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E N V I R O N M E N T A L A S S E S S M E N T**

San Benito County Public Works
Department
San Benito County, California

Old Hernandez Road Low Water
Crossing Repair Project

FEMA-1203-DR-CA, DSR #95898

February 2004

Prepared by



Nationwide Infrastructure Support Technical Assistance Consultants
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**Supplemental Environmental Assessment: FEMA-1203-DR-CA
Federal Emergency Management Agency, Region IX**

Project Name: Old Hernandez Road Low Water Crossing Repair Project

Subgrantee: County of San Benito

DSR or HMGP Number(s): DSR #95898

Date: February 2004

Project Location: Old Hernandez Road within the San Benito River watershed in the County of San Benito, California.

1.0 INTRODUCTION

The San Benito County Department of Public Works (the County), through the California Office of Emergency Services (OES), has applied to the Federal Emergency Management Agency (FEMA) Public Assistance (PA) Program for funding to repair a crossing of the San Benito River, which was damaged during the 1998 winter flood.

The project site is located in a rural, mountainous area of San Benito County, within a narrow valley of the San Benito River watershed. The site is east of the Pinnacles National Monument, approximately 4 miles south of the intersection with State Route 25 and 10 miles north of Coalinga Road (Figure 1, Appendix A). The site is located on the U.S. Geological Survey's (USGS) 7.5 minute quadrangle of Topo Valley, near the boundary of the San Benito quadrangle, and about 2 miles west of the Rock Spring Peak quadrangle boundary. The geographic description is noted as Township 16S, Range 9E at NW ¼ of SE ¼ of Section 31.

Components of the proposed project include the replacement of the existing 12-foot by 6-foot box culvert with a single 15.75-foot by 8-foot prefabricated arched culvert with headwalls; armoring the roadway embankment with 300 feet of articulated concrete mat; and armoring the downstream side of the roadway embankment with a 12.5-foot-wide riprap blanket (Figures 2 and 3, Appendix A). The area of potential effect for the Proposed Action measures approximately 360 feet long by 100 feet wide for a total area of 36,000 square feet. The area of disturbance, including a temporary road diversion, would measure approximately 290 feet long by 50 feet wide for a total area of 14,500 square feet of disturbance.

1.1 Scope of Document

This Supplemental Environmental Assessment (SEA) tiers from the *Final Programmatic Environmental Assessment for Typical Recurring Actions Resulting from Flood Disasters in California as Proposed by FEMA* (PEA) (FEMA 1998) and hereby incorporates the PEA by reference, in accordance with 40 CFR Part 1508.28.

1.2 Purpose of and Need for Action

The purpose of and need for the action is described in Section 1.4 of the PEA. The low water crossing of San Benito River on Old Hernandez Road was damaged during winter storms in 1998. The storms flooded the San Benito River, washing out the approaches,

destroying the wingwalls, and partially destroying the abutment walls. Therefore, the County has determined that action is needed to protect public health and safety, restore access across the river, and prevent future erosion and damage to the road.

2.0 ALTERNATIVE ANALYSIS

As discussed in Section 2.5.1.1 of the PEA, under the No Action Alternative, the repairs to the Old Hernandez Road low water crossing of San Benito River would not be conducted and the existing culvert and river banks would continue to be vulnerable to failure and erosion.

The Proposed Action Alternative is described in Section 2.5.1.3 of the PEA. The Proposed Action would involve repairing the low water crossing of San Benito River on Old Hernandez Road. Details of project repairs are described below.

The first project element is the replacement of the existing 12-foot by 6-foot box culvert with a single 15.75-foot by 8-foot prefabricated bottomless arched culvert with headwalls (Figures 2 and 3, Appendix A). The functional dimensions of the new arched culvert, when placed below the stream scour, would be 14 feet wide, 5.3 feet high, and 20 feet long. The headwalls would be placed on footings 2.7 feet below the channel bed. The Proposed Action would not involve diversion of the river or dewatering of the channel. The culvert would be lowered in place by a crane located on Old Hernandez Road that would not have to enter the wetted channel at any time. Sandbags and other erosion control devices would be installed along the edge of the wetted channel during placement of the headwall footings along the edge of the wetted channel.

The second project element involves armoring the roadway embankment with 300 feet of articulated concrete mat (Figures 2 and 3, Appendix A). The concrete mat would extend approximately 4 feet below the toe of slope of both sides of the culvert to minimize downcutting. Sandbags would be temporarily placed between the work area and the wetted channel to serve as erosion control devices during placement of the articulated concrete mat along the edge of the wetted channel.

The third project element is armoring the downstream side of the roadway embankment with a 12.5-foot-wide riprap blanket (Figures 2 and 3, Appendix A). No riprap would be placed within the wetted channel. The County would use riprap that meets Bureau of Reclamation standards for conditions prevalent during a 100-year flow at this location. The riprap mixture would be composed of a minimum of 60 percent rock with a 24-inch diameter, corresponding to a weight of approximately 700 pounds. The remaining 40 percent of the mixture would be comprised of well-graded riprap with a diameter smaller than 24 inches. The thickness of the riprap layer would be a minimum of 1.5 times the diameter of the largest stone (36 inches) and the embankment slopes would be 2:1. The riprap would be placed by a backhoe from above the stream banks, on Old Hernandez Road.

Construction activities would not begin until May 15 and would be completed prior to the onset of the rainy season (October 15). Following completion of the construction activities, all disturbed upstream areas would be hydroseeded using a mix of native grasses and forbs.

During construction activities, through traffic on Old Hernandez Road would be routed around the project area by a temporary river crossing. The temporary crossing would be removed at the end of the project, before the end of the National Marine Fisheries Service (NOAA Fisheries)-accepted work window. The temporary water crossing would be located approximately 50 feet to the east of the current Old Hernandez Road river crossing. The temporary crossing would be constructed of wood sills raised to the level of the top of the banks. The sills would be stabilized by temporarily adding fill within the area of the dry stream bank. Stringers would be placed across the wetted channel. No fill would be placed within the wetted channel at any time. The fill would be removed at the time that the temporary water crossing is removed. While the temporary crossing is being used, erosion control measures would be implemented to minimize sedimentation. As Old Hernandez Road is a seldom-used road with minimal through traffic, the temporary crossing would not experience substantial use.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Geology, Geohazards, and Soils

The affected environment is described in Section 3.1 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.1.1 of the PEA. Impacts of the Proposed Action Alternative are described in Sections 4.1.1.3 of the PEA.

Under the No Action Alternative, roadway repairs and erosion control measures at the Old Hernandez Road crossing of San Benito River would not be performed. If the roadway banks are not repaired, future failure to the roadway and riverbanks may be exacerbated and could result in soil erosion and aggravated bank instability in this area of San Benito Creek.

The Proposed Action Alternative is not anticipated to have any adverse impacts to geology or geohazards. However, these activities have the potential to cause the disruption and displacement of soils. To minimize erosion impacts associated with the Proposed Action Alternative, the County of San Benito would implement the following erosion control measures during and after construction to prevent inadvertent erosion and offsite transport of sediment into San Benito River:

- Prior to excavation or construction activities, the boundaries of the project area would be clearly delineated by flagging or other means to prevent workers or equipment from working outside of the right-of-way.
- The access routes, staging areas, and total area of activity would be limited to the minimum necessary to achieve the project goal. All workers would be notified of the

appropriate access routes, staging areas, and total area of the activity. These areas would be clearly demarcated and would exclude riparian and wetland areas to the extent possible.

- Well-anchored silt fences would be installed below the construction zones at each slipout site to contain any soil from the construction zone before it reaches the San Benito River.
- All construction materials and fill would be stored and contained in a designated area that is located away from channel areas to prevent inadvertent transport of materials into the adjacent river channel.
- Ground disturbance and vegetation removal would be limited during construction.
- Work would be completed prior to the onset of the rainy season (October 15).

3.2 Air Quality

The affected environment is described in Section 3.2 of the PEA. Impacts of the Proposed Action Alternative and the No Action Alternative are described in Section 4.1.2 of the PEA.

The Clean Air Act is a comprehensive federal law that regulates air emissions from area, stationary, and mobile sources. The 1990 amendments to the Clean Air Act authorize the U.S. Environmental Protection Agency to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The NAAQS include the following five criteria pollutants: nitrogen dioxide (NO₂), ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), and particulate matter less than 10 micrometers in diameter (PM₁₀). In addition, there are new NAAQS for O₃ and PM_{2.5} (particulate matter less than 2.5 micrometers in diameter). Areas where the monitored concentration of a pollutant exceeds the federal standard are classified as being in non-attainment for that pollutant. If the monitored concentration is below the standard, the area is classified as being in attainment.

The project area is located within the Monterey Bay Unified Air Pollution Control District (MBUAPCD), which has jurisdiction over the North Central Coast Air Basin (NCCAB) that includes Santa Cruz, Monterey and San Benito Counties. The NCCAB is in attainment for the federal PM₁₀ (particulate matter less than 10 microns in diameter) and O₃ standards and state and federal nitrogen dioxide, sulfur dioxide and carbon monoxide standards. The NCCAB is classified as a non-attainment area for the state ozone and PM₁₀ standards (MBUAPCD 2001). With respect to the new O₃ and PM_{2.5} standards, the attainment status has not yet been determined. Local air quality districts require preconstruction permits for stationary sources, but do not have authority to issue permits for mobile sources (such as construction vehicles and equipment).

Prior to approval of any federal action, the General Conformity Rule (GCR) requires that the responsible federal agency make a determination of conformity with the State Implementation Plan. Each action must be reviewed to determine whether it qualifies for

one of the many exemptions listed in the GCR (40 CFR Part 51.853) or results in emissions that are below specific emissions thresholds, above which a conformity analysis is required. For this project area (attainment) there is one threshold of 100 tons per year for all criteria pollutants.

Implementation of the Proposed Action Alternative would involve the use of construction vehicles, including backhoes, graders, and trucks. This equipment would increase air pollutants associated with the burning of fossil fuel and fugitive dust; however, their impacts would be temporary, negligible, and well below the general conformity thresholds discussed above. The County of San Benito would be responsible for ensuring that equipment is properly maintained, engine idling time is minimized, and staging areas and access roads are lightly watered when necessary.

3.3 Hydrology and Water Quality

The affected environment is described in Section 3.3 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.3.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.3.3 of the PEA.

The dominant hydrologic control of the San Benito River is the Hernandez Reservoir, located approximately 30 river miles upstream from the project site. Construction of the Hernandez Reservoir was completed in December 1961 (USGS 2002). The reservoir releases approximately 5,000 to 6,000 acre-feet of water per year (Cattaneo 2002, personal communication). The minimum release of water is 12 to 15 acre-feet per day. Seasonal high-flow releases may be up to 250 acre-feet per day. High flow releases typically occur from June through October. Releases vary depending upon weather and the San Benito County Water District's downstream water needs.

The San Benito River is a tributary to the Pajaro River. The strong seasonality of rainfall and runoff within the San Benito River basin reflects the dry Mediterranean-type climate of the region. As a result, sections of the San Benito River historically become dry during the summer and early fall. However, some sections of the river would flow perennially because of water seepage along the San Andreas fault line (Smith 2002, personal communication). In addition, releases from Hernandez Reservoir maintain summer flows in the San Benito River in very wet years; however, the lower half of the river may be dry and other sections of the river may experience intermittent or very low flows. As a result of seasonal drying along sections of the river, the San Benito River may become isolated from the rest of the Pajaro River system.

Under the No Action Alternative, hydrology and water quality have the potential to be negatively affected by future erosion and sedimentation in San Benito River if no action is taken to repair the damaged low water crossing.

Under the Proposed Action Alternative, hydrology is not anticipated to be adversely affected as a result of project activities. Planned project erosion controls, as referenced in Section 3.1, would prevent erosion and sedimentation into San Benito River during and after construction. The proposed improvements to the low water crossing would improve water quality due to decreased sedimentation associated with erosion along the roadway.

In addition to those measures referenced in Section 3.1 of this SEA, FEMA has incorporated best management practices (BMPs) into the proposed project design to avoid or minimize potential affects to water quality in the San Benito River and to sensitive biotic resources in and downstream of the project site. The following BMPs would be implemented by the County of San Benito:

- Fueling, cleaning, or maintenance of equipment would be prohibited except in designated areas located as far as possible from the river, preferably at least 75 feet. In addition, the contractor would maintain adequate materials on site for containment and cleanup of any spills.
- Prior to the onset of work, a spill response plan would be prepared to prevent contamination from accidental spills, and all workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- Workers would not wash out concrete trucks on site or where runoff from such activities could reach riparian vegetation or enter the river.

3.4 Floodplain Management

The affected environment is described in Section 3.4 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.4.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.4.3 of the PEA.

The project area is shown on the Flood Insurance Rate Map (FIRM) panel number 0375 for San Benito County Unincorporated Areas, dated November 27, 1991. The project site is in the San Benito River floodplain area designated Zone A, which represents the inundation limits of a 100-year flood, or a flood with a 1 percent chance of occurring in any single year. Because Zone A is not determined by a detailed study, no flood elevations are associated with the 100-year floodplain. Therefore, the effects of the proposed culvert modifications cannot be directly compared to an existing FEMA study.

The proposed low water crossing is designed to be overtopped by floods exceeding the 2-year event. For floods that overtop the crossing, the articulated concrete mat and riprap would reduce the risk of flood damage to the structure. As described in Section 2.0 of the SEA, the County would use riprap that meets Bureau of Reclamation standards for conditions prevalent during a 100-year flood at this location. Additionally, the culvert footings would be placed at a depth sufficient to prevent failure due to scour during a 100-year event.

