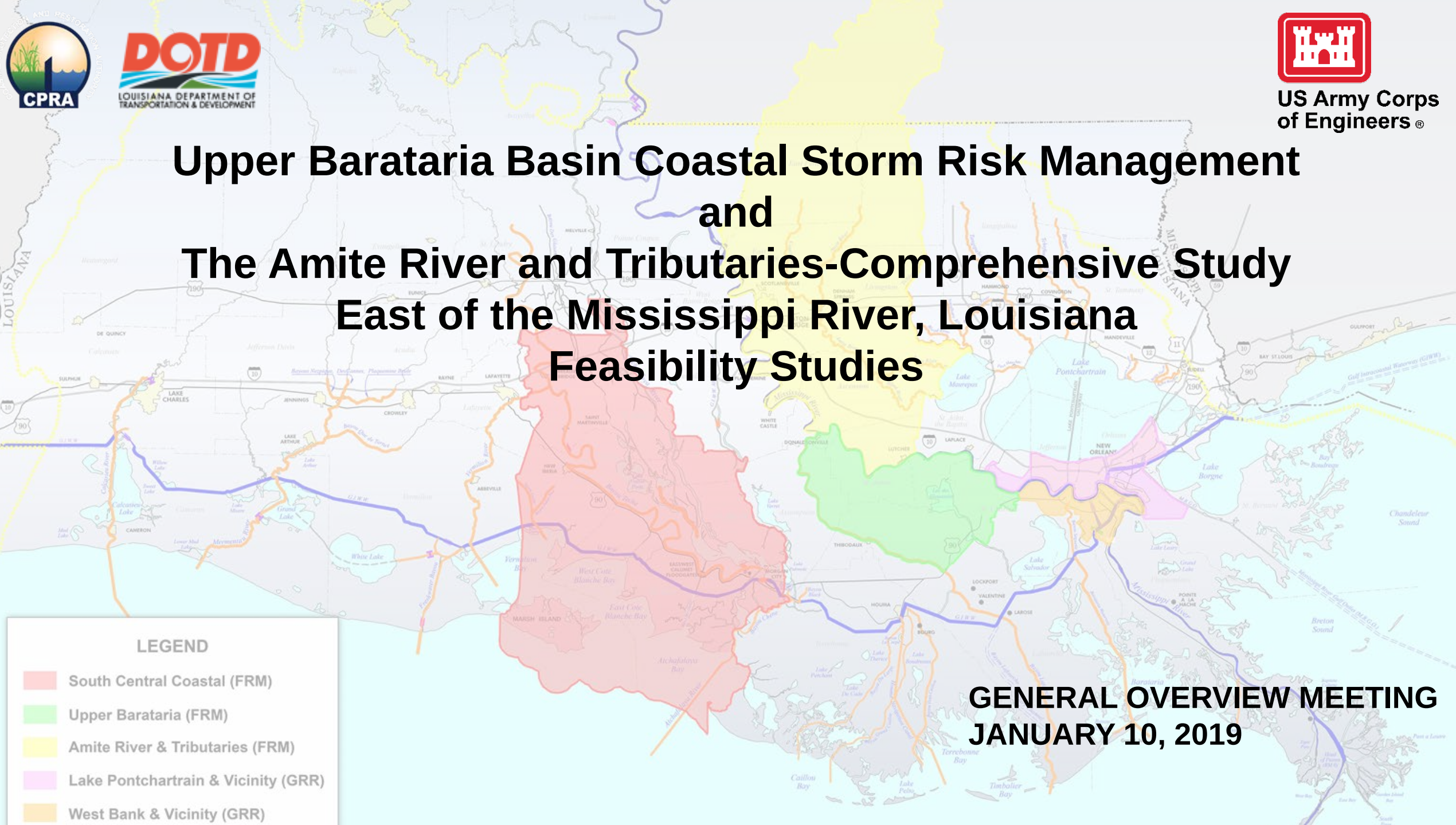
Upper Barataria Basin Coastal Storm Risk Management
and
The Amite River and Tributaries-Comprehensive Study
East of the Mississippi River, Louisiana
Feasibility Studies



GENERAL OVERVIEW MEETING
JANUARY 10, 2019

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AGENDA

Welcome & Introductions

Purpose of the General Scoping Meeting

Study Overviews
- **Authority**
- **Coordination**
- **Schedule**
- **Planning Process**

Upper Barataria Basin Coastal Storm Risk Management

The Amite River and Tributaries-Comprehensive Study East of the Mississippi River, Louisiana

PURPOSE OF THE GENERAL OVERVIEW

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Inform the Public
- **Provide background on Studies**

Solicit input
- **Issues and Concerns**
- **Development of alternatives**

The USACE encourages full public participation to promote open communication on the issues surrounding the studies.

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STUDY AUTHORITY

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**

Upper Barataria Basin Coastal Storm Risk Management

-House of Representatives Resolution Docket 2554, 105th Congress (6 May 1998):

- In the interest of flood control, navigation, wetlands conservation and restoration, wildlife habitat, commercial and recreational fishing, salt water intrusion and fresh water and sediment diversion, and other purposes in the area

The Amite River and Tributaries-Comprehensive Study East of the Mississippi River, Louisiana

-House Document 419, 84th Congress (14 April 1967):

- Amite River and Tributaries, Louisiana, Resolved by the Committee on Public Works of the United States Senate, that, in accordance with section 3 of the River and Harbor Act of 1902

COORDINATION

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Non-Federal Sponsors

– Upper Barataria Basin Coastal Storm Risk Management
  - **Coastal Protection and Restoration Authority Board**

– The Amite River and Tributaries-Comprehensive Study East of the Mississippi River, Louisiana
  - **Department of Transportation and Infrastructure**

Governmental Stakeholders (such as)

