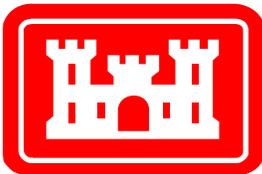


Smith River Basin
Virginia

**Integrated Feasibility Report and Environmental
Impact Statement for the
Philpott Lake, Virginia (Section 216) Study**

PEER REVIEW PLAN



**US Army Corps
of Engineers
Wilmington District**

ACRONYMS & ABBREVIATIONS

AFB – Alternative Formulation Briefing

CESAW – US Army Corps of Engineers, South Atlantic, Wilmington

CWRB – Civil Works Review Board

ECO-PCX - National Ecosystem Planning Center of Expertise

EIS – Environmental Impact Statement

EPR – External Peer Review

FCSA – Feasibility Cost Sharing Agreement

FEIS – Final Environmental Impact Statement

FSM – Feasibility Scoping Meeting

GI – General Investigations

HQ – Headquarters

ITR – Independent Technical Review

LOI – Letter of Intent

NEPA – National Environmental Policy Act

OVEST -- Office of the Chief of Engineers Value Engineering Study Team

PDT – Project Delivery Team

PMP – Project Management Plan

PRP - Peer Review Plan

P&S – Plans & Specifications

SAD – South Atlantic Division

Walla Walla Dx - Walla Walla District Directorate of Expertise for Civil Works
Cost Engineering

1.0 The Peer Review Plan

This Peer Review Plan (PRP) is a collaborative product of the project delivery team (PDT) and the National Ecosystem Planning Center of Expertise (ECO-PCX) and the Walla Walla District Directorate of Expertise for Civil Works Cost Engineering (Walla Walla Dx). The ECO-PCX and Walla Walla Dx shall manage the PRP, which for this study includes Independent Technical Review (ITR) only. External ITR is not deemed necessary for the initial review phase. Each of the following paragraphs (a. through j.) correspond to the guidance provided in paragraphs 6.a. through j. of Engineering Circular 1105-2-408, Planning - Peer Review of Decision Documents, 31 MAY 2005.

a. Decision Document and Team Members. The Integrated Feasibility Report and Environmental Impact Statement for the Philpott Dam and Lake (Section 216 Study), Virginia shall be the decision document. The Feasibility Study, authorized under Section 216 of Public Law 91-611, the River and Harbor and Flood Control Act of 1970, as amended, will review the operation of the Philpott Dam and Reservoir and report recommendations to Congress on the advisability of modifying the structures or the structure's operation and for improving the quality of the environment in the overall public interest. Information developed during the Feasibility Study may become the basis for actions specifically authorized by Congress or by the legislature of the Sponsor, the Commonwealth of Virginia, for actions under the continuing authorities of the US Army Corps of Engineers, and for actions by non-government organizations. The Study provides interested parties an opportunity to integrate multiple perspectives and assets to achieve the common goal. The parties commit to effective and efficient management of their responsibilities for the Study, and to the sharing of information about the Study.

Approval of participation in this Feasibility Study by the US Army Corps of Engineers, Wilmington District, was based on the Philpott Dam and Lake, Virginia (Section 216 Study) Section 905(b) (WRDA 1986) dated August 2004, approved 7 January 2005. This document indicates that the Feasibility Study will address concerns identified in the 28 letters of comment received in response to the 8 December 2003, Scoping Letter. More than 145 comments were identified and placed into 18 pre-determined study subjects. Comments were received for 15 of the 18 categories. The areas of most concern based on comments received are: natural resources, downstream fisheries management related to the brown trout fishery, water quality, the Philpott guide curve and its effects on various resources, and upstream fisheries related to the largemouth bass fishery in Philpott Lake. Hydropower and upstream recreation were topics addressed in several comment letters. Downstream water supply and recreation, erosion and siltation, drought management, fish and wildlife, endangered species, cultural resources, and shoreline management are of concern. However; very few comments were submitted regarding these concerns. There were no comments received regarding flood control, upstream water supply, or aesthetic resources. Task implementation has been developed to consider of each the following Study Subjects

- ✓ Shoreline Management and Erosion
- ✓ Natural and Recreation Resources
- ✓ Operating Policies and Administrative Procedures
- ✓ Water Quality
- ✓ Water Supply
- ✓ Public Involvement

US Army Corps of Engineers Regulation 1105-2-100, Planning Guidance Notebook, provides full guidance regarding conduct of the study.

