



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

REPLY TO
ATTENTION OF:

CEMVD-PD-N

26 FEB 2008

MEMORANDUM FOR Commander, New Orleans District

SUBJECT: Peer Review Plan (PRP) for the Alexandria to the Gulf of Mexico, Louisiana, Feasibility Study

1. References:

- a. EC 1105-2-408, Peer Review of Decision documents, 31 May 2005.
- b. Memorandum, CECW-CP, 30 March 2007, subject: Peer Review Process.
- c. Memorandum, March 2007, subject: Supplemental information for the "Peer Review Process."
- d. Email, CESP, 11 February 2008, subject: FRM-PCX: Final Alexandria to the Gulf PRP (encl).

2. I hereby approve subject PRP and concur with the conclusion that an External Peer Review (EPR) of this project is necessary since the implementation cost is estimated to be greater than \$50,000,000 which is above the \$45,000,000 threshold for the EPR requirement. The proposed PRP has been coordinated with the Flood Risk Management Planning Center of Expertise (FRM-PCX). The PRP complies with all applicable policy and provides an adequate independent technical review of the plan formulation, engineering and environmental analyses, and other aspects of the plan development. Non-substantive changes to this PRP do not require further approval.

3. The District should take steps to post the PRP to its web site and to provide a link to the FRM-PCX for their use. Before posting to the web site, the names of Corps/Army employees should be removed in accordance with reference 1.b. above.

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CEMVD-PD-N

SUBJECT: Peer Review Plan (PRP) for the Alexandria to the Gulf of Mexico, Louisiana, Feasibility Study

4. The MVD point of contact is Mr. ~~XXXXXXXXXX~~, CEMVD-PD-N, (601) 634-5829.

Encl

[Handwritten Signature]
FD-~~XXXXXXXXXX~~ Col 7EP CDK
Brigadier General, USA
Commanding

CF:

CESPD-PDS-P (FRM-PCX, ~~XXXXXXXXXX~~)

CEMVN-PM-W (~~XXXXXX~~)

CECW-CP



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

**Alexandria to Gulf of Mexico
Feasibility Study,
Louisiana
General Investigation**

Peer Review Plan

September 2007

Revised Jan 2008

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1) **Project Description**

- a. **Decision Document.** The Alexandria to the Gulf feasibility study will address the flooding problems and other water resources problems in the area drained by the West Atchafalaya Basin Protection Levee landside drainage system and the Gulf of Mexico. Once completed the study will determine if incorporating agricultural water supply features into the flood control improvements should be warranted as a Federal project. The feasibility study is cost shared 50/50 with the project sponsor being the Gravity Drainage District (GDD) No. 1 and Louisiana Department of Transportation (LADODT).

- b. **General Site Description.** The study area is located in south-central Louisiana west of the South Bank of the Red River Levee, the West Atchafalaya Floodway, and the Atchafalaya Basin Floodway between Alexandria, Louisiana, on the north and the Gulf of Mexico on the south. The western limits of the study area is the western drainage divides of the Bayou Boeuf, Bayou Cocodrie, and Vermilion River basins. The study area is located in Rapides, Avoyelles, St. Landry, Evangeline, St. Martin, Vermilion, Lafayette, Iberia, and St. Mary Parishes. Some of the larger cities in the study area include Alexandria, Marksville, Opelousas, Lafayette, Abbeville, and New Iberia, Louisiana.

- c. **Purpose and Scope.** The purpose of this report is to present the findings of a feasibility investigation that will determine if there is a Federal interest in providing flood control improvements for the city of Alexandria and the agricultural areas south of the city. The proposed project will include alternatives developed in the feasibility study to address flood control problems in the area. These alternatives include a plan of no action and various structural and non-structural measures including channel improvements, a detention pond at confluence of Chatline Lake Canal and Hynson Bayou, an Upper Basin Pump Station and short diversion with channel improvements. Early estimations of project implementation costs projected to be above \$50 million.