A Hydrology Report developed by URS Corporation (2002) calculated the 100-year discharge at the project site to be 14,000 cubic feet per second (cfs). Approximately 5 percent of the total 100-year discharge flows through the culvert, and the remaining 95 percent flows over the road, suggesting that the water surface upstream of the crossing is primarily controlled by weir flow over the road. The elevation of the road is not proposed to change from existing conditions. Additionally, the proposed armoring of the road is not expected to cause a substantial change in the weir-flow conditions at a large

discharge of 14,000 cfs. Therefore, the proposed modifications are not expected to cause a substantial increase in the upstream floodplain.

Similarly, the proposed culvert modifications are not expected to affect the downstream discharge of a 100-year flood event. Because the crossing would be overtopped by larger flood events, the crossing would have no substantial effect on downstream discharges. This condition would be consistent with that of the current crossing, which is similarly overtopped by relatively minor flood events.

3.5 Biological Resources

The affected environment is described in Section 3.5 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.5.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.5.3 of the PEA.

The project site is within the San Benito River drainage, which flows northwesterly for approximately 85 direct miles to the Pacific Ocean via the Pajaro River. The San Benito watershed extends south from the project site along Old Hernandez Road to Coalinga Road and north to the terminus of Willow Creek Road. The watershed is characterized by a narrow San Benito River valley bordered by the steep terrain of the Diablo Range. The valley lowlands are essentially undeveloped, except for a few scattered ranches and light agricultural uses. The valley floor supports relatively unfragmented annual grassland and oak savanna habitat. The steep hills to the east support a continuous mosaic of grassland, open oak woodlands, and scrub. The steep hills to the west support mostly scrub and oak woodlands.

An initial site reconnaissance survey was completed on March 28, 2001. At the time of the survey, the river channel was approximately 10 feet wide beneath Old Hernandez Road at the river crossing. Aquatic habitat was characterized as a woody debris pool/run (that is, deep, fast-flowing water). The water was up to 3 feet deep beneath the crossing and slightly turbid. The substrate was composed of sand, cobbles, and small boulders. Streambanks at the river crossing were reinforced with large boulders and riprap. Riparian vegetation and aquatic emergents were absent from the crossing area, apparently due to scour and past roadwork. Grasses and herbs grew along the sandbars and banks immediately up- and downstream from the river crossing. Upland habitat adjacent to the river crossing included sage scrub and open oak woodlands on the steep foothills bordering the west bank of the river, and annual grassland and oak savanna to the east. Riparian vegetation was essentially absent along the river channel within 1 mile upstream of the river crossing (and for at least 3 miles further upstream) due to scour and perhaps cattle grazing. Aquatic habitat appeared to consist mainly of shallow riffles, with occasional deeper pools and runs. For approximately 1 mile downstream of the river crossing, riparian vegetation was largely absent except for a few widely scattered oak trees. Aquatic habitat downstream of the river crossing appeared to consist mainly of shallow riffles with occasional deeper pools and runs.

The No Action Alternative would result in no disturbance to biological resources. However, future erosion and sedimentation could negatively affect the water quality of San Benito River and, therefore, negatively affect aquatic habitat.

Under the Proposed Action, the area of disturbance, including a temporary road diversion, would measure approximately 290 feet long by 50 feet wide for a total area of 14,500 square feet of disturbance. In compliance with Executive Order 11990, Protection of Wetlands, and 44 CFR Part 9, the Proposed Action has incorporated measures to avoid and/or minimize any impacts to San Benito River. These measures are discussed in Sections 3.1 and 3.3 of this document. The project does not involve diversion of the river and all proposed work would be out of the wetted channel and confined behind erosion control devices.

On June 9, 2003 FEMA initiated coordination with the U.S. Army Corps of Engineers (USACE). The USACE responded in a letter dated June 25, 2003, that the County of San Benito would be required to obtain Section 404 Nationwide Permits 14 (linear transportation project) and 33 (temporary construction, access, and dewatering) from the USACE prior to the commencement of work (Appendix B). In addition, the County would be required to obtain a Regional Water Quality Control Board water quality certification or waiver. The County would also need to obtain a streambed alteration agreement from the California Department of Fish and Game (CDFG), for work on the banks of San Benito River.

3.6 Threatened and Endangered Species

The affected environment is described in Section 3.6 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.6.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.6.3 of the PEA.

To evaluate the potential for special-status species in the vicinity of the project area, FEMA obtained a list of threatened, endangered, or other special-status species that may occur in the study area from the U.S. Fish and Wildlife Service (USFWS) Ventura Office dated May 10, 2002 (Appendix B). In addition, the CDFG's California Natural Diversity Database (CNDDDB) was searched for known occurrences of special-status species within the USGS 7.5-minute quadrangles of Topo Valley, San Benito, Llanada, and Rock Spring Peak. A literature review was also conducted to identify habitat requirements and distribution for listed species, and persons knowledgeable about the study area and species were contacted for information regarding selected species. Federally listed species that were assessed for presence in the project area are presented in Table 1 (Appendix A).

As a result of the field and background review, FEMA determined that the proposed project site and vicinity would provide suitable habitat characteristics for three federally listed species:

- California red-legged frog (*Rana aurora draytonii*)
- San Joaquin kit fox (*Vulpes macrotis mutica*)
- Southcentral California coast steelhead (*Onchorynchus mykiss*)

In a July 2, 2002 letter, FEMA initiated consultation under Section 7 of the federal Endangered Species Act of 1973 (as amended) with the USFWS regarding potential impacts to California red-legged frog and San Joaquin kit fox. FEMA provided supplemental information to USFWS based on changes to the project design in a letter dated May 17, 2003.

FEMA initiated Section 7 consultation regarding the Southcentral California coast steelhead (steelhead) with NOAA Fisheries in a letter dated July 1, 2002. FEMA provided supplemental information based on changes to the project design on May 1, 2003.

California red-legged frog

A reconnaissance survey of the project site that was conducted on March 28, 2001, determined that potential nonbreeding habitat for the red-legged frog exists. The project site lacks potential reproductive habitat for the California red-legged frog, due to high stream water velocity, lack of pools, and lack of suitable aquatic vegetation. Riparian vegetation was essentially absent approximately 1 mile upstream and downstream of the project site, due to scour and perhaps cattle grazing. Upland habitat adjacent to the project area includes sage scrub, oak woodland, and oak savannah, which contain woody debris that could provide refuge for dispersing California red-legged frogs. California red-legged frogs are known to occur in the San Benito River (USFWS 2002), and a female California red-legged frog was observed in herbaceous cover approximately 2 miles downstream of the project site on July 9, 1999 (USFWS 2002). No other records are known within 5 miles of the site (CDFG 2002). A breeding population of red-legged frog is known to occur in Chalone Creek in Pinnacles National Monument, approximately 17 miles west of the study area.

Potential impacts to the red-legged frog include death, injury, or displacement from construction-related activities and degraded water quality. Since the Proposed Action's design excludes the diversion of the river, implementation of a pump, or work within the wetted channel, potential impacts due to increased turbidity and downstream sedimentation would be minimized. The Proposed Action would permanently remove potential riparian habitat at the location of the crossing, where currently no riparian vegetation and aquatic emergent vegetation exists. No other permanent or post-construction impacts to red-legged frog are expected. The Proposed Action would temporarily disturb potential riparian habitat and existing upland habitat for California red-legged frogs.

FEMA determined that the Proposed Action would likely adversely affect the California red-legged frog. Therefore, FEMA initiated formal consultation with the USFWS under Section 7 of the federal Endangered Species Act of 1973 (as amended).

On January 14, 2004, USFWS issued a Biological Opinion and Incidental Take Statement (Appendix B) in response to FEMA's request. The County would be responsible for ensuring that all Avoidance and Minimization Measures and Terms and Conditions of the Biological Opinion would be implemented to avoid, to the extent possible, adverse effects to California red-legged frog and their habitat under the Proposed Action.

The County must comply with the Avoidance and Minimization Measures and Terms and Conditions of the Biological Opinion and the Incidental Take Statement. These measures and conditions are listed below:

- Mark Allaback, Dana Bland, David Laabs, and Bryan Mori are authorized to survey for, capture, and move California red-legged frogs from the work area. The County must request for approval from USFWS of any other biologist it wishes to employ to survey for, capture, and move California red-legged frogs from the work area. The request must be in writing and received by the USFWS at least 15 days prior to any such activities being conducted.
- A USFWS-approved biologist must conduct a pre-construction survey of the project site, during the day and night, 48 hours before the onset of work activities. Nocturnal surveys would include the use of headlamps, flashlights, or spotlights to search for eye-shine. If any individuals of any life stage of the California red-legged frog are found and these individuals are likely to be killed or injured by work activities, the USFWS-approved biologist must be allowed sufficient time to move them from the site before work activities begin. These individual California red-legged frogs would be captured by hand or dipnet and moved to a USFWS-approved site downstream of the construction area. If bullfrogs are encountered during the surveys, they would be captured and eliminated. The USFWS-approved biologist would relocate the California red-legged frogs to the shortest distance possible to a location that contains suitable habitat and would not be affected by activities associated with the Proposed Action. The USFWS-approved biologist must maintain detailed records of any individuals that are moved (e.g., size, coloration, and distinguishing features, photographs [digital preferred]) to assist him or her in determining whether relocated animals are returning to the original point of capture.
- Before project activities begin, the USFWS-approved biologist must identify appropriate areas to receive relocated California red-legged frog adults and juveniles. These areas must be in proximity to the capture site, support suitable vegetation, and be free of exotic predatory species (e.g., bullfrogs) to the best of the USFWS-approved biologists' knowledge.
- To avoid transferring disease or pathogens between aquatic habitats during the course of surveys and handling of California red-legged frogs, the USFWS-approved biologist must follow the Declining Amphibian Population Task Force's Code of Practice. A copy of this Code of Practice is included in the Biological Opinion and Incidental Take Statement (Appendix B). A bleach solution (0.5 to 1 cup of bleach to 1 gallon of water) may be substituted for the ethanol solution discussed in the Code of Practice. Care must be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.
- If California red-legged frogs are detected at the project site during pre-construction surveys, a USFWS approved-biologist would monitor project activities to ensure that all protection measures are implemented and to temporarily halt activities to capture and move any red-legged frog observed in the work area.

- Exclusion fencing (such as silt fences) would be installed as appropriate to prevent California red-legged frogs from entering the work area.
- A training session for all construction workers would be conducted prior to the onset of construction activities. At a minimum, the training would include a description of the California red-legged frog and its habitat, the importance of the habitat, the general measures that are being implemented to conserve California red-legged frogs at the project site, and the boundaries of the Proposed Action.
- Prior to excavation or construction activities, the boundaries of the project area would be clearly delineated by flagging or other means to prevent workers or equipment from working outside of the right-of-way.
- The number of access routes, number and size of staging areas, and total area of activity would be limited to the minimum necessary to complete the Proposed Action. All construction workers would be notified of the appropriate access routes, staging areas, and total area of work activity. These areas would be clearly demarcated and will exclude riparian and wetland areas to the extent possible.
- Well-anchored silt fences would be installed below the construction zones at each slipout site to contain soil from the construction zone before it reaches the San Benito River.
- All construction materials and fill would be stored and contained in a designated area that is located away from channel areas to prevent inadvertent transport of materials into the adjacent river channel.
- The County must inspect all heavy vehicles and equipment for fuel leaks, oil leaks, and other fluid leaks during their operation in or near the river channel.
- Fueling, cleaning, or maintenance of equipment would be prohibited except in designated areas located as far from the river as possible. In addition, the contractor would maintain adequate materials on site for containment and cleanup of any spills.
- Prior to the onset of work, a spill-response plan would be prepared to prevent contamination from accidental spills, and workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur. Equipment would be fueled and staged within the right-of-way of Old Hernandez Road as far from the river as possible, preferably at least 75 feet.
- Workers will not wash out concrete trucks on site or where runoff from such activities could reach riparian vegetation or enter the creek.
- To reduce the potential for attracting predators and opportunistic wildlife to the project area, all food-related trash items would be enclosed in sealed containers and removed regularly from the project areas. Following construction, all trash and construction debris would be removed from work areas.

- Ground disturbance and vegetation removal would be limited during construction.
- All construction activities would be restricted to daylight hours.
- After construction and prior to October 15, all disturbed soils would undergo control treatment consisting of temporary seeding, straw mulch, or other measures pursuant to an approved erosion control plan. All disturbed upstream areas would be hydroseeded using a mix of native grasses and forbs.
- If more than one individual California red-legged frog is killed or injured for any reason, the County must contact the USFWS Ventura Field Office (805-644-1766) immediately for the USFWS to review the project activities to determine if additional protective measures are needed. Project activities may continue during this review period, provided that all avoidance and minimization measures and terms and conditions of the Biological Opinion have been and continue to be implemented.
- Within 3 days of locating any dead or injured California red-legged frogs, the County must notify the USFWS Ventura Field Office (805-644-1766) by telephone and in writing (2493 Portola Road, Suite B, Ventura, CA 93003). The report should include the date, time, location of the carcass, a photograph, cause of death, if known, and any other pertinent information.
- Care must be taken in handling dead specimens to preserve biological material in the best possible state for later analysis. Should any injured California red-legged frogs survive, the USFWS must be contacted regarding their final disposition. The remains of California red-legged frogs must be placed with the California Academy of Sciences Herpetology Department (Contact: Jens Vindum, Collection Manager, California Academy of Sciences Herpetology Department, Golden Gate Park, San Francisco, CA 94118, 415-750-7037). Arrangements regarding proper disposition of potential museum specimens must be made with the California Academy of Sciences by the County prior to implementation of any actions.
- The County must provide a written report to the USFWS within 60 days of the completion of the Proposed Action. The report must document the number of California red-legged frogs killed or injured by the Proposed Action. If California red-legged frogs were moved during work activities, the report must contain information on how many were moved and where and when the individuals were captured and released.

