



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS, SOUTHWESTERN DIVISION  
1100 COMMERCE ST, STE 831  
DALLAS, TX 75242-1317

CESWD-PD

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, Fort Worth District  
(CESWF-ZA), P.O. Box 17300, Fort Worth, TX 76102-0300

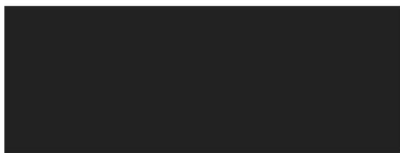
SUBJECT: Review Plan approval for the Whitney Lake Reallocation Study, Bosque,  
and Hill County Texas (P2# 513422)

1. The attached Review Plan for the Whitney Lake Reallocation Study dated January 2024 has been prepared consistent with ER 1165-2-217.
2. The Review Plan has been coordinated with the Water Management and Reallocation Studies Planning Center of Expertise (WMRS-PCX) which is the Review Management Organization (RMO) to execute this plan. The Review Plan includes a risk-informed decision to determine if Independent External Peer Review (IEPR) is needed at the Tentatively Selected Plan (TSP) milestone. The WMRS-PCX concurs with this decision and the Review Plan will be updated accordingly after the TSP milestone to reflect the decision on IEPR.
3. I hereby approve this Review Plan, which is subject to change as circumstances require, consistent with work product development under the Project Delivery Business Process. Subsequent revisions to this Review Plan or its execution due to significant changes in the study/scope or level of review will require new written approval from this office.
4. For further information please contact [REDACTED]

Encl

*Wesley E. Coleman, Jr.*

WESLEY E. COLEMAN, JR. SES  
Regional Programs Director



## Review Plan January 2024

### 1. Project Summary

**Project Name:** Whitney Lake Reallocation Study  
**Location:** Bosque and Hill Counties, TX  
**P2 Number:** 513422

**Decision and Environmental Compliance Document Type:** Feasibility Report

**Congressional Authorization Required:** TBD

**Project Purpose(s):** Water supply. The purpose of the study is to identify and quantify the new use and user requesting additional water supply; evaluate the impacts on the other project purposes, determine environmental effects and determine the price to be charged for the new user.

**Non-Federal Sponsor:** Brazos River Authority

#### Points of Public Contact for Questions/Comments on Review Plan:

**District:** Ft. Worth District (SWF)  
**District Contact:** Project Planner, (313) 600-2338

**Major Subordinate Command (MSC):** Southwestern Division (SWD)  
**MSC Contact:** Review Manager, (469) 487-7065

**Review Management Organization (RMO):** Water Management and Reallocation Studies  
 Planning Center of Expertise

**RMO Contact:** Technical Director (251) 463-8052

#### Key Review Plan Dates

Date of RMO Endorsement of Review Plan	<b>Pending</b>
Date of MSC Approval of Review Plan	<b>Pending</b>
Date of IEPR Exclusion Approval	<i>Pending</i>
Has the Review Plan changed since RMO Endorsement?	<i>Pending</i>
Date of Last Review Plan Revision	<i>Pending</i>
Date of Review Plan Web Posting	<i>Pending</i>

#### Milestone Schedule and Other Dates

	Scheduled	Actual
<b>FCSA Execution</b>	April 28, 2023	April 28, 2023
<b>Alternatives Milestone</b>	Aug 30, 2023	Aug 30, 2023
<b>In-Progress Review #1</b>	May 25, 2024	
<b>In-Progress Review #2 (IEPR/SAR decision point)</b>	Nov 15, 2024	
<b>Tentatively Selected Plan</b>	Jan 15, 2025	
<b>Release Draft Report to Public</b>	March 15, 2025	
<b>Agency Decision Milestone</b>	July 15, 2025	

<b>Final Report Signed by District Engineer</b>	Dec 1, 2025	
<b>State &amp; Agency Briefing*</b>	Feb 1, 2026	
<b>Chief's Report or Director's Report**</b>	April 28, 2026	

\*If required

\*\* Unclear at this point if a Chief's report or Director's report will be needed. Review Plan will be updated once information is known.

## 2. References

Engineer Regulation 1165-2-217 – Water Resources Policies and Authorities – Civil Works Review Policy, 1 May 2021.

