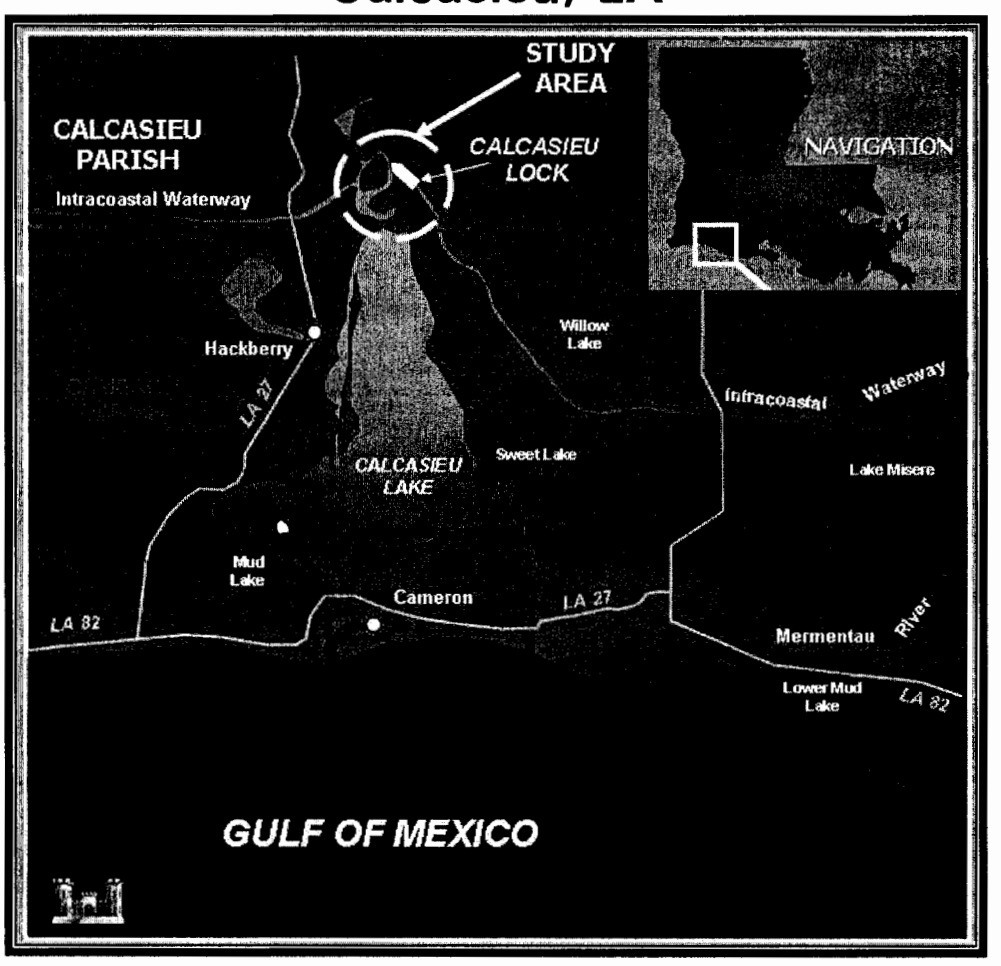
US Army Corps of Engineers®
New Orleans District

Peer Review

Calcasieu Lock
Calcasieu, LA



16 May 2007

This review plan was developed for Calcasieu Lock Feasibility Study to comply with EC 1105-2-408, "Peer Review of Decision Documents," dated 31 May 2005. The purpose of the review plan is to present a process through which decision documents produced by the Corps of Engineers are evaluated to ensure both quality and credibility. The following document outlines the approach to be used by the project team to fulfil the requirement of the two review approaches (independent technical review (ITR) and external peer review (EPR)) and to detail the involvement of the Corps Planning Centers of Expertise (PCX) in the approaches. This document addresses review of the decision document as it pertains to both approaches and planning coordination with the appropriate Center.

In addition to the review provided by the established ITR process, the EPR has been added to the existing Corps review process, to provide an additional external examination of projects with higher risk or project magnitude. EPR can also be used where the information is based on novel methods, presents complex interpretation challenges, contains precedent-setting methods or models, or is likely to affect policy decisions that have a significant impact. The degree of independence required for technical review increases as the project magnitude and project risk increase.

This document also details proposed coordination between the project delivery team (PDT) and the PCX.

1. Project Description

The Corps of Engineers, New Orleans District (CEMVN) is undertaking a Feasibility Study of Calcasieu Lock to assess the feasibility of replacing the lock to alleviate traffic problems that have developed in the area.