In addition to implementing the avoidance and minimization measures listed above for the red-legged frog, the County would notify FEMA to re-initiate consultation if any of the following occur: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species not considered in this opinion; or (4) a new species is listed that may be affected by the action. In instances

where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation of consultation.

San Joaquin kit fox

During the project site survey, a small mammal burrow was observed on a river bench, at the base of the foothills to the west of the river crossing, outside of the County right-of-way. The burrow was estimated to be approximately 50 feet from the project site. The burrow entrance dimensions could not be directly examined due to access restrictions, but appeared to be suitable for kit fox use during low water conditions in the river. Due to its location within the high-water zone of the San Benito River channel, however, the burrow is not likely to be used by kit fox.

Two kit fox sightings have been documented within 10 miles of the project site. During 1987, a road kill was found on Highway 25, 1 mile south of the town of San Benito, and a kit fox was observed in Bitterwater Valley in 1993 during a protocol-level study. Bitterwater Valley is located approximately 8 miles south of the project site, immediately west of Buck Ridge (which is the western slope bordering the project site). The current status of kit foxes in the interior valleys of the Diablo and Gabilan ranges remains uncertain. The above-mentioned kit fox records may be from members of a small, local kit fox population or may be representative of individuals dispersing from the greater Salinas Valley.

Optimal denning habitat for kit fox is not found at the project site due to its location within the river channel. However, the river corridor could be used by kit fox for dispersing and limited foraging. Potential impacts to kit foxes include disturbance and harassment due to construction noise, as well as disturbance to potential prey species from the Proposed Action. No permanent or post-construction impacts to San Joaquin kit fox are expected.

To reduce the potential for adverse affects to San Joaquin kit fox, BMP's outlined above in Section 3.3 of this document would be implemented and the following specific avoidance and minimize measures would be followed by the County:

- A USFWS-approved biologist would perform pre-construction surveys for the presence of kit fox at the river crossing site within 30 days prior to the beginning of ground disturbance or any activity likely to impact this species (USFWS 1999). If potential den sites are identified during the preliminary survey, USFWS would be contacted immediately, and 3 days of surveys would then be conducted wherein a tracking medium is placed at the entrance of all potential den sites to identify their use by kit foxes. If it is determined that the dens are not occupied by kit foxes, these sites would be hand excavated to prevent kit foxes from moving into the area during the construction period. If potential den sites are found, consultation with USFWS would be necessary to determine appropriate actions prior to the initiation of any project activities. In the event that occupied dens are found, excavation of kit fox dens with pups would not be allowed. Avoidance measures (i.e., timing, exclusion zones) would be developed and implemented in conjunction with USFWS guidelines.

- Prior to excavation or construction activities, the boundaries of the project area would be clearly delineated by flagging or other means to prevent workers or equipment from working outside of the right-of-way.
- The number of access routes, number and size of staging area, and total area of activity would be limited to the minimum necessary to achieve the project goal. All workers would be notified of the appropriate access routes, staging areas, and total area of the activity.
- To reduce the potential for attracting potential predators or opportunistic wildlife to the project area, all food-related trash items would be enclosed in sealed containers and removed regularly from the project areas. Following construction, all trash and construction debris would be removed from work areas.
- Ground disturbance and vegetation removal would be limited during construction.
- All construction would be restricted to daylight hours.
- A training session for all construction workers would be conducted prior to the onset of construction activities. At a minimum, the training would include a description of San Joaquin kit fox and its habitat, the importance of this species and its habitat, the general measures that are being implemented to conserve San Joaquin kit fox as they relate to the project, and the boundaries within which the project would be accomplished.

FEMA determined that by implementing the avoidance and minimization measures discussed above, the Proposed Action would not likely adversely affect the San Joaquin kit fox. Through the consultation process between FEMA and the USFWS under Section 7 of the federal Endangered Species Act of 1973 (as amended), the USFWS issued a concurrence with FEMA's determination (Appendix B).

Steelhead

Limited information is available about the presence of special-status fish species in the San Benito River. Informal consultation with NOAA Fisheries also confirmed this lack of data. No local records are available for the steelhead occurring in the project site. NOAA Fisheries assumed the viewpoint that until better information regarding fish species in the San Benito River is available, they are considering the watershed as suitable habitat for steelhead. Due to the lack of information about special-status fish species in the San Benito River and the surrounding area, the suitability of the project area as potential habitat for steelhead was inferred from information obtained from area maps and a site reconnaissance survey.

No significant barriers to fish passage occur downstream of the project area. At the project site, the San Benito River channel is a wide, gravelly, pool/run with no vegetation growing along the active channel. Although a few locations with vegetation and cover occur over the stream channel, the water depth could be sufficient to provide appropriate water temperatures for steelhead during certain times of the year. Water depth may be

insufficient to maintain adequate water temperatures for steelhead during hot summer months. In addition, water flow regimes created by releases from the dam at the Hernandez Reservoir may limit perennial flows through the river. Thus, anadromous fish (if present) could become landlocked in the upper reaches of the river unless sufficient rainfall occurs prior to the emigration period.

The project site meets physical requirements as a migration corridor. Quality juvenile rearing areas, areas for growth and development to adulthood, and spawning areas are not present at the project site, as physical and biological components of the channel are of low quality. The riverbanks at the project site do not provide high quality fish protection as the channel slopes are not undercut and are composed of large boulders and riprap. Shade cover and protection is not provided by riparian vegetation at the project area and along much of the channel up- and downstream from the project site.

Based on the hydrologic and biologic characteristics of the proposed project site, the portion of the San Benito River affected by the project would be characterized only as supporting adult upstream or juvenile downstream migration. Spawning and/or rearing habitat does not exist in the project area.

FEMA determined that the Proposed Action may affect but is not likely to adversely affect steelhead, provided that the County of San Benito follows specific avoidance and minimization measures that were formulated in consultation with NOAA Fisheries. NOAA Fisheries concurred with FEMA's determination on May 17, 2003 (Appendix B). The County would be responsible for implementing the following measures to avoid or minimize impacts to steelhead:

- The pre-fabricated bottomless arch culvert would be lowered into place by a crane working from Old Hernandez Road. No equipment would enter the stream banks or drive off-road when placing the culvert.
- Riprap placement would occur only when the channel is dry. All work would occur from the stream banks, on Old Hernandez Road.
- The new culvert design would maintain existing river hydraulic conditions.
- The culvert footings would be placed 2.7 feet below the channel bed to reduce scour.
- Riprap would be sized to withstand a 100-year flow event.
- Riprap would not be placed in the wetted channel along the upstream edges of the articulated concrete mat.

3.7 Cultural Resources

The affected environment is described in Section 3.7 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.7.1 of the PEA. Impacts of the Proposed Action Alternative are described in Sections 4.1.7.3 of the PEA.

FEMA determined that the area of potential effect (APE) for the Proposed Action Alternative is defined as a 350-foot-long by 100-foot-wide segment of Old Hernandez Road and embankment of San Benito River that would be subject to repairs and erosion control measures.

Pursuant to the revised implementing regulations of the National Historic Preservation Act (NHPA) found at 36 CFR 800.4(a)(2), a cultural resource records literature review was performed at the Northwest Information Center (NWIC) of the California Historic Resources Information System (File No. 60800-01-33) prior to an archeological survey. According to the data provided by NWIC, there are no properties listed on or eligible for inclusion on the National Register of Historic Places, no previously recorded archaeological sites, or archaeological surveys within ½ mile of the proposed project.

FEMA conducted an archaeological field survey for the APE in January 2001. FEMA did not identify any prehistoric archaeological resources or built environment features within the project area and determined that no effect to historic properties would be expected from the Proposed Action.

Pursuant to the revised implementing regulations of the NHPA found at 36 CFR 800.4(a)(4), FEMA requested a review of the Sacred Lands Files and a list of individuals or groups that should be contacted regarding the proposed project from the California Native American Heritage Commission (NAHC). The NAHC responded on March 20, 2002, with negative search results. An informational letter was sent on April 2, 2002, to the one individual identified by the NAHC; no response has been received.

FEMA initiated Section 106 consultation with the State Historic Preservation Officer (SHPO) and received concurrence from SHPO on July 17, 2002, that the project information described above is satisfactory and meets the requirements of Section 106 Consultation (Appendix B).

In the event of an unanticipated discovery, the County of San Benito would stop work and notify FEMA immediately. FEMA would then consult with the SHPO in accordance with Section VII of the Programmatic Agreement for Disaster FEMA-1203-DR-CA. Should human remains be encountered, work in the vicinity would halt and the County would notify the County Coroner immediately. If the remains were determined to be Native American, the coroner would contact the NAHC.

3.8 Socioeconomics and Public Safety

The affected environment is described in Section 3.8 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.8.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.8.3 of the PEA.

In compliance with Executive Order 12898 (Environmental Justice), FEMA determined that neither the implementation of the No Action Alternative nor the Proposed Action Alternative is expected to result in any adverse and/or disproportionate impacts on minority or low-income persons.

3.9 Land Use and Zoning

The affected environment is described in Section 3.9 of the PEA. Impacts of the No Action Alternative are described in Sections 4.1.9.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.9.3 of the PEA.

The lands in the vicinity of the project site are zoned as agricultural rangeland. Current land uses of the project site and its vicinity include cattle grazing, hay production, agriculture, and sparse rural development. Residences within the valley typically support rangeland for cattle and horses.

No adverse impacts to land use or zoning would result from the Proposed Action. All project activities would occur within the County right-of-way.

3.10 Public Services

The affected environment is described in Section 3.10 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.10.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.10.3 of the PEA. Police, fire, and other emergency services utilize Old Hernandez Road only as necessary to access properties between Coalinga Road and Willow Creek Road, as State Route 25 parallels Old Hernandez Road. No public utilities are provided along the right-of-way of Old Hernandez Road.

Under the No Action Alternative, no repairs to the Old Hernandez Road low water crossing of San Benito River would be performed. While the No Action Alternative is not anticipated to cause any immediate and direct impacts to public services, it is possible that future erosion could result in continued failure of the low water crossing, resulting in adverse impacts to police, fire, and emergency services accessing properties on Old Hernandez Road.

The Proposed Action Alternative is anticipated to prevent adverse impacts by reducing the risk of roadway failure. Public services would not be disrupted during construction because a temporary crossing would be provided. Therefore, no impacts to police, fire, emergency services, or public utilities are anticipated as a result of the Proposed Action Alternative.

3.11 Transportation

The affected environment is described in Section 3.11 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.11.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.11.3 of the PEA.

The Proposed Action Alternative is not anticipated to have any permanent adverse impacts to transportation in the project vicinity. Old Hernandez Road would have a temporary increase in traffic related to construction equipment and workers. Since a temporary crossing of San Benito River would be provided, road closures would not be needed during construction activities. The Proposed Action Alternative would be

expected to have a long-term beneficial impact by making Old Hernandez Road safe and accessible.

3.12 Noise

The affected environment is described in Section 3.12 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.12.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.12.3 of the PEA.

The Proposed Action Alternative would result in temporary noise impacts during construction. However, noise due to construction activities would not exceed safe levels and would be restricted to daylight hours. In addition, the land uses in vicinity of the proposed project include cattle grazing, hay production, agriculture, and sparse rural residential development. No residential or other sensitive uses in the immediate vicinity would be affected by the short-term, temporary noise increases.

3.13 Hazardous Materials and Wastes

The affected environment is described in Section 3.13 of the PEA. Impacts of the No Action Alternative are described in Section 4.1.13.1 of the PEA. Impacts of the Proposed Action Alternative are described in Section 4.1.13.3 of the PEA.

Hazardous materials and wastes are not expected to be present in the project area because the project does not involve the transport, use, or disposal of hazardous materials or wastes and would not result in creation of a public health hazard. Neither the No Action Alternative nor the Proposed Action would result in any new impacts to hazardous materials and wastes at the project site.

4.0 REFERENCES

- Cattaneo, J. 2002. Personal communication re: Hernandez Reservoir. Telephone conversation with Jeff Cattaneo, Engineer, San Benito County Water District, December 11, 2002.
- California Department of Fish and Game (CDFG). 2002 California Natural Diversity Database Rarefind2 Program. Natural Heritage Division, Sacramento, California.
- Federal Emergency Management Agency (FEMA). 1998. Final Programmatic Environmental Assessment for Typical Recurring Actions Resulting from Flood Disasters in California as Proposed by the Federal Emergency Management Agency. FEMA 1203-DR-CA. April 16.
- Monterey Bay Unified Air Pollution Control District (MBUAPCD). 2001. 2000 Air Quality Management Plan for the Monterey Bay Region, Third Revision to the 1991 Air Quality Management Plan for the Monterey Bay Region. May.

