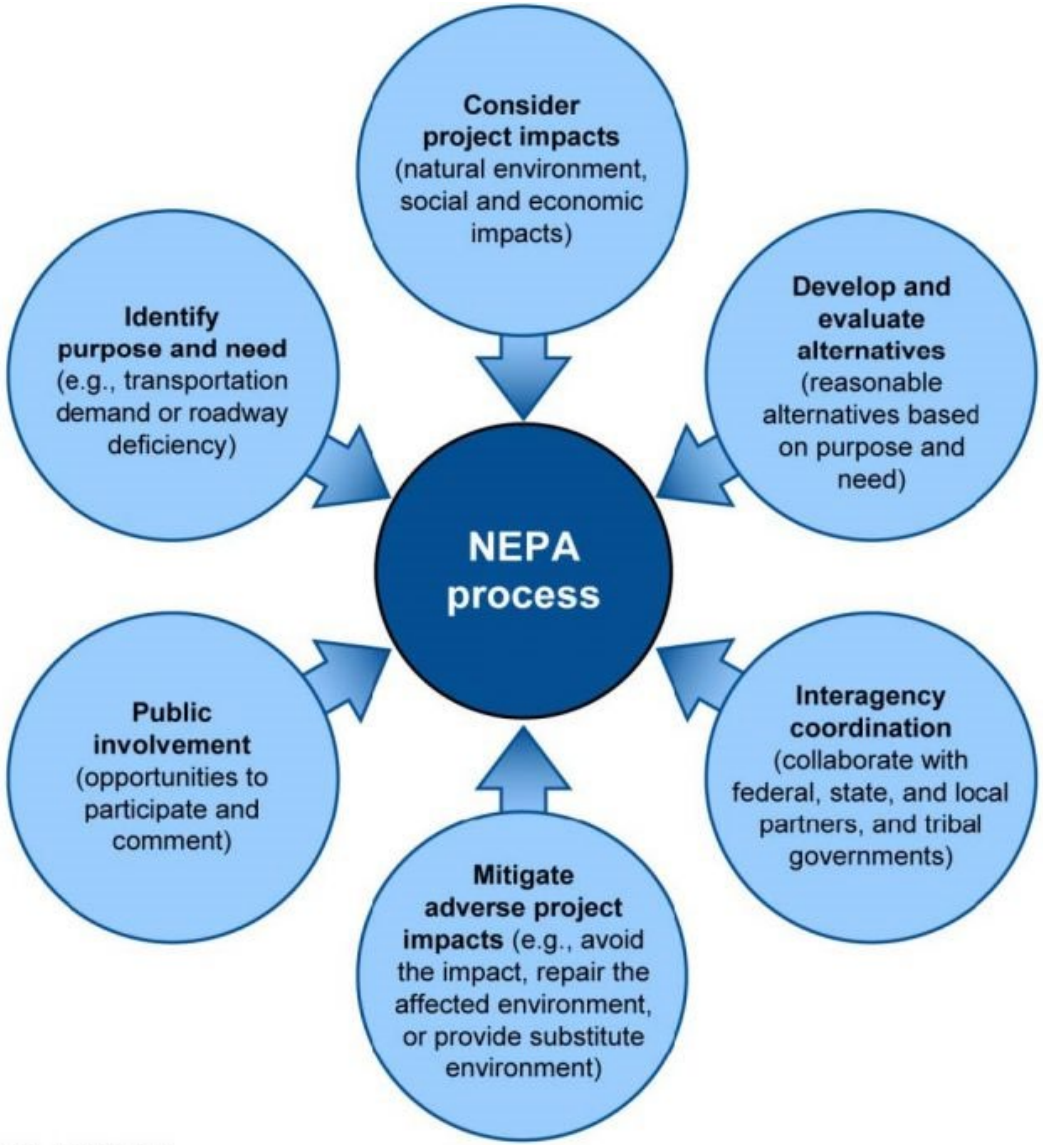
Environmental Consequences

- How will building, operating, and maintaining this project affect those baseline conditions of the human and natural environment?

★★ The public is given an opportunity to respond to the Draft SEIS. This is where we are today.

NATIONAL ENVIRONMENTAL POLICY ACT

- Requires all federal agencies to
  - consider the environmental impacts of any proposed action
  - develop a range of alternatives
  - provide opportunities for the public to provide input
  - document the decision-making process so that interested and affected stakeholders can understand how the agency came to a decision



Source: GAO. | GAO-15-71

45-DAY PUBLIC REVIEW PERIOD

- The revised draft EIS is published for public review and comment.
- Your comments and input are **welcomed** and **encouraged**.
- Once comment period closes, study team will consider all substantive comments and, if necessary, conduct further analysis.
- The 45-day public comment period end September 6.
- Responses to comments will be included in the final SEIS

Public Hearings

Slidell Public Meeting
Tuesday, August 15, 2023, at 6 p.m.
Slidell Municipal Auditorium
2056 2nd Street, Slidell, LA 70458

Covington Public Meeting
Wednesday, August 16, 2023, at 6 p.m.
Covington Firehouse Event Center
32 N. Theard Street, Covington, LA

Public Comments/Public Input

- Traditional Mail
  U.S. Army Corps of Engineers
  Eric Williams, Ch, Environmental Branch
  Regional Planning and Environmental Division South
  7400 Leake Ave, New Orleans, LA 70118

- E-Mail
  sttammanyfs@usace.army.mil

St. Tammany Parish, Louisiana Feasibility Study: Project Area

U.S. Army Corps of Engineers
New Orleans District

Legend

- WBDHU12
- Frequent Flooding
- Study Area

The U.S. Geological Survey Watershed Boundary Dataset (WBDHU12) used to delineate the hydrologic subbasins.

Location Map

STUDY AUTHORITY

Water Infrastructure Improvements Act for the Nation Act (WIIN) of 2016: authorization for flood risk reduction and ecosystem restoration.

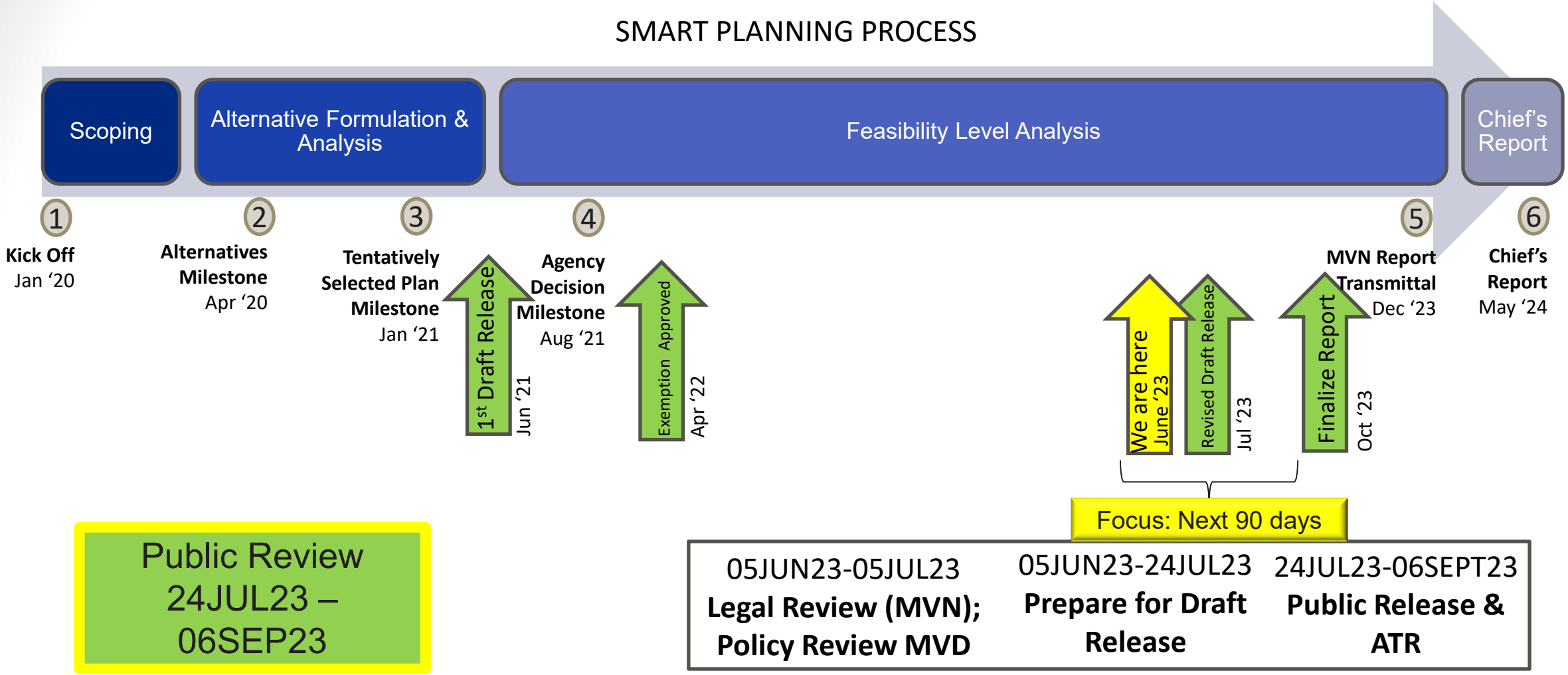
Bipartisan Budget Act (BBA) of 2018

- (Public Law 115-123), Division B, Subdivision 1, H. R. 1892—13, TITLE IV, CORPS OF ENGINEERS—CIVIL, DEPARTMENT OF THE ARMY, INVESTIGATIONS
- ***Funding mechanism limits scope to the flood risk management**
    - **nature based features will be considered under flood risk management only**

Study conducted in accordance with Water Resources Development Act (WRDA) 2014 Section 1001

