DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SOUTH ATLANTIC DIVISION
60 FORSYTH STREET SW, ROOM 10M15
ATLANTA, GA 30303-8801

CESAD-PDP (1105) 20 September 2021

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, Wilmington District
69 Darlington Avenue, Wilmington, NC 28403-1343

SUBJECT: Approval for the Review Plan and the Type 1 Independent External Peer Review Exclusion (IEPR) for the Philpott Water Reallocation Feasibility Study

1. References:

a. Wilmington District, CESAW-PM-D memorandum (Philpott Water Reallocation Feasibility Study – Request for Approval of Review Plan and Type 1 IEPR Exclusion), 24 June 2021.

b. Southwestern Division, CESWD-PDP memorandum (Philpott Lake Water Supply Storage Reallocation Study Review Plan), 27 May 2021.

c. HQ USACE, CECQ-P memorandum (Revised Delegation of Authority in Section 2034(a)(5)(A) of the Water Resources Development Act of 2007 (WRDA 2007), as amended (33 U.S.C. 2343)), 7 June 2018.

2. Wilmington District prepared the review plan for the subject study consistent with EC 1165 2-217. The District coordinated the review plan and request for IEPR exclusion with the National Water Management and Reallocation Studies Planning Center of Expertise (WMRS-PCX), which is the lead office to execute this review plan. For further information, contact Tacy Jensen, acting Technical Director for the WMRS-PCX at 918-210-3087. Based on a case-specific, risk-informed decision, Type I Independent External Peer Review (IEPR) is not required. WMRS-PCX concurs that an IEPR is not required for this study.

3. I approve this review plan (enclosed) and the request for exclusion from IEPR. The approved review plan is subject to change as circumstances require, consistent with study development under the project management business process. Subsequent revisions to this approved review plan due to significant changes in the study, study scope, or level of review will require new written approval from this office.

4. Point of contact for this action is Ms. Karen Dove-Odumosu at (404) 562-5225 or Karen.A.DoveOdumosu@usace.army.mil, for further questions regarding this matter.

Encl

JASON E. KELLY, PMP
Brigadier General, USA
Commanding

REVIEW PLAN

JUNE 2021

Project Name: *PHILPOTT LAKE WATER REALLOCATION STUDY*
P2 Number: *111649*

Decision Document Type: *Feasibility Report and Integrated Environmental Assessment*

Project Type: *Water Supply Reallocation*

District: *Wilmington District, SAW*
District Contact: [redacted]

Major Subordinate Command (MSC): *South Atlantic Division, SAD*
MSC Contact: [redacted]

Review Management Organization (RMO): *Water Management and Reallocation Study PCX*
RMO Contact: [redacted]

Key Review Plan Dates

Date of RMO Endorsement of Review Plan: *May 27, 2021*
Date of MSC Approval of Review Plan: *Pending*
Date of IEPR Exclusion Approval: *N/A*
Has the Review Plan changed since PCX Endorsement? *No*
Date of Last Review Plan Revision: *None*
Date of Review Plan Web Posting: *TBD*
Date of Congressional Notifications: *N/A*

Milestone Schedule

	Scheduled	Actual	Complete
Alternatives Milestone:	*MAY 2021*	*June 2, 2021*	*Yes*
Tentatively Selected Plan:	*FEB 2022*	*(enter date)*	*No*
Release Draft Report to Public:	*MAY 2022*	*(enter date)*	*No*
Agency Decision Milestone:	*AUG 2022*	*(enter date)*	*No*

Final Report Transmittal:	*NOV 2022*	*(enter date)*	*No*
Senior Leaders Briefing:	*APR 2023*	*(enter date)*	*No*
Director's Report:	*MAY 2023*	*(enter date)*	*No*

Project Fact Sheet
JUNE 2021

Project Name: PHILPOTT LAKE WATER REALLOCATION STUDY

Location: Philpott Dam and Reservoir, Henry, Patrick, and Franklin Counties, Virginia

Authority: Public Law 85-500, Title III, Water Supply Act of 1958, as amended.

Sponsor: Henry County Public Service Authority

Type of Study: Integrated Feasibility and Environmental Assessment Study

SMART Planning Status: The Philpott Reallocation Study has adapted to follow current SMART Planning milestones.

Project Area: The Philpott Lake project was authorized for flood control, hydroelectric power generation, low flow augmentation, and recreation by the Flood Control Act of 1944, Public Law 78-534. Philpott Lake and Dam is part of the Roanoke River Basin. It is located about 44 river miles above the mouth of the Smith River. Philpott Lake extends into Franklin, Henry and Patrick Counties, VA and is about 7 miles upstream from Bassett, VA. Philpott Lake is at elevation 974 feet Mean Sea Level (MSL) and covers an area of 2,880 acres and has a shoreline length of 110 miles at elevation 985 feet MSL. Philpott Dam includes a concrete gravity dam with an ungated weir spillway, a powerhouse and switchyard. The top elevation of Philpott Dam is 1016 feet MSL and has an overall length of 920 feet. The maximum height above the streambed is 220 feet. The spillway has a crest elevation of 985 feet MSL and a total length of 120 feet. The power house has two vertical shaft Francis turbines rated at 6700 kw each and a smaller unit rated at 600 kw. Construction of the dam began in 1948 and was completed in 1952. Initial operation of the power generating unit began in 1953.