- Smith, J.J. 2002. Personal communication re: steelhead presence and status in San Benito River. Telephone conversation with Jerry Smith, Professor of Biological Sciences, San Jose State University, December 17 and 19, 2002.
- URS Corporation. 2002. San Benito County, California, San Benito River at Old Hernandez Road Low Water Crossing Repair. Hydrology Report. Prepared for the Federal Emergency Management Agency. December 8.
- U.S. Fish and Wildlife Service (USFWS). 2002. Recovery plan for the California red-legged frog (*Rana aurora draytonii*). Portland, Oregon.
- U.S. Fish and Wildlife Service (USFWS). 1999. U.S. Fish and Wildlife Service standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance. Sacramento, California.
- U.S. Geologic Survey (USGS). 2002. California Hydrologic Data Report for San Benito River near Willow Creek School, CA, 1997 Data. Web site visited: <http://0-ca.water.usgs.gov.library.csuhayward.edu/archive/waterdata/97/11156500.html>.

5.0 LIST OF PERSONS AND AGENCIES CONSULTED

Mr. Ed Wiley
South Section Chief
U.S. Army Corps of Engineers
San Francisco District
333 Market Street
San Francisco, CA 94105

Mr. Rodney R. McInnis
Acting Regional Administrator
National Marine Fisheries Service
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802

Dr. Knox Mellon
State Historic Preservation Officer
Office of Historic Preservation
1416 9th Street, Room 1442-7
Sacramento, California 95814

Ms. Diane Noda, Field Supervisor
Ventura Fish and Wildlife Service Office
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

Ms. Jennifer Nelson
California Department of Fish and Game
Ecological Reserve Office
Monterey, CA

Jerry Smith, PhD
San Jose State University
Department of Biological Sciences
One Washington Square
San Jose, CA 95912

Appendix A – Tables and Figures

Table 1	Listed, Proposed, and Candidate Species Which May Occur in the Vicinity of the Old Hernandez Road Project
Figure 1	Project Location Map
Figure 2	Old Hernandez Road Bottomless Arch Culvert Conceptual Design
Figure 3	Old Hernandez Road Bottomless Arch Culvert Conceptual Design

Table 1
LISTED, PROPOSED, AND CANDIDATE SPECIES THAT MAY OCCUR
IN THE VICINITY OF THE OLD HERNANDEZ ROAD PROJECT, SAN BENITO COUNTY, CALIFORNIA
 Plant and Animal Species that may be Affected by Projects in the Topo Valley, San Benito, Rock Spring Peak, and Llanada 7 ½ Minute Quads¹

Species Common Name	Status ²			Typical Habitat and Fish Spawning Periods	Preliminary Analysis of Occurrence
	Federal	State	CNPS		
Fauna					
Invertebrates					
<i>Branchinecta conservatio</i> conservancy fairy shrimp	E	none	NA	Vernal pools.	Unlikely. No suitable habitat.
<i>Branchinecta longiantenna</i> longhorn fairy shrimp	E	none	NA	Vernal pools.	Unlikely. No suitable habitat.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	T	none	NA	Vernal pools.	Unlikely. No suitable habitat.
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	E	none	NA	Vernal pools	Unlikely. No suitable habitat.
Fish					
<i>Oncorhynchus mykiss</i> steelhead - south-central California Coast ESU	T	SC	NA	Most of adult life is in the open ocean. Migrate to freshwater streams and spawn from December through April, with most activity occurring between January and March. ³	Potential for occurrence of migrating adults and juveniles. Spawning and juvenile rearing habitat not present at site.
Amphibians					
<i>Rana aurora draytonii</i> California red-legged frog	T	SC Pr	NA	Dense, shrubby riparian vegetation associated with deep (≥ 0.7 m), still or slow-moving water. ⁴	Potential for occurrence. Egg-laying habitat is not present at site.
Reptiles					
<i>Gambelia (=Crotaphytus) sila</i> blunt-nosed leopard lizard	T	E Pr	NA	Sparsely vegetated plains, alkali flats, low foothills, grasslands, canyon floors, large river washes and arroyos. ⁴	Unlikely. No suitable habitat.
Birds					
<i>Charadrius montanus</i> mountain plover	PT MNBMC	SC	NA	Do not nest in California. In winter, found in high plains and semi-desert regions. Forages on alkaline flats, plowed ground, grazed pasture, and dry short grass prairie. ⁵	Unlikely. No suitable habitat.

Table 1
LISTED, PROPOSED, AND CANDIDATE SPECIES THAT MAY OCCUR
IN THE VICINITY OF THE OLD HERNANDEZ ROAD PROJECT, SAN BENITO COUNTY, CALIFORNIA
 Plant and Animal Species that may be Affected by Projects in the Topo Valley, San Benito, Rock Spring Peak, and Llanada 7 ½ Minute Quads¹

<i>Species</i> Common Name	Status ²			Typical Habitat and Fish Spawning Periods	Preliminary Analysis of Occurrence
	Federal	State	CNPS		
<i>Haliaeetus leucocephalus</i> bald eagle	T	E Pr	NA	Winters throughout most of California at lakes, reservoirs, river systems, and some rangelands and coastal wetlands. Nests are normally built in the upper canopy of large trees, usually conifers. ⁴	Low potential for occurrence.
<i>Vireo bellii pusillus</i> Least Bell's vireo	E MNBMC	E	NA	Low, dense riparian growth along water or along dry parts of intermittent streams. Associated with willow, cottonwood, baccharis, wild blackberry, or mesquite. ⁶	Unlikely. No suitable habitat.
Mammals					
<i>Dipodomys ingens</i> giant kangaroo rat	E	E	NA	Native annual grassland and shrub-land habitats with sparse vegetative cover and soils that are well drained, fine sandy loams with slope generally less than 10 percent. ⁴	Unlikely. No suitable habitat.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	E	T	NA	Native valley and foothill grasslands and chenopod scrub communities of the valley floor and surrounding foothills. ⁴	Low potential for occurrence of dispersing adults and juveniles. No suitable dens were observed in vicinity of site.
Flora					
<i>Camissonia benitensis</i> San Benito evening primrose	T	none	1B	Chaparral, cismontane woodland / serpentinite alluvium, clay or gravelly; elevation 600-128-0 meters. Annual herb, blooms May-June. ⁷	Unlikely. No suitable habitat.
<i>Eriastrum hooveri</i> Hoover's eriastrum (=woolly-star)	T	none	4	Chenopod scrub, pinyon and juniper woodland, valley and foothill grassland; elevation 50 – 915 m. Perennial herb, blooms March – July. ⁷	Unlikely. No suitable habitat.

¹ USFWS. 2002. U.S. Fish and Wildlife Service species list for the Old Hernandez Road project in San Benito County, CA. Ventura Fish and Wildlife Office, May, 2002

² **Status Abbreviations**

(CDFG (California Department of Fish and Game). 2002. State and Federally Listed Endangered and Threatened Animals of California. Habitat Conservation Division, California Natural Diversity Database, January, 2002):

Federal

E – Endangered
T – Threatened
PT – Proposed Threatened
MNBMC – Migratory nongame birds of management concern

State

E - Endangered
T - Threatened
SC - CDFG species of concern
Pr – CDFG protected species

CNPS (California Native Plant Society)

1B - Rare, threatened and endangered in California and elsewhere
4 - Plants of rare distribution in California and elsewhere

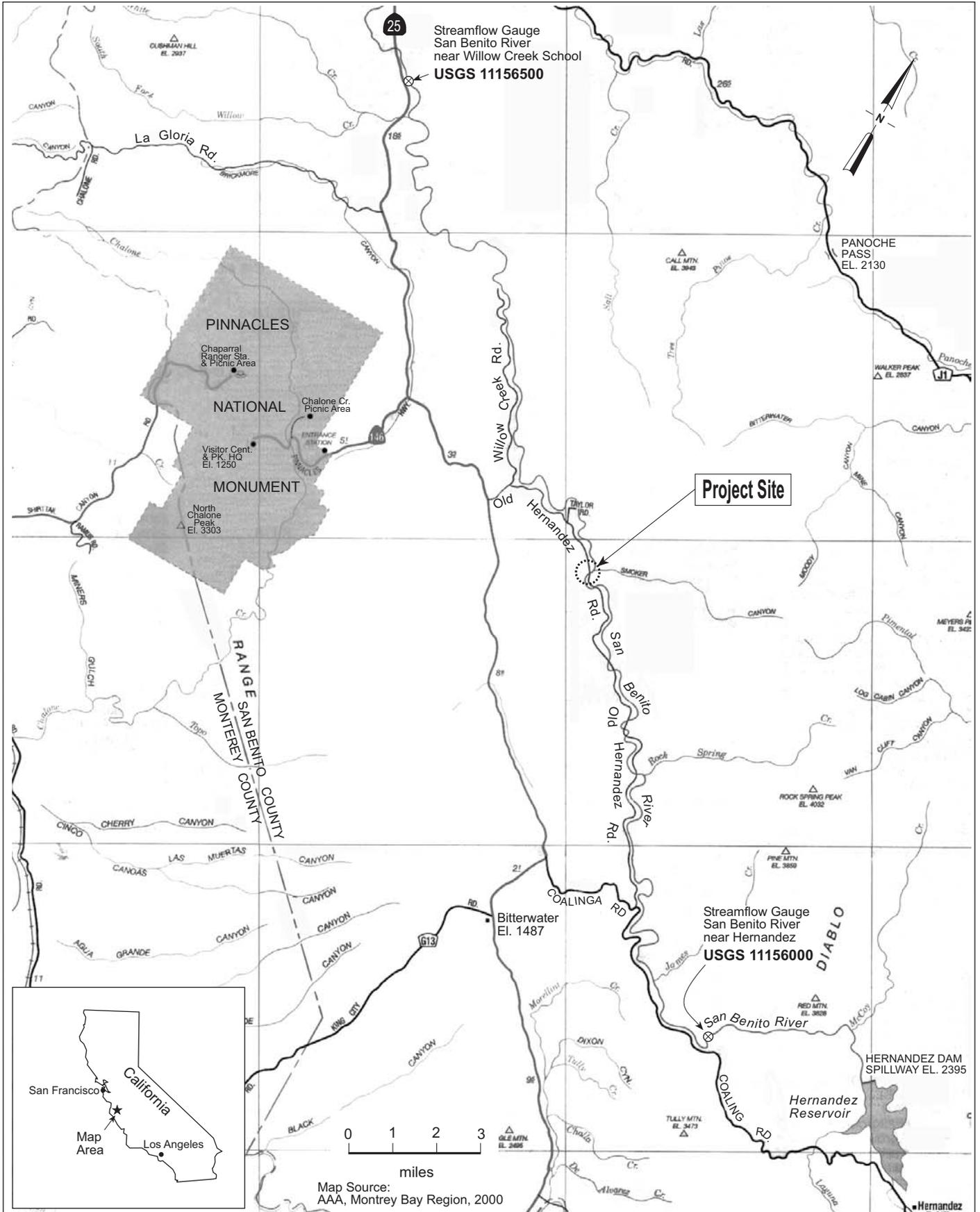
³ Moyle. 2002. Inland fishes of California. University of California Press. 1st ed. 502 pp.

⁴ California Department of Fish and Game, Habitat Conservation Planning Branch web site. [http://www.dfg.ca.gov/hcpb/species/t_e_spp/tespp.shtml]

