

INDEPENDENT TECHNICAL REVIEW (ITR) PLAN and EXTERNAL PEER REVIEW DOCUMENT CLAYTOR LAKE ECOSYSTEM RESTORATION PROJECT HUNTINGTON DISTRICT

1. PURPOSE

This document presents the process that assures quality products for the Claytor Lake Ecosystem Restoration Project, General Investigation (GI) Feasibility Study. This QC / ITR Plan defines the responsibilities and roles of each member on the study and technical review team. This ITR plan is governed by the Lakes and Rivers Division (LRD) Quality Assurance Plan. The basis for the Quality Assurance Plan is the LRD Quality Management Plan. The Quality Assurance Plan will be followed in verifying that the project Quality Control process operates as planned.

The product to be reviewed by the technical review team is the Feasibility Report and related NEPA documents. Under the provisions of new Corps of Engineers 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. Independent Technical Review will be conducted for all decision documents and will be independent of the technical production of the project. This ITR Plan is, by reference, a part of the PMP for this Feasibility Study.

2. APPLICABILITY

This document provides the Quality Control Plan for the Feasibility 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. REFERENCES

- EC1105-2-408 “Peer Review of Decision Documents” dated May 31, 2005
- ER 1105-2-100 “Planning Guidance Notebook & Appendices D, F, G & H”

4. GENERAL

Claytor Lake is a 21 mile long, 4,475 acre impoundment of the New River in southwest Virginia, located south of Radford and east of Pulaski in Pulaski County. The dam was constructed in 1939 by the American Electric Power Company (AEP), and has been operated for hydroelectric power generation since that time. There are no established flood damage reduction benefits, and the lake is operated as run-of-river from 15 April to 15 October each year. During the winter months, the reservoir level varies +/- 2 feet for peaking. The pool is periodically drawn down 1 – 2 feet for significant precipitation events, and up to 5 feet for maintenance activities. Normal maximum pool elevation is 1,846 feet msl.

Runoff from precipitation events, particularly tropical storms, causes widespread erosion and sediment yield to Claytor Lake. A considerable amount of trash and woody debris is also delivered to the lake under these conditions. Development along the lake's shoreline and within the immediate watershed has contributed to the erosion and sedimentation problems that have adversely affected lacustrine and riparian habitats and reduced recreation opportunities. The Huntington District (CELRH) is investigating restoration opportunities for the lake that would address the above concerns.

On 27 June 2005, the Local Sponsor, the Pulaski Board of Supervisors signed a partnering agreement with US Army Corps of Engineers, Friends of Claytor Lake, Appalachian Electric Power, Virginia Department of Game and Inland Fisheries, Virginia Department of Conservation and Recreation and the Radford Chapter of the Izaak Walton League to work together and participate with financial and in-kind services for the Claytor Lake Ecosystem Restoration Project. This partnership is the basis for the local cost share portion of the feasibility phase.

5. REVIEW REQUIREMENTS

Initial Quality Control QC review will be handled within the Section or Branch performing the work or by staff in the corresponding Friends of Claytor Lake, Appalachian Electric Power, Virginia Department of Game and Inland Fisheries, Virginia Department of Conservation and Recreation and the Radford Chapter of the Izaak Walton League when it involves in-kind services. Additional QC will be performed by the 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 EC1105-2-408, this Feasibility Report study will also need to have a Corps ITR team assigned by the Planning Center of Expertise (PCX) for Ecosystem Restoration Projects. It is anticipated that this team will be assigned by CEMVD-RB-T.

Given the significant Ecosystem Restoration component to this study, coordination with the appropriate PCX for Ecosystem Restoration is recommended. It is further recommended that the ITR be handled within the Corps, as the scope and technical complexity do not warrant an External Peer Review (EPR). It is anticipated that while this study will be challenging and beneficial, it will not be novel, controversial or precedent setting; nor have significant national importance. As a result, the ITR will focus on:

- Review of the planning process and criteria applied.
- Review of the methods of preliminary analysis and design.
- Compliance with client, program and NEPA requirements.
- Completeness of preliminary design and support documents.
- Spot checks for interdisciplinary coordination.

6. REVIEW PROCESS

It is anticipated that the ITR Team Review Process will begin after the ITR Team has been assigned, and will initially cover the Project Management Plan and the models to be used in the analysis. As alternative plans are formulated, the Review Process will focus on data, assumptions and the engineering, scientific, economic, social & environmental analysis process. Major Review Process milestones will include the preparation for the Alternative Formulation Briefing.

