DEPARTMENT OF THE ARMY
MISSISSIPPI VALLEY DIVISION, CORPS OF ENGINEERS
P.O. BOX 80
VICKSBURG, MISSISSIPPI 39181-0080

REPLY TO
ATTENTION OF:

26 May, 2011

CEMVD-PD-N

MEMORANDUM FOR Commander, New Orleans District

SUBJECT: Houma Navigation Canal Terrebonne Parish, Louisiana, Continuing Authorities Program, Section 206 Study, Review Plan (RP)

1. References:

a. Memorandum, CEMVN-PM-B, 20 May 2011, subject: CAP Section 206 Houma Navigation Canal, Mile 12 to 31.4, Terrebonne Parish, LA.

b. Memorandum, CEMVD-PD-KM, 5 April 2011, subject: MVD Review Procedures for the Continuing Authorities Program (CAP).

2. The subject RP with the supporting checklist provided under Reference 1.a above was reviewed upon receipt. The RP is consistent with the CAP Model RP approved under Reference 1.b above, and other applicable policy, regulations, and guidance.

3. The Project Manager should post the RP to the District web pages.

4. The MVD point of contact is Mr. James Wojtala, CEMVD-PD-N, (601) 634-5931.

RAYFORD E. WILBANKS
Chief, Lower District Support
Team, New Orleans

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

CEMVN-PM-B

20 MAY 2011

MEMORANDUM FOR Commander, Mississippi Valley Division (MVN-DST/R. Wilbanks)

SUBJECT: CAP Section 206 Houma Navigation Canal, Mile 12 to 31.4, Terrebonne Parish, LA

1. The subject Review Plan is hereby submitted (enclosed). Terrebonne Parish is participating in the ecosystem restoration project as the non-Federal sponsor.

2. I recommend that this Review Plan be approved under the authority of Section 206 of the 1996 Water Resources Development Act.

3. The POC for this study is Mr. Thomas A. Holden Jr., Deputy District Engineer for Programs and Project Management. He can be reached at (504) 862-2204.

Encls
as

EDWARD R. FLEMING
Colonel, EN
Commanding

REVIEW PLAN

Using the MVD Model Review Plan
for
Continuing Authorities Program
Section 14, 107, 111, 204, 206, 208, or 1135 Projects,
or Projects directed by Guidance
to use CAP processes

HOUMA NAVIGATION CANAL, TERREBONNE PARISH, LA CONTINUING AUTHORITIES PROGRAM SECTION 206 (AQUATIC ECOSYSTEM RESTORATION)

Section 206 Project

New Orleans District, MVN

MSC Approval Date: Pending
Last Revision Date: None

US Army Corps
of Engineers ®

Review Plan
Using the MVD Model Review Plan

HOUMA NAVIGATION CANAL, TERREBONNE PARISH, LA
CONTINUING AUTHORITIES PROGRAM SECTION 206 (AQUATIC ECOSYSTEM RESTORATION)
Section 206 Project

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HOUMA NAVIGATION CANAL, TERREBONNE PARISH, LA CONTINUING AUTHORITIES PROGRAM SECTION 206 (AQUATIC ECOSYSTEM RESTORATION)

1. Purpose and Requirements.

a. Purpose. This Review Plan defines the scope and level of peer review for the Houma Navigation Canal, Terrebonne Parish, Louisiana Section 206 Project products. The products that have been included for review are the Feasibility Report, Environmental Assessment, Real Estate Plan and Cost Estimate.

Section 206 of the Water Resources Development Act of 1996, Public Law 104-305, authorizes the Secretary of the Army to carry out a program of aquatic ecosystem restoration with the objective of restoring degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition considering the ecosystem's natural integrity, productivity, stability and biological diversity. This authority is primarily used for manipulation of the hydrology in and along bodies of water, including wetlands and riparian areas. This authority also allows for dam removal. This is a Continuing Authorities Program (CAP) which focuses on water resource related projects of relatively smaller scope, cost and complexity. Unlike the traditional Corps' civil works projects that are of wider scope and complexity, the Continuing Authorities Program is a delegated authority to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization.

Additional Information on this program can be found in Engineering Regulation 1105-2-100, Planning Guidance Notebook, Appendix F, Amendment #2.

b. Applicability. This review plan is based on the MVD Model Review Plan for Section 14, 107, 111, 204, 206, 208, or 1135 Projects or Programs directed by guidance to follow CAP processes, which is applicable to projects that do not require Independent External Peer Review (IEPR), as defined by the mandatory Type I IEPR triggers contained in EC 1165-2-209, Civil Works Review Policy.

c. References:

(1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 January 2010.