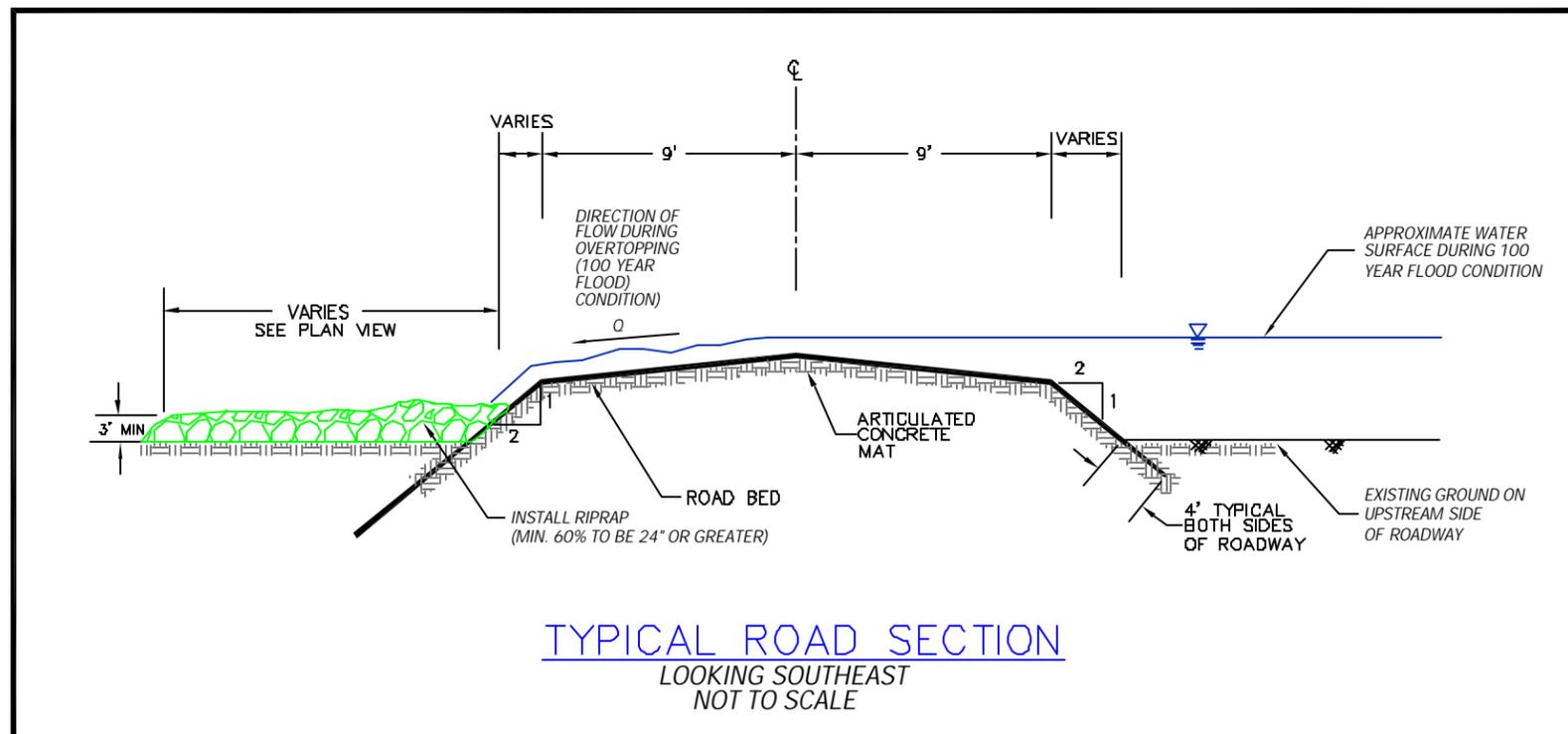
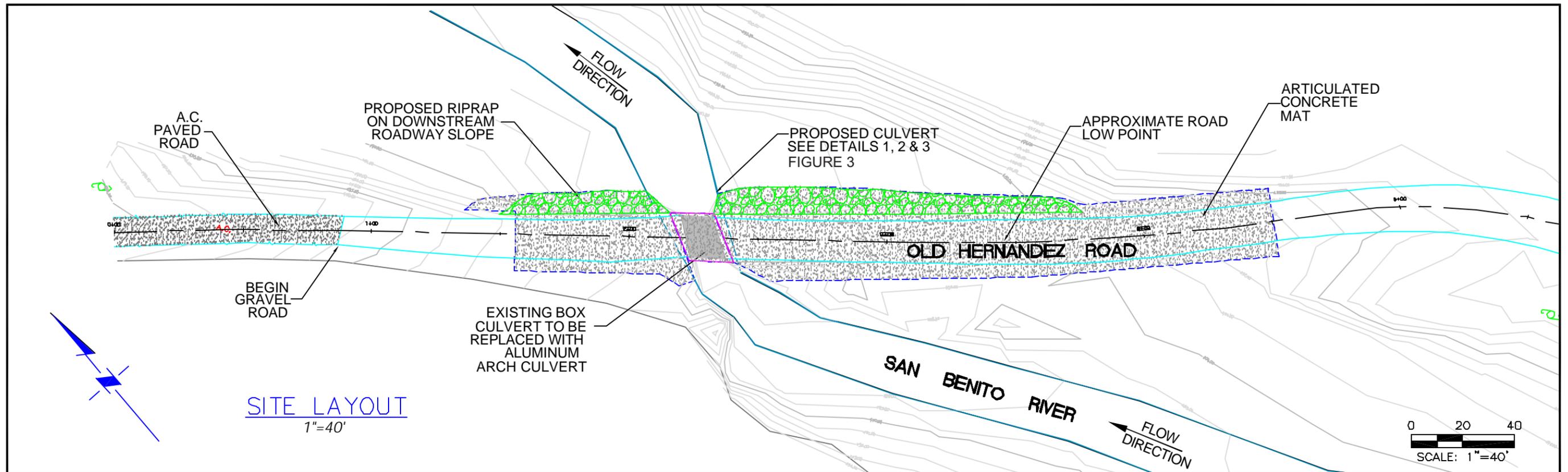
⁵ California State University, Endangered Species Recovery Program web site. [<http://arnica.csustan.edu/esrpp/esrpp.htm>]

⁶ California Department of Fish and Game. 1988. California's Wildlife, Volume II: Birds. Sacramento. 731 pp.

⁷ California Native Plant Society. 2001. Inventory of rare and endangered plants of California (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. Sacramento, CA. 388 pp.



	Project No. 15293557	PROJECT LOCATION MAP	Figure 1
	Old Hernandez Road		



NOTES:

1. PROPOSED CULVERT TO ALIGN WITH RIVER CENTERLINE
2. ROADWAY ALIGNMENT SURVEYED PERFORMED BY SAN BENITO ENGINEERING AND SURVEYING INC.
3. ORIGINAL DESIGN OF ROADWAY AND RIPRAP PROPOSED BY SAN BENITO COUNTY. PER NMFS REQUEST URS EVALUATED CULVERT SIZE AND ALIGNMENT TO ACCOMMODATE FISH PASSAGE.

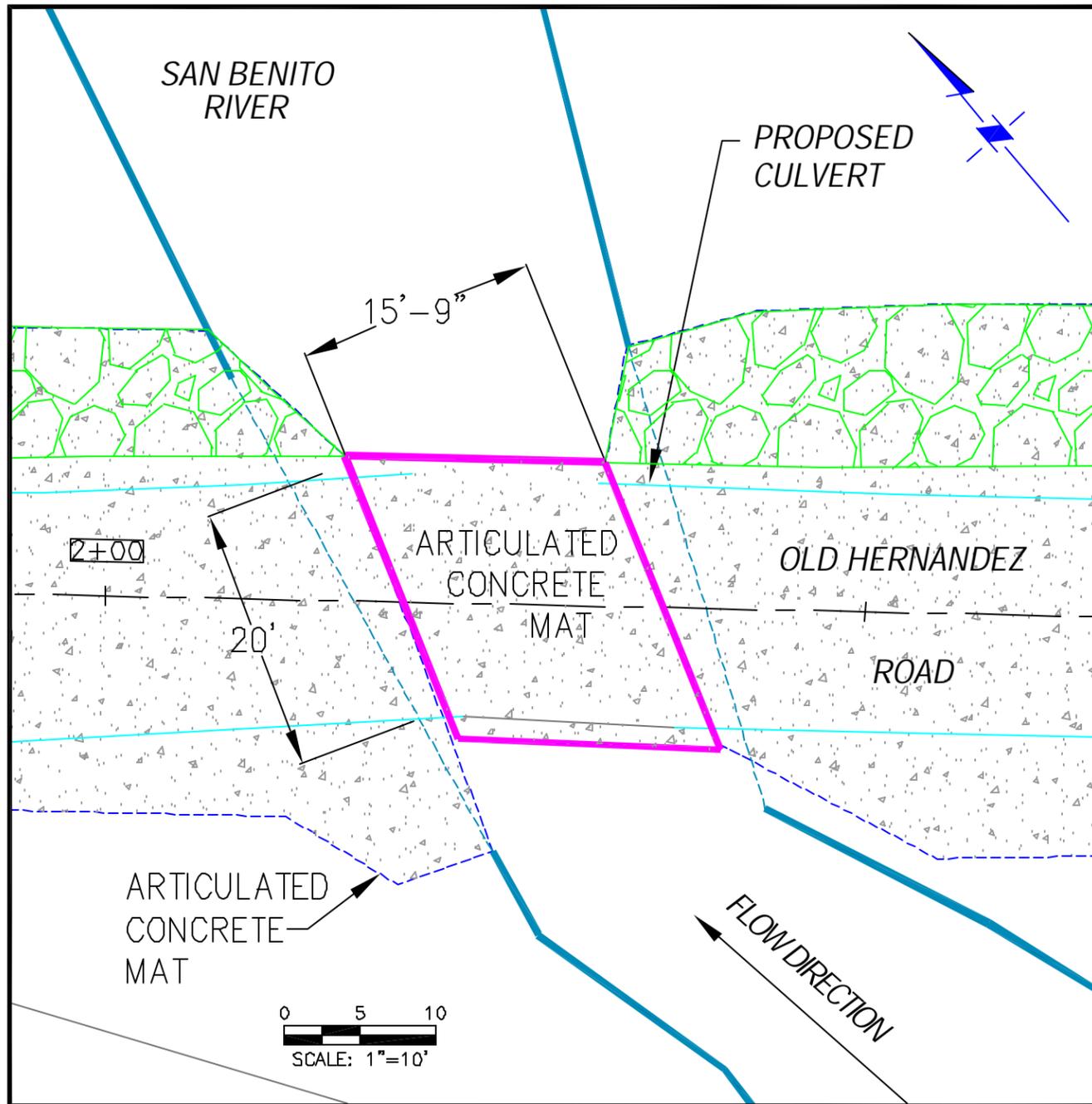
URS CORPORATION
500 12th Street, Suite 200
Oakland, CA 94607



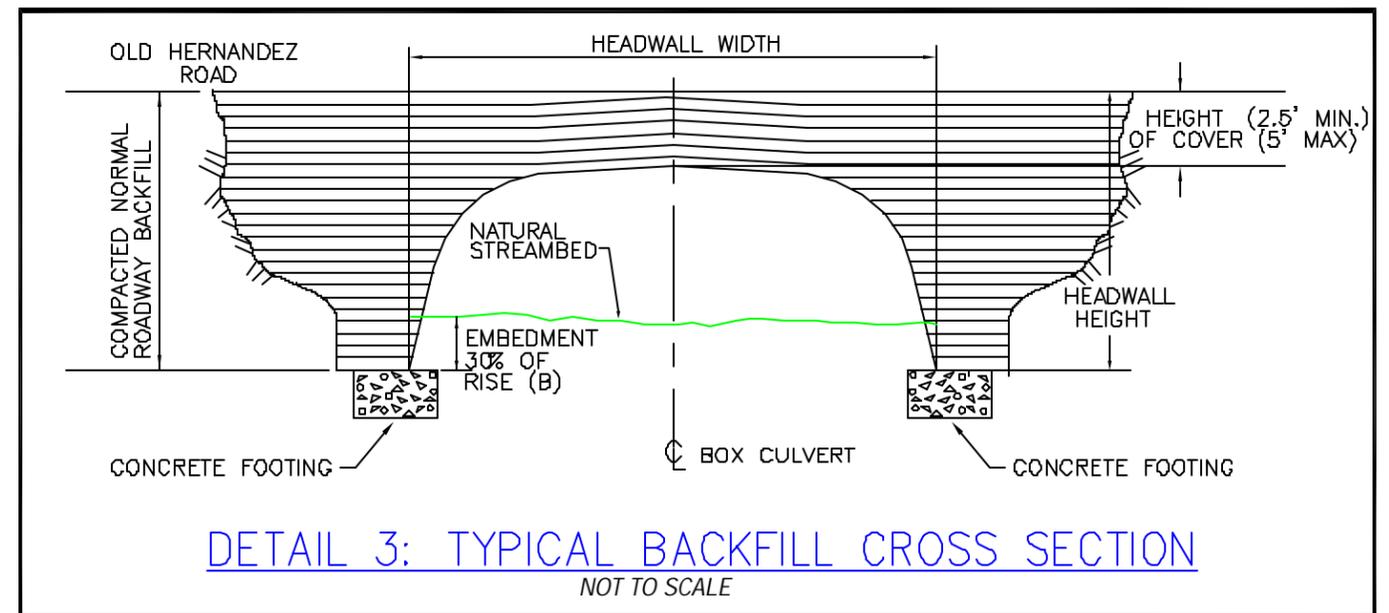
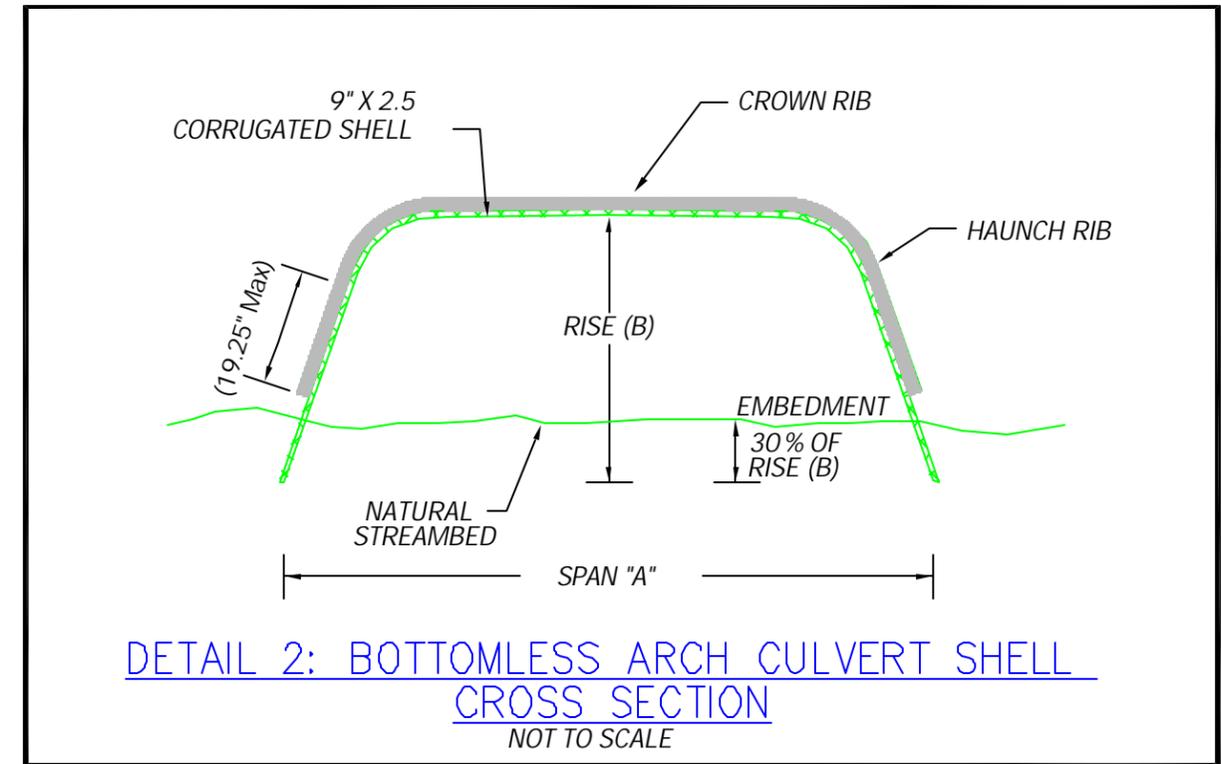
DESIGNED
DRAWN
CHECKED
PEER REVIEWED
PROJECT MANAGER
DATE 4/11/03