Recent Exemption Increased Time and Cost;
Remains fully federally funded

STUDY SCHEDULE

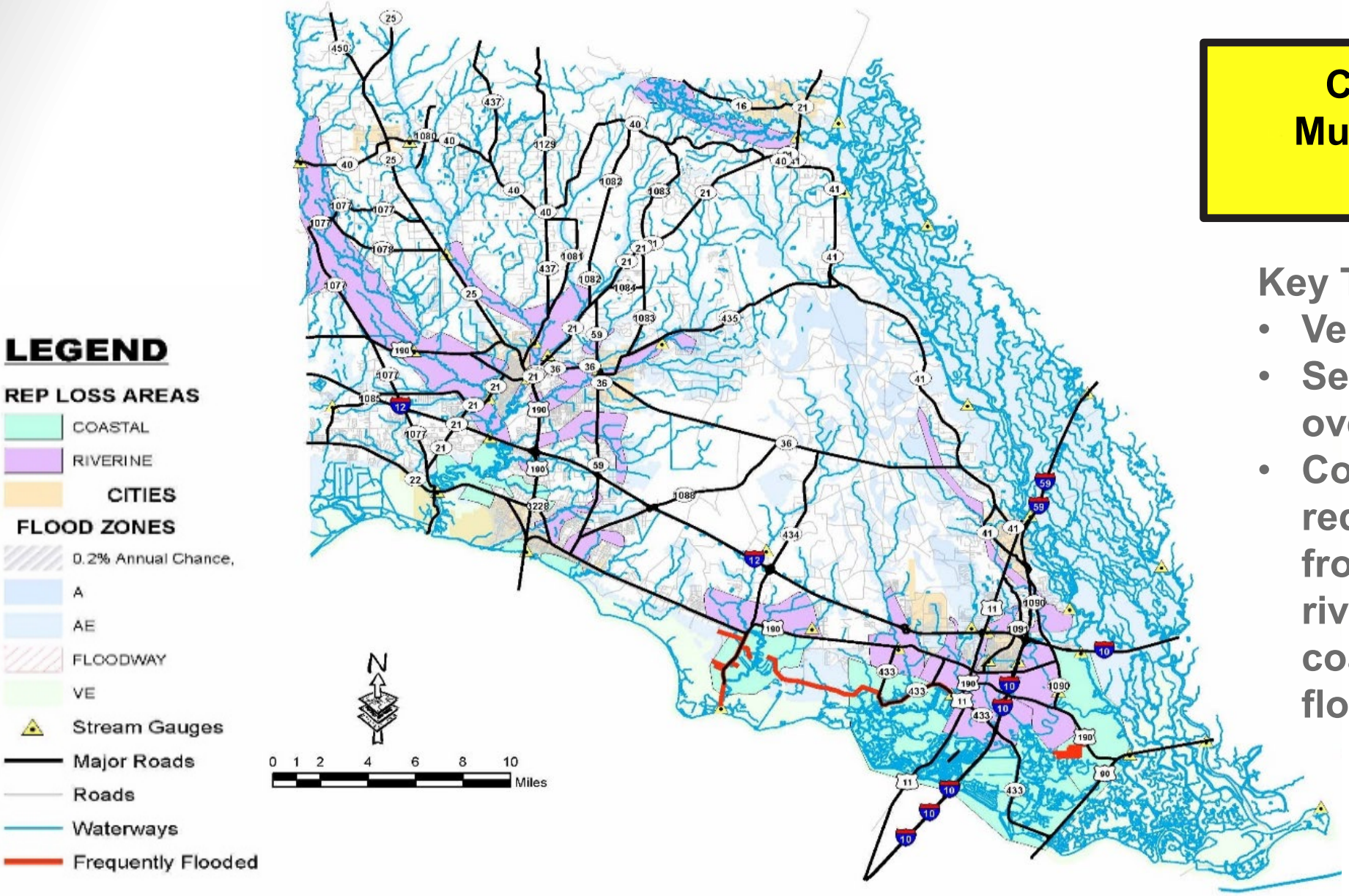


Public Review
24JUL23 –
06SEP23

PROJECT UPDATE

- Draft Report initially released last June 2021 for public comment
- Significant comments received
  - Inadequate impact analysis
  - Insufficient information

ST. TAMMANY PARISH FLOODING



Complex study; Multiple sources of flooding

Key Takeaways:

- Very Large Study Area
- Serves population of over 250,000 people
- Considered flood risk reduction measures from both riverine/rainfall and coastal storm related flooding

OBJECTIVES

- Reduce flood damage to structures
- Reduce the risk to public health and safety
- Reduce interruption to the nation's transportation corridor
- Increase community resiliency

COORDINATION

Non-Federal Sponsor

- **Louisiana Coastal Protection and Restoration Authority Board**

Governmental Stakeholders

– Natural Resource Agencies
– State of Louisiana and State Agencies
– St. Tammany Parish and St. Tammany Levee, Drainage and Conservation District
– City Officials

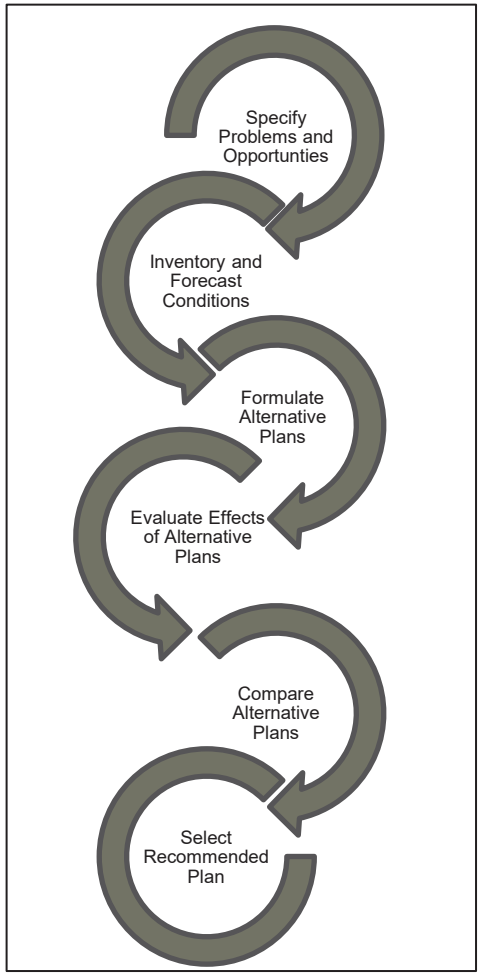
Considered/reviewed/incorporated previous and ongoing studies and recommendations

PLAN FORMULATION STRATEGY FOR TSP

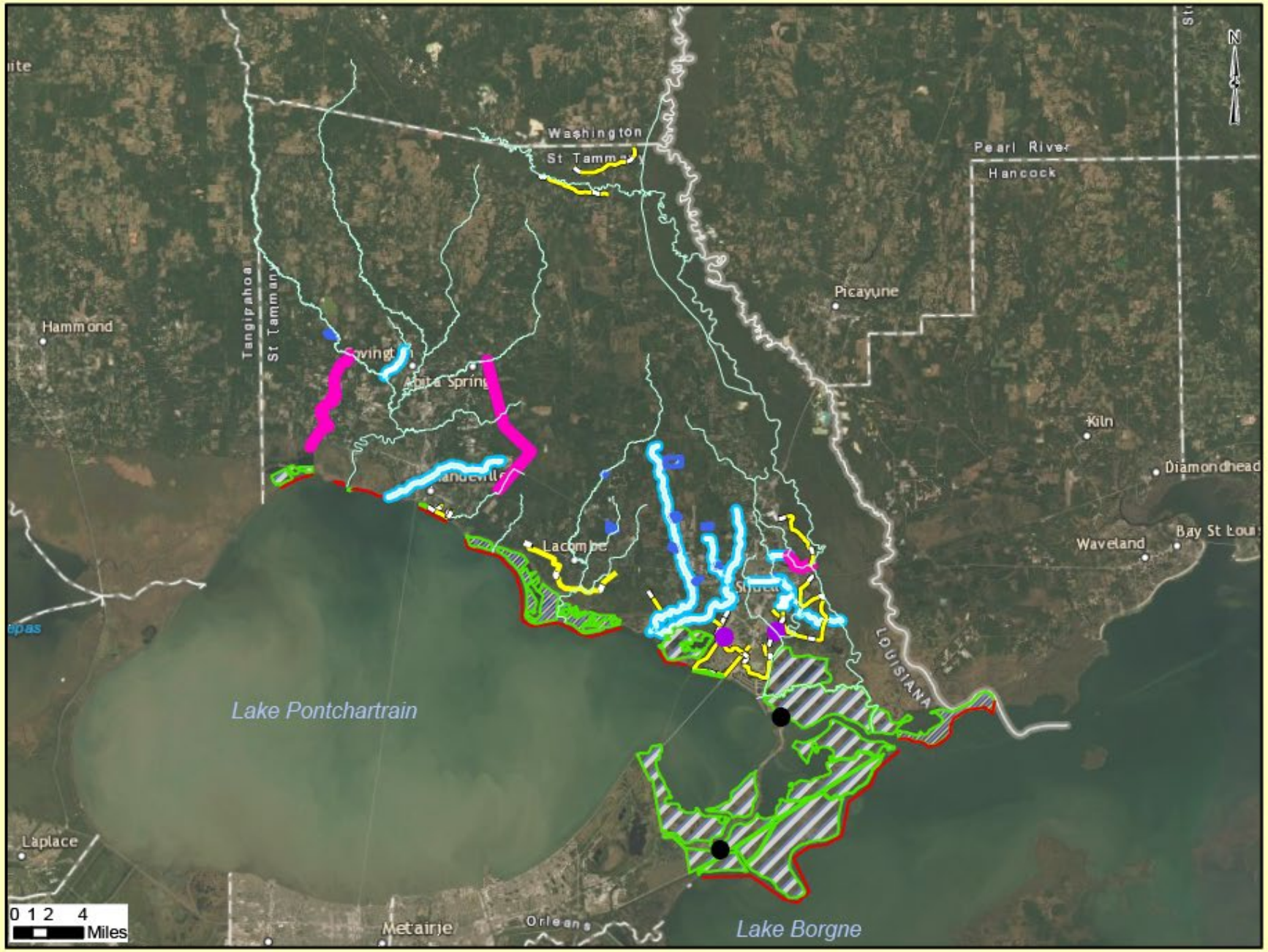
Iterative process of identifying measures to reduce flood risk and continually reevaluating and screening measures through identification of the TSP

Flood risk reduction measures:

- grouped into alternatives based on location and flood source
- structural and nonstructural measures were considered (208 total considered)
- evaluated and screened separately and independently to determine which measures were justified
- justified measures were combined into a comprehensive tentatively selected plan that reduces flood risk to multiple parts of the study area



St. Tammany Parish Feasibility Study: Initial Array (Structural Alternatives)



