

PUBLIC MEETING

DRAFT INTEGRATED FEASIBILITY STUDY WITH ENVIRONMENTAL IMPACT STATEMENT

Amite River and Tributaries - East of the Mississippi River, LA Feasibility Study

Mississippi Valley Division/New Orleans District/Regional Planning and Environmental Division South

Non Federal Sponsor - Louisiana Department of Transportation and Development

December 17, 2019 Denham Springs

December 18, 2019 Clinton



US Army Corps of Engineers



Preliminary Planning Product





TENTATIVELY SELECTED PLAN

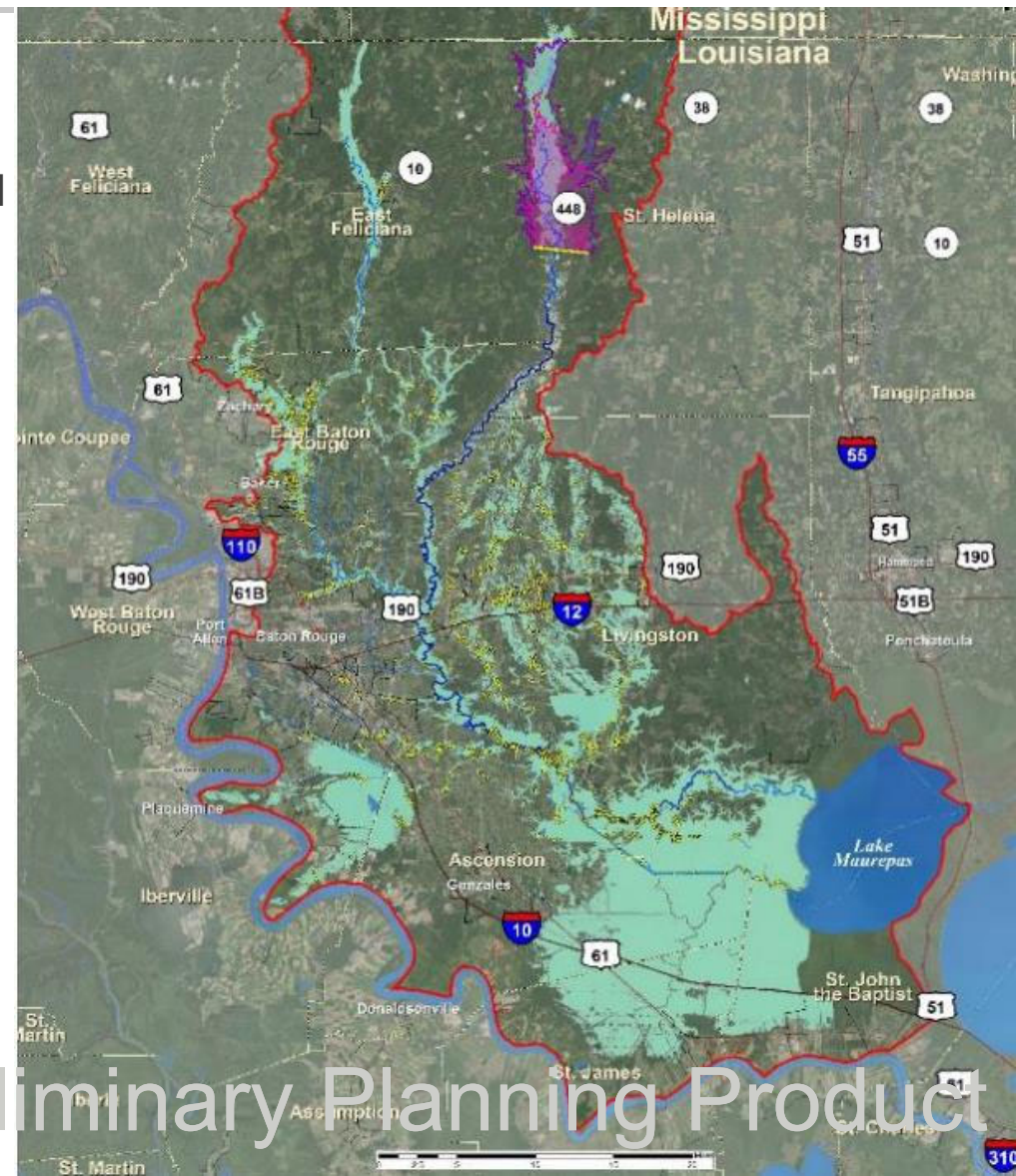
- 0.04 AEP (25 YEAR) DRY DARLINGTON DAM
- NONSTRUCTURAL COMPONENT WITHIN THE 0.04 AEP (25 YEAR) FLOODPLAIN

- Structural and Nonstructural Plans will be optimized during Feasibility Level Design
- Total Project Cost is \$2.3 Billion
- Benefit Cost Ratio is 1.23

Legend

- Structures within the 25 Year floodplain with residual risk
 - Darlington Dam
 - 25 Year Flood Pool (173)*
 - Probable Max. Flood (195.3)*
 - 25 Year Floodplain
 - Densely Populated Places
 - Parish Boundaries
 - Amite Study Area 20190125
- *Based on the 1997 report

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STUDY AUTHORITY



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

“Resolved by the Committee on Public Works of the United States Senate, That the Board of Engineers for Rivers and Harbors, created under Section 3 of the River and Harbor Act approved June 13, 1902, be, and is hereby requested to review the report of the chief of Engineers on Amite River and Tributaries, Louisiana, published as House Document Numbered 419, Eighty-fourth Congress. And other pertinent reports, with a view to determining whether the existing project should be modified in any way at this time with particular reference to additional improvements for flood control and related purposes on Amite River, Bayou Manchac, and Comite River and their tributaries.”

