



**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

MEMORANDUM FOR Commander, New Orleans District

*4 April 08*

SUBJECT: Quality Control and Peer Review Plan (PRP), West Shore Lake Pontchartrain, LA Hurricane Protection Project 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, CENAD-PSD-P, 4 March 2008, subject: Westshore Peer Review Plan (encl).

2. I hereby approve subject Quality Control and PRP and concur in the conclusion that an External Peer Review (EPR) of this project is necessary since the implementation cost will exceed the \$45,000,000 threshold for EPR requirement as per WRDA 2007, Section 2034, and 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 Coastal Storm Damage Reduction (PCX-CSDR). 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 PCX-CSDR 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

SUBJECT: Quality Control and Peer Review Plan (PRP), West Shore  
Lake Pontchartrain, LA Hurricane Protection Project Feasibility  
Study

4. The MVD point of contact is Mr. [REDACTED], CEMVD-PD-N,  
(601) 634-5829.

Encl



MICHAEL J. WALSH  
Brigadier General, USA  
Commanding

CF:

CESPD-PSD-P (PCX-CSDR, [REDACTED])

CEMVN-PM-W ([REDACTED])

CECW-CP



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

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## **Quality Control and Peer Review Plan**

# **WEST SHORE LAKE PONTCHARTRAIN, LA HURRICANE PROTECTION PROJECT FEASIBILITY STUDY**

**January 2008  
Revised April 2008**

- 1) **Project Description Decision Document.** This document outlines the peer review plan for the **West Shore Lake Pontchartrain, LA Hurricane Protection** project. EC 1105-2-408 dated 31 May 2005 "Peer Review of Decision Documents" 1) establishes procedures to ensure the quality and credibility of Corps decision documents by adjusting and supplementing the review process and 2) requires that documents have a peer review plan. The Circular applies to all feasibility studies and reports and any other reports that lead to decision documents that require authorization by Congress. This Feasibility Report will lead to Congressional Authorization and is therefore covered by the Circular. The West Shore Lake Pontchartrain, LA Hurricane Protection Project feasibility study addresses flooding issues associated with storm surge from Lake Pontchartrain in St. John and St. Charles Parishes. The feasibility phase of this project is cost shared 50/50 with the project sponsor, the Pontchartrain Levee District. This study will develop alternative plans for addressing hurricane protection and Storm Damage Reduction for the West Shore study area, for the evaluation and screening of those plans, and for the development of a plan to be recommended for implementation as a Federal project.
  - a) **General Site Description.** The study area, which includes portions of St. Charles, St. John the Baptist, and St James Parishes, is located west of the Bonnet Carre' Spillway between the Mississippi River and Lakes Pontchartrain and Maurepas. Communities within the study area include Laplace, Reserve, Lucher, Gramercy, and Garyville.
  - b) **Project Scope.** Major flooding problems in the study area occurred from Hurricanes Betsy (1965), Juan (1985), and Rita (2005). Approximately 16,400 homes and businesses are located in the project area. Initially, eight alternative alignments for providing increased levels of hurricane protection were evaluated during plan formulation. Subsequent analysis, incorporating lessons learned from Hurricane Katrina, has identified four revised alternatives that will be carried into the final feasibility study, as specified in the amended project management plan (PMP). The PMP provides for the development and selection among the alternatives considering net economic development benefits and assessment of the environmental and social effects of the selected plan. At present, construction costs have not been finalized, but are estimated to be in excess of \$250 million.
  - c) **Problems and Opportunities.** The current scope of work defines the tasks required to complete the West Shore Lake Pontchartrain, LA Hurricane Protection Project feasibility study as currently understood. The required tasks and related costs are subject to modification during the course of the study if plans are changed. Amendments to the scope of work will be developed in consultation with the non-Federal cost-sharing partner. Amendments to the scope of work must be agreed upon by the cost-sharing partner prior to initiating any new task. If changes in the scope of work are required, the total study cost will be adjusted to reflect such changes. The cost sharing for any changes shall be 50/50 between the Federal and Non-Federal sponsor.

- d) **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 and in appendix A.