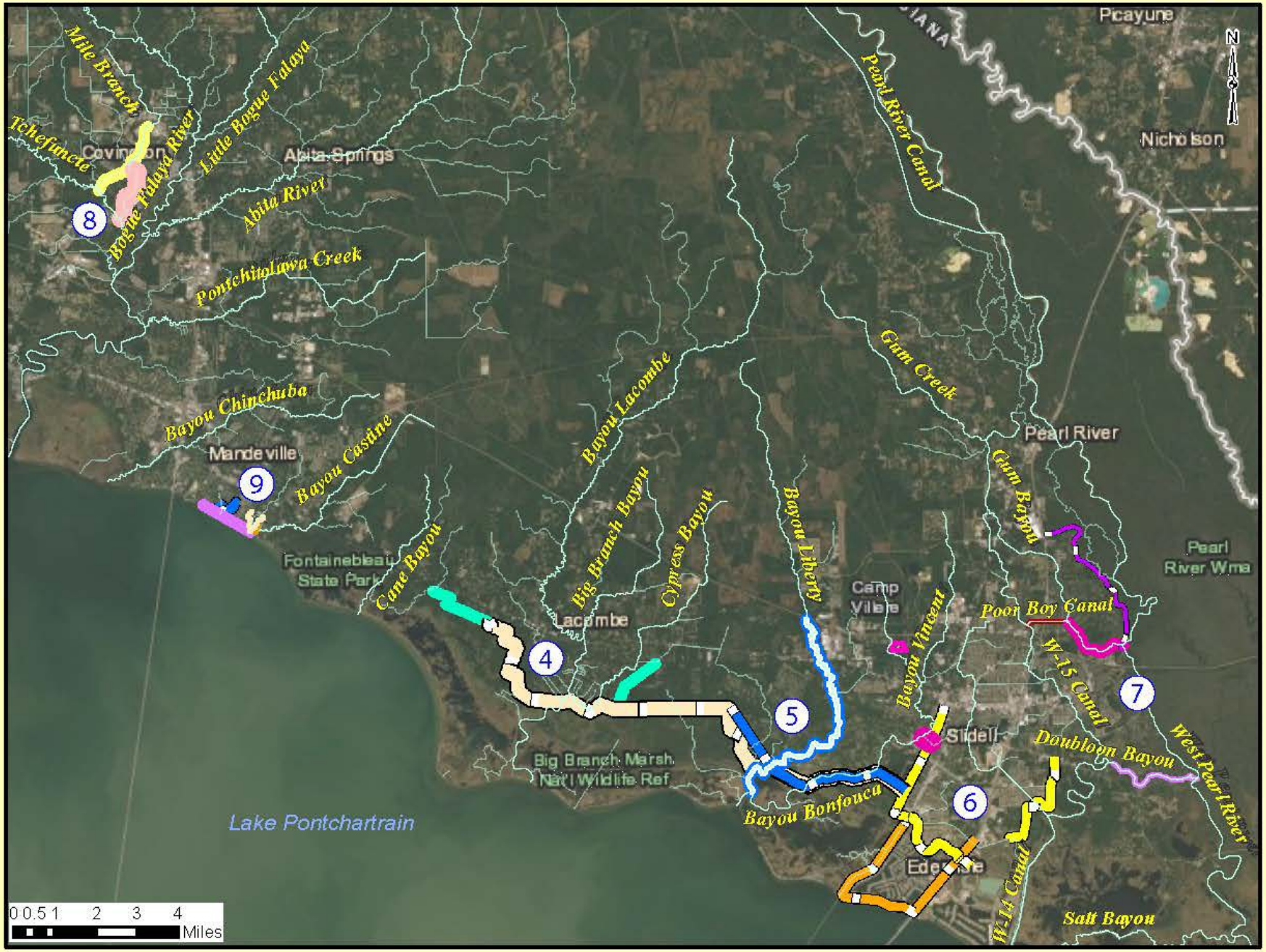
U.S. Army Corps of Engineers
New Orleans District

Legend

- Gates
- Shoreline Protection
- Marsh Creation
- Levee
- Detention Pond
- Channel Improvements
- Pump Station
- Diversion

Location Map

St. Tammany Parish Feasibility Study: Final Array (Structural Alternatives)



U.S. Army Corps of Engineers
New Orleans District

Legend

4 Bayou Lacombe (Alt 4)

5 Bayou Liberty / Bayou Vincent / Bayou Bonfouca (Alt 5)

6 South Slidell Storm Risk Reduction (Alt 6)

7 Eastern Slidell (Alt 7)

8 Upper Tchefuncte / Abita (Alt 8)

9 Mandeville Lakefront (Alt 9)

Location Map

SCREENING CRITERIA FOR FINAL ARRAY ANALYSIS

- Preliminary Engineering Design
- Estimated Risk Reduction Performance (2yr-500 yr event)
- Degree to which they met project objectives and avoided constraints
- Cost Estimate
- Risk Analysis
- Nonstructural Flood Plain Analysis
- Economic benefits
- Environmental Resource Evaluations
- Impacts to Life Safety
- Societal Impacts
- Real Estate Impacts
- Principle and Guideline Criteria- Completeness, Effectiveness, Efficient and Acceptability
- Contribution to Federal Objectives and Accounts

FINAL ARRAY OF ALTERNATIVES CONSIDERED

#	Alternative Name	Measure	Structural/ Non-Structural
1	No action		
2	Non Structural Comprehensive Plan	**Elevations and flood proofing**	**non structural**
4	Lacombe	4a Lacombe Ring Levee	structural
		4a.1 Lacombe Ring Levee short version	structural
		4.b Combined Ring Levee from Lacombe to West Slidell	structural
5	Bayou Liberty/ Bayou Bonfuca and Bayou Vincent	Bayou Bonfouca Regional Detention Pond	structural
		Bayou Liberty Snagging and Clearing	structural
		Bayou Patassat Snagging and Clearing	structural
		West Slidell Ring Levee	**structural**
6	South Slidell Storm Surge	**South Slidell Levee**	**structural**
		South Slidell Levee with Eden Isles	structural
7	Eastern Slidell	Gum Bayou Diversion	structural
		Poor Boy Canal Improvements	structural
		Doubloon Bayou Channel Improvements	structural
		Pearl River Ring Levee North of 1-10	structural
8	Upper Tchefuncte/Covington	**Mile Branch Channel Improvements**	**structural**
		Mile Branch Lateral A Channel Improvements	structural
9	Mandeville Lakefront	Raise Seawall (7.3 ft) with Pump Stations	structural
		Raise Seawall (7.3 ft) with Passive Drainage	structural
		Raise Seawall 18 ft	structural

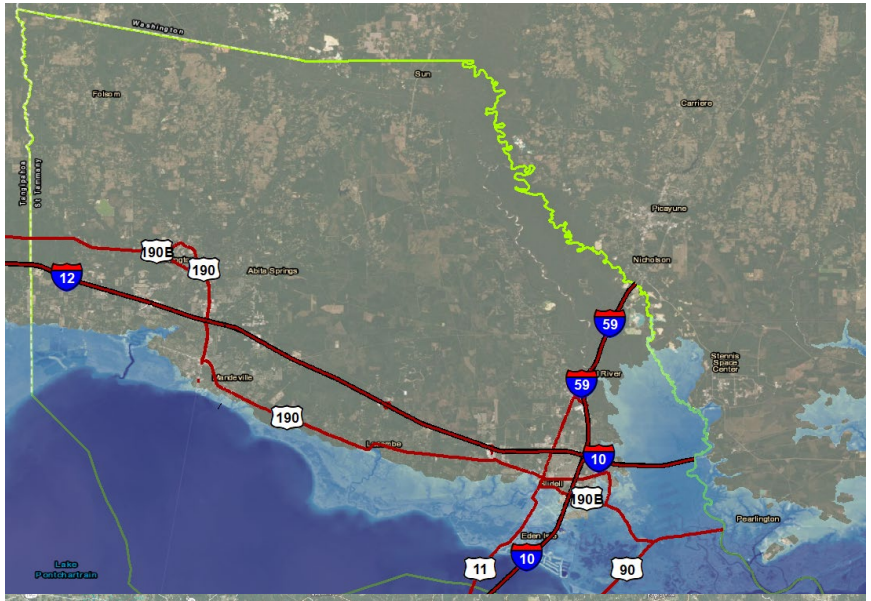
HYDROLOGIC, HYDRAULIC, AND COASTAL MODELING

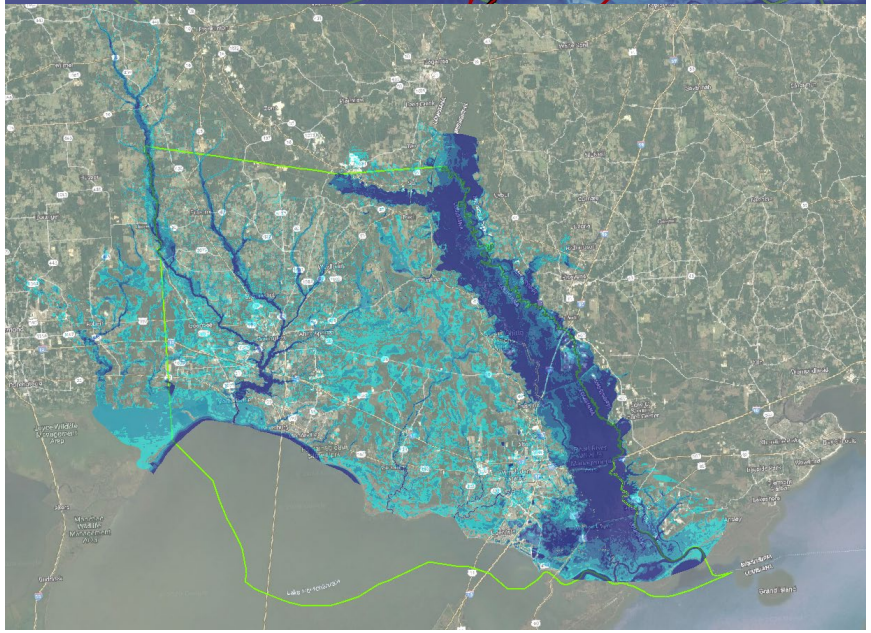
- Existing Conditions and Future Without Project (FWOP) coastal flood risk (using ADCIRC) and rainfall and riverine flood risk (using HEC-RAS) were modeled for a range of frequency events.

- FRM-With-Project HEC-RAS (2032 & 2082) modeling completed.

