DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94103-1399

20 NOV 2008

CESPD-PDC

Subject: Review Plan approval for the Lower San Joaquin River, CA Flood Risk Management and Ecosystem Restoration Feasibility Study.

The attached Review Plan for the Lower San Joaquin River, CA Flood Risk Management and Ecosystem Restoration Feasibility Study has been prepared in accordance with EC 1105-2-410. Please note that the EC 1105-2-408, referenced in the attached review plan, expired on 30 September 2007. Accordingly there should be primary reliance on EC 1105-2-410.

The Review Plan has been made available for public comment, and the comments received have been incorporated into the Review Plan. The Review Plan has been coordinated with and endorsed by the Flood Risk Management Planning Center of Expertise (PCX) of the South Pacific Division which is the lead office to execute this plan. For further information, contact the PCX at 415-503-6852.

The Review Plan includes independent external peer review.

I hereby approve this Review Plan, which is subject to change as study circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution will require new written approval from this office.

Encls

JOHN R. McMAHON
BG, USA
Commanding

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

CESPK-PD-W

MEMORANDUM FOR: Commander, South Pacific Division (ATTN: CESPD-PD-C, (Berresford)

SUBJECT: Request for Approval of Review Plan for the Lower San Joaquin River, California, Flood Risk Management and Ecosystem Restoration Feasibility Study.

1. In accordance with EC 1105-2-410, Review of Decision Documents, dated 22 August 2008, the subject Review Plan is provided for approval by the Commander, South Pacific Division (Enclosure 1). This is the first submittal of a Review Plan for the subject study.

2. This Review Plan is in compliance with the EC and has been coordinated with the applicable Planning Centers of Expertise (PCX). The PCX for Flood Risk Management is designated as the lead PCX, and as such, coordinated the Review Plan with the PCX for Ecosystem Restoration. The PCX concurrence memorandum is provided as Enclosure 2.

3. Please address any questions about this Review Plan to Ms. Alicia Kirchner, (916) 557-6767, who is serving as the interim project planner. Upon approval of this Review Plan, please provide notification to this office so we can post it to the Sacramento District public website. Upon posting of the approved Review Plan, the District will notify the vertical team. I appreciate your quick attention to this matter.

Sincerely,

Francis C. Piccola
Chief, Planning Division
Sacramento District

Encls

REVIEW PLAN

LOWER SAN JOAQUIN RIVER, CALIFORNIA
FLOOD RISK MANAGEMENT AND ECOSYSTEM RESTORATION
FEASIBILITY STUDY

SACRAMENTO DISTRICT

NOVEMBER 2008

REVIEW PLAN
LOWER SAN JOAQUIN RIVER, CALIFORNA
FLOOD RISK MANAGEMENT AND ECOSYSTEM RESTORATION
FEASIBILITY STUDY
SACRAMENTO DISTRICT

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REVIEW PLAN

LOWER SAN JOAQUIN RIVER, CALIFONRIA
FLOOD RISK MANAGEMENT AND ECOSYSTEM RESTORATION
FEASIBILITY STUDY
SACRAMENTO DISTRICT

1. PURPOSE AND REQUIREMENTS

A. Purpose. This document outlines the Review Plan for the Lower San Joaquin River, California, Flood Risk Management and Ecosystem Restoration Feasibility Study. This feasibility study process is anticipated to cumulate in a decision document to Congress for potential authorization of a new project. Engineering Circular (EC) *Peer Review of Decision Documents* 1105-2-408, dated 31 May 2005, (1) established procedures to ensure the quality and credibility of Corps decision documents by adjusting and supplementing the review process, and (2) required that documents have a peer review plan. That EC applies to all feasibility studies and reports and any other reports that lead to decision documents that require authorization by Congress. The Lower San Joaquin River Basin Feasibility Report is anticipated to result in recommendations to Congress for authorization of a project and is therefore covered by this EC.

A subsequent circular, *Review of Decision Documents*, EC 1105-2-410, dated 22 August 2008, revises the technical and overall quality control review processes for decision documents. It formally distinguishes between technical review performed in-district (District Quality Control, "DQC") and out-of-district resources (formerly Independent Technical Review, "ITR," now Agency Technical Review, "ATR"). It also reaffirms the requirement for Independent External Peer Review (IEPR); this is the most independent level of review and is applied in cases that meet certain criteria where the risk and magnitude of a proposed project are such that a critical examination by a qualified team outside of the U.S. Army Corps of Engineers (USACE) is warranted.

B. Requirements. EC 1105-2-410 outlines the requirement of the three review approaches (DQC, ATR, and IEPR). EC 1105-2-408 provides guidance on Corps Planning Centers of Expertise (PCX) involvement in the approaches. This document addresses review of the decision document as it pertains to both approaches and planning coordination with the appropriate PCX. The Lower San Joaquin River, California, Feasibility Study will investigate flood risk management (FRM) and ecosystem restoration (ER) issues in the study area. The non-Federal partners have expressed a strong desire that FRM be considered the primary focus of the feasibility study, while identifying opportunities for ecosystem restoration where they are consistent with FRM features. Therefore, the PCX for FRM is considered to be the primary PCX for coordination. The PCX for FRM will coordinate with the PCX for ER as appropriate.

(1) District Quality Control. DQC is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Lower San Joaquin River, Feasibility Study Project Management Plan (PMP) for the study (to which this Review Plan will ultimately be appended). It is managed in the Sacramento District and may be conducted by in-house staff as long as the reviewers are not doing the work involved in the study, including contracted work that is being reviewed. Basic quality control tools include a Quality Management Plan (QMP) providing for seamless review, quality checks and reviews, supervisory

reviews, Project Delivery Team (PDT) reviews, etc. Additionally, the PDT is responsible for a complete reading of the report to assure the overall integrity of the report, technical appendices and the recommendations before the approval by the District Commander. For the Lower San Joaquin River Feasibility Study, non-PDT members and/or supervisory staff will conduct this review for major draft and final products, including products provided by the non-Federal sponsors as in-kind services following review of those products by the PDT. It is expected that the Major Subordinate Command (MSC)/District QMP address the conduct and documentation of this fundamental level of review. A Quality Control Plan (QCP) is included in the PMP for the subject study and addresses DQC; DQC is not addressed further in this Review Plan. DCQ is required for this study.

(2) Agency Technical Review. EC 1105-2-410 recharacterized ATR (which replaces the level of review formerly known as Independent Technical Review) is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of a project/product. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assures that all the parts fit together in a coherent whole. ATR teams will be comprised of senior USACE personnel (Regional Technical Specialists (RTS), etc.) and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC. EC 1105-2-408 requires that DrChecks https://www.projnet.org/projnet/) be used to document all ATR comments, responses, and associated resolution accomplished. This Review Plan outlines the proposed approach to meeting this requirement for the Lower San Joaquin River, California, Feasibility Study. ATR is required for this study.

(3) Independent External Peer Review. EC 1105-2-410 recharacterized the external peer review process that was originally added to the existing Corps review process via EC 1105-2-408. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. IEPR is managed by an outside eligible organization (OEO) that is described in the Internal Review Code Section 501(c) (3), is exempted from Federal tax under Section 501(a), of the Internal Revenue Code of 1986; is independent; is free from conflicts of interest; does not carry out or advocate for or against Federal water resources projects; and has experience in establishing and administering IEPR panels. The scope of review will address all the underlying planning, engineering, including safety assurance, economics, and environmental analyses performed, not just one aspect of the project. This Review Plan outlines the planned approach to meeting this requirement for the Lower San Joaquin River, California, Feasibility Study. IEPR is required for this study.

