



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

REPLY TO
ATTENTION OF:

21 July 2008

CEMVD-PD-N

MEMORANDUM FOR Commander, New Orleans District

SUBJECT: Quality Control and Peer Review Plan (PRP), Plaquemines Parish Urban Flood Control 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, CESPDPDS-P, 18 April 2008, subject: Plaquemines Parish Peer Review Plan (encl).

2. I hereby approve subject Quality Control and PRP and concur in the recommendation that an External Peer Review (EPR) of this project is necessary since the implementation cost will exceed the \$45 million threshold for EPR requirement as per WRDA 2007, Section 2034. Based upon EC 1105-2-408, 31 May 2005, decision documents will undergo EPR if the subject matter is controversial and is precedent setting. The proposed PRP has been coordinated with the National Planning Center of Expertise for Flood Risk Management (PCX-CFRM). The PRP complies with all applicable policies 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.

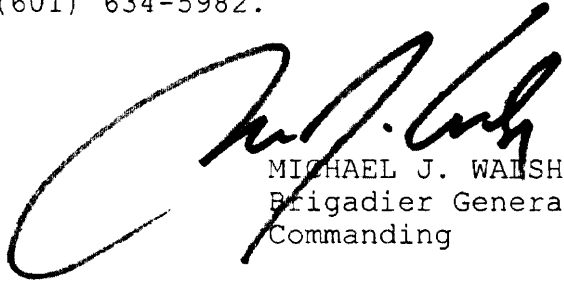
3. The District should take steps to post the PRP to its web site and to provide a link to the PCX-CFRM for their use. Before posting to the web site, the names of Corps/Army employees should be removed in accordance with reference 1.b. above.

CEMVD-PD-N

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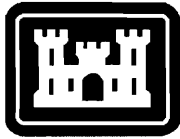
4. The MVD point of contact is Ms. [REDACTED]
CEMVD-PD-N, at (601) 634-5982.

Encl



MICHAEL J. WALSH
Brigadier General, USA
Commanding

CF:
CESPD-PSD-P (PCX-CFRM, Frentzen)
CEMVN-PM-W (Sims)
CECW-CP



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

**Plaquemines Parish Urban Flood Control Study,
Plaquemines, Louisiana
General Investigation**

Peer Review Plan

Revised May 2008

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- 1) **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 Plaquemines Urban Flood Control 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 Plaquemines Urban Flood Control 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 peer review plan 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.

2) **Project Description**

- a. **Decision Document.** The Plaquemines Parish Urban Flood Control (UFC) Study is an investigation to provide flood risk management improvements within the city of Belle Chasse. Flooding occurs in the city because of the flat topography and the inability of the existing drainage system. The study will develop alternative plans for addressing flood risk management in the study area, evaluate and screen these plans, and the development of a plan to be recommended for implementation as a Federal project. Because the decision document will lead to Congressional Authorization, a peer review plan is needed.
- b. **General Site Description.** The Plaquemines Parish study area covers approximately 22.7 square miles and is entirely within the deltaic plain of the Mississippi River and the coastal zone of Louisiana. It is located on the west bank of the Mississippi River south of, and contiguous to, the City of New

Orleans, Louisiana. The main drainage components that help carry the excess rainfall water are the following; Barrier Canal, End Canal, Planters Canal, and Industry Canal. The study area is protected from Mississippi River and hurricane surge flooding by a levee loop that runs along the river and south from the river along the Intracoastal Waterway and the Hero Canal.

- c. **Purpose and Scope.** The feasibility study is cost shared 50/50 with the project sponsor, the Plaquemines Parish Government. The purpose of this report is to present the findings of a feasibility investigation and determine if there is a Federal interest in providing flood risk management improvements for Plaquemines Parish. This report analyzes the problems and opportunities and expresses desired outcomes as planning objectives. Alternatives are then developed to address these objectives. These alternatives include a plan of no action and various structural and non-structural measures. The estimated project cost is \$50-million.

- d. **Problems and Opportunities.** During the past 25 years, excessive rainfall associated with thunderstorms and tropical events have caused extensive flood damages throughout Plaquemines Parish. More recently, during the summer and fall of 1998, three tropical storms and two hurricanes affected the weather in Plaquemines Parish. While none of these storms tracked directly through the area, the rainfall associated with these events caused extensive flooding in the parish. The Federal Emergency Management Agency reports that from 1987 to December 31, 2000, damages claims have totaled \$5.7 million. This represents an increase from 718 claims valued at \$3,945,278 as of July 31 1998. The flood claim dollar amounts reflect prices at the time that the claims were filed. Since prices have increased significantly between 1978 and 1998, the figures tend to understate the value of the payments and the level of damage that occurred.

Flooding is a major problem throughout Plaquemines Parish, and flooding problems are expected to increase due to increased rainfall runoff from development. There is an opportunity throughout the study area to reduce repetitive flooding damages to residential developments with improvements to the primary rainfall drainage system. This is consistent with Administration policy.