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*

3X3X3 Study

100% Federally Funded

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COORDINATION



Non-Federal Sponsor

The Louisiana Department of Transportation and Development

- Support for engineering and stakeholder management
- Key stakeholder and sponsor on other non USACE collaborations in the project area
- Provided the Amite River Basin Numerical Model

Governmental Stakeholders

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



STAKEHOLDER ENGAGEMENT



Kickoff Meetings

- Stakeholder Meeting held in Baton Rouge on December 4, 2018
- Public Meeting held at New Orleans District on January 10, 2019

3 NEPA Scoping Meetings

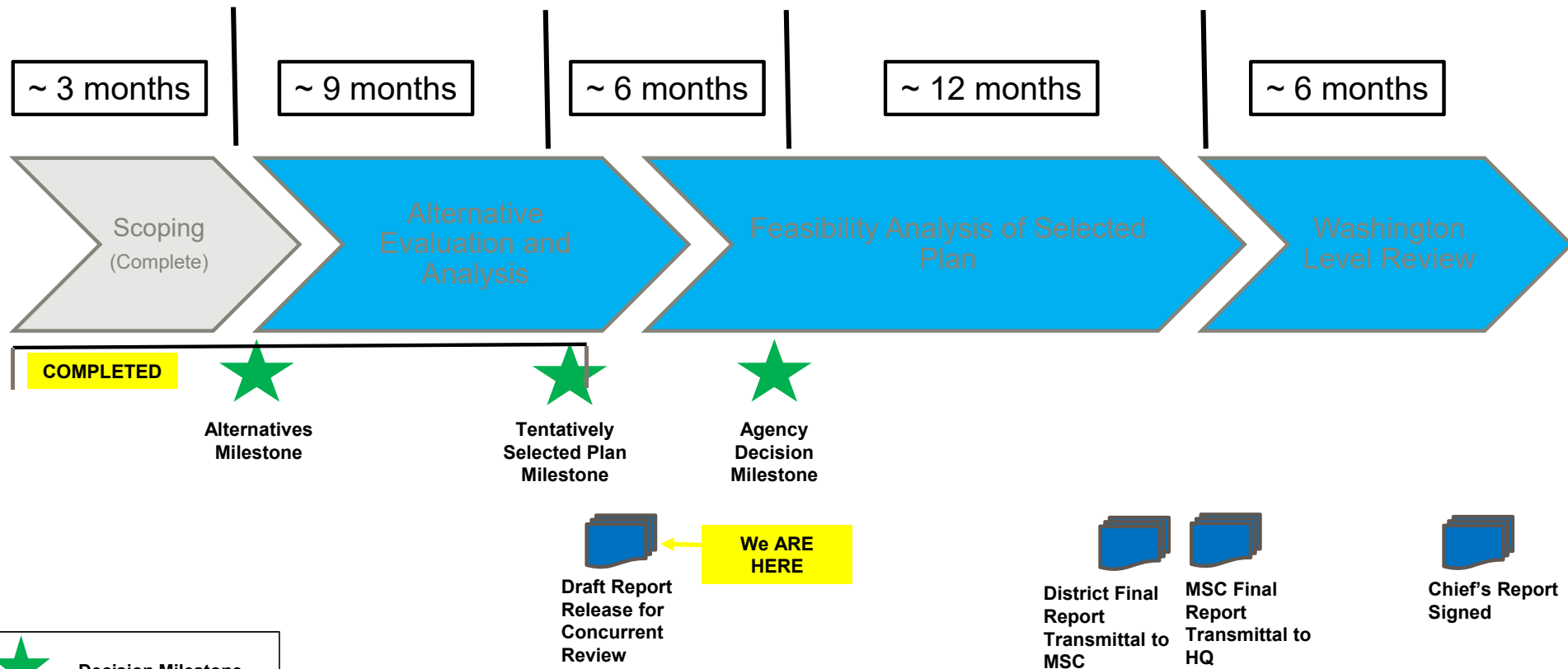
- Denham Springs on April 24, 2019
- Clinton on April 24, 2019
- Prairieville on April 25, 2019
- Federal Register Notice of Intent published on April 2, 2019

Progress Review Meetings

- Alternatives Analysis meeting held in Baton Rouge on June 19, 2019
- Tentatively Selected Plan meeting held in Baton Rouge on October 16, 2019
- Monthly stakeholder conference calls



