



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS
1455 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94103-1399

21-Dec-2012

CESPD-PDS-P

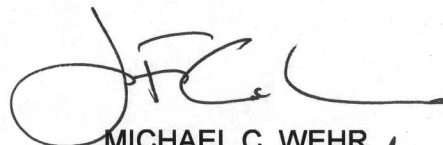
MEMORANDUM FOR Commander, San Francisco District, ATTN: CESPEN-ET-PF, Ms. Joél Benegar

Subject: Riverside Ranch Restoration Project, Humboldt County, CA, Estuary Habitat Restoration Program, Review Plan Approval

1. Riverside Ranch Restoration Project, Humboldt County, CA, Estuary Habitat Restoration Program, Review Plan that is enclosed is in accordance with Engineering Circular (EC) 1165-2-214, Review of Decision Documents, dated 15 Dec 2012. The South Pacific Division, Planning and Policy Division, Regional Business Technical Division, and San Francisco District Support Team have reviewed the Review Plan that has been submitted. The South Pacific Division approves the Riverside Ranch Restoration Project, Humboldt County, CA, Estuary Habitat Restoration Program, Review Plan.
2. With MSC approval the Review Plan will be made available for public comment via the internet and the comments received will be incorporated into future revisions of the Review Plans. The Review Plan excludes independent external peer review.
3. I hereby approve the Review Plan which is subject to change as study circumstances require. This is consistent with study development under the Project Management Business Process. Subsequent revisions to the Review Plan after public comment or during project execution will require new written approval from this office.
4. Point of contact for this action is Ms. Nedenia (Deanie) Kennedy, CESPD-PDS-P, 415-503-6585, Nedenia.C.Kennedy@usace.army.mil.

Building Strong From New Mexico All The Way To The Pacific!

Encl
Review Plan


MICHAEL C. WEHR
BG, EN
Commanding

REVIEW PLAN

Riverside Ranch Restoration Project Humboldt County, CA

*Estuary Habitat Restoration Program
Estuary Restoration Act*

San Francisco District
U.S. Army Corps of Engineers



**US Army Corps
of Engineers**®

MSC Approval Date: 21 December 2012
Last Revision Date: 21 December 2012

REVIEW PLAN

Riverside Ranch Restoration Project, Humboldt County, CA
Estuary Habitat Restoration Program
Estuary Restoration Act

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1. PURPOSE AND REQUIREMENTS.

- a. Authority. The proposed action at Riverside Ranch is a small Federal grant/cost shared project under the Estuary Habitat Restoration Program (EHRP), which is authorized by the Estuary Restoration Act (ERA) of 2000, Title I of PL 106-457 of the Estuaries and Clean Waters Act of 2000, as amended (33 U.S.C. 2901). The purpose of the ERA, as amended, is to promote the restoration of estuary habitat; to develop and implement a national estuary habitat restoration strategy for creating and maintaining effective partnerships within the Federal government and with the private sector; to provide Federal assistance for and promote efficient financing of estuary habitat restoration projects; and to develop and enhance monitoring, data sharing, and research capabilities. The ERA authorizes the Secretary of the Army to carry out estuary habitat restoration projects and establishes the interagency Estuary Habitat Restoration Council (Council), comprised of the U.S. Army Corps of Engineers (Corps), Department of the Interior (acting through the U.S. Fish and Wildlife Service), National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA), and Department of Agriculture. District offices, subject to Head Quarters and Major Subordinate Command (MSC) oversight, are responsible for carrying out approved projects.
- b. Purpose. This Review Plan defines the scope and level of review for the ERA Riverside Ranch Restoration project, located near the City of Ferndale in Humboldt County, California. Documents covered by this review plan are “other work products” as defined by EC 1165-2-209 (Reference 1). The level of review will be commensurate with the scope of the project, or the ERA financial contribution that is granted to the project Recipient for project implementation through the Corps. Project review will ensure technical viability, constructability, and will reasonably assure that there will be no induced damages or other adverse risk from project implementation (Reference 2). Documents to be reviewed include the Recipient’s Quality Control Review and Risk Statement (as described in Section 8), Real Estate Plan, ERA Monitoring Plan, ERA Operations and Maintenance, and the project’s Environmental Assessment (EA).
- c. References.
 - (1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010.
 - (2) Implementation Guidance for the Estuary Habitat Restoration Program (Cooperative Agreement), June 2011.
 - (3) Project Management Plan for Riverside Ranch
- d. Requirements. This Review Plan was developed in accordance with the Implementation Guidance for the EHRP program (June 2011) and EC 1165-2-209. EC 1165-2-209 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).