Engineer Regulation 1110-2-1156 – Safety of Dams – Policy and Procedures, 31 March 2014

Engineer Circular 1105-2-412 – Planning – Assuring Quality of Planning Models, 31 March 2011.

Planning Bulletin 2013-02, Subject: Assuring Quality of Planning Models (EC 1105-2-412), 31 March 2013.

Office of Management and Budget, Final Information Quality Bulletin for Peer Review, Federal Register Vol. 70, No. 10, January 14, 2005, pp 2664-267

CECW-P, Memorandum., Subject: Model Coordination for Civil Works Planning Studies. 28 July 2023.

The online USACE Planning Community Toolbox provides more review reference information at: <https://planning.erdc.dren.mil/toolbox/current.cfm?Title=Peer%20Review&ThisPage=Peer&Side=No>.

## 3. Review Execution Plan

The general plan for executing all required independent reviews is outlined in the following two tables.

Table 1 lists each study product to be reviewed. The table provides the schedules and costs for the anticipated reviews. Teams also determine whether a site visit will be needed to support each review. The decisions about site visits are documented in the table. As the review plan is updated the team will note each review that has been completed.

Table 2 identifies the specific expertise and role required for the members of each review team. The table identifies the technical disciplines and expertise required for members of review teams. In most cases the team members will be senior professionals in their respective fields. In general, the technical disciplines identified for a District Quality Control (DQC) team will be needed for an Agency Technical Review (ATR) team. Each ATR team member will be certified to conduct ATR by their community of practice. The table is set up to concisely identify common types of expertise that may be applicable to one or more of the reviews needed for a study.

**Table 1: Schedule and Costs of Reviews**

<b>Product to undergo Review</b>	<b>Review Level</b>	<b>Site Visit</b>	<b>Start Date</b>	<b>End Date</b>	<b>Cost</b>	<b>Complete</b>
Targeted H&H Analysis Review	ATR	No	May 23 2024	June 23 2024	\$5,000	No
Targeted Hydroelectric Review	ATR	No	Summer 2024	Summer 2024	\$5,000	No
Targeted Water Demand Model Review (single use)	ATR	No	Jan 10 2024	Feb 10 2024	\$5,000	No
Targeted Dam Safety Risk Assessment Review ATR	ATR / Senior Oversight Group (SOG)	No	May 2024	July 2024	\$30,000	No
Draft Feasibility Report / EA	District Quality Control (DQC)	No	01/19/2025	02/28/2025	\$46,000	No
Draft Feasibility Report / EA	Public Comment under National Environmental Policy Act	No	03/11/2025	04/10/2025	N/A	No
Draft Feasibility Report / EA	Agency Technical Review (ATR)	No	03/11/2025	05/15/2025	\$46,000	No
Draft Feasibility Report / EA	Policy and Legal Compliance Review	No	03/11/2025	05/15/2025	N/A	No
Final Feasibility Report / EA	DQC	No	09/13/2025	10/09/2025	\$46,000	No
Final Feasibility Report / EA	ATR	No	10/10/2025	11/06/2025	\$46,000	No
Final Feasibility Report / EA	Policy and Legal Compliance Review	No	11/07/2025	12/01/2025	N/A	No
Final Feasibility Report / EA	Release Final Report under National Environmental Policy Act	No	04/28/2026	04/28/2026	N/A	No
Review Management Organization – Coordination and Participation	An RMO will participate in most key meetings including In-Progress Reviews, Issue Resolution Meetings and SMART Milestone Meetings	No	N/A	N/A	\$25,000	No

