DEPARTMENT OF THE ARMY PERMIT EVALUATION AND DECISION DOCUMENT

APPLICANT: APPLICATION No. 2010-00282N

Humboldt County Resource Conservation District
5630 South Broadway
Eureka, California 95503

Project Name: Salt River Ecosystem Restoration Project
Project Location: Ferndale, Humboldt County, California
Named Waterway: Salt River and tributaries including Francis Creek and Williams Creek
Project Site Latitude: 40.6242°N
Project Site Longitude: -124.31503°W

This document constitutes the Environmental Assessment, Statement of Findings, and review and compliance determination according to the Section 404(b)(1) Guidelines for the project (applicant's preferred alternative) described in the attached Public Notice. The Department of the Army permit application was processed pursuant to the provisions of Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq*.) and Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq*.)

Incorporated herein by reference are the following documents that were reviewed, in part, in formulating the decision on this Department of the Army permit application:
Humboldt County Resource Conservation District Salt River Ecosystem Restoration Project: Riverside Ranch Tidal Marsh Restoration Plans; Phase 1 Construction December 2011 prepared by Kamman Hydrology & Engineering, Inc consisting of 24 sheets.
Salt River Ecosystem Restoration Project, Salt River Channel & Riparian Floodplain Corridor Restoration Plans Phase 2 Construction prepared by Winzler & Kelly and Michael Love & Associates dated May 2011.
County of Humboldt Department of Public Works Project Plans for Construction of Francis Creek Culvert Replacement Port Kenyon Road (2H010) PM 0.5 Agreement No. PXXXXXXXX Contract No. 211303 prepared by County of Humboldt Department of Public Works consisting of 8 sheets dated January 7, 2011.

I. PROPOSED PROJECT:

A. **PROJECT DESCRIPTION** (33 C.F.R. §§ 325.1(d) and 325.3(a)(5); 40 C.F.R. § 1508.20)**:** The Humboldt County Resource Conservation District (RCD) is seeking Department of the Army authorization to discharge fill into navigable waters and wetlands of the United States under jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Sections 10 of the Rivers and Harbors Act and 404 of the Clean Water Act. Identified as the Salt River Ecological Restoration (SRER) Project, construction activities have been designed to restore a higher level of natural function to 7.7 miles of the Salt River and named tributaries.

The Salt River drains an area of 47 square miles and includes Smith, Reas, Francis, Williams and Coffee Creeks. The tributaries originate in the Wildcat Mountains south of the project area. Land use, mainly timber harvest, impacts the Salt River and tributaries prior to flowing onto the flat alluvial plain surrounding Ferndale. Local climate, periodically heavy precipitation, steep slopes, instability due to tectonic activity and erodible soils contribute loads of silt and sand to the high velocity waters before they are slowed from the flat valley, generating a large sediment load deposited within the valley plain.

Prior to community development and private property ownership, the river was allowed to meander, depositing the sediment load wherever decreased velocity occurred. Property ownership and land use had restricted flows to specific channels which have become filled with sediment deposits. Efforts to reduce flood damage and maintain channelized flow have not succeeded. The Humboldt County RCD has focused attention and mobilized local groups to restore lost functions as part of the Salt River Ecological Restoration (SRER) Project.

Project details are complex and interrelated and have been divided into two Phases which would be described separately. Both phases were guided by wildlife agencies and include increases to habitat diversity as well as restoration of lost habitat. Specific habitat requirements for targeted and listed species are detailed under sections devoted to the agencies. Successful collaboration among many groups which has brought the project to the current state of requesting authorization deserves mention. Included in the group of participants, public and private, are property owners, farmers, City of Ferndale, and County of Humboldt who have contributed to the success of planning.

Participants want to restore natural features in support of a functioning ecosystem. In the past, decline in natural function has disrupted the balance of the Salt and Eel Rivers. This project is an attempt to re-configure channel flow to support evolution of the natural system within the disturbed context. The primary purpose of the Salt River Ecological Restoration (SRER) can be summarized as an effort to restore tidal influence within historic wetlands and migratory fish corridors and restore upstream connectivity to provide a framework for re-development of a sustainable natural system. Every opportunity has been taken to increase habitat complexity while reducing flooding to promote agricultural productivity and water quality improvement. The restoration goal has guided the design as a self mitigating project.

Phase 1, Riverside Ranch

Phase 1 focuses on activities contained within the lower 2.5 mile, tidal reach of the Salt River adjacent to Riverside Ranch. The western project limit, Cutoff Slough is a mile upstream from the confluence of the Salt with the Eel River. Excavation of 12,875 linear feet of Salt River channel (185,000 cubic yards (cy)) is designed to expand tidal influence, increasing estuary functions and upstream connectivity. In addition to expansion of the main Salt River channel, the design incorporates alterations within Riverside Ranch to support expansion of tidal influence. The restoration of Riverside Ranch would 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. This includes the restoration of

approximately 356 acres of tidal estuarine habitat on Riverside Ranch, including nearly 4 miles of marsh interior tidal slough channels, approximately 50 acres of salt marsh plain.

An existing berm would be breached in two places opening the site to tidal flow while maintaining protection for existing willow stands. Up to twenty six elevated acres of Riverside Ranch would be re-graded to tidal marsh elevation to support both tidal marsh function and internal remnant slough networks. The channel design goal is to maintain function through tidal cycles in support of salt marsh and brackish marsh vegetation; to provide appropriate depth for eelgrass colonization; and to allow scour velocities and salinity exchange to occur. Construction of an 11,360 foot long by 12 foot wide (top) berm along the eastern property boundary is designed to protect adjacent parcels from newly increased tidal flow. Sediment excavated from the River channel would be used as fill to construct the berm with a design that creates additional habitat features. The following table earthwork table outlines cut and fill for Phase 1 and Phase 2 and was prepared by Winzler & Kelly in the Biological Assessment referenced above, updated in October 2011.

Description	**Cut (CY)**	**Fill (CY)**
Riverside Ranch Restoration:		
Phase 1		
Excavate Salt River Channel (Cut-off Slough to Reas Creek)	183,400	
Excavate Internal Channels	47,000	
Earthwork for new marsh - cut	60,600	
Earthwork for new marsh - fill		121,300
Create Setback Berm (20:1 basal slope)		185,000
Excavate New Eastern Outboard Drainage Ditch	31,400	
Lower Existing Levees	14,150	
Fill Internal Drainage Ditches		25,250
Fill Internal Dairy Barn Ponds		5,000
Phase 1 Total	**336,550**	**336,550**

Description	**Cut (CY)**	**Fill (CY)**
Salt River Restoration		
Phase 2		
Excavate Salt River Channel (Reas Creek to Perry Slough)	387,700	
Francis Creek	36,000	
Eastside Drainage	3,000	
Beneficial Reuse Opportunity Necessary to Balance cut/fill (3-4 inch depth for Agriculture Reuse or other local projects)		426,700
Phase 2 Total	**426,700**	**426,700**
PROJECT TOTAL	**763, 250**	**763,250**

Riverside Ranch was acquired by Western Rivers Conservancy with support from U.S. Fish and Wildlife Service, Wildlife Conservation Board and the State Coastal Conservancy. Future plans include transfer of the 444 acre parcel to California Department of Fish and Game to manage as the Salt River Unit of the Eel River Wildlife Management Area. A portion of the project funding was provided by the Estuary Habitat Restoration Program (EHRP) and administered through USACE Civil Works. The EHRP is a small Federal grant cost shared program under the Estuary Restoration Act (ERA) of 2001, as amended. The purpose of the ERA 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. In accordance with the EHRP, the Estuary Habitat Restoration Council awarded Ducks Unlimited, the applicant and now the project's "Recipient" or "non-Federal sponsor", one million dollars to fund a portion of the Riverside Ranch Estuary Restoration Project. The project is scheduled for implementation in 2012-2022 and monitoring would continue with USACE involvement in the project including five year monitoring support. Tidal marsh restoration at Riverside Ranch would increase tidal flow to support interior channel function and upstream conveyance. Earthwork is designed to allow the evolution of increasingly complex habitat. Selective lowering of the berm supports scour in the Salt River. Berm elevations would protect existing willow forest, supporting re-establishment of raptor habitat removed during agricultural land expansion. Additional woody species would be added to restore historic Salt River Delta forested habitat. Seventy acres of internal agricultural land is targeted as short grass habitat for the Aleutian cackling goose. The berm along the northern boundary of Riverside Ranch would be strengthened and conform to the dimensions of the newly constructed eastern berm that would protect parcels outside the project.

Phase 2, Salt River Ecosystem Restoration between Riverside Ranch (south boundary) upstream to Francis Creek and Williams Creek

As outlined in the approved plan, "Salt River Ecosystem Restoration Project, Salt River Channel & Riparian Floodplain Corridor Restoration Plans, Phase 2 Construction", prepared by Winzler & Kelly and Michael Love & Associates dated May 2011, elements constructed in Phase 2 include excavation of the upstream 5 – 5.5 miles of Salt River channel. Re-grading portions of Frances and Williams Creeks, and Eastside Drainage would improve hydraulic connectivity with newly reconfigured Salt River channel. Management strategies to prevent tidal inflow and downstream sediment discharge are included in the design. Construction guidance has been developed by each wildlife agency and included with authorization for species protection during disturbance. Beneficial re-use materials from channel bed re-alignments would be spread on previously chosen upland fields in a layer 3 – 4 inch thick to function as a soil amendment. The locations have been determined following agreements with Humboldt County RCD under guidance from USACE. Participating farm fields have been delineated to avoid a fill discharge to wetlands. Field determination of transport methods would employ the least damaging method to preserve productive soils and would reach agreement prior to starting construction.