Problem Statement: This reallocation study comes at the request of the Henry County Public Service Authority (HCPSA) to purchase enough storage to yield 4 million gallons of water per day (mgd). The current membership of HCPSA is projected to need an additional 4 mgd by 2073.

The Water Management and Reallocation Study Center of Expertise (WMRS PCX) approved the needs analysis developed for the Philpott Lake Reallocation Study for use in January 2021. The needs analysis projected long-term water needs into the year 2073 for the southwest Virginia region. A review of the projections to evaluate a 50-year planning horizon to 2073 do not indicate additional needs beyond what is already projected.

Philpott Dam has been assigned a Dam Safety Action Classification (DSAC) 3 by the Dam Senior Oversight Group. The District received an exeception to policy waiver in April 2020 permitting the reallocation study per ER 1110-2-1156, Safety of Dams – Policy and Procedures, paragraph 24.7.1, which restricts reallocation studies at a project with a DSAC 1, 2, or 3 classification. At this time, due to the DSAC 3 classification and as a condition of the study approval, it is not anticipated that the conservation pool will be raised. The PDT will review existing risk information and alternatives needed to improve the DSAC rating. However, these are expected to be cost prohibitive.

Federal Interest: Section 301(b) of the Water Supply Act (WSA) of 1958 is the authority of the Corps to include Municipal and Industrial (M&I) water storage in reservoir projects and to reallocate storage in existing projects purposes to M&I water supply storage. As specified in Section 301(d), modifications to a planned or existing reservoir project to add water supply storage, which would seriously affect the project, its other purposes, or its operation, requires congressional authorization.

Risk Identification: The below risks were identified in the Risk Register in preparation for the Alternatives Milestone Meeting conducted in June 2021**.**

Activity/Action/Issue/Risk	Consequences/Impacts	Proposed Mitigation
Mapping/Cultural Resources-- There was no large-scale archaeological survey conducted prior to the creation of the Philpott Reservoir, and there have been few Phase I surveys conducted for managed properties since that time. Due to the limited amount of survey coverage, only 59 sites have been recorded on Philpott managed lands to date. One of these sites, 44PK9, has been determined eligible for inclusion to the National Register of Historic Places. Of the remaining 58 sites recorded at Philpott, 11 have been determined not eligible for the NRHP and 47 have not had their NRHP status evaluated.	The District continues to budget and request funds to survey the remainder of the lake and surrounding Federally-owned lands.	Additional coordination with SHPO and applicable Federally-recognized Tribes. Section 106 coordination will begin once the TSP is selected. Section 106 documentation will be on the same timeline as NEPA (will go out for public review with NEPA). A Programmatic Agreement may be drafted with responsibility for any mitigation assigned to the water supply storage user for any sites located within the band of the pool change.
Evaluation of Serious Effects— Evaluation of serious effects on other project purposes, such as flood risk management, hydropower, and recreation	The study team will coordinate with District OC and the the vertical team to determine is significant effects is applicable. If serious effect is determined the study team will seek guidance from vertical chain on path forward. Could result in additional delays since report will require congressional approval	Performing adequate engineering analysis to determine potential effects to FRM and dam safety. If necessary, adjust alternatives and/or develop mitigation measures. The study team will coordinate with District OC and the the vertical team to determine is significant effects is applicable. If serious effect is determined, the study team will coordinate with District OC and seek vertical team approval. HAC will evaluate and analyze the impacts to hydropower Review the original authorization of how the project was intended to be operated to inform and evaluate serious effects

Reallocating from the Sediment Pool. The pool was designed to hold 100 years of sedimentation so it is unknown without study and re-survey whether or not the capacity in the Sediment Pool is available or not for the life of the agreement. May result in adequate future storage for future sedimentation thereby impacting the long-term viability of the active storage pools.	Increased risk of depletion of Hydropower and Flood Storage Pools as a result of loss of storage in Sediment Pool.	Fully evaluate the Sediment Pool for reallocation; requires a complete bathymetric survey to determine if the initial sedimentation rates were overestimated. Another option includes periodic dredging of the remaining sediment pool to maintain storage capacity. A third option includes screening utilization of the Sediment Pool volumes as a reallocation alternative from futher consideration.
Reallocating from the Flood Storage pool.	Potential major impacts to USACE flood risk management by increasing flood risks downstream in the Roanoke River Basin. Philpott Dam has an elevated DSAC rating of 3 due to high consequences of downstream flooding. Any loss of flood storage increases active risk. There have been significant flood events during operations at Philpott that have nearly utilized the entire flood pool. Even during less significant flood events, there is flooding impact to structures in the floodplain downstream of Philpott Dam.	Choose to eliminate the Flood Control pool as an option for water supply storage reallocation. If this alternative were to be reevaluated and selected, then a Type II IEPR would be required.
Reallocating from the hydropower pool.	Decrease in hydropower capability. Potential impacts of original project purpose by reducing the hydropower capability of the dam.	Utilization of the hydropower pool is the only option for water storage. Conduct Hydropower Analysis to determine impacts of reallocation from Hydropower Pool on original project purpose.

