
REVIEW PLAN

**GRAYSON and MURDERER'S CREEKS, CALIFORNIA
FEASIBILITY STUDY**

SACRAMENTO DISTRICT



**US Army Corps
of Engineers®**

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REVIEW PLAN

GRAYSON and MURDERER'S CREEKS, CALIFORNIA FEASIBILITY STUDY

1. PURPOSE AND REQUIREMENTS

A. Purpose. This document outlines the Review Plan for the Grayson and Murderer's Creeks, California, Feasibility Study (Study). The study process is anticipated to culminate in a decision document that will require additional Congressional authorization. Engineer Circular (EC) 1105-2-410, *Review of Decision Documents*, dated 22 August 2008, defines the technical and overall quality control review processes for decision documents. It formally distinguishes between technical review performed by in-district (District Quality Control, DQC) and out-of-district resources (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 requirements for the three review approaches (DQC, ATR, and IEPR). This plan addresses review of the decision document as it pertains to the three approaches and planning coordination with the appropriate PCX. The Study will investigate flood risk management (FRM) and ecosystem restoration issues in the study area. Due to existing development within the study area, any proposed ecosystem restoration measures are likely to be minor. Therefore, the FRM-PCX is 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 2008 revised Project Management Plan (PMP) for the Study (to which this Review Plan will ultimately be appended). It is managed in the Sacramento District and may be conducted by in-house staff as long as the reviewers are not doing the work involved in the study, including contracted work that is being reviewed. Basic quality control tools include the MSC and District Quality Management Plans (QMPs) providing for seamless review, quality checks and reviews, supervisory reviews, Project Delivery Team (PDT) reviews, certification of without-project hydrology prior to the Feasibility Scoping Meeting, a Value Engineering study based on the Alternative Review Conference pre-conference documentation, etc. Additionally, the PDT is responsible for a complete reading of the report to assure the overall integrity of the report, technical appendices and recommendations before approval by the District Commander. The Major Subordinate Command (MSC)/District are directly responsible for the QM and QC respectively, and to conduct and document this fundamental level of review. A Quality Control Plan (QCP) is included in the PMP for the subject study and addresses DQC by the MSC/District; DQC is not addressed further in this Review Plan. DQC is required for this study.

(2) Agency Technical Review. EC 1105-2-410 recharacterized ATR (which replaces the level of review formerly known as Independent Technical Review) as an in-depth review managed within USACE and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of a project/product. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles

and professional practices. The ATR team reviews the various work products and assures that all the parts fit together in a coherent whole. ATR teams will be comprised of senior USACE personnel (Regional Technical Specialists (RTS), etc.) and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC. EC 1105-2-410 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 Study. ATR is required for this study.

(3) Quality Control and Agency Technical Review of Contractor Products. In accordance with SPD Regulation 1110-1-8, SPD Quality Management Plan, Section 6.13, contractors shall be responsible for quality control of their work in order to maintain contractor responsibility. The QCP for a contractor's work products shall be reviewed and approved by the responsible function chief at the District. A quality control certification shall be provided for all contractor work products. The District will perform a PDT-review of all contractor work products for scope compliance, but agency technical review of the contractor's work will be performed only for special cases when special expertise is required. In accordance with Section 8.10 of Appendix C of the SPD QMP, the ATR team will perform an independent quality assurance review to ensure that contractor products are in compliance with applicable laws, regulations and sound technical practices.