- e. Applicability. This review plan does not cover decision documents or implementation products as defined by EC 1165-2-209. Documents covered by this review plan are “other work products” as defined by EC 1165-2-209.

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION.

The RMO for the peer review effort described in this Review Plan is the South Pacific Division (SPD). SPD will coordinate and approve the review plan. The San Francisco District (SPN) will post the approved review plan on its public website.

3. PROJECT INFORMATION.

In accordance with the EHRP, the Council awarded Ducks Unlimited (DU), the applicant and now the project’s “Recipient” or “non-Federal sponsor,” \$1M to fund a portion of the larger \$8M Riverside Ranch Estuary Restoration Project. The balance of the \$8M project has been provided by Federal and Non-Federal sources¹.

The Riverside Ranch estuary restoration site is located near the City of Ferndale in Humboldt County, CA (Figure 1). Riverside Ranch construction is scheduled for 2013 and monitoring will continue with Corps involvement through 2018. The awarded \$1M includes the total cost for Corps involvement in the project, including five-year monitoring support. ERA funds will be utilized by the Project Recipient to fund a portion of the larger \$8M Riverside Ranch project to restore approximately 356 acres of tidal estuarine habitat on Riverside Ranch. The project will restore tidal connectivity to historic tidal wetlands to allow for the natural evolution of diverse and self-sustaining salt- and brackish water tidal marshes, intertidal mudflat and shallow water habitats.

¹ Federal funding partners for the larger project includes the United States Natural Resources Conservation Service (\$1.7M) and the United States Fish and Wildlife Service (\$1.415M). Non-Federal funding partners for this larger project include DU (\$100,000); California Wildlife Conservation Board (\$1.55M); California Department of Fish and Game (\$555K); California State Water Quality Control Board (\$1.2M); California Department of Transportation (\$350K).

