

#### DEPARTMENT OF THE ARMY

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

2 3 APR 2009

CESPD-PDC

MEMORANDUM FOR Commander, San Francisco District, ATTN: CESPN-PF,

Subject: Review Plan Approval for the Upper Penitencia Creek, California, Feasibility Study.

- 1. The attached Review Plan for the Upper Penitencia Creek, California, Feasibility Study has been prepared in accordance with EC 1105-2-410.
- 2. The Review Plan will be made available for public comment, and the comments received will be incorporated into future revisions of the Review Plan. The Review Plan has been coordinated with the Flood Risk Management Planning Center of Expertise (PCX) of the South Pacific Division which is the lead office to execute this plan. For further information, contact the PCX,

  at 415-503-6852.
- 3. The Review Plan includes independent external peer review.
- 4. I hereby approve this Review Plan, which is subject to change as study circumstances require. This is consistent with study development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution will require new written approval from this office.

5 Encls

1. District Memo

2. Review Plan

3. FRM-PCX Memo

4. FRM-PCX Checklist

5. SPD Checklist

FOR JANICE L. DOMBI

COL, EN

Commanding



#### DEPARTMENT OF THE ARMY

U.S. ARMY ENGINEER DISTRICT, SAN FRANCISCO CORPS OF ENGINEERS 1455 MARKET STREET SAN FRANCISCO, CALIFORNIA 94103-1398

CESPN-ET-PF

16 April 2009

MEMORANDUM FOR: South Pacific Division District Support Team, ATTN: CESPN-PDC

SUBJECT: Request for Approval of Review Plan for the Upper Penitencia Creek Study.

- 1. In accordance with EC 1105-2-410, Review of Decision Documents, dated 22 August 2008, the subject Review Plan is provided for MSC approval by the Commander, South Pacific Division (Enclosure 1). This is the first submittal of a Review Plan for the subject study.
- 2. This Review Plan is in compliance with above EC and has been coordinated with the applicable Planning Centers of Expertise (PCX). The PCX for Flood Risk Management is designated as the lead PCX, and as such, coordinated the Review Plan with the PCX for Ecosystem Restoration. The PCX concurrence memorandum is provided as Enclosure 2.
- 3. Please address any questions about this Review Plan to , who is serving as the SPN POC for this Review Plan, at 415-503- Upon approval of this Review Plan, please provide notification to this office so we can post it to the San Francisco District public website. Upon posting of the approved Review Plan, the District will notify the vertical team. I appreciate your quick attention to this matter.

Sincerely,

Thomas R. Kendall Chief, Planning Branch San Francisco District MEMORANDUM FOR

and

en, San Francisco District

SUBJECT: Upper Penitencia Creek, California, Feasibility Study Review Plan

- 1. The Flood Risk Management Planning Center of Expertise (FRM-PCX) has reviewed the Review Plan (RP) for the subject study and concurs that the RP satisfies peer review policy requirements outlined in Engineering Circular (EC) 1105-2-410 Review of Decision Documents, dated 22 August 2008.
- 2. The review was performed by documenting the review is attached.
- 3. The FRM-PCX recommends the RP for approval by the MSC Commander. Upon approval of the RP, please provide a copy of the approved RP, a copy of the MSC Commander approval memorandum, and the link to where the RP is posted on the District website to Program Manager for the FRM-PCX and , lead Regional Technical Specialist for the FRM-PCX
- 4. Thank you for the opportunity to assist in the preparation of the RP. Please coordinate the Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Model Certification efforts outlined in the RP with me.

Encl

Program Manager, FRM-PCX

#### **REVIEW PLAN**

# UPPER PENITENCIA CREEK FEASIBILITY STUDY, SAN JOSE, CALIFORNIA FLOOD RISK MANAGEMENT SAN FRANCISCO DISTRICT

March 2009

# REVIEW PLAN UPPER PENITENCIA CREEK FEASIBILITY STUDY, SAN JOSE, CALIFORNIA FLOOD RISK MANAGEMENT SAN FRANCISCO DISTRICT

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# REVIEW PLAN UPPER PENITENCIA CREEK FEASIBILITY STUDY, SAN JOSE, CALIFORNIA FLOOD RISK MANAGEMENT SAN FRANCISCO DISTRICT

#### 1. PURPOSE AND REQUIREMENTS

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

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

- **B. Requirements.** EC 1105-2-410 outlines the requirement of the three review approaches (DQC, ATR, and IEPR). EC 1105-2-408 provides guidance on Corps Planning Centers of Expertise (PCX) involvement in the approaches. This document addresses review of the decision document as it pertains to both approaches and planning coordination with the appropriate PCX. The Upper Penitencia Creek, San Jose, California, Feasibility Study will investigate only flood risk management (FRM) in the study area. Ecosystem restoration components will be considered where appropriate to promote environmental sustainability. Mitigation of habitat altered or destroyed due to anticipated construction of the project will be addressed as well. The non-Federal partners have expressed a strong desire that FRM be considered the primary focus of the Feasibility Study, while identifying opportunities for ecosystem restoration where they are consistent with FRM features. Therefore, the PCX for FRM is considered to be the primary PCX for coordination.
- (1) District Quality Control. DQC is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Upper Penitencia Creek, San Jose, Feasibility Study Project Management Plan (PMP) for the study (to which this Review Plan will ultimately be appended). It is managed in the San Francisco District and may be conducted by in-house staff as long as the reviewers are not doing the work involved in the study, including contracted work that is being reviewed. Basic quality control tools include a Quality Management Plan (QMP) providing for seamless review, quality checks and reviews, supervisory reviews, Project Delivery Team (PDT) reviews, etc. Additionally, the PDT is responsible for a complete reading of the report to assure the overall integrity of the report,

technical appendices and the recommendations before the approval by the District Commander. For the Upper Penitencia Creek, San Jose Feasibility Study, non-PDT members and/or supervisory staff will conduct this review for major draft and final products, including products provided by contractors, or the non-Federal sponsors as in-kind services following review of those products by the PDT. It is expected that the Major Subordinate Command (MSC)/District QMP address the conduct and documentation of this fundamental level of review. A Quality Control Plan (QCP) is included in the PMP for the subject Feasibility Study and addresses DQC; DQC is not addressed further in this Review Plan. DCQ is required for this Feasibility Study.

- (2) Agency Technical Review. EC 1105-2-410 recharacterized ATR (which replaces the level of review formerly known as Independent Technical Review) is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of a project/product. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assures that all the parts fit together in a coherent whole. ATR teams will be comprised of senior USACE personnel (Regional Technical Specialists (RTS), etc.) and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC. EC 1105-2-408 requires that DrChecks (<a href="https://www.projnet.org/projnet/">https://www.projnet.org/projnet/</a>) 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 Upper Penitencia Creek, San Jose, California, Feasibility Study. ATR is required for this Feasibility Study.
- (3) Independent External Peer Review. EC 1105-2-410 recharacterized the external peer review process that was originally added to the existing Corps review process via EC 1105-2-408. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. IEPR is managed by an Outside Eligible Organization (OEO) that is described in the Internal Review Code Section 501(c) (3), is exempted from Federal tax under Section 501(a), of the Internal Revenue Code of 1986; is independent; is free from conflicts of interest; does not carry out or advocate for or against Federal water resources projects; and has experience in establishing and administering IEPR panels. The scope of review will address all the underlying planning, engineering, including safety assurance, economics, and environmental analyses performed, not just one aspect of the project. This Review Plan outlines the planned approach to meeting this requirement for the Upper Penitencia Creek, San Jose, California, Feasibility Study. IEPR is required for this Feasibility Study.
- (4) Policy and Legal Compliance Review. In addition to the technical reviews, decision documents will be reviewed throughout the Feasibility Study process for their compliance with law and policy. These reviews culminate in Washington-level determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the Chief of Engineers. Guidance for policy and legal compliance reviews is addressed further in Appendix H, ER 1105-2-100. Technical review described in EC 105-2-410 are to augment and complement the policy review processes by addressing compliance with published Army polices pertinent to planning products, particularly polices on analytical methods and the presentation of findings in decision documents. DQC and ATR efforts are to include the necessary expertise to address compliance with published planning policy. Counsel will generally not participate on ATR teams, but may at the discretion of the district or as directed by higher authority. When policy and/or legal concerns arise during DQC or ATR efforts that are not readily and mutually resolved by the PDT and the reviewers, the district will seek issue resolution support from the MSC and HQUSACE in accordance with the procedures outlined in Appendix H ER 1105-2-100. IEPR

teams are not expected to be knowledgeable of Army and administration polices, nor are they expected to address such concerns. An IEPR team should be given the flexibility to bring important issues to the attention of decision makers. Legal reviews will be conducted concurrent with ATR of the preliminary, draft and final feasibility report and environmental impact statement.

- (5) Planning Center of Expertise (PCX) Coordination. EC 1105-2-408 and EC 1105-2-410 outline PCX coordination in conjunction with preparation of the Review Plan. This Review Plan is being coordinated with the PCX for Flood Risk Management (FRM). The PCX for FRM is responsible for the accomplishment and quality of ATR and IEPR for the Upper Penitencia Creek, San Jose, California, Feasibility Study. The PCX for FRM may conduct the review or manage the review to be conducted by others.
- (6) Review Plan Approval and Posting. In order to ensure the Review Plan is in compliance with the principles of EC 1105-2-410 and the MSC's QMP, the Review Plan must be approved by the applicable MSC, in this case the Commander, South Pacific Division (SPD). Once the Review Plan is approved, the San Francisco District will post it to its district public website and notify SPD and the PCX for FRM.
- (7) Safety Assurance Review. In accordance with Section 2035 of WRDA 2007, EC 1105-2-410 requires that all projects addressing flooding or storm risk reduction undergo a safety assurance review during design and construction. Safety assurance factors must be considered in all reviews for those studies. Implementation guidance for Section 2035 is under development. When guidance is issued, the Feasibility Study will address its requirements for addressing safety assurance factors, which at a minimum will be included in the draft report and appendixes for public and agency review. Prior to preconstruction engineering and design (PED) of the identified for construction, a PMP will be developed that will include safety assurance review. Safety assurance review will also be accomplished during construction.

The project lies entirely in urban San Jose. Development in the study area includes residential homes, commercial units, and high technology and biotechnology firms. Planning is underway to convert the rail line in the downstream reach to a Bay Area Rapid Transit (BART) line. The study area is expected to further develop resulting in higher expected annual flood damage under the future no action plan.

#### 2. PROJECT DESCRIPTION

A. Decision Document. The purpose of the Feasibility Study is to identify flood-related issues in the Upper Penitencia Creek, San Jose study area and determine the National Economic Development (NED) plan. The study team has however incorporated ecosystem restoration elements that promote environmental sustainability and address environmental compliance concerns. The Corps was essentially required to consider ecosystem restoration elements in response to significant Resource Agency concerns about adverse impacts from the FRM features to TES – primarily Steelhead Trout. Accordingly, the traditional "trade-off analysis" and Incremental Cost Analysis (ICA) for NER benefits are not being performed under the scope of the Feasibility Study.

The decision document will present planning, engineering, and implementation details of the recommended plan to allow final design and construction to proceed subsequent to approval of the recommended plan. The project is a General Investigations study undertaken to evaluate structural and non-structural FRM measures primarily related to structural solutions (levees and floodwalls) and possibly non-structural solutions (flood warning system and structural

modifications – raising homes above the flood elevation). Ecosystem restoration measures would likely include restoration of floodplain function and habitat primarily through the use of setback levees. The feasibility phase of this project is not cost shared as a result of original authorization that did not require cost sharing. The sponsors and San Francisco District executed a Feasibility Cost Sharing Agreement on 17 February 1998, amended the FCSA on 21 June 2005 for scope and cost changes, and will again amend the FCSA for scope, cost and schedule change in February 2009.

**B. General Site Description.** The project description and authorization remain the same as the original PMP. Upper Penitencia Creek drains approximately 24 square miles (15,300 acres) in the eastern portion of the Santa Clara Valley and in adjacent portions of the Diablo Range. Upper Penitencia Creek empties into Coyote Creek, which drains the entire eastern side of the Santa Clara Valley and empties into the San Francisco Bay east of Alviso. The Upper Penitencia Creek watershed lies in and adjacent to the eastern part of the City of San Jose; the floodplain extends northward into the City of Milpitas.

The topography of the upstream (eastern) portion of the watershed is mountainous, with sharp relief and steep slopes. The downstream (western) portion of the watershed is a narrow channel in an alluvial apron sloping from the foothills of the Diablo Range to Coyote Creek in the center of the Santa Clara Valley. Elevations within the watershed range from 3,000 feet above sea level in the upper watershed, to 280 feet at Dorel Drive near the base of the mountains, to 80 feet at the junction of Upper Penitencia Creek and Coyote Creek, and to about 10 feet at the extreme northwestern end of the floodplain.

The upper limit of the project is where the Creek disgorges from the foothills; the project lies entirely in urban San Jose. Floods flow naturally north into Milpitas, away from the small Upper Penitencia Creek channel cut by farmers in the 1800s through Coyote Creek's natural levee. Residences have built out the upper reaches, with the occasional park, school, store and office. Housing, office and planned residential-commercial land uses are actively replacing scattered light industrial uses along the downstream reach (between King Road and Coyote Creek). Planning is underway to convert the rail line in the downstream reach to a Bay Area Rapid Transit (BART) line. The Corps reviewed the BART station designs in December 2008 and found that only design alternative "3", which includes a gentle new curve to the creek instead of the existing 90 degree bend, would be acceptable to the Corps.

- C. Project Scope. The Feasibility Study will evaluate a single purpose Flood Risk Management project along the Upper Penitencia Creek. The project lies entirely in San Jose and the floodplain in the study area is highly urbanized. San Jose is located in Santa Clara County and is the third largest city in California with 974,000 people. The area is also home to the largest concentration of technology expertise in the world with more than 6,600 technology companies employing more than 254,000 people. Development in the study area includes residential homes, commercial units, and high technology and biotechnology firms. Some of the firms in the flood plain include Sun Micro Systems, Okidata, and Olympus. In addition, the downstream area of Upper Penitencia Creek along Reach 1, currently home to the San Jose Flee market, is being rezoned into a mixed use, medium to high density residential and commercial development. The rezoning plans also include the proposed Berryessa Road BART Station, which will be built adjacent to the Flea market site. Therefore, the study area is expected to further develop resulting in higher expected annual flood damage under the future no action plan.
- **D. Problems and Opportunities.** The primary flood-related problems in the study area are (1) the potential for levee failure and (2) reduced capacity in channels due to sedimentation and sediment deposition and (3) decreased channel velocity, particularly during storm events, due to

in-channel vegetation. Primary ecosystem problems are (1) construction of levees have separated rivers from historic floodplains and (2) riparian habitat, water quality and scour/deposition. As noted in other portions of this report, the existing channel conditions and the corresponding vegetational cover, have not resulted in ideal habitat for TES; however, the Resource Agencies (primarily National Marine Fisheries Service and CA. Fish and Game Department) are extremely interested in FRM features that improve aquatic, riparian and terrestrial habitats. Failure of the study to adequately address the Resource Agency's concerns would very likely result in a "Jeopardy Decision" and regulatory-type permits from those agencies would not be granted.

- **E. Potential Methods.** Potential FRM measures range from adding, modifying, and/or reregulating storage on major tributaries and new transitory storage within the floodplains to increasing conveyance through raising levees, widening channels and floodway areas, dredging, and constructing/modifying weirs and bypasses. Non-structural floodplain management measures would also be considered. For environmental sustainability, measures range from restoring riparian, wetlands, and floodplain habitats through constructing setback levees for habitat.
- **F. Product Delivery Team.** The PDT is comprised of those individuals directly involved in the development of the decision document, whether representing the Corps or Sponsor. Individual contact information and disciplines are presented in appendix B.
- **G. Vertical Team.** The Vertical Team includes District management, District Support Team (DST) and Regional Integration Team (RIT) staff as well as members of the Planning of Community of Practice (PCoP). Specific points of contact for the Vertical Team can be found in appendix B.
- H. Model Certification. The USACE Planning Models Improvement Program (PMIP) was established in 2003 to assess the state of planning models in the USACE and to make recommendations to assure that high quality methods and tools are available to enable informed decisions on investments in the Nation's water resources infrastructure and natural environment. The main objective of the PMIP is to carry out "a process to review, improve and validate analytical tools and models for USACE Civil Works business programs." In carrying out this initiative, a PMIP Task Force was established to examine planning model issues, assess the state of planning models in the Corps, and develop recommendations on improvements to planning models and related analytical tools. The PMIP Task Force collected the views of Corps leaders and recognized technical experts, and conducted investigations and numerous discussions and debates on issues related to planning models. It identified an array of model-related problems, conducted a survey of planning models, prepared papers on model-related issues, analyzed numerous options for addressing these issues, formulated recommendations, and issued a final report. The Task Force considered ongoing Corps initiatives to address planning capability, and built upon these where possible. Examples include several efforts under the Planning Excellence Program (training, specialized planning centers of expertise, modeling); the Science & Engineering Technology (SET) initiative (an EC publication on the SET initiative models is forthcoming) and associated Technical Excellence Network (TEN), which endeavors to provide uniform Science and Engineering tools and practices to the Corps and share them throughout; and, recognition of existing Quality Assurance/Quality Control programs and internal technical review within the Districts.

For the purposes of this Review Plan, 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 Review Plan does not cover engineering models used in planning which will be certified under a separate process to be established under SET.

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

- HEC-FDA version 1.2.4 (Certified): This model, developed by the Corps' Hydrological Engineering Center, will assist the PDT in applying risk analysis methods for flood risk 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
  - o Provides the tools needed to understand the results
  - Calculates the Expected Annual Damages and the Equivalent Annual Damages
  - Computes the Annual Exceedence Probability and the Conditional Non-Exceedence Probability
  - Implements the risk-based analysis procedures contained in EM 1110-2-1619
- 2. Various Habitat Evaluation Procedure models. The Ecosystem Restoration Planning Center of Expertise has responsibility for approving ecosystem output methodologies for use in ecosystem restoration planning and mitigation planning. The Ecosystem PCX will need to certify or approve for use each 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.
- 3. IWR-Planning Suite (Certified). This software assists with the formulation and comparison of alternative plans. While IWR-PLAN was initially developed to assist with environmental restoration and watershed planning studies, the program can be useful in planning studies addressing a wide variety of problems. IWR-PLAN can assist with plan formulation by combining solutions to planning problems and calculating the additive effects of each combination, or "plan." IWR-PLAN can assist with plan comparison by conducting cost effectiveness and incremental cost analyses, identifying the plans which are the best financial investments and displaying the effects of each on a range of decision variables.

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

- 1. MCACES or MII: These are cost estimating models.
- HEC-HMS: By applying this model the PDT is able to:
  - Define the watersheds' physical features
  - Describe the metrological conditions
  - Estimate parameters
  - o Analyze simulations
  - Obtain GIS connectivity
- HEC-ResSim: This model predicts the behavior of reservoirs and to help reservoir
  operators plan releases in real-time during day-to-day and emergency operations. The
  following describes the major features of HEC-ResSim
  - o Graphical User Interface
  - o Map-Based Schematic

- Rule-Based Operations
- 4. HEC-RAS: The function of this model is to complete one-dimensional hydraulic calculations for a full network of natural and man made channels. HEC-RAS major capabilities are:
  - o User interface
  - Hydraulic Analysis
  - o Data storage and Management
  - Graphics and reporting
- 5. HEC-2: The HEC-2 program computes water surface profiles for one-dimensional steady, gradually varied flow in rivers of any cross section.
- 6. FLO-2D: This model will be used for 'e overbank reaches.
   7. Groundwater Modeling System (GMS <sup>6</sup>This model is used to conduct seepage analysis.
- 8. Utaxas4: This model is used to conduct slope stability analysis.

Additional models that may be employed include HEP and HGM. Any use of these models will be coordinated with the appropriate PCX.

#### 3. AGENCY TECHNICAL REVIEW PLAN

For feasibility studies, ATR is managed by the PCX. As this is a single purpose FRM Feasibility Study the PCX for FRM will identify individuals to perform ATR. San Francisco District can provide suggestions on possible reviewers.

- A. General. An ATR Team Leader shall be designated for the ATR process and shall be outside the home MSC to ensure independence. The proposed ATR Team Leader for this project is to be determined, but will have expertise in project planning. The ATR Team Leader is responsible for providing information necessary for setting up the review, communicating with the Project Planner, 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, plan formulation, environmental compliance, economics, hydrology and reservoir operations, hydraulic design, civil design, geotechnical engineering, cost engineering, real estate, cultural resources; reviews of more specific disciplines maybe identified if necessary.
- B. Agency Technical Review Team (ATRT). The ATRT will be comprised of individuals that have not been involved in the development of the decision document and will be chosen based on expertise, experience, and/or skills. The members will roughly mirror the composition of the PDT and to the extent practicable come from outside of the South Pacific Division region. It is anticipated that the team will consist of about 10 reviewers. The ATRT members will be identified at the time the review is conducted and will be presented in appendix B. Descriptions of the ATR disciplines are listed in the following table and may be amended as the Alternatives Formulation Briefing draws nearer.

Table 1: Agency Technical Review Team

Discipline	Experience Needed for Review		
ATR Manager/Plan Formulation	Plan formulation for multi-purpose projects, including flood risk management; familiarity with the "Planning Guidance Notebook" (ER-1105-100) and the Water Resources Council's Principals and Guidelines.		
Environmental Resources	Integration of environmental evaluation and compliance requirements pursuant to the "Procedures for Implementing NEPA" (ER 200-2-2), national environmental statutes, applicable executive orders, and other Federal planning requirements, into the planning of Civil Works projects. Experience with ESA, fishery resources, and riparian habitat.		
Cultural Resources	Archaeologist familiar with records searches, cultural resource survey methodology, area of potential effects, Section 106 of the National Historic Preservation Act, and state and Federal laws/executive orders pertaining to American Indian Tribes.		
Hydrology and Hydraulics	Hydrologist or hydraulic engineer proficient with river hydraulics, GEO-RAS, HEC-RAS and associated one dimensional models, floodplain mapping, hydrologic statistics, sediment transport analysis, channel stability analysis, risk and uncertainty analysis, and a number of other closely associated technical subjects.		
Geotechnical Engineering	Geotechnical engineer familiar with sampling and laboratory testing, embankment stability and seepage analyses, planning analysis, and a number of other closely associated technical subjects.		
Economics	Analysis of demographics, land use, recreation analysis, and flood damage assessments using HEC-FDA; use of IMPLAN model to address regional economic development associated with a project; discussion of other social effects (OSE) associated with flood risk, and well as OSE benefits from reduction in flood risk; economic justification of projects in accordance with current USACE policy for urban flood damages.		
Civil Design	Civil engineer with experience in designing grading plans and levees, levee stability, and levee and bank-protection removal or modification, earthen channels, and concrete bypasses.		
Cost Engineering <sup>1</sup>	Cost estimating specialist competent in cost estimating for both construction and ecosystem restoration using MCACES/Mii; working knowledge of construction and environmental restoration; capable of making professional determinations based on experience.		
Real Estate/Lands	Real estate specialist familiar with real estate valuation, gross appraisal, utility relocations, takings and partial takings as needed for implementation of Civil Works projects.		

Coordination with the USACE Cost Engineering Directory of Expertise (DX) located in the Walla Walla District will be conducted as required by CECW-EC memo dated 10 Sep 2007 and CECW-CP memo dated 19 Sep 2007.

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

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

- (2) The PDT shall send the ATR manager one hard copy (with color pages as applicable) of the document and appendices for each ATRT member such that the copies are received at least one business day prior to the start of the comment period.
- (3) The PDT shall host an ATR kick-off meeting virtually to orient the ATRT during the first week of the comment period. If funds are not available for an on-site meeting, the PDT shall provide a presentation about the project, including photos of the site, for the team.
- (4) The Project Planner shall inform the ATR manager when all responses have been entered into DrChecks and conduct a briefing to summarize comment responses to highlight any areas of disagreement.
- (5) A revised electronic version of the report and appendices with comments incorporated shall be posted at <a href="ftp://ftp.usace.army.mil/pub/">ftp://ftp.usace.army.mil/pub/</a> for use during back checking of the comments.
- (6) Team members shall contact ATRT members or leader as appropriate to seek clarification of a comment's intent or provide clarification of information in the report. Discussions shall occur outside of DrChecks but a summary of discussions may be provided in the system.
- (7) Reviewers will be encouraged to contact PDT members directly via email or phone to clarify any confusion. DrChecks shall not be used to post questions needed for clarification.
- (8) The ATRT, the PDT, and the vertical team shall conduct an after action review (AAR) no later than 2 weeks after the policy guidance memo is received from HQUSACE for the for the AFB and draft reports.

#### D. Funding

- (1) The PDT district shall provide labor funding by cross charge labor codes. Funding for travel, if needed, will be provided through government order. The Project Planner will work with the ATR manager to ensure that adequate funding is available and is commensurate with the level of review needed. The current cost estimate for this review is \$100,000. Any funding shortages will be negotiated on a case by case basis and in advance of a negative charge occurring. 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.
- (2) The team leader shall provide organization codes for each team members and a responsible financial point of contact (CEFMS responsible employee) for creation of labor codes.
- (3) Reviewers shall monitor individual labor code balances and alert the ATRT Project Planner to any possible funding shortages.

#### E. Timing and Schedule

- (1) Throughout the development of this document, the team will conduct seamless review to ensure planning quality.
- (2) The Feasibility Scoping Meeting (FSM) and Alternatives Review Conference (ARC) were previously completed, and both went through the ATR process; technical review packages will be made available upon request.

- (3) ATR will be conducted on the Alternative Formulation Briefing documentation; the draft Feasibility Report; and if changes are made to the draft report, those changes will be reviewed in the Final Feasibility Report. Previous technical reviews on the FSM and ARC will be made available upon request.
- (4) The PDT will hold a "page-turn" session to review the draft report to ensure consistency across the disciplines and resolve any issues prior to the start of ATR. Writer/editor services will be performed on the draft prior to ATR as well.
- (5) The ATR process for this document will follow the following timeline. Actual dates will be scheduled once the period draws closer. All products produced for these milestones will be reviewed, including those produced by contractors, or as in-kind services by the non-Federal sponsors.

ATR Timeline Task	Date
ATR Feasibility Scoping Meeting (FSM) Document	Complete
ATR FSM Comments	Complete
PDT FSM Responses	Complete
Back check	Complete
ATR Alternatives Review Conference (ARC) Material	Complete
ATR ARC Comments	Complete
PDT ARC Responses	Complete
Back Check	Complete
Alternative Formulation Briefing (AFB) Document	1/4/10
ATR AFB Comments	1/18/10
PDT AFB Responses	1/25/10
Back check	2/1/10
AFB Policy Guidance Memorandum (PGM) Issued	4/1/10
ATR Draft Report	5/1/10
ATR Draft Report Comments	5/14/10
PDT Draft Report Responses	5/21/10
Back Check	5/28/10
ATR Certification Draft Report	6/4/10
Public Review of Draft Report	6/11/10
ATR Final Report	9/10/10
ATR Final Report Comments	9/2410
PDT Final Report Responses	10/1/10
Back Check	10/8/10
ATR Certification Final Report	10/15/10
ATR After Action Review	10/30/10
Final District Report Review	11/7/10

<sup>&</sup>lt;sup>1</sup> ATR Timeline reflects target dates that are subject to change given the dynamic Feasibility Study process, public consensus, and environmental resource agency coordination.

#### F. Review

- (1) ATRT responsibilities are as follows:
  - (a) Reviewers shall review conference material and the draft report to confirm that work was done in accordance with established professional principles, practices,

codes, and criteria and for compliance with laws and policy. Comments on the report shall be submitted into DrChecks.

- (b) Reviewers shall pay particular attention to one's discipline but may also comment on other aspects as appropriate. Reviewers that do not have any significant comments pertaining to their assigned discipline shall provide a comment stating this.
- (c) Grammatical and editorial comments shall not be submitted into DrChecks. Comments should be submitted to the ATR manager via electronic mail using tracked changes feature in the Word document or as a hard copy mark-up. The ATR manager shall provide these comments to the Project Planner.
- (d) Review comments shall contain these principal elements:
  - 1 a clear statement of the concern
  - 2 the basis for the concern, such as law, policy, or guidance
  - 3 significance for the concern
  - 4 specific actions needed to resolve the comment
- (e) The "Critical" comment flag in DrChecks shall not be used unless the comment is discussed with the ATR manager and/or the Project Planner first.
- (2) PDT Team responsibilities are as follows:
  - (a) The team shall review comments provided by the ATRT in DrChecks and provide responses to each comment using "Concur", "Non-Concur", or "For Information Only". Concur responses shall state what action was taken and provide revised text from the report if applicable. Non-Concur responses shall state the basis for the disagreement or clarification of the concern and suggest actions to negotiate the closure of the comment.
  - (b) Team members shall contact the PDT and ATRT managers to discuss any "Non-Concur" responses prior to submission.

#### G. Resolution

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

#### H. Certification

To fully document the ATR process, a statement of technical review will be prepared. Certification by the ATR Team Leader and the Project Planner will occur once issues raised by the reviewers have been addressed to the review team's satisfaction and the final report is ready for submission for HQ review. Indication of this concurrence will be documented by the signing of a certification statement (Appendix A). A summary report of all comments and responses will

follow the statement and accompany the report throughout the report approval process. An interim certification will be provided by the ATR team lead to indicate concurrence with the report to date until the final certification is performed when the report is considered final.

#### I. Alternative Formulation Briefing (AFB)

After alternative plans have been established, evaluated, and the (NED) plan has been selected, the AFB will be held. The AFB for this project will occur after the majority of the ATR comments have been resolved. It is possible that the briefing will result in additional technical or policy comments from high level reviewers for resolution. The resolution of significant policy comments may result in major changes to the document. Therefore, the ATR Team Leader will perform a brief review of the report to ensure that technical issues are resolved.

#### 4. INDEPENDENT EXTERNAL PEER REVIEW PLAN

This decision document will present the details of a Feasibility Study undertaken to evaluate structural and non-structural FRM and ER measures to address problems in the study area. EC 1105-2-408 set forth and EC 1105-2-410 reaffirmed thresholds that trigger IEPR: In cases where there are public safety concerns, a high level of complexity, novel or precedent-setting approaches; where the project is controversial, has significant interagency interest, has a total project cost greater than \$45 million, is preparing an EIS, or has significant economic, environmental and social effects to the nation, IEPR will be conducted. This Feasibility Study is not expected to contain influential scientific information, or to be a highly influential scientific assessment, nor is the project expected to have significant economic, environmental, and social effects to the nation.

This study area is highly urbanized and consequently there are public safety concerns. The study will be highly complex because of the extensive river and tributary system; the existing reservoir and levee system; and the high degree of urbanization. This project has the potential to be controversial and will likely have significant agency and public interest. Public interest will involve urban residents and agricultural landowners. The flood risk management interests of the urban residents may not be completely harmonious with agricultural interests. Further complicating the implementation of the flood project is the fact that local funding for FRM project is subject to passage of local Proposition 218 which required a majority of residents living in the flood risk area must approve revenue generating measures to fund the local share. It appears as though the majority of residents that would receive flood risk reduction live in San Jose, which is in Santa Cruz County. The much smaller town of Pajaro, which also desire flood risk reduction, is in Monterey County.

It can be assumed that the ultimate cost associated with a recommended plan is likely to be in the low hundreds of millions of dollars range (\$100M to \$200M range) and an EIS will be prepared. The project is also considered high risk. For these reasons, IEPR will be conducted. IEPR is currently estimated to be \$300,000. IEPR is a project cost but is not cost shared. The IEPR panel review will be Federally funded. In-house costs associated with developing and procuring the IEPR panel contract as well as PDT response to IEPR comments will be cost shared expenses.

IEPR will be conducted by a minimum of 4 IEPR team members. Disciplines that are anticipated to undergo IEPR are hydrology, hydraulic design, geotechnical engineering, and economics. Work undertaken as part of these technical disciplines is considered to be highly complex due to the size of the study area as well as the existing complex water storage and conveyance system in the study area. Specific factors for this determination are (1) population at risk from flash-flooding; (2) the complex existing levee and water conveyance system; (3) through-levee

seepage, under-levee seepage and subsidence issues associated with the existing levees; (4) and the complex hydraulic system and associated floodplain. Of these products that will undergo IEPR, all will be reviewed by the PDT and undergo DCQ and ATR prior to submittal for IEPR. This includes products that are produced by contractors, or the non-Federal sponsors as in-kind services. In-kind services produced by the sponsor are anticipated to be minimal, if any are produced at all.

- **A. Project Magnitude.** For reasons described in the preceding paragraphs, the magnitude of this project is determined as high. The cost associated with a recommended plan is likely to be in the low hundreds of millions of dollars (\$100M to \$200M range). The scale of the project is large. The study area lies within urban San Jose, the third largest city in California.
- **B.** Project Risk. This project is considered to have high overall risk due to the complex nature of the study area. It will be important to make sound planning assumptions in application of all the modeling and judgment and to do so will require application of multiple levels of review. Public and agency input will be sought in order to minimize the potential for controversy. Uncertainty of success of the project ultimately will be reduced if the proposed review processes are implemented because the methods used for evaluating the project are standard and the concept of implementing proposed project features is not innovative.
- C. Vertical Team Consensus. This Review Plan will serve as the coordination document to obtain vertical team consensus. Subsequent to PCX concurrence, the plan will be provided to the vertical team for approval. MSC approval of the plan will indicate vertical team consensus.
- **D. Products for Review.** Interim products for hydrology, hydraulic and geotechnical design and economics will be provided before the draft report is released for public review. The full IEPR panel will receive the entire draft feasibility report, draft environmental impact statement and all technical appendixes concurrent with public and agency review. The final report to be submitted by the IEPR panel must be submitted to the PDT within 60 days of the conclusion of public review. A representative of the IEPR panel must attend any public meeting(s) held during public and agency review of the draft report. The San Francisco District will draft a response to the IEPR final report and process it through the vertical team for discussion at the Civil Works Review Board (CWRB). An IEPR panel member must attend the CWRB. Following the CWRB, the Corps will issue final response to the IEPR panel and notify the public.

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

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

The OEO will compile the comments of the IEPR panelists, enter them into DrChecks, and forwards the comments to the District. The District will consult the PDT and outside sources as necessary to develop a proposed response to each panel comment. The District will enter the proposed response to DrChecks, and then return the proposed response to the panel. The panel will reply to the proposed response through the (OEO), again using DrChecks. This final panel reply may or may not concur with the District's proposed response and the panels final response will indicate concurrence or briefly explain what issue is blocking concurrence. There will be no final closeout iteration. The District will consult the vertical team and outside resources to prepare an agency response to each comment. The initial panel comments, the District's

proposed response, the panels reply to the District's proposed response, and the final agency response will all be tracked and archived in DrChecks for the administrative record. However, only the initial panel comments and the final agency responses will be posted. This process will continue to be refined as experience shows need for changes. This is specifically in accordance with the EC 1105-2-410 Frequently Asked Questions, dated 3 November 2008.

- (2) The PDT shall send each IEPR panel member one hard copy (with color pages as applicable) of the document and appendices such that the copies are received at least one business day prior to the start of the comment period.
- (3) The Project Planner shall inform the IEPR panel when all responses have been entered into DrChecks and conduct a briefing to summarize comment responses to highlight any areas of disagreement.
- (4) A revised electronic version of the report and appendices with comments incorporated shall be posted at <a href="ftp://ftp.usace.army.mil/pub/">ftp://ftp.usace.army.mil/pub/</a> for use during back checking of the comments.
- (5) PDT members shall contact IEPR panel members as appropriate to seek clarification of a comment's intent or provide clarification of information in the report. Discussions shall occur outside of DrChecks but a summary of discussions may be provided in the system.
- (6) The IEPR panel shall produce a final Review Report to be provided to the PDT not later than 60 days after the close of the public and agency review of the draft report. This report shall be scoped as part of the effort to engage the IEPR panel. The San Francisco 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.

IEPR TIMELINE	
START	6/11/10
FINISH	8/11/10

#### F. Funding

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

#### 5. PUBLIC AND AGENCY REVIEW

The public and agencies will have multiple opportunities to participate in this Feasibility Study. The earliest opportunity will be as part of the public scoping process during the first year of the Feasibility Study. Public review of the draft feasibility report will occur after issuance of the AFB policy guidance memo and concurrence by HQUSACE that the document is ready for public release. As such, public comments other than those provided at any public meetings held during the planning process will not be available to the review teams. Public review of the draft report will begin approximately 1 month after the completion of the ATR process and policy guidance memo. The period will last a minimum of 45 days as required for a draft Environmental Impact Statement. One or more public workshops will be held during the public and agency

review period. Comments received during the public comment period for the draft report could be provided to the IEPR team prior to completion of the final Review Report and to the ATRT before review of the final Decision Document. The public review of necessary state or Federal permits will also take place during this period. A formal State and Agency review will occur concurrently with the public review. However, it is anticipated that intensive coordination with these agencies will have occurred concurrent with the planning process. Upon completion of the review period, comments will be consolidated in a matrix and addressed, if needed. A comment resolution meeting will take place if needed to decide upon the best resolution of comments. A summary of the comments and resolutions will be included in the document. A plan for public participation will be developed early in the Feasibility Study which might identify informal as well as additional formal forums for participation in the Feasibility Study.

### 6. PLANNING CENTERS OF EXPERTISE COORDINATION

The appropriate PCX for this document is the National Flood Risk Management Center of Expertise located at SPD. This Review Plan will be submitted to the PCX for FRM Director, Eric Thaut, for review and comment. Since it was determined that this project is high risk, is required to produce an EIS, and will cost more than \$45 million, IEPR will be required. As such, the PCX will be asked to manage the IEPR review. For ATR, the PCX is requested to nominate the ATR team as discussed in paragraph 3.b. above. The approved Review Plan will be posted to the San Francisco District's public website. Any public comments on the Review Plan will be collected by the Office of Water Project Review (OWPR) and provided to the San Francisco District for resolution and incorporation if needed.

#### 7. APPROVALS

The PDT will carry out the Review Plan as described. The Project Planner will submit the plan to the PDT District Planning Chief for endorsement of MSC approval. Formal coordination with PCX for FRM will occur through the PDT District Planning Chief.

#### 8. POINTS OF CONTACT

Questions about this Review Plan may be directed to the San Francisco District Project Delivery Team Planning contacts, at (415) 503-6854 and (415) 503-6738, or to the Program Manager for the Planning Center of Expertise for Flood Risk Management, at (415) 503-6852.

#### **REVIEW PLAN**

#### UPPER PENITENCIA CREEK, SAN JOSE, CALIFORNIA FEASIBILITY STUDY FLOOD RISK MANAGEMENT

#### SAN FRANCISCO DISTRICT

# APPENDIX A STATEMENT OF TECHNICAL REVIEW

#### COMPLETION OF AGENCY TECHNICAL REVIEW UPPER PENITENCIA CREEK, SAN JOSE, CALIFORNIA FLOOD RISK MANAGEMENT

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

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

TBD		
NAME	Date	
Team Leader, Upper Penitencia Creek, San Jose		
Feasibility Study		
Agency Technical Review Team		

# CERTIFICATION OF AGENCY TECHNICAL REVIEW

A summary of all comments and responses is attached. of the resolution are as follows:	Significant concerns and the explanation
(Describe the major technical concerns, possible impac	ct and resolution)
As noted above, all concerns resulting from the independent fully resolved.	ndent technical review of the project have
Chief, Planning Branch	D-4
Chief, I failining Dranch	Date

#### **REVIEW PLAN**

### UPPER PENITENCIA CREEK, SAN JOSE, CALIFORNIA FEASIBILITY STUDY FLOOD RISK MANAGEMENT

#### SAN FRANCISCO DISTRICT

#### APPENDIX B

#### PRODUCT DELIVERY TEAM

Name	Discipline	Phone	Email
Tim Kelleher	Project Manager	415-503-6722	Timothy.e.Kelleher@usace.army.mil
	Sr. Project Planner		
	Jr. Project Planner		
	Plan Form Supt – MWH A/E		
	Civil Design – MWH A/E		
	Environmental Analysis		
	Hydrology		
	Hydraulic Design		
	Economics		
	Cost Engineering-MWH A/E		
	Real Estate/Acquisition		
	Real Estate/Appraisal		
	Cultural Resources		
	Geotechnical Engineering		
	Senior Project Manager, SCVWD		
	Project Manager, SCVWD		

Primary contact for this Review Plan.

## AGENCY TECHNICAL REVIEW TEAM

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

<sup>&</sup>lt;sup>1</sup>The cost engineering team member nomination will be coordinated with the NWW Cost Estimating Center of Expertise as required. That PCX will determine if the cost estimate will need to be reviewed by PCX staff.

## INDEPENDENT EXTERNAL PEER REVIEW PANEL

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

#### VERTICAL TEAM

Name	Discipline	Phone	Email
	District Support Team Lead		
	Regional Integration Team		

# PLANNING CENTER OF EXPERTISE FLOOD RISK MANAGEMENT

Name	Discipline	Phone	Email
	Program Manager, PCX Flood		
	Risk Management	415-503-6852	

## Review Plan Checklist

Date: 4/13/2009

Originating District: San Francisco Project/Study Title: Upper Penitencia

District POC:

FRM-PCX Reviewer:

MVN

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

	REQUIREMENT	REFERENCE	EVALUATION
Is the Review Plan (RP) a stand alone document?		EC 1105-2-410, Para 8a	Yes 🛛 No 🗌
а.	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?		a. Yes ⊠ No ☐ b. Yes ⊠ No ☐
b.	Does it include a table of contents?		c. Yes ⊠ No □
C.	Is the purpose of the RP clearly stated and EC 1105-2-410 referenced?		e. Yes⊠ No □
d.	Does it reference the Project Management Plan (PMP) of which the RP is a		f. Yes 🛛 No 🗌
e.	component?  Does it succinctly describe the three levels		g. Yes No No h. Yes No
	of peer review: District Quality Control (DQC), Agency Technical Review (ATR), and Independent Technical Peer Review (IEPR)?		Comments: Reviewer: Checklist Requirements 1a though 1h were sufficiently addressed
f.	Does it clearly state that DQC and ATR are required for all decision documents and that IEPR may be required?		and comply with ER 1105-2-410. Correct typo on page 3 of RP add "-" to EC 1105-2-
g.	Does it include a paragraph stating the title, subject, and purpose of the decision document to be reviewed?	EC 1105-2-410, Appendix B, Para 4a	410 and typo on page 6 under HEC-FDA model in second bullet.
h.	Does it list the names and disciplines of the Project Delivery Team (PDT)?*	-	been corrected.
memb apper	: It is highly recommended to put all team per names and contact information in an adix for easy updating as team members ge or the RP is updated.		

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

	f.	Does it address if the project/study is likely to have significant interagency interest?	EC 1105-2-410, Para 6c	f. Yes 🛛 No 🗌
	Is it	t likely? Yes⊠ No □		g. Yes 🛛 No 🗌
		es, IEPR is required.		h. Yes 🛛 No 🗌
	g.	Does it address if the project/study likely involves significant threat to human life	EC 1105-2-410, Appendix D,	i. Yes 🛛 No 🗌
		(safety assurance)?	Para 1b	j. Yes 🛭 No 🗌
	If y	t likely? Yes No Des, IEPR is required.  Does it provide an estimated total project cost?	EC 1105-2-410, Appendix D,	Comments: Reviewer: Evaluation Requirements 2a through 2j were sufficiently addressed.
	(be	nat is the estimated cost: \$100-200 M est current estimate; may be a range)  t > \$45 million? Yes  No  es, IEPR is required.	Para 1b	The estimated project cost is \$100M to \$200M which is well above the \$45M to require an IEPR and there is the threat of loss of human life if failure occurs. Put
	i.	Does it address if the project/study will likely be highly controversial, such as if there will be a significant public dispute as to the size, nature, or effects of the project or to the economic or environmental costs or benefits of the project?	EC 1105-2-410, Appendix D, Para 1b	a check in yes box for checklist evaluation item 2e since you did address in checklist that the project is not likely to have significant economic, environmental or social
		res, IEPR is required.		effects to nation. Also state in RP if not
		Does it address if the information in the decision document will likely be based on novel methods, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices?  it likely? Yes \Backsim No \Backsim required.	EC 1105-2-410, Appendix D, Para 1b	already there that these are not issues for the project  Checked 2e and added statement to RP indicating that economic, environmental, and social impact are not an issue for this project. See section 4, end of first paragraph, page 11.
3. pe	Do er r	es the RP define the appropriate level of eview for the project/study?	EC 1105-2-410, Para 8a	Yes No 🗌
	a.	Does it state that DQC will be managed by the home district in accordance with the Major Subordinate Command (MSC) and district Quality Management Plans?	EC 1105-2-410, Para 7a	a. Yes 🛛 No 🗌

b.	Does it state that ATR will be conducted or managed by the lead PCX?	EC 1105-2-410, Appendix D, Para 3a	b. Yes 🛛 No 🗌 c. Yes 🖾 No 🗍
	Does it state whether IEPR will be performed?	EC 1105-2-410, Appendix B, Para 4b	d. Yes ⊠ No ☐  e. Yes ⊠ No ☐ n/a ☐
	Does it provide a defensible rationale for the decision on IEPR?		Comments:
e.	Does it state that IEPR will be managed by an Outside Eligible Organization, external to the Corps of Engineers?	EC 1105-2-410, Para 7c	
	es the RP explain how ATR will be nplished?	EC 1105-2-410, Appendix B, Para 4I	Yes 🛛 No 🗌
a.	Does it identify the anticipated number of reviewers?	EC 1105-2-410, Appendix B, Para 4f	a. Yes No D
b.	Does it provide a succinct description of the primary disciplines or expertise needed for the review?	EC 1105-2-410, Appendix B, Para 4g	c. Yes No C
C.	Does it indicate that ATR team members will be from outside the home district?	EC 1105-2-410, Para 7b	e. Yes 🛛 No 🗌 f. Yes 🖾 No 🗌 n/a 🗍
d.	Does it indicate that the ATR team leader will be from outside the home MSC?	EC 1105-2-410, Para 7b	Comments: Reviewer: Checklist Requirements
e.	Does the RP state that the lead PCX is responsible for identifying the ATR team members and indicate if candidates will be nominated by the home district/MSC?	EC 1105-2-410, Appendix B, Para 4k(1)	3a through 3e were sufficiently addressed. RP states that IEPR will be performed and the IEPR panel will be
f.	If the reviewers are listed by name, does the RP describe the qualifications and years of relevant experience of the ATR team members?*	EC 1105-2-410, Appendix B, Para 4k(1)	by the OEO as indicated on page 2 of the RP. A strong rationale was provided for IEPR on
memb apper	: It is highly recommended to put all team per names and contact information in an adix for easy updating as team members ge or the RP is updated.		pages 11 and 12 of the RP. A more detailed description of disciplines rather than listing of disciplines should be included for ATR to assist PCX in allocating

		review resources.  table with discipline descriptions has been added. See page Section 3b, Table 1, on page 8.
5. Does the RP explain how IEPR will be accomplished?	EC 1105-2-410, Appendix B, Para 4k & Appendix D	Yes ⊠ No □ n/a □
<ul> <li>Does it identify the anticipated number of reviewers?</li> </ul>	EC 1105-2-410, Appendix B, Para 4f	a. Yes No D
b. Does it provide a succinct description of the primary disciplines or expertise needed for the review?	EC 1105-2-410, Appendix B, Para 4g	c. Yes No C
c. Does it indicate that the IEPR reviewers will be selected by an Outside Eligible Organization and if candidates will be nominated by the Corps of Engineers?	EC 1105-2-410, Appendix B, Para 4k(1) & Appendix D, Para 2a	Comments: Reviewer: A more detailed description of disciplines and expertise needed to assist PCX in allocating review resources. For
d. Does it indicate the IEPR will address all the underlying planning, safety assurance, engineering, economic, and environmental analyses, not just one aspect of the project?	EC 1105-2-410, Para 7c	example, Engineering discipline with focus on levee design or stability and experienced personnel in specific areas of disciplines. This will assist the PCX in determining which areas to focus and allocate review resources he number of reviewers has been added. More information regarding IEPR disciplines will be available at a later date and updates will be provided to FRM-PCX.
Does the RP address peer review of sponsor in-kind contributions?	+	Yes 🛛 No 🗌
a. Does the RP list the expected in-kind contributions to be provided by the sponsor?	EC 1105-2-410, Appendix B, Para 4j	a. Yes No

b. Does it explain how peer rev accomplished for those in-kin contributions?			Comments: Reviewer: Briefly list or address in- kind contributions to be provided by sponsor in the RP. If sponsor does not have input to be reviewed, then indicate in comments. IEPR review of sponsor in- kind services is addressed. This information has been added to the RP in section 4, paragraph 4, on page 12.
7. Does the RP address how the will be documented?	peer review		Yes 🛛 No 🗌
Does the RP address the red document ATR and IEPR co DrChecks?		EC 1105-2-410, Para 8g(1)	a. Yes ⊠ No □
b. Does the RP explain how the documented in a Review Re		EC1105-2-410, Appendix B, Para 4k(13)(b)	b. Yes No n/a c. Yes No n/a n/a
c. Does the RP document how responses to the IEPR Revieus be prepared?		EC 1105-2-410, Appendix B, Para 4I	d. Yes No n/a Comments: Reviewer: Checklist Requirements
d. Does the RP detail how the will disseminate the final IEF Report, USACE response, a materials related to the IEPF internet and include them in decision document?	PR Review and all other R on the	EC 1105-2-410, Para 8g(2) & Appendix B, Para 4I	7a through 7d, documentation of the peer review, are sufficiently addressed in the ATR and IEPR sections of the RP.
8. Does the RP address Policy C and Legal Review?	ompliance	EC 1105-2-410, Para 7d	Yes No Comments: Reviewer: Checklist Requirements for Policy Compliance and Legal Review are sufficiently addressed in the Section 1B(4) of the RP on page 2.
9. Does the RP present the tasks sequence (including deferrals), a reviews?	s, timing and and costs of	EC 1105-2-410, Appendix B, Para 4c &	Yes ⊠ No □

a. Does it provide a schedule for ATR including review of the Feasibility Scoping Meeting (FSM) materials, Alternative Formulation Briefing (AFB) materials, draft report, and final report?	EC 1105-2-410, Appendix C, Para 3g	a. Yes No D  b. Yes No D  c. Yes No n/a D
b. Does it include interim ATR reviews for key technical products?	EC 1105-2-410, Appendix C, Para 3g	d. Yes No Comments: Reviewer: Checklist Requirements
<ul> <li>c. Does it present the timing and sequencing for IEPR?</li> <li>d. Does it include cost estimates for the peer reviews?</li> </ul>		9a through 9d are suffficiently addressed in the RP. The estimated cost, \$100,000, for ATR is included on page 8 and for IEPR,\$300,000 on page 11 of the RP. A Schedule Timeline table is shown on page 9 of the RP. Recommend indicating that ATR should be completed before initiating IEPR to IEPR section of RP. This is addressed in section 4, 4th paragraph, on page 12, "Of these products that will undergo IEPR, all will be reviewed by the PDT and undergo DCQ and ATR prior to submittal for IEPR," Please advise if further clarification is required.
10. Does the RP indicate the study will address Safety Assurance factors (required for Flood Risk Management and Coastal Storm Damage Reduction projects)?	EC 1105-2-410, Para 2 & Appendix D, Para 1c	Yes No n/a  Comments: Reviewer: Checklist Requirements
Where failure leads to significant threat to human life     Novel methods\complexity\ precedent-setting models\policy changing conclusions     Innovative materials or techniques  Review Plan Checklist  7		for Safety Assurance factors are sufficiently addressed on page 3 and 11 of the RP. The consequence of a failure is high in terms of threat to life in populated portions of the floodplain and there  FRM-PCX Ver 11.06.08

	•	Design lacks redundancy, resiliency of robustness Unique construction sequence or acquisition plans Reduced\overlapping design construction schedule		is the potential for levee failure due to seepage.
100000000000000000000000000000000000000		pes the RP address model certification ements?	EC 1105-2-407	Yes 🛛 No 🗌
	a.	Does it list the models and data anticipated to be used in developing recommendations (including mitigation models)?	EC 1105-2-410, Appendix B, Para 4i	a. Yes 🛛 No 🗌
	b.	Does it indicate the certification/approval status of those models and if certification		b. Yes 🛛 No 🗌
		or approval of any model(s) will be needed?		c. Yes 🛛 No 🗌 n/a 🗌
	C.	If needed, does the RP propose the appropriate level of certification/approval for the model(s) and how it will be accomplished?		Comments: Reviewer: Checklist Requirements 11a through 11c are addressed in Section 2h of the RP. Recommend adding any possible environmental impact or mitigation models such as HEP HSI, HGM, etc. to the RP.  Added this information to section 2h, page 7.
		pes the RP address opportunities for participation?		Yes ⊠ No □
	a.	Does it indicate how and when there will be opportunities for public comment on the decision document?	EC 1105-2-410, Appendix B, Para 4d	a. Yes ⊠ No ☐ b. Yes ⊠ No ☐
	b.	Does it indicate when significant and	EC 1105-2-410,	c. Yes ☐ No ⊠
		relevant public comments will be provided to reviewers before they conduct their review?	Appendix B, Para 4e	d. Yes 🛛 No 🗌
	C.	Does it address whether the public, including scientific or professional societies, will be asked to nominate potential external peer reviewers?	EC 1105-2-410, Appendix B, Para 4h	Comments: Reviewer: Section 5, Public Review, addresses opportunities for public participation evaluation requirements 12a
	d.	Does the RP list points of contact at the home district and the lead PCX for inquiries about the RP?	EC 1105-2-410, Appendix B, Para 4a	through 12d. The point of contact for home district and PCX are included in Section 8.

3. Does the RP address coordination with the appropriate Planning Centers of Expertise?	EC 1105-2-410, Para 8a	Yes 🛛 No 🗌
<ul> <li>a. Does it state if the project is single or multipurpose? Single Multi</li> <li>b. Does it identify the lead PCX for peer review? Lead PCX: FRM</li> <li>c. If multi-purpose, has the lead PCX</li> </ul>	EC 1105-2-410,	a. Yes ⊠ No ☐  b. Yes ⊠ No ☐  c. Yes ⊠ No ☐ n/a ☐  Comments: Reviewer:
coordinated the review of the RP with the other PCXs as appropriate?	Appendix D, Para 3c	Coordination with appropriate PCX is addressed on pages 3 and 14. The single purpose is FRM.
14. Does the RP address coordination with the Cost Engineering Directory of Expertise (DX) in Walla Walla District for ATR of cost estimates, construction schedules and contingencies for all documents requiring Congressional authorization?	EC 1105-2-410, Appendix D, Para 3	Yes⊠ No □
Does it state if the decision document will require Congressional authorization?		a. Yes 🛛 No 🗌
b. If Congressional authorization is required, does it state that coordination will occur with the Cost Engineering DX?		b. Yes No n/a Comments: Revviewer: Checklist requirements 14a and 14b are addressed in footnote to ATR review in Appendix B. Recommend adding to text of RP. Added this information to section 3d1, page 8.
15. Other Considerations: This checklist highlights the minimum requirements for an RP based on EC 1105-2-410. Additional factors to consider in preparation of the RP include, but may not be limited to:		Comments: a. No b. No c. No d. No
a. Is a request from a State Governor or the head of a Federal or state agency to conduct IEPR likely?	EC 1105-2-410, Appendix D, Para 1b	
<ul> <li>Is the home district expecting to submit a waiver to exclude the project study from</li> </ul>	EC 1105-2-410, Appendix D,	

	IEPR?	Para 1d	
C.	Are there additional Peer Review requirements specific to the home MSC or district (as described in the Quality Management Plan for the MSC or district)?		
d.	Are there additional Peer Review needs unique to the project study?		

Additional Comments: Reviewer: Excellent RP was prepared. IEPR is required and a defensible rationale was presented. The complexity of the study and the supporting disciplines was also addressed. Additional detail (succinct description of vital disciplines and specific experience within discipline) should be provided in the RP to assist the PCX in allocating and focusing review resources for ATR and IEPR. See checklist requirement boxes for comments to be addressed. Also make sure all checklist boxes are checked in the Checklist document if issue is addressed in RP.

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Approval of RP(s) rests with Division Commanders, but management and coordination with the appropriate Planning Center of Expertise. The Flood Risk Management PCX has developed a review checklist for its RP coordination and management responsibilities. Below is a regional supplemental checklist identifying the regional quality management requirements from CESPD's QMP, Appendix C, Planning.

Following are review process principles from EC 1105-2-410, Review of Decision Documents:

- 1 Reviews significantly improve product quality
- 2 Peer review is concurrent with product development
- 3 Agency technical reviews by another district will be performed on all products
- 4 ATR teams should be chaired by another Division
- 5 Civil Works policy reviews must be consistent

#### CHECKLIST – Upper Penitencia Creek Feasibility Study P2 Project No. 104600

1. Is there a Technical Review Strategy Session identified early in the study process? (See Appendix C paragraph 8.2,)

SPN Response: Yes

SPD: Did not see mention of a TRS in the RP. RP should be revised to indicate if a TRSS is planned or if it has already occurred (including when it occurred).

SPN Response: This is an in-progress feasibility study that has already completed the FSM (F3) and ARC (F4) milestones. At that time a formal TRSS was not mandated, however, equivalent pre-review sessions were conducted to provide the independent technical review team with read ahead's and acclimate them to the feasibility study and its pertinent issues. Similar review sessions are planned to be conducted prior to the ATR of the AFB (F4A) milestone document.

SPD: Resolved. This should be indicated in the next version of the RP.

2. Are there any potential Continuing Authority Program (CAP) "spinoffs" identified, and the appropriate QCP identified for them?

SPN Response: No potential CAP "spinoffs" have been identified to date.

3. Are the review costs identified? for District Quality Control (DCQ), ATR, and Independent External Technical Review (IETR)?

SPN Response: Yes, costs have been identified for DQC, ATR and IETR

4. Does the RP identify seamless technical review (8.4) including supervisory oversight of the technical products? (8.5)

SPN Response: Yes, the RP identifies seamless technical review and includes supervisory oversight of the technical products.

5. Does the RP identify the recommended review comment content and structure? (8.5.4)

SPN Response: Yes

6. The RP should encourage face-to-face resolution of issues between PDT and reviewers. (8.5.5)

SPN Response: This will be conducted when possible. If the reviewers are at different locations, we will utilize any methods necessary, including email, VTC, and conference calls to resolve any issues that may arise between the PDT and reviewers.

7. And if issues remain, does the RP must identify an appropriate dispute resolution process? (8.6)

SPN Response: Yes

8. The RP must require documentation of all the significant decision and leave a clear audit trail. (8.5.6)

SPN Response: The RP identifies a clear method of documentation on significant decisions for review related issues. This method of documentation will provide a clear audit trail.

9. Does the RP identify all the requirements for technical certifications? (8.5.7)

SPN Response: Yes

10. Does the RP identify the requirement that without-project hydrology is certified at the Feasibility Scoping Meeting? (8.5.8)

SPN Response: Hydrology was certified during FSM

11. Does the RP fully address products developed by contractors? (8.10)

SPN Response: Yes

SPD: The RP did not seem to address products developed by contractors. If the Planning PDT member is a consultant, seems like there are at least some products that are to be developed by contractors. The RP should indicate the review process for products

developed by contractors.

SPN Response: The RP intended that products developed by USACE contractors would be included in the respective milestone documents and subject to all DQC, ATR, and IEPR requirements. The RP has been revised to explicitly state this. See Para 1B(1), pg 2; Para 3E pg. 9; and Para 4, pg. 12.

SPD: Resolved.

12. Is the need for a VE study identified and incorporated into the review process subsequent to the feasibility scoping meeting? (8.11)

SPN Response: We have held the feasibility scoping meeting in 2000. We are in the process of preparing for an F4 conference. This question is N/A.

SPD: Since the RP indicates (Part 3, E. (2) that the Alternative Review Conference milestone has been met, you probably mean the F4a in the response above. Please revise either the RP or this checklist for accuracy.

Considering the length of time since the FSM, the District should be prepared in future milestones to address possible changed conditions since the last milestone and if there is a resulting significant affect to key study assumptions that could affect the analysis and ultimate recommendation.

SPN Response: Revision to initial SPN Response: The AFB Documents will verify key study assumptions from the FSM.

SPD: Resolved.

13. Does the RP include a Feasibility Alternative Review Milestone, where CESPD buyin to the recommended plan is obtained. (12.1)

SPN Response: Yes

14. The RP should identify the final public meeting milestone. (See Appendix C, Enclosure 1, SPD Milestones)

SPN Response: The final public meeting milestone will be met during the public review period, as indicted in the RP.

15. Does the RP identify the report approval process and if there is a delegated approval authority?

SPN Response: Yes

Additional comments:

16. Part 1.B.4, last paragraph, appears to be out of place.

SPN Response: This language is part of the template and would seem to provide clarification on policy and legal compliance reviews and they relate to DQC, ATR, and IEPR. At this time and for consistency with other RP's, we would like to retain this paragraph.

SPD: Correction to original comment: Extra text follows Part 1.B.7. Safety Assurance Review. "The project lies entirely in urban San Jose. Development in the study area includes residential homes, commercial units, and high technology and biotechnology firms. Planning is underway to convert the rail line in the downstream reach to a Bay Area Rapid Transit (BART) line. The study area is expected to further develop resulting in higher expected annual flood damage under the future no action plan" If this is out of place, suggest revising as appropriate. (This does not hold up approval of the RP.)

17. For awareness, the RP indicates that the study is single-purpose FRM and that the study area has ecosystem problems, particularly species issues, which will attempt to be addressed through consideration of environmentally sustainable features. Note that Table 1: Agency Technical Review specifies that the experience needed for Plan Formulation includes multiple plan formulation. This is certainly a good idea. While doing the study, the PDT and particularly the planner, will need to be aware of the line between environmentally sustainable FRM features that yield incidental ecosystem benefits vs. ecosystem restoration features which require justification based on ecosystem restoration benefits.

#### SPN Response: Concur

18. Part 3, E. (2). It would be good to specify in the RP when past milestone requirements were met; this will help highlight for all the possible need to update changed or outdated information that may be key to assumptions and formulation.

SPN Response: Dates for past milestones will be included as soon as practicable and well before preparation of the ATR of the AFB Documents, the next major milestone. In addition previous FSM and ARC documents as well as their respective ATR's will be made available to the AFB ATR team. In light of the urgency and ramifications of withholding of FY09 work allowances and distribution of funds, recommend that these revisions be made after SPD MSC approval is provided.

SPD: Resolved.

19. Use of the phrases "flood control" and "flood protection" should be replaced with "flood risk management" and "flood risk reduction" as appropriate. This will give the public a better understanding of goals and potential accomplishments of a project.

SPN Response: These phrases have been replaced.

SPD: Resolved.

20. Part 4, 3<sup>rd</sup> paragraph. This section states that the reasons IEPR is triggered are cost and inclusion of an EIS. However, Part 6 states that the reason IEPR is required is due to high risk. The RP should be revised to be consistent within itself.

SPN Response: The RP was amended. Part 4 and 6 are now consistent.

SPD: Resolved.

20. Part 4, 4<sup>th</sup> paragraph. This section that states which disciplines are to undergo IEPR is not consistent with the IEPR table of disciplines in Appendix B to this RP.

SPN Response: Section 4 has been amended for consistency with the IEPR table of disciplines in Appendix B.

SPD: Resolved.

21. Part 4, C. The RP should be revised to indicate that the PCX "concurs" with RP's as opposed to "approves."

SPN Response: Concur. RP will be revised accordingly.

SPD: Resolved.

22. Part 8. A District p.o.c. for the RP should be identified; it is not appropriate to have a consultant represent the Corps.

SPN Response: Concur. Revised this section and Appedix B-Project Delivery Team table to reflect contact information for Corps project planners

SPD: Resolved.