Location of Study, Non-Federal Sponsor and Congressional Districts

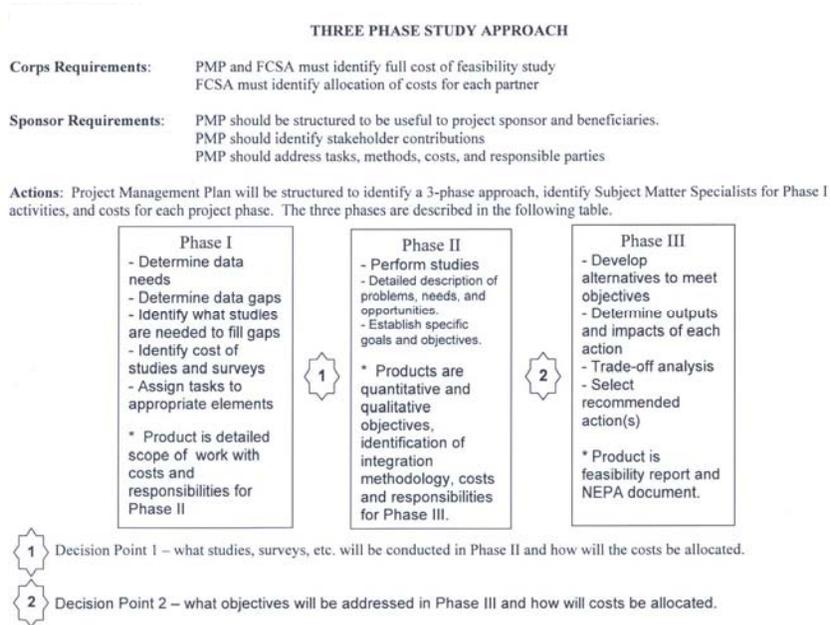
Philpott Lake, which takes its name from the nearby downstream village in Henry County, Virginia, is located on the Smith River, Virginia, 44.3 miles above its junction with the Dan River near Eden, North Carolina, and 35 miles from the Virginia-North Carolina State line. At spillway elevation, the reservoir extends upstream about 16 miles. The overall project covers 10,000 acres in Franklin, Henry, and Patrick Counties, Virginia.

The non-Federal sponsor for the feasibility phase of the Study is the Commonwealth of Virginia. The Virginia point of contact for this Study is the Virginia Natural Resources' Deputy Regional Director of the Department of Environmental Quality.

Philpott Lake is located in Virginia's 5th Congressional District, represented by Congressman Virgil H. Goode, and Virginia's 9th Congressional District, represented by Congressman Rick Boucher. Construction of Philpott Lake began in 1948 and flood control was provided in 1951. The project went into full operation in 1953, when all three generators in the powerhouse were completed. Project purposes include: recreation (PL 78-534), low flow augmentation (PL 78-534), water supply (PL 85-500), flood control (PL 78-534), hydroelectric power (PL 78-534), and fish/wildlife (PL 85-624).

Construction of Philpott Lake was authorized by the Flood Control Act of 1944 (PL 534, 78th Congress) as part of the development plan of the Roanoke River Basin, Virginia and North Carolina. The development of public recreation facilities was authorized by The Flood Control Act (FCA) of 1944, Section 4 of the FCA of 1946, Section 209 of the FCA of 1954, Section 207 of the FCA of 1962, and by the Water Conservation Fund Act of 1965, as amended. The original authorized purposes for construction of Philpott were flood control and generation of hydroelectric power. Other purposes resulting from general legislation were water supply and recreation. Construction commenced in 1948; flood control was provided in 1951 and completion and full operation was reached in 1953. Philpott Lake contains conservation pool storage between elevations 920 and 974 feet mean sea level (msl). The conservation pool is reserved for power generation and low flow augmentation. Potential water supply reallocation of storage is limited to 15% of the total conservation pool. Philpott Lake has an area of 2,880 acres at the top of the conservation pool. One of the Primary purposes of Philpott Lake, controlled flood storage, is provided between elevations 974 and 985 feet, msl. Surcharge, or uncontrolled flood storage is provided above the crest of the spillway, elevation 985 feet, msl. Philpott Dam is a concrete gravity dam, with a crest elevation of 1016 feet, msl and a length of 920 feet.