– Tribes
– Natural Resource Agencies
– State of Louisiana and State Agencies
– Parishes
– City Officials

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SCHEDULE

Milestone	Baseline	Status
Execute FCSA	October 2018	Complete
Alternatives Milestone	2nd Q 2019	-
TSP Milestone	3rd Q 2019	-
Release of Draft Feasibility Report for Public Review	4th Q 2019	-
Agency Decision Milestone	1st Q 2020	-
District Submit Final Feasibility Report to MVD	1st Q 2021	
Division Engineer's Transmittal Letter	3rd Q 2021	-
Chief's Report Milestone	3rd Q 2021	-

We are here

PLANNING PROCESS - INITIAL ITERATION

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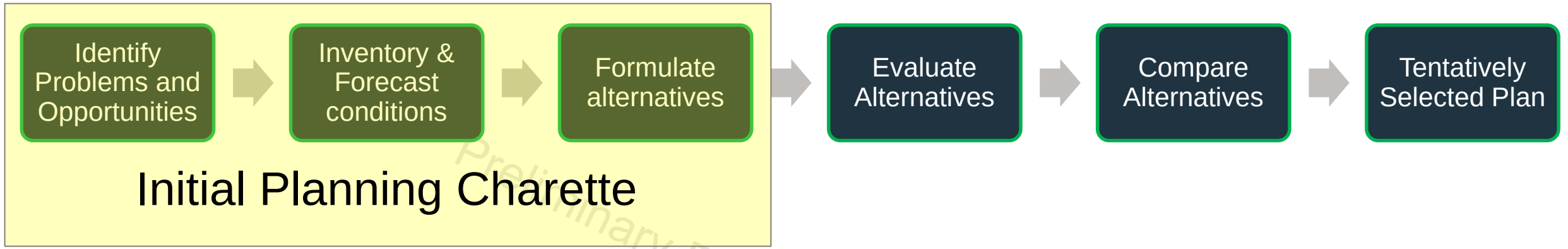

- ✓ Define the problem to be addressed,
- ✓ Conceptual definition of the scale of the project,
- ✓ Preliminary inventory and forecast of future conditions with available data and information,
- ✓ Identification of key areas of uncertainty that will impact the study and the project formulation,
- ✓ Initial identification of the decision criteria that will be used to formulate, compare and select alternatives.
- ✓ Initial formulation of alternative plans based on critical thinking and professional expertise.
- ✓ A draft decision management plan that identifies the level of detail and methods the team will apply to move to the next decision point.

INPUT WE NEED FROM YOU

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1. Do the problems identified capture what is being experienced in the communities?
2. Are there additional problems related to flooding in the project area that are not captured?
3. With what storm or rainfall event did your community see the most damages?
4. Are there measures or alternative strategies that would address the problems more effectively?
5. Are there additional constraints the planning team should consider?
6. What data, modeling, or reports should be considered as part of the study?

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UPPER BARATARIA BASIN COASTAL STORM RISK MANAGEMENT STUDY

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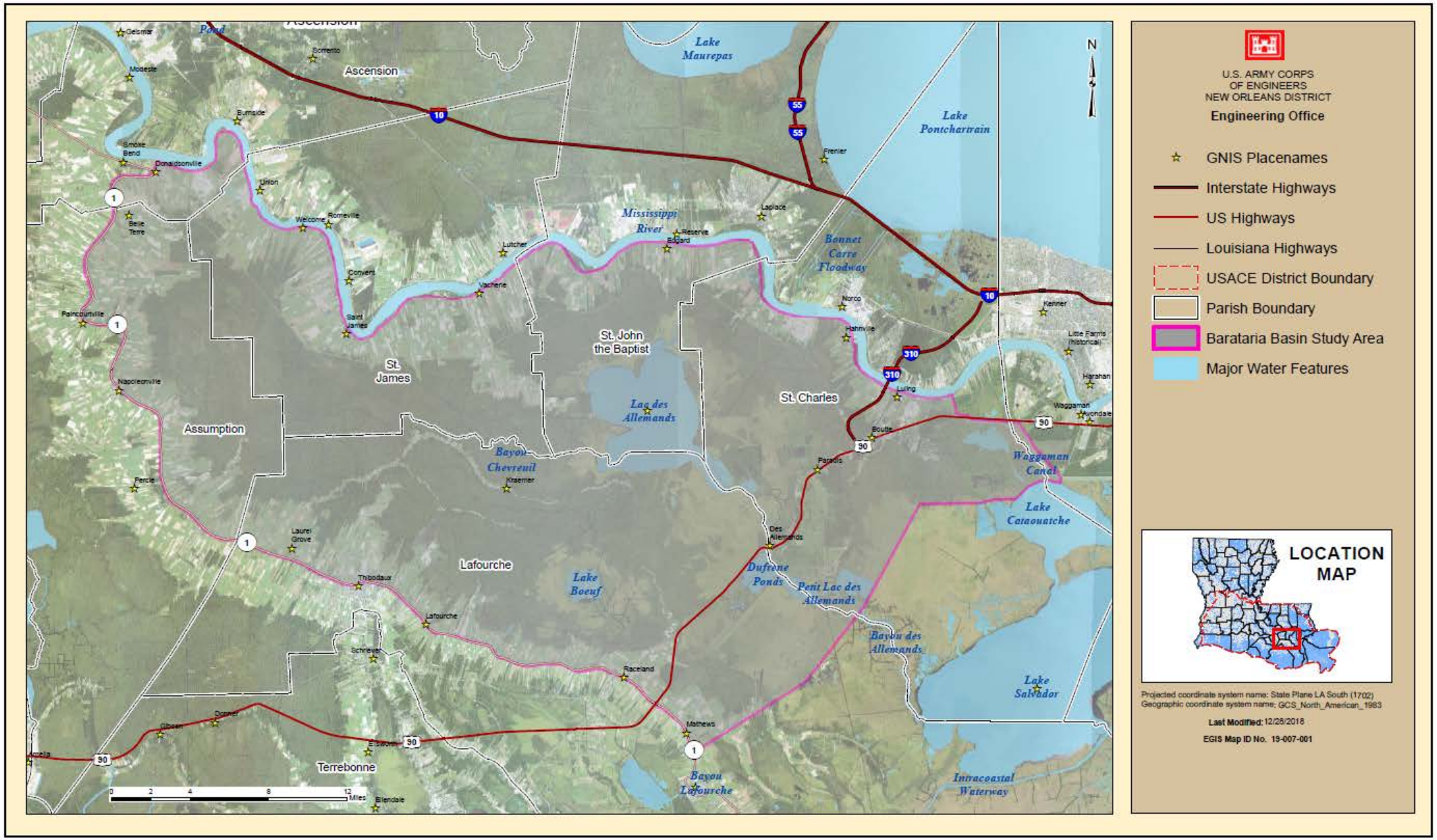
STUDY AREA OVERVIEW