(4) Independent External Peer Review. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. IEPR is managed by an outside eligible organization (OEO) that is described in the Internal Review Code Section 501(c)(3), is exempted from Federal tax under Section 501(a), of the Internal Revenue Code of 1986; is independent; is free from conflicts of interest; does not carry out or advocate for or against Federal water resources projects; and has experience in establishing and administering IEPR panels. The scope of review will address all the underlying planning, engineering, including safety assurance, economics, and environmental analyses performed, not just one aspect of the project. The IEPR will be on the technical aspects of the project, rather than agency and Administration policies. This Review Plan outlines the planned approach to meeting this requirement for the Study. Grayson and Murderer's Creeks is a minor tributary to lower Walnut Creek, with maximum flows near the minimum magnitude required for Corps involvement, and the risks associated with the project are low. The magnitude and risk of the project do not require IEPR. However, EC 1105-2-410 requires IEPR for any project for which an Environmental Impact Statement (EIS) is prepared. An EIS will be integrated into the Grayson and Murderer's Creeks Feasibility Study. Therefore, IEPR is required for this study.

(5) Policy and Legal Compliance Review. In addition to the technical reviews, decision documents will be reviewed throughout the study process for their compliance with law and policy. These reviews culminate in Washington-level determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the Chief of Engineers. Guidance for policy and legal compliance reviews is addressed further in Appendix H, ER 1105-2-100. Technical reviews described in EC 1105-2-410 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 AFB pre-conference documentation, and the draft and final Feasibility Report and EIS/EIR.

(6) Planning Center of Expertise (PCX) Coordination. EC 1105-2-410 outlines 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 FRM-PCX is responsible for the accomplishment and quality of ATR and IEPR for the Study. The FRM-PCX may conduct the review or manage the ATR and IEPR reviews to be conducted by others.

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

(8) Safety Assurance Review (SAR). In accordance with Sections 2034 and 2035 of WRDA 2007, EC 1105-2-410 and pending additional guidance all projects addressing flooding or storm damage reduction must undergo a SAR during design and construction. Safety assurance factors (significant threat to human life, project cost thresholds, etc.) must be considered in the planning study phase and in all reviews for those studies. Updated guidance on the civil works review process including implementation guidance for Sections 2034 and 2035 is under development. This study will address safety assurance factors, which at a minimum will be included in the draft report. Prior to preconstruction engineering and design (PED) of the project identified for construction, a PMP will be developed that will include SARs with the selection of external panels to perform the IEPRs during design and construction.

2. STUDY INFORMATION

A. Decision Document. The Grayson and Murderer's Creeks, California feasibility study is investigating flood damage reduction, ecosystem restoration and recreation in the Grayson Creek sub-watershed of the Walnut Creek watershed. The ecosystem restoration and recreation measures that are being considered would be secondary to the flood damage reduction objective. The feasibility phase of this project is cost shared 50 percent Federal, 50 percent non-Federal with the project sponsor, the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD). The resulting decision document will be an integrated Feasibility Report and EIS/EIR.

B. General Site Description. The study area is along Grayson Creek and its tributaries, including Murderer's Creek, in the lower Walnut Creek watershed of California. Grayson Creek originates on the eastern slope of the Diablo Range above the cities of Pleasant Hill and Walnut Creek. The creek flows north and passes under Interstate 680 before flowing into lower Walnut Creek, which in turn flows into Suisun Bay. The primary study area includes Grayson Creek, Murderer's Creek, other tributaries and their floodplains throughout the Grayson Creek watershed. The overall study area includes those areas adjacent to the primary study area which could be influenced by potential actions to address the identified problems and needs.

C. Study Scope. The study will focus on FRM alternatives along Grayson Creek its tributaries. The non-Federal sponsor is interested in reducing flood risk to the existing urbanized areas in the cities of Pleasant Hill and Walnut Creek to remove those areas from the base floodplain mapped under the National Flood Insurance Program. The ecosystem restoration and recreation measures that are being considered would be secondary to the flood damage reduction objective. Challenging aspects of the study include: designing cost-effective measures for a relatively small, but highly urbanized floodplain in which vacant land for siting new facilities is both scarce and very expensive; identification of measures that will be acceptable to a relatively affluent and environmentally-aware community; and complex floodplain hydraulics with modeling of 39 break-out areas under without-project conditions, which also complicates the economic evaluation of flood damages.