(4) Policy and Legal Compliance Review. In addition to the technical reviews, decision documents will be reviewed throughout the study process for their compliance with law and policy. These reviews culminate in Washington-level determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the Chief of Engineers. Guidance for policy and legal compliance reviews is addressed further in Appendix H, ER 1105-2-100. Technical review described in EC 105-2-410 are to augment and complement the policy review processes by addressing compliance with published Army polices pertinent to planning products, particularly polices on analytical methods and the presentation of findings in decision documents. DQC and ATR efforts are to include the necessary expertise to address compliance with published planning policy. Counsel will generally not participate on ATR teams, but may at the discretion of the district or as directed by higher authority. When policy and/or legal concerns

arise during DQC or ATR efforts that are not readily and mutually resolved by the PDT and the reviewers, the district will seek issue resolution support from the MSC and HQUSACE in accordance with the procedures outlined in Appendix H ER 1105-2-100. IEPR teams are not expected to be knowledgeable of Army and administration polices, nor are they expected to address such concerns. An IEPR team should be given the flexibility to bring important issues to the attention of decision makers. Legal reviews will be conducted concurrent with ATR of the preliminary, draft and final feasibility report and environmental impact statement.

(5) Planning Center of Expertise (PCX) Coordination. EC 1105-2-408 and EC 1105-2-410 outline PCX coordination in conjunction with preparation of the Review Plan. This Review Plan is being coordinated with the PCX for Flood Risk Management (FRM), who in turn will coordinate with the PCX for Ecosystem Restoration (ER) as appropriate. The PCX for FRM is responsible for the accomplishment and quality of ATR and IEPR for the Lower San Joaquin River, California, Feasibility Study. The PCX for FRM may conduct the review or manage the review to be conducted by others.

(6) Review Plan Approval and Posting. In order to ensure the Review Plan is in compliance with the principles of EC 1105-2-410 and the MSC's QMP, the Review Plan must be approved by the applicable MSC, in this case the Commander, South Pacific Division (SPD). Once the Review Plan is approved, the Sacramento District will post it to its district public website and notify SPD and the PCX for FRM.

(7) Safety Assurance Review. In accordance with Section 2035 of WRDA 2007, EC 11052-410 requires that all projects addressing flooding or storm damage reduction undergo a safety assurance review during design and construction. Safety assurance factors must be considered in all reviews for those studies. Implementation guidance for Section 2035 is under development. When guidance is issued, the study will address its requirements for addressing safety assurance factors, which at a minimum will be included in the draft report and appendixes for public and agency review. Prior to preconstruction engineering and design (PED) of the identified for construction, a PMP will be developed that will include safety assurance review. Safety assurance review will also be accomplished during construction.

2. PROJECT DESCRIPTION

A. Decision Document. The purpose of the study is to identify and flood-related and ecosystem-related issues in the Lower San Joaquin River study area. The decision document will present planning, engineering, and implementation details of the recommended plan to allow final design and construction to proceed subsequent to approval of the recommended plan. The project is a General Investigations study undertaken to evaluate structural and non-structural FRM measures including in-basin storage, re-operation of existing reservoirs, improvements to existing levees, construction of new levees, and other storage, conveyance and non-structural options. ER measures would likely include restoration of floodplain function and habitat. The feasibility phase of this project is cost shared 50 percent Federal, 50 percent non-Federal with the project sponsors, the State of California Central Valley Flood Protection Board (CVFPB), San Joaquin County, and the San Joaquin Area Flood Control Agency (SJAFCA).

B. General Site Description. The study area is along the lower (northern) portion of the San Joaquin River system in the Central Valley of California (see Figure 1). The San Joaquin River originates on the western slope of the Sierra Nevada and emerges from the foothills at Friant Dam. The river flows west to the Central Valley, where it is joined by the Fresno, Chowchilla, Merced, Tuolumne, Stanislaus and Calaveras rivers, and smaller tributaries as it flows north to

the Sacramento-San Joaquin Delta (Delta), which in turn flows into the San Francisco Bay en route to the Pacific Ocean. The primary study area includes the main stem of the San Joaquin River and its floodplains from the Mariposa Bypass downstream to and including the city of Stockton. This includes the distributor channels of the San Joaquin River in the southernmost reaches of the Delta: Paradise Cut and Old River as far north as Tracy Boulevard; Little Johns Creek and Farmington Dam areas southeast of Stockton; and north of Stockton including the Lodi Waste Water Treatment Plan at Thornton Road and Interstate 5. The overall study area includes those areas adjacent to the primary study area which could be influenced by potential actions to address the identified problems and needs.

C. Project Scope. The study will focus on FRM and ER alternatives along the Lower San Joaquin River from the Mariposa Bypass to and including the city of Stockton. The non-Federal sponsors are interested in reducing flood risk to the existing urbanized areas in the city of Stockton, and parts of Tracy and Manteca, and the public infrastructure outside the city of Lodi. They are interested in accomplishing ecosystem restoration within this area of primary interest for FRM.

There is an area to the south of Stockton that has been subject to repeated attempts for urbanization. The area, referred to as River Islands, has been the focus of negotiations between the CVFPB (a non-Federal sponsor for the feasibility study), development interests, the Natural Resources Defense Counsel and the Natural Heritage Institute. As a result of those negotiations, the CVFPB has indicated that they would like the feasibility study to include consideration of a high flow bypass channel as a FRM measure. Local interests are pursuing a study resolution to direct the study to include that measure. Inclusion of such a measure is consistent with the flood-related problems, objectives, and potential solutions that will be under consideration as part of the feasibility study.

D. Problems and Opportunities. The primary flood-related problems in the study area are (1) the potential for levee failure and (2) reduced capacity in channels due to sedimentation and sediment deposition. Primary ecosystem problems are (1) construction of levees have separated rivers from historic floodplains and (2) construction of reservoirs has altered historic flow regimes, both of which have resulted in loss of floodplain process and associated native habitats

E. Potential Methods. Potential FRM measures range from adding, modifying, and/or re-regulating storage on major tributaries and new transitory storage within the floodplains to increasing conveyance through raising levees, widening channels and floodway areas, dredging, and constructing/modifying weirs and bypasses. Non-structural floodplain management measures would also be considered. For ecosystem restoration, measures range from restoring riparian, wetlands, and floodplain habitats through conservation easements to constructing setback levees for habitat and possibly reoperating existing reservoirs to provide beneficial flows.

F. Product Delivery Team. The PDT is comprised of those individuals directly involved in the development of the decision document. Individual contact information and disciplines are presented in appendix B. In accordance with the PMP, it is planned that the non-Federal sponsors will contribute in-kind services for project management; public involvement, coordination and outreach; environmental studies; GIS mapping and graphics; hydrology studies, reservoir operations study and report; hydraulic analysis and report; hydraulic data collection and mapping; Engineering Design Analysis and Report; Geotechnical and geology Studies & Report; cost engineering and report; and participating in reviews. All in-kind work products will undergo review by the PDT for a determination of adequacy; products will ultimately undergo DQC. Some products will undergo IEPR (described later in this Review Plan).