**OLD HERNANDEZ ROAD
BOTTOMLESS
ARCH CULVERT CONCEPTUAL
DESIGN**

FIGURE
2



DETAIL 1: PROPOSED CULVERT
SCALE 1"=10'



URS CORPORATION
500 12th Street, Suite 200
Oakland, CA 94607



DESIGNED
DRAWN
CHECKED
PEER REVIEWED
PROJECT MANAGER
DATE 4/11/03

**OLD HERNANDEZ ROAD
BOTTOMLESS
ARCH CULVERT CONCEPTUAL
DESIGN**

FIGURE
3

Appendix B – Agency Correspondence



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
333 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94105-2197

JUN 25 2003

Regulatory Branch

SUBJECT: File Number 27930S

Mr. Doug Koenig
County of San Benito
Department of Public Works
3220 Southside Road
Hollister, CA 95023

Dear Mr. Koenig:

This letter is in response to a request for comments by the Federal Emergency Management Agency, on behalf of the County of San Benito, concerning the Old Hernandez Road Low Water Crossing Repair Project, which was received on June 12, 2003, by their notice dated June 9, 2003. This project will replace a failed box culvert with a prefabricated bottomless arch culvert in the San Benito River, near Pinnacles National Monument, in San Benito County, California. This project will also involve the installation of headwall footings into the bed of the San Benito River. The river will be partially dewatered using sandbags to divert water away from the bank toe where concrete will be poured for the culvert footings. The Corps of Engineers will need to review your project, and it likely will be permitted using Nationwide Permits 14, Linear Transportation Projects, and 33, Temporary Construction, Access, and Dewatering.

All proposed discharges of dredged or fill material into waters of the United States must be authorized by the Corps of Engineers pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands.

Your proposed work appears to be within our jurisdiction and a permit may be required. Application for Corps authorization should be made to this office using the application form in the enclosed pamphlet. To avoid delays it is essential that you enter the File Number at the top of this letter into Item No. 1. The application must include plans showing the location, extent and character of the proposed activity, prepared in accordance with the requirements contained in this pamphlet. You should note, in planning your work, that upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a Public Notice for a period of 30 days.

If an individual permit is required, it will be necessary for you to demonstrate to the Corps that your proposed fill is necessary because there are no practicable alternatives, as outlined in the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines. A copy is enclosed to aid you in preparation of this alternative analysis.

Should you have any questions regarding this matter, please call Andrew Muss of our Regulatory Branch at 415-977-8442. Please address all correspondence to the Regulatory Branch and refer to the File Number at the head of this letter.

Sincerely,
ORIGINAL SIGNED
BY
CHIEF, SOUTH SECTION
FOR

Edward A. Wylie
Chief, South Section

Enclosures

Copy Furnished (w/o enclosure):

US FEMA, Oakland, CA Attn: Mr. Alessandro Amaglio

URS Corp., Oakland, CA Attn: Ms. Suzanne Eastridge



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

In Response Refer To: 2002-194

May 10 2002

Cindy Hopkins
URS Corporation
500 12th Street, Suite 200
Oakland, California 94607-4014

Subject: Species List for the Old Hernandez Road Project in San Benito County, California

Dear Ms. Hopkins:

This letter is in response to your facsimile request of March 14, 2002, for information on threatened or endangered species that may be present in the vicinity of the proposed Old Hernandez Road project in San Benito County, California. Your letter states that the Federal Emergency Management Agency (FEMA) is proposing to upgrade a water crossing over the San Benito River, and that the information provided in the enclosed species list will be used in the preparation of a biological assessment for the project. Per your request, we are providing a list of species that may occur in the following U.S. Geological Survey 7.5-minute quadrangles: San Benito, Rock Spring Peak, Topo Valley, and Llanada. This letter fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (Act).

FEMA, as the lead Federal agency for the project, has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a construction project^v which may require an environmental impact statement, FEMA has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If FEMA determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a written request for formal consultation. During this review process, FEMA may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

^v "Construction project" means any major Federal action which significantly affects the quality of the human environment designed primarily to result in the building of structures such as dams, buildings, roads, pipelines, and channels. This includes Federal actions such as permits, grants, licenses, or other forms of Federal authorizations or approval which may result in construction.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

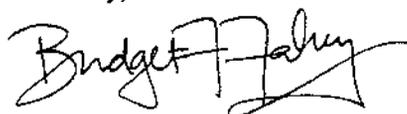
When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

The take of proposed and candidate species is not prohibited by section 9 of the Act. However, we encourage you to consider their conservation in your planning process in the event they are listed prior to project completion. For information on other species of concern that may occur in the project area, the Service recommends that you review information in the California Department of Fish and Game's Natural Diversity Data Base and that you contact the California Department of Fish and Game at (916) 324-3812.

If you have any further questions please contact Amy DeWeerd of my staff at (805) 644-1766.

Sincerely,



for Diane K. Noda
Field Supervisor

**LISTED, PROPOSED, AND CANDIDATE SPECIES
WHICH MAY OCCUR IN THE VICINITY OF THE
OLD HERNANDEZ ROAD PROJECT
SAN BENITO COUNTY, CALIFORNIA**

Mammals

San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	E
Giant kangaroo rat	<i>Dipodomys ingens</i>	E

Birds

Bald eagle	<i>Haliaeetus leucocephalus</i>	PD, T
Mountain plover	<i>Charadrius montanus</i>	PT
Least Bell's vireo	<i>Vireo bellii pusillus</i>	E

Reptiles

Blunt-nosed leopard lizard	<i>Gambelia silus</i>	E
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Amphibians

California red-legged frog	<i>Rana aurora draytonii</i>	T, CH
California tiger salamander	<i>Ambystoma californiense</i>	C

Fish

Steelhead	<i>Oncorhynchus mykiss</i>	*
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Invertebrates

Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	E
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	E
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T
Vernal pool tadpole shrimp	<i>Lepidurus packardi</i>	E

Plants

San Benito evening-primrose	<i>Camissonia benitensis</i>	T
Hoover's eriastrum	<i>Eriastrum hooveri</i>	PD, T

Key:

E - Endangered T - Threatened CH - Critical Habitat

PD - Proposed for delisting

PT - Proposed for listing as threatened

C - Candidate species for which the Fish and Wildlife Service has on file sufficient information on the biological vulnerability and threats to support proposals to list as endangered or threatened

* Species for which the National Marine Fisheries Service has responsibility. For more information, call the Santa Rosa Field Office at 707-575-6050 or go to <http://swr.ucsd.edu/>



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

In Reply Refer To: PAS 275.284.707

January 14, 2004

Alessandro Amaglio, Regional Environmental Officer
Federal Emergency Management Agency
U.S. Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, California 94607-4052

Subject: Repair of the Old Hernandez Road Low-water Crossing, San Benito County,
California (FEMA-1203-DR-CA)(1-8-03-F-31)

Dear Mr. Amaglio:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion regarding the Federal Emergency Management Agency's (FEMA) proposed funding of repairs of a low-water crossing of Old Hernandez Road and its effects on the federally threatened California red-legged frog (*Rana aurora draytonii*). This document was prepared in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act). Your request for formal consultation was received on May 17, 2003.

Consultation History

You initially requested formal consultation with our office with a letter and biological assessment report dated July 1, 2002. Due to revisions in the project design, you submitted a revised request on May 17, 2003. On August 4, 2003, Bill McIver of my staff requested clarification on aspects of the project, in an email sent to Dale Rosskamp of the Department of Public Works of the County of San Benito (County). Mr. McIver received an answer to this request in an email from Mr. Rosskamp on August 13, 2003. In a letter dated December 19, 2003, you requested information regarding the status of this formal consultation. Mr. McIver corresponded further with Mr. Rosskamp and consultant Bryan Mori on January 6, 2004.

You also requested our concurrence that the project is not likely to adversely affect the endangered San Joaquin kit fox (*Vulpes macrotis mutica*). San Joaquin kit foxes have been observed within 10 miles of the project site (California Department of Fish and Game 2002, Bryan Mori Biological Consulting Services (Mori) 2001), and are known to breed in the Ciervo-Panoche area, which is approximately 14 miles northeast of the project site. Therefore, the project site is within the known dispersal distance for San Joaquin kit foxes (Service 1998). However, the project site does not contain any suitable den sites that the species could use (Mori

2001). Therefore, San Joaquin kit foxes would likely only occur within the project area while dispersing or foraging. The County has included, in its project description, the standard measures (Service 1999a) to avoid effects of project activities on the San Joaquin kit fox. The County will conduct pre-construction surveys for San Joaquin kit foxes using a Service-approved biologist. Also, the County will conduct a training session, using a Service-approved biologist, which will include a description of the San Joaquin kit fox and measures to be taken to avoid effects from project activities to the San Joaquin kit fox. We concur with your determination that the project will not likely adversely affect the San Joaquin kit fox. This concurrence is based on the expected effects of the proposed project, the likelihood that San Joaquin kit foxes will not be encountered during project activities, and the proposed avoidance measures.

Our biological opinion is based on information which accompanied your request for consultation, including a biological assessment (Mori 2001), maps of the project area, correspondence between Mr. Roskamp, Mr. Mori and Mr. McIver, and other information in our files. A complete administrative record of this consultation is on file at the Ventura Fish and Wildlife Office.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

The County, with funding from FEMA, proposes to repair sections of the low-water crossing of the San Benito River at Old Hernandez Road that were damaged during winter storms in 1998. The County also proposes to replace the existing 12-foot by 6-foot box culvert with a single 16-foot by 8-foot pre-fabricated arched culvert with headwalls. The culvert would have a natural bottom and the headwalls would be placed on footings approximately 3 feet below the riverbed. The County would install an articulated concrete mat along the river crossing for a length of approximately 300 feet. The concrete mat would extend approximately 4 feet below the toe slope of both sides of the structure. The County would place a 13-foot wide riprap blanket along the roadway embankment downstream of the low-water crossing; the riprap would not be placed in the wet channel.

Repairs would not involve diversion of the river or dewatering of the channel. The culvert would be lowered in place by a crane, which would be located on Old Hernandez Road and would not enter the wet channel. The County would install sandbags and other erosion-control devices (e.g., weed-free hay bales, coffer dams) during placement of the concrete mat and headwall footings along the edge of the wet channel and during any other work occurring adjacent to the river.

During construction activities, through-traffic on Old Hernandez Road would be routed around the project area via a temporary river crossing. The temporary crossing would be removed by October 15. The temporary crossing would be constructed of wood sills raised to the level of the top of the banks. The sills would be stabilized by temporarily adding fill within the area of the stream bank. Stringers would be placed across the wetted channel. No fill would be placed

within the wetted channel at any time. The fill would be removed at the time that the temporary crossing is removed. While the temporary crossing is being used, erosion control measures would be implemented to minimize sedimentation. Construction activities would not begin until May 15 and would be completed prior to the onset of the rainy season (October 15). After construction activities are completed, the County would hydroseed all bare upstream areas with a mix of native grasses and forbs.

The County proposes to implement the following measures to reduce adverse effects to California red-legged frogs and their habitat.

1. Immediately prior to any construction activities, a Service-approved biologist will perform pre-construction surveys for the presence of California red-legged frogs at the project site during the day and night. Nocturnal surveys will include the use of headlamps, flashlights, or spotlights to search for eye-shine. During the diurnal survey, the banks of the river will be searched from a distance with binoculars prior to moving into the area. Any California red-legged frog observed within the project site will be captured by hand or dipnet and moved to a Service-approved site downstream of the construction area. If bullfrogs (*R. catesbeiana*) are encountered during the surveys, they will be captured and permanently removed.
2. If California red-legged frogs are detected at the project site during pre-construction surveys, a qualified biologist will monitor activities to ensure that all protective measures are implemented and to temporarily halt construction activities to move and relocate any California red-legged frogs observed in the work area.
3. Any California red-legged frogs observed, captured, or relocated will be documented in a report to be submitted to the Service.
4. Exclusion fencing (e.g., silt fences) will be installed as appropriate to prevent California red-legged frogs from entering the work area.
5. A training session for all construction workers will be conducted prior to the onset of construction activities. At a minimum, the training will include a description of the California red-legged frog and its habitat, the importance of the habitat, the general measures to be implemented to conserve California red-legged frogs at the project site, and the boundaries of the project.
6. Prior to excavation or construction activities, the boundaries of the project area will be clearly delineated by flagging or other means to prevent workers or equipment from working outside of the right-of-way.
7. The number of access routes, number and size of staging areas, and total area of activity will be limited to the minimum necessary to complete the project. All construction

workers will be notified of the appropriate access routes, staging areas, and the total area of work activity. These areas will be clearly demarcated and will exclude riparian and wetland areas to the extent possible.