Phase 2 plan excavates12,875 linear feet of the Salt River channel upstream from Cutoff Slough to the confluence with Reas Creek; excavates internal channels; and incorporates large wood

structures to increase hydraulic roughness and habitat complexity. Restoration of the reach between Perry Slough and Reas Creek is designed to incorporate active and passive sediment management such as flow velocity and design features. Functionality of the combined Perry Slough, Coffee and Williams Creeks manages flow while Francis Creek contains specific structures to manage sediment. The channel would be constructed with an active bench while the floodplain is designed with sediment deposition zones. Planted trees (spruce, cottonwood and existing willows) can lower water temperatures, reduce invasive species colonization and replace raptor habitat lost to pasture expansion. An active bench between the floodplain and channel with a wide transition zone in some locations, would re-establish wetland habitat with plantings of sedges, grasses and forbs. Flows reaching the active bench would navigate discontinuous vegetation and topographic diversity to reduce velocity and promote sediment deposition. Woody vegetation and shrub layers in these features can stabilize the bank while promoting decreased velocity and sediment deposition also. The active channel would support drainage with connectivity downstream to expanded tidal flow. Monitoring and maintenance if needed would allow intervention before diverging from the design plan. Adaptive Management (AMA) and Active Sediment Management Areas (ASMA) would maintain connectivity within Eastside Drainage, Williams and Francis Creeks. Three ASMA would be constructed in the Salt River near the Francis Creek confluence. Upstream and downstream of Dillon Road Bridge, an expanded active bench would be constructed and an oblong "alcove", 1000 feet by 350 feet. The upper inflow with a narrow outflow would meter incoming flows, reducing velocities, allowing sediment to drop out into the sediment "basin". With a capacity of 8000 cy, the feature would effectively remove sediment prior to discharge into the Salt River and store the sediment for future removal by Salt River Watershed Council in accordance with AMP. Efforts to improve drainage of the Salt River, includes restoring the lower 2,900 feet of Francis Creek. Two existing structures would be removed and replaced by a free span crossing and an elliptical culvert, reducing constraints during high flows.

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B. **PROJECT MODIFICATIONS** (33 C.F.R. § 325.2(a)(2)): Modifications specific to habitat creation follow guidance presented in Biological Opinions (BO) dated November 21, 2011 from U.S. Fish and Wildlife Service (FWS) and January 20, 2012, from National Marine Fisheries Service (NMFS). Mr. Ammerman managed the SRER Project from its inception until his retirement at the end of 2011. I have reviewed the files and rewritten the final authorization and Environmental Assessment to present the information with greater clarity and incorporate revisions.

C. **PROJECT IMPACTS TO WATERS OF THE UNITED STATES:** The report entitled "REVISED UPLANDS DELINEATION FOR SALT RIVER RESTORATION PROJECT FERNDALE, CALIFORNIA" prepared in April 2011 consisting of 245 pages documents the rationale for determining jurisdiction. It was prepared by Winzler and Kelly in collaboration with USACE wetland specialist, Dan Martel. Based on this report, the project area consists of 755 acres under the jurisdiction of USACE. Riverside Ranch consists of 462.9 acres and 293 acres represent the Salt River, 7.7 linear miles. The table "Permanent Impacts to USACE Jurisdictional Wetlands / waters of the United States" outlines the activities which are regulated. In addition, approximately 4,000 cubic yards of gravel and clean stone would be temporarily placed for access, hauling and staging areas. The access roads include those constructed for delivery of sediment in beneficial re-use areas which are outside the jurisdiction

of this authorization. All temporary gravel would be removed and the areas returned to pre-construction status following completion of the project activities.

Phase 1 construction would excavate an expanded, defined channel in the Salt River upstream from Cutoff Slough for a length of 2.0 – 2.5 miles upstream. Within adjacent Riverside Ranch, re-grading would target elevations for habitat development following re-introduction of tidal influence. Refer to cut and fill amounts described in the Earthwork table above. Levees would be lowered and two areas breached to achieve specific habitat development and upland / wetland transition zones. Existing borrow ditches and farm ponds would be filled and a 9,060 foot berm constructed to protect adjacent properties from flooding. In **Phase 2** channel excavation would continue upstream to improve connectivity with non tidal reaches and is designed to allow the ebb and flow of tidal cycles to fully function – with wetting and drying of channel substrate, successful drainage for inland discharges and to provide shallow habitat for eel grass.
The depth of Phase 1 excavation would allow tidal flow to maintain a clean channel without sediment deposition or non native vegetation influx. Phase 2 would extend channel definition by excavating further up stream to reach the full 7 – 7.5 miles. Tributary channels (Francis, William, and Eastside Drainage) would be realigned to improve Salt River basin drainage, flow and effluent removal from Ferndale Wastewater Treatment Plant. In support of City of Ferndale's Drainage Master Plan Update (Spencer Engineering, 2004), project impacts include restoration of 2,900 feet of lower Francis Creek, removal and replacement of the existing Port Kenyon Road Crossing and removal (and free span replacement) of an existing failed bridge over Francis Creek. Proposed improvements would reconnect the Eastside Drainage ditch via a 500 foot channel to Francis Creek. Excavation of an alcove is designed to remove sediment from upstream flow prior to discharge to the Salt River. Temporary and permanent impacts are designed to carve out a functioning drainage basin while reducing sediment discharge to the flat alluvial plain that has become severely impacted by deposits. By defining and widening the Salt River channel, movement of flow by the tides would extend further inland, improving management of sediment. Restoration tasks are aimed at returning the Salt River and floodplain to historic function. In doing so, the project utilizes opportunities to include a complex array of habitat functions that potentially existed historically. Project related impacts to waters of the US is an attempt to undo the results of disturbance and return many historical functions.

II. ENVIRONMENTAL AND PUBLIC INTEREST FACTORS CONSIDERED:

A. PROJECT PURPOSE AND NEED:

1. **Basic Project Purpose** (40 C.F.R. § 230.10(a)(3)): The basic project purpose comprises the fundamental, essential, or irreducible purpose of the project, and is used by USACE to determine whether the project is water dependent. The basic purpose of the project is restoration of the Salt River Watershed and is water dependent.

2. **Overall Project Purpose** (40 C.F.R. § 230.10(a)(2)): The overall project purpose serves as the basis for Section 404(b)(1) Guidelines alternatives analysis, and is determined by further defining the basic purpose in a manner that more specifically describes the applicant's goals for the project, while allowing a reasonable range of alternatives to be

analyzed. The overall project purpose is to restore natural functions to the Salt River Watershed ecosystem that can be self sustaining and accomplished within a reasonable economic framework.

3. **Need for the Project** (33 C.F.R. §§ 325, Appendix B, Para. 9.b.(4), 325.1(d), and 325.3(a)(5)): Historically, the Salt River was navigable for more than 10 miles. Small steam ships could enter the Eel River Estuary and travel the Salt River to dock at Port Kenyon. As the Salt River accumulated sediment, the natural processes that might have moved the sediment into the Pacific Ocean have ceased. Upper watershed logging and road building in the Wildcat Mountains, development of commercial and residential properties which form the City of Ferndale, and land use to maximize agriculture altered the self-sustaining equilibrium of the Salt River. Diking, draining, ditching and installation of water control structures have contributed to the decline as have grazing animals. The practices are not unique to this watershed. It is the determination and drive of the community to return the watershed to a state that more closely aligns historic functions that make this project unique. Going forward, the community has joined together to solve many of the Salt River problems in a way that would return natural functions and allow the return of habitats that support many species, some of which have declined to the level of needing Federal listing for protection.

B. **PROJECT ALTERNATIVES** (33 C.F.R. 33 §§ 320.4(a)(2)(ii) and 325.2(a)(4); 40 C.F.R. §§ 230.10(a) and 1508.25): The Corps received an Alternatives Analysis from Winzler & Kelly dated August 15, 2011, outlined below. The full report has been attached to this document.

Alternative 1. **Full Ecosystem Restoration:** This is the preferred alternative described fully within the Project Description, Item A under I. Proposed Project.

Alternative 2. **Channel Corridor restoration:** This alternative involves the channel restoration component but without restoration of Riverside Ranch. Without Riverside Ranch activities, tidal exchange and scouring would occur through a narrower tidal prism, with no benefits for migratory waterfowl, shorebirds, fish and other wildlife species. Low level tidal exchange would not maintain scouring of the channel, requiring on going maintenance.

Alternative 3. **Historic function level restoration**: An expanded project with construction of larger levees and longer/wider channel excavations would extend further upstream, cover a larger footprint with increased impacts and costs.

Alternative 4. **Off site disposal of sediment**: This alternative would involve the channel restoration and Riverside Ranch component as in Alternative 1, but the excavated material would not be used to construct a setback berm on Riverside Ranch or be applied for sediment reuse on agricultural lands. Without beneficial re-use of excavation sediment, the project would generate additional costs.