(2) Director of Civil Works' Policy Memorandum #1, CECW-P, dated 19 January 2011.

(3) EC 1105-2-412, Assuring Quality of Planning Models, 31 March 2010.

(4) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 September 2006.

(5) ER 1105-2-100, Planning Guidance Notebook, Appendix F, Continuing Authorities Program, Amendment #2, 31 January 2007.

(6) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 November 2007.

2. Review Management Organization (RMO) Coordination.

The RMO is responsible for managing the overall peer review effort described in this review plan. The RMO for Section 206 Projects is MVD. MVD will coordinate and approve the review plan and manage the Agency Technical Review (ATR). The home District will post the approved review plan on its public website.

3. Project Information.

a. Decision Document The Houma Navigation Canal, Terrebonne Parish, Louisiana Section 206 Project decision document will be prepared in accordance with ER 1105-2-100, Appendix F, Amendment #2. The approval level of the decision document (if policy compliant) is MVD. An Environmental Assessment (EA) will be prepared along with the decision document.

b. Study/Project Description. Dredging for navigation, oil and gas drilling, and pipeline construction have disrupted fragile marsh and cypress swamp habitat in Terrebonne Parish, LA. These marshes are part of the world's seventh largest estuary. By the early 1980s, land loss and saltwater intrusion in the area between the west bank of the Houma Navigation Canal (HNC) and the east bank of Bayou du Large had progressed to the point that almost all of the fresh/intermediate marsh and much of the cypress/tupelo swamp had been killed or severely stressed. Tidal and wave action caused by marine vessels navigating the dredged canals are accelerating shoreline erosion. This erosion will lead to substantial shoreline breaches. These breaches will allow saltwater intrusion from the HNC and Falgout Canal to severely deteriorate thousands of acres of marsh and cypress swamp habitat in the vicinity of the Falgout Canal Marsh Management Area. Without action, subsidence, wave action and saltwater intrusion will result in additional future environmental impacts to the marsh and swamp habitat. The purpose of this Feasibility Study is to address these impacts to the marsh area in the vicinity of the Falgout Canal Marsh Management Area where environmental impacts are just beginning to severely impact marsh.

The area along the southern portion of the HNC has already been impacted heavily. The area to the north along the HNC is more protected, and has not yet suffered significant impacts from environmental degradation. The central part of the HNC, between Dulac to the south and the Falgout Canal Marsh Management Area, is in an area where prevention of future impacts can be realized in an efficient and effective manner. This area, from roughly HNC Mile 21 to Mile 28, provides an ecosystem that can be protected and restored within the limits of the Continuing Authorities Program.

The Corps of Engineers, New Orleans District (CEMVN) project delivery team (PDT) identified specific locations to prevent impacts, and selected measures to address environmental impacts. The final measures analyzed comprised a series of shoreline protection dikes in different locations along the HNC, which would protect the interior marsh from wake impacts, limit saltwater intrusion impacts, and help stabilize reaches of the HNC that are at risk. For each location, cost analysis and wetland value assessments were performed for the protection measure, to identify efficient uses of Federal resources.

After completing the cost and benefit analyses, the team used cost effectiveness and incremental cost analyses (CE/ICA) software to combine reaches and compare alternatives. The team identified four reaches that provided more efficient investment.

Protection of Reaches 1, 2, 3 and 5 was selected as the combination that provided the best return on investment for the aquatic ecosystem. These reaches comprise the tentatively selected plan, at an estimated total first cost of $7,142,000, and will result in a net benefit of 20.41 AAHUs.

c. Factors Affecting the Scope and level of Review. The Model Programmatic Review plan was used to determine the appropriate scope and level of review for this study because CAP Section 206 projects are standard aquatic ecosystem restoration projects that are not highly challenging nor do they present a high magnitude of project risks.

