REVIEW PLAN

BERRYESSA CREEK, CALIFORNIA
GENERAL REEVALUATION STUDY

SACRAMENTO DISTRICT

MSC Approval Date: *Pending*
Last Revision Date: 04.29.10

US Army Corps
of Engineers ®

REVIEW PLAN

BERRYESSA CREEK, CALIFORNA
GENERAL REEVALUATION STUDY

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the Berryessa Creek, California, General Reevaluation Study (the Study). Engineer Circular (EC) 1165-2-209, Civil Works Review Policy, dated 31 January 2010, 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. References

(1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2013
(2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
(3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(5) Project Management Plan (PMP) for the Berryessa Creek, California project, September 2010
(6) South Pacific Division Regulation (CESPD-R) 1110-1-8, Quality Management Plan (QMP), September 2004
(7) Sacramento District (CESPK) 01-B Quality Management Plan, Appendix B, QMP for Planning, March 2004

c. Requirements. This review plan was developed in accordance with EC 1165-2-209, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-209) and planning model certification/approval (per EC 1105-2-412).

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. The RMO for the peer review effort described in this Review Plan is the Flood Risk Management (FRM) PCX. (The RMC will be the RMO for Type II IEPR [described in section 6] during the Preconstruction Engineering and Design [PED] phase.)

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

3. STUDY INFORMATION

a. Decision Document. The Berryessa Creek, California general reevaluation study was initiated in 2001 to investigate alternatives to the authorized Berryessa Creek Project in Santa Clara County for the purpose of flood damage reduction. The study is considering channel and floodplain terrace excavation, bridge and culvert modifications, levee and floodwall construction, sediment basin modifications, bed and bank armoring, minor recreation improvements, and planting of riparian vegetation. The feasibility phase of this project is cost shared 50 percent Federal, 50 percent non-Federal with the project sponsor, the Santa Clara Valley Water District (SCVWD). The resulting decision document will be an integrated General Reevaluation Report Environmental Impact Statement/Environmental Impact Report (GRR/EIS/EIR). The approval process for the GRR will depend upon whether the recommended plan requires additional Congressional authority.

b. Study/Project Description. The study area is along a 4.5-mile long portion of Berryessa Creek in the Santa Clara Valley of California (see Figure 1 for an area map). Berryessa Creek originates on the western slope of the Diablo Range and emerges from hills in the northeastern part of the city of San Jose. The creek flows west and passes under Interstate 680 before turning north and flowing into lower Penitencia Creek, which is a tributary to lower Coyote Creek, which in turn flows into the south end of San Francisco Bay. The primary study area includes the main stem of Berryessa Creek and its floodplains from upstream of Old Piedmont Road downstream to Calaveras Blvd.