Listing of a new threatened or endangered species in the study area.	Listing of a new species could put additional demands on the available water quality storage requirements. May require future reevaluation of proposed action.	Complete thorough coordination with Resource Agencies.
Occurrence of a drought more severe than the drought of record. Occurrence of a drought more severe than the drought of record could cause depletion of the water pool and an inability to meet downstream flow targets.	Potential impacts on habitats and species downstream would require additional coordination with Resource Agencies/mitigation.	Reallocate a lower volume than needed to satisfy HCPSA's future water supply storage needs; coordinate with agencies to reduce downstream flow targets per the Drought Contingency Plan; accept the risk.

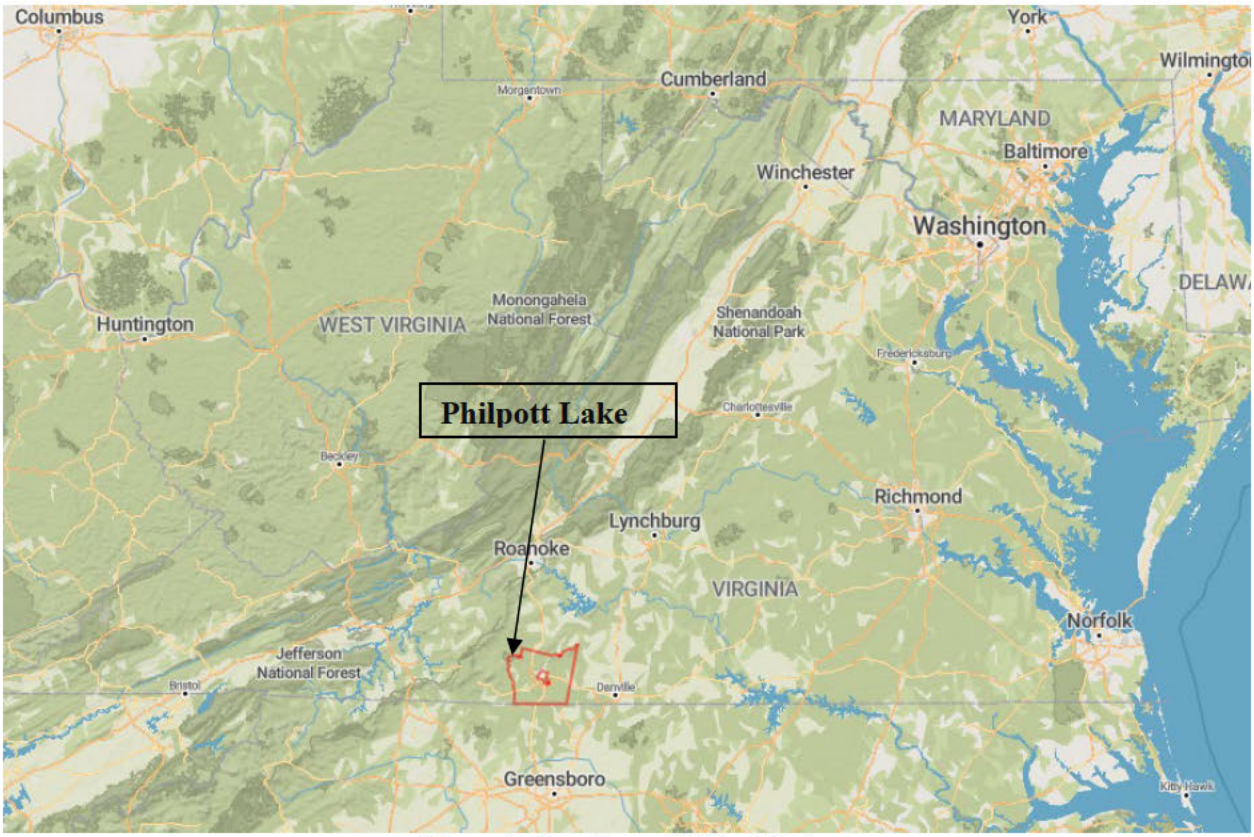

Figure 1. Location of Philpott Lake

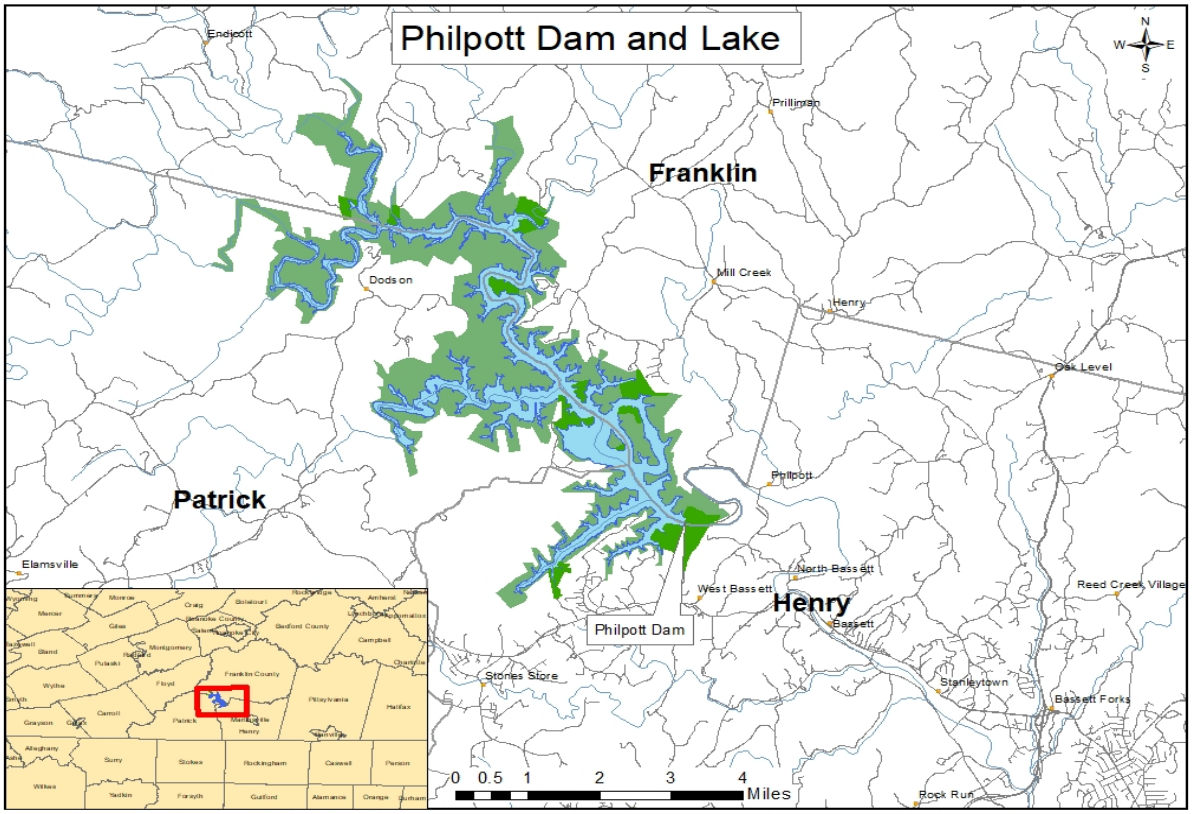

Figure 2. Philpott Dam and Lake

1. FACTORS AFFECTING THE LEVELS OF REVIEW

Scope of Review. Engineering Regulation (ER) 1165-2-217 stipulates that the appropriate scope and level of review be made as a risk-informed decision and provides criteria for doing so. This review plan for the Philpott Lake Water Reallocation Report includes District Quality Control (DQC), Agency Technical Review (ATR), as well as Policy and Legal Compliance and Public Reviews. The PDT has determined that an Independent External Peer Review (IEPR) will not be necessary. Philpott Dam is a Dam Safety Action Classification (DSAC) 3 and therefore a reallocation that would require raising the conservation pool is not permitted while a DASC 3, as stated in ER 1110-2-1156 Safety of Dams – Policy and Procedures, Section 24.4.1.2. The dam safety letter per ER 1110-2-1156, which refers to the dam safety cost-sharing responsibilities was sent to the sponsor in January 2020. This review plan will be updated if at a later time if it is determined that an IEPR trigger is realized. Additional details are provided in Section 2c. of this Review Plan.

Potential Failure Mode Analysis (PFMA). The array of alternatives does not include a potential pool raise, thus the Wilmington District will not perform an abbreviated risk assessment to support the decision.

- Will the study likely be challenging? No. The study will follow guidelines and procedures per guidance, such as ER 1105-2-100 Planning Guidance Notebook, which provide direction regarding analysis and alternative formulation. In order to mitigate the above identified risks, some new information and new analysis will need to be completed, but it isn't expected to be challenging.

- Provide a preliminary assessment of where the project risks are likely to occur and assess the magnitude of those risks. Risk identification was provided on page 3.

