Houma Navigation Canal
Deepening Study
WRDA 1986, Section 203

Louisiana Transportation Conference
March 1, 2016
Houma Navigation Canal (HNC) Deepening Study
Louisiana Transportation Conference Agenda

- History
- Study Authority
- Study Purpose and Need
- Study Scope
- Study Constraints
- Efforts to Date
- Efforts Underway
- Remaining Activities
- Schedule
- Conclusion
HNC Deepening Study
History of HNC

- The HNC is a federally maintained waterway beginning at the Gulf Intracoastal Waterway at Houma, LA and extending southward to the Gulf of Mexico for a distance of approximately 40 miles.

- 29 Jan 1958 – Permit issued to Terrebonne Parish for construction of the HNC

- 1962 – Terrebonne Parish completed construction of the HNC

- Chief’s Report recommending assumption of Maintenance

- 23 October 1962 - River and Harbor Act of 1962 authorized assumption of maintenance by the United States

- 27 November 1964 – First maintenance dredging performed by Corps
The authorized channel dimensions for the HNC are -15 feet MLG by 150 feet in bottom width from the GIWW to mile 0.0 and -18 feet MLG by 300 feet in bottom width, between mile 0.0 and the Gulf of Mexico.

1974, the Gulf entrance channel was widened and deepened by the Corps of Engineers to -18 ft Mean Low Gulf (MLG) by 300 ft as authorized by Section 5 of the R&H Act of 1915, which allows for channel dimension increases “at the entrances, bends, sidings and turning places as may be necessary to allow for the free movements of boats.”
This study is being conducted by the Louisiana Department of Transportation and Development under the authority of WRDA 1986, Section 203:

“A non-Federal interest may on its own undertake a feasibility study of a proposed harbor or inland harbor project and submit it to the Secretary. To assist non-Federal interests, the Secretary shall, as soon as practicable, promulgate guidelines for studies of harbors or inland harbors to provide sufficient information for the formulation of studies.”
VICINITY MAP

Houma Navigation Canal Deepening

Legend
- Proposed MTG Water Control Structures
- Proposed MTG Flood Gate Lock, Bubba Dove Surge Barrier
- Proposed Morganza to the Gulf Levee Alignment
- Houma Navigation Canal
- Bayou Lafourche
- GIWW
- Parish Boundary, Terrebonne

Houma Navigation Canal
Bayou Lafourche
Authorized MTG Levee Alignment (Partially Constructed)
Authorized MTG Flood Gate Lock, Bubba Dove Surge Barrier

Gulf of Mexico

ERSI Ocean Map

Date: October 2012
Scale: 1:750,000
Source: ESRI/GEC
Map ID: 278500218-3026
HNC Deepening Study
Study Purpose and Need

**Purpose:**
Identify the depth that creates the greatest net benefits up to a depth of 20 feet in order to achieve transportation cost savings for businesses supporting the oil and gas industry in the Gulf of Mexico.

**Need:**
Channel is currently operating with insufficient channel depth. Restrictions lead to light loading, maneuvering difficulties, and tidal/river stage delays. Inefficiencies translate into costs to the national economy.
HNC Deepening Study
Study Scope

- Evaluate the channel depth that produces the greatest net benefits for the HNC up to a depth of 20 feet for the entire length of the HNC from Houma to the Gulf of Mexico.

- Maximize the beneficial use of dredged material while staying within the Federal Standard.

- Consider bank stabilization where justified
HNC Deepening Study
Study Constraints

The deepening study has been limited to evaluating the deepening to a maximum depth of 20 feet at the request of the non-Federal Sponsor. This is permissible per ER 1105-2-100 under categorical exemptions to the NED plan for navigation studies:

“For harbor and channel deepening studies where the non-Federal sponsor has identified constraints on channel depths, it is not required to analyze project plans greater (deeper) than the plan desired by the sponsor.”
The HNC Deepening project has been formulated to have the HNC Lock from the Morganza to the Gulf project in place prior to deepening the channel. The Lock will protect against the deleterious effects of saltwater intrusion, which would otherwise threaten the surrounding marshes and Houma’s water supply. This has been done at the request of the stakeholders in the Houma area.
HNC Deepening Study
Efforts to Date

- Study Team previously identified the Tentatively Selected Plan as a recommended depth of 20 feet with earthen containment in the offshore reaches. The B/C ratio associated with this plan was estimated at 2.54.
- Based on coordination with Federal and state agencies, the disposal plan was modified.
- The following items were updated based on the updated disposal plan:
  - Construction and Maintenance Cost Estimates
  - Real Estate Plan
  - WVA Model and Mitigation Costs
- Updated Economics – Benefit-to-Cost Ratios (BCRs)
HNC Deepening Study
Efforts to Date

- New costs resulted in the recalculation of the BCRs
  - 20-foot depth w/ adjacent disposal - 5.30
  - 20-foot depth w/ earthen containment - 2.73

- Project features include:
  - 20’ x 150’/300’ navigation channel
  - 4.1 Miles of rocked bank for disposal containment
  - 10.5 Miles of rocked bank for bank stabilization
  - Project is self mitigating through beneficial use of dredged material except for 9.71 AAHUs of mitigation for bottomland hardwood and 0.72 AAHUs of Swamp
HNC Deepening Study
Efforts to Date

- Integrated Draft Report Approximately 80% complete
- ATR review conducted with 17 of 84 comments left to close out
- Draft Coordination Act Report Completed
DISPOSAL AREAS
South End
Houma Navigation Canal Deepening

Legend
- Channel Mile Marker
- Cities

Disposal Options
Reach
- 1.00 - 3.7
- 5.00 - 1.5
- 11.0 - 5.0
- 13.0 - 11.0
- 16.0 - 13.0
- 18.0 - 16.0
- 20.0 - 18.0
- 22.0 - 20.0
- 24.0 - 22.0
- 26.0 - 24.0
- 28.0 - 26.0
- 29.5 - 28.0
- 32.0 - 29.5
- 34.0 - 32.0
- - Bayou Pelton
- Adjacent Disposal Alternatives
- Houma Navigation Canal
- Houma Navigation Canal - Old Alignment
- Disposal Sites
- Beneficial Use Alternatives
- GIWW
- Proposed Morganza to the Gulf Levee Alignment
- Parishes

Date: December 2014
Scale: 1:165,000
Source: ESRI/GEC
Map ID: 278500218-3026
HNC Deepening Study
Path Forward

- Develop MII and CSRA For Selected Plan
- Obtain Cost Certification (Walla Walla District)
- Obtain ATR Certification (Mobile District)
- Finish Developing Combined Report (FR/EIS) and Technical Appendices
- Conduct IEPR
- Conduct Additional Reviews (Legal, Policy, Etc.)
- Submit Report to ASA
HNC Deepening Study
Remaining Activities

- Identify Selected Plan(s) Based On Guidance And BCR
- Develop MII Estimate and Cost and Schedule Risk Analysis For Selected Plan
- Obtain Cost Certification (Walla Walla District)
- Finish Developing Combined Report (FR/EIS) and Technical Appendices
- Obtain ATR Certification (Mobile District)
- Conduct IEPR (Battelle)
- Prepare Draft Report for Final Reviews
HNC Deepening Study
Remaining Activities

- Conduct Legal Review (New Orleans District)
- Conduct Policy Review (New Orleans District)
- Submit to ASA
- Public, Agency, and State Reviews
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HNC Deepening Study
Conclusion

- The Louisiana Department of Transportation and Development intend to serve as the non-Federal Sponsor for the construction of this project.