D. Problems and Opportunities. The primary flood-related problems in the study area are potential flood damages to existing residential, commercial and light industrial development in a dense urban area due to limited channel and floodway capacity. The primary ecosystem-related problems in the study area are the loss of wetland and riparian habitats due to channelization of creeks and urban development.

E. Potential Methods. Potential FRM measures include on-line and off-line detention basins, channel modifications, levee and floodwall improvements, and other structural and non-structural measures for flood damage reduction on Grayson Creek and its tributaries. Additional measures may include minor recreation improvements and planting of riparian or wetland vegetation for environmentally-sustainable design and/or habitat mitigation.

3. AGENCY TECHNICAL REVIEW PLAN

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

A. General. An ATR Leader shall be designated by the PCX for the ATR process. The proposed ATR Leader for this project is to be determined, but will have expertise in plan formulation. The ATR Leader is responsible for providing information necessary for setting up the review, communicating with the PDT, 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 plan formulation, environmental compliance, economics, hydrology and hydraulic design, civil design, geotechnical engineering, cost engineering, and real estate, including all in-kind work by the sponsor. According to the PMP the sponsor will perform in-kind work for environmental studies; surveys and mapping; hydrology and hydraulics studies; real estate studies; geotechnical studies; engineering/ design; economic studies; and plan formulation. Safety assurance factors will be addressed by the engineering reviewers.

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 MSC. In general, the review team members will each have a minimum of 10 years experience and education in their respective discipline. A statement of qualifications is required for acceptance of review team members. It is anticipated

that the team will consist of about 9 reviewers. The ATRT members will be identified by the lead PCX at the time the review is conducted and will be presented in Appendix B. The Sacramento District or SPD may nominate ATRT members. General descriptions of ATR disciplines are as follows:

Hydrology & Hydraulics: Team member will be an expert in the field of urban hydrology and hydraulics, have a thorough understanding of the dynamics of open channel flow systems, and application of levees and flood walls in an urban environment with space constraints, The team member will have an understanding of computer modeling techniques that will be used for this project (HEC-HMS, HEC-RAS, and CCHE2D).

Geotechnical: Team member will be experienced in levee, channel and revetment design and familiar with the Corps' vegetation-free zone requirements for levees and floodwalls. A certified professional engineer is recommended.

Economics: Team member will be experienced in civil works and related flood risk reduction projects, and have a thorough understanding of HEC-FDA.

Plan Formulation: Team member will be experienced with the civil works process, current flood damage reduction planning and policy guidance, and have experience in plan formulation.

Environmental: Team member will be experienced in NEPA/CEQA process and analysis and other environmental compliance.

Civil/Structural: Team member will have experience in floodwall, box culvert and minor drainage structure design, and utility relocations. A certified professional engineer is suggested.

Cost Engineering: Team member will be familiar with cost estimating for similar civil works projects using MCACES. Team member will be a Certified Cost Technician, Certified Cost Consultant, or Certified Cost Engineer. The Feasibility Report is expected to require Congressional authorization; therefore, a separate process and certification is required through the Cost Engineering DX at Walla Walla District.

Real Estate: Team member will be experienced in federal civil works real estate laws, policies and guidance. Members shall have experience working with respective sponsor real estate issues.

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

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

(1) The team will use DrChecks to document the ATR process. The lead planner or project 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 MS Office or Adobe Acrobat compatible format at: <ftp://ftp.usace.army.mil/pub/> at least one business day prior to the start of the comment period.

(2) The lead planner shall notify the ATR Leader when the document has been posted. ATRT members shall download and print documents as necessary.

(3) The PDT shall host an ATR kick-off meeting virtually or on-site 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 coordinate a virtual presentation meeting or at a minimum provide a presentation about the project, including photos of the site, for the team.

(4) The lead planner shall notify the ATR Leader when all responses have been entered into DrChecks.

(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 the ATR 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 two weeks after the policy guidance memo is received from HQUSACE for the for the draft report.