- Is the project likely to be justified by life safety or is the study or project likely to involve significant life safety issues? No. The project will not be justified by life safety nor is the project expected to involve significant life safety issues. As stated above in the PFMA section, a pool raise is not being considered as a viable alternative and the team is not pursuing any alternatives that would change the hydraulic loading on the dam.

- Has the Governor of an affected state requested a peer review by independent experts? No, the governor of Virginia has not requested a peer review by independent experts.

- Will the Study likely involve significant public dispute as to the project's size, nature, or effects? No, coordination with key agencies will be necessary.

- Is the project/study likely to involve significant public dispute as to the economic or environmental cost or benefit of the project? No

- Is the information in the decision document or anticipated project design likely to be based on novel methods, involve innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices? No, the study is using USACE approved or preferred modeling for all the different disciplines.

- Does the project design require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design/construction schedule? No

- Is the estimated total cost of the project greater than $200 million? No

- Will an Environmental Impact Statement be prepared as part of the study? No, it's not anticipated at this time.

- Is the project expected to have more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources? No, the project is not expected to have more than negligible adverse impacts on tribal, cultural, or historic resources based on currently available information.

- Is the project expected to have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures? No

- Is the project expected to have, before mitigation measures, more than a negligible adverse impact on an endangered or threatened species or their designated critical habitat? No

2. REVIEW EXECUTION PLAN

This section describes each level of review to be conducted. Based upon the factors discussed in Section 1, this study will undergo the following types of reviews:

District Quality Control. All decision documents (including data, analyses, environmental compliance documents, etc.) undergo DQC. This internal review process covers basic science and engineering work products. It fulfils the project quality requirements of the Project Management Plan.

Agency Technical Review. ATR is performed by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. These teams will be comprised of certified USACE personnel. The ATR team lead will be from outside the home MSC. If significant life safety issues are involved in a study or project a safety assurance review should be conducted during ATR.

Independent External Peer Review. Type I IEPR is not required for this study. This is the most independent level of review, and is applied in cases that meet criteria where the risk and magnitude of the project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision is made as to whether Type I IEPR is appropriate.

Cost Engineering Review. All decision documents shall be coordinated with the Cost Engineering Mandatory of Expertise (MCX). The MCX will assist in determining the expertise needed on the ATR team. The MCX will provide the Cost Engineering certification. The RMO is responsible for coordinating with the MCX for the reviews. These reviews typically occur as part of ATR. At this time, the PDT does not aniticipate requiring a cost engineering review because the feasibility report will not result in a construction project.

Model Review and Approval/Certification. ER 1165-2-217 mandates the use of certified or approved models for all planning work to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions.

Yield Analysis Review and Approval: The PDT will request a targeted ATR for review and approval of the H&H Yield Analysis prior to TSP milestone meeting.

Policy and Legal Review. All decision documents will be reviewed for compliance with law and policy. ER 1105-2-100, Appendix H provides guidance on policy and legal compliance reviews. These reviews culminate in determinations that report recommendations and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. These reviews are not further detailed in this section of the Review Plan.

Public Review. The public will have the opportunity to provide comments on the Recommended Plan when the draft report is released for concurrent review. The draft study report will be made available on the District website for those who wish to review and submit comments. Significant and relevant public comments will be discussed at the Agency Decision Milestone with the vertical team and provided to reviewers as part of the final report package when the report is forwarded to the Division for final review. This review are not further detailed in this section of the Review Plan.

Table 1 provides the schedules and costs for reviews. The specific expertise required for the teams are identified in later subsections covering each review. These subsections also identify requirements, special reporting provisions, and sources of more information.

Table 1: Levels of Review

Product(s) to undergo Review	Review Level	Start Date	End Date	Cost	Complete
Planning Model Review (Demand Model)	Model Review (see EC 1105-2-412)	07/30/2020	12/11/2020	$8,000	Yes
Planning Model Review (HEC-RESSIM)	Model Review (see EC 1105-2-412)	07/01/2021	09/30/2021	$6,000	No
Draft Feasibility Report and Integrated EA	District Quality Control	04/05/2022	05/24/2022	$20,000	No
Draft Feasibility Report and Integrated EA	Agency Technical Review	05/25/2022	07/18/2022	$30,000	No
Draft Feasibility Report and Integrated EA	Policy and Legal Review	05/25/2022	07/01/2022	n/a	No
Final Feasibility Report and Integrated EA	District Quality Control	08/24/2022	08/30/2022	$10,000	No
Final Feasibility Report and Integrated EA	Agency Technical Review	09/08//2022	09/21//2022	$15,000	No
Draft Feasibility Report and Integrated EA (Not anticipated at this time)	Type II IEPR	NA	NA	n/a	No

NOTE: This table may also be used to identify future review work in follow-on phases of a project. This may include products prepared during the pre-construction engineering and design phase or products prepared as part of planning for the Operations and Maintenance phase of a project.

a. DISTRICT QUALITY CONTROL

The home district shall manage DQC and will appoint a DQC Lead to manage the local review (see ER 1165-2-217, section 8.a.1). The DQC Lead should prepare a DQC Plan and provide it to the RMO and MSC prior to starting DQC reviews. Table 2 identifies the required expertise for the DQC team.