PROBLEMS

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This study area has problems of coastal storm damage from tidal surges, storm surges, and associated heavy rainfall.

Headwater flooding from rainfall is intensified by tidal events resulting in flood damages to industrial, commercial, and agricultural facilities as well as residential structures and critical evacuation routes.

Sea level rise and subsidence are expected to increase the risk of flooding within the basin.

OPPORTUNITIES

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Decrease the risk to human life due to flooding events

Reduce flood risk and damages to residential, commercial, historic, cultural, and critical assets and infrastructure

Limit economic damages and improve economic resiliency of the local economy and communities

Increase the resiliency and reliability of critical infrastructure (industrial and power facilities)

Reduce recovery time from high water events that make evacuation routes and other critical roadways impassable

Increase community awareness about flooding risks

Conversion of flooding zones to help minimize insurance expenses

Sustain the unique heritage of coastal Louisiana by minimizing impacts from coastal storm events

OBJECTIVES AND CONSTRAINTS

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Objectives

- Reduce the risk to human life, health, and safety by reducing flood impacts to structures, evacuation routes, and critical infrastructure
- Reduce risks to economic impacts due to storm inundation in basin
- Increase community resiliency before, during, and after significant tropical rainfall events

Constraints

- Project features cannot increase flood risk to adjacent areas
- Evacuation capabilities shall not be impeded
- Not to impede transportation of vessels to/from the interior basin
- Maintain the natural hydrological regime
- Not to induce development within flood plain - EO 11988
- Limit the impact to endangered species existing in the area

NO ACTION ALTERNATIVE

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The Future Without Project Condition - is a description of resources and human environment most likely condition if no study alternative actions are taken.

Increased flood risk

- Continued sea level rise
- Continued subsidence

Increased storm damages

- Frequency
- Intensity

Current Construction Project

- CPRAB 2017 Master Plan (US Highway 90 Alignment)

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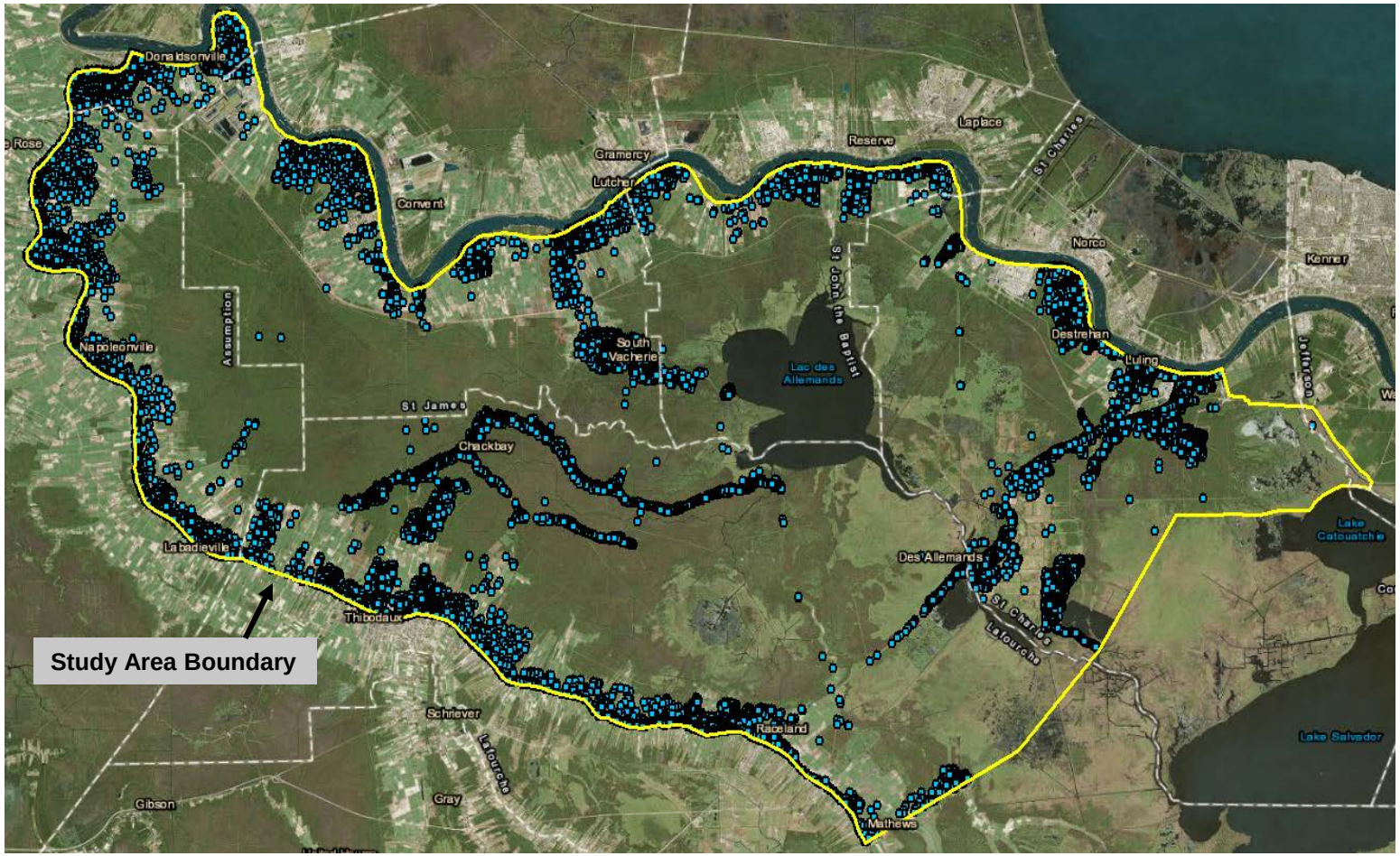
STUDY AREA STRUCTURE OVERVIEW