**Table 2: Review Teams - Disciplines and Expertise**

<b>Discipline / Role</b>	<b>Expertise</b>	<b>DQC</b>	<b>ATR</b>
DQC Team Lead	Extensive experience preparing Civil Works decision documents and leading DQC. The lead may serve as a DQC reviewer for a specific discipline (planning, economics, environmental, etc.).	Yes	No
ATR Team Lead	Professional with extensive experience preparing Civil Works decision documents and conducting ATR. Skills to manage a virtual team through an ATR. The lead may serve on the ATR team for a specific discipline (such as planning, economics, or environmental work).	No	Yes
Planning	Skilled water resources planner knowledgeable in complex planning investigations and the application of SMART principle to problem solving.	Yes	Yes
Economics	Experience with applying theory, methods and tools used in the economic evaluation of water resources projects with a focus on water supply	Yes	Yes
Environmental Resources	Experience with environmental evaluation and compliance requirements, national environmental laws and statutes, applicable Executive Orders, and other planning requirements.	Yes	Yes
Cultural Resources	Experience with cultural resource survey methods, area of potential effects, National Historic Preservation Act Section 106, and state and federal laws pertaining to American Indian Tribes.	Yes	Yes
Hydrology	Engineer with experience applying hydrologic principles and technical tools to project planning, design, construction, and operation.	Yes	Yes
Hydraulic Engineering	Engineer with experience applying hydraulic engineering principles and analytic tools to project planning, design, construction, and operation.	Yes	Yes
Cost Engineering	Experience using cost estimation software; working knowledge of water resource project construction; capable of making professional determinations using experience.	Yes	Yes
Hydroelectric Analysis	Experience with assessing the impacts of reservoir operations to hydroelectric facilities. Familiar with water supply guidance and requirements.	Yes	Yes
Dam Safety	Experience with assessing risk to USACE dam structures due to changes in reservoir management	Yes	Yes
Construction/ Operations	Extensive construction management experience and operations work with USACE reservoirs	Yes	No
Real Estate	Experience developing Real Estate Plans and experience in real estate fee/easement acquisition and residential/business relocations for Federal and/or Federally Assisted Programs for implementation of Civil Works projects.	Yes	Yes
Climate Preparedness and Resilience	A member of the Climate Preparedness and Resiliency Community of Practice knowledgeable of inland hydrology climate change assessment policy and practice.	Yes	Yes

#### 4. Documentation of Reviews

**Documentation of DQC.** Quality Control will be performed continuously. A specific certification of DQC completion will be prepared for the draft and final report stages. Documentation of DQC will follow the District Quality Manual and the MSC Quality Management Plan. DrChecks will be used for documentation of DQC comments. An example DQC Certification statement is provided in ER 1165-2-217, Appendix D. Documentation of completed DQC, to include the DQC checklist, will be provided to the MSC, RMO and the ATR Team leader. The ATR team will examine DQC records and comment in the ATR report on the adequacy of the DQC effort.

**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. All members of the ATR team will use the four-part comment structure (see ER 1165-2-217, Section 5). If a concern cannot be resolved by the ATR team and PDT, it will be elevated to the vertical team to resolve using the issue resolution process in ER 1165-2-217, Section 5.9. Unresolved concerns will be closed in DrChecks by noting the concern has been elevated. ATR documentation will include an assessment by the ATR team of the effectiveness of DQC. The ATR Lead will prepare a Statement of Technical Review (see ER 1165-2-217, Section 5.11, and Appendix D), for the draft and final reports, certifying that review issues have been resolved or elevated. ATR will be certified when all concerns are resolved or referred to the vertical team and the ATR documentation is complete.

**Documentation of Model Review.** Planning models require compliance with EC 1105-2-412. Models developed by the Corps of Engineers are certified and models developed by others are approved. Certifications or approvals may be specific to a single study, a regional application or for nationwide application. Completion of a model review is documented in a memorandum from the Director of a Planning Center of Expertise and should accompany reporting packages for study decisions.

#### 5. Supporting Information

##### Study or Project Background

##### Study Authority

The Whitney Lake Reallocation Study will be prepared under Section 216 of the River and Harbor Act of 1970 (Public Law [P.L.] 91-611), as amended which states:

*“The Secretary of the Army, acting through the Chief of Engineers, is authorized to review the operation of projects the construction of which has been completed and which were constructed by the Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes, when found advisable due to significantly changed physical or economic conditions, and to report thereon to Congress with recommendations on the advisability of modifying the structures or their operation, and for improving the quality of the environment in the overall public interest.”*

The study is also authorized under the Flood Control Act of 1958.