- d. **Problems and Opportunities.** The natural drainage for the City of Alexandria was to the Red River through Bayou Cutoff and its major tributary Sandy Bayou. Also contributing to the natural drainage pattern was Hynson Bayou, which was a distributary of Bayou Robert and a tributary of the Sandy Bayou that was later replaced by the Chatlin Lake Canal. Bayou Robert was at that time a distributary of Bayou Rapides. Bayou Robert now begins northwest of the traffic circle. The upper portion of Bayou Robert during the 1800s is now the upper portion of Hynson Bayou. The natural drainage of the city through Sandy Bayou and Hynson Bayou was immediately to the Red River through Bayou Cutoff.

The natural drainage of the city was interrupted by the construction of the south bank of the Red River levee in the 1930s as part of the Mississippi River and Tributaries Project. The levee eliminated the inlet and outlet for Bayou Cutoff, producing the splayed configuration of present-day Persimmon Bayou, which dissipates in confusion on the Red River floodplain. The construction of Horseshoe Drainage Canal did not change the historic drainage within the city, but simply captured an area to the west that was insufficiently drained.

Drainage in the floodplain below Alexandria was historically constituted by an intricate complex of bayous, most of which are still in existence. These bayous flowed into the Red River. This drainage was also interrupted by the construction of the Red River levee.

Chatlin Lake Canal was built in the late 1930s to rectify the drainage disruptions that were caused by construction of the levee. All of the water from the city and the floodplain below the city now moves to the south through the canal, eventually reaching the Gulf of Mexico rather than the Mississippi River by way of the Red River. The upper portion of this lengthy route is through the nearly flat floodplain below the city, producing a sluggish flow that provides conditions for backwater flooding within the city.

- e. **Project Delivery Team.** The project delivery team (PDT) is comprised of those individuals directly involved in the development of the decision document. (See Appendix A for PDT member names)

Office Symbol	Office	Functional Responsibilities
MVN-PM-W	Project Management Branch West	Senior Project Manager
MVN-PM-W	Project Management Branch West	Project Manager
MML&H	Project Sponsor Representative	Principal Engineer
LADOTD	Project Sponsor	Project Manager
MVK-PM	Economics - Urban	Economists
MVK-PM	Economics - Agricultural	Economists
MVK-PM	Economics - Agricultural	Economists
MVN-PM-RN	Cultural Resources Analysis Section	Archeologist
MVN-PM-RS	Environmental Planning & Comp Branch	Environmental Manager
GEC	Environmental Planning	Cultural Resources
GEC	Environmental Planning	Recreation
GEC	Environmental Planning	Aesthetics
GEC	Environmental Planning	HTRW
GEC	Project Manager	Report Writer

MVK-HH	H&H Branch	Hydraulic Engineer
GEC	H&H	Hydraulic Engineer
MVN-HH	H&H Branch	Hydraulic Support
MVK-RE	Real Estate Division	Realty Specialist
MVN-ED-SP	Project Engineering Section	MVN Engineering FTL
MVN-ED-C	Cost Engineering Branch	Cost Analysis - MCASES
MVN-PM	Project Management	Value Engineering Report
MVN-PM-W	Project Management Branch West	Program Analyst
MVN-ED-T	Structures Branch	Structure Engineer Support
MVN-ED-FD	Geotech Branch	Geotechnical Support
MVN-OC	Office of Counsel	Lead Project Counsel
MVN-OD	Operations Division	Operations Manager
MVN-PA	Public Affairs Office	Public Outreach Coordinator

Source: USACE New Orleans District. PDT, Alexandria to Gulf, Louisiana. Revised August 2007.

- 2) **Peer Review Plan.** This Peer Review Plan (PRP) was developed to insure that high quality products are produced within the New Orleans District. This plan establishes the policies, procedures, and organizational responsibilities for providing quality control of planning products for this project.

The PRP for the Alexandria to the Gulf feasibility study provides a technical review mechanism insuring that quality products are developed during the course of the study by the New Orleans District (MVN). The technical review of the feasibility study will consist of an Independent Technical Review. An additional level of policy review for the Alexandria to the Gulf feasibility study will be performed at the Headquarters of the United States Army Corps of Engineers (HQUSACE) and will insure that all applicable statutes have been applied with respect to cost sharing, project purpose, and budget criteria. All processes, quality control, quality assurance, and policy review, will complement each other producing a seamless review process that identifies and resolves technical and policy issues during the course of the study.