The study is not considered challenging and there are no risks likely to occur since this is a shoreline protection and ecosystem restoration project designed to protect the existing marsh from further erosion and saltwater intrusion. Due to the limited scope of CAP section 206 projects, this project is not likely to have significant economic, environmental, and/or social effects to the Nation and since this is a shoreline protection and ecosystem restoration project designed to protect the existing marsh from further erosion and saltwater intrusion. The project does not likely involve a significant threat to human life/safety assurance since the project is not located in any populated areas. The project/study is not likely to have significant interagency interest since the project is located in southern Terrebonne Parish and a standard Environmental Assessment is being performed with minimal impacts to surrounding areas. The information in the decision document and project design will not be highly controversial, based on novel methods, or present complex challenges as standard erosion control measures will be evaluated (rip rap, etc). Also, being a standard shoreline protection project, the project report is not likely to contain influential scientific information or be a highly influential scientific assessment.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to District Quality Control (DQC) and ATR, similar to any products developed by USACE. No in-kind products are anticipated.

4. District Quality Control (DQC).

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC prior to ATR. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC in accordance with MVD and district Quality Management Plan. Any discrepancies between a reviewer and a Project Delivery Team (PDT) member will be resolved face-to-face. If a concern cannot be satisfactorily resolved between the DQC team and the PDT, it will be elevated to the section supervisor for further resolution.

The DQC review for the HNC CAP 206 project was performed by reviewing each product internally within each division. Plan formulation was reviewed internally by the Senior Plan Formulator, by a Division quality control reviewer and by the Environmental RTS (Reviewing for consistency with the Environmental Documents). The Environmental documents were reviewed by the section chief, and then reviewed by the Environmental RTS. Real Estate, Engineering and Cost Engineering was reviewed by the section Chief, then reviewed by the Branch Chief.

5. Agency Technical Review (ATR).

One ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.), however additional ATRs may be performed if deemed warranted. ATR

shall be documented and discussed at the Alternative Formulation Briefing (AFB) milestone. Certification of the ATR will be provided prior to the District Commander signing the final report. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel. The ATR team lead will be from within the home MSC.

a. Products to Undergo ATR. ATR will be performed throughout the project in accordance with the District and MVD Quality Management Plans. Products to undergo ATR include: The Feasibility Report, Environmental Assessment, Real Estate Plan and Cost Estimate.

b. Required ATR Team Expertise.

ATR Team Members/Disciplines	***Expertise Required***
ATR Lead	The ATR lead should be a senior professional preferably with experience in preparing Section 206 Documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. Typically, the ATR lead will also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc). The ATR Lead MUST be from outside MVN
Planning	The Planning reviewer should be a senior water resources planner with experience in Section 206 Aquatic Ecosystem Restoration Projects and general planning policy.
Environmental Resources	The Environmental reviewer should be a senior environmental planner with experience in Section 206 Aquatic Ecosystem Restoration Projects and general environmental planning policy.
Civil Engineering	The civil engineering reviewer will be an expert in the field of civil engineering and have a thorough understanding of Section 206 documents for Aquatic Ecosystem Restoration and the prevention of habitat due to wave action and saltwater intrusion.
Cost Engineering	Cost DX Staff or Cost DX Pre-Certified Professional with experience preparing cost estimates for Aquatic Ecosystem Restoration Projects.
Real Estate	The Real Estate reviewer should be a senior Real Estate Specialist with experience in Section 206 Aquatic Ecosystem Restoration Projects and general real estate policy.

c. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. Any editorial comments should be provided informally by email to the PDT.

6. Policy And Legal Compliance Review.

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the MVD Commander. DQC and ATR augment and complement the policy review

processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

7. Cost Engineering Directory of Expertise (DX) Review And Certification.

For CAP projects, ATR of the costs may be conducted by pre-certified district cost personnel within the region or by the Walla Walla Cost DX. The pre-certified list of cost personnel has been established and is maintained by the Cost DX at https://kme.usace.army.mil/EC/cost/CostAtr/default.aspx. The cost ATR member will coordinate with the Cost DX for execution of cost ATR and cost certification. The Cost DX will be responsible for final cost certification and may be delegated at the discretion of the Cost DX.

8. Model Certification And Approval.

Approval of planning models under EC 1105-2-412 is not required for CAP projects. MSC commanders remain responsible for assuring the quality of the analyses used in these projects. ATR will be used to ensure that models and analyses are compliant with Corps policy, theoretically sound, computationally accurate, transparent, described to address any limitations of the model or its use, and documented in study reports.