Approximately **28,000** structures reside within the study area, 90% are residential and 10% commercial

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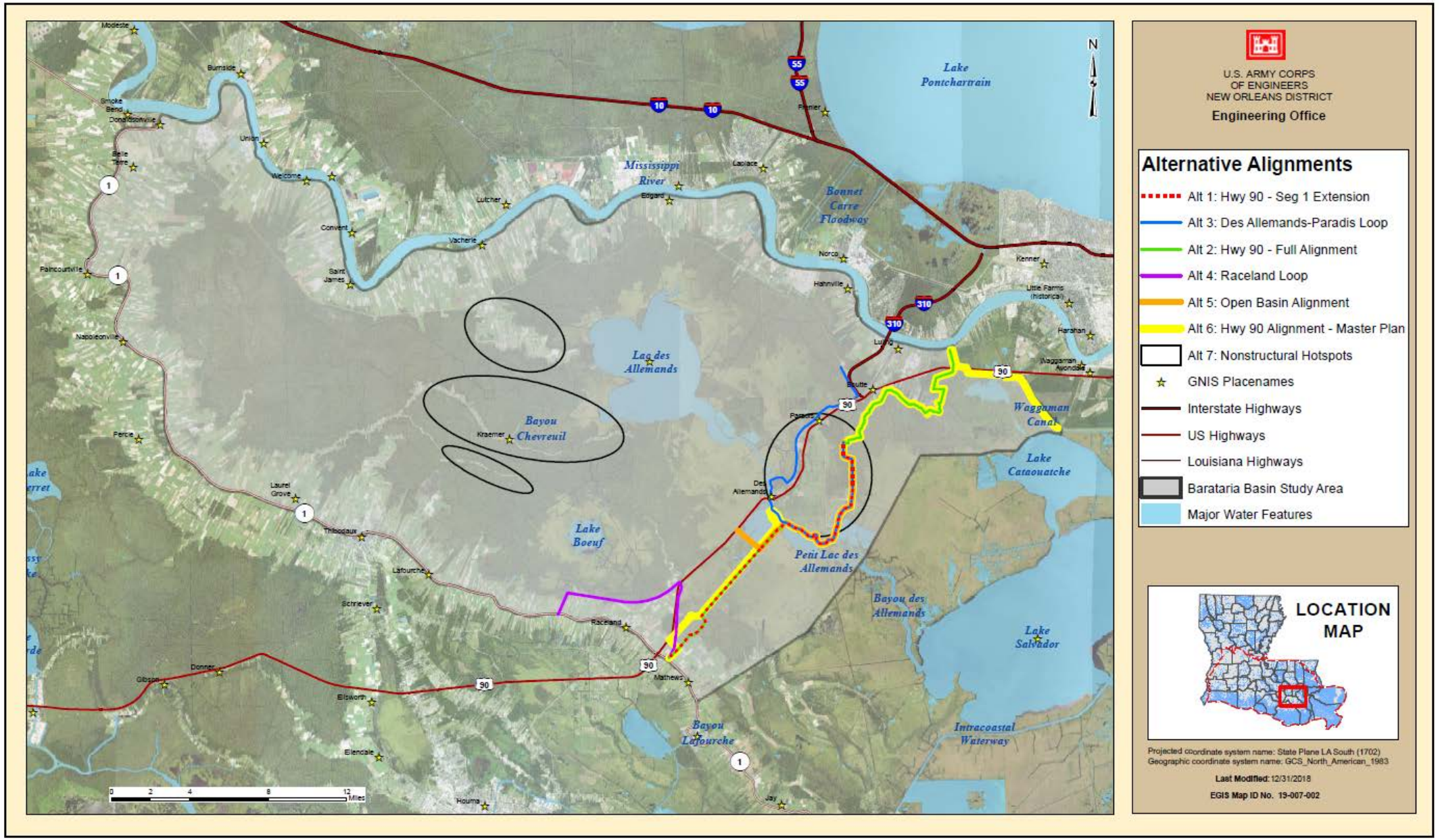
PROJECT OVERVIEW