The review process will insure that a cost-effective solution is developed. Technical review will assure accountability for the technical quality of the product. Each technical review objective in the PRP will be satisfied through a seamless review process performed outside MVN (Independent Technical Review), MVD (quality assurance of technical products), and HQUSACE (policy review). The PRP is based upon applicable guidance from higher authority including the Engineering Circular 1105-2-408 titled: Peer Review of Decision Documents dated May 31, 2005, Report of the Task Force on Technical Review, dated December 1994, and CELMV-ET memorandum of 23 September 1995, subject: Lower Mississippi Valley Division, Directorate of Engineering and Technical Services, Quality Control and Quality Assurance Guidance.

Peer Review. Based upon cost, technical expertise, and current and projected

workload, the on-going technical review process for the Alexandria to Gulf study will be conducted in coordination with the FRM-PCX and MSC. The local sponsor will also be involved in the review process by participating in Project Delivery Team (PDT) meetings. In terms of technical expertise, the New Orleans District has a vast amount of experience and capability in order to produce a quality product given the similarity of other numerous Flood Risk Management projects. Peer Review can consist of In-House Review, Independent Technical Review, and External Peer Review.

Peer Review Teams (PRT) will be responsible for verifying the following:

- Assumptions
- Methods, procedures, and material used in analyses based on the level of analyses
- Alternative evaluated is reasonable
- Appropriateness of data used, and level of data obtained
- Reasonableness of results
- Products meet sponsor needs and are consistent with law and existing policy.

Planning, Programs, and Project Management Division Peer Review Members. Peer Review Members will be from the functional areas within Planning, Programs, and Project Management Division, which includes Project Management, Economics and Social Analysis Branch, Environmental Planning and Compliance Branch, and Engineering Branch. Each functional area will be represented by one or more reviewers on the PRT from the various disciplines. Thus, a minimum of two members from Planning, Programs, and Project Management Division will reside on the Peer Review Team for each level of review.

Engineering Division Peer Review Members. Peer Review Members will be selected from the various design offices. The members may change as the project progresses and specific project features are better defined. The PRT will consist of a Technical Review Manager (TRM) and representatives from the various design offices. The design offices include Civil Branch, Cost Engineering Branch, Design Services Branch, General Engineering Branch, Geotechnical Branch, Hydraulics & Hydrologic Branch, and Structures Branch. One or more reviewers on the Technical Review Team (TRT) will represent each branch from the various disciplines. There will be a minimum of five Engineering Division members on the PRT for each level of review.

Independent Technical Review (ITR). ITR will consist of a single level study review performed outside the New Orleans District by the Planning Center of Expertise of another District.

- i. **Planning Center of Expertise (PCX).** The Alexandria to Gulf feasibility study primarily falls under the PCX business program

“Flood Risk Management.” ITR for studies grouped in this program are performed in San Francisco currently under the supervision of the FRM-PCX Manager, South Pacific Division, (415) 503-6852. The technical point of contact, can be reached at (916) 557-7440. The Center may conduct the ITR themselves or manage the review conducted by others. If the PCX decides to manage the review from an outside source, these potential reviewers may include nominations from scientific or professional societies, if the Center so chooses. At this time it is anticipated that the PCX will perform some of the ITR for the feasibility study.

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- ii. **Independent Technical Review Team (ITRT).** The ITRT will be comprised of the same disciplines on the PDT, and will have experience in the type of analyses in which they are responsible for reviewing. Each ITRT member will be senior or equal in experience to the analyst or production person. The amount of time it will take to conduct the ITR will depend on the Flood Risk Management PCX workload and schedule. ITR initiation has already begun and it is anticipated that it will be accomplished in FY 2009. Consistent with recent Corps guidance, the ITR team member for cost engineering will be obtained through the Walla Walla District. The number of reviewers participating in the ITR should include members with expertise in the following disciplines:

NAME	DISCIPLINE	DIVISION	BRANCH	SECTION
TBD	Economist	Planning, Programs, & Project Mgmt Division (PPPMD)	Economic and Social Analysis	Navigation Support
TBD	Environmentalist	PPPMD	Planning and Compliance	Ecological Planning & Restoration
TBD	Cultural Resource Specialist	PPPMD	Planning and Compliance	Natural/Cultural Resource Analysis
TBD	Recreational Resource Specialist	PPPMD	Planning and Compliance	Natural/Cultural Resource Analysis
TBD	Project Manager	PPPMD	Project Mgmt Branch	
TBD	Hydraulic Engineer	Engineering	Hydraulics & Hydrologic	Hydraulic Design
TBD	Civil Engineer	Engineering	Cost Engineering	
TBD	Geotechnical Engineer	Engineering	Geotechnical	Dams, Levees & Channel Slopes
TBD	Civil Engineer	Engineering	Civil	Levees
TBD	Mechanical Engineer	Engineering	General Engineering	General & Env. Design
TBD	Civil Engineer	Engineering	Design Services	Projects Engineering
TBD	Civil Engineer	Operations	Operations Mgmt	

TBD	Realty Specialist	Real Estate	Acquisition and Leasing Branch	
TBD	Appraiser	Real Estate	Appraisal and Planning Branch	
TBD	Attorney	Real Estate	Acquisition and Leasing Branch	

iii. **DrChecks.** ITR of this decision document will be conducted using the online DrChecks system (www.projnet.org). Use of DrChecks will document all ITR comments, responses, and associated resolution accomplished throughout the study delivery process. The number of reviewers participating in the EPR will be selected by the Corps and should include members with expertise in the same disciplines as in ITR.

iv. **Models.** The Study will be using a variety of models to determine with and without conditions. Although these models have been used in previous Corps studies, they are not currently certified and will be reviewed by the PCX for certification. Planning models being used are:

Economics: IMPLANs model covers both National Economic Development and Regional Economic Development benefits for the latest Risks and Uncertainty guidance handed out in the ER-1105-2-101, dated January 3, 2006 "Risk Analysis for Flood Damage Reduction Studies."

Environmental: Wetland Value Assessment Methodology (WVA) - Evaluation of project-related impacts on fish and wildlife resources will be aided by use of the WVA methodology developed for the evaluation of proposed Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) projects. The WVA methodology is similar to the Service's Habitat Evaluation Procedures (HEP), in that habitat quality and quantity are measured for baseline conditions and predicted for future without-project (FWOP) and future with-project (FWP) conditions.

External Peer Review (EPR). Because of the potential magnitude of this project, the feasibility study does meet the EPR criteria of EC 1105-2-408. Evaluating competing alternatives and developing a preferred course of action will require ongoing outreach efforts with a variety of stakeholders and may lead to significant economic, environmental, and social effects. The possibility exists for the study to contain precedent-setting methods and models and the scientific information disseminated may present conclusions that could change

prevailing practices and contain a potential for failure and/or controversy. Recent MSC guidance has required studies that meet these criteria to undergo EPR. It is assumed that a vertical team consensus exists on the level of review the District is recommending since the total project will cost more than \$50 million, which triggers EPR on its own. The EPR will be managed by the FRM-PCX in a similar manner as ITR, but will be conducted by an external entity.

- v. **External Peer Review Team.** Although the FRM PCX will be responsible for managing the EPR, peer reviewers will be selected by an external entity (procured by the FRM PCX) with any necessary input from other Corps Centers of Expertise, stakeholders and the sponsor. It is anticipated that EPR will be conducted by a panel, but the final decision will be left up to the PCX manager and the external entity. At least 3 members will be needed for the review team with expertise in the following disciplines:

DISCIPLINE
Environmental – team members will have extensive experience in NEPA policies, cultural resources, recreational resources and HTRW
Hydraulic Engineering – the team member will be an expert in the field of urban hydrology & hydraulics, have a thorough understanding of the dynamics of open channel flow systems and enclosed systems, and have an understanding of computer modeling techniques that will be used for this project.
Civil Engineering – team member will have experience in utility relocations, positive closure requirements and internal drainage for levee construction, projects engineering, operations, and application of non-structural flood damage reduction, specifically flood proofing.

b. Milestones and Schedule.