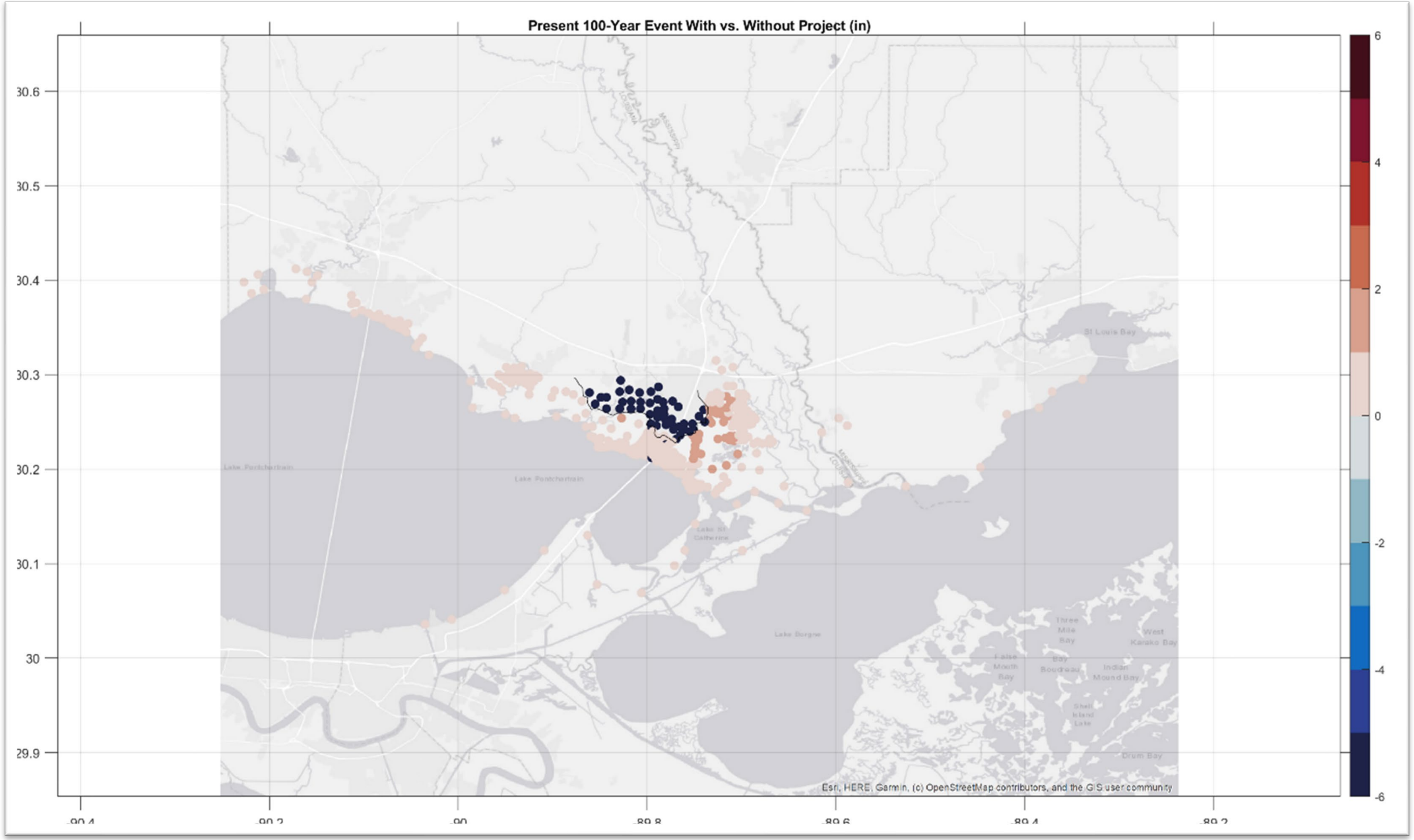
- CSRM- Estimated levee and floodwall heights for 1% AEP (100-year) level of risk reduction for each alternative. Areas of reduced risk were identified for each alternative. Estimated exterior impacts determined.

- With-project ADCIRC modeling effort was completed





MODEL RESULTS



Water Surface Changes in in inches

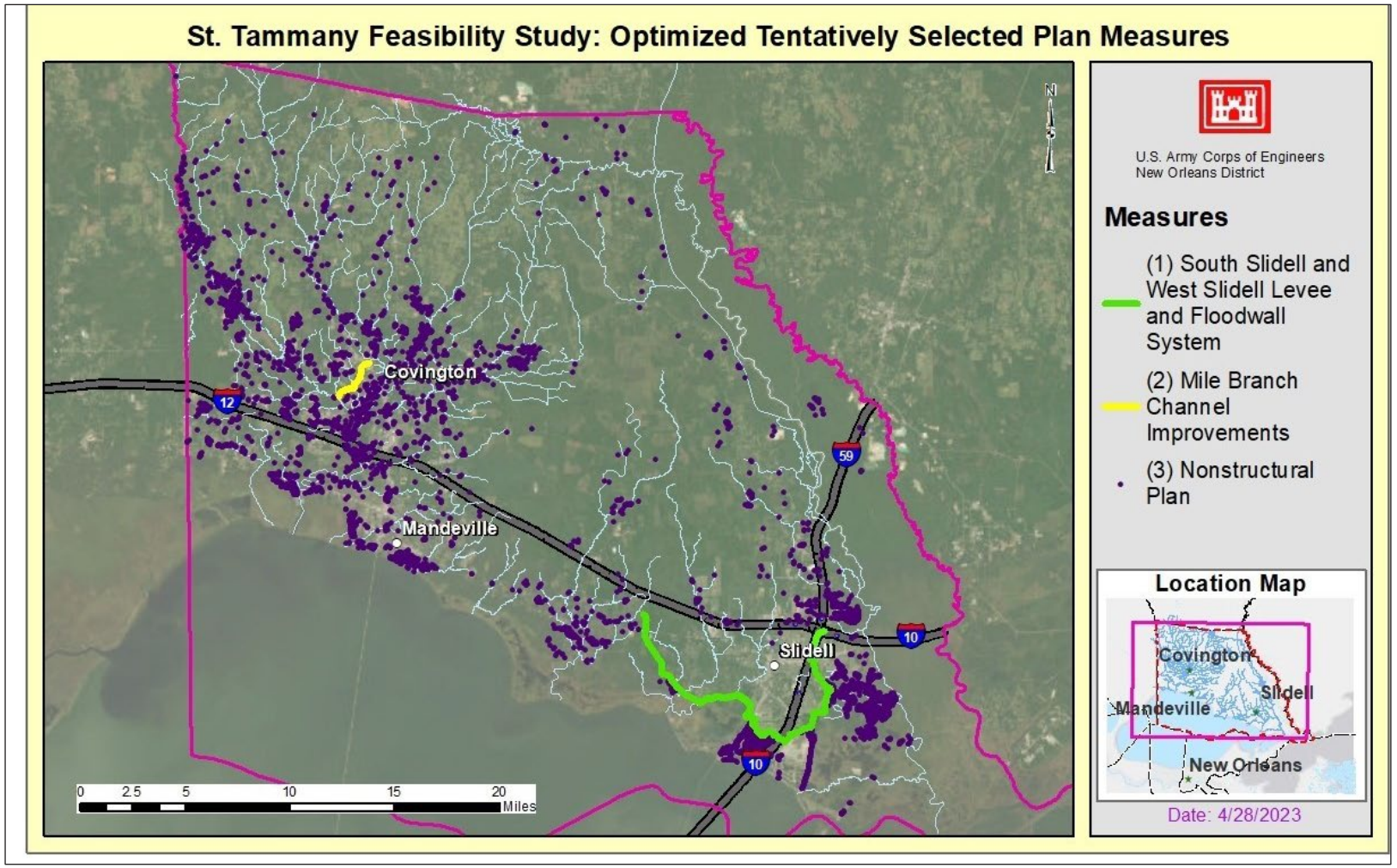
TENTATIVELY SELECTED PLAN

Comprehensive Plan to address flooding Parish wide includes structural measures to reduce flooding risk from coastal events (Costal Storm Risk Management-CSRM), rainfall and riverine events (Flood Risk Management-FRM) and Nonstructural plans

TSP Components

- West Slidell and South Slidell Levees
- Mile Branch Channel Improvements
- Nonstructural home elevations and floodproofing for the rest of the Parish based on structures located in the 50-year flood plain (residual risk)

Project Cost	$4,452,059,000
Benefits	$402,762,000
Average Annual Costs	$165,680,000
Net Benefits	$237,083,000
Benefit to Cost Ratio	**2.4**