### Study or Project Area

Whitney Lake is located on the Brazos River (river mile 442.4) in Hill and Bosque Counties, Texas. The reservoir is approximately 38 river miles upstream from Waco, Texas, 19 miles southwest of Hillsboro and 81 miles by highway southwest from Dallas, Texas. The closest municipality is Whitney, Texas. See Figure 1 for a Whitney Lake Map. The drainage area controlled by the dam is approximately 17,660 square miles of contributing drainage and 8,950 square miles non-contributing. The Brazos River Basin upstream of Whitney Dam extends northwest across a generally semi-arid region of Texas to its headwaters just across the Texas-New Mexico state line. The Brazos River flows to the Gulf of Mexico, with the mouth located near Freeport, Texas.

### Study or Project Area Map

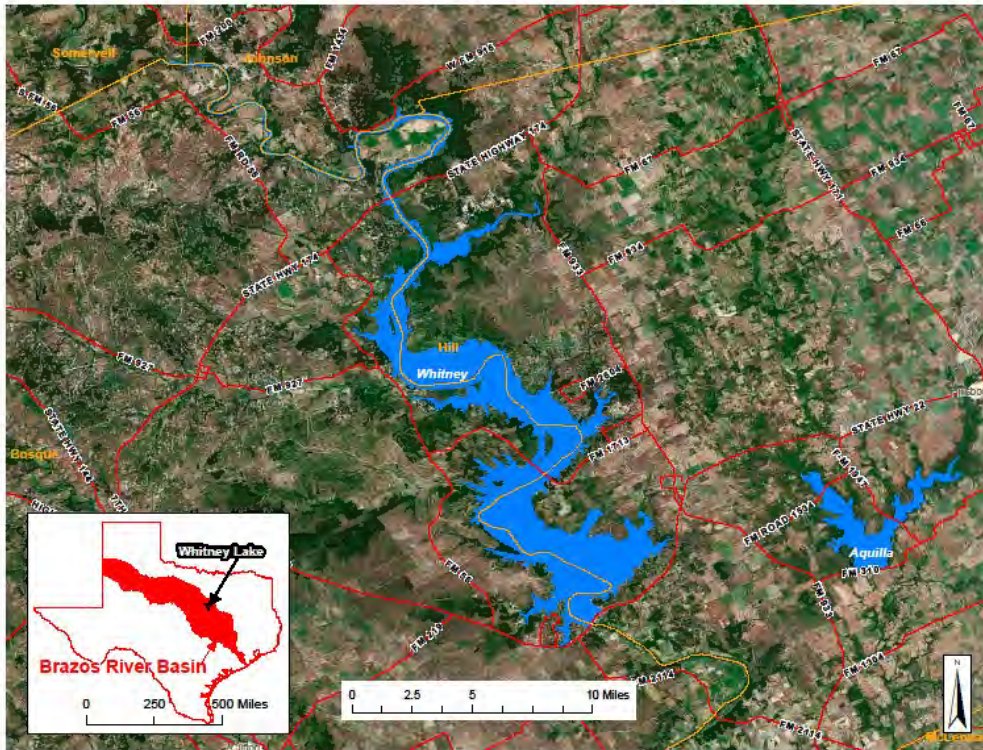


Figure 1 – Study Area Map.

### Problem Statement

The water resource problem to be addressed is the insufficient supply of water in the Brazos River Basin Region today. There is an immediate need for additional water supply in the region due to increased population growth. Furthermore, there is insufficient water supply to meet increased demand that is projected for the region due to population and industry growth in the future.

### Goals and Objectives

The Whitney Lake Reallocation Study objective is to determine if there is an economically viable alternative to meet the current and future water supply demand for the Brazos River Authority.

Primary Objectives include:

- Reduce the risk for future water shortages in the region over the 50-year analysis period.

### **Future Without Project Conditions**

The demand for M&I water supply storage is expected to increase over the next 50 years in the Brazos River Basin Region. This is related to the expected population growth in the Brazos River Basin which is correlated with expected growth in business and industries. Without additional water supply storage from Whitney Lake the Brazos River Authority is likely to continue to explore other more costly options to increase their water supply. This includes the development of new reservoirs and other costly infrastructure development to access new surface water or groundwater. Currently, Whitney Lake is the last large, unpermitted surface water source in the Brazos River Basin.

In an absent of a new federal project, Whitney Lake is expected to continue to be managed in accordance with the current Water Control Manual with the top of Power Pool remaining at elevation 533.0 feet. This means that actions to support the current authorized purposes of flood control, hydroelectric power, and water supply will continue.