THE FEASIBILITY STUDY PROCESS: KEY DECISION AND PRODUCT MILESTONES



Decision Milestone

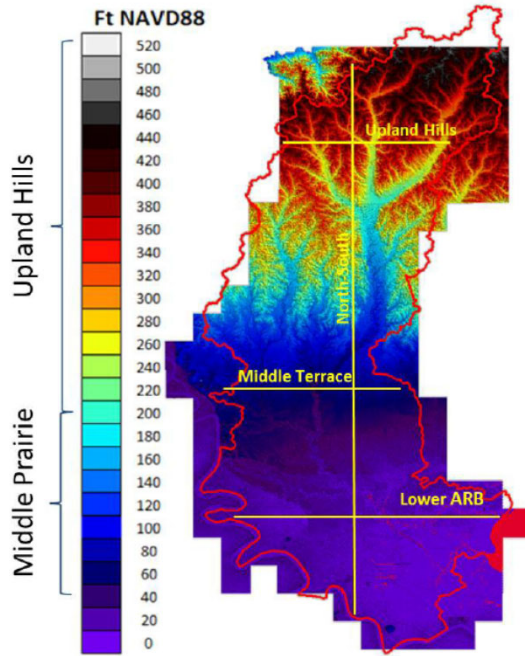
Product Milestone

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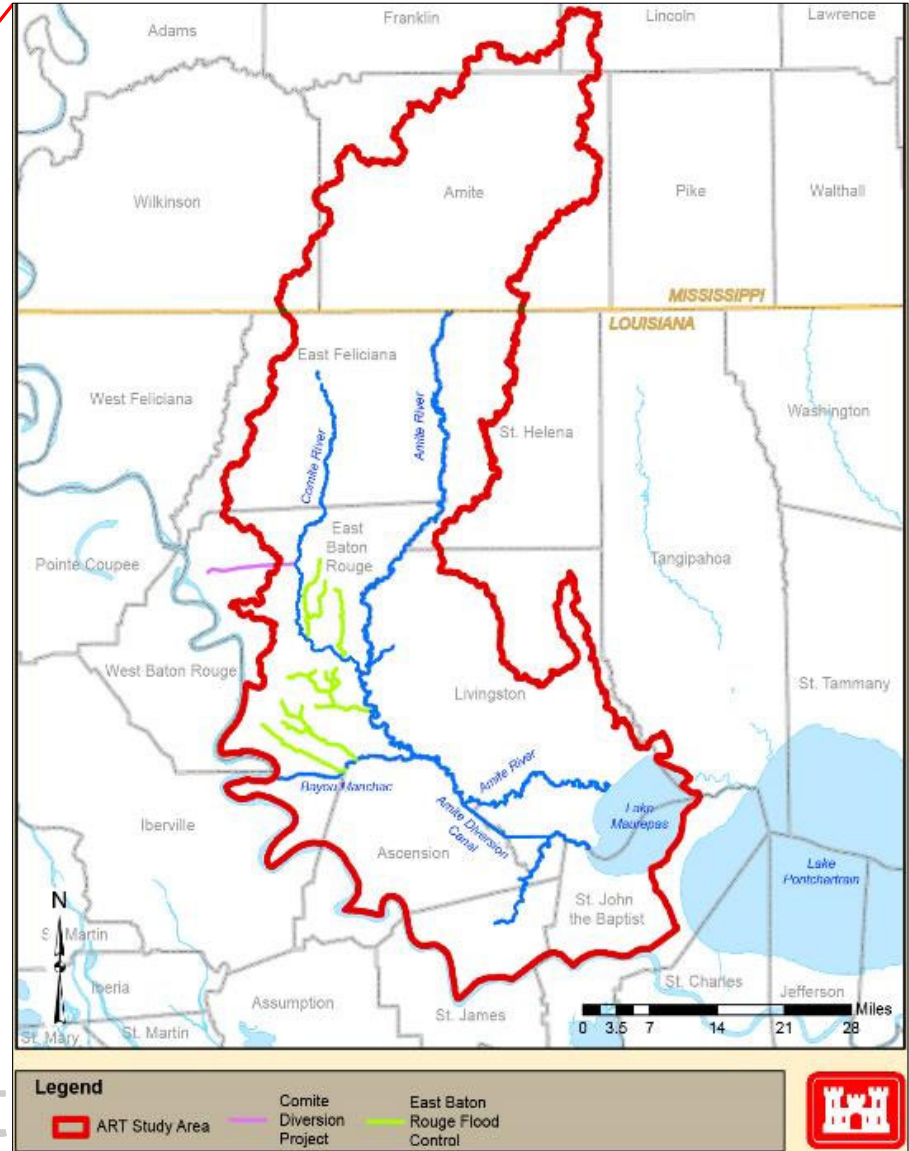
STUDY AREA

Amite River Basin includes 2,200 square miles flowing into the Amite River and its tributaries



a. Full ARB

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



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HYDRAULICS AND HYDROLOGY



LDOTD Amite River Model Obtained

- 1D model in the upper basin and 2D modeling for central and lower basin
- Limited detail for some smaller drainage features such as Creeks and Bayous
- Used the model as provided for existing conditions

