PUBLIC MEETING

DRAFT INTEGRATED FEASIBILITY STUDY WITH ENVIRONMENTAL IMPACT STATEMENT

Upper Barataria Basin Louisiana Feasibility Study

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

Non Federal Sponsor – Coastal Protection and Authority Board (CPRAB) of Louisiana

January 7, 2019 Luling
January 9, 2019 Thibodaux
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
TENTATIVELY SELECTED PLAN
-2% AEP (50 YEAR) LEVEE ALIGNMENT
-POTENTIAL NONSTRUCTURAL COMPONENT

- Structural with the possibility of Nonstructural Plans will be optimized during Feasibility Level Design
- Total Project Cost is $514 Million
  Not including arming for levee resiliency
- Benefit Cost Ratio is 1.5
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

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 – Coastal Protection and Authority Board (CPRAB) of Louisiana
– Support for engineering and stakeholder management
– Provided the Upper Barataria Basin Study Numerical Models

Governmental Stakeholders
– Tribes
– Natural Resource Agencies
– State of Louisiana
– Parish Officials
– Local Levee Districts
– City Officials
Kickoff Meetings
– Stakeholder Workshop Meeting was held in Hahnville on October 18, 2018
– General Public Meeting held at New Orleans District on January 10, 2019

2 NEPA Scoping Meetings
– Thibodaux on May 1, 2019
– Hahnville on May 2, 2019
– Federal Register Notice of Intent published on April 2, 2019

Progress Review Meetings
– Alternatives Analysis meeting held on August 22, 2019 with stakeholders
– Tentatively Selected Plan meeting with stakeholders held on October 15, 2019
– Monthly stakeholder conference calls
THE FEASIBILITY STUDY PROCESS:
KEY DECISION AND PRODUCT MILESTONES

- Scoping (Complete)
- Alternative Evaluation and Analysis
- Feasibility Analysis of Selected Plan
- Washington Level Review

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

Alternatives Milestone
Tentatively Selected Plan Milestone
Agency Decision Milestone
Draft Report Release for Concurrent Review
We ARE HERE
District Final Report Transmittal to MSC
MSC Final Report Transmittal to HQ
Chief's Report Signed

We ARE HERE

Preliminary Planning Product
The study area covers around 800 square miles and contains around 28,000 structures.
HYDRAULICS AND HYDROLOGY

ADCIRC Coastal Storm Modeling (CPRA 2017)
- 50, 100, 200, 500-Year Frequency events were modeled for a 50 year period of analysis (2023-2073)
- An intermediate sea level rise scenario was used in the modeling

HEC-RAS Rainfall Modeling
- 2, 5, 10, 25, 50, 100, 200, 500-Year Frequency events were modeled

<table>
<thead>
<tr>
<th>Recurrence Interval, years</th>
<th>Annual Exceedance Probability (AEP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>50%</td>
</tr>
<tr>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>10</td>
<td>10%</td>
</tr>
<tr>
<td>25</td>
<td>4%</td>
</tr>
<tr>
<td>50</td>
<td>2%</td>
</tr>
<tr>
<td>100</td>
<td>1%</td>
</tr>
<tr>
<td>200</td>
<td>0.50%</td>
</tr>
<tr>
<td>500</td>
<td>0.20%</td>
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</tbody>
</table>
Assembled management measures and launched from previous efforts in the basin:

– Structural
  » Levees
  » Floodwalls
  » Flood Gates
  » Pumping Stations
  » Ring Levees

– Non-structural
  » House Raisings
  » Dry-Proofing

11 Alternatives Developed (Including No Action Option)
– 8 alternatives were presented at the Public Scoping Meetings, May of 2019
– 3 more alternatives were added from Federal resource agency feedback and another planning iteration
– 1 of the 11 alternatives is a nonstructural alternative
ARRAY OF ALTERNATIVES

Upper Barataria Study
Alternative Alignments

Legend
- GNSS Placemarks
- All 1: Hwy 90 - Seg 1 Extension
- All 2: Hwy 90 - Full Alignment
- All 3: Des Allemands-Paradis Levee
- All 4: Ricoland Levee
- All 5: Basin Edge Levee
- All 6: Hwy 90 Alignment - Master Plan
- All 7: Nonstructural Hotspots
- Hwy 90 - Roadway Lift
- Basin Rainfall Alternative
- Channel Floodgate
- Pump Station

Alternative 1: Hwy 90 - Seg 1 Extension
Alternative 2: Hwy 90 - Full Alignment
Alternative 3: Des Allemands-Paradis Levee
Alternative 4: Ricoland Levee
Alternative 5: Basin Edge Levee
Alternative 6: Hwy 90 Alignment - Master Plan
Alternative 7: Nonstructural Hotspots
Alternative 8: Hwy 90 - Roadway Lift
Alternative 9: Basin Rainfall Alternative
Alternative 10: 1% AEP Open Basin
Screening:
- Alternatives 3, 4, 5, 6, 8, and 9 were screened out based on the benefit to costs ratios being less than 1.0 or opposing guidance and regulations.
- Alternatives 1, 2, 10, 7, and the no action were included in the final array.