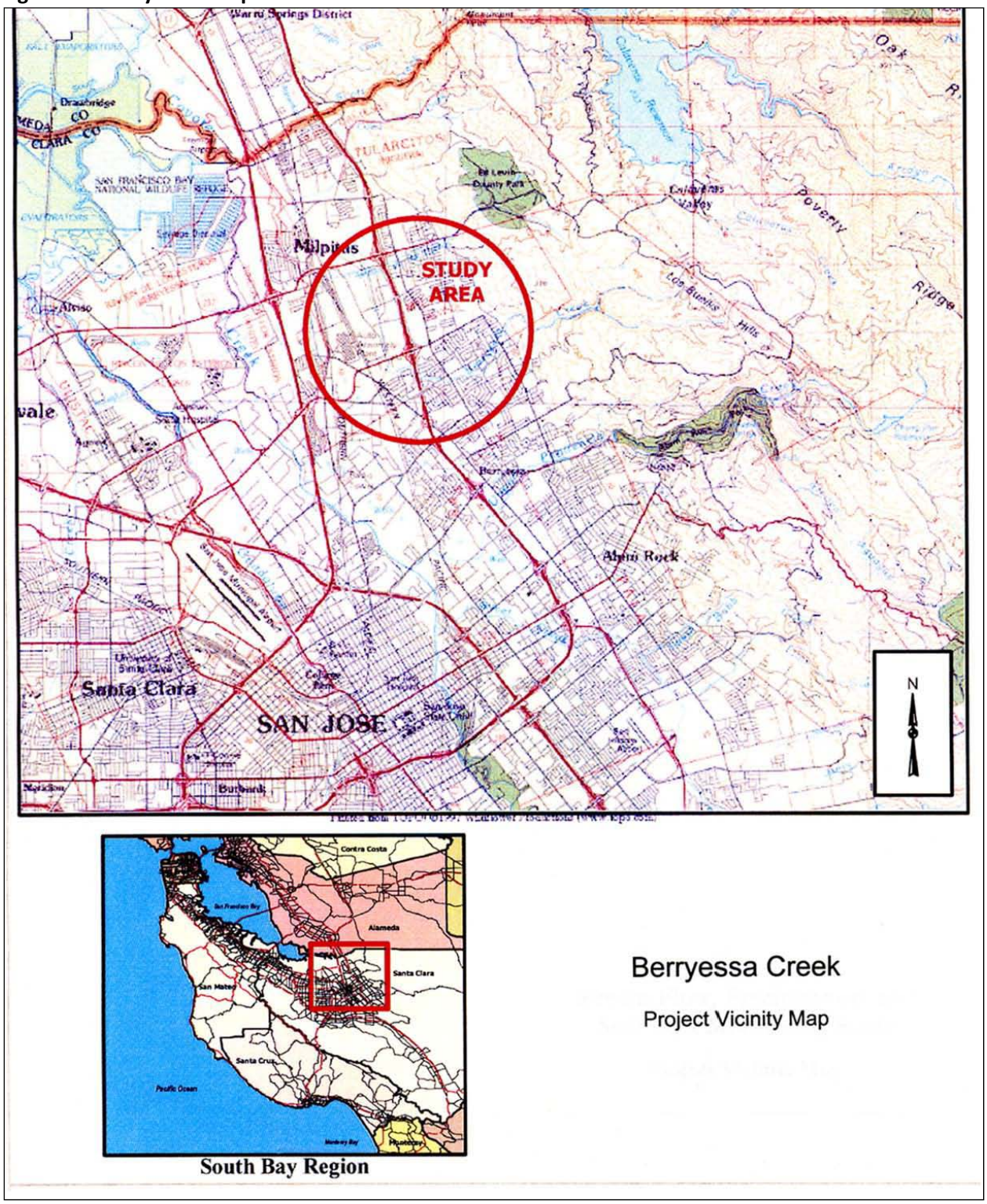
Within the study area, the Berryessa Creek channel is almost entirely man-made, and it provides minimal natural values outside of the well-vegetated "greenbelt reach" adjacent to a schoolyard and park. The overall study area includes those areas adjacent to the primary study area which could be influenced by potential actions to address the identified problems and needs.

The study will focus on FRM alternatives along Berryessa Creek from above Old Piedmont Road to Calaveras Blvd. The non-Federal sponsor is interested in reducing flood risk to the existing urbanized areas in the cities of San Jose and Milpitas to remove those areas from the base floodplain mapped under the National Flood Insurance Program.

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. Potential FRM measures include channel and floodplain terrace excavation, bridge and culvert modifications, levee and floodwall construction, sediment basin modification, and bed and bank armoring. Non-structural floodplain management measures will also be addressed. Additional measures may include minor recreation improvements and planting of riparian vegetation for environmentally-sustainable design and/or habitat mitigation.

A Feasibility Scoping Meeting was held in 2004, a Value Engineering Study was completed and an Alternative Review Conference was held in 2005, and an Alternative Formulation Briefing was held in 2006. ATR will be conducted on the draft General Reevaluation Report; and if changes are made to the draft report, those changes will be reviewed in the final General Reevaluation Report.