In summary, the applicant determined that they could accomplish a reasonable level of functionality with the least amount of disturbance in the preferred alternative project, the project as proposed.

C. **ENVIRONMENTAL ASSESSMENT** (33 C.F.R. §§ 320.4(a) and 325.2(a)(4); 40 C.F.R. § 1508.9): The following paragraphs describe potential beneficial and adverse direct, indirect, and cumulative impacts of the project on various public interest factors. Direct impacts are specifically caused by the project, occur at the same time and place, and may result in short-term and/or long-term changes to the environmental baseline condition. Indirect impacts are caused by the project but occur later in time or are further removed by distance, but are still reasonably foreseeable. Cumulative impacts are specifically addressed at the end of this section.

1. **Scope of Analysis**:

a. **NEPA Scope of Analysis** (33 C.F.R. §§ 325, Appendix B, Para. 7.b. and 325.2(a)(4)): Under the provisions of Paragraph 7.b. of Appendix B to 33 C.F.R. Part 325, when an activity requiring a Department of the Army Permit is merely one component of a larger project, the scope of analysis should address those portions of the entire project over which USACE has "sufficient control and responsibility" to warrant Federal review. Typical factors to consider in determining whether sufficient control and responsibility exist include: (a) Whether or not the regulated activity comprises merely a link in a corridor type project; (b) whether there are aspects of a upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity; (c) the extent to which the entire project occurs in jurisdictional waters; and (d) the extent of cumulative Federal control and responsibility. The determination of Federal control and responsibility may include portions of the project beyond the limits of USACE jurisdiction where the cumulative Federal involvement, such as Federal financing, assistance, direction, regulation, or approval, is sufficient to grant legal control over such additional portions of the project.

In consideration of criterion (a)(b)(c) and (d) cited above, USACE does have sufficient control and responsibility to warrant a Federal review over a larger portion of the entire project, or to turn an essentially private action into a Federal action. USACE has determined the project area includes all waters of the United States in reasonable proximity to the project location and the immediate upland areas (including those upland or wetland areas identified in previous jurisdictional determinations and the applicant's permit application identifying these agricultural lands as "sediment reuse areas") and the riparian corridor adjacent to these waters. Specifically, the NEPA Scope of Analysis includes the entire Salt River corridor within the restoration area between Cut-Off Slough at its confluence with the Salt River at the downstream end. On the eastern limit, the project follows the Salt River to 1,000 feet upstream of Williams Creek, a distance of 7.7 miles. The NEPA scope includes the main stem of the Salt River and adjacent tributaries.

b. **NHPA Scope of Analysis** (33 C.F.R. § 325, Appendix C, Para. 1.g.): Under the provisions of Paragraph 1.g. of Appendix C to 33 C.F.R. Part 325, the term "permit area" is defined as those areas comprising jurisdictional waters that would be directly affected by the proposed work or structures and uplands directly affected as a result of the authorized work or

structures. The permit area may be expanded beyond the limits of the affected jurisdictional waters to upland areas, provided the activity satisfies the following three factors: (a) The activity does not take place but for the authorization of the work or structures; and (b) the activity is integrally related to the authorized work or structures; and (c) the activity is directly associated (first order impact) with the authorized work or structures.

In consideration of criterion (a)(b) and (c) cited above, USACE does not have sufficient control and responsibility to warrant a Federal review over a larger portion of the entire project. The NHPA Scope of Analysis is equivalent in the case of the Salt River Ecosystem Restoration Project to the Area of Potential Effect, which begins with the Riverside Ranch, Phase 1 project limits on the downstream end of the Salt River and ends on the upstream Phase 2 portion beyond Williams Creek. The Area of Potential Effect is shown on Appendix B. The APE and NHPA Scope of Analysis excludes the proposed sediment reuse area located on private agricultural land mostly located north of the Salt River and south of the Eel River. Since no excavation would occur on the sediment reuse properties and only shallow soil fill, these areas are outside the APE and NHPA Scope of Analysis. The NHPA Scope of Analysis includes those areas involved in the channel excavation, floodplain modification, tributary realignment and all levee, tidal marsh and channel restoration activities on Riverside Ranch.

c. **ESA Scope of Analysis** (50 C.F.R. § 402.02): Under the provisions of 50 C.F.R. Section 402.02, the term "action area" is defined as all areas to be affected directly or indirectly by the authorized work or structures. Accordingly, the action area typically includes the affected jurisdictional waters and uplands affected by the authorized work or structures within a reasonable distance. While USACE Headquarters has not provided finalized guidance on formulating the ESA Scope of Analysis, it is presumed that the action area may be expanded beyond limits of the immediate uplands, taking into account the following evaluation factors: (a) That either a causal physical relationship exists between the authorized work or structures and any indirect effects occurring in uplands, or that the extent of USACE involvement is sufficient to exert Federal control and responsibility over additional upland areas; or (b) that activities occurring in upland areas would not occur but for the authorized work or structures; and (c) that activities occurring on upland areas are interrelated activities or interdependent activities with respect to the authorized work or structures.

In consideration of criterion (a), (b), and (c) cited above, USACE does have sufficient control and responsibility to warrant a Federal review over a larger portion of the entire project. The ESA scope of analysis covers the entire 7.7 miles length of the Salt River riparian and channel corridor between the 450-foot downstream portion of Williams Creek downstream to Riverside Ranch near the Salt River confluence with the Eel River and portions of Salt River tributaries (Francis Creek, East Side Drainage, Reas Creek and Smith Creek) that drain into (directly or indirectly) the Salt River. Direct and indirect impacts from sediment release or pollution from upland areas or temporary access roads adjacent to or topographically connected to waters where threatened/endangered fish or other aquatic species and habitat that may occur in the project area are part of the ESA scope of analysis. These upland areas are generally located within the applicant’s established project area limits.

2. **Site Description**: The SRER Project encompasses a rectangular shaped lowland consisting of dairy farms adjacent to the Salt River. The proposed channel corridor "roughly" bisects the parcels which parallel the Eel River at the base of the Wildcat Mountains. The restored Salt River channel would begin at the western boundary with Cutoff Slough, meander in an eastern direction to 1,000 feet upstream of the confluence of the Salt River with Williams Creek. Historically, the Salt River occupied an area 200 feet wide and 15 feet deep. Today, the channel is undefined, filled with sediment, choked by vegetation with the appearance of a forested wetland. In the past, the Salt River supported migratory and spawning runs of salmon and steelhead. Today, the Salt River tidal prism is limited to perhaps 2 miles near Riverside Ranch. Fish passage is non-existent. A network of trails and farm lanes crosses the valley between the Eel and Salt River.

3. **Direct and Indirect Impacts to the Physical Environment** (40 C.F.R §§ 230.11, 230.20-230.25, and 1508.8):

a. **Substrate**: The design plan for the project calls for excavating 7.7 miles of the Salt River channel and adjacent named tributaries. Changes in elevation are as much as 6 feet. Winzler and Kelly, the applicant's consultant have studied and tested the soil that would be removed to create the defined channel. It consists of silt and fine sand. Natural functions have been severely reduced within the fine grained silt and sand of the Salt River substrate. The design includes elevation changes, increases in tidal influence – both timing and volume, drainage to improve water quality- dissolved oxygen content, salinity levels and pH – changes designed to encourage return of natural function, including those inhabiting substrate As presented major, long term beneficial impacts are included in the design for returning substrate to a composition which supported a natural community.

b. **Erosion and Sediment Accretion Patterns**: Up stream erosion of easily weathered and decomposing soils compounded by timber harvest is a major problem for the Salt River drainage basin. Sediment accretion has choked the drainage features and agriculture has confined them. The long term goal is to better manage sediment discharge upstream. It is the short term goal of the SRER Project to undo a century of poor land management. The project would have an immediate, major beneficial impact on erosion and sediment accretion patterns. After completion of Phases 1 and 2, it is anticipated that the partners would focus on long term erosion problems.

c. **Currents, Circulation, or Drainage Patterns**: The design plan would create the setting that would allow tidal currents to perform their natural functions. Tidal influence would be strong enough to scour the lower channel clean – removing sediment and preventing unwanted vegetation from becoming established. At the same time, hydraulic functions would extend far enough upstream to allow drainage from the Wildcat Hills to flow with enough velocity to prevent deposition in the small tributaries. Reconfiguration of the tributaries and an Active Sediment Management Plan that includes a sediment catchment basin plus an Adaptive Management Plan to provide maintenance when problems arise can re-establish efficient drainage. Functioning of the drainage basin would improve dramatically in the short term, a major beneficial impact. The Corps anticipates that the design can sustain these processes well into the future.

d. **Water Quality** (temperature, suspended particulates and turbidity, salinity patterns): It is flow from the Wildcat Hills bringing fresh water to the newly improved tidal flow of the main stem of the Salt River which together would contribute to improved water quality. The alcove, a constructed sediment basin at the Francis Creek confluence would be constructed to act as a sediment catch basin. Two additional ASMAs plus the active bench would route flows in a manner to lower velocity which would affect the carrying capacity of flow, depositing sediment in the basin. Drainage from the Wildcat Hills would discharge into the tidally influenced Salt River bringing fresh water to assist tidal flow volumes in keeping the main stem moving and clean. Improved flow without sediment would aid effluent dilution and discharge from the Ferndale Wastewater Treatment Plant and bring the City closer to compliance with water quality standards. This is a major beneficial impact for Ferndale.