The Phases of the Study



The Philpott 216 Feasibility Study is being conducted in three phases (see above). The first phase details the plan for the Feasibility Study to the first major decision point, the first In-Progress Review (IPR). In the first phase of the Study, existing data about the Study Subjects will be gathered, and recommendations for further study will be developed. As the Study progresses, the PMP will be continually modified to detail the plans for Phase 2 of the Work. Phase 2 will commence in Fiscal Year 2008.

Upon completion of Tasks in Phase I, an IPR with the Sponsors, senior USACE representatives, and resource agency representatives will be conducted. The IPR will be a Feasibility Scoping Meeting, as described in USACE Planning Guidance Notebook, Appendix G. The Feasibility Scoping Meeting will ensure that the Study is correctly focused and that the essential Study objectives are addressed.

In Phase II of the Study, multiple technical studies addressing identified objectives, will be performed to develop specific, quantitative, and qualitative goals and to assess existing problems, needs, and opportunities. Addressing identified objectives in Phase II via data collection, modeling, and analysis will set the stage for development of alternatives in Phase III.

In Phase III of the Study, alternatives will be developed and evaluated to meet the goals and objectives identified in Phase II. Outputs and impacts of each alternative will be determined, trade-off analysis performed, and, if appropriate, actions selected for recommendation to Congress. A feasibility report and National Environmental Policy Act documentation will be prepared.

All models developed or modified during for use in this study will be subjected to ITR and will be certified as required by Engineer Circular (EC) 1105-2-407, U.S. Army Corps of Engineers. *Planning Models Improvement Program: Model Certification.*

All ITR documentation for all required outputs (both reports and models) will be documented using Dr. Checks in order to maintain a complete record of all comments and responses resulting from the review.

Key PDT members are shown in the table below.

| ROLE | NAME | ORGANIZATION |
|-----------------------------------|------|--------------|
| Project Manager | | SAW-PM-C |
| Program Manager | | SAW-PM-P |
| Lead Planner | | SAW-TS-PF |
| Lead Biologist | | SAW-TS-PE |
| Biologist | | SAW-TS-PE |
| Cultural Resources | | SAW-TS-PE |
| Coastal H&H, Water Management | | SAW-TS-EC |
| Coastal/H&H | | SAW-TS-EC |
| Geographic Information Specialist | | SAW-TS-EE |
| Geographic Information Specialist | | SAW-TS-EE |
| Modeling Oversight | | |
| Real Estate | | SAS-RE-RP |
| Contract Specialist | | SAS-CT-P |

For more information regarding the PRP, the project manager for the feasibility study may be contacted as follows:

US Army Corps of Engineers – Wilmington District
 CESAW-PM-C
 69 Darlington Avenue
 Wilmington, North Carolina 28403

Independent Technical Review Team Leaders

National Ecosystem Planning Center of Expertise
 US Army Corps of Engineers – Mississippi Valley Division
 CEMVD-RB-T
<http://eco-pcx.usace.army.mil/index.cfm>

Walla Walla District Directorate of Expertise for Civil Works Cost Engineering
 CENWW-EC-X

b. External Peer Review. EC 1105-2-408 provides the process for deciding whether or not to employ external peer review. The following is an excerpt of EC section 9.a: *Decision documents covered by this Circular will undergo EPR if there is a vertical team consensus (involving district, major subordinate command and Headquarters members) that the covered subject matter (including data, use of models, assumptions, and other scientific and engineering information) is novel, is controversial, is precedent setting, has significant interagency interest, or has significant economic, environmental*

and social effects to the nation. Decision documents covered by this Circular that do not meet the standard shall undergo ITR as described in paragraph 8, above.

The vertical team will be included in all levels of review. The USACE, South Atlantic Division will receive the Draft feasibility report and will be involved in making the determination for level of review (i.e., Independent Technical Review and/or External Peer Review). This Peer Review Plan will be submitted to SAD for approval.

For this study, it has been determined that EPR is not required. Please see the External Peer Review Decision Checklist below (1 - 5).