D. Funding

(1) The PDT district shall provide labor funding by cross charge labor codes. Funding for travel, if needed, will be provided. The lead planner will work with the ATR 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 \$200,000. Any funding shortages will be negotiated on a case by case basis and in advance of a negative charge occurring.

(2) The ATR 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 ATR Leader to any possible funding shortages.

E. Timing and Schedule

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

(2) According to the initial 2003 PMP, a Technical Review Strategy Session to discuss the Independent Technical Review (ITR) process for the Study was held in March 2003 during preparation of the PMP. Because of subsequent changes in study personnel, no additional information regarding the TRSS is available; however, the specifics of that TRSS have been superseded because the ITR process described in the initial PMP has now been replaced by the ATR process described in this Review Plan. Independent Technical Review was performed on the Feasibility Scoping Meeting documentation in 2006. ATR will be conducted on the Alternative Review Conference/Alternative Formulation Briefing pre-conference documents, the

draft Feasibility Report; and if changes are made to the draft report, those changes will be reviewed in the final Feasibility Report.

(3) The ATR timeline for this project is shown in the table below. Actual dates will be scheduled when the review periods are nearer. All products produced for these milestones will be reviewed, including those produced by contractors or as in-kind services by the non-Federal sponsors. Interim ATR reviews may be conducted for key technical products.

ATR Timeline

Task	Date
ATR for Alternative Review Conference/ Alternative Formulation Briefing	4th Qtr FY10
ATR for Draft Report	1st Qtr FY11
ATR for Final Report	4th Qtr FY11

F. Review

(1) ATRT responsibilities are as follows:

(a) Reviewers shall review pre-conference documentation and the draft report, including all in-kind work by the sponsor, to confirm that work was done in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. Comments 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 Leader via electronic mail using email or the track changes feature in the MS Office compatible document or as a hard copy mark-up. The ATR Leader shall provide these comments to the lead planner.

(d) Review comments shall contain these principal elements:

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

(e) The “Critical” comment flag in DrChecks shall not be used unless the comment is discussed with the ATR Leader and/or the lead planner first.

(2) PDT responsibilities are as follows:

(a) The PDT shall review comments provided by the ATRT in DrChecks and provide responses to each comment using “Concur, Non-Concur or For Information”..” 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) PDT members shall contact ATRT members, preferably by telephone, 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. Telephone calls shall be used to resolve any conflicting comments and responses.

(2) A reviewer may close a comment if the comment is addressed and resolved by the response, or if the reviewer determines that the comment was not a valid technical comment as a result of a rebuttal, clarification, or additional information, or because the comment was advisory, primarily based on individual judgment or opinion, or editorial. If reviewer and responder cannot resolve a comment, it should be brought to the attention of the ATR Leader and, if not resolved by the ATR Leader, it should be brought to the attention of the planning chief who will need to sign the certification. ATRT members shall keep the ATR Leader informed of problematic comments. The vertical team will be informed of any unresolved comments, policy variations or other issues that may cause concern during HQ review. A comment may also be closed when it has been addressed or deferred to the policy compliance review process by HQUSACE.

H. Certification. ATR certification is required for the Alternative Review Conference/Alternative Formulation Briefing pre-conference documents, and draft and final reports. See Appendix A for ATR certification statement. A summary report of all comments and responses will follow this statement and accompany the report throughout the approval process.

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 measures to address problems in the study area. EC 1105-2-410 states thresholds that trigger an IEPR: “In cases where there are public safety concerns, a high level of complexity, novel or precedent-setting approaches; where the project is controversial, has significant interagency interest, has a total project cost greater than \$45 million, or has significant economic, environmental and social effects to the nation, IEPR will be conducted.”