G. Vertical Team. The Vertical Team includes District management, District Support Team (DST) and Regional Integration Team (RIT) staff as well as members of the Planning of Community of Practice (PCoP). Specific points of contact for the Vertical Team can be found in appendix B.

H. Model Certification. The USACE Planning Models Improvement Program (PMIP) was established in 2003 to assess the state of planning models in the USACE and to make recommendations to assure that high quality methods and tools are available to enable informed decisions on investments in the Nation's water resources infrastructure and natural environment. The main objective of the PMIP is to carry out "a process to review, improve and validate analytical tools and models for USACE Civil Works business programs." In carrying out this initiative, a PMIP Task Force was established to examine planning model issues, assess the state of planning models in the Corps, and develop recommendations on improvements to planning models and related analytical tools. The PMIP Task Force collected the views of Corps leaders and recognized technical experts, and conducted investigations and numerous discussions and debates on issues related to planning models. It identified an array of model-related problems, conducted a survey of planning models, prepared papers on model-related issues, analyzed numerous options for addressing these issues, formulated recommendations, and wrote a final report that is the basis for the development of this Circular. The Task Force considered ongoing Corps initiatives to address planning capability, and built upon these where possible. Examples include several efforts under the Planning Excellence Program (training, specialized planning centers of expertise, modeling); the Science & Engineering Technology (SET) initiative (an EC on the SET initiative models is expected to be published in August 2005) and associated Technical Excellence Network (TEN), which endeavors to provide uniform Science and Engineering tools and practices to the Corps and share them throughout; and, recognition of existing Quality Assurance/Quality Control programs and internal technical review within the Districts.

For the purposes of this Circular, planning models are defined as any models and analytical tools that planners use 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. It includes all models used for planning, regardless of their scope or source, as specified in the following sub-paragraphs. This Circular does not cover engineering models used in planning which will be certified under a separate process to be established under SET.

The computational models to be employed in the Lower San Joaquin River, California, Feasibility Study have either been developed by or for the USACE. Model certification and approval for all identified planning models will be coordinated through the PCX as needed. Project schedules and resources will be adjusted to address this process for certification and PCX coordination. They are:

1. HEC-FDA (Current working version undergoing review for certification; expected to be certified within the first 1 year of the study): This model, developed by the Corps' Hydrological Engineering Center, will assist the PDT in applying risk analysis methods

for flood damage reduction studies as required by, EM 1110-2-1419. This program:

- Provides a repository for both the economic and hydrologic data required for the analysis
- Provides the tools needed to understand the results
- Calculates the Expected Annual Damages and the Equivalent Annual Damages
- Computes the Annual Exceedence Probability and the Conditional Non-Exceedence Probability
- Implements the risk-based analysis procedures contained in EM 1110-2-1619

2. Various Habitat Evaluation Procedure models. The Ecosystem Restoration Planning Center of Expertise has responsibility for approving ecosystem output methodologies for use in ecosystem restoration planning and mitigation planning. The Ecosystem PCX will need to certify or approve for use each r ionally modified version of these methodologies and individual models ar guidebooks used in application of these methods. The PDT will coordinate with the Ecosystem PCX during the study to identify appropriate models and certification approval requirements.
3. IWR-Planning Suite (Certified). This software assists with the formulation and comparison of alternative plans. While IWR-PLAN was initially developed to assist with environmental restoration and watershed planning studies, the program can be useful in planning studies addressing a wide variety of problems. IWR-PLAN can assist with plan formulation by combining solutions to planning problems and calculating the additive effects of each combination, or "plan." IWR-PLAN can assist with plan comparison by conducting cost effectiveness and incremental cost analyses, identifying the plans which are the best financial investments and displaying the effects of each on a range of decision variables.

The following are considered to be engineering models as opposed to planning models and undergo a different review and approval process for usage. Engineering tools anticipated to be used in this study are:

1. MCACES or MII: These are cost estimating models.
2. HEC-HMS: By applying this model the PDT is able to:
   - Define the watersheds' physical features
   - Describe the metrological conditions
   - Estimate parameters
   - Analyze simulations
   - Obtain GIS connectivity
3. HEC-ResSim: This model predicts the behavior of reservoirs and to help reservoir operators plan releases in real-time during day-to-day and emergency operations. The following describes the major features of HEC-ResSim
   - Graphical User Interface
   - Map-Based Schematic
   - Rule-Based Operations
4. HEC-RAS: The function of this model is to complete one-dimensional hydraulic calculations for a full network of natural and man made channels. HEC-RAS major capabilities are:
   - User interface
   - Hydraulic Analysis
   - Data storage and Management
   - Graphics and reporting

5. HEC-2: The HEC-2 program computes water surface profiles for one-dimensional steady, gradually varied flow in rivers of any cross section.
6. FLO-2D: This model will be used for the overbank reaches.
7. Groundwater Modeling System (GMS): This model is used to conduct seepage analysis.
8. Utaxas4: This model is used to conduct slope stability analysis.

3. AGENCY TECHNICAL REVIEW PLAN

For feasibility studies, ATR is managed by the PCX. For this feasibility study, due to the heavy emphasis on flood risk management, the PCX for FRM will identify individuals to perform ATR. Sacramento District can provide suggestions on possible reviewers.

A. General. An ATR Manager shall be designated for the ATR process. The proposed ATR Manager for this project is to be determined, but will have expertise in project planning. The ATR Manager is responsible for providing information necessary for setting up the review, communicating with the Study Manager, providing a summary of critical review comments, collecting grammatical and editorial comments from the ATR team (ATRT), ensuring that the ATRT has adequate funding to perform the review, facilitating the resolution of the comments, and certifying that the ATR has been conducted and resolved in accordance with policy. ATR will be conducted for project planning, environmental compliance, economics, hydrology and reservoir operations, hydraulic design, civil design, geotechnical engineering, cost engineering, real estate, cultural resources; reviews of more specific disciplines maybe identified if necessary.

B. Agency Technical Review Team (ATRT). The ATRT will be comprised of individuals that have not been involved in the development of the decision document and will be chosen based on expertise, experience, and/or skills. The members will roughly mirror the composition of the PDT and wherever possible, reside outside of the South Pacific Division region. It is anticipated that the team will consist of about 10 reviewers. The ATRT members will be identified at the time the review is conducted and will be presented in appendix B.

C. Communication. The communication plan for the ATR is as follows:

(1) The team will use DrChecks to document the ATR process. The Study Manager will facilitate the creation of a project portfolio in the system to allow access by all PDT and ATRT members. An electronic version of the document, appendices, and any significant and relevant public comments shall be posted in Word format at: ftp://ftp.usace.army.mil/pub/ at least one business day prior to the start of the comment period.

(2) The PDT shall send the ATR manager one hard copy (with color pages as applicable) of the document and appendices for each ATRT member such that the copies are received at least one business day prior to the start of the comment period.

(3) The PDT shall host an ATR kick-off meeting virtually to orient the ATRT during the first week of the comment period. If funds are not available for an on-site meeting, the PDT shall provide a presentation about the project, including photos of the site, for the team.

