

Atchafalaya

MASTER PLAN

BTNEP PRESENTATION

NOVEMBER 4, 2025

WES LEBLANC



AGENDA

- Plan Background and Development Process
- Goals and Objectives
- Modeling
- Outreach and Engagement
- Projects

PLAN DEVELOPMENT PROCESS

1. Developing Goals
and Objectives

2. Identifying
Candidate Projects
for WPU

3. Evaluating
Projects

4. Prioritizing
Projects

5. Developing
Master Plan

SCHEDULE

Complete

Year 1

- Model development, calibration, validation
- Initial conditions project list
- Develop candidate projects (public, Working Group, etc.)
- Environmental scenarios
- Initial development of metrics and

Year 2

- Project attributes
- Modeling Without Project conditions
- Modeling projects
- Iteration on metrics and targets
- DST incorporation of project, modeling data

Year 3

- DST analysis of projects
- Modeling project interactions
- DST analysis of system effects
- Modeling final plan

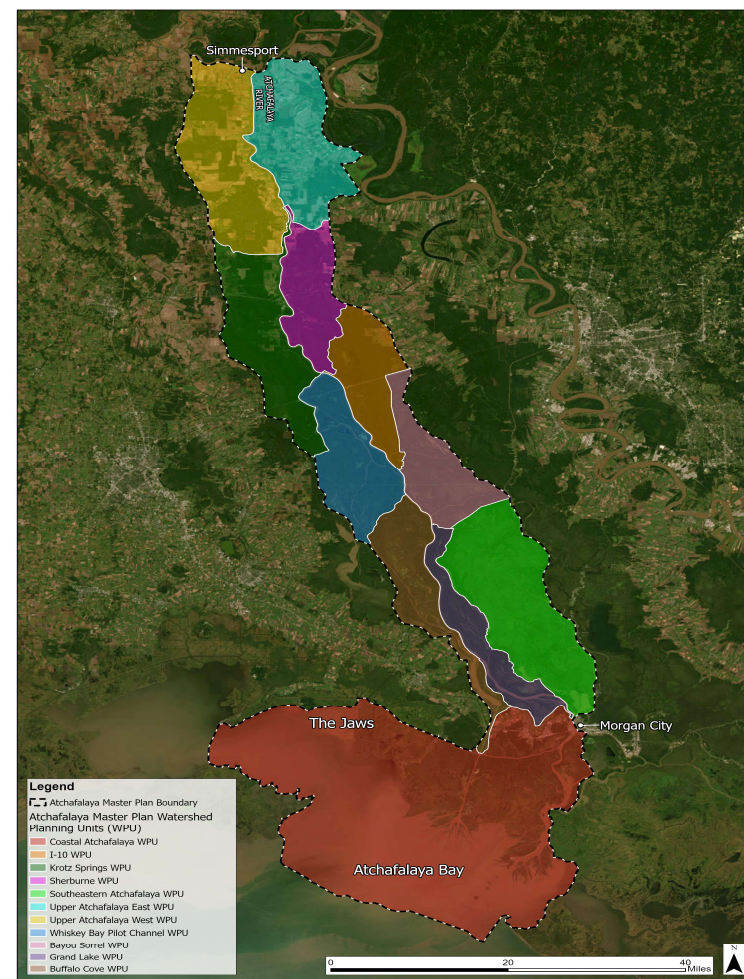
Year 4

- Final DST analysis
- Technical reports
- Draft plan
- Final plan

DST = Decision Support Tool
PDT = Plan Development Team

ATCHAFALAYA MASTER PLAN BOUNDARY

- Total area: ~1.5M acres
- Boundary
 - North: Simmesport
 - South: Gulf of America
 - East and West (above Morgan City): Atchafalaya Basin Protection Levees
 - West (below Morgan City): West Cote Blanche Bay
 - East (below Morgan City): Atchafalaya Bay



CHALLENGES & CONSIDERATIONS

- **Hydrology**
- **Sedimentation**
- **Water Quality**
- **Flood Risk**
- **Navigation**
- **Stakeholder Priorities, Interests, and Uses**

GOALS AND OBJECTIVES

GOAL AND OBJECTIVES

ALIGNED WITH THE COASTAL MASTER PLAN

GOAL

- Manage the use of Atchafalaya River System sediments and water to maximize ecosystem functions and support continued human uses

OBJECTIVES

- **NATURAL PROCESSES:** Promote a sustainable ecosystem by harnessing the natural processes of the Atchafalaya River System.
- **HABITATS:** Provide habitats suitable to support conservation and an array of commercial and recreational activities in the Atchafalaya River System.
- **CULTURAL HERITAGE:** Sustain the unique cultural heritage of the Atchafalaya River System by protecting historic properties and traditional living cultures and their ties and relationships to the natural environment.
- **WORKING RIVER SYSTEM:** Promote a viable working Atchafalaya River System to support regionally and nationally important business and industry.