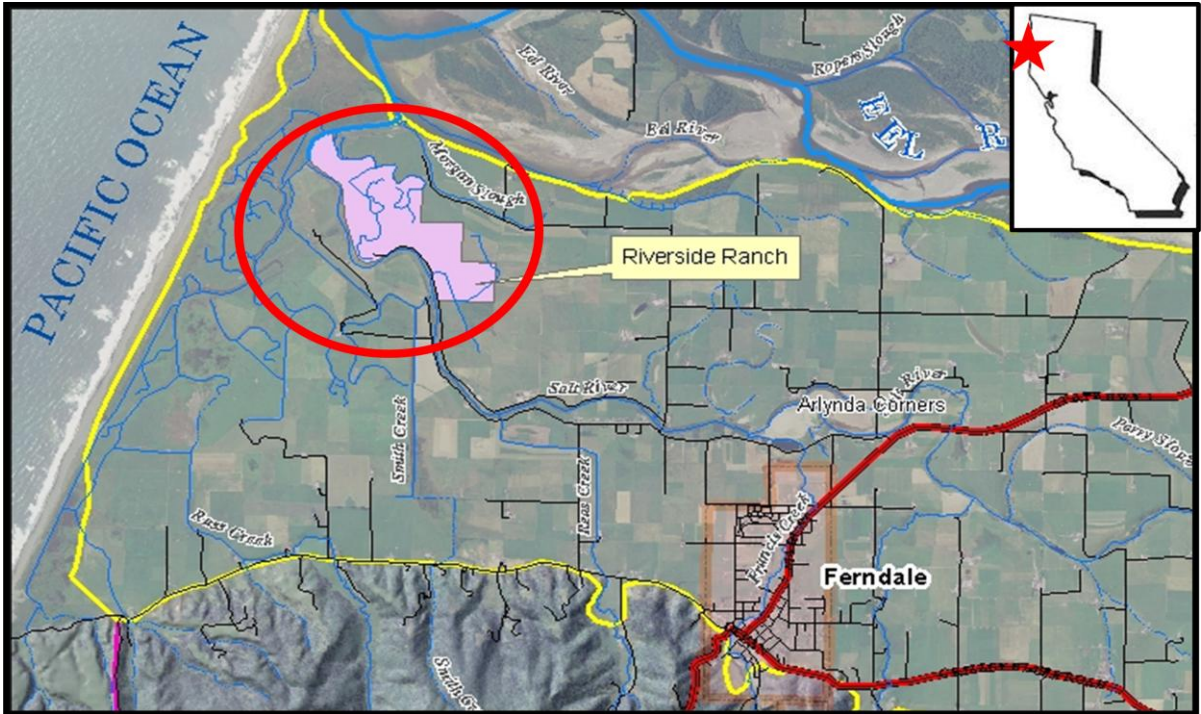


Figure 1: Riverside Ranch Project Vicinity Map

4. FACTORS AFFECTING THE SCOPE AND LEVEL OF REVIEW.

ERA projects are fundamentally different from those projects that are designed and implemented by our Districts. ERA projects have been approved by the Interagency Council and the ASA(CW) for implementation. For Riverside Ranch, the ERA Recipient, DU, is the lead for design review and construction management. The design team is composed of KHE, Inc. as the Design Lead and Engineer of Record. KHE was hired by the Humboldt County Resource Conservation District. Products of design include Plans and Specifications and the Basis of Design Report. Project design has been guided by close coordination and collaboration with local, State and Federal resource agencies. Final design has been completed (100%) for this and construction is scheduled to commence in 2013.

For project review, ERA implementation guidance 4.a states that:

(4.a) Districts shall comply with EC 1165-2-209, Civil Works Review Policy, at a level appropriate for the nature of the project; including but not necessarily limited to performance of appropriate District Quality Control/Quality Assurance, and application of the Risk Informed Decision process as appropriate to determine if Agency technical Review is appropriate.

(5.b (1)): Districts should endeavor to rely largely on the planning and design work that the Recipient has already accomplished and that the District will want to do the minimum necessary to insure technical viability, constructability and to reasonably assure that there will be no induced damages or other adverse risk.

To meet review and program guidance requirements and to ensure that the Government's investment in ERA projects are technically sound, prudent, and to reasonably assure constructability that the risks associated with the project are acceptable to the Corps, the ERA Recipient will provide the Corps of Engineers with a Quality Control Review and Risk Statement (Statement). This Statement should be signed by a licensed professional engineer regarding the project design that indicates that the designs were performed in accordance with generally accepted engineering and scientific practice, that the designers have performed quality control review of their work, and that the reviewer generally agrees with design assumptions, methodologies, calculations, conclusions and anticipated project performance. The project should also provide a written Statement from the project Engineer of Record indicating that public risks (i.e. flood damage risks) have been considered as part of the project and document conclusions relating to the potential for increased or transferred risks as a result of the project construction. This documentation shall include a brief description of the risk assessment and basis for the conclusion.

The Statement shall undergo quality assurance (QA) review by the Corps to ensure that the conclusions provided by the Engineer of Record indicate that the project is technically sound and a prudent investment for the Government and that risks associated with the project are tolerable. Specifically, Corps review team will ensure technical viability, constructability, and will reasonable assure that there will be no induced damages or other adverse risk to the public. Corps QA review will generally verify that design methodologies used by the designer generally follow accepted engineering and scientific practice, that the contractor has performed quality control review, and that the conclusions reached are reasonable. The Corps will not assume any technical control or responsibility for the project, which will remain with the lead design reviewer and the designer and Engineer of Record. For findings that the project increases public risks, the Corps may require higher level approval (Division or HQ) before conclusion can be reached that the project risks are tolerable for project ERA financial support.