(4) The Study Manager shall inform the ATR manager when all responses have been entered into DrChecks and conduct a briefing to summarize comment responses to highlight any areas of disagreement.

(5) A revised electronic version of the report and appendices with comments incorporated shall be posted at ftp://ftp.usace.army.mil/pub/ for use during back checking of the comments.

(6) Team members shall contact ATRT members or leader as appropriate to seek clarification of a comment's intent or provide clarification of information in the report. Discussions shall occur outside of DrChecks but a summary of discussions may be provided in the system.

(7) Reviewers will be encouraged to contact PDT members directly via email or phone to clarify any confusion. DrChecks shall not be used to post questions needed for clarification.

(8) The ATRT, the PDT, and the vertical team shall conduct an after action review (AAR) no later than 2 weeks after the policy guidance memo is received from HQUSACE for the for the AFB and draft reports.

D. Funding

(1) The PDT district shall provide labor funding by cross charge labor codes. Funding for travel, if needed, will be provided through government order. The Study Manager will work with the ATR manager to ensure that adequate funding is available and is commensurate with the level of review needed. The current cost estimate for this review is $138,000. Any funding shortages will be negotiated on a case by case basis and in advance of a negative charge occurring.

(2) The team leader shall provide organization codes for each team members and a responsible financial point of contact (CEFMS responsible employee) for creation of labor codes.

(3) Reviewers shall monitor individual labor code balances and alert the ATRT Study Manager to any possible funding shortages.

E. Timing and Schedule

(1) Throughout the development of this document, the team will conduct seamless review to ensure planning quality.

(2) The ATR will be convened early in the study and will participate in the Technical Review Strategy Session (TRSS) with the PDT and DST. The TRSS is to verify the basic plan of study and the rationale for key planning assumptions.

(3) The ATR will be conducted on the Feasibility Scoping Meeting documentation and assumptions; the Alternative Formulation Briefing documentation; the draft Feasibility Report; and if changes are made to the draft report, those changes will be reviewed in the Final Feasibility Report.

(4) The PDT will hold a "page-turn" session to review the draft report to ensure consistency across the disciplines and resolve any issues prior to the start of ITR. Writer/editor services will be performed on the draft prior to ITR as well.

(5) The ATR process for this document will follow the following timeline. Actual dates will be scheduled once the period draws closer. All products produced for these milestones will

be reviewed, including those produced as in-kind services by the non-Federal sponsors.

ATR Timeline

Task	Date
Participation in TRSS	Prior to F2
ATR Feasibility Scoping Meeting material	September 2009
ATR Alternatives Review Conference material[1]	July 2010
ATR of Draft Report Comment Period	November 2010
Kickoff meeting	During 1st week
ATR Comments	End 2rd week
PDT Responses	End 3rd week
Responses Back check	End 4th week
Alternative Formulation Briefing (AFB)	January 2011
AFB Policy Memo Issued	February 2011
ATR Certification Draft Report	September 2011
Public Review of Draft Report	October 2011
ATR Certification Final Report	December 2011
ATR After Action	January 2012
Final District Report Review	March 2012

[1]Required by the Major Subordinate Command.

F. Review

(1) ATRT responsibilities are as follows:

(a) Reviewers shall review conference material and the draft report to confirm that work was done in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. Comments on the report shall be submitted into DrChecks.

(b) Reviewers shall pay particular attention to one's discipline but may also comment on other aspects as appropriate. Reviewers that do not have any significant comments pertaining to their assigned discipline shall provide a comment stating this.

(c) Grammatical and editorial comments shall not be submitted into DrChecks. Comments should be submitted to the ATR manager via electronic mail using tracked changes feature in the Word document or as a hard copy mark-up. The ATR manager shall provide these comments to the Study Manager.

(d) Review comments shall contain these principal elements:

1 a clear statement of the concern
2 the basis for the concern, such as law, policy, or guidance
3 significance for the concern
4 specific actions needed to resolve the comment

(e) The "Critical" comment flag in DrChecks shall not be used unless the comment is discussed with the ATR manager and/or the Study Manager first.

(2) PDT Team responsibilities are as follows:

(a) The team shall review comments provided by the ATRT in DrChecks and provide responses to each comment using "*Concur*", "*Non-Concur*", or "*For Information Only*". *Concur* responses shall state what action was taken and provide revised text from the report if applicable. *Non-Concur* responses shall state the basis for the disagreement or clarification of the concern and suggest actions to negotiate the closure of the comment.

(b) Team members shall contact the PDT and ATRT managers to discuss any "Non-Concur" responses prior to submission.

G. Resolution

(1) Reviewers shall back check PDT responses to the review comments and either close the comment or attempt to resolve any disagreements. Conference calls shall be used to resolve any conflicting comments and responses.

(2) Reviewers may "agree to disagree" with any comment response and close the comment with a detailed explanation. If reviewer and responder cannot resolve a comment, it should be brought to the attention of the ATR manager and, if not resolved by the ATR Manager, it should be brought to the attention of the planning chief who will need to sign the certification. ATRT members shall keep the ATR manager informed of problematic comments. The vertical team will be informed of any policy variations or other issues that may cause concern during HQ review.

H. Certification

To fully document the ATR process, a statement of technical review will be prepared. Certification by the ATR Manager and the Study Manager will occur once issues raised by the reviewers have been addressed to the review team's satisfaction and the final report is ready for submission for HQ review. Indication of this concurrence will be documented by the signing of a certification statement (Appendix A). A summary report of all comments and responses will follow the statement and accompany the report throughout the report approval process. An interim certification will be provided by the ATR team lead to indicate concurrence with the report to date until the final certification is performed when the report is considered final.

I. Alternative Formulation Briefing (AFB)

The AFB for this project will occur after the majority of the ATR comments have been resolved. It is possible that the briefing will result in additional technical or policy comments from high level reviewers for resolution. The resolution of significant policy comments may result in major changes to the document. Therefore, the ATR Manager will perform a brief review of the report to ensure that technical issues are resolved.

4. INDEPENDENT EXTERNAL PEER REVIEW PLAN

This decision document will present the details of a feasibility study undertaken to evaluate structural and non-structural FRM and ER measures to address problems in the study area. EC 1105-2-408 set forth and EC 1105-2-410 reaffirmed thresholds that trigger IEPR: "In cases

where there are public safety concerns, a high level of complexity, novel or precedent-setting approaches; where the project is controversial, has significant interagency interest, has a total project cost greater than $45 million, or has significant economic, environmental and social effects to the nation, IEPR will be conducted." This study is not expected to contain influential scientific information nor be a highly influential scientific assessment. This study area is highly urbanized and consequently there are public safety concerns. The study will be highly complex because of the extensive river and tributary system; the existing reservoir and levee system; and the high degree of urbanization. This project has the potential to be controversial and will likely have significant agency and public interest (as evidenced by the Sacramento and San Joaquin River Basins Comprehensive Study). It can be assumed that the ultimate cost associated with a recommended plan is likely to be in the high hundreds of millions of dollars range. For these reasons, IEPR will be conducted. IEPR is currently estimated to be $100,000. IEPR is a project cost. The IEPR panel review will be Federally funded. In-house costs associated with obtaining the IEPR panel contract as well as responding to IEPR comments will be cost shared expenses. It is not anticipated that the public, including scientific or professional societies, will be asked to nominate potential external peer reviewers.