e. **Flood Hazards and Floodplain Functions**: Improved flood control is a major stimulus for this project. As sediment drops out of drainage flows and impedes water draining from the Wildcat Hills, floods ensue. Property damage and reduced productivity of farm fields motivates the community to change the pattern of inundation and damage. From the very beginning of excavation, there would be major beneficial impacts for flood hazards and flood relief.

f. **Wetland Functions** (flood control, storm or wave erosion control buffers): As research supports the important role of wetlands, particularly in the context of sea level rise, attenuating sediment deposition and flood storage are major beneficial impacts resulting from the SRER. Every opportunity to increase wetland amounts, for physical functions as well as for biological habitat have been utilized. The "active bench" included in upstream construction of the defined channel has been designed for "roughness" to slow water velocity and allow sediment to drop out of the water. Trees and woody shrubs act to further slow the flow. Vegetation has been chosen which functions effectively in this environment. Some hydrophytes thrive with the enrichment of soil sediment, just as use of the excavated material would benefit farm fields. The table inserted below from the Biological Assessment prepared by Winzler & Kelly, updated October 14, 2011 provides an accounting of the area of wetlands anticipated following restoration. By design, the numbers balance existing wetlands with diverse wetlands planned for creation.

Land Use and Habitat Projections (all units in acres)[1]

	RIVERSIDE RANCH[2]				SALT RIVER[2]				OVERALL PROJECT			
HABITAT TYPE	Existing	Removed	Replanted or Created	Projected or Created	Existing	Removed	Replanted or Created	Projected or Created	Total Existing	Total Projected	Projected Change	Creation Ratio[7]
Tidal Salt & Brackish Marsh	36	14	300	322	-	-	4	4	36	326	+290	9:1
High Marsh Ecotone Wetland	-	-	12	12	-	-	-	-	0	12	+12	12:1
Aquatic / Mudflat[5]	8	4	17	21	3	-	-	14	11	35	+24	3:1
Riparian Forest/Scrub	31	13	25	43	66	32	51	85	97	128[8]	+31	1.3:1
Freshwater Wetland Habitats:												

a) Freshwater Marsh/Freshwater Channel Wetlands	<1	-	-	<1	1	<1	22	22	1	22	+22	22:1
b) Seasonal Wetlands	3	3	-	<1	21	11	-	10	24	10	-14	-
Agricultural/ Grassland/ Levees	358	303[9]	18[4]	73	240	52	-	188	598	262	-337	-
Scrub-Shrub	8	8	-	-	1	1	-	-	9	0	-9	-
Ruderal	20	20	-	-	3	3	-	-	23	0	-23	-
Developed	8	8	-	<1	1	<1	-	<1	9	<1	-8	-
Sediment Management Areas [6]	-	-	-	-	-	-	-	13[3]	0	13	+13	13:1
Permanent Access Road or Improved Bridge Crossing	-	-	-	-	-	-	-	<1	0	<1	+<1	-
Approximate Total	**472**			**472**	**336**			**336**	**808**	**808**		

[1] Totals are approximate due to rounding of individual acreage amounts.
[2] The confluence of Reas Creek divides the restoration areas of Riverside Ranch (Phase 1) and Salt River (Phase 2).
[3] 13 acres have been depicted on the projected vegetation maps. However, an additional 7 ac are tentatively proposed within the project area on existing agricultural grasslands.
[4] New berm would be seeded with native and erosion control grass species, above 9 ft (NAVD 88) on tidal marsh side and entire side slope on opposing side.
[5] Existing habitat type includes impacted areas to existing Eel grass beds (1.2 ac). Projected habitat area includes an estimated 8.7 acres of Eel grass beds created. Reference: Salt River Ecosystem Restoration Project Rare Plant Mitigation and Monitoring Plan (H.T. Harvey & Associates and Winzler & Kelly, January 27, 2011).
[6] The location of proposed Sediment Management Areas currently comprise approximately 85% Agricultural Grasslands and 15% Riparian Forest and have been accounted for in the respective Removed columns.
[7] Creation Ratio defined as total acres **Projected** (Created) to total acres **Existing**.
[8] Area does not include anticipated future natural recruitment of riparian habitat on the active bench. 20+ acres of projected freshwater and seasonal wetland habitats on the active bench could convert to riparian forest per Adaptive Management Plan.
[9] Area includes grassland habitat on existing levees some of which are not currently used for agricultural production.

g. **Baseflow**: Both main stem and tributary base flow within the Salt River drainage basin has been impaired by disconnecting tributaries from the main channel. Proposed Phases 1 and 2 would improve base flow by reducing sediment accretion while increasing flow volume. The proposed design would expand the tidal prism and improve the efficiency of upper watershed drainage. These actions would improve base flow, a major beneficial improvement over current level of function.

h. **Aquifer Recharge and Water Supply** (natural): No effect.

4. **Direct and Indirect Impacts to the Biological Environment** (40 C.F.R §§ 230.11, 230.30-230.45, and 1508.8):

a. **Wetlands** (Special Aquatic Site): Jurisdictional wetlands are present within the project area. A portion of the **Land Use and Habitat Projections** table prepared by Winzler & Kelly in the Biological Assessment, updated October 14, 2011 compares existing acreage in the project area with that proposed following restoration and is outlined below. Although divided into types, the existing wetlands are low functioning and degraded by

agricultural practices. It is the quality and diversity following restoration that defines this project as a major beneficial contribution. The design targets creation of a wide variety of quality wetland types, and provides the framework for evolution of a wide spectrum of types. It is both the higher quality and variety of intermediary mosaics which would distinguish this restoration in the future. Without grazing and degradation caused by farming, the restored wetlands will evolve to historic levels of function.

	RIVERSIDE RANCH		SALT RIVER		OVERALL PROJECT	
HABITAT TYPE	Existing	Removed	Existing	Removed	Total Existing	Total Projected
Tidal Salt & Brackish Marsh	36	14	-	-	36	326
High Marsh Ecotone Wetland	-	-	-	-	0	12
Aquatic / Mudflat[5]	8	4	3	-	11	35
Riparian Forest/Scrub	31	13	66	32	97	128
Freshwater Wetland Habitats: a) Freshwater Marsh/Freshwater Channel Wetlands	<1	-	1	<1	1	22
b) Seasonal Wetlands	3	3	21	11	24	10

b. **Mudflats** (Special Aquatic Site): Tidal mudflat within the Salt River channel would be removed during excavation. However, the proposed project would have long-term, major beneficial impact by creating up to 20 acres of tidal mudflat with main channel excavation and creation of narrower tidal channels within Riverside Ranch. There are 3 acres of existing mudflat in Phase 2 that would be expanded to approximately 14 acres following completion of the project. These are long-term, major beneficial impact on mudflat habitat, a unique environment.

c. **Vegetated Shallows** (Special Aquatic Site): Adjacent to Riverside Ranch, eelgrass (*Zostera marina*) was observed along a continuous 3 to 4 foot wide band on either side of the Salt River channel in the lowest reach. Bathymetric surveys of the Salt River channel reveal eelgrass beds at elevations ranging from 0 to 4 feet (NAVD88 datum) or -1.5 to 2.5 feet Mean Lower Low Water (MLLW). Eel grass beds are considered Special Aquatic Sites by the United States Environmental Protection Agency (EPA) as described in the Section 404 (b)(1) EPA Guidelines for Discharge of Dredged or Fill Material. The *Salt River Ecosystem Restoration project Rare Plant Mitigation and Monitoring Plan*, prepared for the applicant by H.T. Harvey & Associates, dated January 27, 2011, describes creation of 8.7 acres of eelgrass habitat. The area would be monitored regularly for growth as it is difficult to establish. USACE anticipates successful re-establishment and expanded acreage to be a major long term beneficial impact on vegetated shallows.

d. **Coral Reefs** (Special Aquatic Site): No effect.

e. **Pool and Riffle Areas** (Special Aquatic Site): Design for the SRER project incorporates habitat structures such as wooden logs and boulders that encourage scouring of channel pools for salmon, grade control structures and bioengineered stream banks, along with extensive riparian replanting to encourage shade for water temperature regulation. As planned the project would have a major, long term beneficial effect on pool and riffle complexes which have become completely obliterated by sediment deposits.

f. **Wildlife Sanctuaries and Refuges** (Special Aquatic Site): The Wildlands Conservancy has acquired the nearby Connick Ranch and has undertaken a study for restoration feasibility. Upon completion of SRER, California Department of Fish and Game would take over management of the Riverside Ranch property as part of the Salt River Unit of the Eel River Estuary Wildlife Preserve. The proposed project would have a long term beneficial effect on wildlife sanctuaries and refuges, increasing acreage considerably.

g. **Threatened and Endangered Species, and Critical Habitat**: On November 22, 2011, FWS responded to a formal Section 7 consultation request from the Corps dated March 24, 2011. A copy of the BO is attached as Enclosure 3 and includes protection for Tidewater Goby (*Eucyclogobius newberryi*) and habitat as well as invasive species control: dense flowered cordgrass (*Spartina densiflora*), dwarf eelgrass (*Zostera japonica*) and Sacramento pikeminnow (*Ptychocheilus grandis*). Quoting from the BO, ". . . the final quantity of created habitat features is unknown, although the project is expected to result in a large increase in quantity and quality of tidewater goby habitat." The BO describes creation of 7 – 11 acres of tidal pannes based on topography which may be used by tidewater goby as well as minimally filled ditches which can provide complex habitat. Scour holes that form at the foot of four proposed culverts are anticipated for use by tidewater goby in the same way as existing scour holes, where tidewater goby were observed during project planning. FWS lists potential habitat sources from the following constructed features: low energy ponded tide channels, marshplain and ditch fill to a targeted elevation, the salvage and installation of large wood structures from on-site clearing and preservation of riparian vegetation along internal ditches. Conservation measures listed in the BO include work timing restrictions, between June 15 and October 15; water diversion standards and coffer dam construction with safeguards; and the presence of a qualified biologist prior to installation of diversion with well defined procedures for relocating sensitive species found during construction activities. Monitoring and management include ongoing surveys with reporting to improve future restoration projects. Comparing the projected 7 – 11 acres of habitat created with restoration to the existing 0.024 acre existing habitat brings into focus major, long term benefits for listed tidewater goby as a result of the restoration.