8. Well-anchored silt fences will be installed below the construction zones at each slipout site to contain soil from the construction zone before it reaches the San Benito River.
9. All construction materials and fill will be stored and contained in a designated area that is located away from channel areas to prevent inadvertent transport of materials into the adjacent river channel.
10. Fueling, cleaning, or maintenance of equipment will be prohibited except in designated areas located as far from the river as possible. In addition, the contractor will maintain adequate materials onsite for containment and cleanup of any spills.
11. Prior to the onset of work, a spill-response plan will be prepared to prevent contamination from accidental spills and workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur. Equipment will be fueled and staged within the right of way of Old Hernandez Road as far from the river as possible, preferably at least 75 feet.
12. Workers will not wash out concrete trucks on-site or where runoff from such activities could reach riparian vegetation or enter the creek.
13. To reduce the potential for attracting predators and opportunistic wildlife to the project area, all food-related trash items will be enclosed in sealed containers and removed regularly from the project areas. Following construction, all trash and construction debris will be removed from work areas.
14. Ground disturbance and vegetation removal will be limited during construction.
15. All construction activities will be restricted to daylight hours.
16. After construction and prior to October 15, all disturbed soils will undergo control treatment consisting of temporary seeding, straw mulch, or other measures pursuant to an approved erosion control plan.

STATUS OF THE SPECIES

The California red-legged frog was federally listed as threatened on May 23, 1996 (61 *Federal Register* 25813). The Service has published a recovery plan (Service 2002). Critical habitat for the California red-legged frog was designated on March 13, 2001 (66 *Federal Register* 14625). On November 6, 2002, the United States District Court for the District of Columbia set aside the

designation and ordered the Service to publish a new final rule with respect to the designation of critical habitat for the California red-legged frog (*Home Builders Association of Northern California et al. versus Gale A. Norton, Secretary of the Department of Interior et al.* Civil Action No. 01-1291 (RJL) U.S. District Court, District of Columbia).

Detailed information on the biology of California red-legged frogs can be found in Storer (1925), Stebbins (1985), and Jennings et al. (1992). This species is the largest native frog in the western United States, ranging from 1.5 to 5.1 inches in length. The abdomen and hind legs of adults are largely red; the back is characterized by small black flecks and larger irregular dark blotches with indistinct outlines on a brown, gray, olive, or reddish background color. Dorsal spots usually have light centers, and dorsolateral folds are prominent on the back. Tadpoles range from 0.6 to 3.1 inches in length and are dark brown and yellow with dark spots.

California red-legged frogs spend most of their lives in and near sheltered backwaters of ponds, marshes, springs, streams, and reservoirs. Deep pools with dense stands of overhanging willows and an intermixed fringe of cattails are considered optimal habitat. California red-legged frog eggs, larvae, transformed juveniles, and adults also have been found in ephemeral creeks and drainages and in ponds that do not have riparian vegetation. Accessibility to sheltering habitat is essential for the survival of California red-legged frogs within a watershed and can be a factor limiting population numbers and distribution. Individual California red-legged frogs are known to move long distances over land between water sources during winter rains.

California red-legged frogs breed from November through March, with earlier breeding records occurring in southern localities. California red-legged frogs are often prolific breeders, typically laying their eggs during or shortly after large rainfall events in late winter and early spring. Embryos hatch 6 to 14 days after fertilization and larvae require 3.5 to 7 months to metamorphose. Larvae probably experience the highest mortality rates of all life stages, with less than 1 percent of eggs laid reaching metamorphosis. Sexual maturity normally is reached at 3 to 4 years of age; California red-legged frogs may live 8 to 10 years. Juveniles have been observed to be active diurnally and nocturnally, whereas adults are mainly nocturnal.

The diet of California red-legged frogs is highly variable. Invertebrates are the most common food items, although vertebrates such as Pacific tree frogs (*Hyla regilla*) and California mice (*Peromyscus californicus*) can constitute over half of the prey mass eaten by larger frogs (Hayes and Tennant 1985). Larvae likely eat algae.

The California red-legged frog has been extirpated or nearly extirpated from 70 percent of its former range. Historically, this species was found throughout the Central Valley and Sierra Nevada foothills. At present, California red-legged frogs are known to occur in 243 streams or drainages from 22 counties, primarily in central coastal California. The most secure aggregations of California red-legged frogs are found in aquatic sites that support substantial riparian and aquatic vegetation and lack non-native predators. Over-harvesting, habitat loss, non-native species introduction, and urban encroachment are the primary factors that have negatively

affected the California red-legged frog throughout its range (Jennings and Hayes 1985, Hayes and Jennings 1988). Ongoing causes of decline include direct habitat loss due to stream alteration and disturbance to wetland areas, indirect effects of expanding urbanization, and competition or predation from non-native species.

ENVIRONMENTAL BASELINE

Mori (2001) conducted a reconnaissance-level survey of the project area on March 28, 2001. The landscape within 10 miles of the project site was cursorily surveyed by driving south and north from the site. The proposed project site is located in a rural, mountainous area of San Benito County. The project site lacks potential reproductive habitat for the California red-legged frog, due to high stream water velocity, lack of pools, and lack of suitable aquatic vegetation. Riparian vegetation was essentially absent approximately one mile upstream and downstream of the project site, due to scour and perhaps cattle grazing. Upland habitat adjacent to the project area includes sage scrub, oak woodland, and oak savannah, containing woody debris which could provide refuge for dispersing California red-legged frogs. California red-legged frogs are known to occur in the San Benito River (Service 2002), and a female California red-legged frog was observed in herbaceous cover approximately 2.0 miles downstream of the project site on July 9, 1999 (Mori 2001; Bryan Mori, personal communication with staff biologist Bill McIver, January 6, 2004). No other records are known within 5.0 miles of the site (California Department of Fish and Game 2002).

EFFECTS OF THE ACTION

California red-legged frogs within work areas could be injured or killed by earth-moving equipment, construction debris, and worker foot traffic. These effects would be reduced by minimizing and clearly demarcating the boundaries of the project area and equipment access routes, locating staging areas outside of riparian areas or other water bodies, and educating workers on California red-legged frogs and the protective measures to be implemented.

Uninformed workers may intentionally or unintentionally collect, injure, or kill California red-legged frogs. The potential for this effect would be reduced by informing workers of the presence and protected status of this species and the measures that are to be implemented to protect it during project activities.

Relocating California red-legged frogs out of harm's way may further reduce injury or mortality. However, mortality of California red-legged frogs may occur as a result of improper handling, containment, or transport of individuals or from releasing them into unsuitable habitat. Observations of diseased and parasite-infected amphibians are now frequently reported. This has given rise to concerns that releasing amphibians following a period of captivity, during which time they can pick up infections of disease agents, may cause an increased risk of mortality in wild populations. Amphibian pathogens and parasites can also be carried between habitats on the hands, footwear, or equipment of fieldworkers, which can spread them to localities

containing species which have had little or no prior contact with such pathogens or parasites. Use of a Service-approved biologist would reduce or prevent improper handling, containment, or transport of California red-legged frogs.

Trash left during or after project activities could attract predators to work sites, which could, in turn, disturb or prey on California red-legged frogs. For example, raccoons (*Procyon lotor*) are attracted to trash and also prey opportunistically on California red-legged frogs. This potential impact would be reduced or avoided by careful control and frequent removal of waste products at all work sites.

Accidental spills of hazardous materials or careless fueling or oiling of vehicles or equipment could degrade aquatic or upland habitat to a degree where California red-legged frogs are injured or killed. The potential for this impact to occur will be reduced by thoroughly informing workers of the importance of preventing hazardous materials from entering the environment, locating staging and fueling areas a minimum of 75 feet from riparian areas or other water bodies, and by having an effective spill response plan in place.

Work in the river could cause unusually high levels of siltation downstream. Likewise, fill material that is stored too close to the river could wash or fall into the live channel, causing unusually high levels of siltation downstream. Siltation could smother eggs of the California red-legged frog and alter the quality of the habitat to the extent that use by individuals of the species is precluded. Conducting construction activities during the dry season, installing well-anchored silt fences to prevent soil from reaching the river, washing out concrete trucks off-site or where runoff from such activities could not reach the river, and storing and containing fill materials in a designated area located away from the river will likely reduce the amount of sediment that is washed downstream as a result of project activities.

The activities associated with the repair of the low-water crossing of the San Benito River at Old Hernandez Road would permanently remove 0.27 acre of riparian habitat at the location of the crossing, where no riparian vegetation and aquatic emergents are present. The repair activities would also disturb 0.56 acre of riparian and upland habitat for California red-legged frogs. Replanting all bare upstream areas and areas of temporarily disturbed soil with native grasses and forbs will provide sheltering habitat that could be available to dispersing frogs.

The repair activities could also kill or injure the female California red-legged frog observed downstream of the project area in 1999, if the frog still occurs in the vicinity of the project area. Utilization by the County of the minimization measures in the Description of the Proposed Action section would reduce effects to this frog or any other California red-legged frog that may occur in these areas during project activities.

Vehicles may strike and kill or injure California red-legged frogs attempting to cross Old Hernandez Road while dispersing. However, Old Hernandez Road is a seldom-used road with minimal through traffic, and the low-water crossing would not experience substantial use.

Because only a few California red-legged frogs are likely to be within the project area, we expect that some mortality or injury from vehicle strikes would not substantially affect the survival and recovery of California red-legged frogs.

This proposed action would affect a small number of California red-legged frogs, if any occur in the 0.56 acre that would be temporarily disturbed by construction activities. Because of the small size of the work area, the temporal nature of the project, the implementation of the project in the dry season, and the proposed protective measures, we anticipate that few, if any, California red-legged frogs are likely to be killed or injured during this work. The area to be disturbed by project-related activities constitutes a small portion of the available habitat within the San Benito River watershed. In addition, disturbed areas will be replanted with native grasses and forbs, which would benefit California red-legged frogs.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. We are unaware of any non-federal actions that are reasonably certain to occur in the action area.

CONCLUSION

After reviewing the current status of the California red-legged frog, the environmental baseline for the action area, the effects of the proposed culvert replacement and road repairs where Old Hernandez Road crosses the San Benito River, and the cumulative effects, the Service's biological opinion is that the proposed project is not likely to jeopardize the continued existence of the California red-legged frog. We base this conclusion on the following reasons:

1. Only 0.27 acre of riparian habitat would be permanently affected and only 0.56 acre of riparian and upland habitat would be temporarily affected by project activities.
2. Few, if any, California red-legged frogs are likely to be killed or injured during project activities.
3. FEMA and the County will implement several measures to reduce the adverse effects of the proposed project on the California red-legged frog.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to

engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary; FEMA must make them binding conditions of its funding to the County for the exemption in section 7(o)(2) to apply. FEMA has a continuing duty to regulate the activity covered by this incidental take statement. If FEMA fails to require the County to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the funding, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, FEMA or the County must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

We anticipate that few California red-legged frogs will be taken through injury or mortality during the culvert installation and road repair activities along Old Hernandez Road. Incidental take of the California red-legged frog will be difficult to detect because of its small body size and finding a dead or injured specimen is unlikely. If more than one individual is killed or injured for any reason, FEMA or the County must contact our office immediately so we can review the project activities to determine if additional protective measures are needed. Project activities may continue during this review period, provided that all protective measures proposed by FEMA and the County and the terms and conditions of this biological opinion have been and continue to be implemented.

REASONABLE AND PRUDENT MEASURES

The Service's evaluation of the effects of the proposed action includes consideration of the measures to minimize the adverse effects of the proposed culvert installation and road repairs project on the California red-legged frog that were developed by FEMA and the County and repeated in the Description of the Proposed Action portion of this biological opinion. Any subsequent changes in these measures proposed by FEMA or the County may constitute a modification of the proposed action and may warrant re-initiation of formal consultation, as specified at 50 CFR 402.16. The following reasonable and prudent measures are intended to clarify or supplement the protective measures that were proposed by FEMA and the County as part of the proposed action.

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of California red-legged frogs:

1. Only qualified biologists that we authorize must survey for, capture, and move California red-legged frogs from work sites.
2. FEMA and County must use well-defined operational procedures to minimize mortality of California red-legged frogs.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, FEMA must ensure that the County complies with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. The following terms and conditions implement reasonable and prudent measure 1.
 - a. Mark Allaback, Dana Bland, David Laabs and Bryan Mori are authorized to survey for, capture, and move California red-legged frogs from the work area. FEMA must condition its authorization to require the County to request our approval of any other biologist it wishes to employ to survey for, capture, and move California red-legged frogs from the work area. The request must be in writing and be received by the Service at least 15 days prior to any such activities being conducted.
 - b. A Service-approved biologist must survey the project site 48 hours before the onset of work activities. If any individuals of any life stage of the California red-legged frog are found and these individuals are likely to be killed or injured by work activities, the approved biologist must be allowed sufficient time to move them from the site before work activities begin. The Service-approved biologist will relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. The Service-approved biologist must maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the original point of capture.
 - c. Before project activities begin, the approved biologists must identify appropriate areas to receive relocated California red-legged frog adults and juveniles. These areas must be in proximity to the capture site, support suitable vegetation, and be free of exotic predatory species (e.g., bullfrogs) to the best of the approved biologists' knowledge.