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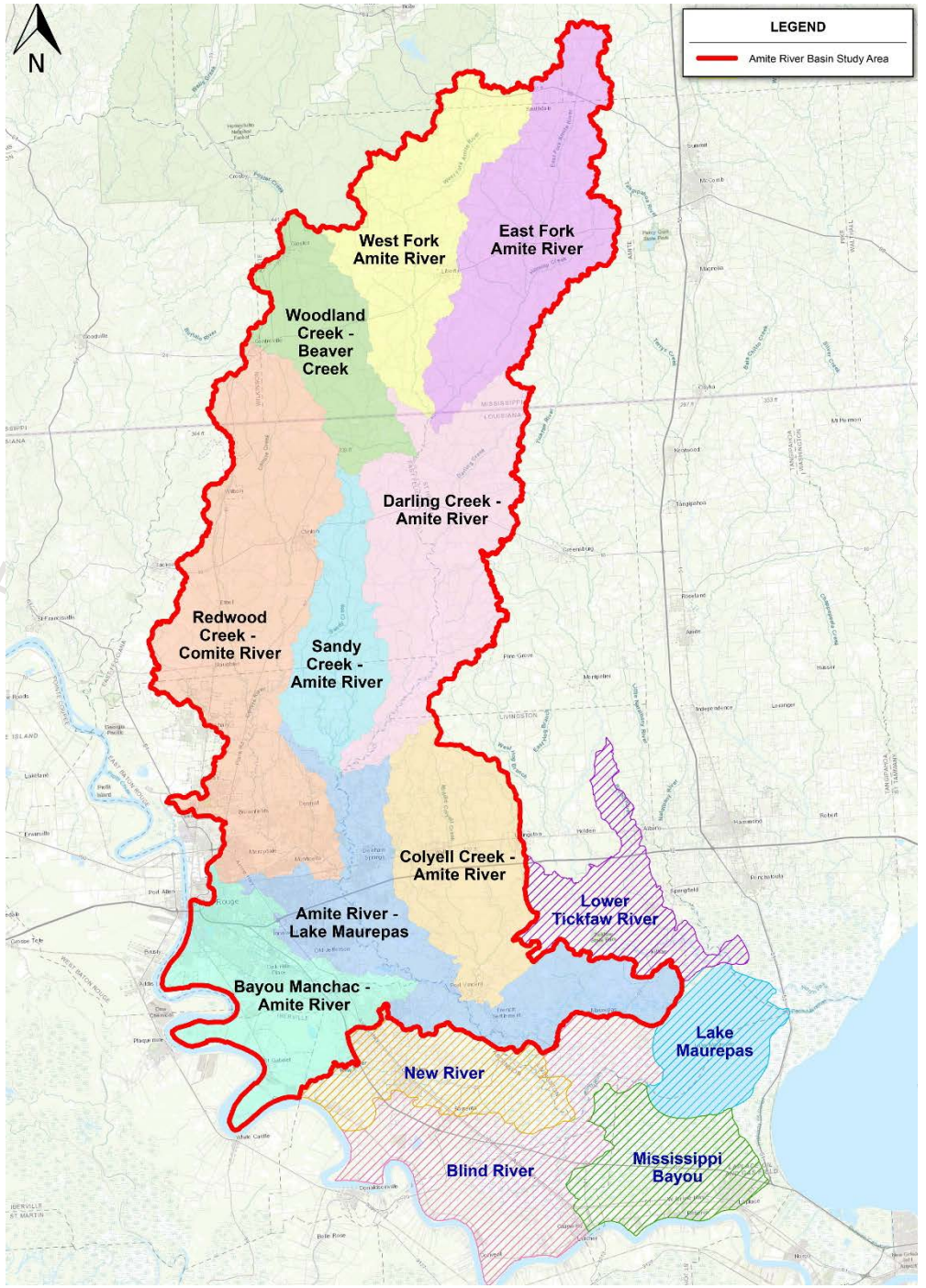
Amite River & Tributaries -Comprehensive Study East of the Mississippi River, LA Study

STUDY AREA & HUC SUB-BASINS

- Focus on the study area but smaller subset (project area) will include project features
- Also consider impacts in adjacent basins, where Amite River backwater flooding has been a problem



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PROBLEMS

The Amite River and its tributaries can cause flood damages to industrial, commercial, and residential and nonresidential structures.

The Amite River Basin primarily has flooding from two different sources. The upper basin flooding is caused from headwater flooding from rainfall events. The Lower Basin flooding is caused by a combination of drainage from headwaters and backwater flooding from tides and wind patterns.

Critical infrastructure throughout the region including the I-10 and I-12 transportation system, government facilities, and schools become more at risk of damage from rainfall events as climate changes.