Table 2: Required DQC Expertise

DQC Team Disciplines	Expertise Required
DQC Lead	A senior professional with extensive experience preparing Civil Works decision documents and conducting DQC. The lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Planning	The Planning reviewer should be a senior water resources planner with experience in formulation and evaluation of alternatives for water supply and/or reallocation, and assessment of significance of impacts on other project purposes (e.g. flood risk mitigation, navigation, hydropower, recreation, water quality, fish and wildlife) at multi-purpose projects.
Economics	The economics reviewer should be a senior economist with experience in development of population and water use forecasts, cost allocation at multi-purpose projects, assessing financial feasibility of reallocation to M&I water supply storage, calculation of storage pricing based on updated cost of storage and benefits foregone methods, including reviewing a recreation analysis if necessary. The reviewer should also be able to evaluate Inputs into a spreadsheet model for water demand and supply. Lastly, the reviewer should also be able to provide expertise for water storage agreements
Hydropower Economics	The hydropower economics reviewer should also be familiar with economic evaluation of hydropower, especially with regard to the computation of energy and capacity benefits.
Environmental Resources	The environmental resources reviewer should be a senior NEPA practitioner who is able to review the combined report to confirm that all environmental and cultural resource statues are in compliance and that impact evaluation is adequate.
Cultural Resources	The cultural resources reviewer should be a senior archaeologist. Reviewer should also have expertise in both Pre-Contact/Post-Contact Archaeology, and geographic expertise in either the Great Plains or Southeast United States geographical areas
Hydrology & Hydraulic Engineering	Thorough knowledge of hydrology and hydraulics as it pertains to downstream consequences for a project. RMC Risk Cadre experience is preferred. Must be proficient using HEC-FIA and HECLifeSim-
Water Management	The water management reviewer will be a senior engineer with expertise in water control manuals and operations of multipurpose projects and river basin systems, including an understanding of storage accounting. They should also have expertise in developing

	and running rules based reservoir and river system simulation models including HEC-ResSim.
Dam Safety	The dam safety reviewer will be a senior professional who is a subject matter expert in the area of dam safety evaluations.
Operations	Lakes Branch Chief who is a subject matter expert on multi-purpose reservoirs will review the report of accuracy.
Real Estate	Reviewer will have knowledge and expertise regarding flowage easements and what amount of additional frequency of inundation may lead to land acquisition in fee.

Documentation of DQC. Quality Control should be performed continuously throughout the study. A specific certification of DQC completion is required at the draft and final report stages. Documentation of DQC should follow the District Quality Manual and the MSC Quality Management Plan. An example DQC Certification statement is provided in ER 1165-2-217, on page 19 (see Figure F).

Documentation of completed DQC should be provided to the MSC, RMO and ATR Team leader prior to initiating an ATR. The ATR team will examine DQC records and comment in the ATR report on the adequacy of the DQC effort. Missing or inadequate DQC documentation can result in delays to the start of other reviews (see ER 1165-2-217, section 9).

b. AGENCY TECHNICAL REVIEW

The ATR will assess whether the analyses are technically correct and comply with guidance, and that documents explain the analyses and results in a clear manner. An RMO manages ATR and the ATR Team Lead is a member outside of the home MSC. The review is conducted by an ATR Team whose members are certified to perform reviews. Lists of certified reviewers are maintained by the various technical Communities of Practice (see ER 1165-2-217, section 9(h)(1)). Table 3 identifies the disciplines and required expertise for this ATR Team.

Table 3: Required ATR Team Expertise

ATR Team Disciplines	Expertise Required
ATR Lead	A senior professional with extensive experience preparing Civil Works decision documents and conducting ATR. The lead should have the skills to manage a virtual team through an ATR. The lead may serve as a reviewer for a specific discipline (such as planning, economics or environmental).
Planning	The Planning reviewer should be a senior water resources planner with experience in formulation and evaluation of alternatives for water supply and/or reallocation, and assessment of significance of impacts on other project purposes (e.g. flood risk mitigation, navigation, hydropower, recreation, water quality, fish and wildlife) at multi-purpose projects.
Economics	The economics reviewer should be a senior economist with experience in development of population and water use forecasts, cost allocation at multi-purpose projects, assessing financial feasibility of reallocation to M&I water supply, calculation of storage pricing based on updated cost of storage and benefits foregone methods, including reviewing a recreation analysis if necessary. The reviewer should also be able to evaluate Inputs into a spreadsheet model for water demand and supply. Lastly, the reviewer should also be able to provide expertise for water storage agreements
Environmental Resources	The environmental resources reviewer should be a senior NEPA practitioner who is able to review the combined report to confirm that all environmental and cultural resource statues are in compliance and that impact evaluation is adequate.
Cultural Resources	The cultural resources reviewer should be a senior archaeologist. Reviewer should also have expertise in both Pre-Contact/Post-Contact Archaeology, and geographic expertise in either the Great Plains or Southeast United States geographical areas
Water Management	The water management reviewer will be a senior engineer with expertise in water control manuals and operations of multipurpose projects and river basin systems, including an understanding of storage accounting. They should also have expertise in developing and running rules based reservoir and river system simulation models including HEC-ResSim.