1. Novel subject matter? No.
2. Controversial subject matter? No
3. Precedent setting? No
4. Unusually significant interagency interest? No
5. Unusually significant economic, environmental, and social effects to the nation? No

Decision: The PDT suggests that External Peer Review is not required. Independent Technical Review by a US Army Corps of Engineers team external to the project district, CESAW, will be sufficient to comply with the spirit of EC 1105-2-408, Planning - Peer Review of Decision Documents, dated 31 May 2005. It is not anticipated that any new methodologies will be used in the analysis and preparation of the Integrated Feasibility Report/EIS, or that any of the data collected or analyzed would be considered influential scientific data.

Approval of participation in this Feasibility Study by the US Army Corps of Engineers, Wilmington District, was based on the Philpott Dam and Lake, Virginia (Section 216 Study) Section 905(b) (WRDA 1986) dated August 2004, approved 7 January 2005. This document indicates that the Feasibility Study will address concerns identified in the 28 letters of comment received in response to the 8 December 2003, Scoping Letter. More than 145 comments were identified and placed into 18 pre-determined study subjects. Comments were received for 15 of the 18 categories. The areas of most concern based on comments received are: natural resources, downstream fisheries management related to the brown trout fishery, water quality, the Philpott guide curve and its effects on various resources, and upstream fisheries related to the largemouth bass fishery in Philpott Lake. Hydropower and upstream recreation were topics addressed in several comment letters. Downstream water supply and recreation, erosion and siltation, drought management, fish and wildlife, endangered species, cultural resources, and shoreline management are of concern. However; very few comments were submitted regarding these concerns. There were no comments received regarding flood control, upstream water supply, or aesthetic resources. Task implementation has been developed to consider of each Study Subject. US Army Corps of Engineers Regulation 1105-2-100, Planning Guidance Notebook, provides full guidance regarding conduct of the study.

While there are two areas of minor controversy associated with this project, the potential loss of hydropower production and the potential conflict regarding management for brown trout vs. the endangered Roanoke log perch. It is felt that neither of these issues

will generate sufficient controversy to require Peer Review. Philpott Lake is the smallest hydropower unit in the Corps of Engineers inventory and at present generates for only 2 hours a day so it is not felt that potential changes in hydropower production will arouse significant controversy. The potential conflict regarding the fisheries management issue is not felt to be significant since improvements to benefit the brown trout, which is of economic important to the study area, will also benefit the Roanoke log perch.

The Philpott Lake 216 study is very early in the planning process and potential measures and alternatives have not been fully developed. The potential measures for possible implementation range from alterations to the guide curve and changes in the water management control plan to potential structural change to Philpott Dam. Implementation of measures altering the guide curve or water control plan, which are the most likely measures to be implemented, would have minimal implementation costs. Implementation of structural changes to the dam, while unlikely, would have significant implementation costs, on the order of magnitude of several million dollars.

While the study could potentially recommend rehabilitation of the hydro-electric plant implementation of any improvements to this plant would not be undertaken under the Section 216 authority but pursuant to other Corps of Engineers authorities.

c. Anticipated Study and ITR Review Schedule.

| Action | Completion Date |
|---|---------------------------|
| 905(b) Report approved | |
| PMP completed | June 2003 |
| FCSA executed | September 2006 |
| Technical work groups formed/Team leaders assigned | May 2007 |
| Begin Stage 1 Prepare Scopes of Work (SOW's) | June 2007 |
| Work groups complete Stage 2 SOW's | September 2007 |
| ITR IPR Materials | |
| Work groups complete Stage I (In-Progress Review and Executive Committee Approval) | October 2007 |
| FY 08 Funding Delay | October 07 – September 08 |
| Receive Funding and Work Group Begin Stage 2 Data Collection & Modeling | October 2008 |
| Work groups complete Stage 2 (In-house Review and Executive Committee Approval) | September 2009 |
| Work groups begin Stage 3 (Preliminary Plan Formulation and Evaluation) | |
| ITR IPR Materials | |
| Work groups complete Stage II (In-Progress Review and Executive Committee Approval) | |
| Independent Technical Review FSM Materials | |
| Feasibility Scoping Meeting (FSM) | |
| Draft Report to ITR | January 2011 |
| Independent Technical Review AFB Materials | |
| Alternative Formulation Briefing (AFB) | December 2010 |
| Final EIS / NEPA Public Review | April 2011 |
| Final Report Complete and Submitted to Division/Headquarters | September 2011 |
| Feasibility report approved by Division | October 2011 |
| Civil Works Review Board | January 2012 |

d. Conducting External Peer Review. The relevant Planning Center(s) of Expertise will make the final determination as to whether or not External Peer Review is to be conducted. For this feasibility study, this decision is the responsibility of the ECO-PCX and the Walla Walla Dx.