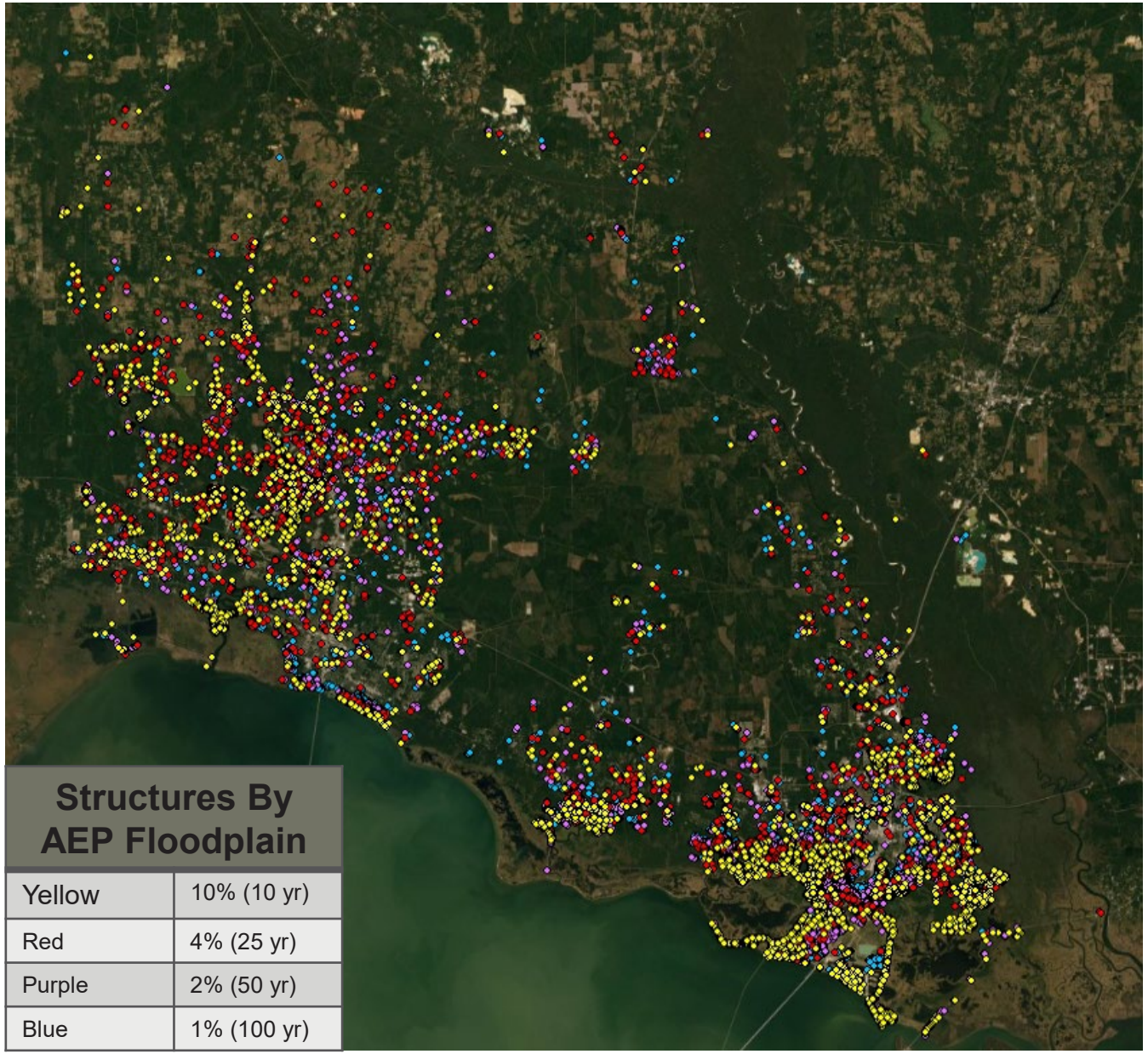


NONSTRUCTURAL ANALYSIS

Initial Draft: 50 year floodplain for the entire parish

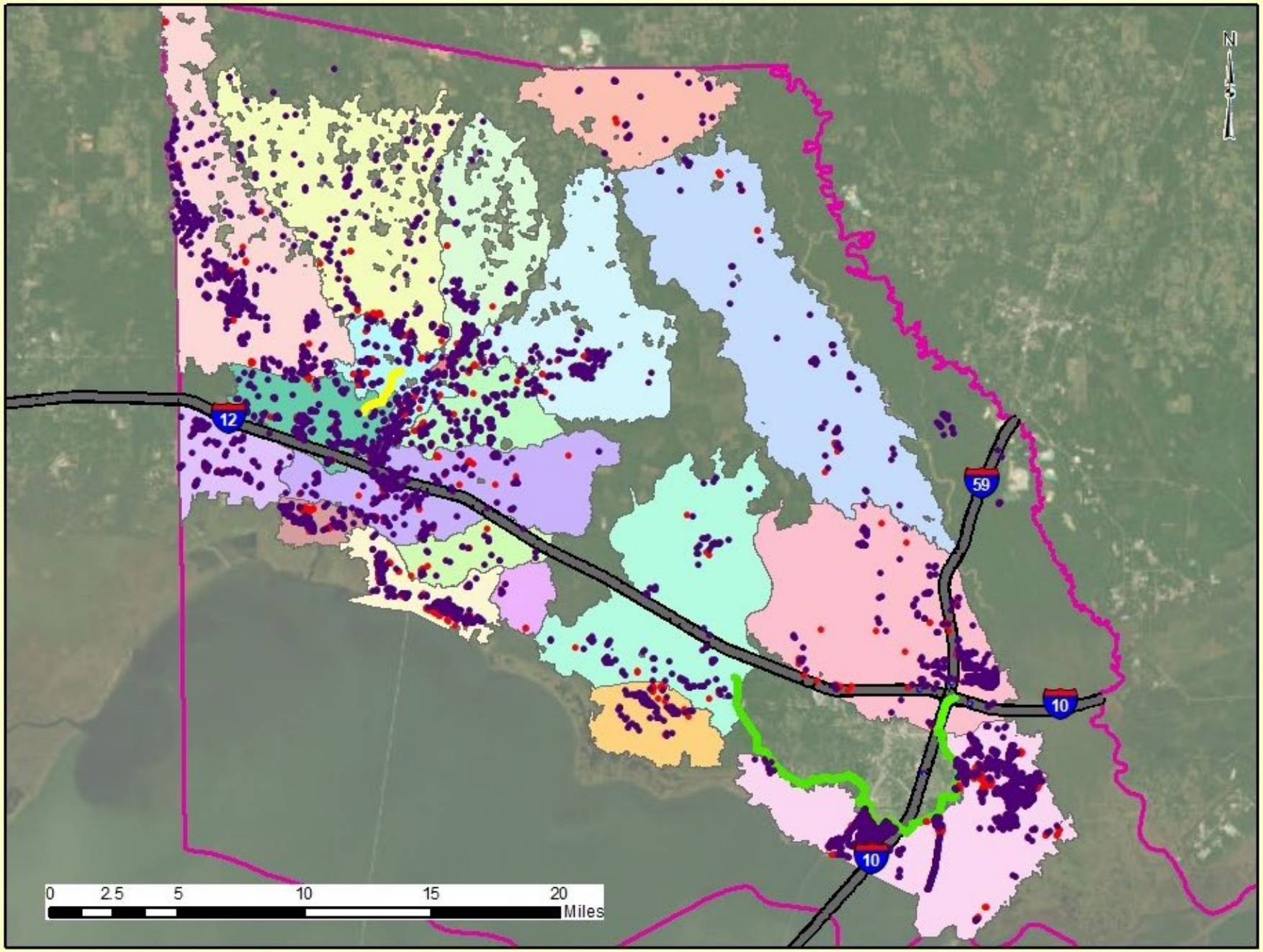
Optimized Plan: Various Floodplains including 25, 50 and 100 year across 20 sources of flooding

- NS in combination with Structural alternatives.
- 10, 25, 50 and 100 year floodplain.
- Identify structures in the floodplains of the project area influence areas.
- B/C Ratios and Net benefits calculated for each source of flooding.



Structures By AEP Floodplain	
Yellow	10% (10 yr)
Red	4% (25 yr)
Purple	2% (50 yr)
Blue	1% (100 yr)

St. Tammany Feasibility Study: Nonstructural Plan Details



U.S. Army Corps of Engineers
New Orleans District

Nonstrucural Plan

Modification

- Flood Proofing
- Raise Structure

Location Map

Date: 5/5/2023

DATA REQUIRED FOR NED ECONOMIC ANALYSIS

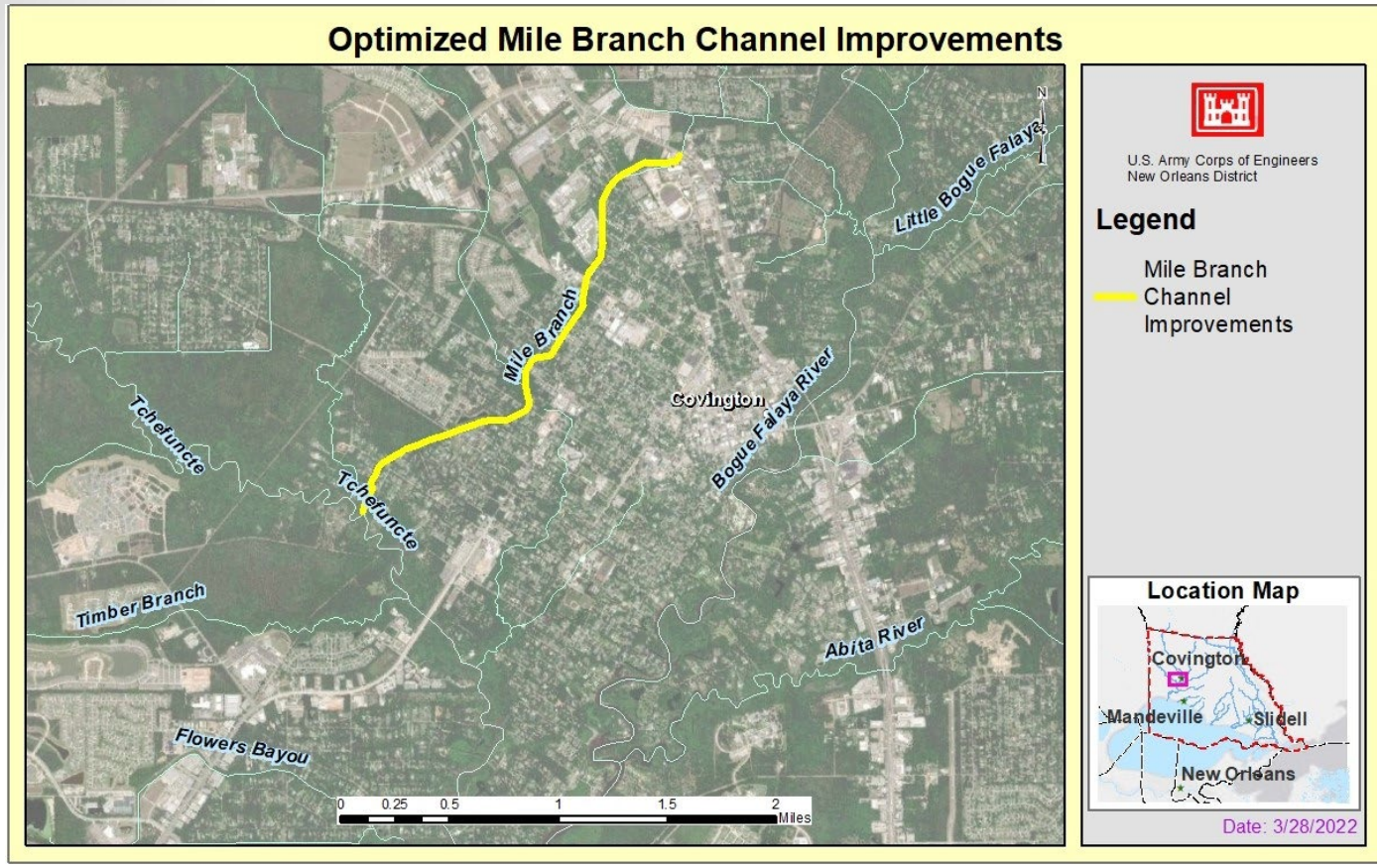
- First-Floor Elevation
- Ground Elevations
  - LiDAR
- Foundation Height
  - Statistical Sampling