Hydraulic Engineering	Thorough knowledge of hydrology and hydraulics as it pertains to downstream consequences for a project. RMC Risk Cadre experience is preferred. Must be proficient using HEC-FIA and HECLifeSim
Dam Safety	The dam safety reviewer will be a senior professional who is a subject matter expert in the area of dam safety evaluations.
Real Estate	The real estate reviewrr should be an experienced and certified real estate reviewer. Experience with reallocation studies would be helpful, but it is not necessary.
Climate Preparedness and Resilience CoP Reviewer	A member of the Climate Preparedness and Resiliency Community of Practice (CoP) will participate in the ATR review.

Documentation of ATR. DrChecks will be used to document all ATR comments, responses and resolutions. Comments should be limited to those needed to ensure product adequacy. If a concern cannot be resolved by the ATR team and PDT, it will be elevated to the vertical team for resolution using the ER 1165-2-217 issue resolution process. Concerns can be closed in DrChecks by noting the concern has been elevated for resolution. The ATR Lead will prepare a Statement of Technical Review (see ER 1165-2-217, Section 9), for the draft and final reports, certifying that review issues have been resolved or elevated. ATR may be certified when all concerns are resolved or referred to the vertical team and the ATR documentation is complete.

Site Visit Determination. The study does not involve significant life safety risks, therefore, a site visit by the ATR team will not be required.

c. INDEPENDENT EXTERNAL PEER REVIEW

(i) Type I IEPR.

Decision on Type I IEPR. ER 1165-2-217 states that an exclusion is not necessary if the three mandatory conditions are not met.

- The Philpott Lake Reallocation Study doesn't meet the Type I IEPR mandatory triggers in ER 1165-2-217, Chapter 6, para 6.4 as follows:

  - the estimated total project cost is not anticipated to be greater than $200 million;
  - it is not expected that the Governor will request an IEPR;
  - the project study is not controversial due to significant public dispute over the size, mature, or effects of the project or the economic or environmental costs or benefits of the project. Therefore, it is not anticipated that the Chief of Engineers will direct an IEPR.

(i) Type II IEPR.

Decision on Type II IEPR. The second kind of IEPR is Type II IEPR, also know as a Safety Assurance Review (SAR). These Safety Assurance Reviews are managed outside of the USACE and are conducted on design and construction for hurricane, storm and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. A Type II IEPR Panel would be convened to review the design and construction activities, if construction activities were anticipated, before construction begins, and until construction activities are completed, and periodically thereafter on a regular schedule. However, there are no construction activities anticipated.

Site Visit Determination. The study does not involve significant life safety risks, therefore, a site visit for IEPR will not be required.

d. MODEL CERTIFICATION OR APPROVAL

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models are any models and analytical tools used to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision making. The use of a certified/approved planning model does not constitute technical review of a planning product. The selection and application of the model and the input and output data is the responsibility of the users and is subject to DQC, ATR, and IEPR.

Table 5: Planning Models. The following models may be used to develop the decision document:

Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Certification / Approval
Philpott Water Demand and Water Supply Needs Analysis	Spreadsheet that calculates water demands and potential water supply needs over the planning period of analysis.	Model underwent targeted ATR in 2020. Approved and certified by Planning Center of Expertise for Water Management and Reallocation Studies/HQUSACE in December 2020.
HEC-FIA 2.2	HEC-FIA evaluates consequences from events defined by hydraulic model output such as gridded data. The consequences HEC-FIA computes include economic losses (losses to structures and their contents), agricultural losses, and expected life loss from these hydraulic events.	Certified by the Flood Risk Management Planning Center of Expertise

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue. The professional practice of documenting the application of the software and modeling results will be followed. The USACE Scientific and Engineering Technology Initiative has identified many engineering models as preferred or acceptable for use in studies. These models should be used when appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR.

Table 6: Engineering Models. These models may be used to develop the decision document:

Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Approval Status
HEC-ResSim 3.4.1.88 Beta May 2019	This model aids engineers and planners in predicting the behavior of reservoirs and is better suited for conducing yield anlysis. ResSim will be used to determine changes to reservoir operations under alternative reallocation plans.	HEC

e. POLICY AND LEGAL REVIEW

Policy and legal compliance reviews for draft and final planning decision documents are delegated to the MSC (see Director's Policy Memorandum 2018-05, paragraph 9).

(i) Policy Review.