<b>Discipline</b>	<b>Phone Number</b>	<b>Office Symbol</b>	<b>Org. Code</b>
Project Management		CEMVN-PM-W	B2H4800
Economics		CEMVN-PM-AW	B2H4610
Project Engineering (FTL)		CEMVN-ED-SP	B2L0500
Geotechnical		CEMVN-ED-FD	B2L0900
Systems & Programming		CEMVN-ED-SE	B2L0540
Relocations		CEMVN-ED-SR	B2L0500
Engineering Control		CEMVN-ED-SP	B2L0500
Structures		CEMVN-ED-T	B2L0900
Cost Engineering		CEMVN-ED-C	B2L0700
Civil Engineering		CEMVN-ED-L	B2L0400
Surveys		CEMVN-ED-SS	B2L0550
Environmental		CEMVN-PM-RS	B2H4710
Cultural Resources		CEMVN-PM-RN	B2H4730
Recreational Resources		CEMVN-PM-RN	B2H4730
Aesthetics		CEMVN-PM-RN	B2H4730
HTRW		CEMVN-PM-RP	B2H4720
H&H (ADCIRC Modeling)		CEMVN-ED-HD	B2L0200
H&H (Exterior Surge)		CEMVN-ED-HD	B2L0200
H&H (Interior Drainage)		CEMVN-ED-HD	B2L0200
H&H (Water Quality)		CEMVN-ED-HD	B2L0200
Real Estate		CEMVN-RE-E	B2N0200
Operations		CEMVN-OD-W	B2R0045
Office of Counsel		CEMVN-OC	B2N0100
PCX Lead		CENAD-PSD-P	TBD

- e) **In House Review Team (IHRT).** In house review will be performed inside the New Orleans District prior to submitting the West Shore Lake Pontchartrain, LA Hurricane Protection Project feasibility study for peer review. The IHRT will be comprised of members from Planning, Programs, and Project Management Division and Engineering Division, as described below. The IHRT will be established at the planning steps of the study and will be maintained to the maximum extent possible during the life of the study. IHRT members will come from inside the New Orleans District, but must not have been involved with the preparation of the technical product under review. The IHRT 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 IHRT member will be senior or equal in experience to the analyst or production person. The makeup of the IHRT may be modified as the study progresses to match the review requirements. The tiered IHR approach as described in MVD memorandum dated 14 February 2003 is the guiding instrument for IHR team establishment.
- **Planning, Programs, and Project Management Division Peer Review Members.** IHRT Members will be from the functional areas within Planning, Programs, and Project Management Division, which includes Project Management, Economics and Social Analysis Branch, and Environmental Planning and Compliance Branch. Each functional area will be represented by one or more reviewers on the IHRT from the various disciplines. Thus, a minimum of three members from Planning, Programs, and Project Management Division will reside on the Peer Review Team for the West Shore Lake Pontchartrain, LA Hurricane Protection Project feasibility study and will perform the Peer Review
  - **Engineering Division Peer Review Members.** IHRT 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 IHRT 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 IHRT will represent each branch from the various disciplines. There will be a minimum of seven Engineering Division members on the PRT for the West Shore Lake Pontchartrain, LA Hurricane Protection Project feasibility study and will perform the Peer Review.
- 2) **Peer Review Plan.** This review plan 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 peer review plan (PRP) for the West Shore Lake Pontchartrain, LA Hurricane

Protection Project 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 Independent Technical Review and External Peer Review. An additional level of policy review for the West Shore Lake Pontchartrain 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 peer review will be satisfied through a seamless review process performed outside the NOD (Internal Technical Review and External Peer 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 West Shore Lake Pontchartrain, LA Hurricane Protection Project feasibility study will be conducted by the New Orleans District in conjunction with another District with hurricane and storm damage prevention experience. 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 for the West Shore Lake Pontchartrain, LA Hurricane Protection Project feasibility study given the similarity to numerous other hurricane related projects constructed throughout the New Orleans District. Peer Review will consist of Independent Technical Review and External Peer Review. Peer Review Teams (PRT) will be responsible for verifying; 1) assumptions, 2) methods, procedures, and material used in analyses based on the level of analyses, 3) alternative evaluated is reasonable, 4) appropriateness of data used, and level of data obtained, 5) reasonableness of results, and 6) 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 by the National Planning Center of Expertise for Coastal Storm Damage Reduction (PCX-CSDR).

i) *Planning Center of Expertise (PCX-CSDR).* The West Shore Lake

Pontchartrain, LA Hurricane Protection Project feasibility study primarily falls under the PCX business program "Coastal Storm Damage Reduction." ITR for studies grouped in this program for the purposes of storm damage reduction are performed by the PCX-CSDR. The PCX Lead will direct the ITR. If the PCX decides to include the reviewers 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-CSDR will perform the ITR for the West Shore Lake Pontchartrain, LA Hurricane Protection Project feasibility study.

