

INFORMATION HANDOUT

MATERIALS INFORMATION

REVISED FOUNDATION REPORT
FINAL HYDRAULICS REPORT
GEOTECHNICAL DESIGN REPORT FOR GEOSYNTHETIC REINFORCED
EMBANKMENT
WATER AVAILABILITY LETTER

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ROUTE: 11-SD-76-23.1/23.5

M e m o r a n d u m*Flex your power!
Be energy independent!*

To: MR. RAMIN RASHEDI
Division of Engineering Services
Office of Bridge Design South (OBDS)
Bridge Design Branch 11

Date: June 30, 2009

Attn: Mr. Daryoush Tavatli

File: 11-SD-76 - PM 23.2
Pala Creek Bridge (Replace)
Proposed Br# 57-1200
Existing Br# 57-0072
EA 11-273401

From: DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES
OFFICE OF GEOTECHNICAL DESIGN – SOUTH 2 (OGDS2)
DESIGN BRANCH B, MS #5

Subject: Revised Foundation Report (RFR)

The following RFR supersedes the original Foundation Report, dated November 6, 2008, for the proposed Pala Creek Bridge (Br. #57-1200). This RFR is in response to request by the OBDS for pile tip elevation recommendations for Wingwalls 1 & 2; and to include OBSD's updated data tables dated 4/22/09. The updated tables provide slight adjustments to the design load and pile cut-off elevations of the abutments, as reflected in Tables 4 thru 6 of this report.

The following RFR for the proposed replacement of the Pala Creek bridge is based on the OBSD's 4/22/09 data revisions to the draft General and Foundation Plans (dated 4/30/08 & 3/5/08 respectively) that were used for the original foundation report (dated 11/6/08). This report also relies on the field investigations performed in March of 2008, and review of the following limited As-Built plans and reports:

- 2 sheets of As-built plans titled "Bridge at Station 43+00 – California Federal Lands Highway" with a design date of March 1938.
- "Preliminary Seismic and Foundation Recommendations" (PS&FR) memo dated 4/27/05.
- "Bridge Scour Evaluation – Plan Of Action" (BSE-PA), dated 4/19/06.
- "Preliminary Foundation Report" (PFR) dated 11/6/07.
- "Bridge Inspection Report" (BIR) for the Pala Creek Bridge, dated 11/2/06.

Elevations referenced in this report are based on the NGVD 1988 vertical datum, unless noted otherwise.

Project Location / Description

OBDS proposes to replace the existing multi-span Pala Creek Bridge (57-0072), located on Route 76 in San Diego County, with a wider and longer one-span bridge (57-1200) to be supported on cast in drilled hole (CIDH) piles

The OBDS's draft General Plan (dated 4-30-08) indicates a proposed 141 ft long by 97 ft wide replacement bridge.

Geology

The geotechnical field investigation performed in March of 2008 consisted of 2 mud-rotary borings (R-08-001 and R-08-002) drilled with an Acker drill rig. The ground surface elevations for borings R-08-001 and R-08-002, drilled near the west and east abutments were respectively at 385.7 and 386.0 ft. The maximum depth of the investigation was 100 feet (elevation 285.7.0 feet) below the existing ground surface.

Boring R-08-001 reveals about 50 ft (to elev. 335 ft) of fill and alluvial soil deposits (Silty Sand, Silt, Gravel, and occasional Cobble size fragments). The upper 35 ft (to elev. 350 ft) is generally loose to very loose with intermittent medium dense zones. The lower 15 ft (to elev. 335 ft) is dense to very dense.

In boring R-08-001, the soil is underlain by layers of granitic rock to the maximum explored depth of 100 ft. The upper 40 ft of the rock (to elev. 295 ft) varies from very soft (decomposed to soil) to medium hard. The rock varies from hard to moderately soft for about the next 7 ft (elev. 288 ft) before becoming soft to very soft for about the last 2 ft, to the maximum explored depth (elev. 285.7 ft).