Figure 1 – Study Area Map



c. Factors Affecting the Scope and Level of Review. The parts of the study that will be most

challenging are the need to meet current vegetation-free zone and other design requirements in an acceptable manner despite a constricted right-of-way bordered by dense residential and commercial development. Based on current information, the project is likely to have significant economic, environmental, and/or social effects such as, but not limited to: cultural, historic, or tribal resources; fish and wildlife species or their habitat (prior to implementation of mitigation). The project is not likely to have more than negligible adverse effect on species listed as endangered or threatened, or to the designated critical habitat of such species, prior to the implementation of mitigation. An EIS is being prepared.

The study area is highly urbanized and consequently, there are public safety concerns. Flood depths are 1-3 feet for the 1% chance exceedence event, but this project is considered to have low overall risk. The potential for failure is low relative to other Corps projects, because high flows in Berryessa Creek are near the minimum required for Corps participation in a project. However, if the FRM structures failed, commercial and residential buildings would flood. I-680 would remain open. The FRM structures that are likely to be included in a recommended plan will be relatively small in scale and conventional in design.

This study is not expected to contain influential scientific information nor be a highly influential scientific assessment. The study will not be highly complex in comparison to other Corps studies.

The total project cost of the locally preferred plan will likely be about $50 million. This project has the potential to be controversial and has significant agency and public interest, mainly because the currently authorized plan was so unpopular.

Key construction risks include the adequacy of real estate requirements and construction management in an urban setting (traffic control, etc).

Key risks to project performance include potential for overtopping and damage to utilities. Seepage is not a major concern due to the low flows and volumes in the channel. The design will require redundancy, resiliency, and/or robustness.

The Governor did not request peer review. No novel methods will be used. Unique construction sequencing is not needed.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. No in-kind products and analyses will be provided by the non-Federal sponsor.

4. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home MSC.

a. Documentation of DQC. Staff who did not prepare study products are conducting DQC for the study, then their management certifies that DQC took place. The reviewers record comments either in track changes, as comments in documents, in a Word document, or in DrChecks.

b. Products to Undergo DQC. All products will undergo DQC.

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside the home MSC.

a. Products to Undergo ATR. All products will undergo ATR. The study is currently at the Draft Report stage.

b. Required ATR Team Expertise.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Planning	The planning reviewer should be a senior water resources planner with experience in FRM studies in highly urban areas.
Economics	The economics reviewer should be a senior water resources economist with experience in FRM studies in highly urban areas.
Environmental Resources	The environmental reviewer should be a senior water resources environmental manager with experience in FRM studies, including EISes, in highly urban areas.
Cultural Resources	The cultural reviewer should be a senior water resources archaeologist with experience in FRM studies in highly urban areas of the western United States.
Hydrology	The hydrology reviewer should be a senior water resources hydrologist with experience in FRM studies in highly urban areas, especially concerning flashy flooding and alluvial fans.
Hydraulic Engineering	The hydraulic engineering reviewer will be an expert in the field of hydraulics and have a thorough understanding of open channel dynamics, levees/flood walls, and computer modeling techniques that will be used such as HEC-RAS and FLO-2D.

Civil Engineering	The civil reviewer should be a senior water resources civil engineer with experience in FRM studies.
Cost Engineering	The cost engineering reviewer should be a senior water resources cost engineer with experience in FRM studies.
Construction/Operations	(Will be needed during PED)
Real Estate	The real estate reviewer should be a senior water resources real estate specialist with experience in FRM studies in highly urban areas.

c. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

(1) The review concern – identify the product's information deficiency or incorrect application of policy, guidance, or procedures;
(2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not be properly followed;
(3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
(4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

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

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and

- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date, for the AFB, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

ATR also includes a Risk Analysis review to be conducted by the Corps' Hydraulic Engineering Center (HEC). Risk analysis will evaluate and report residual risk, which includes the consequence of project capacity exceedence.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for decision documents under certain circumstances. 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. A risk-informed decision, as described in EC 1165-2-209, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- Type I IEPR. Type I IEPR reviews are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-209.