- ii) *Schedule and 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 schedule of the ITRT members. It is currently estimated that ITR will take no more than two months to complete and will be accomplished by 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	

**In addition, the PCX project manager will provide the plan formulation discipline.**

- iii) *DrChecks*. ITR of this decision document will be conducted using the online *DrChecks* system ([www.projnet.org](http://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: The amount of time it will take to conduct the ITR will depend on the Coastal Storm Damage Reduction PCX workload and schedule. The tentative schedule is as follows:

Milestone	Date
FCSA Amendment Execution	April 08
ITR Initiation	Third Quarter FY08
Feasibility Scoping Meeting	Fourth Quarter FY08
AFB	Second Quarter FY09
Draft Report	Third Quarter FY09
Draft Submittal	Third Quarter FY09
EPR Initiation	Third Quarter FY09
Technical review conference	If Needed Second Quarter FY09
NEPA Public Review	Third Quarter FY09
ITR Certification	Third Quarter FY09
EPR Certification	Third Quarter FY09
Final Submittal	First Quarter FY10
CWRB	First Quarter FY10
MSC Commanders Public Notice	Second Quarter FY10

- v) *Planning Models*: The Study will use certified HEC-HMS and HEC-RAS models for the H&H portion of the project; no ITR of these models will be necessary. The models that will be employed to analyze water and/or sediment transport in wetland areas of the project have not been selected yet. If the models ultimately selected for this task are subject to certification, they will undergo certification in accordance with the requirements of EC 1105-2-407, *Planning Models Improvement: Model Certification and current Corps guidance, as applicable*. As required, the Coastal Storm Damage Reduction PCX will coordinate with the PCX for Ecosystem Restoration when planning models of an environmental nature are utilized.
- b) **External Peer Review (EPR)**. The total project cost will exceed \$45 million therefore an EPR is mandatory for the study as per WRDA 2007, Section 2034. Additional criteria upon which the need for an EPR was established are summarized in the following External Peer Review Decision Checklist.

**External Peer Review Decision Checklist**

Evaluation Criteria	Yes/No	Rationale
Novel subject matter?	No	Project involves construction of typical storm damage reduction measures.
Controversial subject matter?	Yes	The study is evaluating alternatives that enclose wetlands within protected areas and provides for long-term active management of these wetlands.
Precedent setting?	Yes	Enclosing wetlands within the protected area with the intent to maintain the areas as wetlands through long-term active management may set precedents.

Unusually significant interagency interest?	No	Initial interagency discussions suggest that involvement by other agencies will not be unusually significant.
Unusually significant economic, environmental, and social effects to the nation?	No	The costs and benefits of the project are typical of other storm damage reduction projects and the environmental effects will be minimized/mitigated.

Therefore, the PCX-CSDR will manage an EPR consisting of reviewers/expects external to the Corps, in accord with EC1105-2-408 and current Corps policy, as applicable. ERP reviewers will be external to the Corps and also will be selected by an external entity (procured by the PCX-CSDR). It is anticipated that EPR will be conducted through a panel, although the final decision will be made by the PCX and could include individual letters or some form of alternative procedure. The EPR team will be comprised of the same disciplines as the PDT, and will have experience in the type of analyses in which they are responsible for reviewing. Each EPR team member will be senior or equal in experience to the analyst or production person. The EPR Team leader will also come from the CSDR PCX and the ideal candidate will have experience with previous EPR's and have at least 15 years experience in one of the major disciplines. If these criteria cannot be met the team leader will go to the member with the most experience. At least 8 members will be needed for the review team 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 will have extensive experience in acquisition and leasing, including right of way issues, and appraisals.

- 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.

Public meetings and workshops will be conducted to gather and provide feedback from the public, formulate a consensus, and generally keep interested parties informed. A public meeting will be scheduled subsequent to the public release of the draft feasibility report and environmental assessment to present the study conclusions. Throughout the study other public meetings and workshops will be held as necessary.

Although all comments will not be provided to the ITR team, significant and relevant public comments will have been addressed prior to ITR submittal. Any major changes in the study resulting from these comments, and all pertinent comments, will be made available to the PCX.