Boring R-08-002 reveals about 55 ft (elev. 331 ft) of fill and alluvial soil deposits. The soil is mostly Sand, Silty Sand, Gravel, and occasional Cobbles size fragments. An 8 ft layer of soft to very-soft Clayey Sand and Clay, and very loose Silt, is interbedded between the depths of about 22 to 30 ft (elev. 351 to 364 ft). The upper 22 ft (to elev. 351 ft) is loose to medium dense. The lower 20 ft of the soil (lying below the clay and silty layers down to elev. 331 ft) is very dense.

In boring R-08-002, the soil is underlain by layers of granitic rock to the maximum explored depth of 100 ft. The upper 35 ft of rock (to elev. 296 ft) varies from soft (decomposed to soil) to medium hard. The rock becomes moderately hard to hard for about the last 10 ft, to the maximum explored depth (elev. 286 ft). For further details please refer to the log of test boring (LOTB) sheets.

The lab results reflecting the approximate Unconfined Compression Test results for some of the testable rock samples for the 2 drilled borings are shown below in Table 1.

Table 1 – Unconfined Compression Test Summary

Boring	Sample Depth / Elev. (ft)	Unconfined Compressive Strength (tsf)
R-08-001	94-95 / 291.7-290.7	66
R-08-001	97-98 / 288.7-287.7	101
R-08-002	77-78 / 309.0-308.0	2
R-08-002	83-84 / 303.0-302.0	3
R-08-002	87-87.5 / 299.0-298.5	6
R-08-002	93.5-94 / 292.5-292.0	118
R-08-002	97-98 / 289.0-288.0	248

Please refer to the LOTB for R-08-001 and R-08-002, and the 2008 lab results for more details. No As-Built LOTB sheets were found for the existing Pala Creek Bridge (Br# 57-0072).

Groundwater

Groundwater was measured at elevation 364.2 ft (depth of 21.8 ft) on May 21, 2008 in boring R-08-002. No attempt was made to measure groundwater in boring R-08-001. Groundwater surface elevations are subject to seasonal fluctuations and may occur higher or lower depending on the conditions and time of construction. For more details, please refer to the LOTB sheets.

Scour

The following information is based on the BSE-PA report by the Office of Structure Maintenance and Investigations (SM&I), dated 4/19/06. The report identified a channel degradation of over 13 ft at the bridge site, since its 1938 construction. About 5 ft of this total degradation occurred during the rainstorms of December 2004 and January 2005. Although no significant local scour was noted at the columns, 5 ft high vertical bank cuts were observed on both sides of the channel. Rock Slope Protection (RSP) had failed on both sides of the bank due to undermining. Channel degradation had reduced the total embedment of the existing piles, negatively affecting their load carrying capacity and lateral stability.

According to information provided by OBDS the long term scour (Degradation and Contraction) at both abutments is around elevation 374 ft (please refer to Table 4, provided further in this report).

Corrosion

Corrosion test results for soil samples collected from borings R-08-001 and R-08-002 are shown below in Table 2. All of the soil samples tested are considered non-corrosive by current Caltrans standards.

Table2 – Corrosion Test Summary

Location	SIC Number	pH	Minimum Resistivity (Ohm-Cm)	Sulfate Content (ppm)	Chloride Content (ppm)
Boring R-08-001 (Elev. 378 to 328 ft.)	C639751	7.00	6,454	N/A	N/A
Boring R-08-002 (Elev. 378 to 352 ft.)	C639752	7.16	5,993	N/A	N/A

Note: For structural elements Caltrans considers a site to be corrosive if the resistivity is less than 1000 ohm-cm and one or more of the following conditions exist: The pH is 5.5 or less, chloride concentration is 500 ppm or greater, or sulfate concentration is 2000 ppm or greater.

Seismic Data Evaluation

The 1996 Caltrans’ California Seismic Hazard Map shows the controlling fault as the Whittier-Elsinore (WEE) Strike-Slip type fault, with a maximum credible earthquake (MCE) of moment magnitude (M_w) 7.5, located about 3.1 miles east of the site.