MODELING

MODELING APPROACH

TO ALIGN PREDICTED OUTCOMES WITH OBJECTIVES AND TARGETS

CANDIDATE PROJECT EVALUATION

- Model With Project vs Without Project conditions
- Assess project performance
 - How well do projects meet WPU targets?
- Refine projects as needed

MODELS

- Mixed model approach using tools that already exist and can be readily updated
- Hydrodynamic models to simulate water flow, sediment flux, and distribution of water in both the backwater swamps and the main channels
- Habitat models for bottomland hardwood, swamp, and fish and wildlife species that are of importance in the system for their conservation, recreation, and commercial value

MODELING STATUS

H&H MODELS

- All calibrated, initial runs underway

SEDIMENT MODELS

- Calibration/refinement underway

VEGETATION MODEL

- Complete analysis will proceed as H&H outputs become available

HABITAT & WETLAND VALUE ASSESSMENT

- Coded, some variables are awaiting H&H outputs (e.g., water age to represent stagnant conditions)

OUTREACH AND ENGAGEMENT

OUTREACH AND ENGAGEMENT

PUBLIC

- Public webinars
- Project solicitation

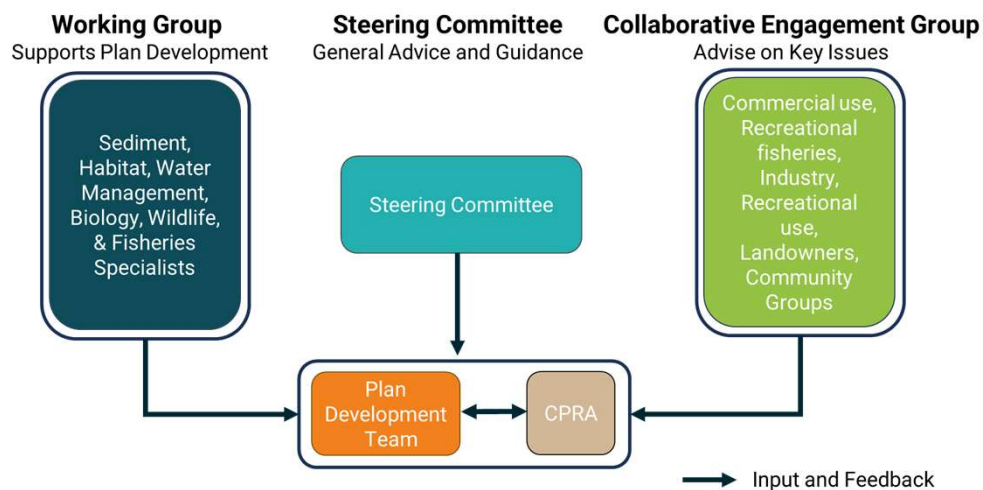


WORKING GROUP

STEERING COMMITTEE

COLLABORATIVE ENGAGEMENT GROUP

CPRA BOARD



PROJECTS

ISSUES AND CHALLENGES

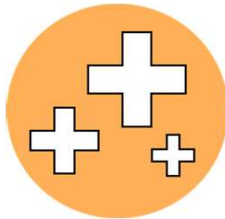
AS IDENTIFIED BY KEY ENGAGEMENT GROUPS (STEERING COMMITTEE, COLLABORATIVE ENGAGEMENT GROUP, AND WORKING GROUP)

- Excessive sedimentation affecting navigation and water intake areas
- Water quality (oxygen levels and pathogens in water sources)
- Rapid changes to landscapes
- Hydrologic exchanges needed to promote healthy forested wetlands are impaired
- Sustaining cultural and traditional use of natural resources