Correspondence dated January 31, 2011 from the Corps initiated formal consultation from NMFS concerning the effects of the SRER Project and associated activities on threatened Southern Oregon/Northern California Coast (SONCC) coho salmon (*Oncorhynchus kisutch*), California Coastal (CC) Chinook salmon (*O. tshawytscha*) and Northern California (NC) steelhead *(O. mykiss*) and their designated critical habitats. Upon receipt of the October 14, 2011

revised *Biological Assessment for the Salt River Ecosystem Restoration Project Humboldt County, California* dated September 10, 2010 prepared by Winzler & Kelly, the consultation began. The following quote from the NMFS BO summarizes direct and indirect impacts to federally listed species found within the action area:

" Project would rehabilitate 7.7 miles of Salt River channel and riparian floodplain corridor that would contain aquatic habitat features including alcoves and in stream wood structures for salmonid refugia, create 264 acres of tidal marsh habitat suitable for salmonid rearing habitat, create 8.7 acres of channel slough habitat suitable for eel grass beds, an essential fish habitat for salmonids, and create 32 acres of riparian forest/scrub that would provide aquatic habitat cover and complexity, while promoting long-term large wood recruitment potential.

The addition of large woody debris would more than offset any loss of future large woody debris (LWD) recruitment from the riparian trees that would be removed during the Project. The benefits of riparian habitat restoration would take longer to realize, but should increase stream shading, provide future LWD, and contribute to properly functioning conditions for the riparian ecosystem. Finally, the removal of sediment and reestablishment and reconnection of the Salt River with its tributary streams would increase the access to approximately 15 miles of salmonid spawning and rearing habitat."

The final NMFS BO, dated January 24, 2012, concludes that the issuance of a Corps individual Section 404 Clean Water Act permit to the Humboldt County Resource Conservation District for implementation of the Salt River Ecosystem Restoration Project is not likely to jeopardize the continued existence of NC steelhead or SONCC coho salmon; the action is not likely to adversely affect Southern DPS green sturgeon, CC Chinook salmon, and Southern Resident killer whales (*Orcinus orca*), added to the BO by NMFS as it is considered present in the Eel River. The project is not likely to adversely affect critical habitat for CC Chinook salmon, SONCC coho salmon, and NC steelhead. The NMFS BO provided an Incidental Take Statement with the inclusion of Reasonable and Prudent Measures to minimize take of SONCC coho salmon, CC Chinook salmon and NC steelhead, and Terms and Conditions which would be included in the Corps authorization. A copy of the NMFS BO (Enclosure 5) is attached to the Corps authorization. In summary, guidance during project planning provides large increases in the amounts of habitat that would be created for threatened and endangered species, considered a <u>major, long term beneficial effect</u>.

h. **Essential Fish Habitat**: Essential Fish Habitat (EFH) for marine and estuarine fish managed under various Fishery Management Plans (Pacific Salmon Fishery Management Plan, Groundfish Management Plan and Pelagic Management Plan) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, as amended (16 U.S.C. § 1801 *et. seq.*) is an interagency cooperative effort. All subtidal and intertidal habitats within the project area are designated as EFH and as Habitat Areas of Particular Concern (HAPC) for estuarine and seagrass habitat. Direct impacts on EFH are anticipated and <u>long term major benefits</u> have been described and are referenced in the BO provided by both NMFS and FWS.

i. **Riparian Vegetation**: The Salt River project area contains 97 acres of riparian forest and/or scrub within a 50 to 200 foot wide corridor. The riparian plant community consists mostly of willows (*Salix* sp.), red alder (*Alnus rubra*) and black cottonwood

(*Populus fremontii*), and California blackberry (*Rubus* sp.). A total of 62 acres of riparian vegetation would be removed during implementation of the SRER Project. Riverside Ranch would lose 31 acres and 32 acres would be lost along the Salt River in Phase 2. Vegetation removal is necessary for construction of contoured floodplains adjacent to the Salt River channel and access for heavy equipment. Creation of 129 acres of riparian habitat along the river corridor and floodplain would compensate for the loss. Winzler & Kelly have noted that this does not include anticipated natural recruitment on the active bench. Both freshwater and seasonal wetland habitats planted on the active bench would evolve as the site matures. Considering planned and potential increase in riparian forest and scrub, the proposed project would have a long-term, minor, if not major beneficial impact on riparian habitat in the project area.

j. **Habitat for Fish, Other Aquatic Organisms, and Other Wildlife**: The project area contains habitat for fish, migratory waterfowl, small and large mammals and other wildlife. Fish observed in some areas of Riverside Ranch by FWS include: threespine stickleback (*Gasterosteus aculeatus*), prickly sculpin (*Cotus asper*), staghorn sculpin (*Leptocottus armatus*), and Sacramento pikeminnow (*Ptychocheilus grandis*). The proposed project would create disturbance during construction. Major long-term beneficial impacts to quality and diversity of habitat are planned as a result of channel restoration. The FWS BO includes strategies for unwanted habitat and species that appear including dwarf eelgrass, Sacramento pikeminnow and predatory outsiders.

In a normal riverine system, excavation of the channel would remove benthic species at the bottom of the food chain and would destroy habitat as well. Life forms that may have existed would be removed but increased populations should quickly recolonize newly exposed areas. The SRER plan has designed numerous elements to restore conditions favorable to development of habitats and colonization with natural fauna. Experience with dredging indicates that populations quickly return following disturbance. The B.O.s from NMFS and FWS target eel grass, salmonid, steelhead, and tidewater goby – sensitive species, once found in the area.

5. **Direct and Indirect Impacts to the Social-Economic Environment** (40 C.F.R §§ 230.11, 230.50-230.54, and 1508.8):

a. **Air Quality**: Equipment operation, grading work, and other construction activities would generate various air pollutant emissions, including fugitive dust, carbon, nitrogen, and sulfur dioxides, and reactive organic gases that may degrade ambient air quality. Taking into account the limited construction period to be phased over time and the relative scale subject to Federal control and responsibility, the adverse project effect on ambient air quality would be short-term in duration and minor in magnitude. Air quality impacts for the entire project were quantified in the Final Environmental Impact Report for Salt River Ecosystem Restoration Project and were found after inclusion of mitigation measures to not be significant under federal and state air quality requirements. The Humboldt County Resource Conservation District prepared the Final Environmental Impact Report: Salt River Ecosystem Restoration Project dated February 2011.

b. **Noise Conditions**: Equipment operation, grading work, and other construction activities would generate noise that may exceed ambient noise levels and become audible at nearby residential and commercial areas. Taking into account the limited construction period and the project scale subject to Federal control and responsibility, the adverse project effect on ambient noise levels would be short-term in duration and minor in magnitude.

c. **Mineral Resources**: No effect

d. **Prime and Unique Agricultural Lands**: No effect

e. **Food and Fiber Production**: The proposed project would not reduce existing production on agricultural lands. Project partners anticipate a reduction in flood damage. The proposed project would have major, long-term, beneficial impacts on food production by preventing losses from floods.

f. **Commercial and Recreational Fishing**: Opportunities for recreational fishing may arise under management of the Eel River Estuary by California Department of Fish and Game, a long term, beneficial minor effect.

g. **Recreational Resources**: Recreational activities would evolve under management of the Eel River Estuary by California Department of Fish and Game, a long term minor beneficial effect.

h. **Wild and Scenic Rivers**: The Eel River is designated under the Federal Wild and Scenic River Act for recreational and scenic values. As a tributary, the Salt River could be studied for designation under the Act. The Wild and Scenic Rivers Coordinator for the National Park Service, Western Regional Office, Oakland, California has indicated that potential values exist and following restoration a study for designation could be considered.

i. **Nationwide Rivers Inventory**: No effect. The project neither occurs on a river reach listed on the Nationwide River Inventory nor would cause any direct or indirect impacts to a listed reach.

j. **National and Historical Monuments, National Seashores, Wilderness Areas, Parks, and other Preserves**: No effect.