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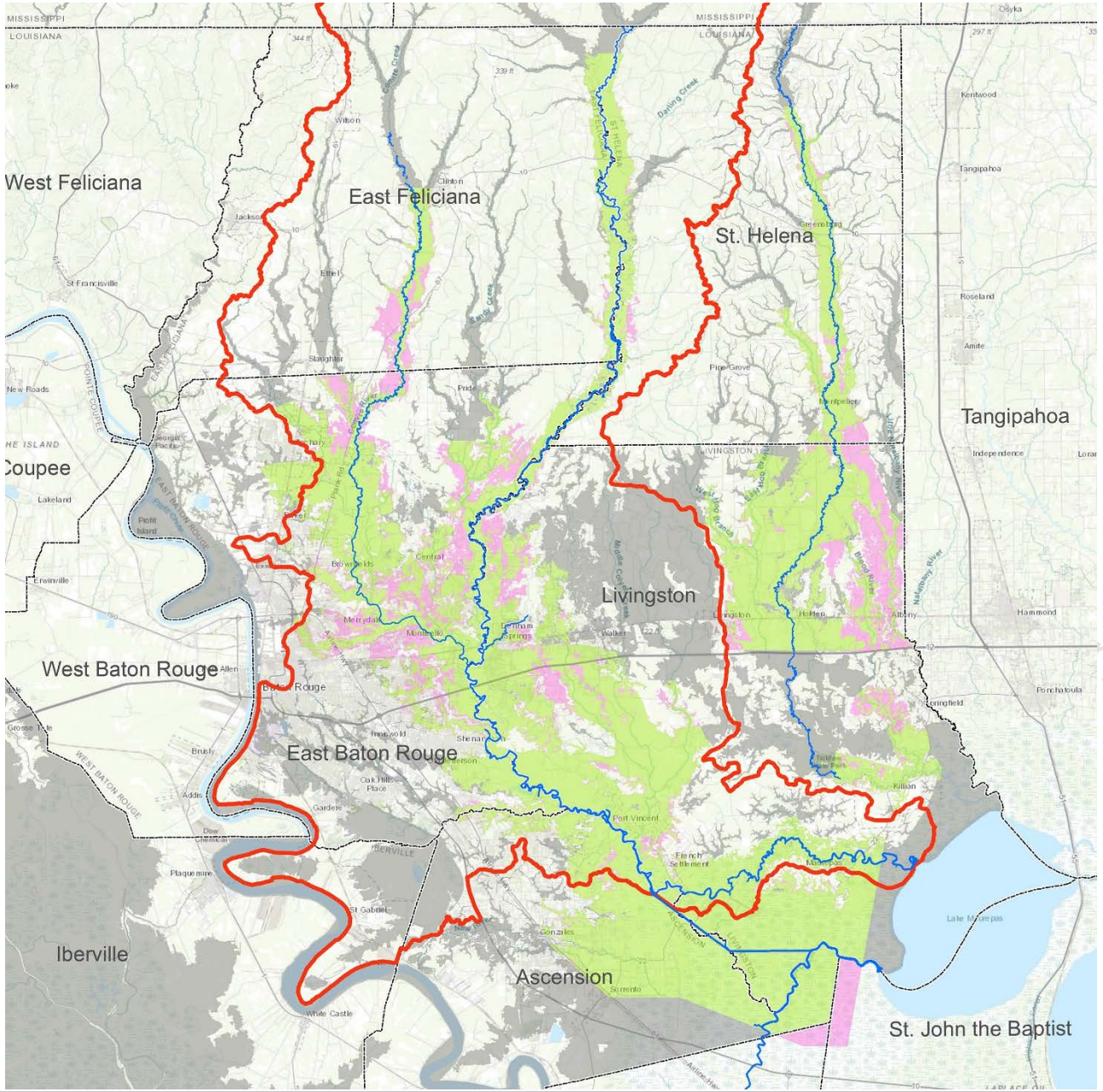
8/2016 FLOOD-FEMA 100-YEAR FLOOD PLAIN



Since 1851, the paths of 51 tropical events have intersected through the Amite River and Tributaries project boundaries.

The 8/2016 floods in LA resulted in 26,909 flood claims paid costing approximately $2.5 billion.

LEGEND

- Amite River Basin Study Area
- Principal Channels
- Inundated August 2016 Flood; Outside 100 Year Flood Plain
- Inundated August 2016 Flood; Within 100 Year Flood Plain
- 100 Year Floodplain; Not Impacted August 2016 Flood

OPPORTUNITIES

Protection to life, land, property and infrastructure from flooding

Work with local communities to manage flood risk by leveraging efforts

- Enhance public education and awareness of floodplain management
- Improve flood warnings for preparation and evacuation
- Recommend future modifications to the roadway systems to maintain emergency response vehicles access during hurricane and tropical storm events

Increase the resiliency of the vitally important I-10/I-12 transportation corridor caused by flood events

Modify channel hydrograph to reduce flood risk

Prevent degradation to fish and wildlife habitat

- Improve water quality
- Increase habitat or slow the trend of habitat quality reduction,
- Encourage land use management

Afford access to recreation (boating, bike trails, camping, swimming, and sightseeing facilities)

OBJECTIVES AND CONSTRAINTS

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Objectives

- Reduce flood damages in the Amite River Basin to business, residents and infrastructure;
- Reduce risk to human life from flooding from rainfall events;
- Reduce interruption to the nation's transportation corridors;
- Reduce risks to critical infrastructure (e.g. medical centers, schools, transportation etc.);

Constraints

- Avoid or minimize negative impacts to
  - threatened and endangered species and protected species;
  - critical habitat, e.g., essential fish habitat (EFH).
  - cultural resources;
  - recreation users in the basin;
  - water quality.
- Portions of the Amite and Comite Rivers are Scenic Rivers.
- Recognition of local flood management plans.
- BBA Authorization limits USACE to flood risk management.
- Not to induce development within flood plain - EO 11988

Overall Goal: Advance comprehensive risk reduction management system.

NO ACTION ALTERNATIVE

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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

