REVIEW PLAN

SACRAMENTO RIVER BANK PROTECTION PROJECT, PHASE II,
PROJECT LEVEL REVIEW PLAN

SACRAMENTO DISTRICT, U.S. ARMY CORPS OF ENGINEERS

US Army Corps of Engineers®

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Approved:

Revised:

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APPENDICES

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1. PURPOSE AND REQUIREMENTS

A. Purpose. This Review Plan (RP) defines the scope of review activities for the additional elements of Phase II of the Sacramento River Bank Protection Project that was authorized in Water Resources Development Act (WRDA) 2007. This RP applies to both the Decision Documents and Implementation Documents for Phase II work. The Review activities consist of District Quality Control (DQC), Agency Technical Review (ATR) and Independent External Peer Review (IEPR) types I & II. The project is in the planning, design and construction phases simultaneously as this is an ongoing multi-year repair type project. The related project documents consist of an Environmental Impact Statement / Environmental Impact Report (EIS/EIR), an Engineering Document Report (EDR), and a Post Authorization Decision Document (PADD), a Real Estate (RE) Plan, an Economic Reevaluation, Plans and Specifications and a Design Documentation Report (DDR). Upon approval this RP will be included into the Project Management Plan (PMP) as an appendix to the Quality Management Plan (QMP).

B. References.

(1) ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 Aug 1999

(2) ER 1110-1-12, Engineering and Design Quality Management, 21 Jul 2006

(3) ER 1105-2-100, Planning Guidance Notebook, 20 Nov 2007

(4) ER 11-1-321, Army Programs Value Engineering

(5) WRDA 2007 H. R. 1495 Public Law 110-114, 8 Nov 2007

(6) EC 1165-2-209, Civil Works Review Policy, 31 Jan 2012

(7) EC 1105-2-411, Planning: Watershed Plans

(8) ETL 1110-2-571, Engineering and Design: Guidelines for Landscape Planting and Vegetation Management at Levees, floodwalls, Embankment Dams, and Appurtenant Structures.

(9) Army Regulation 15–1, Committee Management, 27 November 1992 (Federal Advisory Committee Act Requirements)

(10) National Academy of Sciences, Background Information and Confidential Conflict Of Interest Disclosure, BI/COI FORM 3, May 2003

This RP was prepared following the *Civil Works Review Policy*, EC 1165-2-209, dated 31 January 2012. The EC formally distinguishes between technical review performed by 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.

C. Requirements. EC 1165-2-209 outlines the requirement of the three review approaches (DQC, ATR, and IEPR). This document addresses review of the decision document as it pertains to ATR and IEPR and planning coordination with the appropriate Planning Center of Expertise (PCX). The Sacramento River Bank Protection Project's purpose is Flood Risk Management (FRM). Therefore, the PCX for FRM is considered to be the primary PCX for coordination. The PCX for FRM will coordinate with the PCX for Ecosystem Restoration (ER) as appropriate.

i. District Quality Control. DQC is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Sacramento River Bank Protection Project, Project Management Plan (PMP) for the project (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 products to assure the overall integrity of the report, technical appendices and the recommendations before the approval by the District Commander. For the Sacramento River Bank Protection Project, senior qualified non-PDT members and/or supervisory staff will conduct this review for major draft and final products. South Pacific Division (SPD) and Sacramento District (SPK) are directly responsible for the QM and QC respectively, and to conduct and document this fundamental level of review. A Quality Control Plan (QCP) is included in the PMP for the subject product and addresses DQC by the MSC/District; DQC is not addressed further in this Review Plan. DQC is required for this project.

ii. Agency Technical Review. EC 1165-2-209 recharacterizes ATR (which replaces the level of review formerly known as Independent Technical Review) as 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. DrChecks (https://www.projnet.org/projnet/) will 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 Sacramento River Bank Protection Project. ATR is required for this project.

iii. Independent External Peer Review (IEPR). EC 1165-2-209 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. The IEPR will be on the technical aspects of the project while the ATR will be responsible for the agency and administration's policy review. IEPR is divided into two types: Type I IEPR is generally for decision document; while, Type II is generally for implementation documents. These two types are discussed further in Section 5.

iv. 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 reviews described in EC 1165-2-209 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 SPD 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 draft and final EIR/EIS, EDR, and PADD.

v. Planning Center of Expertise (PCX) Coordination. This Review Plan has been coordinated with the PCX for Flood Risk Management (FRM), who in turn coordinated with the PCX for Ecosystem Restoration (ER) . The PCX for FRM is responsible for the accomplishment and quality of ATR and IEPR for the Sacramento River Bank Protection Project, Phase II. The DQC is the responsibility of the Sacramento District with SPD having the QA role. The PCX for FRM may conduct the review or manage the ATR and IEPR reviews to be conducted by others.

vi. Review Plan Approval and Posting. In order to ensure the Review Plan is in compliance with the principles of EC 1165-2-209 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. The Review Plan was approved on April 17, 2009.

vii. Type II IEPR, Safety Assurance Review (SAR). In accordance with Section 2034 and

2035 of WRDA 2007, EC 1165-2-209, and pending additional guidance requires that all projects addressing flooding or storm damage reduction undergo a SAR during design and construction. Safety assurance factors (significant threat to human life, project cost thresholds, etc) must be considered in the planning and studies phases and in all reviews for those studies. Updated guidance on the civil works review process including implementation guidance for Section 2034 and 2035 is under development. This study will address 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 sites identified for construction, a PMP will be developed that will include SAR's with the selection of external panels to perform the independent external peer reviews during design and construction.

viii. Value Engineering (VE) certification will be obtained for Decision documents and Implementation documents as directed in ER 11-1-321, Army Programs Value Engineering. As per ER 11-1-321, "All projects, programs and procurements greater than $1 million ($2 million for construction and environmental) shall have an appropriate VE study (ies) or approved waiver…". Planned VE studies for this project scope shall include, but are not limited to, a VE study during the feasibility phase, as part of the plan formulation process prior to the selection of final alternatives; a VE study on the Post-Authorization Changes (PACs) reports (e.g. LRRs, GRRs); and a VE study will be performed on all construction elements as the current working estimate (CWE) to construct the authorized additional 80,000 linear feet under Phase II exceeds $10 million.

D. Review Management Organization (RMO).

The South Pacific Division (SPD) is designated as the RMO. The RMO is responsible for managing the review activities described in this RP.

2. PROJECT INFORMATION AND BACKGROUND

A. Project Authority. The Sacramento River Bank Protection Project (SRBPP), Phase II was authorized by Section 202 of the River Basin Monetary Authorization Act of 1974 (Public Law 93-252) and through a joint resolution of Congress (PL 97-377). This phase included the authority to implement 405,000 linear feet of bank protection. An additional 80,000 linear feet of bank protection was authorized by the Water Resources Development Act (WRDA) of 2007 (Public Law 110-114). This Review Plan shall cover all Implementation and Decision documents related to the additional 80,000 linear feet subsequently authorized under Phase II .

B. Project Overview. The Sacramento River Bank Protection Project is a part of the Sacramento River Flood Control Project (SRFCP). The SRFCP includes approximately 980 miles of levees along the Sacramento River, tributaries (American, Feather, Yuba, and Bear Rivers along with additional minor tributaries), and distributary sloughs. The SRFCP also includes the Moulton, Colusa, Tisdale, Fremont, and the Sacramento Flood Overflow Weirs and the Butte Basin and Sutter and Yolo Bypasses and Sloughs. Both Phase I (construction complete) & II (current phase, partially complete) repairs are within this entire system. (See Figures 1 & 2)

The purpose of Phase II of the SRBPP is to identify and repair sites along the Sacramento River and Tributaries that may have been weakened due to erosion while concurrently providing mitigation for any environmental impact as detailed in the supporting EIS/EIR. This portion of Phase II consists of 80,000 levee feet of bank protection along the Sacramento River and

tributaries identified in the entry paragraph of this section and can be seen on the map presented in Figures 1 & 2 which follow.

C. General Site Description. The Sacramento River begins near Mount Shasta in Northern California, flows through the northern Central Valley, and finally joins the San Joaquin River and Sacramento River Delta to discharge to the Suisan Bay.

The SRBPP is a continuing construction project, originally authorized by the Flood Control Act of 1960, to provide protection for the existing levees and flood control facilities of the Sacramento River Flood Control Project (SRFCP). The SRFCP consists of approximately 980 miles of levees plus overflow weirs, pumping plants, and bypass channels that protect communities and agricultural lands in the Sacramento Valley and Sacramento-San Joaquin Delta.

The SRFCP was authorized by Congress and approved on March 1, 1917, then amended on May 15, 1928, August 26, 1937, August 18, 1941, August 17, 1954, and July 14, 1960 as the Flood Control Act of 1960, Public Law (PL) 86-645. Prior to 1960, the Federal government did not support continued participation in a project perceived as completed.

However, by 1960 the Federal government began to see the national value in investing funding in large scale flood protection protects in complicated watersheds. In the Flood Control Act of 1960, Congress authorized substantial support for flood protection for the Sacramento River Basin. This constituted Phase I of the SRBPP. Phase I was constructed from 1963 to 1975, and consisted of 436,000 levee feet completed.

In 1972, the Chief of Engineers found that "Although work under the initial phase [Phase I] has effectively controlled erosion at the critical sites, each year stream banks and levees at additional unprotected locations throughout the Sacramento River Flood Control Project are subject to erosion…." Accordingly in 1974 repair of 405,000 linear levee feet were authorized as SRBPP Phase II. Authorization was through the River Basin Monetary Authorization Act of 1974 (PL 93-251).

Through the Water Resources Development Act of 2007, Phase II was modified to include an additional 80,000 linear feet. A Post Authorization Decision Document (PADD) for the 80,000 linear feet needs to be final and approved before the 1974 authority runs out.