5. REVIEW.

EC 1165-2-209 outlines four general levels of review: District Quality Control (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. Based on an appropriate level of review for ERA projects, SPN recommends that project documents be subject to DQC and Policy and Legal Compliance Review but not to ATR or IEPR. Below are detailed positions related to DQC, ATR, and IEPR.

6. DISTRICT QUALITY REVIEW.

DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the 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. Products to Undergo DQC. DQC for Riverside Ranch will include a QA/Quality Control (QC) review of documents produced for this ERA effort (ERA Real Estate Plan) and QA review of the Recipient's Monitoring Plan, O&MRRR manual, and the Quality Control Review and Risk Statement. As necessary, the technical review(s) can reference the Plans and Specifications during the QA review of the Statement. Project design and specification and basis of design documentation will be provided to the Corps to support the information included in the Recipient's Statement.
- b. Documentation of DQC. DQC comments for products completed by the Recipient will be compiled into a memorandum to be given to the project's Recipient for review and response.
- c. Required DQC Expertise. DQC is managed in the San Francisco District and may be conducted by in-house staff as long as the reviewers are not doing the work involved in the study. This DQC review team will consist of District personnel from Hydraulic Engineering, Civil Design, Geotechnical Engineering, Cost Engineering, Real Estate, Plan Formulation, Environmental Planning, and Construction Management.

7. AGENCY TECHNICAL REVIEW.

In deciding whether to undertake ATR for this "other work product," SPN first referred to the guidance for the EHRP. The guidance clarifies that the risk informed decision process is applied, as appropriate to determine if ATR is appropriate. The implementation risk to the Corps for this project is considered low as the Recipient is the lead design reviewer and is responsible for the design review, construction, and operation and maintenance of the approved project. In addition, the design of the project was completed in collaboration with the National Marine Fisheries Service, US Fish and Wildlife Service, the California Department of Fish and Game (DFG), and Humboldt County. Final designs included input from multiple years of extensive regulatory coordination and input. Coordination has ensured that the 100% design meets restoration objectives as well as regulatory requirements related to wetland, fisheries, human, and riparian impacts. A draft EIR was circulated for comment in January 2010 and the final EIR was released in February 2011. The sponsor, DU, is a leading technical expert in tidal wetland restoration and has well established review standards based on performing this type of work across the nation and will be performing their own separate reviews.

To support this recommendation, SPN answered questions provided in EC 1165-2-209 to decide whether to undertake ATR for other work products. The questions are intended to help the user determine if the work product at hand is a decision and/or an implementation document. For some questions, context is provided in italicized font. **Bolded** questions indicate affirmative answers to the question.

- **Does it include any design (structural, mechanical, hydraulic, etc)?** Yes. *90% Design is complete and construction will initiate in spring and summer 2013.*
- Does it evaluate alternatives? *No.*
- Does it include a recommendation? *No.*
- **Does it have a formal cost estimate?** Yes. *The Recipient's documentation for the ERA process includes project cost estimates.*
- **Does it have or will it require a NEPA document?** Yes. *The Corps Regulatory EA is expected in 2012-2013. This EA is expected to be sufficient to meet the needs for this Corps action under ERA. An EIR was prepared for California Environmental Quality Act (CEQA) compliance by the Humboldt County RCD.*
- Does it impact a structure or feature of a structure whose performance involves potential life safety risks? *No.*
- What are the consequences of non-performance? *Non performance would jeopardize wetland and river restoration objectives.*
- Does it support a significant investment of public monies? *No. Corps cost for this is granting project is \$1,000,000, with approximately \$800,000-\$850000 being expended on Construction. For this review plan this is not significant.*
- Does it support a budget request? *No.*
- Does it change the operation of the project? *No.*
- **Does it involve ground disturbances?** Yes. *This project involves construction activities necessary to construct a restored estuary and associated infrastructure.*
- Does it affect any special features, such as cultural resources, historic properties, survey markers, etc, that should be protected or avoided? *No. Cultural Resources documentation has been completed for CEQA and NEPA compliance.*
- **Does it involve activities that trigger regulatory permitting such as Section 404 or stormwater/NPDES related actions?** Yes. *Project Federal, State and local permitting is expected to be complete in 2012-2013.*
- Does it involve activities that could potentially generate hazardous wastes and/or disposal of materials such as lead based paints or asbestos? *No.*
- Does it reference use of or reliance on manufacturers' engineers and specifications for items such as prefabricated buildings, playground equipment, etc? *No.*
- Does it reference reliance on local authorities for inspection/certification of utility systems like wastewater, stormwater, electrical, etc? *No.*
- Is there or is there expected to be any controversy surrounding the Federal action associated with the work product? *No.*