This study is not expected to contain influential scientific information nor be a highly influential scientific assessment. The study is not expected to use novel methods, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices. The study will not be highly complex in comparison to other Corps studies. However, the total project cost of a recommended plan may exceed \$45 million. The study area is highly urbanized and consequently there may be public safety concerns. This project has the potential to be controversial and to generate significant agency and public interest due to effects on remnant riparian habitats and aesthetics in a relatively affluent residential area. An environmental impact statement may be prepared. For these reasons, IEPR will be conducted. The cost of IEPR is currently estimated to be \$100,000. IEPR is a project cost. The IEPR panel review will be Federally funded. In-house costs associated with obtaining the IEPR panel contract as well as responding to IEPR comments will be cost-shared expenses. It is not anticipated that the public, including scientific or professional societies, will be asked to nominate potential external peer reviewers.

Disciplines that are anticipated to be the focus of IEPR are hydrology and hydraulic design, economics, and environmental compliance. Work undertaken as part of these technical disciplines is relevant to public safety, justification of the project cost, and potentially controversial environmental effects. Members of the IEPR panel will be selected using qualifications that meet or exceed the qualifications given in Section 3.B. for ATR team members in the same disciplines. IEPR will address all the underlying planning, engineering, including safety assurance, economics and environmental analyses performed, not just one aspect of the project. The safety assurance review will focus on the quality of the surveys and investigations, the range of alternatives considered, the models used to assess hazards, the appropriateness of the assumptions made for the hazards, the level of uncertainty in assessments, and whether the quality and quantity of science and engineering per ER 1110-2-1150 are sufficient to insure public health, safety, and welfare at the feasibility level of design. The IEPR panel shall advise as to whether the level of engineering adequately addresses the uncertainty pertaining to consequences associated with the potential for loss of life. All products will be reviewed by the PDT and undergo ATR prior to submittal for IEPR. This includes products that are produced by the non-Federal sponsors as in-kind services and contractor work products.

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

B. Project Risk. This project is considered to have low overall risk. The potential for failure is low relative to other Corps projects because high flows in Grayson Creek are near the minimum required for Corps participation in a project. The structures that are likely to be included in a recommended plan will be relatively small in scale and conventional in design. If included in a recommended plan, detention basins in the upper watershed would have moderate risk because of the potential for a catastrophic failure resulting in the sudden release of a large volume of water above an urban area. Since construction of the existing Walnut Creek Project, flooding in the study area has been limited to shallow depths which are generally not life-threatening. The floodplain is in a dense urban area with a substantial population; however, the size of the floodplain is fairly limited, so it is likely that there are few critical structures such as hospitals and fire stations in the floodplain. Additional information regarding risk will be developed as the evaluation of without-project conditions continues. Redundancy of protection will be considered during the development and evaluation of detailed alternatives.

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

D. Products for Review. The full IEPR panel will receive the entire draft Feasibility Report/EIS/EIR and all technical appendixes concurrent with public and agency review. The final report of 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 review of the draft report. The Sacramento District will draft a response to the IEPR final report and process it through the vertical team for discussion at the Civil Works Review Board (CWRB). An IEPR panel member must attend the CWRB. Following the CWRB, the Corps will issue final response to the IEPR panel and notify the public.

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

(1) The panel will use DrChecks to document the IEPR process. The lead planner will facilitate the creation of a project portfolio in the system to allow access by all PDT and a qualified Outside Eligible Organization (OEO). An electronic version of the document, appendices, and any significant and relevant public comments shall be posted in MS Office compatible or Adobe Acrobat 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 panel's 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.

(2) Each IEPR panel member shall download the appropriate documents.

(3) The lead 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 <ftp://ftp.usace.army.mil/pub/> for use during back checking of the comments.

(5) PDT shall contact the OEO for the IEPR 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 review of the draft report. This report shall be scoped as part of the effort to engage the IEPR panel. The Sacramento District will draft a response report to the IEPR final report and process it through the vertical team for discussion at the CWRB. Following direction at the CWRB and upon satisfactorily resolving any relevant follow-on actions, the Corps will finalize its response to the IEPR Review Report and will post both the Review Report and the Corps final responses to the public website.