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

Planning and Engineering Models. The following models are anticipated to be used in the development of the decision document:

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study
Wetland Value Assessment Model (WVA)	The Wetland Value Assessment methodology purpose is to quantify changes in habitat quantity that are projected to occur as a result of proposed wetland enhancement projects. The model will be used to measure or quantify if conditions will increase or decrease habitat suitability for each of the reaches along the HNC identified in the Feasibility Report.
IWR Planning Suite, Cost Effectiveness/Incremental Cost Analysis Software, (CE/ICA)	The Cost Effectiveness/Incremental Cost Analysis Software, (CE/ICA) analysis is conducted to evaluate alternative plans, determine which plans are cost effective and to identify a National Ecosystem Restoration (NER) Plan. The various alternatives of the HNC CAP 206 project will be analyzed individually and in combinations of reaches,

9. Review Schedules And Costs.

ATR Schedule and Cost. The ATR is estimated to take one month for a cost of $20,000. The ATR lead can be made available for the AFB to address the ATR process and any ATR concerns.

10. Public Participation.

State and Federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Preparation of the Supplemental Environmental Assessment (SEA) 391-A and draft Finding of No Significant Impact (FONSI) will be coordinated with appropriate Congressional, Federal, state, and local interests, as well as environmental groups and other interested parties. The Interested Parties letters and Notice of Availability for the SEA and draft FONSI will be mailed out for a 30 day comment period. Final copies of the SEA and FONSI will be sent via e-mail or mail if requested. The following agencies, as well as other interested parties, will receive copies of this SEA and draft FONSI:

U.S. Department of the Interior, Fish and Wildlife Service
U.S. Environmental Protection Agency, Region VI
U.S. Department of Commerce, National Marine Fisheries Service
U.S. Natural Resources Conservation Service, State Conservationist
Advisory Council on Historic Preservation
Governor's Executive Assistant for Coastal Activities
Louisiana Department of Wildlife and Fisheries
Louisiana Department of Natural Resources, Coastal Management Division
Louisiana Office of Coastal Protection and Restoration
Louisiana Department of Environmental Quality, PER-REGC
Louisiana Department of Environmental Quality, EP-SIP
Louisiana State Historic Preservation Officer

11. Review Plan Approval And Updates.

The MVD DST Chief is responsible for approving this review plan and ensuring that use of the MVD Model Review Plan is appropriate for the specific project covered by the plan. The review plan is a living document and may change as the study progresses. The home district is responsible for keeping the review plan up to date. Minor changes to the review plan since the last MVD approval are documented in Attachment 2. Significant changes to the review plan (such as changes to the scope and/or level of review) should be reapproved by MVD following the process used for initially approving the plan. Significant changes may result in MVD determining that use of the MVD Model Review Plan is no longer appropriate. In these cases, a project specific review plan will be prepared and approved in accordance with EC 1165-2-209. The latest version of the review plan, along with the MVD approval memorandum, will be posted on the home district's webpage.

12. Review Plan Points Of Contact.

Public questions and/or comments on this review plan can be directed to the following points of contact:

MVN:

Marti Lucore, Senior Project Manager	504-862-2057
John Eblen, Project Manager	504-862-1855
Crorey Lawton, Plan Formulator	504-862-1281

MVD:

Jim Wojtala, MVN-DST	601-634-5931

Attachment 1: Team Rosters

PDT

Name	Discipline	Division	Phone Number
Marti Lucore	Senior Project Manager	MVN-PM-B	504-862-2057
John Eblen	Project Manager	MVN-PM-B	504-862-1855
Brian M Leaumont	Civil Engineer	MVN-Engineering	504-862-2777
Crorey M Lawton	Plan Formulation	MVN-Planning	504-862-1281
John Petitbon	Cost Engineering	MVN-Engineering	504-862-2732
Michael Brown	Environmental	MVN-Planning	504-862-1570
Karen E Vance	Real Estate	MVN-Real Estate	504-862-1349

ATR Team

Name	Discipline	Division	Phone Number
Sheridan S. Willey	ATR Team Lead/Plan Formulation	CESWG-PE-PL	409-766-3917
Joy Smith	Real Estate	CESWG-RE-A	409-766-3144
Jim Ellis	Environmental	CESWL-PE	501-324-5629
Nancy Young	General Engineering	CESWG-EC-EG	409-766-3147
Jacqueline Lockhart	Cost Engineering	CESWG-EC-PS	409-766-3053

Attachment 2: Review Plan Revisions

Revision Date	Description of Change	Page/Paragraph Number