Project History. Calcasieu Lock, which was completed in 1950, is a feature of the Gulf Intracoastal Waterway between Apalachee Bay, Florida, and the Mexican Border Project. The lock has dimensions of 13 by 75 by 1,206 feet and is located east of the Calcasieu River, approximately 10 miles south of Lake Charles, Louisiana, in Calcasieu Parish. The structurally sound lock prevents saltwater intrusion from the Calcasieu River into the Mermentau River basin, a major rice producing area. As one of five locks in the Mermentau Basin, Calcasieu Lock provides one of only five outlets for water drainage in the basin. During periods of high water, the lock is currently being used to drain water out of the basin, alleviating local flooding. The use of the lock for flood control impacts traffic going through the lock Calcasieu Lock

As a feasibility study of a lock replacement on an inland waterway, the project study is funded with 100% Federal funds [Section 102, WRDA 1986 (P.L. 99-662].

Intracoastal Waterway Locks, Louisiana, a reconnaissance study completed in 1992, determined that there is an immediate need for capacity increases at Bayou Sorrel and Calcasieu Locks. The Calcasieu Lock Section 905(b) analysis found a benefit-cost ratio of 1.2:1 for provision of a new lock and recommended proceeding with feasibility

phase studies. A benefit –cost ratio for the feasibility phase was calculated at 2.3 to 1. The costs and benefits, however, are being revisited to reflect post-Rita price increases.

Delays to the completion of the study have resulted from sporadic funding of the project; as a result, many of the previously completed analyses will need to be redone. The current schedule, contingent on timely and sufficient funding, will result in a completed feasibility study by December of 2008.

The current schedule includes the following efforts:

a. Modeling contract to evaluate the flood control impacts of lock operation;

b. Alternative plan formulation and evaluation for H&H, preliminary designs, and environmental analysis;

c. Economic analyses of navigation (and flood control) benefits;

d. ERDC Barge Simulation model to evaluate navigability of alternatives;

e. Environmental assessment of the area to be impacted by the project;

f. Cultural resources and land use history investigations;

g. Cultural resources and land use history contract.

Problems and Opportunities. The Calcasieu Lock provides the only navigation outlet for the area. As traffic has increased for the area, locking times have grown. Barge tows are also delayed due to the size of the lock and the need to break them apart in order to transit. Salinity intrusion is a problem because of the number of lockages required in a day. In 1994 Corps representatives agreed to modify the operation of Calcasieu Lock to the current methodology, which is driven primarily by flooding. The basin requires approximately 6-weeks to re-establish a stage below +2.0 MLG following major rainfall events. There are some water quality issues north of the IWW due to salinity intrusion and agricultural activities (pesticides, etc.) Current modeling efforts do not capture the damages or benefits in the entire Mermentau Basin - only that area immediately north of the IWW and all of the area south of the IWW, along the coast. The opportunity now exists to address all of these issues through the replacement of the lock, which will provide flood protection benefits, environmental benefits relating to reduced saltwater intrusion, and navigation benefits through decreased lockage times.

Project Delivery Team (PDT) members. The PDT comprises the indivduals directly responsible for the development of the decision documentThe New Orleans District Corps of Engineers (CEMVN) is conducting this study. The Corps' project manager, Crorey Lawton, is the primary POC for the PDT. Contact Mr. Lawton by telephone at (504) 862-1281) or by e-mail at james.m.lawton@mvn02.usace.army.mil. Other team members include:

Table 1. PDT Members

First	Last	Discipline	Phone Number
Don	Alette	Waterways	(504) 862-2435
Mark	Huber	Surveys	(504) 862-1852
Mark	Haab	Economics	(504) 862-2497
Lisa	Leonard	Economics	(504) 862-1916
Lewis	Hornung	Contractor - Project Mgmt.	(504) 862-2446
Terri	Lewis	Program Analyst – PM	(504) 862-2242
Rodney	Greenup	Senior Project Manager	(504) 862-2613
Christie	Nunez	Functional Team Leader, Eng	(504) 862-2144
Nathan	Dayan	Environmental	(504) 862-2530
Jerica	Richardso	Cultural	(504) 862-2038

Additional team members from real estate, geotechnical, design services, cost engineering, and engineering are being assigned to replace recently retired and promoted team members.

2. Review of the decision document

Evaluation of the decision document will comprise several levels of review, including review by an ITR and EPR, as coordinated by a Corps PCX.

Planning Center of Expertise (PCX). A Corps of Engineers PCX, other than the New Orleans District, will be responsible for verifying that the CEMVN's products meet the needs and expectations of the customer and that competent technical resources are utilized throughout the design and review process. Six PCX's exist throughout the Corps, each with their own primary business program. Review is assigned to the appropriate Corps PCX based on these business programs.

The Calcasieu Lock feasibility study falls under the PCX business program "Navigation." ITR for studies grouped in this program are performed in Mobile District under the supervision of Claseman, Kenneth G., CESAM-PD-FE. The primary purpose of the decision document is navigation, with secondary concerns involving flood control and ecosystem restoration. 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.

The Center will also arrange for EPR to complement the review of the ITR. The EPR will involve subject matter experts outside the Corps of Engineers to review and evaluate the project at two stages during its development.

The review of the ITR team and the EPR team will provide additional confidence to the project team that the proposed project both uses suitable methods to achieve its goals and has applied appropriate models to accomplish the aims of the project.