7. REVIEW COST

The cost of the ITR is estimated to be about \$6,250. Of that amount, \$6,250 is anticipated to be allocated to biological & ecosystem ITR issues.

8. REVIEW SCHEDULE

TASK START DATE FINISH DATE

1. Develop ITR Plan, to PCX	11-April 07	to	24-April 07
2. Identify Regional ITR resources	23-April 07	to	23-April 07
3. Recommend ITR Plan to PCX	24-April 07		
4. PCX Approves or Assigns ITR Team	24-April 07	to	30-April 07
5. Review of Models	Aug 07		
6. Biological Assessment FONSI Review TBD			
7. Preparation for AFB TBD			
8. Alternative Formulation Briefing TBD			
9. Review of Draft Feasibility Report TBD			

9. PEER REVIEW PLAN

The components of the Peer Review Plan were developed pursuant to the requirements of EC1105-2-408.

A. Basic Information

The decision documents that will be the ultimate focus of the peer review process are the Feasibility Report and the Environmental Assessment for the Claytor Lake Ecosystem Restoration Study, General Investigation Feasibility Study. The purpose of the decision document will be to begin the approval process leading to the authorization to begin Plans & Specifications.

B. Scientific Information

Based upon the self-evaluation by the PDT, it is unlikely that the Corps report to be disseminated will contain influential scientific information. The lacustrine ecosystem restoration measures that were identified within the ERDC Claytor Lake Restoration Opportunities Report will not require innovative steps to achieve good habitat and the efforts envisioned to date will not result in a highly influential scientific assessment.

C. Timing

The ITR Peer Review process is envisioned to begin this summer (FY07-FY08) with an assessment of key models to be used in the evaluation and comparison of alternative plans in this feasibility study. It is currently anticipated that the alternative plans will be

evaluated using IWR-Plan Decision Support Software a model developed by IWR. IWR-Plan employs cost effective and incremental cost analysis for decision making. It is anticipated that work would start by August 2007.

D. EPR Process

No External Peer Review process is envisioned at this time. This assessment is supported by the evaluation of the PDT and comments received by ECERD-EE-E during its review of the project scope, problem and opportunities at the lake.

E. Public Comment

Public involvement is anticipated throughout the Feasibility Study. The Sponsor (Pulaski Board of Supervisors) has already established a Public Advisory Committee for this Feasibility Study. It is anticipated that this group will form the nucleus of additional input from the citizens of the region. The Public Involvement process is expected to occur as follows:

TASK START DATE FINISH DATE

1. Meet with Public Advisory Committee	25 Jun 05	Ongoing
2. AEP/FERC Environmental Studies Meeting	1-Jun-07 to 31-Jul-07	
3. Public Coordination with Draft EA	FY08	

F. Dissemination of Public Comment

It is anticipated that minutes of the Public Advisory and Public Involvement Meetings will be disseminated to the Peer Review Team following the meetings. This will allow the public response to be available to the ITR team.

G. Reviewers

It is anticipated that four to five reviewers total should be available in the following disciplines:

- 1) Hydraulic Engineering
- 2) Economics
- 3) Biology & Ecosystem
- 4) Planning

H. Review Disciplines

The expertise that should be brought to the review team includes the following:

- 1) Hydraulic Engineering – The reviewer(s) should have extensive knowledge of HEC-RAS modeling including the use of GIS (ARC-INFO) inputs to the model. The reviewer(s) should also have a solid understanding of the geomorphology of alluvial rivers.
- 2) Biology and Ecosystem – The reviewer should have a solid background in the restoration of stream channels and wetlands, and understand the factors that influence the reestablishment of native species of plants and animals.

3) Real Estate – The reviewer should have recent experience in reviewing Real Estate plans for feasibility studies and be able to draw on “lessons learned” in advising the PDT of best practices.

4) Planning/Form – The reviewer should have recent experience in reviewing Plan Formulation processes for multi-objective studies and be able to draw on “lessons learned” in advising the PDT of best practices.

I. EPR Selection

An External Peer Review is not anticipated for this study.

J. Public Peer Review

While no formal Public Peer Review is included in the current schedule and budget, it is likely that as the study generates alternative plans that there will be interest from universities in this region of Virginia. Their input and comment will be welcome at the Public Involvement meeting and through individual contacts in specific subject matter areas.