Although the Phase II - 80,000 linear feet will consist of individual bank protection sites on SRFCP levees, actual sites are not yet identified. The PADD will contain a programmatic plan that will use the 2007 Field Reconnaissance Report which lists and prioritizes possible bank protection sites. As detailed in the 2007 Field Reconnaissance Report there are 152 sites that may or may not receive bank protection for the new 80,000 levee feet to undergo bank protection under Phase II. Figures 1 and 2 are the location maps for the project. The report lists sites that are scattered along levees on the Main Sacramento River, from Chico Landing (RM 199) to Collinsville (RM 4), and tributaries of the Sacramento River. These tributaries include the American River, the Feather River, the Bear River, the Yuba River, Cache Creek, and others.

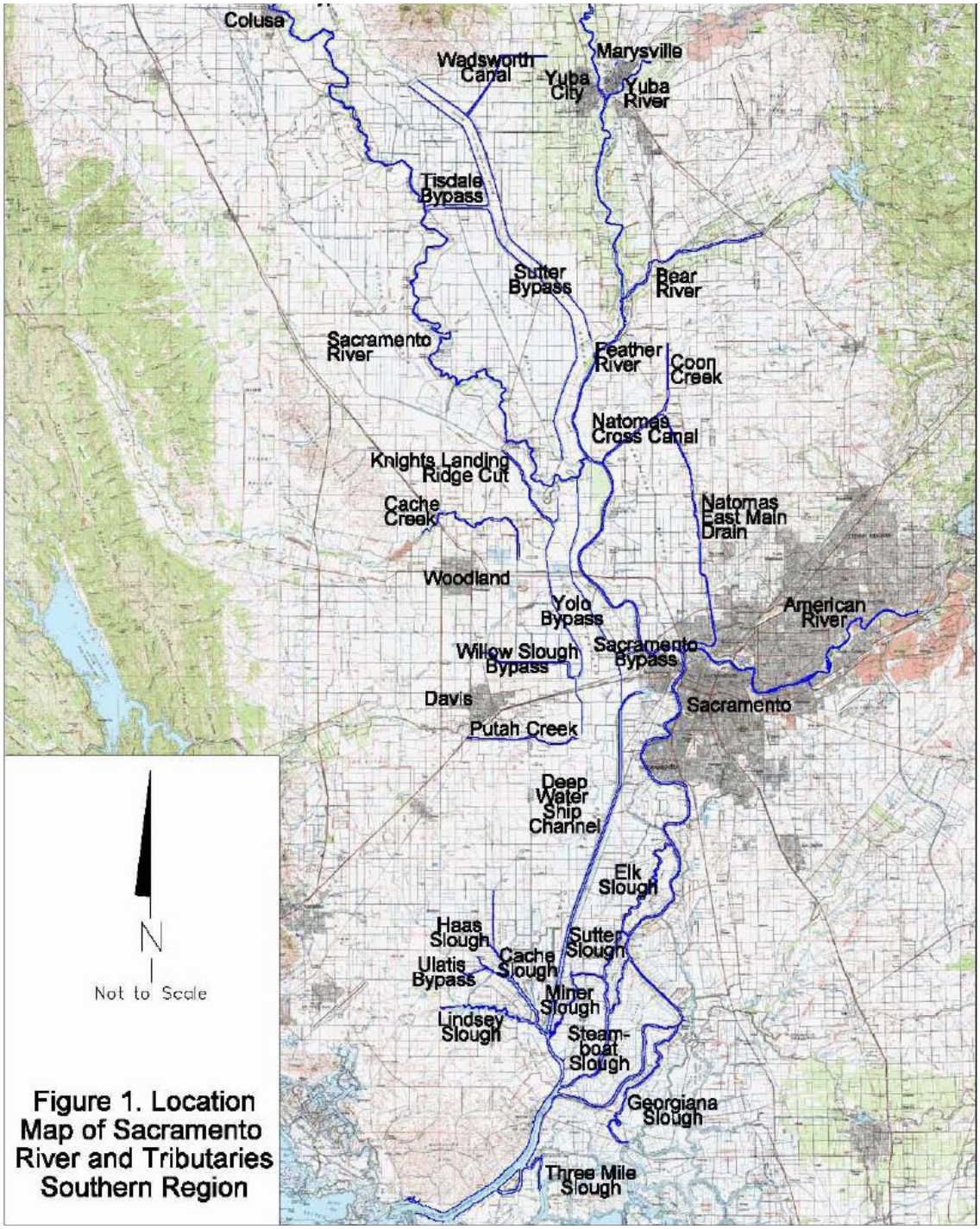

Figure 1. Location Map of Sacramento River and Tributaries Southern Region

Source: Ayers Associates, Inc. *2007 – Field Reconnaissance Report, Erosion Site Inventory and Priority Ranking*, December 18, 2007

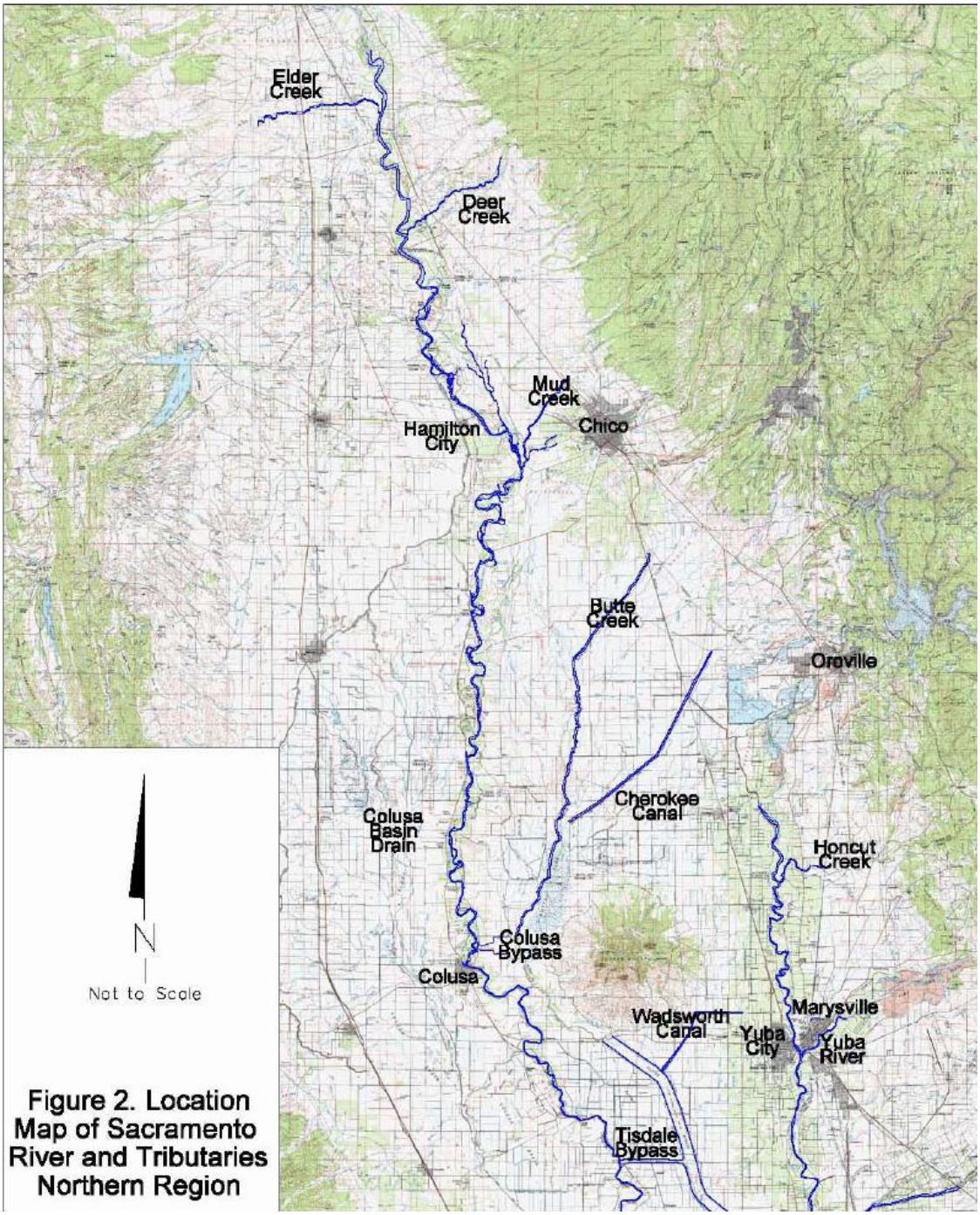

Figure 2. Location Map of Sacramento River and Tributaries Northern Region

Source: Ayers Associates, Inc. *2007 – Field Reconnaissance Report, Erosion Site Inventory and Priority Ranking*, December 18, 2007

*The system (all reaches) as shown in figures 1 and 2 cover both Phase I and Phase II site repairs. This entire system as indicated is inventoried annually during the Erosion Site Inventory Reconnaissance and sites are given priority and ranking based on level of critical active erosion. The sites that were and will be selected for repair for both Phases I (construction 1963 to 1975) & II (405,000 lf constructed -80,000 lf to be constructed) are located within this system.

D. Project Scope. The project will include a PADD which will be supported by an Engineering Documentation Report (EDR) with both Economics and Real Estate Appendices and a Programmatic EIS/EIR. Since erosion problems change over time on the Sacramento River, this entire portfolio of documents will need to be programmatic in nature. The bank protection program has to respond to erosion that may appear after any flood season or event. Costs, benefits, and environmental effects will be based on erosion sites identified in the *2007 Field Reconnaissance Report of Bank Erosion Sites and Site Priority Ranking*, report dated 18 December 2007. .

Rather than a specific plan, the PADD will describe an approximation of the future work under Phase II and how Phase II efforts and other associated projects will be integrated into a future Phase III strategy. This PADD will be based on the 152 identified sites from the 2007 Field Reconnaissance Report. Thus estimates of costs, effects, benefits, and mitigation will be a documented baseline as the project's response to erosion problems change over time. The estimated Phase II costs, benefits, and effects will serve as a meaningful basis for the Project Partnership Agreement (PPA).