As shown above, five questions from EC 1165-2-209 were answered "yes" and reflect that the Riverside Ranch EHRP plans and specifications are implementation documents. However, given the intent of the ERA program implementation, SPN supports that ATR for this "other work product" is unnecessary as the project does not rise to the significance of having external district review of the project documents. The Recipient's reviews, permitting requirements, and the Corps' DQC review would provide adequate

review for this project and would be sufficient to insure technical viability, constructability, and to reasonably ensure that there will be no induced damages or other adverse risk.

8. INDEPENDENT EXTERNAL PEER REVIEW.

According to EC 1165-2-209, there are two types of IEPR: Type I is generally for decision documents and Type II is generally for implementation products. A Type I IEPR is not required because this review plan does not cover any decisions documents. Type II IEPR is not required because this project does not rise to the significance of having an external organization review and does not meet any of the criteria for conducting Type II IEPR as per Paragraph 2 of Appendix E of EC 1165-2-209:

- The project does not involve the use of innovative materials or techniques where the engineering is based on novel methods, present complex challenges for interpretations to minimize risks to human health and safety;
- The project does not contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices;
- The project design does not require redundancy, resiliency, and/or robustness to minimize risks to human health and safety;
- The project does not include unique construction sequencing or a reduced or overlapping design construction schedule
- The project is not controversial, does not have significant interagency interest, has a total project cost less than \$45 million, is not preparing an EIS, and does not have significant economic, environmental, and social effects to the nation.
- The project does not involve a significant threat to human life and safety and failure of the project would not pose a significant threat to human life:

The Recipient's engineering analysis, the project's EIR, and the proposed Recipient's "Statement" have documented or will document that there is no change to human life and safety that would result from construction of the setback levee.

The Riverside Ranch project restores estuary habitat by converting reclaimed agricultural lands back to its natural habitat. In order to restore the estuary habitat, it is necessary to breach existing agricultural berms and construct setback berms (levees) to protect adjacent agricultural lands from tidal inundation. The setback levee is designed to contain the enhanced tidal prism and to maintain the same level of protection against tidal incursion onto adjacent agricultural properties as is provided currently by existing agricultural berms. The agricultural land behind the levee contains limited human-related infrastructure or activity proximate to the project area. Specifically, there is an organic dairy with associated infrastructure and a single residence as well as leased pasture lands with a single residence. The

consequences of failure would be the degradation of agricultural land by salt water.

In addition, the project is located between two rivers, the Eel River, and its tributary, the Salt River. The project levee is not designed nor intended to reduce levels of fluvial flooding. Specifically, the levee is not designed as a complete system and will not alter the extent or depth of flood water on agricultural areas adjacent to the project from current or historical conditions. While the project levee will incidentally provide a less than 2-year fluvial flood protection from Salt River flows to adjacent agricultural lands the area, for any flood event above a 12-year event, fluvial flooding from the Eel and Salt Rivers will occur on both sides of the berm concurrently. Based on this, flooding impact to landowners for events larger than 12-years will be the same regardless of the presence of the project berm.

Based on the above and in accordance with Director of Civil Works' Policy Memorandum # 1, signed 19 January 2010, and EC 1165-2-209, Civil Works Review Policy, the work products under review for this ERA project are not subject to Type I IEPR.