k. **Aesthetic Quality**: The Salt River would undergo disturbance during restoration. These disturbances might not be readily distinguished from large machines used in agriculture. Major, long term beneficial impacts on aesthetics should result from the proposed project and would evolve and support restoration efforts.

l. **Navigation**: The Salt River was historically navigable to small commercial vessels. Steamships loading forestry products and dairy supplies traveled inland as far as 10 miles.. The proposed project is not intended to restore commercial navigation but rather to restore the Salt River hydrologic and ecologic functions. The proposed construction

would have no effect on navigation.

m. **Traffic and Transportation**: During construction there would be increases in traffic, including heavy equipment (scrapers, belly dumps, low boy tractor-trailers delivering equipment). For properties cooperating with HCRCD in accepting excavated soil for reuse on agricultural land, there would be additional effects. A farming community is accustomed to the presence and use of large machine traffic. The effect of the proposed project on traffic and transportation is considered a short term, minor impact.

n. **Municipal and Private Water Supply and Conservation**: Water supply would be protected in the future as discharges from the Wastewater Treatment are diluted and contamination is no longer measureable. Reducing contaminants from surface water helps preserve groundwater supplies. The effect of the proposed project on municipal and private water supply is considered a short term, minor impact.

o. **Public Health and Safety**: Overall, the completed project, would have long-term, moderate beneficial impacts on public health and safety. Examples include improved water quality as wastewater discharge and storm water are better managed. Reduced risk of flooding eliminates a large worry and would provide peace of mind to the community while ecological and habitat improvements raise the quality of life for all.

p. **Energy and Conservation**: No effect.

q. **Land Use**: No effect.

r. **Consideration of Property Ownership**: Private property rights including exclusion of unauthorized access by those other than project contractors or the applicant involved in the Salt River project shall be honored. The Riverside Ranch project includes the construction of a berm to protect adjacent private lands from flooding. The project has developed as a community effort that respects land ownership. The effect of the proposed project on property ownership is considered a long term, minor impact.

s. **Economics and Employment**: During construction, there would be an increase in employment and economics. After completion, the project would have long-term, moderate to major beneficial economic benefit to agricultural landowners that have suffered in the past. It is estimated that 750 acres of farmland is removed from production as a result of annual floods. Tables 1 and 2 on page 16a outline anticipated changes in agricultural productivity as a result of SRER project as presented by the report entitled "Agricultural Impact Analysis: Salt River Ecosystem Restoration Project, dated April 14, 2011 prepared by Humboldt County Resource Conservation District.

t. **Environmental Justice**: No effect.

6. **Direct and Indirect Impacts to the Historic and Cultural Environment** (40 C.F.R §§ 230.11, 230.50-230.54 and 1508.8):

a. **National Historic Landmark Properties**: No effect.

b. **Other National Register Historic Properties**: No effect.

c. **Archaeological and Cultural Resources**: As a partner for funding through the North American Wetland Conservation Act and Pacific Coast Joint Venture program for tidal restoration of 268 acres in the Salt River delta, FWS had taken the lead for Section 106 compliance on the Riverside Ranch. Pursuant to 36 CFR 800 of the National Historic preservation Act (NHPA) FWS requested concurrence from the California Office of Historic Preservation (SHPO) on the adequacy of cultural resource identification and evaluation that the project would not affect historic properties. Four historic-era resources were recorded on the property where the project is proposed. In response to FWS determination, the SHPO by letter dated October 27, 2010 stated: (1) SHPO concurs that the Area of Potential Effects (APE) has been properly determined and documented pursuant to 36 CFR Parts 800.4(a)(1) and 800.16(d).; (2) SHPO concurs that a finding of No Historic Properties Affected is appropriate for this undertaking pursuant to 36 CFR part 800.4(d)(1) and that the documentation supporting this finding has been provided pursuant to 36 CFR part 800.11(d); and (3) SHPO advises that under certain circumstances, such as an unanticipated discovery or a change in project description, the USFWS may have future responsibilities for this undertaking under 36 CFR part 800.

On August 24, 2011 the Corps initiated consultation with the SHPO for the remaining project activities and identified historic farmsteads, buildings and landscape features in the vicinity of but outside the Area of Potential Effects (APE) and requested concurrence that no historic properties would be impacted. Following review of the *Addendum Report for Additional Phase 1 Cultural Resources Investigation of the Proposed Salt River Ecosystem Restoration Project Located in Ferndale, Humboldt County, California*, dated January 2011, SHPO concurred with the determination of the Corps in a letter of September 20, 2011.

7. **Summary of Cumulative Impacts on the Aquatic Ecosystem** (40 C.F.R. §§ 230.11(g) and 1508.7): Cumulative impacts result from incremental impact of the project when added together to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The Salt River Ecosystem Restoration Project would reconfigure the Salt River channel for a distance of approximately 7.7 miles and redefine much of the degraded and disturbed diked croplands that constitute Riverside Ranch. Small native stands of riparian trees would be preserved as a starting point for development of historic forest habitat and associated wildlife. The land use change table on page 2a reflects habitats and wetlands that are planned, without projecting those that may develop incidental to proposed targets. Based on the comments from NMFS in their BO, the list of aquatic functions that are planned are varied and numerous.

By returning natural functions to the Salt River and its floodplain, many problems will be remedied, including unpermitted activities required to reduce flood damage, a reduction in the need for FEMA funding and fewer emergency permits for Public Works. The activities needed to deal with problems created by flooding would no longer impact river function and allow habitats for both sensitive and non-listed species to develop. Page 19a presents Tables 1 and 2 prepared by Humboldt County Resource Conservation District dated April 14, 4011, entitled

"*Agricultural Impact Analysis: Salt River Ecosystem Restoration Project*" which provide fiscal benefits to the agricultural community.

Authorization under a separate Individual Permit would allow HC Public Works Department to remove sediment deposits that collect between Phase 1 and Phase 2 activities have been completed and the channel has been fully reconstructed and self sustaining. As a result of improvements resulting from this project, it is anticipated that the community will continue efforts further upstream, to manage sediment and land use in a beneficial manner.

Expansion of tidal marsh in Riverside Ranch and widening of the Salt River delta will increase flood storage capacity and expand carbon reservoirs as sea level rises.

III. **FINDINGS**:

A. **STATUS OF OTHER AUTHORIZATIONS**:

1. **Water Quality Certification** (33 C.F.R. §§ 320.4(d) and 325.2(b)(1)(ii)): The California Regional Water Quality Control Board (RWQCB), North Coast Region, in correspondence dated October 20, 2011 has issued a Section 401 Water Quality Certification for Phases 1 and 2 of the Salt River Ecosystem Restoration Project. This 401 Water Quality Certification expires on October 15, 2016. In addition the RWQCB Certification states: "The authorization of this certification for maintenance activities associated with the AMP expires on October 15, 2022".

2. **Coastal Zone Management Consistency Review** (33 C.F.R. §§ 320.4(h) and 325.2(b)(2)(i)-325.2(b)(ii)): The California Coastal Commission (CCC) has issued a conditional Coastal Development Permit No. 1-10-032 for the described Salt River Ecosystem Restoration Project. A copy of final approval was obtained on September 24, 2012 when the Corps was able to issue authorization.

3. **Other State and County Requirements** (33 C.F.R. § 320.4(j)(1): The applicant must obtain a Streambed Alteration Agreement from the California Department of Fish and Game before starting work and may need authorizations from the State Lands Commission. The applicant must also obtain Humboldt County Planning Department Use Permits and Grading Permits where applicable and where applied to county jurisdiction before starting work on the project.

B. **COMPLIANCE WITH VARIOUS FEDERAL LAWS** (33 C.F.R. § 320.3):

1. **Endangered Species Act of 1973, as amended** (ESA) (16 U.S.C. § 1531 *et seq.*) (33 C.F.R § 325.2(b)(5)): Section 7 of ESA requires Federal agencies to consult with either the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to insure any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any Federally-listed species or result in the adverse modification of designated

critical habitat. The applicant, through USACE initiation of consultation has obtained non-jeopardy Biological Opinions on the Salt River restoration project from the U.S. Fish and Wildlife Service and National Marine Fisheries Service (NMFS). Each Biological Opinion has Incidental Take Statements and binding measures to protect against further take of endangered/threatened species and habitat. Details of this ESA consultation effort is discussed under "Threatened/Endangered Species" above in this Decision Document.

2. **Magnuson-Stevens Fishery Conservation and Management Act of 1996, as amended** (MSFCMA) (16 U.S.C. § 1801 *et seq.*): Section 305(b)(2) of MSFCMA requires Federal agencies to consult with the National Marine Fisheries Service on all proposed actions authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is designated only for those species managed under a Federal Fisheries Management Plan (FMP), such as the *Pacific Groundfish FMP*, the *Coastal Pelagics FMP*, and the *Pacific Coast Salmon FMP*. EFH consultation was executed concurrent with ESA consultation with the NMFS and resulted in a Biological Opinion which indicated EFH would

3. **National Historic Preservation Act of 1966, as amended** (NHPA) (16 U.S.C. § 470 *et seq.*) (33 C.F.R. § 325.2(b)(3)): Section 106 of NHPA requires Federal agencies to consult with the appropriate State Historic Preservation Officer to take into account the effects of their undertakings on historic properties listed in or eligible for listing in the *National Register of Historic Places*. Section 106 of NHPA further requires Federal agencies to consult with the appropriate Tribal Historic Preservation Officer or any Indian Tribe to take into account the effects of their undertakings on historic properties, including traditional cultural properties, trust resources, and sacred sites, to which Indian Tribes attach historic, religious, and cultural significance. Section 106 NHPA consultation was completed as described above in Environmental Assessment, section 6, c.

