



Reply to
Attention of:

DEPARTMENT OF THE ARMY
SOUTHWESTERN DIVISION, CORPS OF ENGINEERS
1100 COMMERCE STREET
DALLAS, TEXAS 75242-0216

CESWD-PDS-P

12 SEP 2007

MEMORANDUM FOR Commander, Galveston District

SUBJECT: Review Plan Approval for the Clear Creek, Texas Feasibility Report

1. References:

- a. EC 1105-2-408, 31 May 2005, subject: Peer Review of Decision Documents.
- b. Memorandum, CECW-CP, 30 March 2007, subject: Peer Review Process.

2. The enclosed Review Plan for the Clear Creek, Texas Feasibility Report has been prepared in accordance with referenced guidance.

3. This plan has been made available for public comment, and the comments received have been incorporated. It has been coordinated with the Flood Risk Management Planning Center of Expertise of the South Pacific Division which is the lead office to execute the plan. The Review Plan does not include External Peer Review.

4. I hereby approve this Review Plan, which is subject to change as study circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this plan or its execution will require new written approval from this office. For further information on this issue please contact Lanora Wright, CESWD-PDS at (469) 487-7032.

Encl

A handwritten signature in black ink, appearing to read "K Cox", with a long horizontal line extending to the right.

KENDALL P. Cox
Colonel, EN
Commanding

Clear Creek, Texas

Project Review Plan

Independent Technical Review and External Peer Review

1. PURPOSE

Pursuant to Engineering Circular (EC) 1105-2-408, "Peer Review of Decision Documents," Office of Management and Budget's "Final Information Quality Bulletin for Peer Review," and the May 30, 2007 memorandum from Major General Don Riley, USACE Director of Civil Works, a Project Review Plan (PRP) is being developed.

The PRP presents the process for independent technical review (ITR) and external peer review (EPR) that will be implemented as part of the Clear Creek general re-evaluation study. These processes are essential to improving the quality of the products that we produce.

2. APPLICABILITY

The document provides the PRP for the Clear Creek Flood Risk Management General Reevaluation Study. It identifies the ITR and EPR process for all work conducted as part of the study, including in-house, non-Federal sponsor, and contract work efforts.

3. REFERENCES

EC 1105-2-408 "Peer Review of Decision Documents" dated May 31, 2005

ER 1105-2-100 "Planning Guidance Notebook" dated April 2000

Major General Riley Memorandum on Peer Review Process dated May 30, 2007

4. GENERAL

Clear Creek, a wooded stream, drains an area south of and partially within the City of Houston. The Clear Creek watershed is located in four counties, includes sixteen cities and covers approximately 260 square miles of land. The watershed is composed of relatively flat coastal plain with elevations varying from near sea level at Clear Lake to about 75 feet mean sea level (MSL) on the western watershed boundary. Clear Creek

receives flow from 17 principal tributaries. Clear Lake is the flooded lower extremity of the Clear Creek entrenched channel, now forming an estuarine lake tributary to Galveston Bay. The Lake area is between 1,500 and 2,000 acres depending on the tide. The average depth of Clear Lake is about 3.4 feet. Clear Lake is used extensively for boating, sailing and skiing. The Clear Lake area contains one of the largest marina development areas in the United States. The 100-year flood plain contains an area of approximately 19,000 acres. Many communities and subdivisions along the creek are subject to flooding and recent floods (1973, 1976, twice in 1979, 1989, October 1994, and June 2001) have caused extensive property damage. A flood in July 1979 caused more than \$90 million in damages in the Clear Creek watershed.

The Flood Control Act of 1962 authorized the initial investigation of flood problems on Clear Creek. In 1968, a survey report recommending construction of flood control measures along the main channel of Clear Creek was submitted to the Congress. In submitting the report, the Secretary of the Army directed that the recommended plan be reviewed during the preconstruction planning stage and modified to achieve the most reasonable balance between structural modification of the creek, floodplain regulations, and a broad program of floodplain management. The Congress authorized the Clear Creek Flood Control project in the Flood Control Act of 1968, as described in House Document No. 351, 90th Congress, 2nd Session, including the condition of authorization stipulated by the Secretary of the Army. This stipulation, together with subsequent Congressional actions, administrative changes to water resources planning policies, changes in the project area, and changes in the attitude of the affected public, required a comprehensive restudy of the Clear Creek project.

As a result of that restudy, a preconstruction authorization planning report was completed in May of 1982. This project authorized enlargement and rectification of Clear Creek from Clear Lake to just inside Fort Bend County. This improved grass-lined channel was to be 31 miles long and would replace about 41 miles of existing winding channel. The grass-lined channel was designed to contain flood flows up to and including the 100-year flood. Construction was initiated on this project, but concerns about the environmental impact of the project were raised by the public. Based on these concerns the sponsors requested that construction stop and that the project be reevaluated. A general reevaluation was initiated in 1999.

5. REVIEW REQUIREMENTS (Independent Technical Review)

As part of the Quality Control Plan for the Clear Creek Project, an ITR team will be formed to perform periodic reviews of the re-evaluation study efforts, including the

project assumptions, analyses, and calculations, as needed throughout the planning study process. The ITR is best conducted by experienced peers within the same discipline who are not directly involved with the development of the study or project being reviewed.