- Type II IEPR. Type II IEPR, or Safety Assurance Review (SAR), are managed outside the USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

a. Decision on IEPR. This decision document will present the details of a general reevaluation study undertaken to evaluate structural and non-structural FRM measures to address problems in the study area. EC 1165-2-209 states that Type I IEPR is of critical importance where there are public

safety concerns, significant controversy, a high level of complexity, or significant economic, environmental and social effects to the nation. Because the GRR includes an EIS and will recommend an FRM plan, it is subject to IEPR.

b. Products to Undergo Type I IEPR. All products will be available the the panel (the draft GRR/EIS/EIR and all technical appendices).

c. Required Type I IEPR Panel Expertise.

IEPR Panel Members/Disciplines	Expertise Required
Economics	The Economics Panel Member should be a scientist from academia, a public agency, a non-governmental entity, or an Architect-Engineer or Consulting Firm. Member must have at least ten years' experience directly related to water resource economic evaluation or review. At least 5 years' experience directly working for or with USACE is highly recommended. A minimum of five years' experience is required in directly dealing with the USACE planning process as outlined in ER-1105-2-100, Planning Guidance Notebook, especially with regard to flood risk management studies, outlined in Appendix E (referred to as "Flood Damage Reduction" in this document).
Environmental Compliance	The panel member should be a scientist from academia, a public agency, a non-governmental entity, or an Architect-Engineer or Consulting Firm with a minimum 10 years' demonstrated experience in evaluation and conducting National Environmental Policy Act (NEPA) impact assessments, including cumulative effects analyses, for public works projects. The panel member should have extensive background experience and working knowledge with the implementation of the NEPA compliance process.
Hydrology/Hydraulics	The panel member should be a hydrologist or registered professional engineer with a minimum of 10 years' experience in hydrologic and hydraulic engineering with an emphasis on public works projects, or a professor from academia with extensive background in hydrologic and hydraulic theory and practice, with a minimum MS degree or higher in engineering. Active participation in related professional societies is encouraged. The panel member should have extensive experience modeling water surface profiles for flood risk management projects. The panel member should have a thorough understanding of the dynamics of open channel flow systems, floodplain hydraulics, and interior flood control systems. The panel member should be familiar with USACE application of risk and uncertainty analyses in flood risk management studies. The panel member should also be familiar with standard USACE hydrologic and hydraulic computer models including HEC-1, HEC-HMS, HEC-2, HEC-RAS and HEC-DSS.

d. Documentation of Type I IEPR. The IEPR panel will be selected and managed by an Outside Eligible Organization (OEO) per EC 1165-2-209, Appendix D. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the economic, engineering and environmental methods, models, and analyses used. IEPR comments should generally include the same four key parts as described for ATR comments in Section 4.d above. The OEO will prepare a final Review Report that will accompany the publication of the final decision document and shall:

- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions; and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

The final Review Report will be submitted by the OEO no later than 60 days following the close of the public comment period for the draft decision document. USACE shall consider all recommendations contained in the Review Report and prepare a written response for all recommendations adopted or not adopted. The final decision document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public, including through electronic means on the internet.

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in 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 home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

8. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Cost Engineering DX, located in the Walla Walla District. The DX will assist in determining the expertise needed on the ATR team and Type I IEPR team (if required) and in the development of the review charge(s). The DX will also provide the Cost Engineering DX certification. The RMO is responsible for coordination with the Cost Engineering DX.