Future Development and Change in Floodplain Hydrology

Current Construction Projects

- Comite River Diversion
- East Baton Rouge Flood Control Project

Increased flood risk

- Sea level rise
- Increased marine and river flooding

Increased storm damages

- Frequency
- Intensity

Loss of estuary fisheries and rearing grounds

PROJECT OVERVIEW

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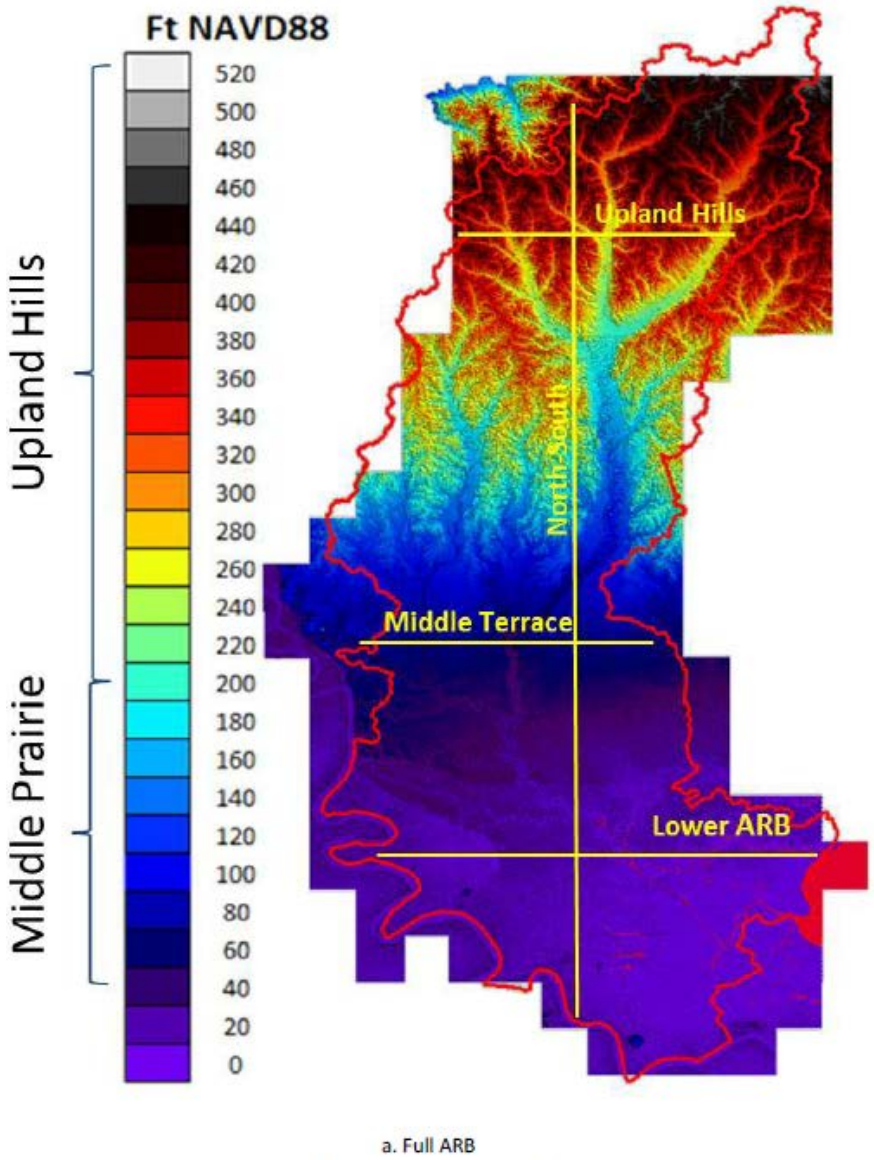
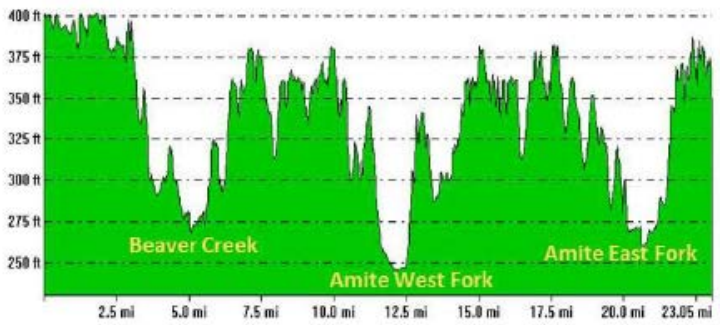


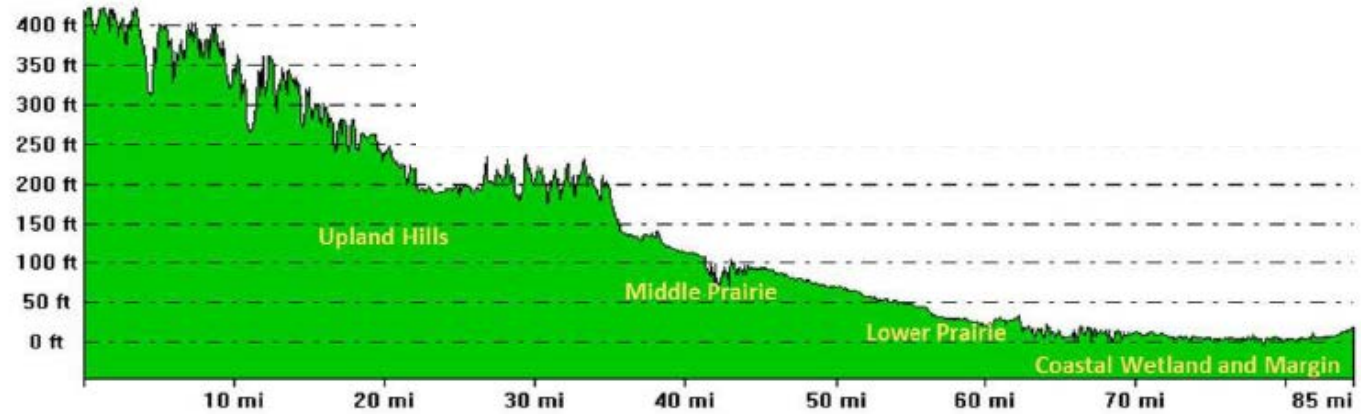
a. Full ARB

Figure 4. ARB Topographic Digital Elevation Model
Louisiana Oil Spill Coordinators Office 2001