PROJECT TYPES



HYDROLOGIC
RESTORATION



INTEGRATED
PROJECTS



PROGRAMMATIC
PROJECTS



DREDGING &
PLACEMENT



SEDIMENT
DIVERSION



FRESHWATER
DIVERSION

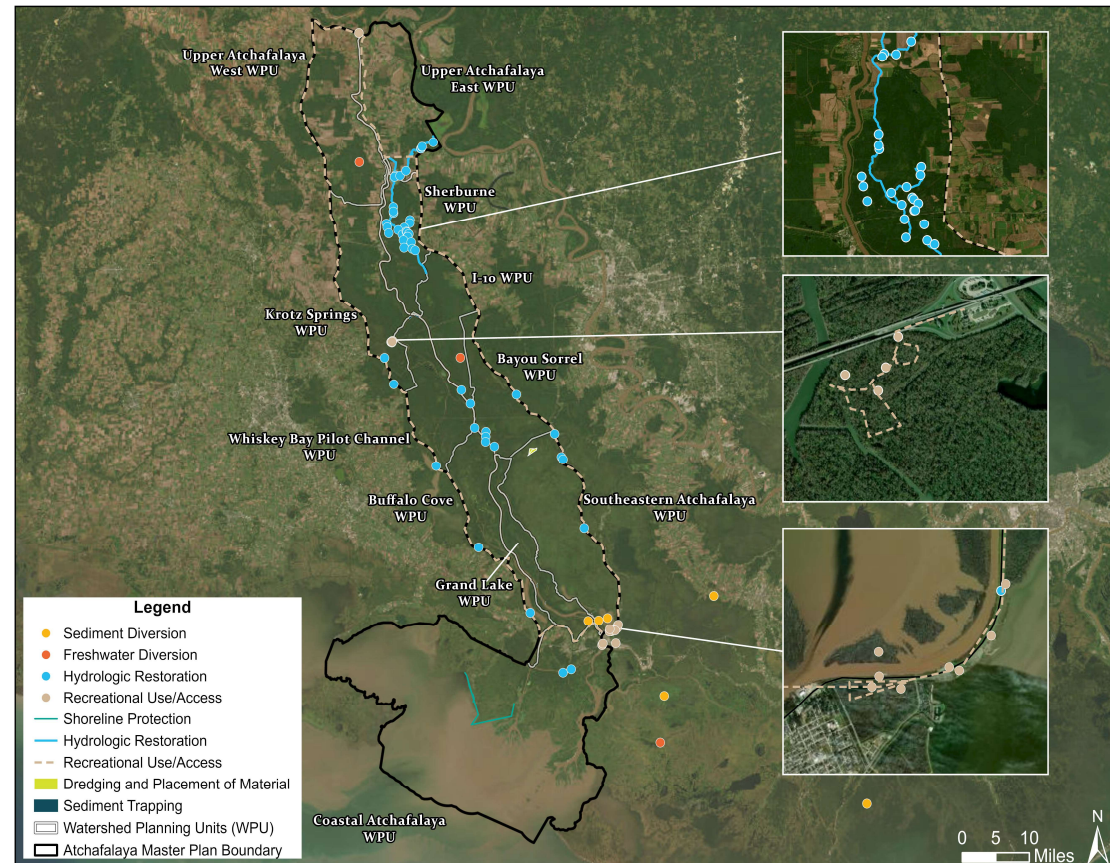


SEDIMENT
TRAPPING

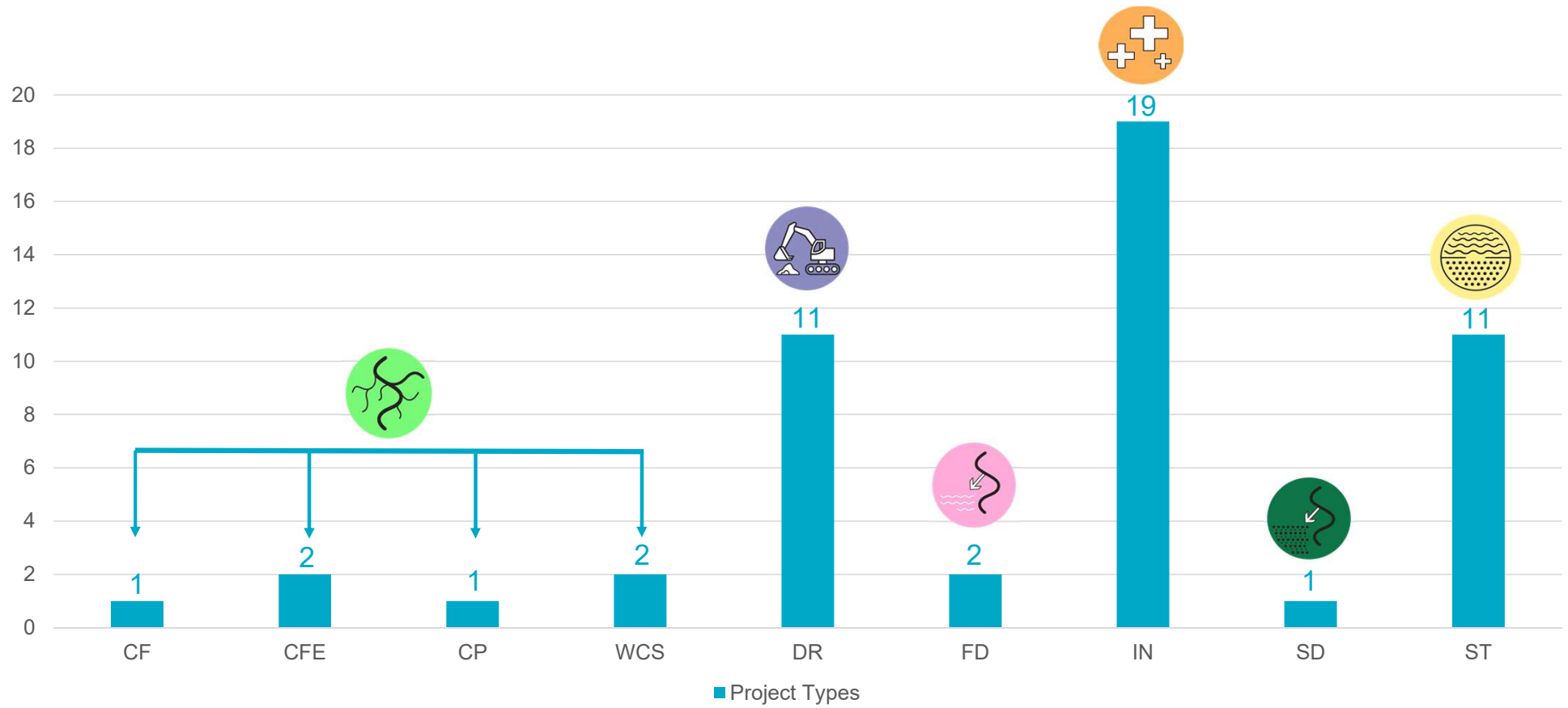
PROJECT SOLICITATION

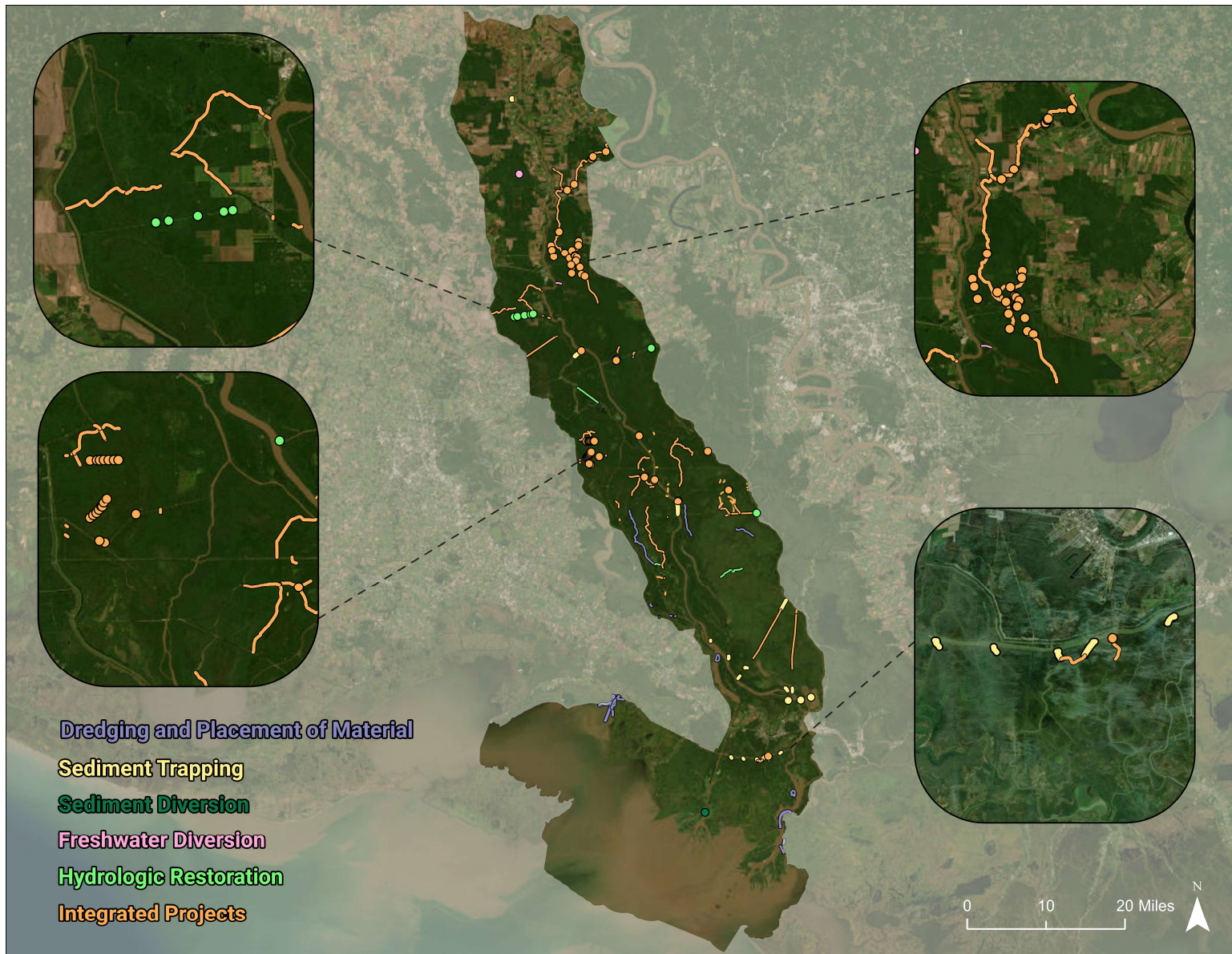
PROJECTS SUBMITTED

- 23 projects submitted
 - Hydrologic Restoration – 10
 - Recreational Use/Access – 5
 - Freshwater Diversion – 2
 - Shoreline Protection – 2
 - Dredging/Placement of Material – 1
 - Sediment Diversion – 1
 - Sediment Trapping – 1



CANDIDATE PROJECTS





FLOW REGIMES

EVALUATION OF SELECT FLOW SCENARIOS FROM OMAR TECHNICAL ASSESSMENT

ID	Name	Description
305	Old River Control Complex Flow Evaluation	Base projection of continuing current operations (no flushing).
306	Old River Control Complex 60/40 High Flow Operational Regime	60/40 during high flow, with 70/30 on long-term basis through water volume tracking.
307	Old River Control Complex 80/20 High Flow Operational Regime	80/20 during high flow, with 70/30 on long-term basis through water volume tracking.
308	Old River Control Complex 80/20 Daily Operational Regime	Daily 80/20 without any constraints.
309	Old River Control Complex 60/40 Daily Operational Regime	Daily 60/40.

147: WAX LAKE OUTLET INCREASED CAPACITY

PROJECT TYPE: FRESHWATER DIVERSION

The proposed project would increase the capacity of the Wax Lake Outlet located in the Coastal Atchafalaya Watershed Planning Unit. This would reduce the sedimentation in the Atchafalaya River channel directly upstream of the outlet and help to prevent upstream flooding.