- 3) **Technical Review Meetings and Critical Checkpoints.** The quality control process recognizes that the appropriate place to perform one-on-one verification and IHR for Planning, Programs, and Project Management Division, Engineering Division, and Real Estate Division products will vary among the functional areas. However, the verifications will occur before the release of data and/or final products to another office/division, and may include reviewers and PDT members from other functional areas. The one-on-one verifications for technical divisions will occur numerous times throughout the current 25-month schedule. Each one-on-one verification meeting will be documented and become part of the quality control records used in the quality assurance process by MVD.

In addition to the one-on-one verification process, there are also points within the study process where it is appropriate for the TRT and PDT to perform the verification process as a team. This feature of the quality control process allows the flexibility to optimize the one-on-one verification process within the functional area while maintaining the team concept during the Technical Review Meetings. Each meeting will be documented and become part of the quality control records used in the quality assurance process by MVD. These points in the study process would typically occur during: alternative screening, plan selection, and report review.

- 4) **Quality Control Records.** Quality control records will be generated by the In-House Review Team and Independent Technical Review Team. IHRT quality control records will consist of comments, responses, and technical review checklists prepared by MVN Planning, Programs, and Project Management Division and MVN Engineering Division. ITRT quality control records will consist of comments, responses, and certifications prepared by the ITRT members assigned to the PRT.

The comments/response element of the quality control records for both the IHRT and ITRT will:

- Summarize the issues/comments from the reviewers
- Record the PDT's response or resolution to each comment

Technical review checklists prepared by MVN will assure that the major elements of the project have undergone technical review prior to submitting material to the ITRT for review. Certifications prepared by the ITRT members will verify that independent technical review has been conducted in accordance with applicable requirements.

The PDT leader is responsible for compiling the quality control records generated by the In-House Review Team. The PCX Lead is responsible for compiling the quality control records generated by the Independent Technical Review Team.

The quality control records that will be included in the West Shore Lake Pontchartrain, LA Hurricane Protection Project feasibility study report are:

- The Planning, Programs, and Project Management Division technical review checklist,
- The Engineering Division technical review checklist, and
- ITRT certifications

**APPENDIX A**  
**PROJECT CONTACT LIST**

<b>Discipline</b>	<b>Project Contact</b>	<b>Phone Number</b>	<b>Office Symbol</b>
Project Management	Durund Elzey	504-862-1674	CEMVN-PM-W
Economics	Lisa Leonard	504-862-1916	CEMVN-PM-AW
Project Engineering (FTL)	Jake Terranova	504-862-2709	CEMVN-ED-SP
Geotechnical	Frank Vojkovich	504-862-1034	CEMVN-ED-FD
Systems & Programming	Ralph Scheid	504-862-2995	CEMVN-ED-SE
Relocations	Greg DeBose	504-862-2452	CEMVN-ED-SR
Engineering Control	Walter Teckemeyer	504-862-2611	CEMVN-ED-SP
Structures	Rob Dauenhauer	504-862-1840	CEMVN-ED-T
Cost Engineering	Darrell Normand	504-862-2727	CEMVN-ED-C
Civil Engineering	Danny Thurmond	504-862-1214	CEMVN-ED-L
Surveys	Mark Huber	504-862-1852	CEMVN-ED-SS
Environmental	Bill Klein	504-862-2540	CEMVN-PM-RS
Cultural Resources	Paul Hughbanks	504-862-1100	CEMVN-PM-RN
Recreational Resources	Andrew Perez	504-862-1442	CEMVN-PM-RN
Aesthetics	Richard Radford	504-862-1927	CEMVN-PM-RN
HTRW	Christopher Brown	504-862-2508	CEMVN-PM-RP
H&H (ADCIRC Modeling)	Hasan Pourtaheri	504-862-2444	CEMVN-ED-HD
H&H (Exterior Surge)	Whitney Hickerson	504-862-2607	CEMVN-ED-HD
H&H (Interior Drainage)	Leslie Lombard	504-862-2490	CEMVN-ED-HD
H&H (Water Quality)	Eric Glisch	504-862-2066	CEMVN-ED-HD
Real Estate	Eric Savage	504-862-2776	CEMVN-RE-E
Operations	Karen Oberlies	504-862-2313	CEMVN-OD-W
Office of Counsel	Mary Kinsey	504-862-2828	CEMVN-OC
PCX Lead	Joe Vietri	718-765-7070	CENAD-PSD-P