Additions to the Model (Base Conditions, Future with Project, Future without Project)

- Authorized USACE Construction Projects were Included: EBR and Comite
- Run-off rates in the model were changed based on projected increased development by parish
- Relative sea-level rise was included using the intermediate rate.
- Locally operated flood control measures were handled individually

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ALTERNATIVE DEVELOPMENT



15 Alternatives

- 13 Presented at Public Scoping Meetings
- 2 added from resource agency feedback

Assembled with management measures using a combination of Concept/Formulation Strategies:

- Remove Water
- Hold Water
- Non-Structural
- Upper and Lower Basin
- Focused Structural

Alternatives focus on 4 Influence Areas

- Lower Amite River Basin near Lake Maurepas
- Central Portion of Amite River Basin
- Upper Amite River Basin
- Upper and Lower Amite River Basin

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SCREENING



Diversion Structures (Gravity Fed and Pump)

Channelization/Dredging

Channel Bank Gapping

Flood Gates

Dredging

Reduction of Flow Restrictions from Bridges

Small Dams on the Amite

Natural River Restoration (Restoring Meanders)

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FOCUSED ARRAY



Measures	Alternative Description
No-Action	Damages would continue into the future
Darlington Dam	0.04 AEP (25 year) dam with an emergency spillway with the option of being dry or reduced wet dam as presented in the 1997 USACE report
Dry Dam on Sandy Creek	0.01 AEP (100 year) Dam Largest of the 4 tributaries
Dry Dam on Darling, Lilley and Bluff Creeks	0.01 AEP (100 year) Dams Combination of 3 dams have a smaller capacity than Sandy Creek Dam
Nonstructural	Nonstructural only plan. Aggregated based on 0.04 and 0.02 AEP with elevating and floodproofing of homes.

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~~FOCUSED ARRAY BENEFIT-COST ANALYSIS~~

FINAL ARRAY BENEFIT-COST ANALYSIS

Plan	Nonstructural 25 Year Floodplain	Nonstructural 50 Year Floodplain	Darlington Reduced Wet Dam	Darlington Dry Dam	Sandy Creek Dry Dam	Darling, Bluff, and Lilley Creek Dry Dams
Total Project Costs						
First Cost	\$1,335,282	\$2,160,836	\$1,788,530	\$1,278,524	\$270,977	\$349,981
Interest During Construction	\$4,739	\$7,670	\$105,269	\$75,251	\$7,819	\$10,098
Total Investment Cost	\$1,340,022	\$2,168,505	\$1,893,800	\$1,353,775	\$278,796	\$360,079
Estimated Annual Costs						
Annualized Project Costs	\$50,851	\$82,291	\$71,866	\$51,373	\$10,580	\$13,664
Annual OMRR&R	\$0	\$0	\$658	\$439	\$220	\$659
Total Annual Costs	\$50,851	\$82,291	\$72,524	\$51,813	\$10,800	\$14,323
Average Annual Benefits						
Total Annual Benefits	\$53,547	\$63,542	\$65,066	\$65,066	\$13,649	\$6,131
Net Annual Benefits	\$2,696	-\$18,749	-\$7,459	\$13,253	\$2,849	-\$8,192
Benefit to Cost Ratio	1.05	0.77	0.90	1.26	1.26	0.43

NATIONAL ECONOMIC DEVELOPMENT PLAN (NED)

(FY19 Price Level, \$ 000's)