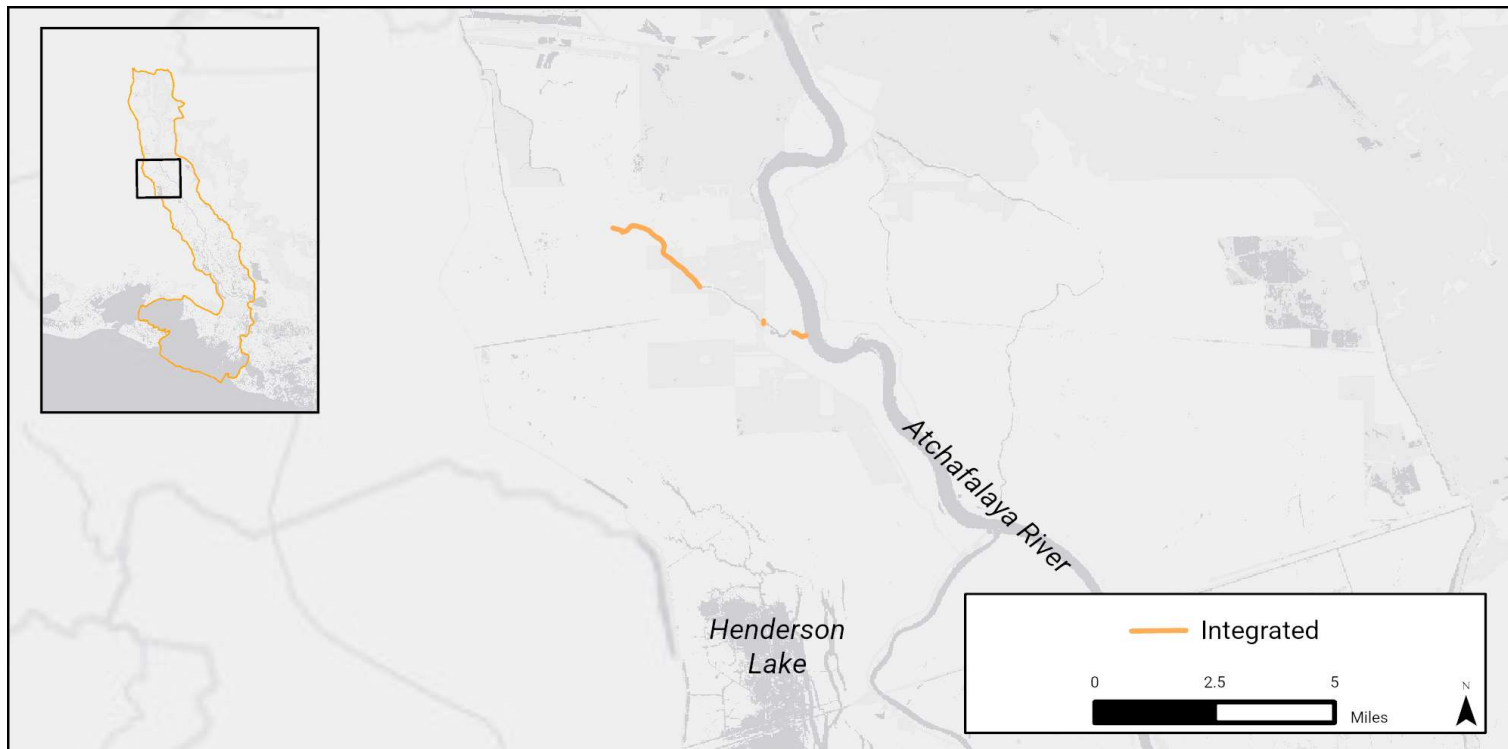
114: BAYOU COURTABLEAU CLEARING AND RIVER RECONNECTION

PROJECT TYPE: INTEGRATED

The proposed project, located in the Krotz Springs Watershed Planning Unit, would improve water quality through a combination of approaches. The project would install a gate at the east end of Bayou Courtableau to reconnect it to the Atchafalaya River and would clear and snag sections of Bayou Courtableau to improve flow and capacity.