<table>
<thead>
<tr>
<th>Plan</th>
<th>EAD Benefits</th>
<th>Construction Cost</th>
<th>Average Annual Cost</th>
<th>Net Benefits</th>
<th>B/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative 1, Hwy 90-Segment 1 Extension, 7.5ft</td>
<td>$30,261,000</td>
<td>$513,423,000</td>
<td>$20,358,000</td>
<td>$9,904,000</td>
<td>1.5</td>
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<tr>
<td>Alternative 2, Hwy 90-Full Alignment, 8.5ft</td>
<td>$30,465,000</td>
<td>$665,108,000</td>
<td>$26,238,000</td>
<td>$4,228,000</td>
<td>1.2</td>
</tr>
<tr>
<td>Alternative 10, 1% AEP Open Basin 12.0ft</td>
<td>$30,875,000</td>
<td>$908,484,000</td>
<td>$32,574,000</td>
<td>($1,700,000)</td>
<td>0.95</td>
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<tr>
<td>Alternative 7, Nonstructural</td>
<td>$17,559,000</td>
<td>$1,568,912,000</td>
<td>$58,312,000</td>
<td>($40,753,000)</td>
<td>0.3</td>
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</tbody>
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NATIONAL ECONOMIC DEVELOPMENT PLAN (NED)
Levee Resiliency
- To be resilient to overtopping the levee will be designed with either High Performance Turf Reinforcement Matting (HPTRM) armoring or concrete armoring
- Armoring will be placed as needed on the project levee (Alternative 1) and on the Existing St Charles Parish Levee for resiliency
- The table below displays the costs for the extreme case that the entire system would be armored

<table>
<thead>
<tr>
<th></th>
<th>Alt 1 With Armoring - Matting</th>
<th>Alt 1 With Armoring - Concrete</th>
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</thead>
<tbody>
<tr>
<td>First Cost</td>
<td>$557,719,000</td>
<td>$650,719,000</td>
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<tr>
<td>Annual Costs</td>
<td>$22,568,000</td>
<td>$26,147,000</td>
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<tr>
<td>Annual Benefits</td>
<td>$30,261,000</td>
<td>$30,261,000</td>
</tr>
<tr>
<td>Net Annual Benefits</td>
<td>$8,009,000</td>
<td>$4,430,000</td>
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<tr>
<td>Benefit to Cost Ratio</td>
<td>1.4</td>
<td>1.2</td>
</tr>
</tbody>
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(FY19 Price Level)
TENTATIVELY SELECTED PLAN
– 2% AEP (50 YEAR) LEVEE ALIGNMENT
– POTENTIAL NONSTRUCTURAL COMPONENT

- Structural with the possibility of Nonstructural Plans will be optimized during Feasibility Level Design
- Total Project Cost is $514 Million Not including armoring for levee resiliency
- Benefit Cost Ratio is 1.5
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 Section 106 Programmatic Agreement in consultation with coordinating parties during the feasibility study to fulfill CEMVN’s NHPA responsibilities during the Pre-Construction, Engineering and Design (PED) phase

Environmental
– Threatened, Endangered, and Protected Species
– Borrow Source
– Mitigation Plan
– Recreational Impacts

Preliminary Planning Product
# MILESTONE SCHEDULE

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Baseline</th>
</tr>
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<tbody>
<tr>
<td>Execute FCSA</td>
<td>Complete</td>
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<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>
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<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>
FREQUENTLY ASKED QUESTIONS

Q: Is this proposed levee a repeat of an earlier project the Corps proposed but was not economically justified? If so, is the Corps changing the formula it uses to justify the cost of this project?

A: There was a study released in 2012, Donaldsonville to the Gulf, that looked at a larger geographic area and with different criteria. The Upper Barataria Basin is reviewing coastal storm risk reduction measures and rainfall management measures within the upper portion of the basin and is looking at alternatives with a variety of design frequencies.
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: Am I part of the nonstructural plan?

A: Targeted nonstructural measures will be refined as we determine the residual risk of the alignment and overtopping rates. That plan will be voluntary and more information will be available as the study progresses.
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.
Q: Will this project impact access to canals for recreational use?

A: Initial assessment indicates there may be some limitations to access to the canals. However, more information will be available upon Feasibility level design. If you have a comment or concern about this please provide a comment for the record.
HOW TO COMMENT

Send your comments by January 13, 2020

UpperBaratariaFS@usace.army.mil or

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

Upper Barataria Basin Louisiana Study Website: