

PEER REVIEW PLAN
ALISO CREEK MAINSTEM ECOSYSTEM RESTORATION FEASIBILITY STUDY
LOS ANGELES DISTRICT

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**US Army Corps
of Engineers** ®
Los Angeles District

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1. PURPOSE AND REQUIREMENTS

A. Purpose. This document outlines the Review Plan for the Aliso Creek Mainstem Ecosystem Restoration Feasibility study. The process for this feasibility study effort is anticipated to culminate in a decision document to Congress recommending authorization of a new project. A Project Management Plan (PMP) has been prepared for this study, for which this Review Plan is a component.

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. This EC applies to all feasibility studies and reports and any other reports that lead to decision documents that require authorization by Congress, and would therefore pertain to the Aliso Creek Mainstem Ecosystem Restoration Feasibility study.

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

B. Requirements. EC 1105-2-410 outlines the requirement of the three review approaches (DQC, ATR, and IEPR). EC 1105-2-408 provides guidance on Corps Planning Centers of Expertise (PCX) involvement in the approaches. This document addresses review of the decision document as it pertains to both approaches and planning coordination with the appropriate PCX. As ecosystem restoration is the sole purpose of the Aliso Creek Mainstem Ecosystem Restoration Feasibility study, coordination will be conducted with the National Ecosystem Restoration Center of Expertise (ECO-PCX). However since potential induced flooding effects associated with an array of restoration alternatives will need to be assessed, the ECO-PCX will coordinate with the National Flood Risk Management Center of Expertise (FRM-PCX) as appropriate.

(1) District Quality Control (DQC). DQC is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP) for the study. It is managed in the Los Angeles District (home district) and may be conducted by staff in the home district as long as they 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 approval by the District Commander. For the Aliso Creek Mainstem Ecosystem Restoration Feasibility study, non-PDT members and/or supervisory staff will conduct this review for major draft and final products,

including products provided by the non-Federal sponsors as in-kind services following review of those products by the PDT. It is expected that the Major Subordinate Command (MSC)/District QMP address the conduct and documentation of this fundamental level of review. A Quality Control Plan (QCP) is included in the PMP for the subject study and addresses DQC; DQC is not addressed further in this Review Plan. DCQ is required for this study.

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

(3) Independent External Peer Review (IEPR). 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 Aliso Creek Mainstem Ecosystem Restoration Feasibility Study. IEPR will be required for this study as specific criteria warranting its need, as described in subsequent sections of this Review Plan, have been met.

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

expected to be knowledgeable of Army and administration policies, 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 ECO-PCX. The ECO-PCX is responsible for the accomplishment and quality of ATR and IEPR for the Aliso Creek Mainstem Ecosystem Restoration Feasibility study. The ECO-PCX may conduct the review or manage the review to be conducted by others. The ECO-PCX will also coordinate with the FRM-PCX as appropriate.

(6) Review Plan Approval and Posting. 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 Los Angeles District will post it to its district public website and notify SPD and the ECO-PCX.

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

2. PROJECT DESCRIPTION

A. Decision Document. The purpose of the study is to identify ecosystem degradation-related issues in the lower Aliso Creek Mainstem study area and to evaluate opportunities for reestablishing natural ecosystem functions, leading to a tentatively recommended restoration plan. The decision document, to be called the *Aliso Creek Mainstem Ecosystem Restoration Feasibility Study*, will provide planning, engineering, and implementation details of the recommended plan to allow final design and construction to proceed subsequent to the approval of the plan. The study is a General Investigations effort undertaken to evaluate structural and non-structural ecosystem restoration measures. The study is cost shared 50 percent Federal, 50 percent non-Federal with the non-Federal Sponsor, Orange County Public Works. There are no anticipated Continuing Authority Program (CAP) "spinoffs" associated with this feasibility study effort.

B. General Site Description. The Aliso Creek watershed is located in southern Orange County, California and encompasses an area of approximately 35 square miles. It drains a long, narrow coastal watershed from the Cleveland National Forest to the Pacific Ocean. The mainstem of Aliso Creek is approximately 19.5 miles long.

C. Project Scope. In October 2002, the Los Angeles District completed the Aliso Creek Watershed Management Study that resulted in one of the recommendations to pursue a more focused feasibility study effort on ecosystem restoration opportunities along the lower Mainstem. The scope of the feasibility study will include about a 7-mile reach of the Aliso Creek Mainstem from the Pacific Ocean to just north of Pacific Park Drive. The majority of the project will lie

within a regional wilderness park, a designated wildlife sanctuary home to many rare and endangered plants and wildlife. The lower portion (confluence area) of Wood Canyon Creek, a tributary to Aliso Creek will also be included in the study. This creek has experienced some degradation issues as a result of effects from Aliso Creek.

D. Problems and Opportunities. The degradation to Aliso Creek stems from development of the watershed with attendant elimination of channel meanders in certain locations, alteration of the natural hydrologic and sediment regimes, and a resultant channel destabilization culminating in major downcutting of the mainstem creek and tributaries, loss of overflow to the adjacent floodplain, and destruction of habitats associated with the creek and floodplain. There are opportunities to improve riparian and floodplain function and habitat. Poor water quality throughout the watershed and in the nearshore zone immediately adjacent to the creek mouth is also a critical problem. Identified water quality problems include aspects that affect public use and enjoyment of the resource, and that of wildlife and habitat degradation. There is an opportunity and means to improve water quality as an outcome of the measures described in the following paragraph.

E. Potential Restoration Methods and Estimated Project Cost. Potential ecosystem restoration measures that will be considered appropriate include pool and riffle grade control structures, multi-purpose basins to act as detention/retention structures (with ungated outlets) and to provide areas for habitat creation, channel recontouring, and non-native vegetation eradication. Estimated project costs are in the \$25M to \$40M range.

F. Need for Environmental Impact Statement. The potential project will likely have significant beneficial effects to the Nation in terms of ecosystem restoration. However, structural measures may impact some existing habitat for the benefit of promoting the creation or restoration of a greater area with higher quality habitat. Environmental compliance will need to be fulfilled by the preparation of an Environmental Impact Statement (EIS), and an Environmental Impact Report (EIR). Significant interagency interest is expected, as well as public interaction and potential dispute.

G. Project Delivery Team. The PDT is comprised of those individuals directly involved in the development of the decision document. Individual contact information and disciplines are presented in appendix B. In accordance with the PMP, it is planned that the non-Federal sponsors will contribute in-kind services for project management; public involvement, coordination and outreach; GIS graphics; and for participation in reviews. All in-kind work products will undergo review by the PDT for a determination of adequacy; products will ultimately undergo DQC.

H. 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.

I. Model Certification. The USACE Planning Models Improvement Program (PMIP) was established in 2003 to assess the state of planning models in the USACE and to make recommendations to assure that high quality methods and tools are available to enable informed decisions on investments in the Nation's water resources infrastructure and natural environment. The main objective of the PMIP is to carry out "a process to review, improve and validate analytical tools and models for USACE Civil Works business programs." In carrying out this initiative, a PMIP Task Force was established to examine planning model issues, assess the state of planning models in the Corps, and develop recommendations on improvements to planning models and related analytical tools. The PMIP Task Force collected the views of Corps leaders and recognized technical experts, and conducted investigations and numerous discussions and debates on issues related to planning models. It

identified an array of model-related problems, conducted a survey of planning models, prepared papers on model-related issues, analyzed numerous options for addressing these issues, formulated recommendations, and wrote a final report that is the basis for the development of EC 1105-2-407. 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 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 EC 1105-2-407, 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 subparagraphs. This Circular does not cover engineering models used in planning which will be certified under a separate process to be established under SET.

Most of the models to be employed in the Aliso Creek Mainstem Ecosystem Restoration Feasibility Study have either been developed by or for the USACE. Model certification and approval for all identified planning models will be coordinated through the PCX as needed. Project schedules and resources will be adjusted to address this process for certification and PCX coordination. They are:

1. HEC-FDA 1.2.4: 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:
 - o Provides a repository for both the economic and hydrologic data required for the analysis
 - o Provides the tools needed to understand the results
 - o Calculates the Expected Annual Damages and the Equivalent Annual Damages
 - o Computes the Annual Exceedence Probability and the Conditional Non-Exceedence Probability
 - o Implements the risk-based analysis procedures contained in EM 1110-2-1619

2. Various Habitat Evaluation Procedure models. The ECO-PCX has responsibility for approving ecosystem output methodologies for use in ecosystem restoration planning and mitigation planning. The ECO-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 ECO-PCX during the study to identify appropriate models and certification approval requirements. The District will propose to use Combined Habitat Assessment Protocols (CHAP) as the habitat evaluation method. CHAP is an evaluation tool used to measure the relative value of ecological resources of concern (species, habitats and functions) in quantitative, non-monetary terms (habitat units). CHAP is a regional habitat accounting method, and will evaluate the local ecological resources providing results in local habitat units. Habitat unit quantification provides a direct assessment of the net difference between the No Action ('without-project') condition and an alternative plan ('with-project') condition. This allows for a comparison of net benefits for an array of alternatives.

3. IWR-Planning Suite (Certified). This software assists with the formulation and comparison of alternative plans. While IWR-PLAN was initially developed to assist with environmental restoration and watershed planning studies, the program can be useful in planning studies addressing a wide variety of problems. IWR-PLAN can assist with plan formulation by combining solutions to planning problems and calculating the additive effects of each combination, or "plan." IWR-PLAN can assist with plan comparison by conducting cost effectiveness and incremental cost analyses, identifying the plans which are the best financial investments and displaying the effects of each on a range of decision variables.

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

1. MCACES or MII: These are cost estimating models.
2. HEC-HMS: By applying this model the PDT is able to:
 - o Define the watersheds' physical features
 - o Describe the metrological conditions
 - o Estimate parameters
 - o Analyze simulations
 - o Obtain GIS connectivity
3. 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
 - o Hydraulic Analysis
 - o Data storage and Management
 - o Graphics and reporting
4. HEC-2: The HEC-2 program computes water surface profiles for one-dimensional steady, gradually varied flow in rivers of any cross section.
5. UTEXAS4: This model is used to conduct slope stability analysis

3. AGENCY TECHNICAL REVIEW PLAN

For feasibility studies, ATR is managed by the PCX. For this feasibility study, due to the emphasis on ecosystem restoration, the ECO-PCX will identify individuals to perform ATR.

A. General. An ATR team leader from outside of the Southern Pacific Division (SPD) region will be designated to lead the ATR process. The ATR team leader for this study 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 Study Manager, providing a summary of critical review comments, collecting grammatical and editorial comments from the ATR team (ATRT), ensuring that the ATRT has adequate funding to perform the review, facilitating the resolution of the comments, and certifying that the ATR has been conducted and resolved in accordance with policy. ATR will be conducted for project planning; environmental compliance; economics; hydrology, hydraulic design and sediment transport; civil design; geotechnical engineering; cost engineering; real estate; cultural resources; reviews of more specific disciplines may be identified if necessary.

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

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

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

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

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

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

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

(6) PDT 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 by way of a government order. The Study Manager will work with the ATR team leader to ensure that adequate funding is available and is commensurate with the level of review needed. The current cost estimate for this review is in the range of \$ 120,000 to \$180,000. Any funding shortages will be negotiated on a case by case basis and in advance of a negative charge occurring.

(2) The ATR team leader shall provide organization codes for each team member 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 ATR team leader to any possible funding shortages.

E. Timing and Schedule

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

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

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

(4) The PDT will hold a “page-turn” session to review the draft report to ensure consistency across the disciplines and resolve any issues prior to the start of 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 as in-kind services by the non-Federal sponsors.

ATR Timeline

Task	ATR Team Involvement	Date
Participation in TRSS	X	May 2009
Public Scoping Meeting		May 2009
ATR Feasibility Scoping Meeting documentation	X	June 2009
ECO-PCX Model Certification		June 2009
Feasibility Scoping Meeting (FSM)	ATR- lead only	July 2009
ATR Alternatives Analyses Briefing documentation (SPD Milestone)	X	Feb 2010
SPD Alternatives Analyses Briefing (SPD Milestone)	ATR- lead only	Mar 2010
ATR Alternative Formulation Briefing Documentation	X	June 2010
Alternative Formulation Briefing (AFB)	ATR lead only	July 2010
IEPR of Draft Report		July 2010
ATR of Draft Report	X	Oct 2010
Public Review of Draft Report		Nov 2010
SPD In-Progress Review		Jan 2011
Final Public Meeting		Jan 2011
ATR of Final Report	X	Feb 2011
Feasibility Review Conference	ATR-lead only	Mar 2011

ATR Certification Final Report	X	Spring 2011
Final Report to SPD		Spring 2011
DE Transmittal of Final Report		Summer 2011
Civil Works Review Board		Summer 2011
State and Agency Review of Final Report		Fall 2011
Chief's Report to ASA(CW)		Fall 2011
ASA(CW) Memorandum to OMB		Winter 2011

F. Review

(1) ATRT responsibilities are as follows:

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

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

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

(d) Review comments shall contain these principal elements:

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

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

(2) PDT Team responsibilities are as follows:

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

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

G. Resolution

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

(2) Reviewers may “agree to disagree” with any comment response and close the comment with a detailed explanation. If reviewer and responder cannot resolve a comment, it should be brought to the attention of the ATR team leader and, if not resolved by the ATR team 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 team 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.

H. Certification

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

I. Alternative Formulation Briefing (AFB)

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

4. INDEPENDENT EXTERNAL PEER REVIEW PLAN

A. General. This decision document will present the details of a feasibility study undertaken to evaluate structural and non-structural ecosystem restoration measures to address problems in the study area. EC 1105-2-408 set forth and EC 1105-2-410 reaffirmed thresholds that trigger IEPR: “In cases where there are public safety concerns, a high level of complexity, novel or precedent-setting approaches; where the project is controversial, has significant interagency interest, has a total project cost greater than \$45 million, or has significant economic, environmental and social effects to the nation, IEPR will be conducted.”

B. Potential Project Challenges. Ecosystem restoration projects are challenging because they are often one-of-a-kind. The challenge for restoration in lower Aliso Creek will be to find an approach which balances the effects of the post urbanization higher runoff/lower sediment supply regime that is causing channel and bank degradation with achieving a stream restoration goal that is considered to be in a least degraded and most ecologically dynamic state possible suitable for the natural setting of a regional wilderness park. As there will likely be significant interagency and stakeholder interest, a consensus building approach will need to be successfully developed in

the plan formulation and evaluation process in order to arrive at a viable and defensible restoration solution.

C. Project Risks. For the assessment of risk, the potential to induce flooding will need to be evaluated and appropriate measures taken to minimize risk to public safety and damage to downstream structures and infrastructure. The number of structures to be inundated with the study area is limited to several utility maintenance facilities and a golf resort. Risk associated with ecosystem restoration consists of weighing the benefits and uncertainties associated with using one restoration technique over another with regard to project cost, performance or ecological success. Monitoring with respect to project performance and achieving an output objective will be required. The effectiveness of revegetation efforts and eradication of exotic species are also uncertainties that need to be monitored, and as a result an adaptive management plan will need to be developed.

D. Magnitude of Risks. For reasons described in the preceding paragraphs, the magnitude of this project is determined as moderately high.

E. Level of Public Controversy. It is anticipated that there will be some level of public controversy. As a significant part of the project lies within a wilderness park, there is the possibility that some existing habitat may be adversely impacted for the benefit of promoting the creation or restoration of a greater area of higher quality habitat. Additionally, any efforts that will lead to channel stabilization within Aliso Creek, should be demonstrated not to adversely impact sand nourishment to Aliso Beach. A sound assessment and good communication through public outreach will be needed to successfully quell any public concern with the project.

F. Level of Influential Scientific Information. The document will contain a highly influential scientific assessment related to complex hydraulic, riverine sediment transport, and ecological concepts in the context of a very dynamic coastal riverine system with a large diversity of vegetation communities and wildlife species affected by degradation stemming from urban development. The scientific assessment will need to be defensible and will be subject to review by many federal, state, and local agencies, the environmental resource agencies, interest groups and other stakeholders. As the study will seek to provide ecosystem restoration incorporating historical attributes, a highly scientific assessment will be necessary to quantify net changes (both beneficial and adverse) between existing conditions and all alternative plans considered, with the goal of selecting a recommended plan that is viable and economically justified.

G. Need for IEPR. As an EIS will be developed for this study, and for reasons described above, an IEPR will be conducted. IEPR is currently estimated to be \$120,000. IEPR is a project cost. The IEPR panel review will be Federally funded. In-house costs associated with obtaining the IEPR panel contract as well as responding to IEPR comments will be cost shared expenses. It is not anticipated that the public, including scientific or professional societies, will be asked to nominate potential external peer reviewers.

Disciplines that are anticipated to undergo IEPR are hydrology, hydraulic design and sediment transport; geotechnical engineering, ecological sciences, and economics. Of these products that will undergo IEPR, all will be reviewed by the PDT and undergo DCQ prior to submittal for IEPR. This includes products that are produced by the non-Federal sponsors as in-kind services.

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

I. Products for Review. Interim products for hydrology, hydraulic design and sediment transport, geotechnical engineering, ecological sciences, and economics assessment will be

provided before the draft report is released for public review. The full IEPR panel will receive the entire draft feasibility report, environmental impact statement and all technical appendices 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 Los Angeles 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.

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

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

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

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

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

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

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

(6) The IEPR panel shall produce a final Review Report to be provided to the PDT not later than 60 days after the close of the public and agency review of the draft report. This report shall be scoped as part of the effort to engage the IEPR panel. The Los Angeles 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.

K. Funding

The ECO-PCX will identify someone independent from the PDT to scope the IEPR and develop an Independent Government Estimate. The Los Angeles District will provide funding to the IEPR panel.

5. PUBLIC AND AGENCY REVIEW

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

6. PLANNING CENTERS OF EXPERTISE COORDINATION

The appropriate primary PCX for this document is the National Ecosystem Restoration Center of Expertise (ECO-PCX) located at MVD. The ECO-PCX will coordinate with the National Flood Risk Management Center of Expertise (FRM-PCX) at SPD, as appropriate. This Review Plan will be submitted to the ECO-PCX for review and comment. It was determined that an IEPR will be required. As such, the ECO-PCX will be asked to manage the IEPR review. For ATR, the ECO-PCX is requested to nominate the ATR team as discussed in paragraph 3.b. above. The approved Review Plan will be posted to the Los Angeles 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 Los Angeles District for resolution and incorporation if needed.

7. COST ENGINEERING DIRECTORY OF EXPERTISE COORDINATION

The primary PCX will coordinate with the Cost Engineering Directory of Expertise (DX) at the Walla Walla District to conduct reviews (ATR) of cost estimates, construction schedules and contingencies. The Cost Engineering DX will assign the reviewer(s) to the ATR team and will utilize USACE personnel and/or the private sector to assure highly qualified persons are available to conduct these reviews. In cases where the Cost Engineering DX identifies the need for IEPR, it will inform the lead PCX and will assist with establishing the cost for the IEPR.

8. APPROVALS

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

9. POINTS OF CONTACT

Questions about this Review Plan may be directed to Mr. Jonathan Vivanti, Los Angeles District Project Delivery Team Planning contact, at (213) 452-3809, or at jonathan.d.vivanti@usace.army.mil, or to Ms. Jodi Staebell, ECO-PCX, Operations Director, at (309) 794-5448, or jodi.k.staebell@usace.army.mil.

REVIEW PLAN

**ALISO CREEK MAINSTEM , CALIFORNIA
ECOSYSTEM RESTORATION
FEASIBILITY STUDY**

LOS ANGELES DISTRICT

**APPENDIX A
STATEMENT OF TECHNICAL REVIEW**

**COMPLETION OF AGENCY TECHNICAL REVIEW
ALISO CREEK MAINSTEM , CALIFORNIA
ECOSYSTEM RESTORATION FEASIBILITY STUDY, ENVIRONMENTAL IMPACT
STATEMENT/ENVIRONMENTAL IMPACT REPORT AND APPENDICES**

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

TBD
NAME
Team Leader, Aliso Creek Mainstem
Feasibility Study
Agency Technical Review Team

Date

**REVIEW PLAN
ALISO CREEK MAINSTEM, CALIFORNIA
ECOSYSTEM RESTORATION FEASIBILITY STUDY
LOS ANGELES DISTRICT**

APPENDIX B

PROJECT DELIVERY TEAM MEMBERS

Name	Discipline	Phone	Email
Kerry Casey (lead) Sharon Garcia	Hydrology/Hydraulics and Sediment Transport	213-452-3574 213-452-3552	Kerry.T.Casey@usace.army.mil Sharon.L.Garcia@usace.army.mil
Steve Dibble	Cultural Resources	213-452-3849	David.S.Dibble@usace.army.mil
Eldon Kraft	Project Manager	213-452-4004	Eldon.J.Kraft@usace.army.mil
Jon Vivanti	Plan Formulation	213-452-3809	Jonathan.D.Vivanti@usace.army.mil
Juan Dominguez	Cost Estimating	213-452-3737	Juan.A.Dominguez@usace.army.mil
Debbie Lamb	Environmental Coordinator	213-452-3798	Deborah.L.Lamb@usace.army.mil
Tom Keeney	Biology	213-452-3875	Thomas.W.Keeney@usace.army.mil
Paul Beaver	Geotechnical Engineering	213-452-3588	Paul.R.Beaver@usace.army.mil
Jeff Devine	Geology	213-452- 3579	Jeffrey.D.Devine@usace.army.mil
Joseph Lamb	Socio-Economics	213-452-3819	Joseph.J.Lamb@usace.army.mil
Frank Mallette	Civil Design	213-452-3667	Frank.B.Mallette@usace.army.mil
Jason Lambert	Regulatory	213-452-3634	Jason.P.Lambert@usace.army.mil
Pete Garcia	Real Estate	213-452-3131	Pete.N.Garcia@usace.army.mil

ATR TEAM MEMBERS¹

Name	Discipline	Phone	Email
TBD	ATR Lead/Plan Formulation		@usace.army.mil
TBD	Civil Design		@usace.army.mil
TBD	Biology/NEPA		@usace.army.mil
TBD	Hydrology/Hydraulics and Sediment Transport		@usace.army.mil
TBD	Socio-Economics		@usace.army.mil
TBD	Cost Engineering ²		@usace.army.mil
TBD	Real Estate		@usace.army.mil
TBD	Cultural Resources (Archeology)		@usace.army.mil
TBD	Geotechnical Engineering		@usace.army.mil
TBD	Geology		@usace.army.mil

¹ All ATR team members are at senior level positions of their respective disciplines and have a minimum of 10 years experience in their field of expertise.

² The cost engineering team member nomination will be coordinated with the Cost Estimating Directory of Expertise (DX) as required. The Directory will decide if the cost estimate will need to be reviewed by Directory Staff.

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INDEPENDENT EXTERNAL PEER REVIEW PANEL

Name	Discipline	Phone	Email
TBD	Hydrology		
TBD	Hydraulic Design/Sediment Transport		
TBD	Ecological Sciences		
TBD	Geotechnical Engineering		
TBD	Economics		

VERTICAL TEAM

Name	Discipline	Phone	Email
Paul Bowers	District Support Team Mgr	415-503-6556	Paul.w.bowers@usace.army.mil
Ken Zwickl	Regional Integration Team	202-761-4085	Kenneth.J.Zwickl@usace.army.mil

PLANNING CENTER OF EXPERTISE

Name	Discipline	Phone	Email
Jodi Staebell ¹	Operations Director, ECO-PCX	309-794-5448	Jodi.K.Staebell@usace.army.mil

Eric Thaut	Program Manager, FRM-PCX	415-503-6852	Eric.W.Thaut@usace.army.mil
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¹Primary PCX is ECO-PCX, who will coordinate with FRM-PCX as appropriate.