- d. To avoid transferring disease or pathogens between aquatic habitats during the course of surveys and handling of California red-legged frogs, the Service-approved biologist must follow the Declining Amphibian Population Task Force's Code of Practice. A copy of this Code of Practice is enclosed. You may substitute a bleach solution (0.5 to 1.0 cup of bleach to 1.0 gallon of water) for the ethanol solution. Care must be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.

2. The following term and condition implements reasonable and prudent measure 2.

The County must inspect all heavy vehicles and equipment for fuel leaks, oil leaks, and other fluid leaks during their operation in or near the river channel.

REPORTING REQUIREMENTS

FEMA must provide a written report to the Service within 60 days of the completion of the work. The report must document the number of California red-legged frogs killed or injured by project activities. If California red-legged frogs were moved during work activities, the report must contain information on how many were moved and where and when the individuals were captured and released. We request that the report contain any recommendations on how future projects of this type can be conducted expeditiously while maintaining protection of the California red-legged frog.

DISPOSITION OF DEAD OR INJURED SPECIMENS

Within 3 days of locating any dead or injured California red-legged frogs, you must notify our office at (805) 644-1766 by telephone and in writing (2493 Portola Road, Suite B, Ventura, California 93003). The report shall include the date, time, location of the carcass, a photograph, cause of death, if known, and any other pertinent information.

Care must be taken in handling dead specimens to preserve biological material in the best possible state for later analysis. Should any injured California red-legged frogs survive, the Service must be contacted regarding their final disposition. The remains of California red-legged frogs must be placed with the California Academy of Sciences Herpetology Department (Contact: Jens Vindum, Collections Manager, California Academy of Sciences Herpetology Department, Golden Gate Park, San Francisco, California, 94118, (415) 750-7037). Arrangements regarding proper disposition of potential museum specimens must be made with the California Academy of Sciences by FEMA or the County prior to implementation of any actions.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species, or to help implement recovery plans, or to develop information.

1. We recommend that a Service-approved biologist permanently remove individuals of exotic species, such as crayfish (*Procambarus clarkii*) and centrarchid fishes from the project area, to the maximum extent possible. The Service-approved biologist should be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.
2. We recommend that FEMA or the County collect additional information on California red-legged frogs and San Joaquin kit foxes and their habitats elsewhere within the San Benito River watershed that would assist in future discussions and consultations with the Service regarding potential future projects. This could include mapping of habitat upstream and downstream of the project area (e.g., locations of potential breeding pools or foraging locations (for the frog) and possible den sites (for the fox)) or additional California red-legged frog nighttime surveys.
3. We recommend that FEMA and the County work with the Service in long-range planning of FEMA or County projects to meet conservation objectives for California red-legged frogs and San Joaquin kit foxes. For example, FEMA, the County, and the Service could develop a plan to use hazard mitigation funds for projects that would benefit California red-legged frogs and San Joaquin kit foxes.

The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats.

REINITIATION NOTICE

This concludes formal consultation on your proposed funding of a culvert replacement and road repairs where Old Hernandez Road crosses the San Benito River. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law), and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species

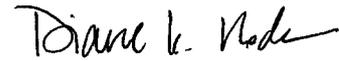
Alessandro Amaglio

13

not considered in this opinion; or (4) a new species is listed that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions, please contact Bill McIver of my staff at (805) 644-1766.

Sincerely,

A handwritten signature in black ink that reads "Diane K. Noda". The signature is written in a cursive style with a long horizontal stroke at the end.

Diane K. Noda
Field Supervisor

Enclosure

LITERATURE CITED

- California Department of Fish and Game. 2002. California Natural Diversity Database. Rarefind2 Program, Natural Heritage Division. Sacramento, California.
- Bryan Mori Biological Consulting Services. 2001. Old Hernandez Road California red-legged frog and San Joaquin kit fox assessment. Watsonville, California.
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- Jennings, M.R., M.P. Hayes, and D.C. Holland. 1992. A petition to the U.S. Fish and Wildlife Service to place the California red-legged frog (*Rana aurora draytonii*) and the western pond turtle (*Clemmys marmorata*) on the list of endangered and threatened wildlife and plants. 21 pp.
- Stebbins, R.C. 2003. A field guide to western reptiles and amphibians-third ed. Houghton Mifflin Company, Boston, Massachusetts. 514 pp.
- Storer, T.I. 1925. A synopsis of the amphibia of California. University of California Publications in Zoology 27:1-342.
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- U.S. Fish and Wildlife Service. 1999a. U.S. Fish and Wildlife Service standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance. Sacramento, California.
- U.S. Fish and Wildlife Service. 1999b. Recovery plan for the arroyo southwestern toad. Portland, Oregon.
- U.S. Fish and Wildlife Service. 2002. Recovery plan for the California red-legged frog (*Rana aurora draytonii*). Portland, Oregon.

The Declining Amphibian Populations Task Force Fieldwork Code of Practice

1. Remove mud, snails, algae, and other debris from nets, traps, boots, vehicle tires, and all other surfaces. Rinse cleaned items with sterilized (e.g., boiled or treated) water before leaving each work site.
2. Boots, nets, traps, and other types of equipment used in the aquatic environment should then be scrubbed with 70 percent ethanol solution and rinsed clean with sterilized water between study sites. Avoid cleaning equipment in the immediate vicinity of a pond, wetland, or riparian area.
3. In remote locations, clean all equipment with 70 percent ethanol or a bleach solution, and rinse with sterile water upon return to the lab or "base camp" Elsewhere, when washing-machine facilities are available, remove nets from poles and wash in a protective mesh laundry bag with bleach on the "delicates" cycle.
4. When working at sites with known or suspected disease problems, or when sampling populations of rare or isolated species, wear disposable gloves and change them between handling each animal. Dedicate sets of nets, boots, traps, and other equipment to each site being visited. Clean them as directed above and store separately at the end of each field day.
5. When amphibians are collected, ensure that animals from different sites are kept separately and take great care to avoid indirect contact (e.g., via handling, reuse of containers) between them or with other captive animals. Isolation from unsterilized plants or soils which have been taken from other sites is also essential. Always use disinfected and disposable husbandry equipment.
6. Examine collected amphibians for the presence of diseases and parasites soon after capture. Prior to their release or the release of any progeny, amphibians should be quarantined for a period and thoroughly screened for the presence of any potential disease agents.
7. Used cleaning materials and fluids should be disposed of safely and, if necessary, taken back to the lab for proper disposal. Used disposable gloves should be retained for safe disposal in sealed bags.

The Fieldwork Code of Practice has been produced by the Declining Amphibian Populations Task Force with valuable assistance from Begona Arano, Andrew Cunningham, Tom Langton, Jamie Reaser, and Stan Sessions.

For further information on this Code, or on the Declining Amphibian Populations Task Force, contact John Wilkinson, Biology Department, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK.

E-mail: DAPTF@open.ac.uk

Fax: +44 (0) 1908-654167



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

In Response Refer To:

May 21, 2003 151422SWR02SR6444:JMA

Mr. Sandro Amaglio, AIA
Regional Environmental Officer
Federal Emergency Management Agency
Region IX
1111 Broadway, Suite 1200
Oakland, California 94607

Dear Mr. Amaglio:

This letter acknowledges the May 1, 2003, receipt by the National Marine Fisheries Service (NOAA Fisheries) of your undated letter (File Number: FEMA-1203-DR-CA) requesting initiation of Section 7 consultation pursuant to the Endangered Species Act. The consultation concerns the possible effects from repair to a river crossing and structural upgrade of a box culvert crossing on the San Benito River, a tributary to the Pajaro River, on Old Hernandez Road in central San Benito County, California, to South-Central California Coast (S-CCC) Evolutionarily Significant Unit (ESU) steelhead trout (*Oncorhynchus mykiss*) by the San Benito County Public Works Department (SBCPWD).

The Old Hernandez Road stream crossing was damaged during a winter storm in 1998. The proposed action will include replacement of a 12 x 6-foot box culvert with a single 15.75-foot by 8-foot pre-fabricated bottomless arched culvert with headwall, armoring of the roadway embankment with 300-feet of articulated concrete mat, and armoring the downstream side of the roadway with rip rap.

Staff from NOAA Fisheries, California Office of Emergency Services, California Department of Fish and Game, and URS Corporation (consultants acting on behalf of the Federal Emergency Management Agency (FEMA)) conducted a site visit on September 30, 2002, and suggested revisions to the overall project design. These revisions were incorporated in a letter from NOAA Fisheries to FEMA on October 7, 2002, indicating the Biological Assessment, dated July 1, 2002, did not contain all of the information necessary to initiate consultation per 50 CFR 402.14. The URS Corporation conducted numerous telephone and email conversations with NOAA Fisheries biologists and engineers regarding upgrades to the initial proposed design to ensure minimal constraints to fish passage under a variety of anticipated flow events in the San Benito River. The revised crossing design now incorporates placement of a headwall placed on footings 2.7-feet below the channel bed and maintenance of a natural stream bottom.



The FEMA has requested NOAA Fisheries concurrence pursuant to 50 CFR 402.13 that the proposed project may affect, but is not likely to adversely affect, S-CCC ESU steelhead trout. Available information indicates the San Benito River may support populations of S-CCC ESU steelhead trout. Status of the steelhead fishery is unknown in the San Benito River watershed, however, smaller perennial tributaries upstream of the proposed crossing may support remnant populations of steelhead. The mainstem San Benito River which includes the project area, according to available information, does not support steelhead trout rearing habitat due to warm instream summer temperatures. Nonetheless, the project area serves as a migration corridor during the winter period (during periods of adequate flows) and therefore it is important the road crossing meet NOAA Fisheries' Stream Crossing Guidelines so migration opportunities are not impeded. To avoid or minimize impacts to this species FEMA has incorporated the following measures into the project:

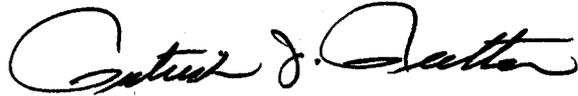
1. The pre-fabricated bottomless arch culvert will be lowered into place by a crane working from Old Hernandez Road. No equipment will enter the stream banks or drive off-road when placing the culvert.
2. Rip rap placement will occur only when the channel is dry. All work will occur from the stream banks, on Old Hernandez road.
3. The new culvert design will maintain existing river hydraulic conditions and will not worsen conditions for salmonids passage according to NOAA Fisheries' Fish Passage Guidelines (as of 2000). The proposed design does not comport to NOAA Fisheries' fish passage criteria for juvenile steelhead, however due to instream temperature conditions, juvenile rearing is not present in this portion of the San Benito River.
4. The culvert footings will be placed 2.7-feet below the channel bed in order to reduce scour.
5. Rip rap will be sized to withstand a 100 year flow event.
6. Rip rap will not be placed in the wetted channel along the upstream edges of the articulated concrete mat.

Based on the information available, I conclude that this project may affect but is not likely to adversely affect threatened S-CCC ESU steelhead. This concludes informal consultation for the project in accordance with 50 C.F.R. section 402.14(b)(1). However, if: (1) new information becomes available indicating steelhead trout may be adversely affected by the project in a manner not previously considered, (2) if the take avoidance and minimization measures listed above are not followed, or (3) if the project plans change, reinitiation of consultation will be required. In addition, at the onset and completion of construction activities it will necessary to inform Mr. Jonathan Ambrose, Protected Resources Division at (707) 575-6091 or via email at jonathan.ambrose@noaa.gov. **This concurrence letter does not authorize the capture,**

harassment, handling, or any other form of "take" of S-CCC ESU steelhead trout in the project area. Operations within the wetted low flow channel cannot occur before 15 June and must be terminated by 15 October of each calendar year of construction.

If you have any questions or comments regarding this letter, please contact Mr. Jonathan Ambrose at (707) 575-6091 or via email at jonathan.ambrose@noaa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Rodney R. McInnis". The signature is fluid and cursive, with a large initial "R" and "M".

Rodney R. McInnis
Acting Regional Administrator

cc: Jim Lecky, NOAA Fisheries
Christopher Barkley, URS Corporation, Oakland
Patricia Anderson, CDF&G, Monterey

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

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July 17, 2002

In reply refer to:
FEMA020624B

Sandro Amaglio, AIA
Regional Environmental Officer
Federal Emergency Management Agency
Region IX
1111 Broadway, Suite 1200
Oakland, CA 94607

RE: Old Hernandez Road, San Benito County; FEMA-1203-DR-CA

Dear Mr. Amaglio,

Thank you for requesting my comments on the Federal Emergency Management Agency's (FEMA) undertaking referenced above. This request is made in accordance with 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act.

You are requesting my concurrence that efforts to identify historic properties within the Area of Potential Effects (APE) for this project are complete and adequate and no historic properties will be affected by the undertaking. You also acknowledge that if any post-review discoveries are made, your agency will address those discoveries in accordance with 36 CFR 800.13(b).

Based on the information provided in your letter I concur that the undertaking's APE has been adequately delineated; that historic property identification efforts are satisfactory; and that efforts to involve interested parties, including Native Americans, are likewise satisfactory. I also concur with your finding that the subject undertaking would not affect historic properties. Accordingly, I concur that your efforts to address the requirements of 36 CFR Part 800 for this undertaking are satisfactory.

Your responsibilities under Section 106 will be complete once you have notified all consulting parties of the finding and make the documentation of it available to the public prior to the approval of the undertaking.

If you have any questions or comments, please contact Jennifer Darcangelo, Staff Archaeologist, at (916) 654-4614 or at jdarc@ohp.parks.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Knox Mellon".

Dr. Knox Mellon
State Historic Preservation Officer