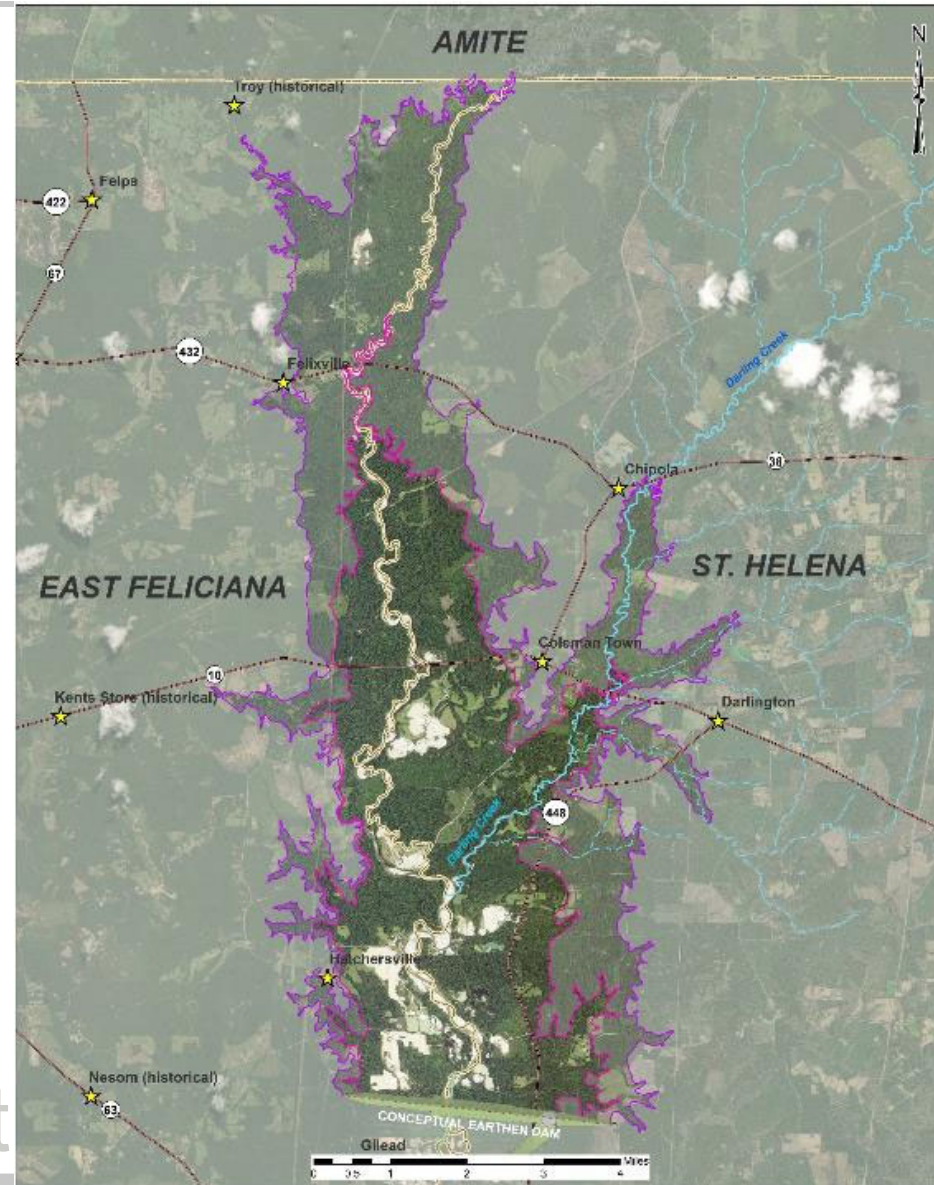
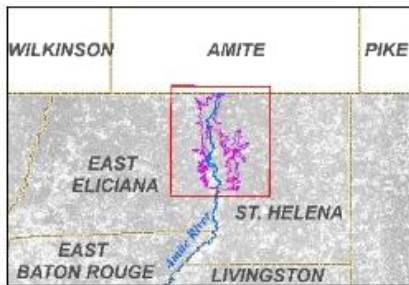
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0.04 ANNUAL EXCEEDANCE PROBABILITY(AEP) DRY DARLINGTON DAM

Legend

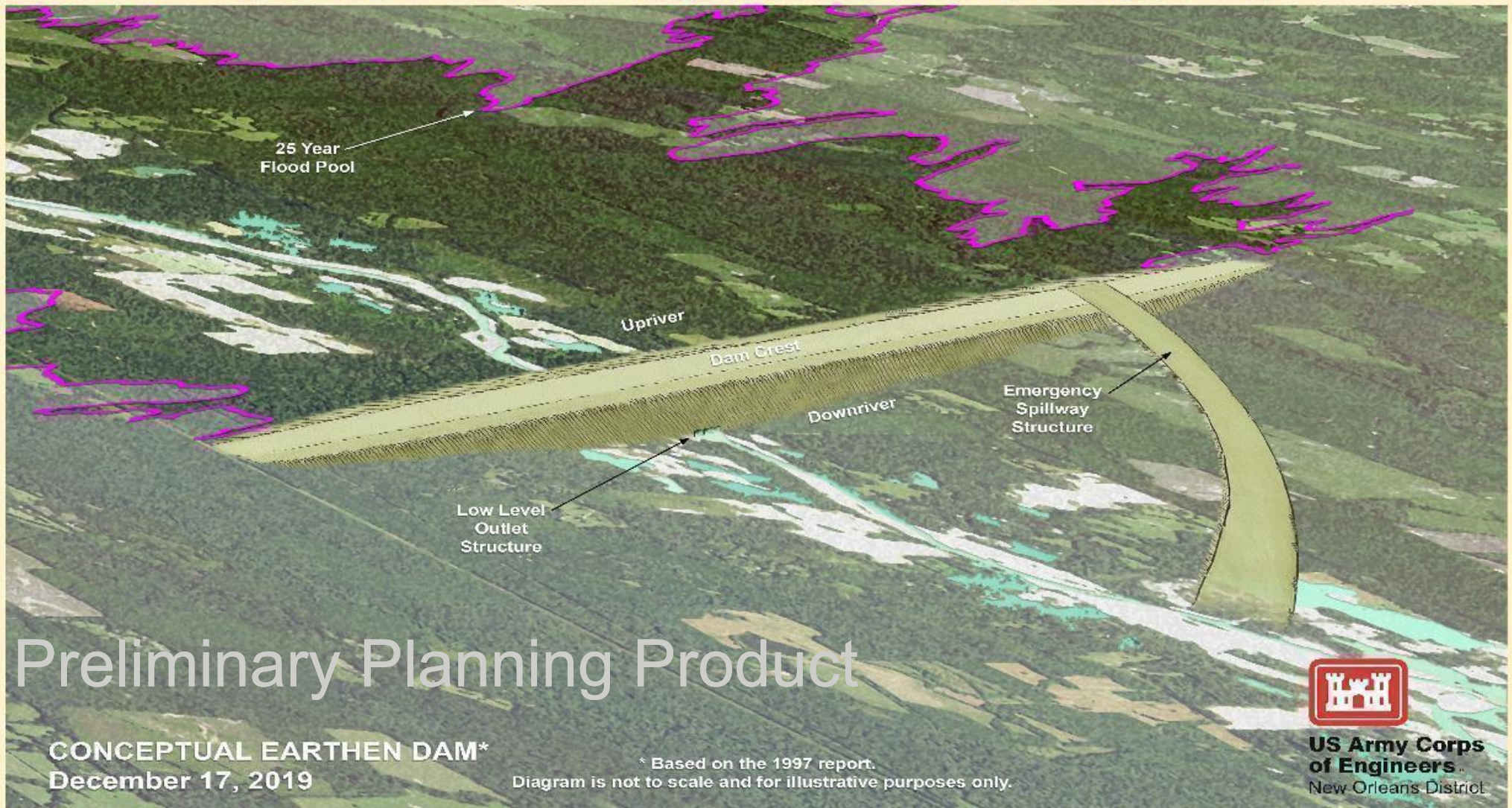
- ★ Placenames
- Darling Creek
- Darling Creek Tributaries
- Darlington Dam
- 25 Year Flood Pool (173)*
- Probable Max. Flood (195.3)*
- Parish Boundaries