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

5. MODEL CERTIFICATION

For the purposes of this RP section, planning models are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to

formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision-making. It includes all models used for planning, regardless of their scope or source, as specified in the following subparagraphs. This RP section 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 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. Models to be used in the Study are:

1. HEC-FDA version 1.2.4 (Certified). This model, developed by the Corps' Hydrologic Engineering Center, will assist the PDT in applying risk analysis methods for flood risk management studies as required by EM 1110-2-1419. HEC-FDA may be used for non-structural measures, such as ring levees or floodwalls, as well as structural measures, if appropriate.
2. Various Habitat Evaluation Procedure models. The Ecosystem Planning Center of Expertise (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.
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.

It is currently anticipated that the Regional Economic Development and Other Social Effects accounts will be evaluated qualitatively and will not require the use of any additional models. The following are considered to be engineering models as opposed to planning models and undergo a different review and approval process for usage. Engineering models anticipated to be used in the Study are:

1. MCACES or MII: These are cost estimating models.
2. HEC-1: This model was used to develop the without-project hydrology.
3. HEC-RAS: The function of this model is one-dimensional hydraulic calculations for channels.

The engineering models listed are all USACE corporate models.

6. PUBLIC REVIEW

The public will have opportunities to participate in this study. The earliest opportunity will be as part of the NEPA scoping process. Public review of the draft Feasibility Report will occur after 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 last a minimum of 45 days as required for an Environmental Impact Statement. One or more public meetings will be held during the public review period. Comments received during the public comment period for the draft report could be provided to the IEPR team prior to completion of the final Review Report and to the ATRT before review of the final decision document. A formal State and Agency Review will occur concurrently with the public review. 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.

7. POINTS OF CONTACT

A. 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; environmental studies; surveys and mapping; hydrology studies; real estate studies; and preliminary hazardous waste investigation. All in-kind work products will undergo review by the PDT for a determination of adequacy; products will ultimately undergo DQC. Some products will undergo IEPR (described later in this Review Plan).

B. 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.

C. PCX. The appropriate PCX for this document is the National Flood Risk Management Center of Expertise located at SPD. The FRM-PCX will coordinate with the National Ecosystem Restoration Planning Center of Expertise at MVD as appropriate. This Review Plan will be submitted to the FRM-PCX Program Manager review and comment. Because an environmental impact statement is anticipated, an IEPR will be required. As such, the PCX will be asked to manage the IEPR review. For ATR, the PCX is requested to nominate the ATR team as discussed in paragraph 3.b. above. The approved Review Plan will be posted to the Sacramento District's public website for public comment and consideration of public comments.

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

1. District Point of Contact: Scott Miner, 916-557-6695
2. MSC Point of Contact: Karen Berresford, 415-503-6557
3. FRM-PCX Point of Contact: Eric Thaut, 415-503-6852

8. APPROVALS

The PDT will carry out the Review Plan as described. The lead planner will submit the Review Plan to the FRM-PCX for review and recommendation for approval. After FRM-PCX review and recommendation, the PDT District Planning Chief will forward the Review Plan to their respective MSC for approval. Formal coordination with FRM-PCX will occur through the PDT District Planning Chief.

The Review Plan is a "living document" and shall be updated as needed during the study process. The FRM-PCX shall be provided an electronic copy of any revised approved Review Plan. The PDT shall follow the guidance of the SPD DST for processing revised Review Plans.

REVIEW PLAN

**GRAYSON and MURDERER'S CREEKS, CALIFORNIA
FEASIBILITY STUDY**

SACRAMENTO DISTRICT

APPENDIX A

STATEMENT OF TECHNICAL REVIEW

**COMPLETION OF INDEPENDENT TECHNICAL REVIEW
GRAYSON and MURDERER'S CREEKS, CALIFORNIA
FEASIBILITY STUDY, ENVIRONMENTAL IMPACT
STATEMENT/ENVIRONMENTAL IMPACT REPORT AND APPENDICES**

The Sacramento District has completed the Feasibility Report, Environmental Impact Statement/Environmental Impact Report and appendices for the Grayson and Murderer's Creeks 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 customers' 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.