Milestone	Date
ITR Initiation	Complete
EPR Initiation	3 rd Qtr FY08
AFB	4 th Qtr FY08
Draft Report	1 st Qtr FY09
Draft Submittal	2 nd Qtr FY09
NEPA Public Review	3 rd Qtr FY09
ITR Certification	3 rd Qtr FY09
EPR Certification	3 rd Qtr FY09
Final Submittal	3 rd Qtr FY09
CWRB	4 th Qtr FY09
MSC Commanders Public Notice	4 th Qtr FY09

- c. **Public Involvement.** The public will be asked to nominate potential peer reviewers and will have several opportunities to comment on the feasibility study through a public involvement plan implemented through a notice of study initiation, public meetings, and workshops. This will give the Corps the opportunity to exchange information with the public and insure that individuals with an inherent interest in the study are identified and contacted allowing them to voice their views and concerns relative to the study process. Significant and relevant public comments will be provided to the ITR team prior to ITR submittal along with any changes in the study resulting from these comments

Public meetings and workshops will be conducted to gather and provide feedback from the public, formulate a consensus, and generally keep interested parties informed. One such public meeting will be scheduled subsequent to the public release of the draft feasibility report and environmental assessment to present the study conclusions. This NEPA public scoping process will allow the public to comment on any environmental issues that may arise as a result of the study's recommended plan. Throughout the study other public meetings and workshops will be held as necessary.

In addition, the public will have the opportunity to comment on this peer review plan. Upon approval, the plan will be posted to the New Orleans District's website where the public will be able to view and provide any comments relating to the reviewable process they might have.

Appendix A

Members	Office Symbol	Office	Functional Responsibilities
Rodney Greenup	MVN-PM-W	Project Management Branch West	Senior Project Manager
Robert Ariatti	MVN-PM-W	Project Management Branch West	Project Manager
Kerry Labauve	MML&H	Project Sponsor Representative	Principal Engineer
Nick Rabalais	LADOTD	Project Sponsor	Project Manager
Toni Baldini	MVK-PM	Economics - Urban	Economists
Lee Robinson	MVK-PM	Economics - Agricultural	Economists
Terry Baldrige	MVK-PM	Economics - Agricultural	Economists
Valerie McCormack	MVN-PM-RN	Cultural Resources Analysis Section	Archeologist
Nathan Dayan	MVN-PM-RS	Environmental Planning & Comp Branch	Environmental Manager
Patrick McDaniel	GEC	Environmental Planning	Cultural Resources
Patrick McDaniel	GEC	Environmental Planning	Recreation
Patrick McDaniel	GEC	Environmental Planning	Aesthetics
Patrick McDaniel	GEC	Environmental Planning	HTRW
Jacques Bagur	GEC	Project Manager	Report Writer
Tommy Brown	MVK-HH	H&H Branch	Hydraulic Engineer
Robert Reed	GEC	H&H	Hydraulic Engineer
Angel Mislán	MVN-HH	H&H Branch	Hydraulic Support
Robert Wood	MVK-RE	Real Estate Division	Realty Specialist
Brian Gannon	MVN-ED-SP	Project Engineering Section	MVN Engineering FTL
Darrell Normand	MVN-ED-C	Cost Engineering Branch	Cost Analysis - MCASES
Frank Vicidomina	MVN-PM	Project Management	Value Engineering Report
Terri Lewis	MVN-PM-W	Project Management Branch West	Program Analyst
TBA	MVN-ED-T	Structures Branch	Structure Engineer Support
TBA	MVN-ED-FD	Geotech Branch	Geotechnical Support
TBA	MVN-OC	Office of Counsel	Lead Project Counsel
TBA	MVN-OD	Operations Division	Operations Manager
TBA	MVN-PA	Public Affairs Office	Public Outreach Coordinator

Source: USACE New Orleans District. PDT, Alexandria to Gulf, Louisiana. Revised August 2007.

Environmental Planning