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Tentatively Selected Plan : Large Scale 0.04 AEP (Dry Darlington Dam)



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CONCEPTUAL EARTHEN DAM*
December 17, 2019

* Based on the 1997 report.
Diagram is not to scale and for illustrative purposes only.



**US Army Corps
of Engineers**
New Orleans District



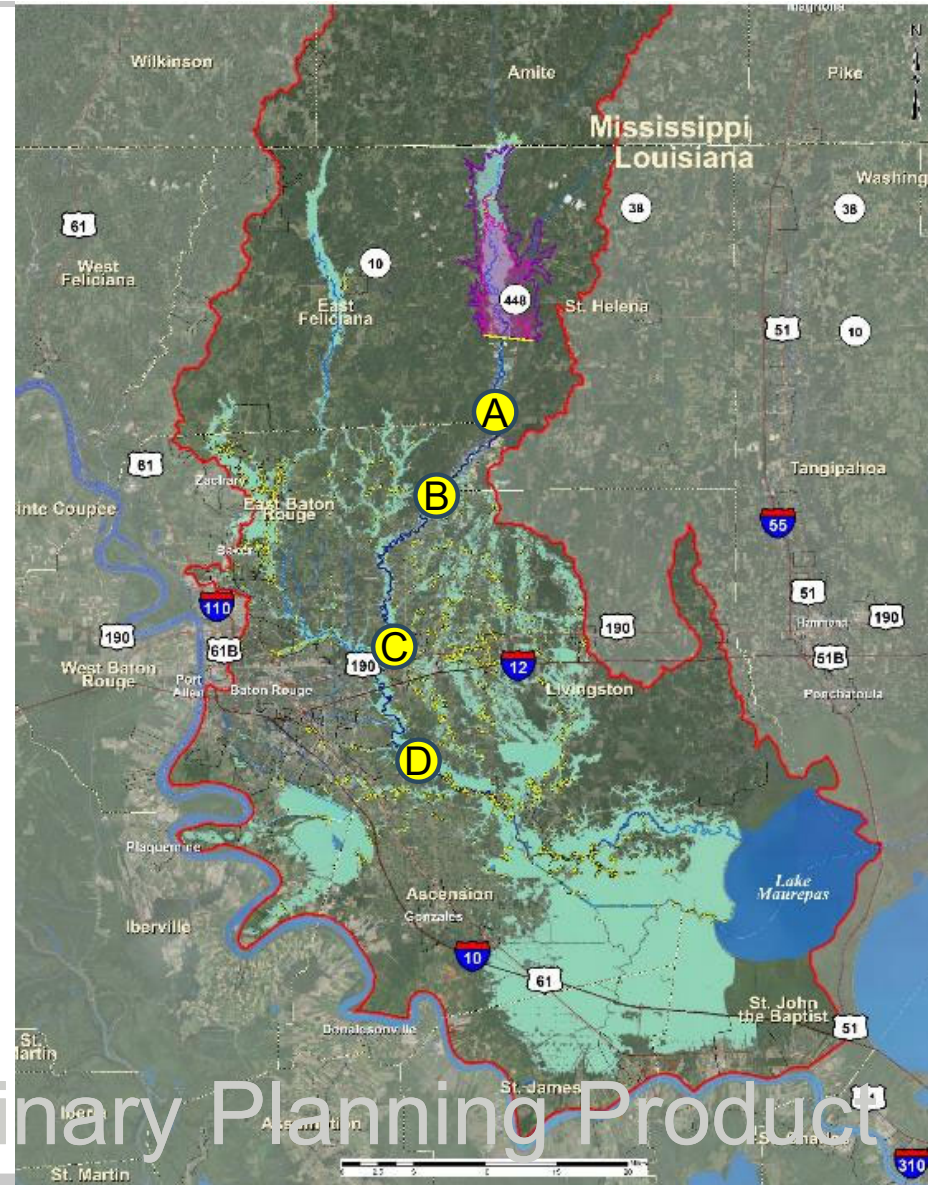
AMITE RIVER LOWERINGS WITH 0.04 AEP DRY DARLINGTON DAM

	A	B	C	D
AEP	Grangeville	Brownsfield	Denham Springs	Port Vincent
0.04 (25 year)	8.8	7	6.5	2.7
0.02 (50 year)	10.1	7.6	6.8	2.9
0.01 (100 year)	11.3	8.2	7	2.8

All lowerings in feet

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RESIDUAL RISK



Final Array NED Plan: Darlington Dry Dam 0.04 AEP

TSP: Final Array NED Plan + Nonstructural (to address residual risk)

Nonstructural:

1. NonPhysical
 - Emergency Action Plan
 - Flood Warning System
 - Floodplain Management Plans
2. Physical
 - Residential and nonresidential structures in 0.04 AEP Floodplain
 - May be eligible for residential elevations, non-residential floodproofing, and acquisitions