114: BAYOU COURTABLEAU CLEARING AND RIVER RECONNECTION

PROJECT TYPE: INTEGRATED



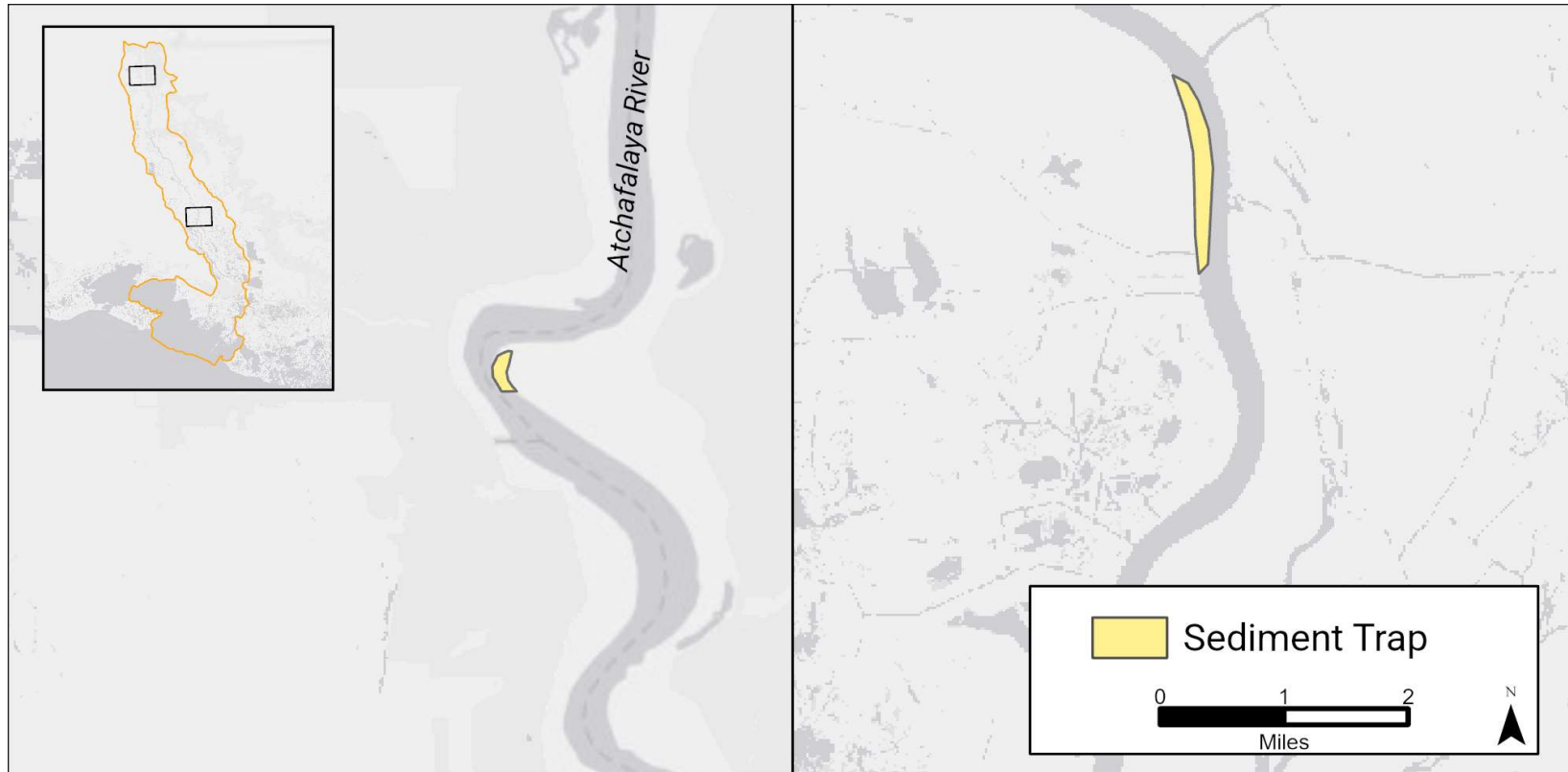
77: SEDIMENT TRAPS IN THE ATCHAFALAYA RIVER

PROJECT TYPE: SEDIMENT TRAP

The proposed project would implement strategically placed sediment traps in the Atchafalaya River, one within the Upper Atchafalaya East Watershed Planning Unit and one located in the Buffalo Cove Watershed Planning Unit. The two sediment traps would capture sediment before it disperses downstream and contribute to improved sediment management, water quality, and habitat stability.

77: SEDIMENT TRAPS IN THE ATCHAFALAYA RIVER

PROJECT TYPE: SEDIMENT TRAP



RESOURCES AVAILABLE

COASTAL.LA.GOV/OUR-PLAN/ATCHAFALAYA-MASTER-PLAN/

PROJECT INFORMATION AND OVERVIEW

RECORDED PUBLIC WEBINAR (10/1)

RECORDED PROJECT SOLICITATION WEBINAR
(11/14)

PROJECT SOLICITATION SURVEY & DEMO

FREQUENTLY ASKED QUESTIONS





CONNECT WITH US

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