- Water Surface Elevation

- Structure Inventory

- Depth-Damage Relationships

MILE BRANCH CHANNEL IMPROVEMENTS



Lower 2.15 miles (11,341 ft channel) of Mile Branch in Covington, LA

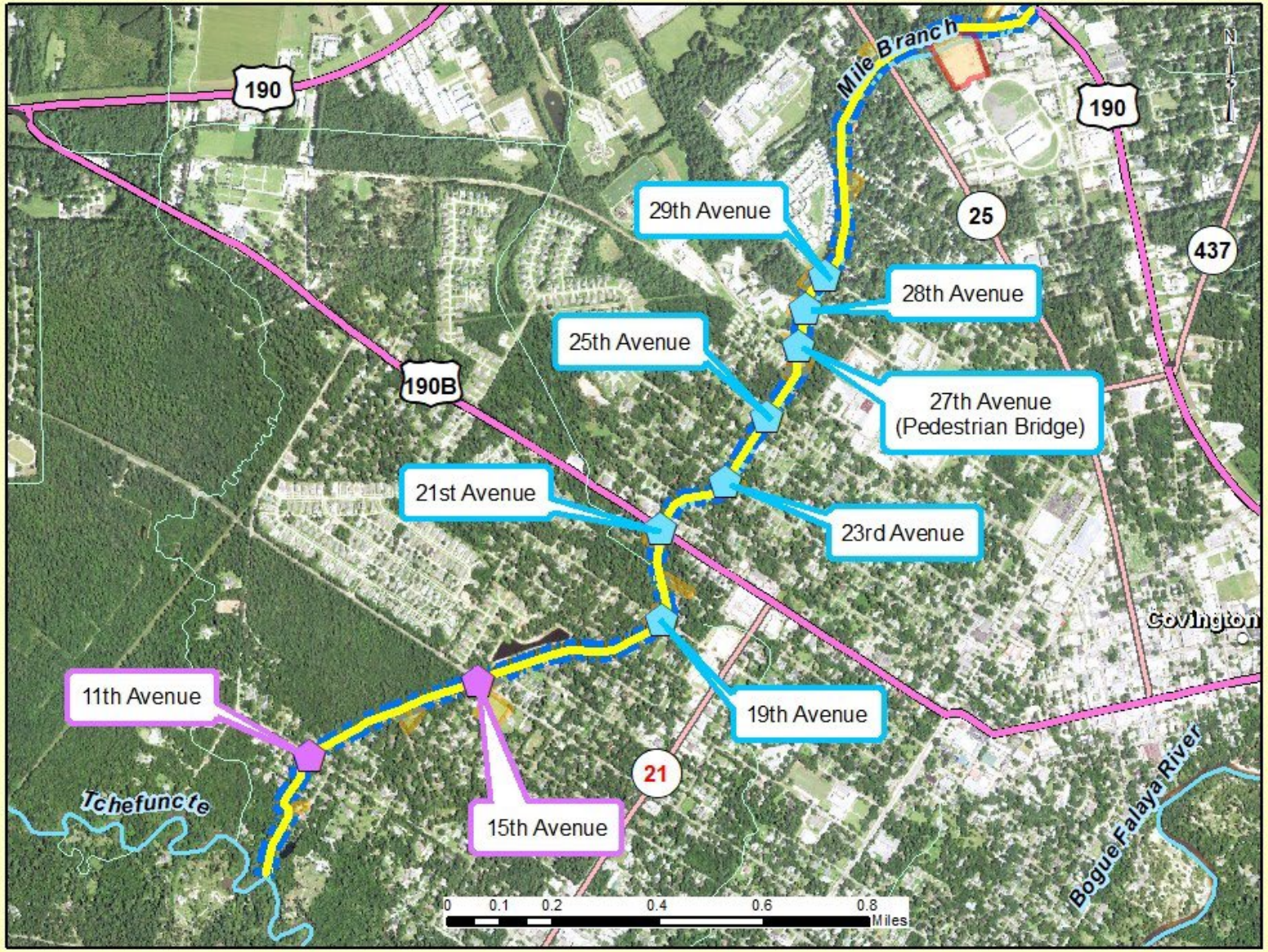
- Clearing and Grubbing
- Mechanical Dredging

Deepen Channel by ~5 feet

- Bridge replacements
- Real Estate
- ROE & ROW for construction and staging areas

29

St. Tammany Parish Feasibility Study: Optimized Mile Branch Channel Improvements



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New Orleans District

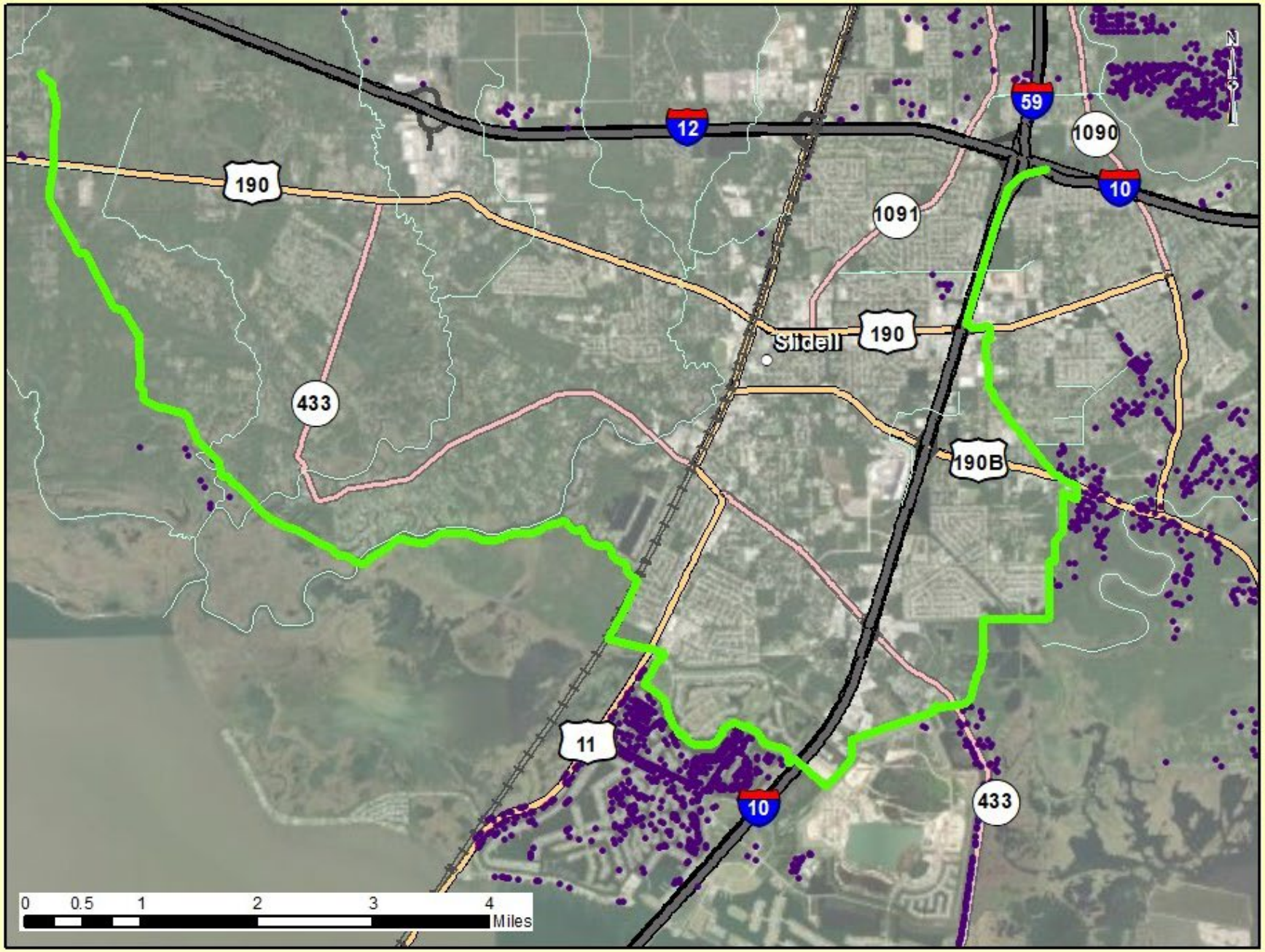
Legend

- Culvert or Bridge Replacement Required
- Culvert or Bridge Replacement Completed
- Mile Branch Channel Improvements
- Staging Areas
- Staging Area (becomes Backwater Improvement)
- Mile Branch Channel Improvements ROW Footprint

Location Map

Date: 2/23/2023

St. Tammany Feasibility Study: Optimized Tentatively Selected Plan Measures (Slidell Focus)



U.S. Army Corps of Engineers
New Orleans District

Measures

(1) South Slidell and West Slidell Levee and Floodwall System

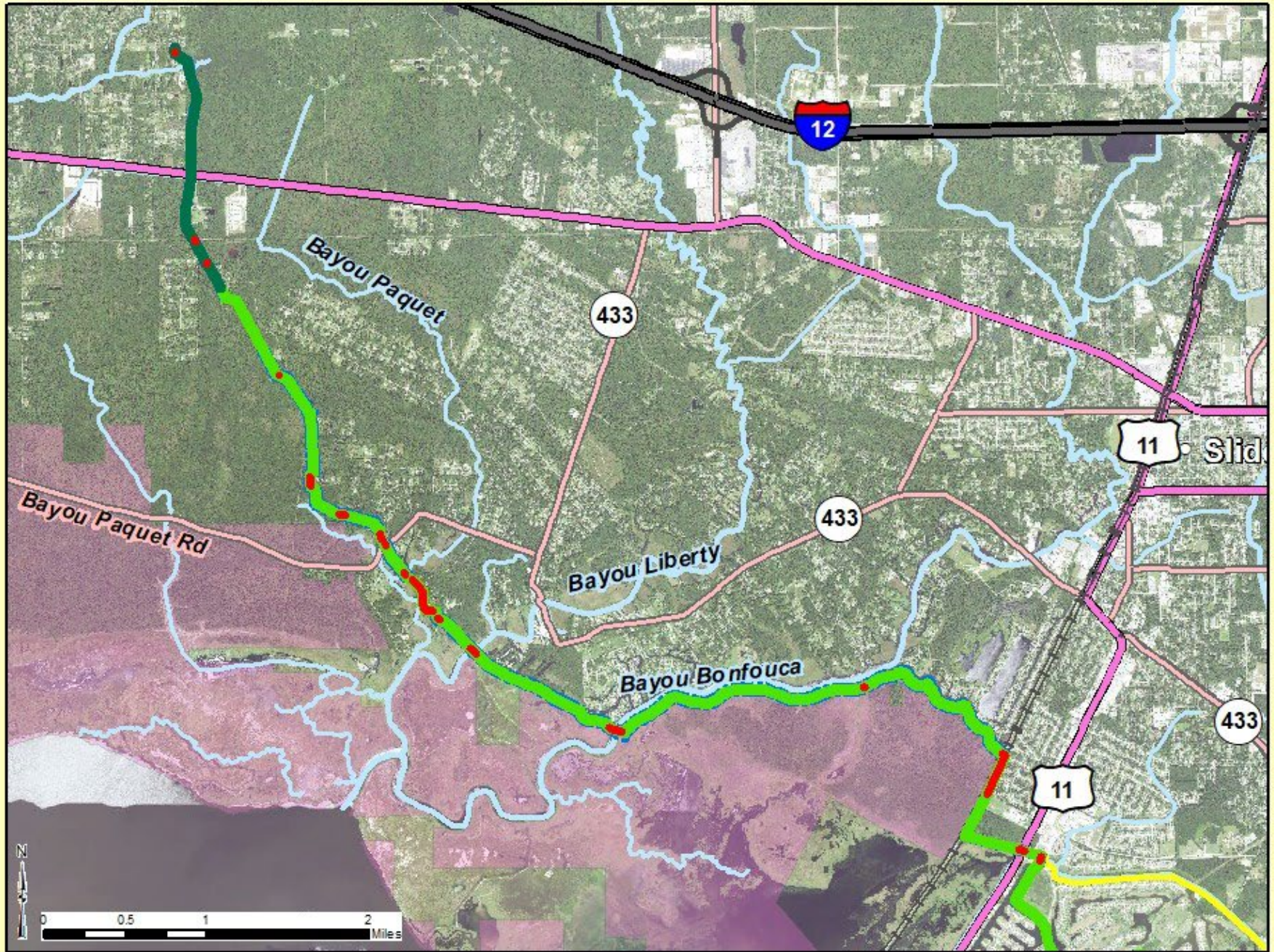
(3) Nonstructural Plan

Location Map

Date: 4/28/2023

West Slidell Loop Focus Map

Optimized Tentatively Selected Plan for South Slidell and West Slidell Levee and Floodwall System