Disciplines that are anticipated to undergo IEPR are hydrology, hydraulic and geotechnical engineering and feasibility-level design, and economics. Work undertaken as part of these technical disciplines is considered to be highly complex due to the size of the study area as well as the existing complex water storage and conveyance system in the study area. Specific factors for this determination are (1) the large population center; (2) the complex existing levee and water conveyance system; (3) through-levee seepage, under-levee seepage and subsidence issues associated with the existing levees; (4) and the complex hydraulic system and associated floodplain. Of these products that will undergo IEPR, all will be reviewed by the PDT and undergo DCQ prior to submittal for IEPR. This includes products that are produced by the non-Federal sponsors as in-kind services.

A. Project Magnitude. For reasons described in the preceding paragraphs, the magnitude of this project is determined as high.

B. Project Risk. This project is considered to have high overall risk. The potential for failure is high because of the complex nature of the study area. It will be important to make sound planning assumptions in application of all the modeling and judgment and to do so will require application of multiple levels of review. Public and agency input will be sought in order to minimize the potential for controversy. Uncertainty of success of the project ultimately will be low to moderate – if the proposed review processes are implemented - because the methods used for evaluating the project are standard and the concept of implementing proposed project features is not innovative.

C. Vertical Team Consensus. This Review Plan will serve as the coordination document to obtain vertical team consensus. Subsequent to PCX approval, the plan will be provide to the vertical team for approval. MSC approval of the plan will indicate vertical team consensus.

D. Products for Review. Interim products for hydrology, hydraulic and geotechnical design and economics will be provided before the draft report is released for public review. The full IEPR panel will receive the entire draft feasibility report, environmental impact statement and all technical appendixes concurrent with public and agency review. The final report to be submitted by the IEPR panel must be submitted to the PDT within 60 days of the conclusion of public

review. A representative of the IEPR panel must attend any public meeting(s) held during public and agency review of the draft report. The Sacramento District will draft a response to the IEPR final report and process it through the vertical team for discussion at the Civil Works Review Board (CWRB). An IEPR panel member must attend the CWRB. Following the CWRB, the Corps will issue final response to the IEPR panel and notify the public.

E. Communication and Documentation. The communication plan for the IEPR is as follows:

(1) The panel will use DrChecks to document the IEPR process. The Study Manager will facilitate the creation of a project portfolio in the system to allow access by all PDT and the OEO. An electronic version of the document, appendices, and any significant and relevant public comments shall be posted in Word format at: ftp://ftp.usace.army.mil/pub/ at least one business day prior to the start of the comment period.

The OEO will compile the comments of the IEPR panelists, enter them into DrChecks, and forwards the comments to the District. The District will consult the PDT and outside sources as necessary to develop a proposed response to each panel comment. The District will enter the proposed response to DrChecks, and then return the proposed response to the panel. The panel will reply to the proposed response through the OEO, again using DrChecks. This final panel reply may or may not concur with the District's proposed response and the panels final response will indicate concurrence or briefly explain what issue is blocking concurrence. There will be no final closeout iteration. The District will consult the vertical team and outside resources to prepare an agency response to each comment. The initial panel comments, the District's proposed response, the panels reply to the District's proposed response, and the final agency response will all be tracked and archived in DrChecks for the administrative record. However, only the initial panel comments and the final agency responses will be posted. This process will continue to be refined as experience shows need for changes. This is specifically in accordance with the EC 1105-2-410 Frequently Asked Questions, dated 3 November 2008.

(2) The PDT shall send each IEPR panel member one hard copy (with color pages as applicable) of the document and appendices such that the copies are received at least one business day prior to the start of the comment period.

(3) The Study Manager shall inform the IEPR panel when all responses have been entered into DrChecks and conduct a briefing to summarize comment responses to highlight any areas of disagreement.

(4) A revised electronic version of the report and appendices with comments incorporated shall be posted at ftp://ftp.usace.army.mil/pub/ for use during back checking of the comments.

(5) PDT members shall contact IEPR panel members as appropriate to seek clarification of a comment's intent or provide clarification of information in the report. Discussions shall occur outside of DrChecks but a summary of discussions may be provided in the system.

(6) The IEPR panel shall produce a final Review Report to be provided to the PDT not later than 60 days after the close of the public and agency review of the draft report. This report shall be scoped as part of the effort to engage the IEPR panel. The Sacramento District will draft a response report to the IEPR final report and process it through the vertical team for discussion at the CWRB. Following direction at the CWRB and upon satisfactorily resolving any relevant follow-on actions, the Corps will finalize its response to the IEPR Review Report and will post both the Review Report and the Corps final responses to the public website.

F. Funding

The PCX for FRM will identify someone independent from the PDT to scope the IEPR and develop an Independent Government Estimate. The Sacramento District will provide funding to the IEPR panel.

5. PUBLIC AND AGENCY REVIEW

The public and agencies will have multiple opportunities to participate in this study. The earliest opportunity will be as part of the public scoping process during the first year of the study. Public review of the draft feasibility report will occur after issuance of the AFB policy guidance memo and concurrence by HQUSACE that the document is ready for public release. As such, public comments other than those provided at any public meetings held during the planning process will not be available to the review teams. Public review of the draft report will begin approximately 1 month after the completion of the ATR process and policy guidance memo. The period will last a minimum of 45 days as required for an Environmental Impact Statement. One or more public workshops will be held during the public and agency review period. Comments received during the public comment period for the draft report could be provided to the IEPR team prior to completion of the final Review Report and to the ATRT before review of the final Decision Document. The public review of necessary state or Federal permits will also take place during this period. A formal State and Agency review will occur concurrently with the public review. However, it is anticipated that intensive coordination with these agencies will have occurred concurrent with the planning process. Upon completion of the review period, comments will be consolidated in a matrix and addressed, if needed. A comment resolution meeting will take place if needed to decide upon the best resolution of comments. A summary of the comments and resolutions will be included in the document. A plan for public participation will be developed early in the study which might identify informal as well as additional formal forums for participation in the study.

6. PLANNING CENTERS OF EXPERTISE COORDINATION

The appropriate PCX for this document is the National Flood Risk Management Center of Expertise located at SPD. The PCX for FRM will coordinate with the National Ecosystem Restoration Planning Center of Expertise at MVD, as appropriate. This Review Plan will be submitted to the PCX for FRM Director, Eric Thaut, for review and comment. Since it was determined that this project is high risk, an IEPR will be required. As such, the PCX will be asked to manage the IEPR review. For ATR, the PCX is requested to nominate the ATR team as discussed in paragraph 3.b. above. The approved Review Plan will be posted to the Sacramento District's public website. Any public comments on the Review Plan will be collected by the Office of Water Project Review (OWPR) and provided to the Sacramento District for resolution and incorporation if needed.

7. APPROVALS

The PDT will carry out the Review Plan as described. The Study Manager will submit the plan to the PDT District Planning Chief for approval. Formal coordination with PCX for FRM will occur through the PDT District Planning Chief.