Pursuant to EC 1105-2-408, the District will coordinate with the Flood Risk Management Planning Center of Expertise (South Pacific Division) to organize a team to perform the ITR at various stages throughout the study.

The ITR team will meet with the project delivery team (PDT) members on a quarterly basis or as needed. These quarterly meetings will be documented as required by ER 1165-2-203. Coordination throughout the study will be accomplished through individual contact between the PDT and the ITR team. The ITR will focus on the following:

- Review of the planning study process,
- Review of the methods of analysis and design of the alternatives and recommended plan,
- Review of real estate requirements necessary for project construction,
- Review of the methods of evaluation and modeling performed for economic analysis,
- Compliance with program and NEPA requirements, and
- Completeness of study and support documentation

More detailed ITR information is found in the Plan Formulation and Evaluation Section of the Project Management Plan (PMP).

6. REVIEW PROCESS

The ITR process will be conducted throughout the study process. ITR involvement is anticipated between major project milestones (FSM, IPR, and AFB). Once the ITR team has been identified, copies of PDT meeting notes will be provided to ITR team for information. ITR participation in PDT meetings on a quarterly basis (at a minimum) will be recommended.

7. REVIEW COST

The cost for ITR is estimated at \$60,000.

8. REVIEW SCHEDULE

<u>TASK</u>	<u>Proposed Date</u>
Develop Project Review Plan	July 2007
Coordinate with MSC and post on website	August 2007
PCX identifies ITR team	August 2007
Review of Models	TBD
ITR review of FSM documents	N/A
ITR review of draft documents (before AFB)	February 2008
Participation in AFB meeting	June 2008

9. PROJECT RISK

Anticipate minimal risk involved with the project.

10. PROJECT REVIEW PLAN

The components of the PRP were developed pursuant to the requirements of EC 1105-2-408.

A. General Information

The decision documents that will undergo peer review are the Reevaluation Report (including Economic Appendix), Environmental Impact Statement, and Engineering Appendix. The District PDT is listed below:

1. District Project Delivery Team

<u>NAME/ORGANIZATION</u>	<u>PHONE</u>	<u>EMAIL</u>
Mike Bragg Project Manager CESWG-PM	409-766-3140	john.m.bragg@usace.army.mil
Bob Heinly Planning Study Lead CESWG-PE-PL	409-766-3992	robert.w.heinly@usace.army.mil

Suhail Idriss Design Project Engineer CESWG-EC-C	409-766-3837	suhail.t.idriss@usace.army.mil
Andrea Catanzaro Environmental Lead CESWG-PE-PR	409-766-3035	andrea.catanzaro@usace.army.mil
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Randy Richardson Real Estate CESWG-RE-A	409-766-6356	randolph.e.richardson@usace.army.mil
Gerald Dunaway H&H CESWG-EC-EH	409-766-3107	gerald.m.dunaway@usace.army.mil
Jaqueline Lockhart Cost Engineering CESWG-EC-E	409-766-3053	jacqueline.f.lockhart@usace.army.mil
Nancy Young General Engineering CESWG-EC-EG	409-766-3147	nancy.c.young@usace.army.mil

2. ITR Team – TBD

B. Scientific Information

The final report (and supporting documentation) is anticipated to contain standard engineering, environmental and economic analyses and information; therefore no

influential scientific information is likely to be contained in any of the documentation.

C. Timing

The peer review process is projected to being completed by the end of FY08 with the initiation of the ITR team and assessment of key models during this initial plan formulation phase of the study.

D. EPR Process

It is anticipated that an External Peer Review will not be necessary for this project based on the performance of work under previous authorization.

E. Public Comment

A Public Scoping Meeting was held in June 10, 2003. An Interagency Coordination Team (ICT) comprised of representatives from the District, non-Federal sponsors, state and Federal resources agencies, and interested groups has been formed as part of the study. The ICT will participate in identifying potential sensitive resources and environmental issues and developing ways to address those issues. A Public Involvement Plan will be formulated to ensure public involvement throughout the study process. Public comments will be made available on the project website.

<u>TASK</u>	<u>START DATE</u>	<u>FINISH DATE</u>
Public Scoping Meeting	15 March 2001	9 May 2001
ICT Meetings	23 February 2003	TBD
Public Open Houses	24 February 2004	26 February 2004

F. Dissemination of Public Comments

Proceedings from all public meetings, minutes from ICT meetings or any other public involvement meetings will be posted on the project website.

G. Reviewers

Since the reevaluation study is a flood risk management study, anticipated disciplines of ITR reviewers are:

1. Engineering
2. Economics
3. Environmental
4. Real Estate
5. Planning
6. Operations

H. Review Disciplines

A brief description of the disciplines required for the ITR team are identified below:

1. Hydrology and Hydraulics – the reviewer(s) should have extensive knowledge of the nature of H&H model preparation and runs to insure accuracy and suitability of models utilized to determine changes in flood surface elevations.
2. Economics – the reviewer(s) should have a strong understanding of economic models or studies relative to the effect of riverine flooding of structures.
3. Environmental – the review(s) should have a strong background in riparian forest and prairie habitat as well as current environmental laws and regulations.
4. Real Estate – The reviewer(s) should have knowledge in reviewing RE Plans for flood risk management studies.
5. Planning – The reviewer(s) should have a strong knowledge in current planning policies related to flood risk management.