The policy review team is identified through the collaboration of the MSC Chief of Planning and Policy and the HQUSACE Chief of the Office of Water Project Review. The team is identified in Attachment 1 of this Review Plan. The makeup of the Policy Review team will be drawn from Headquarters (HQUSACE), the MSC, the Planning Centers of Expertise, and other review resources as needed.

- The Policy Review Team will be invited to participate in key meetings during the development of decision documents as well as milestone meetings. These engagements may include In-Progress Reviews, Issue Resolution Conferences or other vertical team meetings plus the milestone events.

- The input from the Policy Review team should be documented in a Memorandum for the Record (MFR) produced for each engagement with the team. The MFR should be distributed to all meeting participants.

- In addition, teams may choose to capture some of the policy review input in a risk register if appropriate. These items should be highlighted at future meetings until the issues are resolved. Any key decisions on how to address risk or other considerations should be documented in an MFR.

(ii) Legal Review.

Representatives from the Office of Counsel will be assigned to participate in reviews. Members may participate from the District, MSC and HQUSACE. The MSC Chief of Planning and Policy will coordinate membership and participation with the office chiefs.

- In some cases legal review input may be captured in the MFR for the particular meeting or milestone. In other cases, a separate legal memorandum may be used to document the input from the Office of Counsel.

- Each participating Office of Counsel will determine how to document legal review input.

ATTACHMENT 1: TEAM ROSTERS

PROJECT DELIVERY TEAM			
Name	Office	Position	Phone Number
[redacted]	CESAW-PM-DG	Project Manager	[redacted]
[redacted]	CESAW-ECP-P	Plan Formulation	
[redacted]	CESAJ-PD-D	Economics	
[redacted]	CESAW-ECP-EC	H&H/Water Management	
[redacted]	NWP-HDC-H	Hydropower Analysis Center	[redacted]
[redacted]	CESAW-ECP-PE	Environmental	[redacted]
[redacted]	CESAW-ECP-EG	Dam Safety Program Manager	
[redacted]	CESAW-ECP-EC	H&H/Water Management	[redacted]
[redacted]	SAS-RE-HA	Real Estate	[redacted]
[redacted]	CESAW-ECP-ET	Cost Enginnering	
[redacted]	CESAW-OP-LP	Philpott Lake Project Office	
[redacted]	CESAW-OC	Office of Counsel	[redacted]
[redacted]	CESAW-OP	Philpott Lake Operations	[redacted]

DISTRICT QUALITY CONTROL TEAM			
Name	Office	Position	Phone Number
[redacted]	CESAW-ECP-E	DQC Lead/Dam Safety Officer	[redacted]
[redacted]	CESAW-PM-D	CW Prog & PM Branch	[redacted]
[redacted]	CESAW-ECP-P	Plan Formulation	[redacted]
[redacted]	CESAJ-PD-D	Economics	
[redacted]	CESAW-ECP-T	Cost Engineering	
[redacted]	CESAW-ECP-PENWK-PMP-R	Environmental	
[redacted]	CESAW-ECP-EC	H&H/Water Management	[redacted]
[redacted]	SAS-RE-HA	Real Estate	[redacted]
[redacted]	CESAW-OP	Lakes Branch Chief	

AGENCY TECHNICAL REVIEW TEAM			
Name	Office	Position	Phone Number
[redacted]	CESWF-PEP-E	ATR Lead/Economics	[redacted]
TBD		Plan Formulation	
[redacted]		Hydropower Impacts	
		Water Supply Needs Analysis	
TBD		Environmental Resources	
TBD		Water Management	
TBD		Dam Safety	
TBD		Hydraulic Engineer	
TBD		Cultural Resources	
TBD		Real Estate	
TBD		Dam Safety	
TBD		Climate Analysis	

VERTICAL TEAM			
Name	Office	Position	Phone Number
[redacted]	Water Management and Reallocation Study PCX-RMO	Acting Technical Director	[redacted]
TBD		Plan Formulation	
TBD		Economics	
TBD		Environmental	
TBD		Water Management/ Hydraulic Engineer	
TBD		Real Estate	
TBD		Office of Counsel	

POLICY REVIEW TEAM			
Name	Office	Position	Phone Number
[redacted]	CESAM-PD-FP	Plan Formulation/Review Manager	[redacted]
[redacted]	OWPR - POC	Economics	[redacted]
[redacted]	CESAD-PDP	Environmental	[redacted]
[redacted]	CESAD-RBT	Engineering and Construction	[redacted]
[redacted]	CESAD-PDR	Real Estate	[redacted]
[redacted]	CECC-SAD	Office of Counsel	[redacted]
[redacted]	CECW-EC	Climate Preparedness and Resilience	[redacted]
[redacted]	CESAD-PDO	Operations & Water Manager	[redacted]
[redacted]	Water Management and Reallocation Study PCX-RMO	Acting Technical Director	[redacted]