a. Upland Hills

b. Middle Prairie



d. North-South

AMITE STUDY AREA-INITIAL MEASURES

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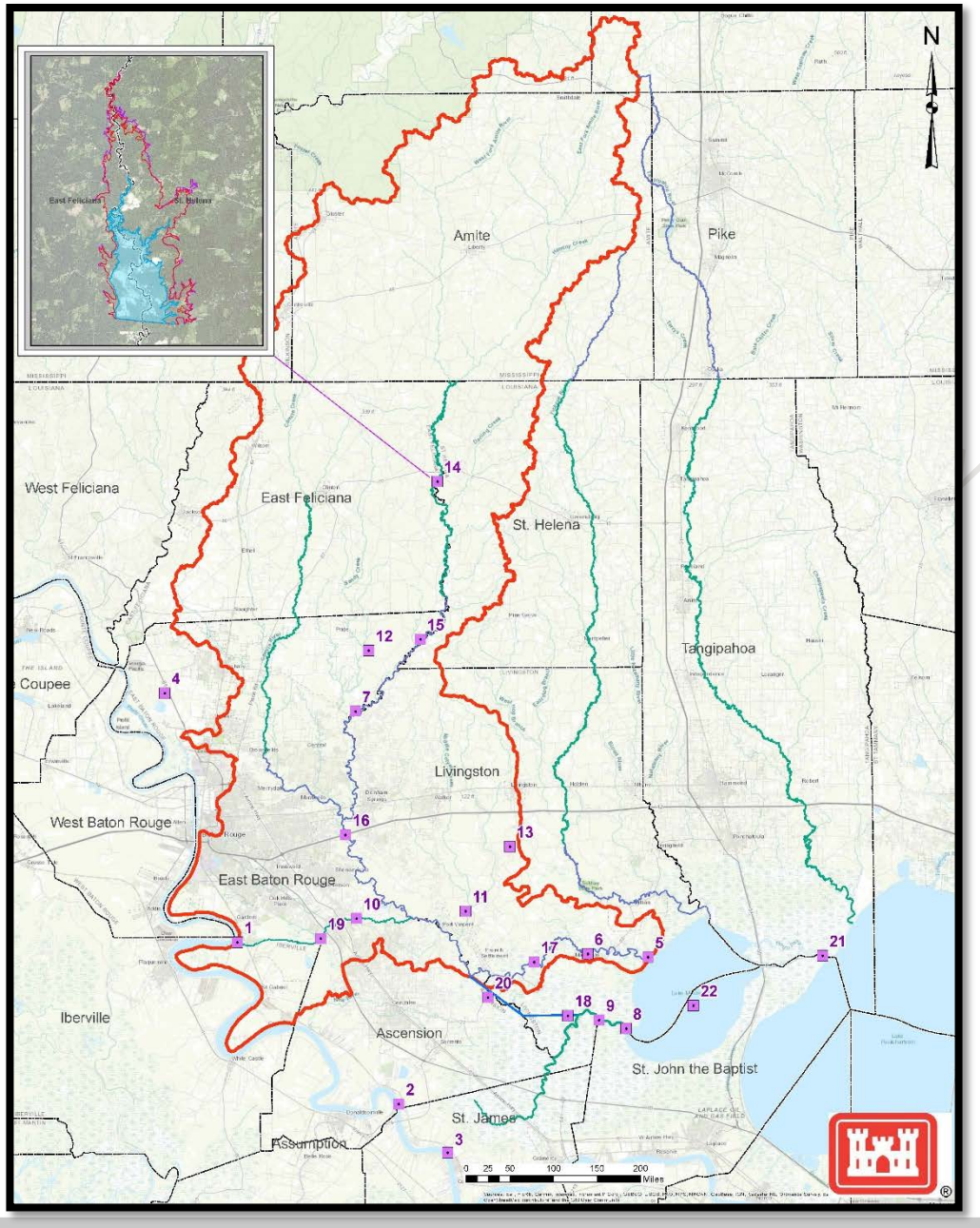
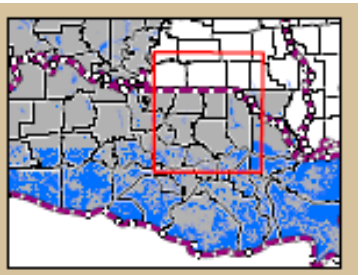


Amite Study Initial Measures
Amite Study Area
Louisiana Scenic Rivers
Major Rivers and Bayous

Darlington Dam - 1997 Re-evalution Alternatives

Elevation 150.0 = 25 Years Reduced Wet Conservation Pool Elevation
Elevation 171.0 = 25 Years Dry Flood Control Pool Elevation
Elevation 172.8 = 25 Years Reduced Wet Flood Control Pool Elevation



Map ID	Measure ID
1	Diversion Gravity Fed (Manchac)
1	Diversion Pump Station (Manchac)
2	Diversion Gravity Fed (Union)
2	Diversion Pump Station (Union)
3	Diversion Gravity Fed (Romeville)
3	Diversion Pump Station (Romeville)
4	Modifications to Comite Diversion
5	Dredging of Outfall @ Amite River
6	Dredging of Lower Amite River
7	Dredging of Upper Amite River
8	Dredging of Outfall @ Blind River
9	Dredging of Lower Blind River
10	Dredging of Bayou Manchac
11	Dredging of Colyell Creek
12	Dry Retention Ponds-Upper Amite
13	Dry Retention Ponds Lower Amite

Map ID	Measure ID
12	Dry Retention Ponds-Upper Amite
13	Dry Retention Ponds Lower Amite
14	Large Scale Dam -Upper Amite (ie Darlingtion)
15	Small Retention Dam -Upper Amite
16	Upper Amite Bridge Restrictions/ Improvements for I-12
17	Amite River Channel Bank Gapping
18	Amite River Diversion Channel Bank Gapping
19	Storage Area at Spanish Lake, Ascension/Ibiville Parish
20	Hwy 22 Drainage Improvements
21	Closures at Tidal Passes
22	Dredging of Lake Marpas
NA	Flood warning/Monitoring systems
NA	Dredging of Amite River Tributaries
NA	Nonstructural Improvements for high freqency events
NA	Ring Levees around Critical Facilities
NA	Upper Amite Bridge Restrictions/ Improvements

RECAP - INPUT WE NEED FROM YOU

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QUESTIONS?

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Website: https://www.mvn.usace.army.mil/About/Projects/BBA-2018/studies

Written comments:

CEMVN-PM, 7400 Leake Avenue New Orleans, LA 70118.

or

Sarah.C.Bradley@usace.army.mil

FOR FURTHER INFORMATION: Questions concerning the proposed studies should be addressed to CEMVN PM Phone: (504) 862-1723