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

Preliminary Planning Product
MEETING AGENDA

1. Bottom Line Up Front (TSP)
2. Project Background
3. Alternatives Considered
4. Tentatively Selected Plan
5. Project Schedule
6. Public Comment Period
7. Frequently Asked Questions
8. Questions and Comments
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
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
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

~ 3 months  ~ 9 months  ~ 6 months  ~ 12 months  ~ 6 months

Scoping (Complete)

Alternative Evaluation and Analysis

Feasibility Analysis of Selected Plan

Washington Level Review

We ARE HERE

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STUDY AREA

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

Preliminary Planning Product
## FOCUSED ARRAY

<table>
<thead>
<tr>
<th>Measures</th>
<th>Alternative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-Action</td>
<td>Damages would continue into the future</td>
</tr>
<tr>
<td>Darlington Dam</td>
<td>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</td>
</tr>
<tr>
<td>Dry Dam on Sandy Creek</td>
<td>0.01 AEP (100 year) Dam Largest of the 4 tributaries</td>
</tr>
<tr>
<td>Dry Dam on Darling, Lilley and Bluff Creeks</td>
<td>0.01 AEP (100 year) Dams Combination of 3 dams have a smaller capacity than Sandy Creek Dam</td>
</tr>
<tr>
<td>Nonstructural</td>
<td>Nonstructural only plan. Aggregated based on 0.04 and 0.02 AEP with elevating and floodproofing of homes.</td>
</tr>
</tbody>
</table>
## FOCUSED ARRAY BENEFIT-COST ANALYSIS

### FINAL ARRAY BENEFIT-COST ANALYSIS

#### NATIONAL ECONOMIC DEVELOPMENT PLAN (NED)

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

*(FY19 Price Level, $ 000’s)*

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**Preliminary Planning Product**
0.04 ANNUAL EXCEEDANCE PROBABILITY (AEP) DRY DARLINGTON DAM

Legend
- Placenames
- Darling Creek
- Darling Creek Tributaries
- Darlington Dam
- 25 Year Flood Pool (173.9"
- Probable Max. Flood (195.3"
- Parish Boundaries

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

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

<table>
<thead>
<tr>
<th>AEP</th>
<th>Grangeville</th>
<th>Brownsfield</th>
<th>Denham Springs</th>
<th>Port Vincent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04 (25 year)</td>
<td>8.8</td>
<td>7</td>
<td>6.5</td>
<td>2.7</td>
</tr>
<tr>
<td>0.02 (50 year)</td>
<td>10.1</td>
<td>7.6</td>
<td>6.8</td>
<td>2.9</td>
</tr>
<tr>
<td>0.01 (100 year)</td>
<td>11.3</td>
<td>8.2</td>
<td>7</td>
<td>2.8</td>
</tr>
</tbody>
</table>

All lowerings in feet
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
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.

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

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

-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

Legend
- Structures within the 25 Year floodplain with residual risk
  - Darlington Dam
  - 25 Year Flood Pool (173)*
  - Probable Max. Flood (185.3)*
  - 25 Year Floodplain
  - Densely Populated Places
  - Parish Boundaries
  - Amite Study Area 20190125
  *Based on the 1997 report

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NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE SUMMARY

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
# MILESTONE SCHEDULE

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execute FCSA</td>
<td>Complete</td>
</tr>
<tr>
<td>Alternatives Milestone</td>
<td>Complete</td>
</tr>
<tr>
<td>TSP Milestone</td>
<td>Complete</td>
</tr>
<tr>
<td>Release of Draft Feasibility Report for Public Review</td>
<td>Complete*</td>
</tr>
<tr>
<td>Agency Decision Milestone</td>
<td>Spring 2020</td>
</tr>
<tr>
<td>District Submit Final Feasibility Report to MVD</td>
<td>Spring 2021</td>
</tr>
<tr>
<td>Division Engineer’s Transmittal Letter</td>
<td>Spring 2021</td>
</tr>
<tr>
<td>Chief’s Report Milestone</td>
<td>Fall 2021</td>
</tr>
</tbody>
</table>

Preliminary Planning Product
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.
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.
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.
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.
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.
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.
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/