U.S. Army Corps of Engineers
New Orleans District

Legend

South Slidell and West Slidell Levee and Floodwall System

- 2032 Optimized TSP
- 2082 Western Extension
- Optimized TSP Floodwalls
- Levee and Floodwall ROW Footprint
- Existing Slidell Levees
- Railroad
- Big Branch Marsh NWR

Location Map

Date: 2/24/2023

South Slidell Loop Focus Map

Optimized Tentatively Selected Plan for South Slidell and West Slidell Levee and Floodwall System

U.S. Army Corps of Engineers
New Orleans District

Legend

- Optimized TSP Floodwalls
- **Optimized TSP - South and West Slidell Combined Levee**
- 2032 Optimized TSP
- 2082 Western Extension
- I-10 Embankment High Ground
- Levee and Floodwall ROW Footprint
- Existing Slidell Levees
- Railroad
- Big Branch Marsh NWR

Location Map

FEATURES

Attribute	South Slidell and West Slidell Levee and Floodwall System
Total Length of alignment/improvements	18.5 miles (97,700 feet)
Length of Floodwall	3.5 miles (18,200 feet)
Length of earthen Levee	15 miles (79,500 feet)
Hydraulic Design Elevation Range (Dependent on location)	13.5 to 16 (year 2032) 17.5 to 20 (year 2082) (depending on location)
Pump Stations	8
Culverts/ Sluice Gates/ Life Gates	13
Number of Vehicular Floodgates	18
Number of Pedestrian Floodgates	1
Number of Railroad Gates	1
Number of Road Ramps	6 (includes the I-10 near Oak Harbor)
Fill (Borrow Material) Required	7,079,000 cubic yards (initial construction plus future lifts) 3,000,000 cubic yards for initial construction only
Temporary Acres of Construction Impacts	238 acres (3.34 net acres)
Permanent Construction Impacts	352 acres (224 net acres)

SUMMARY OF ENVIRONMENTAL IMPACTS FOR TSP

Resource	Alt 2: Non-Structural Plan	Optimized TSP *
Wetlands–Fresh/intermediate Marsh	Minimal indirect	122.5 acres 40 net acres -47.5 AAHU
Wetlands-Pine Savanna/ Flatwood Forests	Minimal indirect	441 acres 150 net acres -75.12 AAHU
Wetlands - Riparian Habitat	Minimal indirect	35 acres
Uplands	indirect	-1,103 acres
Aquatic Resources/ Fisheries	No impact	Direct & indirect impacts
Essential Fish Habitat (EFH)	No impact	Direct & indirect impacts
Wildlife	Indirect impacts	Direct & indirect impacts
T&E; Protected Species	Limited indirect impacts	NLAA T&E or their critical habitat; potential impacts to protected species
Cultural Resources	PA agreement	PA agreement
Recreation Resources	No Impact	Direct & Indirect Impacts
Aesthetics	Indirect Impacts	Direct & indirect Impacts
Air Quality	In Attainment	In Attainment
Water Quality	Temporary	Temporary
Prime and unique Farmland	No impact	Direct Impacts
Noise Quality	Temporary Impact	Temporary Impact
Socioeconomics	Direct & Indirect impacts	Direct & Indirect impacts
Navigation	No Impact	Temporary Impacts

ENVIRONMENTAL COMPLIANCE

Law	Compliance Status
Clean Water Act	• Section 404(b)(1) evaluation. Public Notice is out for comments • CWA Section 401 Water Quality Certification has been received from LDEQ
Coastal Zone Management Act	Coastal zone consistency determination has been submitted to LA DNR
Fish and Wildlife Coordination Act	Draft CAR has been received. DCAR recommendations and USACE responses are included in the RDEIS.
Hazardous Toxic and Radioactive Waste	A full Phase I ESA has been conducted and is included in the RDEIS
Threatened and Endangered Species	A Biological Assessment for potential impacts to T&E species has been submitted to both FWS and NOAA for their consideration and development of Biological Opinion

NEPA/ENVIRONMENTAL COMPLIANCE

Law	Compliance Status
National Historic Preservation Act, Section 106	Developed draft Programmatic Agreement (PA) pursuant to 36 CFR § 800.14(b) Notice of Intent to develop a PA sent to LA State Historic Preservation Officer (SHPO), affected federally recognized Tribes, and Advisory Council on Historic Preservation (ACHP) on 26 August 2020 in partial fulfillment of CEMVN's Section 106 (NHPA) responsibilities. • NHPA/NEPA Public Notice posted to the designated project website for a 30-day comment period on 31 August 2020. • Continued Section 106 consultation to develop a PA sent to LA SHPO, affected federally recognized Tribes, and NFS on 21 May 2021.

SCHEDULE TO COMPLETE

Activity	Schedule
Execute Feasibility Cost Share Agreement (FCSA)	13 January 2020
Alternatives Milestone	13 April 2020
TSP Milestone with MVD	13 January 2021
Release of Draft Feasibility Report for Public Review	11 June 2021
Agency Decision Milestone	27 August 2021
Exemption Approved	04 April 2022
District Submittal of the Final Feasibility Report to HQ	15 December 2023
Division Transmittal of Final Approved Feasibility Report	20 February 2024
Chief Signs Chief's Report	14 May 2024

Public Meetings June 2021

Public Meetings Aug 2023

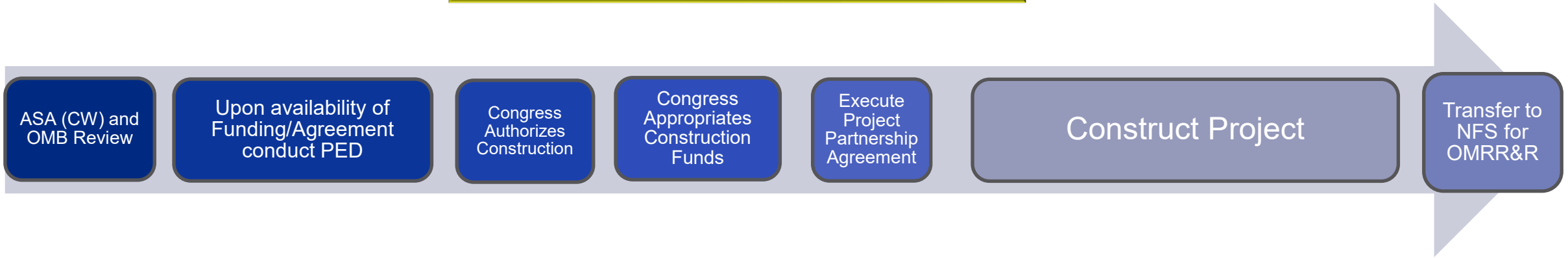
Public Meeting Dates
- 28JUN21
- 29JUN21
- 15AUG23
- 16AUG23

Public Review Period
- 11JUN21 – 26JUL21
- 21JUL23 – 06SEPT23

PATH FORWARD

- Chief's Report May 2024
  - Anticipated Authorization WRDA 2024
  - Detailed Design and Construction Funding not yet received

Chief's Report is **NOT** the last stop before construction



INPUT WE NEED FROM YOU

- Does the TSP meet the needs of the community?
- Are there additional problems related to flooding in the project area that are not captured by the structural or nonstructural components of the TSP?
- Are there any modifications that could be made to the TSP to further reduce flooding?
- Is there anything in the draft report that needs further explanation in the final report?

QUESTIONS/COMMENTS

TO SUBMIT COMMENTS/ PROVIDE INPUT

Comments accepted through Sept 6, 2023

Document Available at:
https://www.mvn.usace.army.mil/Missions/Environmental/ NEPA-Compliance-Documents/Bipartisan-Budget-Act-2018-BBA-18/BBA-18-Projects/

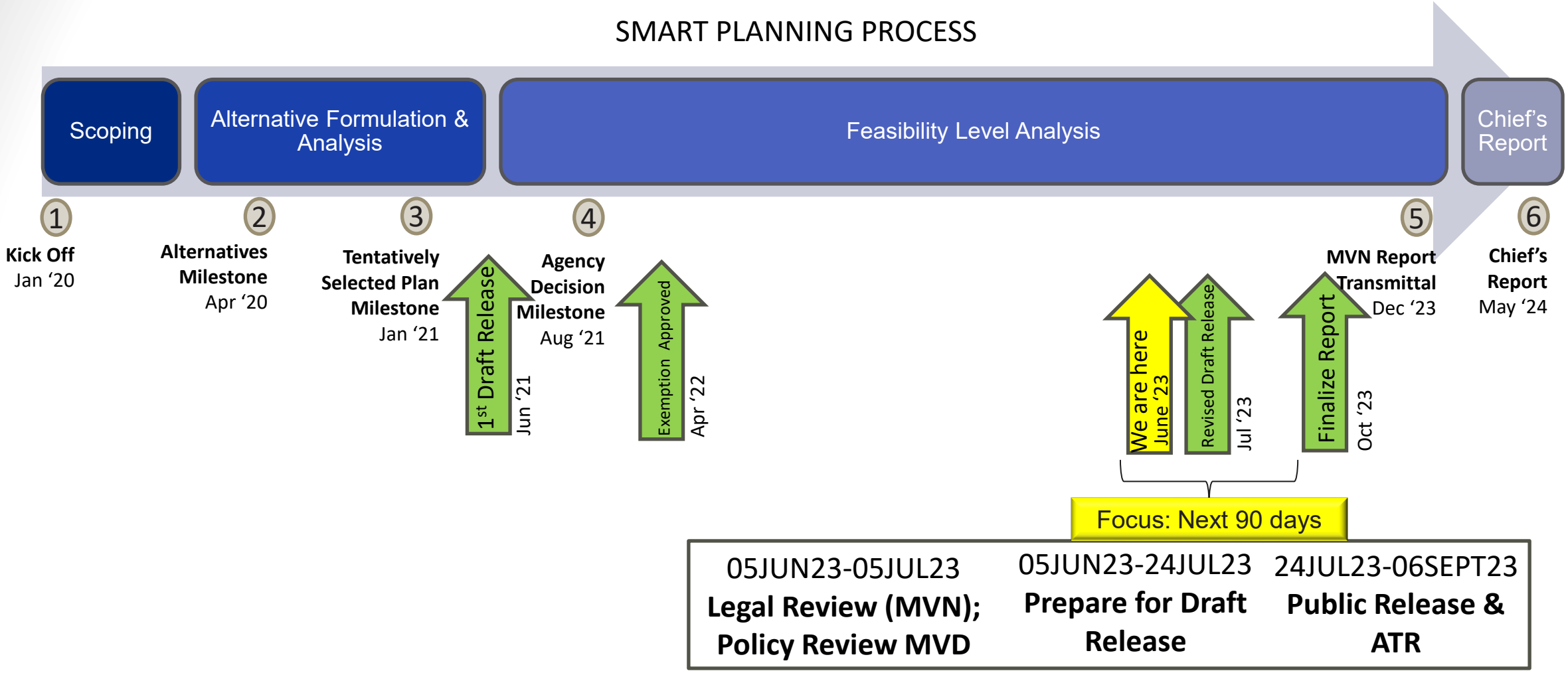
Email: sttammanyfs@usace.army.mil

Address:
U.S. Army Corps of Engineers
Regional Planning and Environmental Division South PDS-C
7400 Leake Ave, New Orleans, LA 70118