8. POINTS OF CONTACT

Questions about this Review Plan may be directed to Ms. Alicia Kirchner (interim), Sacramento District Project Delivery Team Planning contact, at (916) 557-6767, or alicia.e.kirchner@usace.army.mil, or to Mr. Eric Thaut, Program Manager for the Planning Center of Expertise for Flood Risk Management, at (415) 503-6852, or eric.w.thaut@usace.army.mil.

REVIEW PLAN

LOWER SAN JOAQUIN RIVER, CALIFORNIA
FLOOD RISK MANAGEMENT AND ECOSYSTEM RESTORATION
FEASIBILITY STUDY

SACRAMENTO DISTRICT

APPENDIX A
STATEMENT OF TECHNICAL REVIEW

COMPLETION OF INDEPENDENT TECHNICAL REVIEW
LOWER SAN JOAQUIN RIVER, CALIFORNIA
FLOOD RISK MANAGEMENT AND ECOSYSTEM RESTORATION

FEASIBILITY STUDY, ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT AND APPENDICES

The Sacramento District has completed the project implementation report (feasibility report), environmental impact statement/environmental impact report and appendices of the Lower San Joaquin River Feasibility Study. Notice is hereby given that an agency technical review, that is appropriate to the level of risk and complexity inherent in the project, has been conducted as defined in the Review Plan. During the agency technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level obtained; and reasonableness of the result, including whether the product meets the customer's needs consistent with law and existing Corps policy. The ATR was accomplished by an agency team composed of staff from multiple districts. All comments resulting from the ATR have been resolved.

TBD _____ _____

NAME
Team Leader, Lower San Joaquin River
Feasibility Study
Agency Technical Review Team

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW

A summary of all comments and responses is attached. Significant concerns and the explanation of the resolution are as follows:

(*Describe the major technical concerns, possible impact and resolution*).

As noted above, all concerns resulting from the independent technical review of the project have been fully resolved.

_____ _____

Francis C. Piccola
Chief, Planning Division

Date

REVIEW PLAN

LOWER SAN JOAQUIN RIVER, CALIFORNIA
FLOOD RISK MANAGEMENT AND ECOSYSTEM RESTORATION
FEASIBILITY STUDY

SACRAMENTO DISTRICT

APPENDIX B

PRODUCT DELIVERY TEAM

Name	Discipline	Phone	Email
Russ Rote	Project Manager	916-557-6672	Russ.L.Rote@usace.army.mil
Alicia Kirchner (interim)[1]	Study Manager/Planning	916-557-6767	Alicia.E.Kirchner@usace.army.mil
Richard Torbik (interim)	Civil Design	916-557-6698	Richard.A.Torbik@usace.army.mil
Matt Davis (interim)	Environmental Analysis	916-557-6708	Matthew.G.Davis@usace.army.mil
Kevin Richardson	Hydrology/Reservoir Operations	916-557-7108	Kevin.A.Richardson@usace.army.mil
Scott Stonestreet	Hydraulic Design	916-557-7719	Scott.E.Stonestreet@usace.army.mil
Kurt Keilman (interim)	Economics	916-557-7836	Kurt.Keilman@usace.army.mil
Joseph Yee (interim)	Cost Engineering	916-557-6990	Joseph.W.Yee@usace.army.mil
TBD	Real Estate/Lands		
Sannie Osborn (interim)	Cultural Resources	916-557-6861	Sannie.K.Osborn@usace.army.mil
Mary Perlea	Geotechnical Engineering	916-557-7185	Mary.P.Perlea@usace.army.mil

[1] Primary contact for this Review Plan.

AGENCY TECHNICAL REVIEW TEAM

Name	Discipline	Phone	Email
TBD	ATR Manager/Plan Formulation		
TBD	Civil Design		
TBD	Environmental Resources		
TBD	Hydrology/Reservoir Operations		
TBD	Hydraulics		
TBD	Economics		
TBD	Cost Engineering [1]		
TBD	Real Estate/Lands		
TBD	Cultural Resources		
TBD	Geotechnical Engineering		

[1]The cost engineering team member nomination will be coordinated with the NWW Cost Estimating Center of Expertise as required. That PCX will determine if the cost estimate will need to be reviewed by PCX staff.

INDEPENDENT EXTERNAL PEER REVIEW PANEL

Name	Discipline	Phone	Email
TBD	Hydrology		
TBD	Hydraulic Design		
TBD	Geotechnical Engineering		
TBD	Economics		

VERTICAL TEAM

Name	Discipline	Phone	Email
Karen Berresford	District Support Team Mgr		Karen.G.Berresford@usace.army.mil
Ken Zwickl	Regional Integration Team		Kenneth.J.Zwickl@usace.army.mil

PLANNING CENTER OF EXPERTISE
FLOOD RISK MANAGEMENT

Name	Discipline	Phone	Email
Eric Thaut[1]	Program Manager, PCX Flood Risk Management	415-503-6852	Eric.W.Thaut@usace.army.mil
David Vigh,	Program Manager, PCX Ecosystem Restoration	601-634-5854	David.A.Vigh@usace.army.mil

[1] Primary PCX is FRM, who will coordinate with PCX for EC as appropriate.

10 November 2008

MEMORANDUM FOR Alicia Kirchner, CESPK

SUBJECT: FRM-PCX endorsement of the Review Plan for the Lower San Joaquin River, CA Flood Risk Management and Ecosystem Restoration Feasibility Study.

1. The FRM-PCX has reviewed the Review Plan (RP) for the subject study and concurs that the RP satisfies peer review policy requirements outlined in EC 1105-2-410 Review of Decision Documents, dated 22 Aug 2008.

2. The RP was submitted to the FRM-PCX for review on 29 September 2008. The FRM-PCX comments on the draft PRP were submitted to the District and coordinated with the ECO-PCX on 14 October 2008. The revised RP was back-checked on 10 November 2008 and all comments have been satisfactorily addressed. The RP checklist for the study is attached for reference.

3. The FRM-PCX endorses the RP for approval by the MSC Commander. Upon approval of the RP, please provide a copy of the approved RP, a copy of the MSC Commander approval memorandum, and the link to where the RP is posted on the District website.

4. Thank you for the opportunity to assist in the preparation of the RP. Please contact me if you have any questions or when further peer review assistance is required.

Encl

/s/
Eric Thaut
Program Manager, National Planning Center of Expertise
for Flood Risk Management (FRM-PCX)

Enclosure

Review Plan Checklist

Date: 11-10-2008
Originating District: Sacramento District
Project/Study Title: Lower San Joaquin River, CA Flood Risk Management and Ecosystem Restoration Feasibility Study
District POC: Alicia Kirchner, 916 557 7440
FRM-PCX Reviewer: Eric Thaut, 415 503 6852

Any evaluation boxes checked 'No' indicate the RP may not comply with ER 1105-2-410 (22 Aug 2008) and should be explained. Additional coordination and issue resolution may be required prior to MSC approval of the Review Plan.

