DEPARTMENT OF THE ARMY
NORTH ATLANTIC DIVISION, US ARMY CORPS OF ENGINEERS
FORT HAMILTON MILITARY COMMUNITY
BROOKLYN, NEW YORK 11252-6700

REPLY TO
ATTENTION OF

JAN 15 2008

CENAD-PSD-P

MEMORANDUM FOR Commander, New York District, ATTN: CENAN-PP

SUBJECT: Review Plan Approval for Rahway River Basin, New Jersey Flood Damage Reduction and Ecosystem Restoration Study

1. Reference:

a. EC 1105-2-408, Peer Review of Decision Documents, 31 May 2005.

b. Memorandum, CECW-CP, 30 March 2007, subject: Peer Review Process.

2. The enclosed Review Plan for the Rahway River Basin, New Jersey Flood Damage Reduction and Ecosystem Restoration Study has been prepared in accordance with the referenced guidance.

3. The Plan has been made available for public comment, and any comments received have been incorporated. It is being coordinated with the Flood Risk Management and Ecosystem Restoration Planning Centers of Expertise. The Plan currently includes external peer review.

4. I hereby approve this 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.

Encl

Joseph R. Vietri
Chief, Planning & Policy Community of Practice
Program Support Division
Programs Directorate

QUALITY CONTROL (QC) AND INDEPENDENT TECHNICAL REVIEW (ITR) PLAN

1.0 PURPOSE

This review plan presents the process that assures quality products for the Rahway River Basin, New Jersey Flood Damage Reduction and Ecosystem Restoration Study. This QC and ITR plan defines the responsibilities and roles of each member on the study and technical review team.

The product to be reviewed by the technical review team is the feasibility-level Rahway River Basin, New Jersey Flood Damage Reduction and Ecosystem Restoration Study. Under the provisions of new U.S. Army Corps of Engineers (USACE) policy, as detailed in EC1105-2-408 dated May 31, 2005, the ITR will be conducted by specialists from organizations outside of the district responsible for the study. ITR will be conducted for all decision documents and will be independent of the technical production of the project. This QC and ITR plan is, by reference, a part of the project management plan.

2.0 APPLICABILITY

This document provides the quality control plan for the Rahway River Basin, New Jersey Flood Damage Reduction and Ecosystem Restoration Study. It identifies quality control processes and independent technical review for all work to be conducted under this study authority, including in-house, sponsor, and contract work.

3.0 REFERENCES

EC 1105-2-408 "Peer Review of Decision Documents" (May 31, 2005)
EC 1105-2-407 "Planning Models Improvement Program: Model Certification" (May 31, 2005)
EC 1105-2-409 "Planning in a Collaborative Environment" (May 31, 2005)
ER 1105-2-100 "Planning Guidance Notebook and Appendices"

4.0 GENERAL PROJECT DESCRIPTION

The Rahway River Basin (the Basin) has a drainage area of approximately 81.9 square miles, and is located in northeastern New Jersey in the counties of Essex, Union, and Middlesex. Figure 1 shows the location of the Basin.

Flooding within the Rahway River Basin is caused principally by the rapid development of the area, which has resulted in a large increase of storm water runoff. Floods have caused damage to houses, businesses, municipal facilities and public infrastructure. Portions of the Rahway River Basin have also suffered environmental degradation and opportunities exist for restoration.

The most damaging floods of record within the Rahway River Basin resulted from the storms of July 1938, May 1968, August 1971, August 1973, July 1975, June 1992, October 1996, July 1997, Tropical Storm Floyd in September 1999 and the April 2007 Nor'easter. During the April 2007 storm, 70 to 100 homes suffered major damage to first floor and foundations. Union County and the Township of Cranford were declared federal disaster areas as a result of the April 2007 storm.

The study was authorized in a resolution of the Committee on Transportation and Infrastructure of the U.S. House of Representatives. The Rahway River Basin resolution was dated 24 March 1998.

5.0 REVIEW REQUIREMENTS

Initial Quality Control (QC) review has been handled within the Branch performing the work. Additional QC will be performed by the Project Delivery Team (PDT) during the course of completing the Feasibility Study. The detailed checks of computations and methodology should be performed at the District level, and the processes for this level of review are well established. Pursuant to EC 1105-2-408, item 2 c (2), Models used in the preparation of decision documents covered by this Circular will be reviewed in accordance with EC 1105-2-407, Planning Models Improvement Program: Model Certification. For this study, one or more spreadsheet-based economic models will be utilized, which would need to be reviewed consistent with the current certification procedures.

Pursuant to EC 1105-2-408, the Feasibility study and EIS will need a full ITR team coordinated by the Planning Centers of Expertise (PCX) for Flood Risk Management (South Pacific Division) & Ecosystem Restoration (Mississippi Valley Division). The scope and level of technical complexity currently do not warrant an External Peer Review (EPR), based upon the initial Risk Screening Process conducted by the PDT noted in Section 9. The study is not controversial or precedent setting, nor does it have highly significant national importance so as to warrant risk abatement external peer review. However, as the total project cost is expected to exceed $45 million, EPR is expected to be performed and will be coordinated with the PCXs.

The ITR will focus on:

1. Review of the planning process and criteria applied.
2. Review of the methods of preliminary analysis and design.
3. Compliance with authority and NEPA requirements.
4. Completeness of preliminary support documents.
5. Spot checks for interdisciplinary coordination.