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TSP SELECTION-NED PLAN



Dry Darlington Dam Combined with Nonstructural Measures

-0.04 AEP (25 year) Dam includes an emergency spillway.

-Current nonstructural optimization is at the 0.04 AEP year floodplain.

Item	Expected Annual Benefits and Costs
Damage Category	
Structure, Contents, Vehicles, and Debris Removal	\$109,065
Total Benefits	\$109,065
Structural First Costs	\$1,278,524
Nonstructural First Costs	\$1,024,198
Total First Costs	\$2,302,722
Interest During Construction	\$75,386
Annual Operation & Maintenance Costs	\$439
Total Annual Costs	\$88,527
B/C Ratio	1.23
Expected Annual Net Benefits	\$20,539

(FY19, \$1,000's, 2.75% Discount Rate)

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-Dry Darlington Dam scale will be optimized during the feasibility study design

-Targeted nonstructural plan to be refined with the optimized dam as the new base condition



TENTATIVELY SELECTED PLAN – DRY DARLINGTON DAM

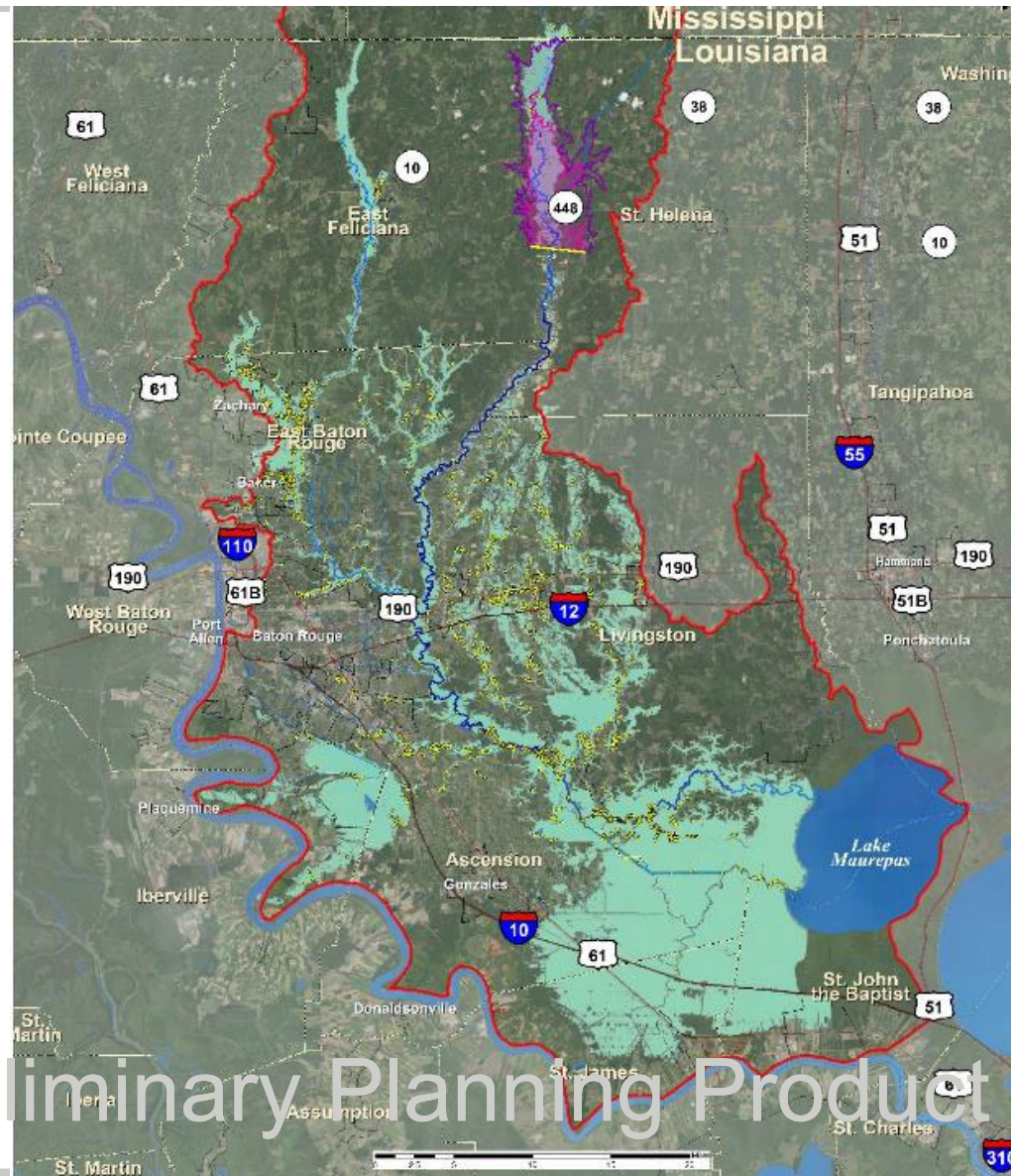
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NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE SUMMARY