e. Public Comment on Decision Document. Once completed, the Integrated Feasibility Report and EIS will be disseminated to resource agencies, interest groups, and the public as part of the National Environmental Policy Act (NEPA) environmental compliance review. Please note where “FEIS / NEPA Public Review” is highlighted in

the “Peer Review Plan” flow chart included as Attachment 1. Public entities and private individuals may also review and comment on draft documents as members of the PDT.

f. Provision of Public Comments to Reviewers. All significant and relevant public comments will be provided as part of the review package to Reviewers as they are available and may include but not be limited to: scoping letters, meeting minutes, other received letters, and emails.

g. Anticipated Number of Reviewers.** The relevant Planning Center(s) of Expertise shall make the final determination for the number needed of reviewers. For this feasibility study, this decision is the responsibility of the ECO-PCX and the Walla Walla Cost Estimating DX.

h. Primary Review Disciplines and Expertise. The number of reviewers (Level of Review) shall vary as depicted under “Review Phase” in the “Peer Review Plan” flow chart included as Attachment 1. The ECO-PCX and the Walla Walla Dx shall make the final determination for the discipline type and number needed of reviewers depending upon the “Review Phase.”

| PRELIMINARY REVIEW DISCIPLINES FOR ITR** | |
|--|--|
| Plan Formulation | The reviewer should have the ability to review the planning process which should address the Nation’s water resources needs in a systems context and explore a full range of alternatives in developing solutions. The reviewer should be able to recognize innovative solutions and the application of the full range of the Corps programs and authorities are integral to the planning process. The reviewer should thoroughly understand the Planning Guidance Notebook (ER-1105-100) and the Water Resources Council’s Principals and Guidelines. |
| Environmental / NEPA Compliance | The reviewer should be able to addresses the integration of environmental evaluation and compliance requirements, pursuant to national environmental statutes, applicable executive orders and other Federal planning requirements, into the planning of Civil Works water and related land resources comprehensive plans and implementation projects. |
| Hydrology & Hydraulics | The reviewer should have the ability to address river hydraulics and sediment transport, hydrologic statistics and risk analysis, reservoir system analysis, planning analysis, real-time water control management and a number of other closely associated technical subjects. |
| Cost Estimating | The cost estimating reviewer must be cost estimating specialist. It is imperative that estimates be prepared by, and reviewed under the supervision of, personnel who are competent in construction cost estimating. The reviewer must possess a working knowledge of construction and environmental restoration and be capable of making professional determinations based on their experience. |

As the Philpott Section 216 Feasibility Study proceeds, additional reviewing disciplines will be added.

i. Selection of External Peer Reviewers. Peer review is not recommended.