During the implementation phase, as bank protection designs are applied to specific sites, consideration for the selected design will based on effects to life and safety from the evaluation of the existing conditions of the levee profile and associated erosion, adjacent land uses, and environmental impacts and restoration. During the design process all appropriate levels of review will be conducted as identified in this RP. Upon completion of the repaired/construction sites an Operations and Maintenance (O&M) Manual will be provided to the local sponsor at the time of turnover. The stated O&M Manual shall include guidance on maintenance and monitoring practices for the repaired/constructed sites as designed.

This RP also addresses the plan for the quality assurance during the implementation phase (design and construction). Due to the nature of this project not all sites are identified at this time therefore this RP discusses design and construction on a project level as opposed to being site specific. This approach has been recommended by South Pacific Division (SPD) and concurred with by Sacramento District (SPK), Engineering Division. This Review plan will be updated to address future implementation phases of the project. The levels of review required are DQC (District Quality Control), ATR (Agency Technical Review), IEPR (Independent External Peer Review) & SAR (Safety Assurance Review).

3. DISTRICT QUALITY CONTROL

All work products, reports, evaluations and assessments shall undergo necessary and appropriate District Quality Control/Quality Assurance (DQC). This review is managed by the home district in accordance with the Major Subordinate Command (MSC) and district Quality Management Plans (P2 Project # 105606) and includes seamless quality checks and reviews, supervisory reviews, Project Delivery Team reviews (PDT) including input from the Local Sponsor. To ensure specific discipline efforts are on target with regard to compliance with policy and criteria and an acceptable level of quality, sub-products will be technically coordinated and reviewed before they are integrated into the overall project. DQC will be conducted for 60%, pre-final, 100% and for Biddability, Constructability, Operability and Environmental reviews (BCOE).

A. General. DQC for decision documents covered by EC 1165-2-209 is managed by the home district in accordance with the MSC and district Quality Management Plans. All draft products and deliverables will be reviewed within the district as they are developed by the PDT to ensure they meet project and customer objectives, comply with regulatory and engineering

guidance, and meet customer expectations of quality. Work products will be forwarded to the appropriate Branch Chiefs of disciplines directly involved with the development of the document. The Branch Chiefs will determine the most appropriate person to carry out the review of the document.

B. Products for Review. All work products and reports, evaluations, and assessments shall undergo necessary and appropriate DQC, including National Environmental Policy Act (NEPA) documents, other environmental compliance products, and any in-kind services provided by the local sponsor. 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 approval by the District Commander.

C. Documentation of DQC. DrChecks$_{sm}$ review software will be used to document all DQC comments, responses, and associated resolutions accomplished throughout the review process. Relevant DQC records will be reviewed during each ATR event and the ATR team will provide comments as to the adequacy of the DQC effort for the associated product.

The SMART guide is the first step in the transition to update the PGN Appendices G&H and future Planning and Engineering Regulations. The SMART Guide will continue to evolve as concepts are tested and replaced.

The Planning SMART Guide should be utilized immediately: the methodology and critical thinking applies to all Planning Studies. Studies subject to the 3x3x3 Rule must utilize the new milestone framework. Guidance on which studies are considered Legacy and which must be 3x3x3 compliant is provided in Planning Bulletin 2012-02.

4. AGENCY TECHNICAL REVIEW PLAN

For post authorization decision documents, ATR is managed by the PCX. For this 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. In accordance with EC 1165-2-209, ATR is mandatory for all decision and implementation documents and it undertaken to "ensure the quality and credibility of the government's scientific information." ATR is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved with the day-to-day production of the project/product.

An ATR Manager from outside the home MSC shall be designated by the FRM-PCX for the ATR process. The proposed ATR Manager for this project is to be determined, but will have expertise in project planning for decision documents and project design for implementation documents (design/construction). The ATR Manager is responsible for providing information necessary for setting up the review, communicating with the Study Manager and Technical 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, hydraulic design, civil design, geotechnical engineering, cost engineering, real estate, cultural resources; reviews of more specific disciplines maybe identified if necessary.

At the conclusion of ATR, the ATR team will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organization affiliations, and include a short paragraph on both the credentials and relevant expertise of each reviewer;
- Include the charge to reviewer;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issues (if any); and
- Include a verbatim copy of each reviewers comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

B. Agency Technical Review Team (ATRT). The ATRT will be comprised of individuals that have not been involved in the development of the implementation and decision documents 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 Sacramento District. It is anticipated that the team will consist of about 9 reviewers. The ATRT members will be identified at the time the review is conducted and will be presented in appendix B. General descriptions of ATR disciplines are as follows:

1. **Hydrologic and Hydraulic Engineering:** The team member shall be a registered professional with a minimum of 3 years experience in discipline specific features of similar projects as stated within this document. Team member shall be an expert in the field of urban hydrology & hydraulics, have a thorough understanding of the dynamics of the both open channel flow systems, enclosed systems, application of detention / retention basins, effects of best management practices and low impact development on hydrology, approaches that can benefit water quality, application of levees and flood walls in an urban environment with space constraints, non-structural measures especially as related to multipurpose alternatives including ecosystem restoration, non-structural solutions involving flood warning systems, and non-structural alternatives related to flood proofing. A certified flood plain manager is recommended but not required. The team member shall have an understanding of computer modeling techniques that may be used for this project such as RMA2, ADH, HEC-RAS, and FLO-2D.

2. **Geotechnical Engineering:** The team member shall be a registered professional with a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document. Team members shall be experienced in levee & floodwall design, post-construction evaluation, and rehabilitation. The team member shall have an understanding of computer modeling techniques that may be such as UTEXAS, GMS, and the Geotechnical reliability analysis (Risk and Uncertainty) in accordance with EM 1110-2-1916 “Risk- Based Analysis for Flood Damage Reduction Studies” and ETL 1110-2-556 “Risk-Based Analysis in Geotechnical Engineering for Support of Planning Studies”.

3. **Economics:** The team member shall be experienced in civil works and related flood risk reduction projects, and have a thorough understanding of HEC-FDA, with a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document.

4. **Plan Formulation:** The team member shall be experienced with the civil works process, watershed level projects, current flood damage reduction planning and policy guidance, and have a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document, experience in plan formulation for multipurpose projects, specifically integrating measures for flood risk management, ecosystem restoration, recreation, watersheds, and planning in a collaborative environment.

5. **NEPA Compliance:** The team member shall have experience in NEPA compliance activities and preparation of Environmental Assessments and Environmental Impact Statements for Civil Works projects, with a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document.

6. **Environmental:** The team member shall be experienced in NEPA/CEQA process and analysis, fish and wildlife biology and environmental background that is familiar with the project area and ecosystem restoration, with a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document.

7. **Cultural Resources:** The team member shall be experienced in cultural resources and tribal issues, regulations, and laws, with a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document.

8. **Civil Engineering:** The team member shall be a registered professional with a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document. The team member shall be experienced in levee & floodwall design, post-construction evaluation, and rehabilitation, earthwork operations, construction phasing, utility relocations, positive closure requirements and internal drainage for levee construction, and application of non-structural flood damage reduction, specifically flood proofing

9. **Landscape Architecture:** The team member shall be a registered professional, with a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document. The team member shall be experienced in landscape architecture, ecosystem restoration, endangered species regulations, fish eco-system biology, habitat mitigation, recreation planning & design.

10. **Cost Estimating:** The team member shall be familiar with cost estimating for similar civil works projects using MCACES, Certified Cost Technician, Certified Cost Consultant, or Certified Cost Engineer, with a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document. A separate process and coordination is also required through the Walla Walla District DX for cost engineering.

11. **Real Estate:** The team member shall be experienced in federal civil work real estate laws, policies and guidance, experience working with respective sponsor real estate issues, with a minimum of 3 years experience in discipline specific elements on projects similar in scope and complexity to the project as stated within this document.

Other disciplines/functions involved in the project included as needed with similar general experience and educational requirements.

C. Review

1. ATRT responsibilities are as follows:

a. Reviewers shall review documentation to confirm that work was done in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. Generated comments shall be documented in DrChecks model review documentation database. DrChecks is a module in ProjNet suite of tools developed and operated at ERDC-CERL. (www.Projnet.org)

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:
   - a clear statement of the concern
   - the basis for the concern, such as law, policy, or guidance
   - significance for the concern
   - 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, Technical 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.

   ATRT members shall discuss any "non-Concur" responses prior to submission with the PDT and ATRT Leader.

D. 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. A reviewer may close a comment if the comment is addressed and resolved by the response, or if the reviewer determines that the comment was not a valid technical

comment as a result of a rebuttal, clarification, or additional information, or because the comment was advisory, primarily based on individual judgment or opinion, or editorial. If reviewer and responder cannot resolve a comment, it should be brought to the attention of the ATR Leader and, if not resolved by the ATR Leader, it should be brought to the attention of the planning chief who will need to sign the certification. ATRT members shall keep the ATR Leader informed of problematic comments. The vertical team will be informed of any policy variations or other issues that may cause concern during HQ review.

E. Certification

ATR certification is required for the AFB, draft report, and final report and in order to obtain the Biddibility, Constructibility, Operability and Environmental (BCOE) certification for all Implementation documents. See Appendix A for ATR certification statement. A summary report of all comments and responses will follow this statement and accompany the report throughout the report approval process.

5. INDEPENDENT EXTERNAL PEER REVIEW PLAN

The decision and implementation documents under review for the Phase II bank protection project may trigger an IEPR as defined in EC 1165-2-209. The EC states, "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." IEPR is divided into two types; Type I IEPR applies to decision documents, while Type II applies to implementation documents.

A. Type I IEPR:

Type I IEPR is conducted on project studies. It is of critical importance for those decision documents and supporting work products where there are public safety concerns, a high level of complexity, novel, or precedent-setting approaches; has significant interagency interest; has significant economic, environmental, and social effects to the nation; or where the Chief of Engineers determines that the project is controversial. However, it is not limited to only those cases and most studies should undergo Type I IEPR.

- *The economic evaluation and risk analysis is a novel approach in the sense that it will be an abbreviated version of the standard analysis typically used in feasibility studies. Since it has been previously agreed that a rigorous economic justification is beyond the scope of this study, the PADD plans to use a procedure specific to this study to capture site-by-site economic benefits. This analysis will include shortened hydraulic, geotechnical, and economic procedures. This will be the subject of an Issues Resolution Conference for Corps vertical team approval prior to the IEPR.*

- *Bank protection is controversial due to potential environmental effects and prioritization of sites. Habitat along many reaches of the SRFCP is critical to endangered and threatened species, and is considered high ecological, recreation, and esthetic value. Bank protection is expensive, thus only the most critical reaches that experience erosion are treated. The local perceived need for bank protection may not agree with priorities as set by the Corps and sponsor.*

- *Due to the likelihood that bank protection would take place on ecologically sensitive sites, there is close coordination with state and Federal resource agencies. An Interagency Working Group (IWG) is an established group that confers on Sacramento River Bank Protection. Close coordination also occurs with the sponsor, the State of California CVFPB*

- *The estimated project cost for newly authorized Phase II bank protection is $300+ million. This is over the $45 million threshold for IEPR.*

- *The project includes an EIS. There would be substantial adverse impacts on resources, including endangered species, without mitigation.*

B. Type I IEPR:

In accordance with EC 1165-2-209, Type II IEPR (also known as a Safety Assurance Review) shall be conducted for all projects addressing hurricane and storm risk management or flood risk management, or any other project where the Federal action is justified by life safety, or the failure of the project would pose a significant threat to human life. Factors that will be considered for conducting a Type II review of this project or components of this project are as follows;

- *The "typical" (most used) design and construction used for erosion repair is quarry stone placement on the waterside berm adjacent to the levee profile. This repair work is preemptive in nature and therefore is not considered an immediate risk to public safety due to flooding. The risk to public safety shall be evaluated on a site specific basis during the annual erosion inventory which is conducted on the entire system in the fall of each year. In areas where erosion is intruding in to the levee profile or where a setback levee is to be constructed Type II IEPR (SAR) would be implemented.*

- *In the event that "typical" design for any of the repair sites were to change and the actual levee profile were to be impacted, such that failure of the project could potentially threaten human life a Type II IEPR (SAR) would conducted and an amendment to this RP would be processed. Examples of changes in design include but are not limited to the use of a setback levee or cut off wall within the levee profile, essentially any situation where the repair work cuts into the flood protection levee profile.*

- *In reaches where it is feasible a setback or adjacent levee may be design and constructed; for example on the Sacramento River at river mile (RM) 57.2R in West Sacramento. Because of this new levee design and construction, a Type II IEPR SAR would be conducted due to the potential risk to human safety from a levee failure.*

1. Does the project involve the use of innovative materials or techniques where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices?

   RESPONSE: *The engineering activities in this scope, based on facts known as of today, do not include any type of new, innovative materials or techniques where the engineering is based on novel methods, present complex challenges for interpretations, contain precedent-setting methods or models or present conclusions that are likely to change prevailing*

practices. The quarry stone placement for lower bank protection is a method of repair that has been used by USACE and other agencies for many years. In case where this may change as the design progress incorporation of those facts shall be used in a Type II IEPR review.

2. Does the project design require redundancy, resiliency, and robustness?

    a. Redundancy. Redundancy is the duplication of critical components of a system with the intention of increasing reliability of the system, usually in the case of a backup or failsafe.

    RESPONSE: *Redundancy is not a feature of in typical bank protection designs of quarry stone placement at the waterside bank. The placement of the quarry stone is not intended to be a foundation on which additional features will be built. The quarry stone is designed to launch and fill into adjacent areas that my experience erosion. The rock placement and associated site mitigation is expected to be somewhat dynamic. Redundancy is a feature when constructing a setback levee and would trigger a Type II IEPR.*

    b. Resiliency. Resiliency is the ability to avoid, minimize, withstand, and recover from the effects of adversity, whether natural or manmade, under all circumstances of use.

    RESPONSE: *Resiliency as a feature of these designs is similar to redundancy in that the basic or typical design for the majority of the repair sites requires minimal resiliency and is actually designed to be minimally dynamic. The resiliency expectation of the quaryy stone placement is limited by the innate design feature of "launch rock" (which is the primary design used for erosion repairs on this project). The launch rock feature is designed such that the quarry stone is expected to slightly shift over time (years) in response to the impacts of river water elevation fluctuations and only expected to remain in the general vicinity of the originally placed location. In cases where life safety and impediment into the levee profile are the construction considerations or in the case of a setback levee a Type II IEPR shall be conducted.*

    c. Robustness. Robustness is the ability of a system to continue to operate correctly across a wide range of operational conditions (the wider the range of conditions, the more robust the system), with minimal damage, alteration or loss of functionality, and to fail gracefully outside of that range.

    RESPONSE: *The Sacramento River Bank Protection Project repair work is preemptive in nature in that it focuses on minimizing bank erosion and repairing bank cutting in order to avoid impacts to the levee profile which set back from the toe of the bank. Therefore, a Type II IEPR would rarely be required for the majority of the project repairs. The majority of the repairs involve simple placement of the quarry stone at the waterside toe. In cases where more extensive repairs such as an adjacent or setback levees are required, the appropriate Type II IEPR (SAR) will be conducted.*

    RESPONSE: *The typical bank protection designs are not technically complex and use standard measures. The typical erosion repair design consists of quarry stone placement at the waterside toe and partially up the bank slope with soil filled quarry stone to support vegetative plantings for mitigation and soil stabilization*

3. Does the project have unique construction sequencing or a reduced or overlapping design

construction schedule; for example, significant project features accomplished using the Design-Build or Early Contractor Involvement (ECI) delivery systems?

RESPONSE: *At this time the project does not include unique construction sequencing or a reduced or overlapping design construction schedule know to the time. As the design and construction activities are defined this may change and those issues will be considered. The appropriate level of review will be incorporated based on those issues in accordance with EC1165-2-209.*

C. Level of Review on Related Project Sites:

Since the induction of EC 1165-2-209 in Jan 2010 the SRBPP has designed and constructed a total 5 sites, Sacramento River (SR) River Mile (RM) 57.2R, SR RM 77.2L, Feather River (FR) RM 7.0L, Lower American River (LAR) RM 10.0L & LAR RM 10.6L. The review plan and process for, SR RM 77.2L, FR RM 7.0L, LAR RM 10.0L & LAR RM 10.6L included a DQC and ATR. Both the DQC and ATR were completed and certified as presented in that Review Plan for "Contract 5". It was determined and approved by the Sacramento District Chief of Engineering that Type II IEPR was not required under the protocol as stated in EC 1165-2-209. The design and construction of these sites consisted of quarry stone placement on the waterside berm adjacent to the existing levee profile. Because the levee structure had not yet been compromised and the construction work did not disturb the levee profile the repair was not considered to be a risk to life safety.

Conversely the review process for the SR RM 57.2R included a DQC, ATR, and Type II IEPR (SAR). All phases of those review processes were completed and certified as presented in the Review Plan. The design and construction work at SR RM 57.2R included a setback levee. It was recommend and approved by the Sacramento District Chief of Engineering that Type II IEPR (SAR) be conducted under the protocol as stated in EC 1165-2-209. The IEPR consultant reviewed the design documents during the design phases. During the construction phase of this project the IEPR made two field visits and conducted post inspection presentation to the PDT and Construction team after each visit. Recommendations from the IEPR team were incorporated during the construction phases and a final SAR report was provided to the District.

D. Project Risk:

The primary risk to any work related to this project is bank erosion which encroaches into the levee profile. Engineering design and construction are standard and non-complex in most cases therefore the technical risk is low in most cases.

Another concern of this project is the ability to implement bank protection in ecologically sensitive areas and incorporate on-site mitigation. The selected designs for all erosion repair sites shall comply with ETL 1110-2-571, Vegetation on Levee Management. Often this regulation is in contradiction to the environmental restoration/mitigation requirements associated with the repair or construction work. In cases where there is a narrow berm or no berm between the water elevation and the levee profile it not possible to re-vegetate the repair site to pre-construction conditions. Pre-construction conditions often not ETL 1101-2-571 compliant due the fact the levee had not been properly maintained. Mitigation compliance under by NEPA and CEQA combined with this USACE guidance creates a lengthy process of negotiation in order to comply with both. Because the majority of the levee profiles within SRBPP system are immediately adjacent to the water elevations, with little or no berm as a buffer or are adjacent to densely populated urban areas, replanting on site can be close to impossible. The guidance under ETL

1110-2-571 requires a 15' woody vegetation free zone at the outer reaches of the defined levee profile. In most cases this leads to a situation where woody vegetation cannot be reincorporated into the erosion repair site and thus puts USACE in a difficult position with the Resource Agencies such as U.S. Fish and Wildlife Service (USFWS) and National Oceanic & Atmospheric Administration (NOAA) Fisheries. At this time we are working closely with USFWS and NOAA during the planning, design and construction phases. Where possible we are incorporating set-back levees and negotiating adjacent (nearby) mitigation.

E. Project Risk Magnitude:

Bank protection is a necessary rehabilitation effort that significantly lowers the risk of levee failure due to erosion. There would be a steady annual increase in risk of levee failure if the bank protection project is curtailed. Levee failure due to excessive erosion on the water side of the levee profile varies due to a range of adjacent land uses & development protected by levees. The project risk is thus considered high.

F. Products for Review:

Type I IEPR: Interim products for review will be provided to the PDT for DQC and the ART team for review before the final documents is released for public review. The IEPR panel for review of decision documents, consisting of environmental, geotechnical, hydraulic, and economic disciplines (or as modified by SPD or the PCX for FRM), will receive the entire draft PADD, EDR, EIS/EIR and all technical appendixes concurrent with public and agency review. Review of these draft documents will meet the IEPR requirement. However, a preliminary review of pre-draft documents will be done by the IEPR panel to anticipate if there would be major and significant comments that would substantially change the report, possibly requiring a resubmission for public review.

The final review 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. No discussions with the Civil Works Review Board are planned for this study. Following vertical team review, the Corps will issue final response to the IEPR panel and notify the public. When the Vertical Team and Project Deliver Team agree on the plan that will be published as the Tentatively Selected Plan for public review, concurrent public, technical, policy, and legal reviews will occur.

Type II IEPR: The District Chief of Engineering shall ensure the Type II review is conducted in accordance with EC 1165-2-209 (31 January 2010) and fully coordinate with the Chief of Construction, The Chief of Operations, and the project manager through the Pre-Engineering Design (PED) and construction Phases. The project manager will coordinate with the RMO to develop the review requirements and to include them in the RP.

G. 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 (Decision Documents) and Technical Manager (Implementation documents) will facilitate the creation of a project portfolio in the system to allow access by all PDT and the Outside Eligible Organization

OEO. An electronic version of the document, appendices, and any significant and relevant public comments shall be posted in Word format at:

http://www.spk.usace.army.mil/Missions/Civil Works/SacramentoRiverBankProtection.aspx 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 forward 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.

2. The Study or Technical 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.

3. A revised electronic version of the report and appendices with comments incorporated shall be provided to the IEPR panel upon completion of comment annotation and document revisions.

4. PDT shall contact the OEO for the IEPR panel 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.

5. 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 subject review. 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.

H. Conclusion for use of Type I & Type II IEPR:

From the above discussion it is concluded by the PDT that an IEPR Type I is appropriate and will be conducted for the decision documents and in some instances during the implementation phase an IEPR Type II IEPR (SAR).

6. MODEL CERTIFICATION

For the purposes of this RP section, 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 RP section does not cover engineering models used in planning which will be certified under a separate process.

The computational models anticipated to be employed in the Sacramento River Bank Protection Project 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. Models that are potentially to be used are:

1. HEC-FDA: 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. Standard Assessment Methodology (SAM) model. This model may be used for impact and mitigation assessment of listed fish species. The model has undergone the certification process and is awaiting approval.

3. 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 regionally modified version of these methodologies and individual models and 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. It is anticipated that all habitat evaluation models will have already been certified.

4. IWR-Planning Suite (Certified). This software assists with the formulation and comparison of alternative plans. This project will not be performing plan formulation, thus this model will not be used.

5. IMPLAN: This is an economic model measuring the quantitative impacts on Regional Economic Development (RED) due to project alternatives. This model is in the process of being approved, but does not require certification.

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:

a. MCACES or MII: These are cost estimating models.

b. RMA2: A teo-dimensional depth averaged finite element hydrodynamic model.

It computes water surface elevations and horizontal velocity components for subcritical, free-surface flow in two-dimensional flow fields. RMA2 computes a finite element solution of the Reynolds number from the Navier-Stokes equations for turbulent flows. Friction is calculated with the Manning's equation, and eddy viscosity coefficients are used to define turbulent characteristics. The program Surface Water Modeling System (SMS) is utilized to process the input and output of RMA2.

c. ADH (Adaptive Hydraulic Modeling system): A finite element hydrodynamic model developed by the USACE Engineering Research and Design Center. It is capable of handling both saturated and unsaturated groundwater, overland flow, three-dimensional Navier-Stokes flow, and two- or three-dimensional shallow water problems. It uses an adaptive numerical mesh that can be employed to improve model accuracy without sacrificing efficiency. It also allows for the rapid convergence of flows to steady state solutions. ADH contains other essential features such as wetting and drying, completely coupled sediment transport, and wind effects. A series of modularized libraries make it possible for ADH to include vessel movement, friction descriptions, as well as a host of other crucial features.

d. HEC-RAS is a River Analysis System program developed by the USACE Hydrologic Engineering Center to perform one-dimensional steady flow or unsteady flow calculations for a full network of natural and constructed channels. The steady flow component is capable if modeling subcritical, supercritical, and mixed flow regime water surface profiles using the energy equation. Energy loses are evaluated by friction and contraction/expansion. The momentum equation is utilized in situations where the water surface profile is rapidly varied. The unsteady flow component is capable of simulating one-dimensional unsteady flow through a full network of open channels. The unsteady flow component was developed primarily for subcritical flow regime calculations; however it can now perform mixed flow regime calculations in the unsteady flow computations module. It can simulate dam breaks, levee breaching and overtopping, pump stations, and pressurized pipe systems.

e. FLO-2D is a two-dimensional dynamic flood routing model that simulates channel flow, unconfined overland flow, and street flow over a complex topography and roughness to develop floodplains. It can input rainfall, infiltration, sediment transport, buildings, levees, embankments, walls, dam breach, mudflows, storm drains, culverts, bridges, hydraulic structures, and groundwater.

f. UTEXAS 4.0: This model is used to conduct slope stability analysis. Embankment stability against shear failure is analyzed using the UTEXAS 4.0 software package. Long term conditions are analyzed with steady state seepage along the landside slope of the levee with pore pressures and waterside distributed loads imported from seepage analysis using SEEP 2D within GMS 6.5.6 and GMS 7.1.9. Analysis to find

factors of safety against sliding are conducted using a floating grid search routine at design water surface elevations to identify the critical failure surfaces using the Spencer Procedure with all sliding surfaces assumed to be a circular arc within the embankment and/or foundation.

g. GMS: This model is used to study seepage analyses. Steady state seepage analysis is performed utilizing SEEP 2D within GMS 6.5.6 and GMS 7.1.9 (Groundwater Modeling System), a finite element program. Results from the seepage analyses are used to calculate exit gradients at the landside levee toe, and in some cases to calculate the average vertical exit gradients at the toe of seepage berms. An average vertical exit gradient is taken as the total head drop in the vertical direction across the levee's landside blanket, divided by the blanket's thickness; this is also referred to as the uplift gradient. This gradient controls a blowout type failure through a low hydraulic conductivity blanket.

h. Risk and Uncertainty: Geotechnical reliability analysis is performed in accordance with EM 1110-2-1916 "Risk- Based Analysis For Flood Damage Reduction Studies" and ETL 1110-2-556 "Risk-Based Analysis in Geotechnical Engineering for Support of Planning Studies". This reliability analysis calculates the probability of unsatisfactory or poor performance as a function of uncertainty in parameter values and floodwater elevation. The uncertainty in parameter values for an existing levee can include soil strength, permeability, embankment geometry, foundation stratigraphy, etc. Based on historical performances of the levees, the geotechnical reliability analysis presents results in terms of risk associated with the probability of poor performance. The total conditional probability of failure as a function of floodwater elevation is developed by combining the probability of failure functions for four failure modes; underseepage, through-seepage, slope instability, and judgment. The reliability is the probability of no failure due to each mode considered in the calculations. The analysis also assumes that no flood fighting is employed.

7. PUBLIC REVIEW

The public will have opportunities to participate in this study. The earliest opportunity was part of the NEPA public scoping process during the first year of the study. Four public scoping meetings were held on the 17th, 18th, 24th, and 25th of February 2009. 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 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 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

8. CONDUCT OF REVIEW

A. Project Delivery Team (PDT)

The PDT is comprised of those individuals directly involved in the development of decision and implementation documents. Individual contact information and disciplines are presented in Appendix C. In accordance with the PMP, it is planned that the CVFPB will contribute in-kind services for project management.

B. Vertical Team

The Vertical Team includes Sacramento District management, District Support Team (DST) at SPD, 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 C.

C. Review Management Organization (RMO)

The management of a review effort is a critical factor in assuring the level of independence of the review effort, as required by law, USACE policy, or both. With the exception of District Quality Control/Quality Assurance, all reviews shall be managed by an office outside the home district and shall be accomplished by professionals that are not associated with the work that is being reviewed. The USACE organization managing a particular review effort is designated the Review Management Organization (RMO) for that effort. Different levels of review and reviews associated with different phases of a single project can have different RMO's

D. Planning Center of Expertise (PCX)

The appropriate PCX for this document is the National Flood Risk Management Center of Expertise located at SPD. The FRM-PCX will coordinate with the National Ecosystem Restoration Planning Center of Expertise at MVD, as appropriate. This Review Plan will be submitted to the FRM-PCX Program Manager 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.

E. Review Plan Points of Contact

The Points of Contact for questions and comments to this Review Plan are as follows:

1.	Study Manager (Decision Documents)	Mr. Arturo Ceballos
2.	Technical Manager (Implementation)	Ms. Pamlyn Hill
3.	Project Manager	Mr. Tom Karvonen
4.	MSC Point of Contact:	Ms. Karen Berresford
5.	FRM-PCX Point of Contact:	Mr. Eric Thaut, PCX Manager
6.	Environmental Manager	Mr. Brian Mulvey

9. APPROVALS

The PDT will carry out the Review Plan as described. The Study or Technical manager will submit the Review Plan to the FRM-PCX (for Planning efforts) and the RMO (for engineering

efforts) for review and recommendation for approval. After FRM-PCX and RMO review and provide recommendation, the PDT District Planning and Engineering Chief's will forward the Review Plan to their respective MSC for commander approval. Formal coordination with FRM-PCX and RMO will occur through the PDT District Planning Division Chief and the District Engineering Division Chief. The Review Plan is a "living document" and shall be updated annually during the project. The FRM-PCX shall be provided an electronic copy of any revised approved Review Plan. The PDT shall follow their DST's guidance for processing revised Review Plans for their respective MSCs

10. FUNDING & SCHEDULE

A. Funding

1. The District PDT shall provide labor funding by cross charge labor codes. The Project Manager will work with the ATR manager to ensure that adequate funding is available and is commensurate with the level of review needed. 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 Project Manager to any possible funding shortages.

B. Schedule

1. Throughout the development of the decision and implementation documents, the team will conduct seamless review to ensure USACE high standards of quality control.

2. The DQC will be conducted on all decision and implementation documents, the PDT will hold a "page-turn" session to review all generated comments to ensure consistency across the disciplines and resolve issues prior to the start of ATR. The DQC Team and the PDT may choose to flag issues for consideration by the ATR. DQC documentation will be part of the draft report package to ATR. Writer/editor services will be performed on the draft prior to ATR as well.

3. An ATR will be conducted on all decision and implementation documents.

4. The overall review process known at this time for both the decision and implementation documents will follow approximate timeline and have the potential costs as indicated in the following table. 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.

Title and Activity	Start Date	End Date	Approximate Cost in $'s
Draft PADD (DQC)	10/1/11	10/31/11	30,000
Draft PADD (ATR)	11/1/11	11/31/11	30,000
Draft PADD (Public Agency)	12/1/11	1/31/12	5,000
Draft PADD (IEPR)	1/1/12	2/15/12	50,000
Final PADD (DQC)	3/1/12	4/30/12	30,000
Final PADD (ATR)	5/1/12	5/31/12	30,000
Final PADD (Public Agency)	5//1/12	9/15/12	5,000
Final PADD (IEPR)	7/1/12	9/15/12	50,000
Review Cert & Final PADD to SPD	11/15/12	12/15/12	10,000
30% FY 13 P&S (DQC)	10/1/11	10/31/11	20,000
60% FY 13 P&S (DQC)	1/1/12	2/1/12	20,000
60% FY13 P&S (ATR) [include team site visit]	2/15/12	2/30/11	25,000
100% FY 13 P&S (DQC)	4/1/12	4/15/12	10,000
100% FY13 P&S (ATR)	6/1/12	6/30/12	15,000
FY 13 P&S (BCOE)	8/1/12	9/15/12	5,000
30% FY 14 P&S (DQC)	4/1/13	4/30/13	20,000
60% FY 14 P&S (IEPR) if needed	5/15/13	6/15/13	20,000
60% FY 14 P&S (DQC)	5/15/13	6/15/13	20,000
60% FY14 P&S (ATR)	7/1/13	7/30/13	15,000
100% FY 14 P&S (DQC)	9/1/13	9/15/13	10,000
100% FY14 P&S (ATR)	10/1/13	10/31/13	15,000
100% FY 14 P&S (IEPR) if needed	9/1/13	9/30/13	20,000
FY 14 P&S (BCOE)	3/1/14	3/5/13	5,000
FY 14 Construction (SAR) 1st visit	3/1/14	3/5/13	5,000
FY 14 Construction (SAR) 2nd visit	3/1/14	3/5/13	5,000
30% FY 15 P&S (DQC)	4/1/14	4/30/14	20,000
60% FY 14 P&S (IEPR) if needed	5/15/14	6/15/14	20,000
60% FY 15 P&S (DQC)	5/15/14	6/15/14	20,000
60% FY15 P&S (ATR)	7/1/14	7/30/14	15,000
100% FY 15 P&S (DQC)	9/1/14	9/15/14	10,000
100% FY15 P&S (ATR)	10/1/14	10/31/14	15,000
100% FY 14 P&S (IEPR) if needed	9/1/14	9/30/14	20,000
FY 15 P&S (BCOE)	11/15/14	12/15/14	5,000
FY 15 Construction (SAR) 1st visit	3/1/14	3/5/13	5,000
FY 15 Construction (SAR) 2nd visit	3/1/14	3/5/13	5,000
Total			605,000

APPENDICES

APPENDIX A
STATEMENT OF TECHNICAL REVIEW

COMPLETION OF AGENCY TECHNICAL REVIEW
SACRAMENTO RIVER BANK PROTECTION PROJECT, PHASE II
FLOOD RISK MANAGEMENT

DECISION DOCUMENTS

The Sacramento District has completed the project decision documents, environmental impact statement/environmental impact report and appendices of Phase II of the Sacramento River Bank Protection Project. Notice is hereby given that an agency technical review (ATR), 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 ATR, 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 Date
Study Leader, SRBPP Phase II
Decision Documents
Agency Technical Review Team

APPENDIX B

STATEMENT OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the *Programmatic Review Plan* for Sacramento Bank Protection Project, *location>*. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, 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 results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks[sm].

SIGNATURE _____ Date _____
Name
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ Date _____
Name
Project Manager
Office Symbol

SIGNATURE _____ Date _____
Name
Review Management Office Representative
Office Symbol

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*
As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE _____ Date _____
Name
Chief, Engineering Division
Office Symbol

SIGNATURE _____ Date _____
Name
Chief, Planning Division
Office Symbol

APPENDIX C

TABLE 1 - PRODUCT DELIVERY TEAM

Name and Org.	Role	Phone	E-mail
U.S. Army Corps of Engineers			
Tom Karvonen CESPK-PM-C	Project Manager	916-557-7630	Tom.D.Karvonen@usace.army.mil
Arturo Ceballos CESPK-PD-WF	Lead Planner	916-557-5297	Arturo.Ceballos@usace.army.mil
John Jordan CESPK-PD-WE	Economics	916-557-5313	John.F.Jordan@usace.army.mil
Morgan Marlatt CESPK-ED-HD	Hydraulic Design	916-557-710	Morgan.k.Marlatt@usace.army.mil
Kevin Hazleton CESPK-ED-GS	Geotechnical	916-557-7531	Kevin.J.Hazleton@usace.army.mil
Glen Johnson CESPK-ED-GS	Geotechnical	916-557-6681	Glen.A.Johnson@usace.army.mil
Jeremy Hollis CESPK-RE-B	Real Estate	916-557-6880	Jeremy.I.Hollis@usace.army.mil
Brian Mulvey CESPK- PD-RP	Environmental Resources - Lead	916-557-7660	Brian.M.Mulvey@usace.army.mil
Joe Reynolds CESPK-ED-SC	Cost Engineering	916-557-7573	Joe.L.Reynolds@usace.army.mil
Brian Luke CESPK-PD-RP	Environmental	916-557-6629	Brian J.Luke@usace.army.mil
Ryan Larson CESPK-CO-OR	Construction Operations	916-557-7568	Ryan.T.Larson@usace.army.mil
Nikki Polson CESPK-PD-RC	Cultural Resources	916-557-6977	Nikki.Polson@usace.army.mil

Name and Org.	Role	Phone	E-mail
Kathleen Dadey CESPK-RD	Regulatory	916-557-7253	Kathleen.A.Dadey@usace.army.mil
Don Lash CESPK-PD-R	Environmental	916-557-5172	Don.W.Lash@usace.army.mil
Pam Hill CESPK-ED-DB	Civil Design Technical Lead Landscape Architect	916-557-7279	Pamlyn.K.Hill@usace.army.mil
Hans Carota CESPK-ED-DB	Civil Design	916-557-6826	Hans.P.Carota@usace.army.mil
Bryan Holm CESPK-ED-DB	Civil Design	916-557-5140	Bryan.S.Holm @usace.army.mil
Department of Water Resources			
Kip Young DWR	CEQA Coordinator	916-574-1437	kyoung@water.ca.gov
Steve Porter	DWR - Project Management		sporter@water.ca.gov
Bahadur Mann	DWR - Real Estate		bmann@water.ca.gov
Wes Dote	DWR - Real Estate		wdote@water.ca.gov
Resource Agencies & Other			
Michael Hendricks NOAA-Fisheries	NOAA Coordinator	916-930-3656	Michael.Hendricks@noaa.gov
Jennifer Hobbs USFWS	USFWS Coordinator	916-414-4400	Jennifer_Hobbs@fws.gov
Tom Adams HDR Engineering	Plan Formulation Consultant	916-817-4737	Thomas.Adams@hdrinc.com
Gregg Ellis ICF | Jones & Stokes	Environmental Analysis Consultant	916-737-3000	GEllis@jsanet.com
Ingrid Norgaard ICF | Jones & Stokes	Environmental Analysis Consultant	916-737-3000	INorgaard@jsanet.com
Grant Kreinberg	SAFCA		kreinberg@saccounty.net

Name and Org.	Role	Phone	E-mail
Tim Kerr	ARFCD		tkerr@arfcd.org

TABLE 2 - SACRAMENTO DISTRICT QUALITY CONTROL TEAM		
Name	**Discipline (Activity)**	**Phone**
Tom Karvonen	Project Manager	(916) 557-7630
Pamlyn Hill	Chair	(916) 557-7279
Rick Torbik	Chief, Civil Design Sec B	(916) 557-6698
Jim Wier	Civil Design	(916) 557-7285
Derek Morly	Chief, Geotechnical Sec.	(916) 557-7440
Joe Sciandrone	Geotechnical	(916) 557-7184
Steve Graff	Chief, Hydraulic Sec.	(916) 557-7297
Todd Rivas	Hydraulic	(916) 557-7523
Ben Gompers	Chief, Levee Safety Sec	(916) 557-7183
Juan Gonzales	Levee Safety	(916) 557-7936
Mike Dietl	Chief, Flood & Storm Risk	(916) 557-6742
Mark Cowen	Chief, Water Resources Branch	(916) 557-6721
Miki Fujitsubo	Planning	(916) 557-7440
Robert Koenigs	Chief, Env. Planning	(916) 557-6712
Matt Davis	Environmental	(916) 557-6708
Jane Rinck	Chief, Environmental Sec	(916) 557-6715
Niki Polson	Archaeologist	(916) 557-6977
Tom Sobelewski	Chief, Survey-GIS	(916) 557-7419
Casey Young	GIS Specialist	(916) 557-7158
Alison Plant	Environmental Eng. SWPPP	(916) 557-7473
Stan Wallin	Chief, Real Estate	(916) 557-5225
Russell Thorne	Contracting	(916) 557-6762
Steven Freitas	ET&S/ISO Manager	(916) 557-7296
Mary Diel	VE Officer	(916) 557-6833
Jennifer Wheelis	Valley Resident Office	(916) 373-1617 x308
Cathy Wise	Chief, Construction Field Office	(916) 373-1617 x321
Drew Perry	Chief, Construction	(916) 557-7779

Samuel Yang	Construction	(916) 557-7028
Anderson Macatumbas	Safety Office	(916) 557-5315
Sherman Fong	Cost Engineering	(916) 557-6983

TABLE 3 - AGENCY TECHNICAL REVIEW TEAM

Name	Discipline	Phone	Email
TBD	ATR Team Lead/Plan Formulation		
TBD	Civil Design		
TBD	Environmental Resources		
TBD	NEPA/Mitigation		
TBD	Hydraulics		
TBD	Economics		
TBD	Cost Engineering [1]		
TBD	Real Estate/Lands		
TBD	Cultural Resources		
TBD	Geotechnical Engineering		
TBD - from or assigned by HEC.	Risk Reviewer		

[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.

TABLE 4 - INDEPENDENT EXTERNAL PEER REVIEW PANEL

Name	Discipline	Phone	Email
TBD	Environmental Analysis		
TBD	Geotechnical Engineering		
TBD	Economic Analysis		
TBD	Hydraulic Design		

TABLE 5 - VERTICAL TEAM

Name	Discipline	Phone	Email
Karen Berresford	District Support Team	415-503-6557	Karen.G.Berresford@usace.ar

TABLE 6 - 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.

APPENDIX D

DRAFT Review Plan Checklist for Programmatic Documents

Date: November 6, 2012
Originating District: Sacramento District
Project/Study Title: Sacramento River Bank Protection Project, Phase II, Project Level Review Plan
PWI #: 105606
District POC: Tom Karvonen (916) 557-7630, Tom.D.Karvonen@usace.army.mil
PCX Reviewer: Karen Berresford

Please fill out this checklist and submit with the draft Review Plan. Any evaluation boxes checked 'No' indicate the RP may not comply with EC 1165-2-209 and should be explained. Additional coordination and issue resolution may be required prior to MSC approval of the Review Plan.

REQUIREMENT	REFERENCE	EVALUATION
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?	EC 1165-2-209, Appendix B, Para 4a	*a. Yes* ☒ *No* ☐
b. Does it reference ECs, ERs, and the Project Management Plan (PMP) of which the RP is a component?		*b. Yes* ☒ *No* ☐
c. Does it include a table of contents?		*c. Yes* ☒ *No* ☐
d. Is the purpose, objective, and specific advice sought of the RP clearly stated?	EC 1165-2-209, Para 7a(1)	*d. Yes* ☒ *No* ☐
e. Does it include a paragraph stating the title, subject, and purpose of the implementation document to be reviewed?		*e. Yes* ☒ *No* ☐
f. Does it succinctly describe the three levels of peer review: District Quality Control (DQC), Agency Technical Review (ATR), and Independent External Peer Review (IEPR)?		*f. Yes* ☒ *No* ☐
g. Does it include a project description to include the general site location and project scope?		*g. Yes* ☒ *No* ☐
h. Does it address if the project likely involves significant threat to human life (safety assurance)?	EC 1165-2-209 Appendix E, Para 1a	*h. Yes* ☒ *No* ☐

REQUIREMENT	REFERENCE	*EVALUATION*
i. Does it adequately address redundancy, resilience, or robustness between structures, materials, members, and project phases?	EC 1165-2-209, Appendix E, Para 6f(2)	*i. Yes* ☒ *No* ☐
j. Does it contain project features and/or components that effectively work as a system?	EC 1165-2-209, Appendix E, Para 6f(3)	*j. Yes* ☒ *No* ☐
k. When non-Federal interest undertakes a Federal project design, does it require the use of NAS reviewers and encourage Outside Eligible Organization management when a non-Federal interest designs, implements, or alters a non-Federal project?	EC 1165-2-209, Para 13.	*k. Yes* ☒ *No* ☐
l. Does it contain a unique project authorized and appropriated or approved without a decision document?	EC 1165-2-209, Appendix E, Para 6g	*l. Yes* ☐ *No* ☒
If "No", go to Question v. *If "Yes", continue to Question m.*		
m. Does it include the models used to assess hazards that are appropriate?	EC 1165-2-209, Appendix E, Para 6g(1)	*m. Yes* ☐ *No* ☐
n. Does it state assumptions made for the hazards that are appropriate?	EC 1165-2-209, Appendix E, Para 6g(2)	*n. Yes* ☐ *No* ☐
o. Does it provide the quality and quantity of surveys, investigations, and engineering for the design sufficient to support the models and assumptions made for determining the hazards?	EC 1165-2-209, Appendix E, Para 6g(3)	*o. Yes* ☐ *No* ☐
p. Does it include an analysis adequately addressing the uncertainty given the consequences associated with the potential for loss of life for this project type?	EC 1165-2-209, Appendix E, Para 6g(4)	*p. Yes* ☐ *No* ☐
q. Does it address project features that adequately address redundancy, resilience, or robustness with an emphasis on interfaces between structures, materials, members, and project phases?	EC 1165-2-209, Appendix E, Para 6g(5)	*q. Yes* ☐ *No* ☐

r. Does it propose a reasonably appropriate alternatives to be considered?	EC 1165-2-209, Appendix E, Para 6g(6)	*r. Yes* ☐ *No* ☐
s. Does it address a reasonably comprehensive environmental assessment?	EC 1165-2-209, Appendix E, Para 6g(7)	*s. Yes* ☐ *No* ☐
t. Does it assess the recommended alternatives from the perspective of systems?	EC 1165-2-209, Appendix E, Para 6g(8)	*t. Yes* ☐ *No* ☐
u. Does it include systematic aspects being considered from a temporal perspective, including the potential effects of climate change?	EC 1165-2-209, Appendix E, Para 6g(8)	*u. Yes* ☐ *No* ☐
v. Does the RP assumptions remain valid through construction?	EC 1165-2-209, Appendix E, Para 6h(1)	*v. Yes* ☒ *No* ☐
w. Does it maintain the conditions assumed during design and validated during construction?	EC 1165-2-209, Appendix E, Para 6h(2)	*w. Yes* ☒ *No* ☐
x. For O&M manuals do the requirements adequately maintain the conditions assumed during design and validated during construction will the project monitoring adequately reveal any deviations from assumptions made for performance?	EC 1165-2-209, Appendix E, Para 6h(2)	*x. Yes* ☒ *No* ☐
y. Does it involve innovative materials or techniques, a design requiring redundancy, resilience, robustness, or has unique construction sequencing?	EC 1165-2-209, Appendix E, Para 2a, 2b,& 2c.	*y. Yes* ☐ *No* ☒
z. Does it include documentation of risk-informed decisions on which levels of review are appropriate.	EC 1165-2-209, Appendix B, Para 4b	*z. Yes* ☒ *No* ☐
aa. Does it contain a summary of the CW implementation products required?	EC 1165-2-209 Para 7.a.	*aa. Yes* ☒ *No* ☐
bb. Does it address the following:		*bb.*
i. Does it describe the scope of review for the phase of work (for example, Feasibility, PED, Construction, BCOE reviews, etc)?	EC 1165-2-209 Appendix B Para 4g	*(i) Yes* ☒ *No* ☐
ii. Does it list the review teams who will perform the DQC activities?	EC 1165-2-209 Appendix B	*(ii) Yes* ☒ *No* ☐

iii. Does it provide a schedule showing when the DQC activities will be performed?	Para 4c	*(iii) Yes* ☒ *No* ☐
cc. Does it assume an ATR is required and if an ATR is not required does it provide a risk based decision of why it is not required?	EC 1165-2-209,Para 15a	*cc. Yes* ☒ *No* ☐
If an ATR is required the RP will need to address the following questions:		
i. Does it identify the ATR lead from outside the MSC?	EC 1165-2-209 Para 9c	*(i) Yes* ☒ *No* ☐
ii. Does it provide tasks and related resource, funding and schedule showing when the ATR activities will be performed?	EC 1165-2-209 Appendix C Para 3e	*(ii) Yes* ☒ *No* ☐
dd. Does it reflect Corps vertical team input (involving district, MSC, RMO, and RIT members)?	EC 1165-2-209, Appendix B, Para 7a	*dd. Yes* ☒ *No* ☐
ee. Does it identify milestones to perform reviews and site visits?	EC 1165-2-209, Appendix E, Para 5	*ee. Yes* ☒ *No* ☐
ff. Does it establish a milestone schedule aligned with critical features of the project design and construction?	EC 1165-2-209, Appendix E, Para 6c	*ff. Yes* ☒ *No* ☐
gg. Does it include periodic reviews of the design and construction activities?	EC 1165-2-209, Para 12(c)	*gg. Yes* ☒ *No* ☐
hh. Does it include an ATR ensuring the appropriate problems and opportunities have been address?	EC 1165-2-209, Appendix C, Para 3a	*hh. Yes* ☒ *No* ☐
ii. Does it include ATR timing, ATR team, ATR review criteria, ATR process, and ATR comments.	EC 1165-2-209, Appendix C, Para 3(d)-(g)	*ii. Yes* ☒ *No* ☐
jj. Does the RP address the requirement to document ATR comments using DrChecks?	EC 1165-2-209, Para 7.d.(1)	*jj. Yes* ☒ *No* ☐
kk. Does it include a Statement of Technical Review and Certification of ATR?	EC 1165-2-209, Appendix C, Para 3.j.(7)	*kk. Yes* ☒ *No* ☐
ll. Does it include a A-E Contractor Statement of Technical Review and Certification of ATR?	EC 1165-2-209, Appendix C, Para 3.j.(7)	*ll. Yes* ☐ *No* ☒
mm. Does it include a Policy Compliance and		*mm. Yes* ☒ *No* ☐