6.0 REVIEW PROCESS

The ITR review process has not commenced; as stated above, the PCXs for Flood Risk Management & Ecosystem Restoration will coordinate this process. The review will cover key formulation and benefit and cost assessment areas. Following completion of

the draft feasibility study, which will be no earlier than the end of 2008, the major review process milestones will be those listed below:

1 Draft Report Review
2 Final Report Review

7.0 REVIEW COST

The final cost of the ITR is to be determined between the PDT and the PCX. It is assumed that any remaining documents to be reviewed will be transmitted electronically. Comments will be made and addressed in Dr. Checks. It is also assumed that the external ITR team will be working virtually. Only under extreme circumstances should the external ITR team, or a representative of that team, be required to travel to physically attend PDT or milestone meetings. The external ITR team should, with this constraint, participate in all remaining milestone meetings.

8.0 REVIEW SCHEDULE

The review schedule is as follows:

TASK	START DATE	FINISH DATE
Develop ITR Plan and post to Web Site, PCX	August 2007	August 2007
Identify Regional ITR resources and	TBD	
Recommend ITR Plan to PCX	TBD	
Sponsor Approves ITR Plan	indefinite	
Review of Models	N/A - standard	
Alternative Formulation Briefing		
Review of Draft Report	TBD	
Review of Final Report	TBD	

9.0 PROJECT RISK

The PDT has completed an initial risk assessment associated with this project based upon five factors and rated the project quantitatively among five levels of project risk of failure ranging from low to high (risk score class). The PDT scored each Project Risk Item in the Review Plan Score Guide (Table 9.1) and calculated an overall Average Project Risk Assessment Score. The exact values of the scores were not as important as compared to what risk score class (low, medium, or high). Based upon the PDT analysis, the project is medium in risk because it did not receive an overall high risk score.

The PDT considered previous District project experience when making this analysis. No attempt was made to tie this to a national scale of rating. The Project Schedule and Cost were assessed as a medium degree of risk if they both remained flexible and a high degree of risk if the Project schedule and cost was fixed. Staff Technical Experience was

assessed as a low degree of risk if the staff had a high level of fluvial flood damage reduction experience and a high degree of risk if the staff had a low level of experience. The results of the evaluation are tabulated as follows:

Table 9.1 Review Plan Score Guide

Project Risk Item	**Risk Assessment Score (Low Degree to High Degree)**					**Score**
	Low		Medium		High	
Project Complexity	1	2	3	4	5	2
Customer Expectations	1	2	3	4	5	4
Product Schedule/Cost	1	2	3	4	5	3
Staff Technical Experience	1	2	3	4	5	2
Failure Impact and Consequences	1	2	3	4	5	3
Average Project Risk Assessment Score						**2.8 (Medium)**

10.0 REVIEW PLAN

The components of the review plan were developed pursuant to the requirements of EC1105-2-408.

10.1 Team Information

The decision document that will be the ultimate focus of the review process is the Rahway River Basin, New Jersey Flood Damage Reduction and Ecosystem Restoration Study. The purpose of this feasibility-level study and associated EIS will be to guide the Corps' efforts to prevent flood damage and improve the ecosystem in the Rahway River Basin, NJ. This list provides the points of contact of NAN team members who are available to answer specific technical questions as part of the review process. The list also provides the names and organization of participating outside entities.

District Project Team Members:

MAIN REPORT PRODUCT	STUDY TEAM MEMBERS	REVIEW TEAM MEMBER
Feasibility Report Main Text	Project Planner CENAN-PL-F	All review team members will review this document internally External ITR: TBD
NEPA Documentation	CENAN-PL-E	All review team members will review this document internally External ITR: TBD

Sections	STUDY TEAM MEMBER	REVIEW TEAM MEMBER
Plan Formulation		TBD thru PCX
Economics		TBD thru PCX
Environmental		TBD thru PCX
Cultural Resources		TBD thru PCX
Real Estate		TBD thru PCX
Hydrology and Hydraulics		TBD thru PCX
Geotechnical/Structural	TBD	TBD thru PCX

10.2 Scientific Information

Based upon the self evaluation by the PDT, it is unlikely that the USACE study to be disseminated will contain influential scientific information. Influential scientific information is defined by the Office of Management and Budget as scientific information the agency reasonably can determine will have or does have a clear and substantial impact on important public policies or private sector decisions.

10.3 Timing

The ITR process will start upon coordination with the PCX--dependent on the completion of the draft feasibility study, which will be no earlier than the end of 2008.

10.4 External Peer Review Process

It is anticipated that external peer review will be required as the cost of the project will likely exceed the WRDA 2007 threshold. PCX and vertical team concurrence is required.

10.5 Public Comment

Public involvement is anticipated during the outreach phase between the draft and final feasibility studies. As these will not be completed until at least 2008, further public involvement activities have, therefore, not been scheduled at this time.

10.6 ITR Reviewers [This will be updated accordingly based on PDT and NAD negotiations.]

It is anticipated that four to five reviewers total should be available in the following disciplines: fluvial hydraulics and design, economics, geotechnical, planning, environmental, cultural resources, and cost estimating. The reviewer contact information should be stated in Section 10.1 of this review plan. Cost estimating, as required by HQUSACE, review will be conducted by Cost Estimating Center of Expertise (NWW).

10.7 External Peer Review Selection

This will be determined conclusively in conjunction with the PCX and vertical team, if necessary.