### **Types of Measures/Alternatives Being Considered**

The BRA has a need for water supply storage greater than what Whitney Lake could provide. This is because the BRA manages their water supply on a regional scale. Managing on a regional scale allows for them to utilize water in the most efficient and cost-effective manner possible. Therefore, the current plan formulation strategy is to explore optimizing the different authorized purposes at Whitney Lake and to utilize a holistic approach to assess various alternatives.

A Planning Charette was held on June 26-27 and an initial array of alternatives were developed. Currently, the plan formulation strategy is to conduct initial H&H modeling runs (Riverware) followed by a hydroelectric analysis in order to “bound” the analysis and determine upper limits for the alternatives. In addition, for alternatives that propose reallocating from the flood pool, a Potential Failure Mode Analysis (PFMA) review for the dam and an analysis of the effect of a higher pool elevation, longer storage duration, or any other modification on the probability of failure and consequences associated with the project will be completed and presented to the USACE Dam Safety Senior Oversight Group. Once preliminary model runs and dam safety evaluation are complete, the initial array will be re-formulated into the final array.

The initial array of alternatives include:

1. **No Action.** No new Federal Action would occur at Whitney Lake. Current operations would continue as described in the Water Control Manual.
2. **Reallocate the conservation pool.**
  - i. Between elevation of 520 – 533 ft allocate various percentages of the storage to water supply
  - ii. Between elevation of 514 – 533 ft allocate various percentages of the storage to water supply.
3. **Reallocate from the flood pool.**



- i. Raise the flood pool elevation and reallocate storage to water supply.

**4. Reallocate from the inactive pool**

**5. Various combinations of reallocating from the conservation pool and flood pool**

**Estimated Cost/Range of Costs**

Alternative costs are not yet available but based on previous studies and the likely extent of alternatives, costs are anticipated to be less than \$200 million dollars.

**6. Models to be Used in the Study**

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 following planning models may be used to develop the decision document:

**Table 3: Planning Models.**

<b>Model Name and Version</b>	<b>Brief Model Description and How It Will Be Used in the Study</b>	<b>Certification / Approval</b>
Study specific spreadsheets for needs analysis	Spreadsheet model to check the water demand analysis for the sponsor	Request approval for use through PCX
Study specific spreadsheets for Hydropower Benefits forgone	Determination from the USACE Hydropower Analysis Center	Approved
HEC Life Sim 2.1	Perform consequence analysis for SQRA related to reallocations in the flood pool. Estimate loss of FRM benefits if reallocation from the flood pool is among the final array of alternatives. May be used in conjunction with or in lieu of HEC-FDA for evaluation of loss of FRM benefits related to reallocation from the flood pool.	Approved
HEC-FDA 1.4.3	Model used to assist the PDT in using risk analysis procedures for formulating and evaluating flood risk management measures. Computes expected annual damage (EAD) and equivalent annual damages	Approved

Regional Economic System (RECONS)	RECONS will be utilized to partially address Regional Economic Development Impacts to quantitatively describe the impacts of any construction dollars spent to implement the final plan.	Approved
Existing approved species Habitat Suitability Index (HSI) models such as fox squirrel, barred owl, wood duck, downy woodpecker, eastern cottontail, and northern bobwhite	Use HSI models to quantify impacts and develop mitigation, if needed.	Certified / Approved for Regional Use
IWR Planning Suite v2.0.9	Tool to conduct cost effectiveness and incremental cost analysis (CE/ICA) on mitigation, if required; annualizer tool will also be used to annualize project costs for benefit-cost analysis.	Certified
CEJST	The Council of Environmental Quality (CEQ) developed the Climate and Economic Justice Screening Tool (CEJST). The tool shows information about the burdens that communities experience. It uses datasets to identify indicators of burdens using census tracts. This tool supports compliance with EJ Executive Orders and the Justice40 initiative. The tool will not be used to evaluate or compare alternative plans, so are not subject to planning model certification requirements.	N/A
EJScreen	EJScreen is an EPA's environmental justice (EJ) mapping and screening tool that provides EPA with a nationally consistent dataset and approach for combining environmental and demographic socioeconomic indicators. EJScreen users choose a geographic area; the tool then provides demographic socioeconomic and environmental information for that area. All EJScreen indicators are publicly available data. EJScreen provides a way to display this information and includes a method for combining environmental and demographic indicators into EJ indexes. This tool supports compliance with EJ Executive Orders and the Justice40 initiative. The tool will not be used to evaluate or compare alternative plans, so are not subject to planning model certification requirements.	N/A

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. For example, HH&C models need to comply with the requirements of HH&C CoP Enterprise Standard 08101.