20



Cultural

- Initiated consultation under Section 106 National Historic Preservation Act of 1966 (NHPA) with State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officers (THPOs)
- Developing a Programmatic Agreement in consultation with stakeholders during the feasibility study to fulfill CEMVN's NHPA responsibilities during the Pre-Construction, Engineering and Design (PED) phase

Environmental

- Scenic Rivers
- Threatened, Endangered, and Protected Species
- Borrow Source
- Mitigation Plan
- Environmental Justice

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MILESTONE SCHEDULE



Milestone	Baseline
Execute FCSA	Complete
Alternatives Milestone	Complete
TSP Milestone	Complete
Release of Draft Feasibility Report for Public Review	Complete*
Agency Decision Milestone	Spring 2020
District Submit Final Feasibility Report to MVD	Spring 2021
Division Engineer's Transmittal Letter	Spring 2021
Chief's Report Milestone	Fall 2021

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FREQUENTLY ASKED QUESTIONS



Q: Is the dam going to protect all of the areas that were impacted by the 2016 flood? What about the lower part of the basin?

A: First and foremost, this study did not specifically model the 2016 event which was greater than a 500 year event. The model used a range of various AEP (from a 2 year event up to a 500 year event) to inform existing conditions and help evaluate study alternatives.

Secondly, no areas are ever fully protected. There will always be residual risk. Communities further downstream will see less significant lowerings than the upstream locations nearest the dam, but the nonstructural component of the project is intended to help address residual risk in the lower basin.

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FREQUENTLY ASKED QUESTIONS



Q: Will I have another chance to provide feedback?

A: The 45-day comment period is the time for public feedback on the draft report. However, if there are significant changes to the Tentatively Selected Plan in the future, additional opportunities for public comment would be considered.

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FREQUENTLY ASKED QUESTIONS



Q: How were the public meeting locations chosen?

A: We held public meetings in these communities in April 2019 during the scoping phase of the study and wanted to return to the same communities. The public meetings aren't just for the town where the meeting is located, but is for surrounding communities as well. This is a basin wide study and meetings were held throughout the study area.

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FREQUENTLY ASKED QUESTIONS



Q: Am I located within the dam and reservoir footprint?

A: The footprint of the dam and reservoir is continuing to be refined as the design is optimized. More information will be available in the final report.

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FREQUENTLY ASKED QUESTIONS



Q: Am I part of the nonstructural plan?

A: Targeted nonstructural is also being refined as we determine the residual risk of the Darlington Dam in place. More information will be available in the final report.

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FREQUENTLY ASKED QUESTIONS



Q: When is this project going to start?

A: We are far from beginning any work as we are still in the study process. This study is anticipated to be completed in late 2021. Once the study is complete, separate appropriations (funding) from congress are needed to begin construction following a 3-5 year design period. Right now, we are looking to see if there is the potential for a project.

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HOW TO COMMENT



Send your comments by January 13, 2020

AmiteFS@usace.army.mil or

Mail to:
CEMVN-PMR
7400 Leake Avenue
Room 331
New Orleans, LA 70118

Amite River and Tributaries Study Website:
<https://www.mvn.usace.army.mil/Amite-River-and-Tributaries/>

Mississippi River Valley Division,
Regional Planning and Environment Division South

**Amite River and Tributaries
East of the Mississippi River,
Louisiana**

**Draft Integrated Feasibility Study with
Environmental Impact Statement**

November 2019