9. MODEL CERTIFICATION AND APPROVAL

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, 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. The use of a

certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

a. Planning Models. The following planning models are anticipated to be used in the development of the decision document:

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Certification / Approval Status
HEC-FDA 1.2.4 (Flood Damage Analysis)	The Hydrologic Engineering Center's Flood Damage Reduction Analysis (HEC-FDA) program provides the capability for integrated hydrologic engineering and economic analysis for formulating and evaluating flood risk management plans using risk-based analysis methods. The program will be used to evaluate and compare the future without- and with-project plans to aid in the selection of a recommended plan to manage flood risk.	Certified
Various U.S. Fish and Wildlife Service Habitat Evaluation Procedure (HEP) models	HEP models evaluate future habitat values for selected wildlife species following implementation of the project or mitigation features of the project.	The PDT will coordinate with the Eco-PCX as needed
IWR-Planning Suite	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.	Certified

b. Engineering Models. The following engineering models are anticipated to be used in the development of the decision document:

Model Name and	Brief Description of the Model and How It Will Be Applied in	Approval

Version	the Study	Status
HEC-RAS 4.0 (River Analysis System)	The Hydrologic Engineering Center's River Analysis System (HEC-RAS) program provides the capability to perform one-dimensional steady and unsteady flow river hydraulics calculations. The program will be used for steady flow analysis to evaluate the future without- and with-project conditions along the Wild River and its tributaries. [For a particular study the model could be used for unsteady flow analysis or both steady and unsteady flow analysis. The review plan should indicate how the model will be used for a particular study.]	HH&C CoP Preferred Model
MCACES or MII	cost estimating models	Approved
HEC-HMS	This model was used by contractors to develop the without-project hydrology and breakout hydrographs.	Approved
FLO-2D	This model is being used by a contractor for hydraulic modeling in the overbank areas.	Approved
HEC-6T	This model was used by a contractor to estimate sediment bed load yields and sediment balances for the without-project condition.	Approved

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost. ATR of the draft report will occur in the 4th quarter of FY12. ATR of the final report is scheduled for the 2nd quarter of FY13.

ATR is expected to cost approximately $60,000. 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. Reviewers shall monitor individual labor code balances and alert the ATR Leader to any possible funding shortages.

b. Type I IEPR Schedule and Cost. A tentative Type I IEPR schedule is shown below. The effort is expected to cost approximately $100,000.

Draft review documents available	September 2012
OEO sends review documents to IEPR Panel	October 2012
USACE/OEO/Panel hold kick-off meeting	October 2012
OEO submits Final IEPR Report to USACE	March 2013
OEO inputs Final Panel Comments to DrChecks; OEO provides Comment Response template to USACE	March 2013
OEO convenes teleconference with USACE to review the Comment Response Process	April 2013
USACE provides draft Evaluator Responses to OEO	April 2013
OEO convenes teleconference with Panel and USACE to discuss Final Panel Comments, and draft responses	April 2013
USACE inputs final Evaluator Responses in DrChecks	May 2013
OEO inputs the Panel's BackCheck Responses in DrChecks	May 2013

c. Model Certification/Approval Schedule and Cost. N/A

11. PUBLIC PARTICIPATION

The public will have opportunities to participate in this study. Public review of the draft GRR 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.

12. REVIEW PLAN APPROVAL AND UPDATES

The Sacramento District Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last MSC Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commander's approval memorandum, should be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

13. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following points of contact:

1. District Point of Contact: Melissa Hallas, Planner, 916-557-7774
2. MSC Point of Contact: Karen Berresford, District Support Team Leader, 415-503-6557
3. FRM-PCX Point of Contact: Eric Thaut, FRM-PCX Program Manager, 415-503-6852

ATTACHMENT 1: TEAM ROSTERS

Berryessa Creek, California
General Reevaluation Study
Sacramento District

PROJECT DELIVERY TEAM

Name	Discipline
Cameron Sessions	Project Manager
Melissa Hallas	Lead Planner
TBD	Economics
Jamie LeFevre	Environmental Resources
Richard Perry	Cultural Resources
ShanChing "Paul" Hsia	Civil Design
Robert Thompson	Hydrology
John Wiest	Hydraulic Design
Jane Bolton	Geotechnical Engineering
Joe Reynolds	Cost Engineering
Jeremy Hollis	Real Estate