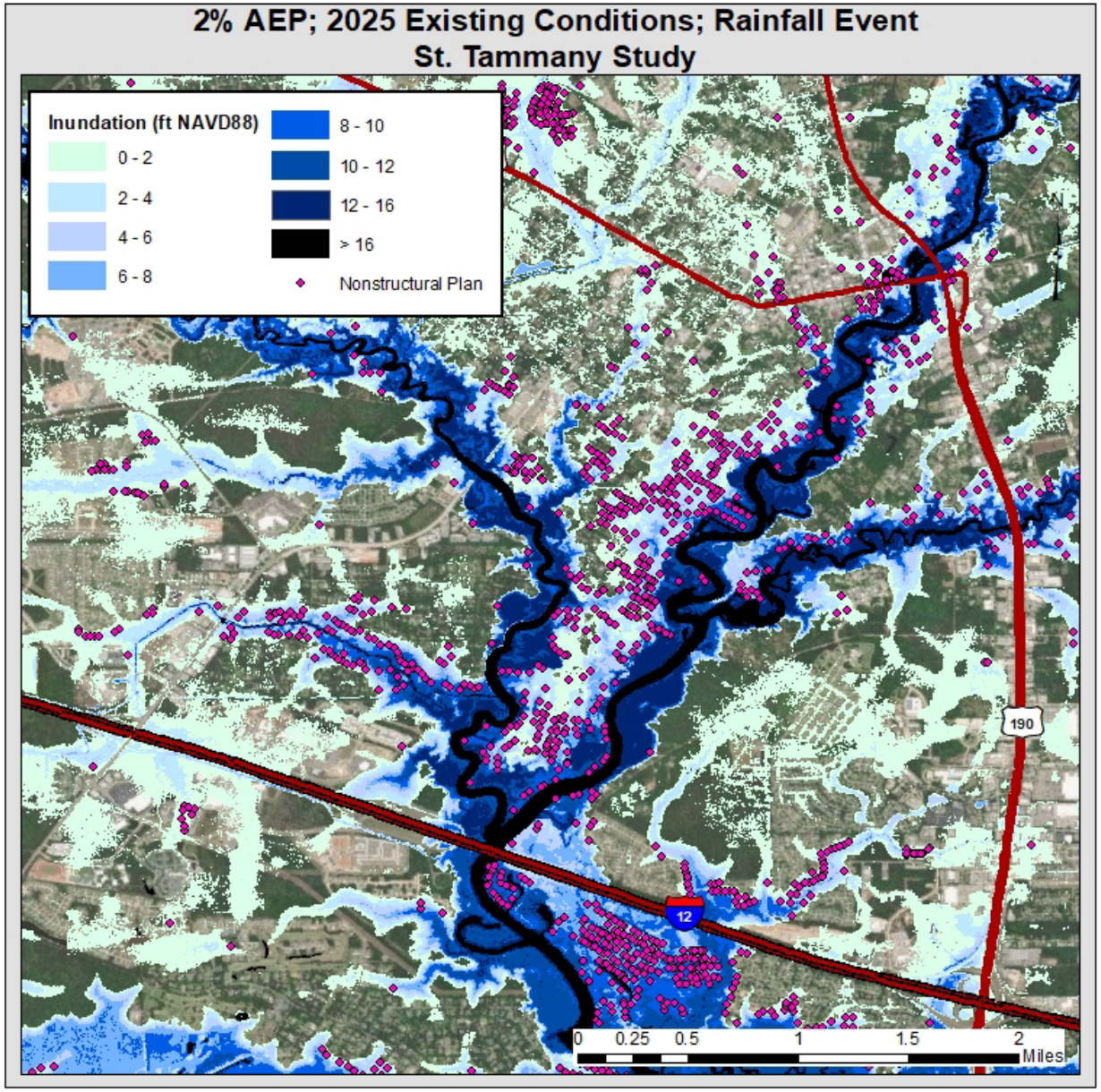
Additional Project Information:
https://www.mvn.usace.army.mil/About/Projects/BBA-2018/studies/St-Tammany

THANK YOU FOR JOINING US

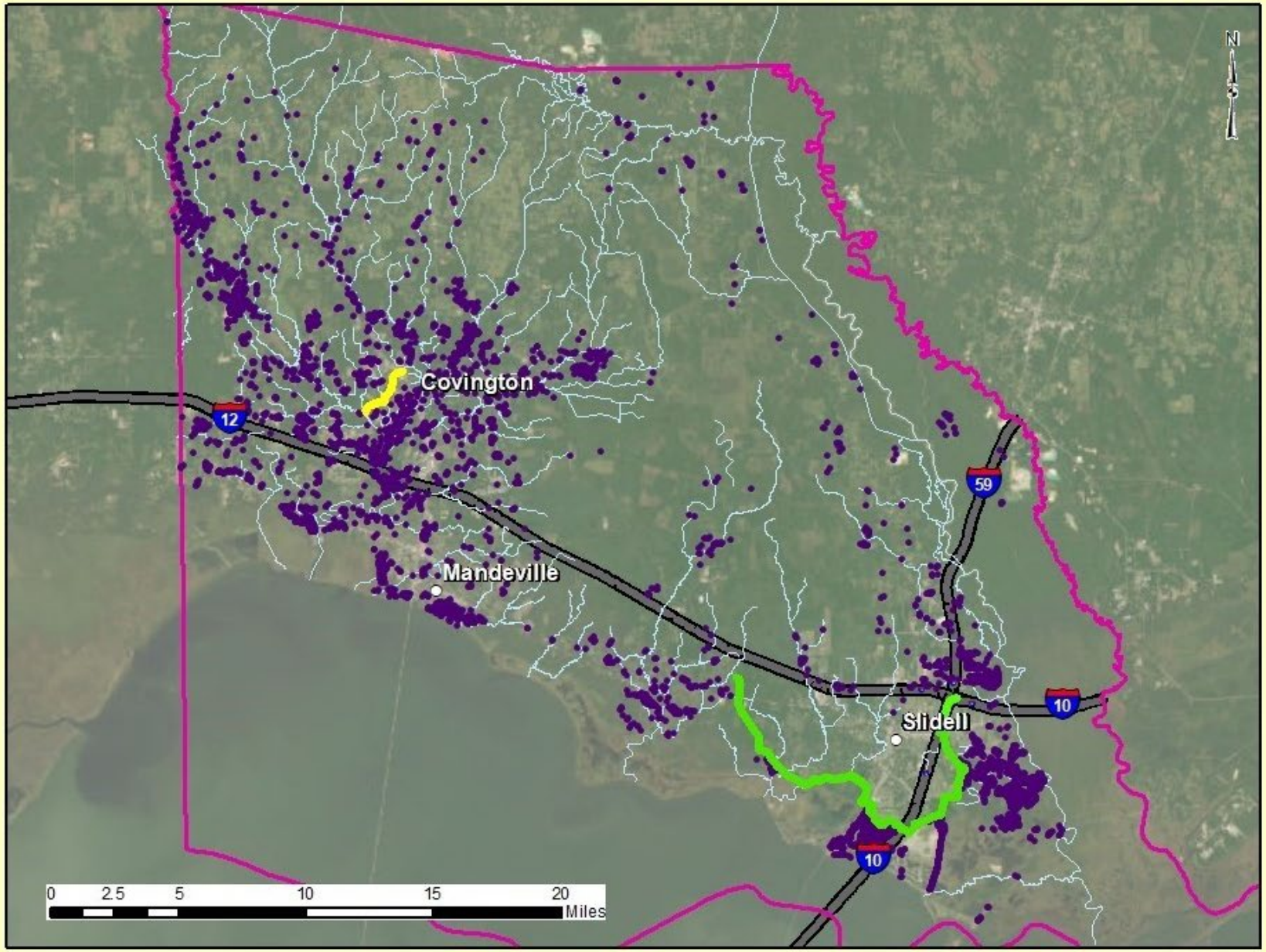
STUDY SCHEDULE



50 YEAR INUNDATION MAP WITH NS OVERLAY



St. Tammany Feasibility Study: Optimized Tentatively Selected Plan Measures



U.S. Army Corps of Engineers
New Orleans District

Measures

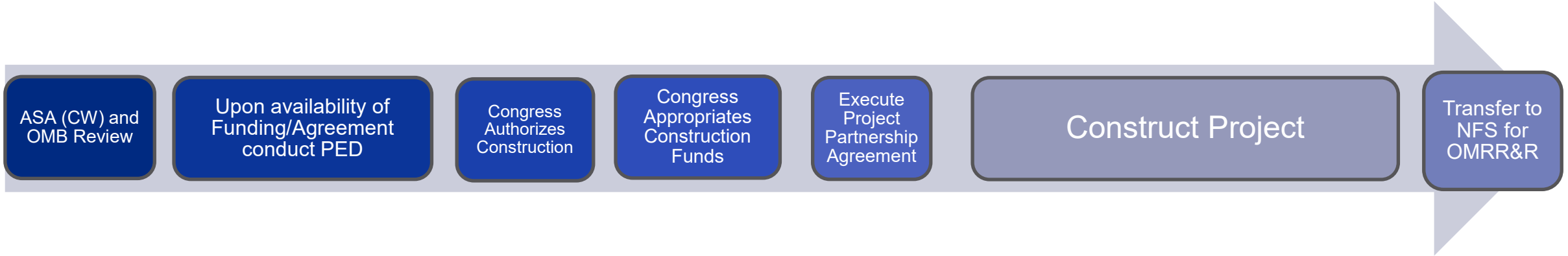
- (1) South Slidell and West Slidell Levee and Floodwall System
- (2) Mile Branch Channel Improvements
- (3) Nonstructural Plan

Location Map

Date: 4/28/2023

Preliminary Planning Document not for distribution

PATH FORWARD

- Chief's Report May 2024
  - Anticipated Authorization WRDA 2024
  - Detailed Design and Construction Funding not yet received

Chief's Report is **NOT** the last stop before construction