In accordance with EC 1165-2-209, the San Francisco District's Chief of Engineering has assessed the potential for the Riverside Ranch ERA project to pose a significant threat to human life. Based on preliminary review and analyses of existing documentation, the District's Chief of Engineering has determined that the project does not incur life safety concerns or pose a significant threat to human life. The project does not address hurricane and storm risk management. The project does provide a limited flood risk management component but the Recipient's engineering analysis, the project's EIR, and the proposed Recipient's "Statement" have documented or will document that there is no change to human life and safety that would result from construction of the setback levee. In addition, the failure of the project's levee does not pose a significant threat to human life. Therefore, the project is not subject to Type II IEPR/SAR.

9. POLICY AND LEGAL COMPLIANCE REVIEW.

Project documents will be reviewed for their compliance with applicable law and policy.

10. COST ENGINEERING REVIEW AND CERTIFICATION.

The basic material, labor, and construction costs for this project will be reviewed and certified by the SPN District Cost Estimating Section.

11. VALUE ENGINEERING.

A contract for construction of Riverside Ranch is in the solicitation period. The USACE ERA contribution to construction funds is less than \$1M and the total project costs is

approximately \$8M. A Value Engineering study will be conducted concurrent with the DQC review. The study will be facilitated by the MSC Value Engineering Program Manager (VEPgM) and include a single bundled analysis of the Riverside Ranch and Sears Point restoration projects. Cost savings identified in the study will be tendered to the recipient for consideration.”

12. MODEL CERTIFICATION AND APPROVAL.

There are no decision documents requiring model review for this project. Engineering models will be reviewed by appropriate Engineering disciplines during the DQC Review. SPN Hydraulic Engineering has performed a cursory review and determined that the two hydraulic models utilized to produce the final project design are Corps approved models.

13. REVIEW SCHEDULE AND COSTS

DQC Schedule and Cost. DQC will be performed in 2-5 working days by each team member and as described in the project’s PMP. DQC will be completed in Winter 2013, depending on the approval schedule for this Review Plan. Due to the extremely limited budget for ERA projects, the total cost for DQC should not exceed \$20-30,000.

14. PUBLIC PARTICIPATION.

There has been extensive public participation in the Riverside Ranch Estuary Restoration Project. The Humboldt County Resource Conservation District (RCD) has been the responsible party for California Environmental Quality Act compliance and public outreach. Over more than a decade, the District has facilitated numerous public meetings, tours, small group discussions, and individual conversations in order to assure public involvement in this highly collaborative project. On June 21, 2007 a public scoping meeting to discuss the Notice of Preparation for this proposed project was held at the Ferndale City Hall and public comment was received. During 2006 and 2007 additional public meetings were held inviting landowners and interested citizens to form Salt River Watershed Council. Project design has been guided by close coordination and collaboration with local, State and Federal resource agencies. These resource agencies have been actively involved in the project for the last several years and are currently involved in resolving final permit issues. Resource agencies with regulatory review responsibilities have been coordinated with and actively engaged as required by applicable laws and regulations. The public has had the opportunity to comment on the project through the public notice process and notifications in the local news media.

15. REVIEW PLAN APPROVAL AND UPDATES.

The SPD 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 2. 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 Commanders' 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.

The PDT will carry out the Review Plan as described. The Project Manager will submit the plan to the District Engineering and Technical Branch Chief for endorsement of MSC approval. Formal coordination with SPD will occur through the District Planning Branch Chief.

The latest version of the review plan, along with the SPD approval memorandum, will be posted on the SPN webpage at:

http://www.spn.usace.army.mil/project_review_plans/index.html

16. REVIEW PLAN POINTS OF CONTACT.

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

- San Francisco District Project Manager, Joél Benegar: 415-503-6848
- South Pacific Division Point of Contact, Nedenia Kennedy : 415-503-6585

ATTACHMENT 1: TEAM ROSTER

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ATTACHMENT 2: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number