These engineering models may be used to develop the decision document:

**Table 4: Engineering Models.**

<b>Model Name and Version</b>	<b>Brief Model Description and How It Will Be Used in the Study</b>	<b>Approval Status</b>
RiverWare 9.0.3	This model aids engineers in simulating reservoir regulation alternatives by manipulating operational rules and utilizing historical Period of Record (POR) hydrologic data. RiverWare will be used to determine the effects of different reservoir regulation alternatives.	Approved USACE model
HEC-RAS 6.4.1	This model aids engineers in developing water surface elevation profiles for respective rates of flow along a reach of river. If needed this model will be used to provide a basis for assessment of flood related impacts associated with various project alternatives considered.	Approved USACE model
HEC-HMS 4.11	The Hydrologic Modeling System (HEC-HMS) is designed to simulate the complete hydrologic processes of watershed systems. The software includes many traditional hydrologic analysis procedures such as event infiltration, unit hydrographs, and hydrologic routing.	Approved USACE model
HEC-SSP 2.3	This software allows users to perform statistical analyses of hydrologic data. The current version of HEC-SSP can perform generalized frequency analyses, volume frequency analyses, duration analyses, coincident frequency analyses, curve combination analyses, balanced hydrograph analyses, distribution fitting analyses, mixed population analyses, correlation analyses, and record extension analyses.	Approved USACE model
HEC-ResSim 3.3	The Reservoir System Simulation (HEC-ResSim) software developed by the U.S. Army Corps of Engineers, Institute for Water Resources, Hydrologic Engineering Center (CEIWR-HEC) is used to model reservoir operations at one or more reservoirs for a variety of operational goals and constraints. The software simulates reservoir operations for flood management, low flow augmentation and water supply for planning studies, detailed reservoir regulation plan	Approved USACE model

	investigations, and real-time decision support. Maybe needed for flood pool reallocation alternatives.	
RMC Semi-Quantitative Risk Assessment (SQRA) Calculations Toolbox	The spreadsheet tools contained in this toolbox assess the total incremental risk, non-breach risk for dams, and overtopping incremental and non-breach risk for levees to support semi-quantitative risk assessments for dam and levee safety using the methods of RMC-TN-2018-01 (O'Leary 2018).	Approved USACE model
RMC-RFA (Risk Management Center - Reservoir Frequency Analysis)	software facilitates hydrologic hazard assessments within the U.S. Army Corps of Engineers Dam Safety Program.	Approved USACE model
RMC-BestFit	RMC-BestFit is a menu-driven software package, which performs distribution fitting and Bayesian estimation from a choice of thirteen probability distributions.	Approved USACE model
USACE Climate Preparedness and Resiliency (CPR) COP tools	A qualitative analysis of the sensitivity to the alternatives to climate variability and change will be conducted in accordance with ECB 2018-14. This qualitative analysis will include the use of USACE CPR COP tools such as the Climate Hydrology Assessment Tool (CHAT), the nonstationary detection tool, and the time series toolbox.	Approved USACE tool

**7. Factors Affecting Level and Scope of Review**

All planning products are subject to the conduct and completion of District Quality Control. Most planning products are subject to Agency Technical Review and a smaller sub-set of products may be subject to Independent External Peer Review and/or Safety Assurance Review. Information in this section helps in the scoping of reviews through the considerations of various potential risks.

**Objectives of the Reviews**

Civil works products will undergo an open, dynamic, and rigorous review process. Technical, scientific, engineering, and other information used to support recommendations in decision documents or form the basis of design (at any scale) must undergo review. Key objectives include: the PDT self-checks its work with the goal that subsequent reviews produce minimal comments, peer review contributes to improved quality of work and ultimately saves time and additional cost by lessening rework and other undesired outcomes, and robust DQC is the foundation for quality.