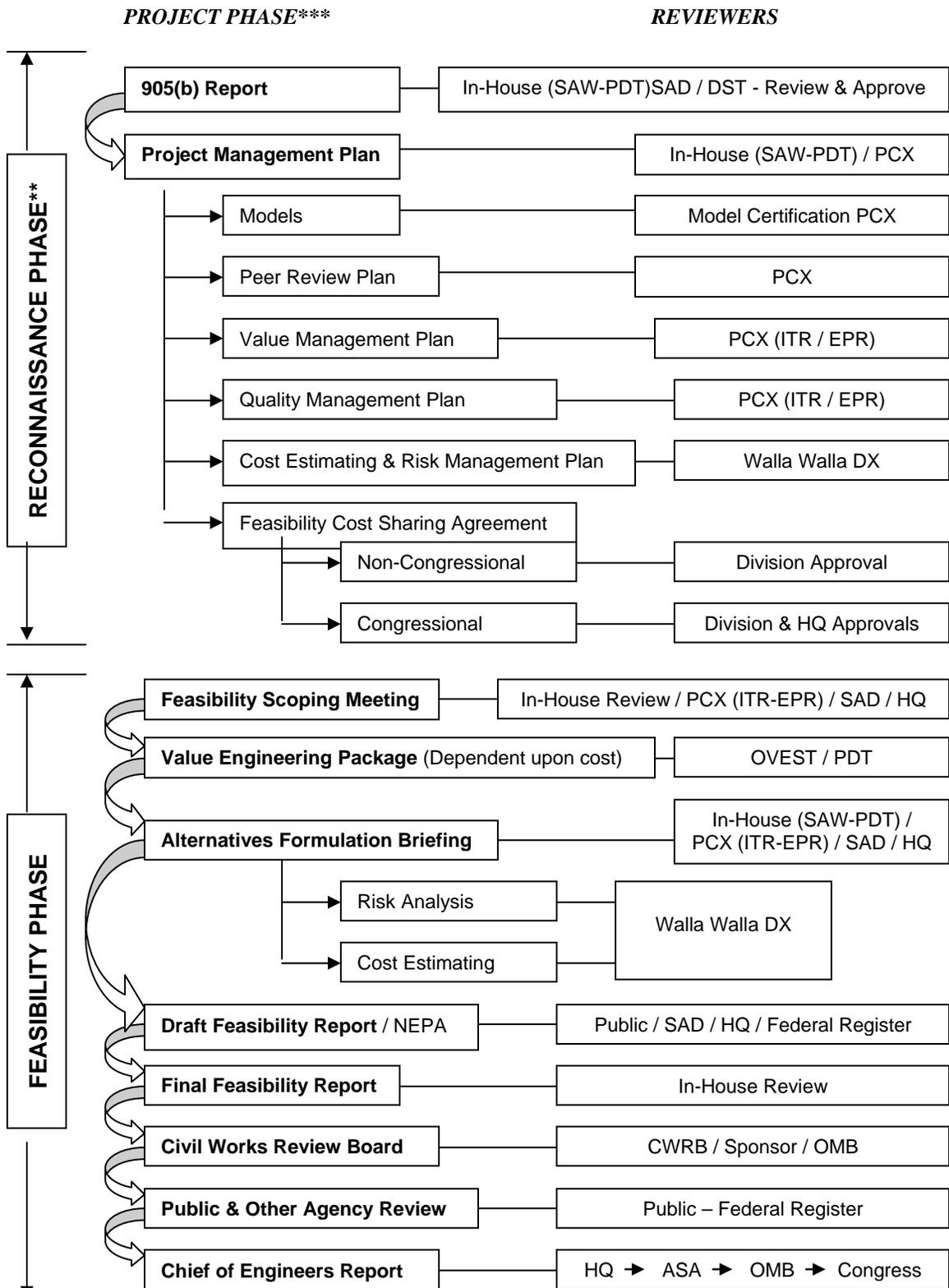
j. Nomination of Peer Reviewers by the Public. Peer review is not recommended.

** See Attachment 2

ATTACHMENT 1

PEER REVIEW PLAN

PEER REVIEW PLAN*



* Reference External Peer Review Decision Checklist in Section b., questions 1 - 5: if any changes occur in checklisted items, the vertical team will determine if External Peer Review (EPR) will be required. A decision regarding EPR is requested in writing from SAD and HQ Regional Integration Team Leader (RIT).

**A Scoping Letter during the Reconnaissance Phase provides the Public the opportunity to share any known concerns.

***The Project Delivery Team (PDT) includes the non-Federal Sponsor, stakeholders, and resource agencies.

ATTACHMENT 2

ITR APPROVAL REQUEST

Establishment of ITR responsibility has been an evolving process. Skilled and experienced personnel who have not been associated with the development of the Philpott Feasibility Study products will be requested by Wilmington District Plan Formulation and Economics Section. The following disciplines have been identified during the initial process. Additional disciplines will be added as deemed appropriate.

- ✓ **Planning Formulation**
- ✓ **Economics/Cost Effectiveness and Incremental Analysis**
- ✓ **Hydraulic and Hydrology**
- ✓ **Environmental Restoration and NEPA Compliance**