4. **Wild and Scenic Rivers Act of 1968, as amended** (WSRA) (16 U.S.C. § 1271 *et seq.*): Section 7(a) of WSRA provides that no Federal agency shall assist by loan, grant, license or otherwise, in the construction of any water resources project that would have a direct and adverse effect on the values for which such river designation was established, as determined by the Secretary charged with its administration. The Western Regional Office of National Park Service (NPS) recognizes FWS and NMFS BOs to address Wild and Scenic River values. Designation could be pursued in the future.

5. **Clean Air Act of 1963, as amended** (CAA) (42 U.S.C. § 7401 *et seq.*): Section 176(c) of CAA requires Federal agencies to demonstrate that activities in which they engage conform with applicable, Federally-approved CAA state implementation plans. Furthermore, projects occurring in geographic areas designated as "non-attainment" and "maintenance" areas are to be analyzed for conformity applicability, pursuant to the provisions of 40 C.F.R. Section 51.850. Based on guidance issued by Chief Counsel on 20 April 1994, USACE concludes any increase in direct air emissions of criteria pollutants attributed to project related dredged and fill material discharges into waters of the United States would be clearly *de minimis* and are, therefore, exempt from the requirement of a CAA conformity determination, pursuant to the

provisions of 40 C.F.R. Section 93.153. Any indirect air emissions associated with later phases of the project operation or maintenance would not be a continuing program responsibility of nor practicably controlled by USACE. In the event such discharges exceeded the *de minimis* threshold, USACE would prepare an appropriate CAA conformity determination for the project.

6. **Marine Protection, Research, and Sanctuaries Act of 1972, as amended** (MPRSA) (16 U.S.C. § 1432 *et seq.*) (33 C.F.R. § 320.4(i)): Section 302 of MPRSA, as amended, authorizes the Secretary of Commerce to designate areas of ocean waters, such as Cordell Bank, Gulf of the Farallones, and Monterey Bay, as national marine sanctuaries for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or aesthetic values. After such designation, activities in sanctuary waters authorized under other authorities are valid only if the Secretary of Commerce certifies that the activities are consistent with Title III of MPRSA.

C. **COMPLIANCE WITH VARIOUS EXECUTIVE ORDERS**:

1. **Executive Order 11990, Protection of Wetlands**: This Executive Order (EO) directs Federal agencies to ensure their actions minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. This EO does not apply, however, to the issuance of Federal permits, licenses, or allocations to private parties for activities involving wetlands on non-Federal property. Project related impacts to wetlands and measures to further avoid, minimize, and compensate for unavoidable impacts to wetlands are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to wetlands.

2. **Executive Order 11988, Floodplain Management**: This EO directs Federal agencies to ensure their actions avoid, to the extent practicable, the long and short term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development whenever there is a practicable alternative. Project related impacts to floodplains and measures to further avoid, minimize, and compensate for unavoidable impacts to floodplains are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to floodplains.

3. **Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations**: This EO directs Federal agencies to ensure their programs, policies, and activities do not have a disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. Project related impacts to minority and low-income populations and measures to further avoid, minimize, and compensate for unavoidable impacts to these populations are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to minority and low-income populations.

4. **Executive Order 13112, Invasive Species**: This EO directs Federal agencies to ensure their programs, policies, and activities prevent the introduction of invasive species, to provide for their control, and to minimize the economic, ecological, and human health

impacts that invasive species cause. Project related impacts to native species and measures to further avoid, minimize, and compensate for unavoidable impacts to native species are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to native species or result in the import of invasive species.

5. **Executive Order 13175, Consultation and Coordination with Indian Tribal Governments**: This EO directs Federal agencies to establish regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, and to reduce the imposition of unfunded mandates upon Indian tribes. Comments received from Indian tribes through consultation and by other means are described and evaluated in this document (Refer to Sections II.C., III.B.3, and III.E.).

6. **Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds**: This EO directs Federal agencies to ensure their programs, policies, and activities promote the conservation of migratory bird populations. Project related impacts to migratory birds and measures to further avoid, minimize, and compensate for unavoidable impacts to migratory birds are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to migratory birds.

7. **Executive Orders 13212 and 13302, Actions to Expedite Energy-Related Projects**: This EO directs Federal agencies to expedite their review of permits and other evaluations for projects that increase the production, transmission, or conservation of energy and for projects that strengthen pipeline safety. The project does not entail the production, transmission, or conservation of energy and does not involve pipeline safety.

D. **PROJECT BACKGROUND**: An initial and generally complete Department of the Army permit application was received by USACE on July 29, 2010 and was assigned to the Regulatory Permit Manager on July 29, 2010. A 30-day Public Notice describing the project was issued on September 10, 2010 and was sent to all interested parties, including appropriate Federal, State, and County agencies, organizations, and the public at large. USACE conducted field investigations on September 14-16, 2010, October 5-7, 2010, February 15, 2011, and March 30-April 1, 2011 in the company of a representative of Winzler & Kelly to verify the boundaries of wetlands within the Salt River project corridor and in proposed sediment reuse areas on private agricultural lands in the general project vicinity. Notification of the extent of jurisdictional waters was forwarded by mail to 25-30 landowners between June 2009 and November 2009; June 30, 2011, and September 28, 2011.

E. **PUBLIC NOTICE COMMENTS**: (33 C.F.R. § 325.2(a)(3)): All comments received on the Public Notice and response to comments are summarized below:

1. **Native American Tribal Governments**: None.

2. **Federal Agencies**:

a. **U.S. Environmental Protection Agency** (USEPA): None.

b. **U.S. Fish and Wildlife Service** (USFWS): No comments to Public Notice, but see section in Decision Document above under Threatened/Endangered Species.

c. **National Marine Fisheries Service** (NMFS): No comments to Public Notice, but see section in Decision Document above under Threatened/Endangered Species.

d. **U.S. Coast Guard** (USCG): None

e. **Federal Emergency Management Agency** (FEMA): None.

f. **National Park Service** (NPS): None

g. **Advisory Council on Historic Preservation** (ACHP): None.

h. **Other Federal Agencies**: None.

3. **State and Local Agencies**:

a. **State Historic Preservation Officer** (SHPO): No comments to the Public Notice, but see the section in this Decision Document under Section 106 National Historic Preservation Act consultation.

b. **California Department of Fish and Game** (CDFG): None.

c. **California Department of Transportation** (CALTRANS): None.

d. **California State Lands Commission** (CSLC): None.

e. **California Regional Water Quality Control Board** (RWQCB): No comments to Public Notice but see section of Decision Document under Section 401 Water Quality Certification requirements.

f. **California Coastal Commission** (CCC): No comments to Public Notice but refer to Coastal Development Permit No. 1-10-032 Staff Report under the section in Decision Document under Coastal Zone Act Authorizations.

g. **Other State and Local Agencies**: None.

4. **Organizations**: None.

5. **Individuals**: None

F. **PUBLIC HEARING COMMENTS**: (33 C.F.R. § 327.9): No Public Hearing was requested or held.

G. **EVALUATION**: The documents and factors relating to the Department of the Army permit application, and the stated views of other agencies and the concerned public have been reviewed and evaluated in light of the overall public interest. In this analysis, the possible consequences of the project were considered in accordance with regulations published in 33 C.F.R. Parts 320 to 332, and 40 C.F.R. Part 230. The following paragraphs include the USACE evaluation of comments received and project compliance with the above cited regulations.

1. **Consideration of Public Notice and Public Hearing Comments** (33 C.F.R. §325.2(a)(3) and 327.9): The 2010 Public Notice did not generate any substantive comments by the public or by other government agencies. None of the Federal resource agencies identified the project as causing "substantial and unacceptable impacts to aquatic resources of national importance" in accordance with the Section 404(q) MOA; therefore, these agencies have relinquished their options to elevate specific objections on permit issuance for reconsideration by higher authority.

2. **Compliance with Section 404(b)(1) Guidelines**:

a. **Alternative Test** (40 C.F.R. § 230.10(a)): The Section 404(b)(1) Guidelines presume the availability of a practicable alternative to project related dredged and fill material discharges into waters of the United States that would result in less adverse impact to the aquatic environment, provided the alternative does not cause some other adverse environmental consequence. An alternative is considered to be practicable if it is available and capable of being implemented, after taking into account cost, logistics, and technology in light of the overall project purpose (40 C.F.R. § 203.10(a)(2)). An evaluation pursuant to the Guidelines indicates the project is dependent on location in or proximity to waters of the United States to achieve the basic project purpose of restoring the hydrologic and ecological function of the Salt River corridor and its tributaries including Phase 1 Riverside Ranch and Phase 2 of the main Salt River channel excavation. For water dependent projects involving discharge of dredged or fill material into waters of the United States, the Guidelines presume the availability of a practicable alternative that results in less adverse impact to the aquatic ecosystem, while not causing other major adverse environmental consequences.