- e. **Project Delivery Team.** The project delivery team (PDT) is comprised of those individuals directly involved in the development of the decision document. Contact information and disciplines are listed below.

Members	Office Symbol	Office	Functional Responsibilities
[REDACTED]	MVN-PM-W	Project Management Branch West	Senior Project Manager
[REDACTED]	MVN-PM-W	Project Management Branch West	Project Manager
[REDACTED]	PPG	Project Sponsor	Principal Engineer
[REDACTED]	MVN-PM-AW	Economics - Urban	Economists
[REDACTED]	MVN-PM-RN	Cultural Resources Analysis Section	Archeologist
[REDACTED]	MVN-PM-RS	Environmental Planning & Comp Branch	Environmental Manager
[REDACTED]	MVN-PM-RS	Environmental Planning & Comp Branch	Cultural Resources
[REDACTED]	MVN-PM-RN	Environmental Planning & Comp Branch	Recreation
[REDACTED]	MVN-PM-RN	Environmental Planning & Comp Branch	Aesthetics
[REDACTED]	MVN-PM-RN	Environmental Planning & Comp Branch	HTRW
[REDACTED]	MVK-ED-HH	H&H Branch	Hydraulic Engineer
[REDACTED]	MVN-HH	H&H Branch	Hydraulic Support
[REDACTED]	MVN-RE	Real Estate Division	Realty Specialist
[REDACTED]	MVN-ED-SP	Project Engineering Section	MVN Engineering FTL
[REDACTED]	MVN-ED-C	Cost Engineering Branch	Cost Analysis - MCASES
[REDACTED]	MVN-PM	Project Management	Value Engineering Report
[REDACTED]	MVN-PM-W	Project Management Branch West	Program Analyst
[REDACTED]	MVN-ED-T	Structures Branch	Structure Engineer Support
[REDACTED]	MVN-ED-FD	Geotech Branch	Geotechnical Support
[REDACTED]	MVN-OC	Office of Counsel	Lead Project Counsel
[REDACTED]	MVN-OD	Operations Division	Operations Manager
[REDACTED]	MVN-PA	Public Affairs Office	Public Outreach Coordinator

Source: USACE New Orleans District. PDT, Plaquemines Parish UFC Study, Louisiana. Revised August 2007.

- 3) **Peer Review.** Based upon cost, technical expertise, and current and projected workload, the on-going technical review process for the Plaquemines Parish UFC study will be done 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 will 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.

a. Independent Technical Review (ITR). ITR will consist of a single level study review performed outside the New Orleans District in coordination with the FRM-PCX and MSC.

i. Planning Center of Expertise (PCX). The Plaquemines Parish UFC Study primarily falls under the PCX business program “Flood Risk Management.” ITR will be coordinated through the Flood Risk Management PCX. 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. Consistent with recent Corps guidance, the ITR team member for cost engineering will be obtained through the Walla Walla District.

ii. Independent Technical Review Team (ITRT). As with the IHRT, 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 ITR team member will be senior or equal in experience to the analyst or production person. The ITR Team leader will be coordinated with FRM PCX with the ideal candidate having experience with previous ITR’s and at least 15 years experience in one of the major disciplines. 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 completed in FY 2009. The number of reviewers participating in the ITR should include members with expertise in the following disciplines:

DISCIPLINE
Economics – team member will have extensive experience in related flood damage reduction projects, and have a thorough understanding of HEC-FDA
Environmental – team members will have extensive experience in NEPA policies, cultural resources, recreational resources and HTRW
Project Management – team member will be familiar with watershed level projects, current flood damage reduction planning and policy guidance and have experience in plan formulation.
Hydraulic Engineering – the team member will be an expert in the field of urban hydrology & hydraulics, have a through 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 / cost – team member will be familiar with cost estimating for similar projects using MCACES. Coordination will be made through the Walla District.
Geotechnical Engineering – team member will have extensive experience in levee & floodwall design, post-construction evaluation, and rehabilitation.
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.
Mechanical Engineering – team member shall be familiar with levee pump station and closure structure design.
Real Estate – team member wall have extensive experience in acquisition and leasing, including right of way issues, and appraisals.

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.

iv. Milestones and Schedule.

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

CWRB	3 rd Qtr FY09
MSC Commanders Public Notice	4 th Qtr FY09

b. External Peer Review (EPR). This feasibility study does meet the EPR criteria of EC 1105-2-408. The cost of this project is estimated to be around \$50 million. The study will not contain precedent-setting methods or models, or contain a potential for failure or controversy. Because of this, the scientific information disseminating from the feasibility report will not be influential and will not present conclusions that are likely to change prevailing practices. Recent MSC guidance has stated studies in this price range are required to undergo EPR, so it is assumed that a vertical team consensus exists on the level of review the District is recommending.

i. 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.

c. Public Involvement. The public 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.

Upon approval, the plan will be posted to the New Orleans District's and PCX website where the public will be able to view and provide any comments relating to the reviewable process they might have.

- 5. Models.** The Study will be using a variety of planning models to determine with and without conditions. Model certification will be completed in coordination with PCX. Planning models currently 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