Independent Technical Review

The quality control plan (QCP) for the Calcasieu Lock, Calcasieu, LA will be consistent with the CEMVN Quality Control Plan for Planning Studies and the CEMVN Quality Management Plan (www.intra.usace.army.mil/eng/eda/nodqmp6.doc). The QCP includes an independent technical review (ITR) plan to ensure that quality products are developed during the course of the study by the CEMVN. The Level of ITR for this project will be Inter District/Regional. The Mississippi Valley Division (MVD) will be responsible for verifying that CEMVN's products meet the needs and expectations of the customer, and that competent technical resources are utilized throughout the design and review process. Policy review for this 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 should complement each other, producing a seamless review process, which identifies and resolves technical and policy issues during the course of the study and not during the final study stages. The vertical team (including

The QCP has been formulated to provide for a sound ITR process at the project study level that focuses on several objectives. Primarily, quality technical products will be produced through an effective and comprehensive single level technical review process throughout product development while verifying that functional, legal, safety, health and environmental requirements are satisfied. This review process will insure that a cost effective solution, while maintaining product requirements, is developed. Technical review will also act as a mechanism to avoid start-overs and redesign efforts, and will assure accountability for the technical quality of the product.

The ITR team will communicate through a combination of mail, electronic communication, telephone conversations and teleconferencing. Following the completion of the draft report, an electronic copy of the draft report will be posted at ftp://ftp.usace.army.mil/pub/, and one hard copy of the draft report will be provided to the ITR team leader for each of the ITRT members at least one day before the beginning of the comment period. Dr. Checks will be used to document comments to the draft report; following a kick-off meeting, all comments will be entered into Dr. Checks.

Following the comment period, an in-progress review of PDT and ITR team members will be conducted to review comments and specific issues. After addressing open comments, ITR team members will backcheck the comments. The ITRT, PDT, and vertical team will conduct an after-action review to discuss continuing issues and concerns.

The ITR team will be assigned by the PCX. Team members will come from outside CEMVN, and would represent selections appropriate to the study. Suggested disciplines for the ITR team would include the following disciplines:

Table 2. ITR Team Member Disciplines

First	Last	Discipline	Phone Number
TBD	TBD	Civil Engineering	TBD
TBD	TBD	Cost Engineering	TBD
TBD	TBD	Design Services	TBD
TBD	TBD	Economics	TBD
TBD	TBD	Environmental	TBD
TBD	TBD	Geotechnical	TBD
TBD	TBD	Hydraulics and Hydrology	TBD
TBD	TBD	Real Estate	TBD
TBD	TBD	Surveys Branch	TBD
TBD	TBD	Waterways	TBD

External Peer Review (EPR).

An EPR will be conducted through the coordination of the PCX. The project at Calcasieu Lock does not provide a high-risk scenario, as there are no new technologies or novel models being proposed to evaluate the lock. Risk is low, because the analysis associated with the project reflects traditional methods used in engineering, economic, environmental and design reports. The economic interest to the nation, however, is significant, and the construction costs for replacement are high, estimated during reconnaissance phase at a pre-Rita cost of $42,950,000 with annual O&M costs of $2,467,000. Costs updated to reflect current costs are expected to be considerably higher.

The EPR panel will accomplish a review that will cover the entire document, focusing on underlying engineering, economic, and environmental work; it will not focus on one part of the project. The amount of time it will take to conduct the EPR will depend on the Navigation PCX's workload and schedule. As with the ITR team, the number of reviewers participating in the EPR Team will also be determined at a later date by the PCX, but should include members with expertise in the following disciplines:

Table 3. EPR Team Member Disciplines

First	Last	Discipline	Phone Number
TBD	TBD	Civil Engineering	TBD
TBD	TBD	Cost Engineering	TBD
TBD	TBD	Design Services	TBD
TBD	TBD	Economics	TBD
TBD	TBD	Environmental	TBD
TBD	TBD	Geotechnical	TBD
TBD	TBD	Hydraulics and Hydrology	TBD
TBD	TBD	Real Estate	TBD
TBD	TBD	Surveys Branch	TBD
TBD	TBD	Waterways	TBD

3. Schedule

The timetable for the reviews of project actions remains too far in the future to gauge with any degree of accuracy. To ensure that sufficient review is taking place over the course of the project, two EPR sessions will be held, with the first coming prior to the review and evaluation of alternatives. The second will be held prior to the completion of the draft feasibility report. The following table provides a relative time frame for the completion of these reviews. It is anticipated that these reviews will take place in the final quarter of FY08.

Task	Date
EPR #1	Week 1
Responses, Backcheck	Week 3
Comment Period Begin	Week 3
ITR Kickoff Meeting	Week 3
ITR Comments due	Week 7
PDT Responses Due	Week 9
Responses Backcheck	Week 11
Certification	Week 14
Alternative Formulation Briefing	Week 17
AFB Policy Memo issued	Week 21
After Action Review	Week 23
EPR #2	Week 25
Responses, Backcheck	Week 26
Draft Feasibility Study Report	Week 28