REQUIREMENT	REFERENCE	EVALUATION
1. Is the Review Plan (RP) a stand alone document?	EC 1105-2-410, Para 8a	Yes ☒ No ☐
a. Does it include a cover page identifying it as a RP and listing the project title, originating district or office, and date of the plan? b. Does it include a table of contents? c. Is the purpose of the RP clearly stated and EC 1105-2-410 referenced? d. Does it reference the Project Management Plan (PMP) of which the RP is a component? e. Does it succinctly describe the three levels of peer review: District Quality Control (DQC), Agency Technical Review (ATR), and Independent Technical Peer Review (IEPR)? f. Does it clearly state that DQC and ATR are required for all decision documents and that IEPR may be required?		a. Yes ☒ No ☐ b. Yes ☒ No ☐ c. Yes ☒ No ☐ d. Yes ☒ No ☐ e. Yes ☒ No ☐ f. Yes ☒ No ☐ g. Yes ☒ No ☐ h. Yes ☒ No ☐ **Comments:**
g. Does it include a paragraph stating the title, subject, and purpose of the decision document to be reviewed? h. Does it list the names and disciplines of the Project Delivery Team (PDT)?* **Note: It is highly recommended to put all team*	EC 1105-2-410, Appendix B, Para 4a	

member names and contact information in an appendix for easy updating as team members change or the RP is updated.		
2. Is the RP detailed enough to assess the necessary level and focus of peer review?	EC 1105-2-410, Appendix B, Para 3a	Yes ☒ No ☐
a. Does it indicate which parts of the study will likely be challenging?	EC 1105-2-410, Appendix B, Para 3a	a. Yes ☒ No ☐ b. Yes ☒ No ☐
b. Does it provide a preliminary assessment of where the project risks are likely to occur and what the magnitude of those risks might be?	EC 1105-2-410, Appendix B, Para 3a	c. Yes ☒ No ☐ d. Yes ☒ No ☐ e. Yes ☒ No ☐
c. Does it indicate if the project/study will include an environmental impact statement (EIS)? *Is an EIS included? Yes ☒ No ☐* *If yes, IEPR is required.*	EC 1105-2-410 Para 7c & 8f	
d. Does it address if the project report is likely to contain influential scientific information or be a highly influential scientific assessment? *Is it likely? Yes ☐ No ☒* *If yes, IEPR is required.*	EC 1105-2-410, Appendix B, Para 4b	
e. Does it address if the project is likely to have significant economic, environmental, and social affects to the nation, such as (but not limited to):	EC 1105-2-410, Para 6c	
• more than negligible adverse impacts on scarce or unique cultural, historic, or tribal resources?	EC 1105-2-410 Para 8f	
• substantial adverse impacts on fish and wildlife species or their habitat, prior to implementation of mitigation?	EC 1105-2-410 Para 8f	
• more than negligible adverse impact on species listed as endangered or threatened, or to the designated critical habitat of such species, under the Endangered Species Act, prior to implementation of mitigation?	EC 1105-2-410 Para 8f	

Is it likely? Yes ☒ No ☐ *If yes, IEPR is required.*		
f. Does it address if the project/study is likely to have significant interagency interest? *Is it likely? Yes ☒ No ☐* *If yes, IEPR is required.*	EC 1105-2-410, Para 6c	f. Yes ☒ No ☐ g. Yes ☒ No ☐ h. Yes ☒ No ☐
g. Does it address if the project/study likely involves significant threat to human life (safety assurance)? *Is it likely? Yes ☒ No ☐* *If yes, IEPR is required.*	EC 1105-2-410, Appendix D, Para 1b	i. Yes ☒ No ☐ j. Yes ☒ No ☐ **Comments:**
h. Does it provide an estimated total project cost? *What is the estimated cost: >$100M* *(best current estimate; may be a range)* *Is it > $45 million? Yes ☒ No ☐* *If yes, IEPR is required.*	EC 1105-2-410, Appendix D, Para 1b	
i. Does it address if the project/study will likely be highly controversial, such as if there will be a significant public dispute as to the size, nature, or effects of the project or to the economic or environmental costs or benefits of the project? *Is it likely? Yes ☒ No ☐* *If yes, IEPR is required.*	EC 1105-2-410, Appendix D, Para 1b	
j. Does it address if the information in the decision document will likely be based on novel methods, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices? *Is it likely? Yes ☒ No ☐* *If yes, IEPR is required.*	EC 1105-2-410, Appendix D, Para 1b	
3. Does the RP define the appropriate level of peer review for the project/study?	EC 1105-2-410, Para 8a	Yes ☒ No ☐

b. Does it state that ATR will be conducted or managed by the lead PCX? c. Does it state whether IEPR will be performed? *Will IEPR be performed? Yes ☒ No ☐* d. Does it provide a defensible rationale for the decision on IEPR? e. Does it state that IEPR will be managed by an Outside Eligible Organization, external to the Corps of Engineers?	EC 1105-2-410, Appendix D, Para 3a EC 1105-2-410, Appendix B, Para 4b EC 1105-2-410, Para 7c	b. Yes ☒ No ☐ c. Yes ☒ No ☐ d. Yes ☒ No ☐ e. Yes ☒ No ☐ n/a ☐ **Comments:**
4. Does the RP explain how ATR will be accomplished?	EC 1105-2-410, Appendix B, Para 4l	Yes ☒ No ☐
a. Does it identify the anticipated number of reviewers? b. Does it provide a succinct description of the primary disciplines or expertise needed for the review? c. Does it indicate that ATR team members will be from outside the home district? d. Does it indicate that the ATR team leader will be from outside the home MSC? e. Does the RP state that the lead PCX is responsible for identifying the ATR team members and indicate if candidates will be nominated by the home district/MSC? f. If the reviewers are listed by name, does the RP describe the qualifications and years of relevant experience of the ATR team members?* **Note: It is highly recommended to put all team member names and contact information in an appendix for easy updating as team members change or the RP is updated.*	EC 1105-2-410, Appendix B, Para 4f EC 1105-2-410, Appendix B, Para 4g EC 1105-2-410, Para 7b EC 1105-2-410, Para 7b EC 1105-2-410, Appendix B, Para 4k(1) EC 1105-2-410, Appendix B, Para 4k(1)	a. Yes ☒ No ☐ b. Yes ☒ No ☐ c. Yes ☒ No ☐ d. Yes ☒ No ☐ e. Yes ☒ No ☐ f. Yes ☐ No ☐ n/a ☒ **Comments:**
5. Does the RP explain how IEPR will be accomplished?	EC 1105-2-410, Appendix B, Para 4k & Appendix D	**Yes ☒ No ☐ n/a ☐**

member names and contact information in an appendix for easy updating as team members change or the RP is updated.		
5. Does the RP explain how IEPR will be accomplished?	EC 1105-2-410, Appendix B, Para 4k & Appendix D	**Yes** ☒ **No** ☐ **n/a** ☐
a. Does it identify the anticipated number of reviewers? b. Does it provide a succinct description of the primary disciplines or expertise needed for the review? c. Does it indicate that the IEPR reviewers will be selected by an Outside Eligible Organization and if candidates will be nominated by the Corps of Engineers? d. Does it indicate the IEPR will address all the underlying planning, safety assurance, engineering, economic, and environmental analyses, not just one aspect of the project?	EC 1105-2-410, Appendix B, Para 4f EC 1105-2-410, Appendix B, Para 4g EC 1105-2-410, Appendix B, Para 4k(1) & Appendix D, Para 2a EC 1105-2-410, Para 7c	a. Yes ☒ No ☐ b. Yes ☒ No ☐ c. Yes ☒ No ☐ d. Yes ☒ No ☐ **Comments:**
6. Does the RP address peer review of sponsor in-kind contributions?		Yes ☒ No ☐
a. Does the RP list the expected in-kind contributions to be provided by the sponsor? b. Does it explain how peer review will be accomplished for those in-kind contributions?	EC 1105-2-410, Appendix B, Para 4j	a. Yes ☒ No ☐ b. Yes ☒ No ☐ n/a ☐ **Comments:**
7. Does the RP address how the peer review will be documented?		Yes ☒ No ☐
a. Does the RP address the requirement to document ATR and IEPR comments using DrChecks? b. Does the RP explain how the IEPR will be documented in a Review Report? c. Does the RP document how written	EC 1105-2-410, Para 8g(1) EC1105-2-410, Appendix B, Para 4k(13)(b) EC 1105-2-410,	a. Yes ☒ No ☐ b. Yes ☒ No ☐ n/a ☐ c. Yes ☒ No ☐ n/a ☐ d. Yes ☒ No ☐ n/a ☐