**Assessing the Need for IEPR**

Independent External Peer Review (IEPR) is the most independent level of review. At this time, the Whitney Lake Reallocation Study does not meet the three mandatory triggers for conducting an IEPR. The mandatory triggers are listed below:

### Mandatory IEPR Triggers

- Has the Chief of Engineers determined the project is controversial? **No**, however there is uncertainty regarding whether the project is controversial.
- Has the Governor of an affected state requested an IEPR? **No**
- Is the cost of the project more than \$200 million? **No**

Discretionary IEPR – Studies may undergo IEPR where a risk-informed decision shows the study would significantly benefit from an external peer review.

- Has the head of another Federal agency requested an IEPR? **No**

Potential IEPR Exclusion - To date, the Whitney study does not anticipate the need for an IEPR. However, depending on the final array of alternatives an IEPR may be warranted especially if the Tentatively Selected Plan (TSP) includes reallocating from the flood storage pool or if serious effects to other authorized purposes are expected. Therefore, the PDT recommends re-visiting the IEPR decision, in conjunction with the MSC, prior to the TSP milestone decision. IEPR contingency funds will be identified in the study budget.

### **Assessing Other Risk Considerations**

- Will the study likely be challenging? If so, describe how?  
The study is expected to use routine analysis and standard practices, but maybe challenging from the perspective of balancing different needs of authorized users. Specially the interaction between water supply and hydroelectric power will be assessed and while that assessment is not expected to be challenging the acceptance of the assessment from authorized users could be challenging.
- Provide a preliminary assessment of where the project risks are likely to occur and assess the magnitude of those risks.  
Key study risks likely include various uncertainties in the assumptions used for hydrologic modeling, the magnitude of impacts to all the authorized project purposes, and coordination between authorized users.
- Is the project likely to be justified by life safety or is the study or project likely to involve significant life safety issues? Briefly describe the life risk, including the District Chief of Engineering's assessment as to whether there is a significant threat to human life associated with aspects of the study or failure of the project or proposed projects.  
The project is not expected to be justified by life safety and is not expected to involve significant life safety issues. The Whitney Dam currently holds a DSAC 4 rating. Alternatives that reallocate storage out of the flood pool will be examined, however, life safety considerations will be addressed if any alternatives in the final array have potential life safety impacts. The District Chief of Engineers concurs with this assessment. It is possible that reallocation from the flood pool would have life safety impacts, however the extent to which flood pool reallocation is a viable alternative is not yet known.

- 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? If so, how?  
No, standard and accepted practices and analysis for a water supply study will be used.
- Does the project design require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design/construction schedule? If so, how?  
No, the study will not require design redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design/construction schedule.
- Is the project expected to have more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources? If so, what are the anticipated impacts?  
No, at this point no adverse impacts to scarce or unique tribal, cultural, or historic resources are expected.
- Is the project expected to have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures? If so, describe the impacts?  
No, at this point no substantial adverse impacts on fish and wildlife species and their habitat are expected.
- 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? If so, what are the anticipated impacts?  
No, the project is not expected to have more than a negligible adverse impact on endangered or threatened species or their designated critical habitat.

## 8. Risk Informed Decisions on Level and Scope of Review

### Targeted ATR.

Will a targeted ATR be conducted for the study? **Yes**, targeted ATRs of the following work products are expected.

- H&H analysis of alternatives leading to the final array
- Hydropower/Econ analysis leading to the final array
- Water Demand Model for Single Use
- Dam Safety Risk Assessment Review leading to the final array

DQC of products will occur before the targeted ATR starts.

### IEPR Decision.

The PDT recommends delaying the decision on IEPR until closer to the TSP milestone meeting. This is because the final array of alternatives is not known and the wide-range of likely impacts from the initial array could trigger the need for a discretionary IEPR. No mandatory IEPR triggers are expected to be reached during the study. However, once the final array of alternatives is developed a risk assessment will be conducted to determine if a IEPR would be warranted. The likely reason an IEPR

maybe requested would include if the final array includes alternatives that reallocated from the flood pool or due to significant concern raised from other authorized users.