AGENCY TECHNICAL REVIEW TEAM

Name	Discipline
Diane Karnish (MVR)	ATR Manager/Plan Formulation
Jon Fleischman	Civil/Structural Design
Charlene Carmack	Environmental Resources
Tom Gambucci	Hydrology/Hydraulics
Craig Newcomb	Economics
Jim Neubauer	Cost Engineering [1]
TBD	Real Estate
Randall Kinney	Geotechnical Engineering
Bob Carl	Risk & Uncertainty

[1]The 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
Bradd Schwichtenberg	Regional Integration Team	703-761-1367	Bradd.R.Schwichtenberg@usace.army.mil

PLANNING CENTER OF EXPERTISE
FLOOD RISK MANAGEMENT

Name	Discipline	Phone	Email
Eric Thaut	Program Manager, PCX Flood Risk Management	415-503-6852	Eric.W.Thaut@usace.army.mil

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECSION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the General Reevaluation Study for Berryessa Creek, California. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks[sm].

SIGNATURE _____ _____

Diane Karnish — Date
ATR Team Leader
CEMVR-PD-E

SIGNATURE _____ _____

Cameron Sessions — Date
Project Manager
CESPK-PM-C

SIGNATURE _____ _____

Name — Date
Architect Engineer Project Manager[1]
Company, location

SIGNATURE _____ _____

Name — Date
Review Management Office Representative
Office Symbol

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

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

SIGNATURE _____ _____

Rick Poeppelman — Date
Chief, Engineering Division
CESPK-ED

SIGNATURE _____ _____

Alicia E. Kirchner — Date
Chief, Planning Division
CESPK-PD

[1] Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number
April 2010	The last update of the Review Plan was prepared in April 2010 to incorporate minor changes resulting from the approval of EC 1165-2-209 on 31 January 2010. The study description, schedule and estimated project cost were also updated.	Throughout
June 2012	This update was prepared in June 2012 to add Risk Analysis review, update the team members, and update the format. There were no changes in the level of review. Electronic copies of this updated RP will be provided to the FRM-PCX and SPD.	Throughout

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
AFB	Alternative Formulation Briefing	NER	National Ecosystem Restoration
ASA(CW)	Assistant Secretary of the Army for Civil Works	NEPA	National Environmental Policy Act
ATR	Agency Technical Review	O&M	Operation and maintenance
ATRT	Agency Technical Review Team	OMB	Office and Management and Budget
CSDR	Coastal Storm Damage Reduction	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DPR	Detailed Project Report	OEO	Outside Eligible Organization
DQC	District Quality Control/Quality Assurance	OSE	Other Social Effects
DX	Directory of Expertise	PCX	Planning Center of Expertise
EA	Environmental Assessment	PDT	Project Delivery Team
EC	Engineer Circular	PAC	Post Authorization Change
EIR	Environmental Impact Report	PED	Preconstruction Engineering & Design
EIS	Environmental Impact Statement	PMP	Project Management Plan
EO	Executive Order	PL	Public Law
ER	Ecosystem Restoration	QMP	Quality Management Plan
FDR	Flood Damage Reduction	QA	Quality Assurance
FEMA	Federal Emergency Management Agency	QC	Quality Control
FRM	Flood Risk Management	RED	Regional Economic Development
FSM	Feasibility Scoping Meeting	RMC	Risk Management Center
GRR	General Reevaluation Report	RMO	Review Management Organization
HEP	Habitat Evaluation Procedure	RTS	Regional Technical Specialist
HQUSACE	Headquarters, U.S. Army Corps of Engineers	SAR	Safety Assurance Review
IEPR	Independent External Peer Review	SCVWD	Santa Clara Valley Water District
LRR	Limited Reevaluation Report	SET	Scientific & Engineering Technology
MSC	Major Subordinate Command	USACE	U.S. Army Corps of Engineers
NED	National Economic Development	WRDA	Water Resources Development Act