responses to the IEPR Review Report will be prepared? d. Does the RP detail how the district/PCX will disseminate the final IEPR Review Report, USACE response, and all other materials related to the IEPR on the internet and include them in the applicable decision document?	Appendix B, Para 4l EC 1105-2-410, Para 8g(2) & Appendix B, Para 4l	**Comments:**
8. Does the RP address Policy Compliance and Legal Review?	EC 1105-2-410, Para 7d	Yes ☒ No ☐ **Comments:**
9. Does the RP present the tasks, timing and sequence (including deferrals), and costs of reviews?	EC 1105-2-410, Appendix B, Para 4c & Appendix C, Para 3d	Yes ☒ No ☐
a. Does it provide a schedule for ATR including review of the Feasibility Scoping Meeting (FSM) materials, Alternative Formulation Briefing (AFB) materials, draft report, and final report? b. Does it include interim ATR reviews for key technical products? c. Does it present the timing and sequencing for IEPR? d. Does it include cost estimates for the peer reviews?	EC 1105-2-410, Appendix C, Para 3g EC 1105-2-410, Appendix C, Para 3g	a. Yes ☒ No ☐ b. Yes ☒ No ☐ c. Yes ☒ No ☐ n/a ☐ d. Yes ☒ No ☐ **Comments:**
10. Does the RP indicate the study will address Safety Assurance factors (required for Flood Risk Management and Coastal Storm Damage Reduction projects)? Factors to be considered include: • Where failure leads to significant threat to human life • Novel methods\complexity\ precedent-setting models\policy changing conclusions • Innovative materials or techniques	EC 1105-2-410, Para 2 & Appendix D, Para 1c	**Yes ☒ No ☐ n/a ☐** **Comments:** Suggest adding a discussion in the RP to address item 10 - DONE.

• Design lacks redundancy, resiliency of robustness • Unique construction sequence or acquisition plans • Reduced\overlapping design construction schedule		
11. Does the RP address model certification requirements?	EC 1105-2-407	Yes ☒ No ☐
a. Does it list the models and data anticipated to be used in developing recommendations (including mitigation models)? b. Does it indicate the certification/approval status of those models and if certification or approval of any model(s) will be needed? c. If needed, does the RP propose the appropriate level of certification/approval for the model(s) and how it will be accomplished?	EC 1105-2-410, Appendix B, Para 4i	a. Yes ☒ No ☐ b. Yes ☒ No ☐ c. Yes ☒ No ☐ n/a ☐ **Comments:**
12. Does the RP address opportunities for public participation?		Yes ☒ No ☐
a. Does it indicate how and when there will be opportunities for public comment on the decision document? b. Does it indicate when significant and relevant public comments will be provided to reviewers before they conduct their review? c. Does it address whether the public, including scientific or professional societies, will be asked to nominate potential external peer reviewers? d. Does the RP list points of contact at the home district and the lead PCX for inquiries about the RP?	EC 1105-2-410, Appendix B, Para 4d EC 1105-2-410, Appendix B, Para 4e EC 1105-2-410, Appendix B, Para 4h EC 1105-2-410, Appendix B, Para 4a	a. Yes ☒ No ☐ b. Yes ☒ No ☐ c. Yes ☒ No ☐ d. Yes ☒ No ☐ **Comments:**
13. Does the RP address coordination with the appropriate Planning Centers of Expertise?	EC 1105-2-410, Para 8a	Yes ☒ No ☐
a. Does it state if the project is single or multi-purpose? Single ☐ Multi ☒ b. Does it identify the lead PCX for peer		a. Yes ☒ No ☐ b. Yes ☒ No ☐

review? Lead PCX: **FRM** c. If multi-purpose, has the lead PCX coordinated the review of the RP with the other PCXs as appropriate?	EC 1105-2-410, Appendix D, Para 3c	c. Yes ☒ No ☐ n/a ☐ **Comments:** The FRM-PCX will coordinate with the ECO-PCX by forwarding this checklist along with the draft RP.
14. Does the RP address coordination with the Cost Engineering Directory of Expertise (DX) in Walla Walla District for ATR of cost estimates, construction schedules and contingencies for all documents requiring Congressional authorization?	EC 1105-2-410, Appendix D, Para 3	Yes ☒ No ☐
a. Does it state if the decision document will require Congressional authorization? b. If Congressional authorization is required, does the state that coordination will occur with the Cost Engineering DX?		a. Yes ☒ No ☐ b. Yes ☒ No ☐ n/a ☐ **Comments:**
13. Other Considerations: This checklist highlights the minimum requirements for an RP based on EC 1105-2-410. Additional factors to consider in preparation of the RP include, but may not be limited to: a. Is a request from a State Governor or the head of a Federal or state agency to conduct IEPR likely? b. Is the home district expecting to submit a waiver to exclude the project study from IEPR? c. Are there additional Peer Review requirements specific to the home MSC or district (as described in the Quality Management Plan for the MSC or district)? d. Are there additional Peer Review needs unique to the project study?	EC 1105-2-410, Appendix D, Para 1b EC 1105-2-410, Appendix D, Para 1d	**Comments:**
Additional Comments: HQUSACE has clarified use of Dr. Checks for IEPR (in the EC 1105-2-410 FAQ dated 3 Nov 2008): "HQ does not expect IEPR panelists to personally input their information the DrChecks system. The basic process follows: The OEO will compile the comments of the panelists, enter them into DrChecks, and forwards the comments to the district. The district will consult their internal team and outside sources as necessary to develop a proposed response to each panel comment, the district will enter the proposed response to DrChecks, and then return the proposed response to the panel. The panel will reply to the proposed response through the OEO, again using DrChecks. This final panel reply may or may		

not concur with the district's proposed response and the panels final response will indicate concurrence or briefly explain what issue is blocking concurrence. There will be no final closeout iteration. The district will consult the vertical team and outside resources to prepare an agency response to each comment. The initial panel comments, the district's proposed response, the panels reply to the district's proposed response, and the final agency response will all tracked and archived in DrChecks for the administrative record. However, only the initial panel comments and the final agency responses will be posted. This process will continue to be refined as experience shows need for changes." Per this clarification, the PDT may choose to revise the RP (Paragraph 4e) with regard to how IEPR is documented in Dr. Checks - DONE.