**Safety Assurance Review.** Safety Assurance Reviews are managed outside of the USACE and are conducted on design and construction products for hurricane, storm and flood risk management projects, or other projects where existing and potential hazards pose a significant threat to human life. In some cases, significant life safety considerations may be relevant to planning decisions. These cases may warrant the development of relevant charge questions for consideration during reviews such as ATR or IEPR. In addition, if the characteristics of the recommended plan warrant a Safety Assurance Review, a panel will be convened to review the design and construction activities on a regular schedule before construction begins and until construction activities are completed.

**Decision on Safety Assurance Review.** The PDT recommends delaying the decision on SAR until closer to the TSP milestone. At this time the PDT will have more information on the final array and if any will cause serious effects to other authorized purposes. The PDT will also know if reallocating from the flood pool is in the final array. Assessing the impacts from flood pool reallocation is the likely trigger for an SAR review. A decision by the District Dam Safety Officer in conjunction with SWD will be made on the need for an SAR prior to the Tentatively Selected Plan Milestone.

## **9. Policy and Legal Compliance Review**

Policy and legal compliance review of draft and final planning decision documents is delegated to the MSC (see Director's Policy Memorandum 2019-01).

### **(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 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 SMART Planning 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.
- 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.

## **10. Public Comment**

This Review Plan will be posted on the District's website. Public comments on the scope of reviews, technical disciplines involved, schedules and other considerations may be submitted to the District for consideration. If the comments result in a change to the Review Plan, an updated plan will be posted on the District's website.

## **11. Documents Distributed Outside the Government**

For information distributed for review to non-governmental organizations, the following disclaimer shall be placed on documents:

*“This information is distributed solely for the purpose of pre-dissemination review under applicable information quality guidelines. It has not been formally disseminated by USACE. It does not represent and should not be construed to represent any agency determination or policy.”*



## Appendix A - Brief Description of Each Type of Review

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 and accompanying components will undergo DQC. This internal review covers basic science and engineering work products. It fulfills the project quality requirements of the Project Management Plan. The DQC team will read all reports and appendices. The review must evaluate the correct application of methods, validity of assumptions, adequacy of basic data, correctness of calculations (error-free), completeness of documentation, and compliance with guidance and standards. Districts are required to check all computations and graphics by having the reviewer place a highlight (e.g., place a “red dot”) on each annotation and/or number indicating concurrence with the correctness of the information shown.

**Agency Technical Review.** ATR will be 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.

**Dam Safety Senior Oversight Group (DSOG).** All life safety risk assessments will undergo a review by the DSOG. The DSOG is provided an advanced copy of the final report approximately four weeks prior to the DSOG Panel Discussion, or as directed by the RMC Program Manager. The PDT will prepare DSOG Briefing Slides summarizing the project Risk, the report findings, and recommendations. These slides will be reviewed by the RMC Program Manager and MSC prior to presentation to DSOG for clarity and conciseness. At the conclusion of the DSOG briefing, a memo will be prepared by the DSOG Chairperson that summarizes the risk characterization of the dam, confirms or adjusts the recommended DSAC, proposes Dam Safety and Operations and Maintenance (O&M) actions to reduce risk, and is signed by the Headquarters Dam Safety Officer or designee. The DSOG review is anticipated in 3rd QTR of FY24.

Upon completion of the DSOG review, final risk assessment documents will be posted to the appropriate folder on ProjectWise CE-Dam and Levee Safety (CEDALS).

**Cost Engineering Review.** All decision documents will be coordinated with the Cost Engineering Mandatory Center of Expertise (MCX). The MCX assisted in determining the expertise needed on the ATR and IEPR teams. The MCX will provide the Cost Engineering certification. The RMO is responsible for coordinating with the MCX for the reviews. These reviews occur as part of ATR.

**Model Review and Approval/Certification.** One time use model approval from the WMRS PCX will be required for a economics spreadsheet model on the water needs analysis.

**Policy and Legal Compliance Review.** 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.

**Public Review.** The District will post the Review Plan and approval memo on the District’s internet site. Public comment on the adequacy of the Review Plans will be accepted and considered. Additional public review will occur when the report and environmental compliance document(s) are released for public and agency comment.