NAME

Grayson and Murderer's Creeks Feasibility Study
Agency Technical Review Leader

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW

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

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

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

Frank Piccola
Chief, Planning Division
Sacramento District

Date

REVIEW PLAN

**GRAYSON and MURDERER'S CREEKS, CALIFORNIA
FEASIBILITY STUDY**

SACRAMENTO DISTRICT

APPENDIX B

PROJECT DELIVERY TEAM

Name	Discipline
Katie Huff	Project Manager
TBD	Lead Planner
Ignatius Anyanwu	Economics
Michael Dunphy	Environmental Resources
Dan Bell	Cultural Resources
Markus Boedtke	Civil Design
Laurine White	Hydrology
Todd Rivas	Hydraulic Design
Sherman Fong	Cost Engineering
Robert Iwasa	Geotechnical Engineering
Laurie Parker	Real Estate
TBD	Public Affairs/Communications

AGENCY TECHNICAL REVIEW TEAM

Name	Discipline
TBD	ATR Manager/Plan Formulation
TBD	Civil/Structural Design
TBD	Environmental Resources
TBD	Hydrology/Hydraulics
TBD	Economics
TBD	Cost Engineering ¹
TBD	Real Estate
TBD	Geotechnical Engineering

¹The cost engineering team member nomination will be coordinated with the NWW Cost Engineering Directory of Expertise as required. That DX will determine if the cost estimate will need to be reviewed by DX staff.

INDEPENDENT EXTERNAL PEER REVIEW PANEL

Name	Discipline
TBD	Hydrology & Hydraulic Design
TBD	Economics
TBD	Environmental Resources

VERTICAL TEAM

Name	Discipline	Phone	Email
Karen Berresford	District Support Team Lead	415-503-6557	Karen.G.Berresford@usace.army.mil
Ken Zwickl	Regional Integration Team	202-761-4085	Kenneth.J.Zwickl@usace.army.mil

PLANNING CENTER OF EXPERTISE FLOOD RISK MANAGEMENT

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

¹ Primary PCX is FRM, who will coordinate with FRM-ECO as appropriate.

REVIEW PLAN

**GRAYSON and MURDERER'S CREEKS, CALIFORNIA
FEASIBILITY STUDY**

SACRAMENTO DISTRICT

**APPENDIX C
ACRONYMS AND ABBREVIATIONS**

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
ASA(CW)	Assistant Secretary of the Army for Civil Works	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
ATR	Agency Technical Review	OEO	Outside Eligible Organization
CEQA	California Environmental Quality Act	PCX	Planning Center of Expertise
CESPD	Corps of Engineers, South Pacific Division	PDT	Project Delivery Team
		PAC	Post Authorization Change
DQC	District Quality Control	PPA	Project Partnership Agreement
DX	Directory of Expertise	PL	Public Law
EA	Environmental Assessment	QMP	Quality Management Plan
EC	Engineer Circular	QA	Quality Assurance
EDR	Engineering Documentation Report	QC	Quality Control
EIR	Environmental Impact Report	RED	Regional Economic Development
EIS	Environmental Impact Statement	WRDA	Water Resources Development Act
EO	Executive Order		
ER	Ecosystem Restoration		
FDR	Flood Damage Reduction		
FEMA	Federal Emergency Management Agency		
FRM	Flood Risk Management		
GRR	General Reevaluation Report		
IEPR	Independent External Peer Review		
ITR	Independent Technical Review		
MSC	Major Subordinate Command		
NED	National Economic Development		
NER	National Ecosystem Restoration		
NEPA	National Environmental Policy Act		
O&M	Operation and Maintenance		
OMB	Office of Management and Budget		