Legal Review?		
nn. Does it address coordination with the Cost Engineering Directory of Expertise (DX) located in Walla Walla District?	EC 1165-2-209, Para 9c.(1)(d).	*nn. Yes* ☒ *No* ☐
oo. Does the RP present the tasks, timing and sequence (including deferrals), and costs of reviews?	EC 1165-2-209, Appendix B, Para 4c	*oo. Yes* ☒ *No* ☐
pp. Does it include the cost for the RMO to administer and manage the review and cost of the independent review?	EC 1165-2-209, Para 17.	*pp. Yes* ☒ *No* ☐
qq. Does it include cost estimates for the peer reviews?		*qq. Yes* ☒ *No* ☐
rr. Does the review plan establish a milestone schedule aligned with the critical features of the project design and construction?	EC 1165-2-209, Appendix E, Para 6c	*rr. Yes* ☒ *No* ☐
ss. Does it provide an opportunity for public comment?		*ss.Yes* ☒ *No* ☐
tt. Does it indicate how and when there will be opportunities for public comment on the decision document?	EC 1165-2-209, Para 7.a.(2)(d)	*tt. Yes* ☒ *No* ☐
uu. Does it indicate when significant and relevant public comments will be provided to reviewers before they conduct their review?	EC 1165-2-209, Appendix B, Para 4d	*uu. Yes* ☒ *No* ☐
vv. Does it address whether the public, including scientific or professional societies, will be asked to nominate potential external peer reviewers?	EC 1165-2-209, Appendix B, Para 4e	*vv.Yes* ☒ *No* ☐
ww. Does it list the names and disciplines of the Project Delivery Team (PDT)?	EC 1165-2-209, Appendix B, Para 4h	*ww. Yes* ☒ *No* ☐
xx. Does it use DrChecks to documents all ATR comments, responses and associated resolutions accomplished throughout the review process?		*xx. Yes* ☒ *No* ☐
yy. Does it list the District Chief of Engineers as responsible for this review and coordinate with the Chief of Construction, Chief of Operations, and the project manager?	EC1165-2-209, Para 7d(1)	*yy. Yes* ☒ *No* ☐
		aaa. Yes ☒ *No* ☐

aaa. Does it assume a Type II IEPR is required?	EC 1165-2-209, Appendix E, Para 1b	
bbb. If a Type II IEPR is required the RP will need to address the following questions:		
i. Does it state that for a Type II IEPR, it will be contracted with an A/E contractor?	EC 1165-2-209, Para 12a	*(i)Yes* ☒ *No* ☐
ii. Does it state for a Type II IEPR, that the selection of IEPR review panel members will be made up of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of expertise suitable for the review being conducted?	EC 1165-2-20 Appendix B Para 4k (4)	*(ii) Yes* ☒ *No* ☐
ccc. If a Type II IEPR is not required does it provide a risk based decision of why it is not required?	EC 1165-2-209 Para 10 & Appendix B, Para 4k(4)	*ccc.Yes* ☒ *No* ☐
ddd. Does it establish the RMO as the responsible agent for ensuring IEPR panels are established in accordance with EC 1165-2-209?	EC 1165-2-209, Para 15a & Para 7	*ddd.Yes* ☒ *No* ☐
eee. Does it provide a succinct description of the primary disciplines and competencies or expertise needed, as defined by the RMO, for each panel member (not simply a list of disciplines)?	EC 1165-2-209, Appendix E, Para 7a(1)	*eee.Yes* ☒ *No* ☐
fff. For review teams led by and composed of other government employees, does it indicate that panel compositions consisting of one person are appropriate, competent, and qualified reviewers?	EC 1165-2-209, Appendix E, Para 7a(2)	*fff. Yes* ☒ *No* ☐
ggg. For review teams led by and composed of contractors, does it indicate that USACE personnel established the IEPR panel? *If "Yes", local counsel should be consulted.*	EC 1165-2-209, Appendix E, Para 7b(2)	*ggg. Yes* ☒ *No* ☐
hhh. Does it indicate that contracting officers are aware of potential conflicts when the review team is led by and composed of contractors?	EC 1165-2-209, Appendix E, Para 7c(1)	*hhh. Yes* ☒ *No* ☐
iii. If the reviewers are listed by name, does the RP describe the qualifications and	EC 1165-2-209,	*iii. Yes* ☒ *No* ☐

years of relevant experience of the ATR team members?	Appendix E, Para 7c(2)	
JJJ. Has the approval memorandum been prepared and does it accompany the RP?	EC 1165-2-209, Appendix B, Para 7	*jjj. Yes* ☒ *No* ☐

APPENDIX E

CESPD Supplemental Review Plan Checklist
For Implementation Documents

Review Plan: **SACRAMENTO RIVER BANK PROTECTION PROJECT, PHASE II, CALIFORNIA**

Date of review:

Reviewed by:

References: CESPD R 1110-1-8, Appendix C, Planning; EC 1165-2-209, Civil Works Review Policy

Note: Any "No" answer requires explanation in the comment field.

	Item	Yes	No	Comment
1	Is there a Technical Review Strategy Session identified early in the study process? (See Appendix C paragraph 8.2,)	☒	☐	The Technical Review Strategy session was held in February of 2012 a follow on session is projected to be held in January of 2013
2	Are potential Continuing Authority Program (CAP) "spinoffs" identified, along with the appropriate QCP identified for them?	☐	☒	
3	Are the review costs identified?	☒	☐	
	For District Quality Control (DCQ)?	☒	☐	
	ATR?	☒	☐	
	Independent External Peer Review (IEPR)?	☒	☐	
4	Does the RP identify seamless DQC technical review (8.4), including supervisory oversight of the technical products? (See Appendix C paragraph 8.5)	☒	☐	
5	Does the RP identify the recommended review comment content and structure? (See Appendix C paragraph 8.5.4)	☒	☐	
6	Does the RP encourage face-to-face resolution of issues between the PDT and reviewers? (See Appendix C paragraph 8.5.5)	☒	☐	
7	If issues remain, does the RP must identify an appropriate dispute resolution process? (See Appendix C paragraph 8.6)	☒	☐	
8	Does the RP require documentation of all significant decisions, and leave a clear audit trail? (See Appendix C paragraph 8.5.6)	☒	☐	
9	Does the RP identify all requirements for technical certifications? (See Appendix C paragraph 8.5.7)	☒	☐	
10	Does the RP identify models expected to be used in developing recommendations and the model certification/acceptance status of those models. (Appendix B, 4)	☒	☐	
11	Does the RP fully address products developed by contractors? (See Appendix C paragraph 8.10)	☒	☐	
12	Is the need for a VE study identified, and	☒	☐	

	Item	Yes	No	Comment
	incorporated into the review process, after the feasibility scoping meeting? (See Appendix C paragraph 8.11)			
13	Does the RP identify the final public meeting milestone? (See Appendix C, Enclosure 1, SPD Milestones)	☒	☐	
14	Does the RP identify the report approval process, and if there is a delegated approval authority?	☒	☐	
15	Does the RP reference CESPD milestones, along with PGN milestones?	☒	☐	
16	Does the RP address a reasonably comprehensive real estate plan in accordance with ER 405-1-12	☒	☐	

Revised 10May10

APPENDIX F

CONCURRENCES

Concurrences

Project Manager _____

Date:_____

District Planning and Policy CoP leader _____

Date:_____

District Counsel _____

Date:_____

DDE (PM) _____

Date:_____

MSC Planning and Policy CoP Leader _____

Date:_____

MSC Counsel _____

Date:_____

APPENDIX G

GLOSSARY of Acronyms and Abbreviations

A-E	Architect – Engineer
ASA(CW)	Assistant Secretary of the Army for Civil Works
ATR	Agency Technical Review
BA	Biological Assessment
CES	Cost Engineering Section
CEQA	California Environmental Quality Act
CESPK	United States Army Corps of Engineers, Sacramento District
CFS	Cubic Feet per Second
CVFCP	Central Valley Flood Control Project
CVFPB	State of California, Central Valley Flood Protection Board
DQC	District Quality Control
DQR	Data Quality Report
DWR	State of California, Central Valley Flood Protection Board (CVFPB)
CX	Corps of Engineers, Center of Expertise
EA	Environmental Assessment
EC	Engineering Circular
EDR	Engineering Document Report
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EM	Engineer Manual
EO	Executive Order
ER	Engineering Regulation
ESA	Endangered Species Act
FCSA	Feasibility Cost-Sharing Agreement
FDR	Flood Damage Reduction
FEMA	United States Federal Emergency Management Agency
FRM-PCX	Flood Risk Management Planning Center of Expertise
GIS	Geographical Information System
GRR	General Reevaluation Report
IEPR	Independent External Peer Review
ITR	Independent Technical Review
IWG	Interagency Working Group
IWM	In-Stream Woody Material
LERRDS	Land Easements Relocations Right of Way and Disposal Sites
LF	Linear Feet
MSC	Major Subordinate Command
NED	National Economic Development

NER	National Ecosystem Restoration
NEPA	National Environmental Policy Act
NOAA	U.S. National Oceanic & Atmospheric Administration
O&M	Operation and maintenance
OMB	U.S. Office and Management and Budget
OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
OEO	Outside Eligible Organization
PAC	Post Authorization Change
PADD	Post Authorization Decision Document
PAPSS	Post Authorization Plan of Study & Strategy
PCA	Project Cooperation Agreement
PDT	Project Delivery Team
PL	Public Law
PM	Project Manager
PMP	Project Management Plan
PPA	Project Partnership Agreement
PRP	Peer Review Plan
QA/QC	Quality Assurance / Quality Control
QMP	Quality Management Plan
RD	Reclamation District
REP	Real Estate Plan
RP	Review Plan
RED	Regional Economic Development
RM	River Mile
SACCR	Schedule & Cost Change Request
SAM	Standard Assessment Methodology
SOS	Scope of Services
SOW	Scope of Work
SPD	South Pacific Division
SRBPP	Sacramento River Bank Protection Project
SRFCP	Sacramento River Flood Control Project
TRSS	Technical Review Strategy Session
USFWS	United States Fish & Wildlife Service
VE	Value Engineering
WRCB	Water Resources Control Board
WRDA	Water Resources Development Act