The Humboldt County Resource Conservation District has reasonably demonstrated there are no other locations within the locale (market-project area) to accommodate the project or that would result in less impact to aquatic resources, or alternative designs that would further reduce impacts to aquatic resources (Refer to Section II.B.). Proposed discharges of dredged and fill material in wetlands, and navigable and other waters of the U.S. below ordinary high water and below the high tide line would constitute the minimum volume and fill area necessary to achieve the overall project purpose. Based on this evaluation, USACE concludes there are no other practicable alternatives to the project with less adverse impact on the aquatic ecosystem or without other significant adverse environmental consequences.

b. **Special Restrictions** (40 C.F.R. § 230.10(b)): Proposed discharges of

dredged and fill material discharges into waters of the United States would not: (1) Violate State water quality standards; (2) Violate toxic effluent standards (under Section 307 of the Clean Water Act); (3) Jeopardize endangered or threatened species or their critical habitat; or (4) Violate standards set by the Department of Commerce to protect marine sanctuaries. The information evaluated in Section II.C. indicates proposed discharges of dredged and fill material are composed primarily of sand, gravel, or other naturally occurring inert material that would not be a carrier of contaminants.

c. **Other Restrictions** (40 C.F.R. § 230.10(c)): Proposed discharges of dredged and fill material would not contribute to *significant* degradation of waters of the United States by adversely affecting: (1) Human health or welfare through pollution of municipal water supplies, fish, shellfish, wildlife, and special aquatic sites; (2) Life stages of aquatic life or other wildlife; (3) Diversity, productivity, and stability of the aquatic ecosystem, such as loss of fish or wildlife habitat, or loss of the capacity of wetlands to assimilate nutrients, purify water, or reduce wave energy; or (4) Recreational, aesthetic, and economic values.

d. **Actions to Minimize Adverse Impacts** (40 C.F.R. §§ 230.10(d), 230.70-23076, and 1508.20; 33 C.F.R. §§ 320.4(r) and 325.4): The Department of the Army Permit authorizing the project would include the following Special Conditions to further avoid, minimize, and compensate for unavoidable adverse impacts to aquatic resources:

1. This Corps permit does not authorize you to take an endangered species. In order to legally take a listed species, you must have a separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit or a Biological Opinion (BO) under ESA Section 7 with "incidental take" provisions with which you must comply). The enclosed U.S. Fish and Wildlife Service BO dated November 22, 2011 (Enclosure 3) and National Marine Fisheries Service BO dated January 25, 2012 (Enclosure 5) contain mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BOs. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take authorized by the attached BOs, whose terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BOs, where a take of the listed species occurs, would constitute an unauthorized take and it would also constitute non-compliance with this Corps permit. The FWS and NMFS are the appropriate authorities to determine compliance with the terms and conditions of their BOs and with the ESA.

2. The permittee shall adhere to the schedule outlined in the approved " *Salt River Ecosystem Restoration project Rare Plant Mitigation and Monitoring Plan*, prepared by H.T. Harvey & Associates with Winzler & Kelly dated January 27, 2011. Phase 1 activities target replacement of the existing 1.2 acres of eelgrass that would be impacted by establishing 8.7 acres of eelgrass habitat on site.

3. The permittee shall provide a mid-term (five years after initial construction or in

phase with California Coastal Commission reporting requirements) wetland and other waters of the United States delineation of the Salt River Phase 1 and Phase 2 project sites. The wetland and other waters delineation report shall contain acreage of restored or created wetlands or other waters of the U.S. to date, with data sheets and jurisdictional maps prepared in accordance with the USACE 1987 Federal Wetland Delineation Manual and the Western Mountains, Valleys and Coastal Wetlands Supplement to the Delineation Manual. Photographs of post-construction habitat shall be taken from the same locations periodically over the monitoring period. A final wetland delineation and other waters of the U.S. report shall be prepared and sent to USACE for final field verification at the end of project Adaptive Management activities and Maintenance at the tenth year of permit duration.

4. The applicant will notify USACE prior to maintenance activities for Phases 1 and 2 and report excavated volume and location post construction and in accordance with the *Salt River Adaptive Management Plan (AMP)* prepared by H.T. Harvey & Associates and Winzler & Kelly dated January 2012 The work shall be performed in conformance with the final approved plans, the AMP and *Salt River Ecosystem Restoration Project Habitat Mitigation and Monitoring Plan* prepared by H.T. Harvey & Associates with Winzler & Kelly last revised January 5, 2012. All four plans are incorporated by reference into this authorization.

5. Maintenance activities such as sediment removal and channel excavation between Phase 1 construction and prior to Phase 2 construction are not covered under this authorization and require a separate Individual Permit.

3. **Public Interest Evaluation** (33 C.F.R. §§ 320.4(a)(2)(i)-320.4(a)(2)(iii)):

a. **Extent of Public and Private Need for the Project**: The project would fulfill both a private and a public need by restoring ecological and historic functions to the Salt River Watershed. The project will increase habitat for salt marsh dependent species, salmonids and tidewater goby which has disappeared to a degree that is threatening the continued existence of these species. The restoration will relieve economic hardships in the agricultural community due to lost productivity, reduce the need for outside funding and improve land management practices which will benefit the entire community.

b. **Practicality of Alternative Locations and Methods**: No alternative location was identified that would fulfill the purpose and need for the project to the degree that these parcels do. The project would not cause an unresolved conflict in resource use.

c. **Extent and Permanence of Beneficial and Detrimental Effects**: Various public interest factors were taken into account in evaluating the effects of the project. Detrimental effects of the project would include direct, long term, impacts on existing seasonal wetlands; and direct short term, minor impacts on air quality and noise conditions. Beneficial

effects of the project would include direct, long term, major impacts on substrate, erosion and sediment accretion patterns, currents and circulation, drainage patterns, water quality, flood hazards, tidal marsh wetland functions, base flow, aquifer recharge, recreation resource, aesthetics, traffic and transportation, public health and safety, land use, economics and employment. On the basis of this analysis, USACE concludes the benefits of the project would outweigh any resulting damage to the aquatic ecosystem.

4. **Significant National Issues** (33 C.F.R. §§ 320.4(j)(4) and 325.2(a)(6)): No national issue of overriding importance to State and local issues was identified that would cause the issuance of a Department of the Army Permit to be contrary to the public interest.

IV. **DETERMINATIONS**:

A. **FINDING OF NO SIGNIFICANT IMPACT** (33 C.F.R. Part 325, Appendix B, Para. 7 and § 325.2(a)(4); 40 C.F.R. §§ 1501.4(e) and 1508.13): The Environmental Assessment has been prepared to address comments generated by the applicant, general public, and resource agencies have special expertise or jurisdiction by law in response to the Public Notice (Refer to Section II.C.). Based on a review of the impacts addressed in the Environmental Assessment incorporated herein, USACE concludes that the issuance of a Department of the Army Permit for the project (applicant's preferred alternative) does not constitute a major Federal action that would *significantly* affect the quality of the human environment. Pursuant to the provisions of the National Environmental Policy Act of 1969 (42 U.S.C. § 4332), the preparation of an Environmental Impact Statement (EIS) is, therefore, not required.

B. **COMPLIANCE WITH DISCHARGE RESTRICTIONS** (40 C.F.R. § 230.12): USACE concludes that project related dredged and fill material discharges into waters of the United States comply with the Section 404(b)(1) Guidelines, with the inclusion of appropriate and practicable Special Conditions to the Department of the Army Permit to minimize pollution or adverse effects to the aquatic ecosystem (Refer to Section III.G.2.d.). With the inclusion of these discharge conditions, the project currently represents the least environmentally damaging practicable alternative.

C. **PUBLIC HEARING DETERMINATION** (33 C.F.R. §§ 325, Appendix B, Para. 11, 325.2(a)(5), and 327.4(b)): A Public Hearing may be held if USACE determines that information essential to the permit evaluation could be gleaned from such a forum. A Public Hearing is conducted on an as needed basis at the discretion of the District Engineer. Public comments on the project did not include any request for a Public Hearing; accordingly, USACE did not convene a Public Hearing on the project.

D. **PUBLIC INTEREST DETERMINATION** (33 C.F.R. § 320.4(a)): The decision on whether to issue a Department of the Army Permit is based on an evaluation of probable effects, including cumulative effects, of the project and its intended use on the public interest. This evaluation reflects the national concern for both the protection and utilization of important resources identified at 33 C.F.R. Section 320.4(a)(1). Pursuant to the provisions of 33 C.F.R. Parts 320 to 330 and 40 C.F.R. Part 230, USACE has reviewed the administrative record for the Department of the Army permit application and considered all pertinent comments received on the project. Upon completing this evaluation and weighing all factors relevant to the project, USACE concludes that the issuance of a Department of the Army Permit, with Special Conditions, to authorize the project is not contrary to the public interest.

PREPARED AND RECOMMENDED BY:

Roberta Morganstern — 9-24-2012

Roberta Morganstern
Regulatory Permit Manager

Date

REVIEWED AND CONCURRED BY:

Laurie Monarres — 9/25/12

Laurie Monarres
Chief, North Branch

Date

APPROVED BY:

Laurie Monarres — 9/25/12

for John K. Baker, P.E.

Date

Lieutenant Colonel, U.S. Army
Commander and District Engineer