Using the attenuation equation of Sadigh (1997), the horizontal Peak Bedrock Acceleration (PBA) and Peak Ground Acceleration (PGA) at this site from the WEE fault are estimated to be about 0.6g. The site is not considered prone to surface rupture due to fault movement since there are no known faults projecting towards or passing through the project site.

Recommended ARS

The soil profile at this site is classified as Type D as defined in Table B.1 of the Caltrans Seismic Design Criteria (SDC, 2006). The recommended ARS was obtained by modifying the ARS shown in Figure B.8 of the SDC, corresponding to a PBA of 0.6g. The modifications included a 20 percent increase in the spectral acceleration for structures within 10 miles of an active fault for periods $T > 1.0$ seconds. No modification was performed for periods $T < 0.5$ seconds. A linear interpolation was used to obtain spectral acceleration for $0.5 < T < 1.0$ seconds. The recommended Acceleration Response Spectrum (ARS) is attached as Figure 1.

Liquefaction Potential Evaluation

Soil liquefaction is a phenomenon that may occur due to earthquake induced ground vibration of relatively loose saturated sandy layers. During the 2008 field exploration, layers of relatively loose sandy soil were encountered down to a depth of 35 feet, while groundwater was encountered at depth of less than 22 ft. Therefore the potential for liquefaction is high for the loose sandy layers found from elevations of approximately 360 ft to 350 ft. Because of the static shear stresses caused by the weight of the creek banks and approach embankments, shear stress reduction in the loose sand due to liquefaction may result in permanent ground displacement of the river banks primarily directed towards the center of the creek (commonly referred to as lateral spreading).

Seismically induced total settlement of the liquefiable soil is expected to be about 9 inches, with a potential differential settlement of about 4.5 to 6 inches. The down-drag load produced by liquefaction does not appear significant and has been considered in the design.

As-Built Foundation Data

According to the 2006 BIR, the existing bridge is a continuous 7 span concrete slab bridge, with open-end diaphragm abutments and 5 column bents, all supported on driven concrete piles. The information contained in the 1938 As-Built plans, infer that the existing pile tip elevations are around 341 ft (roughly 33 ft below the original creek bed).

Foundation Recommendations

The foundation recommendations shown in Table 3 for the Cast-In-Drilled-Hole (CIDH) piles are based on OBDS's latest revised data, dated 4/22/09 (as reflected in Tables 4 thru 6).

Axial Capacity:

Table 3 - Abutments 1 and 2 & Wingwalls 1 & 2 - CIDH Pile Data (Axial Capacity)

Location	Pile Type	Pile Cut-off Elevation (ft)	LRFD Service-I Limit State Load per Support (kips)		LRFD Service-I Limit State Total Load per pile (Compression) (kips)	Nominal Resistance (q _n) (kips)	Design Tip Elevation ⁽¹⁾ (ft)	Specified Tip Elevation (ft)
			Total	Permanant				
Abut 1	48" CIDH	372.25	3,660	2,685	915	1,830	292.0 (a)	292.0
Abut 2	48" CIDH	372.40	3,660	2,685	915	1,830	292.0 (a)	292.0
Wingwall 1	24" CIDH	381.40	NA	NA	20	40	365.0 (a)	365.0
Wingwall 2	24" CIDH	381.65	NA	NA	20	40	365.0 (a)	365.0

Notes:

(1) - Design tip elevations are controlled by: (a) Compression.

Lateral Capacity:

Estimates of the lateral capacities of the proposed piles were developed using LPILE 5.0 for pinned head condition and are presented in Figure 2 for 48-inch CIDH piles. Structural integrity of the piles needs to be checked separately.

P-Y, T-Z and Q-Z Curves:

At both abutments lateral load versus displacement curves (P-Y curves), vertical load versus tip deflection curves (T-Z curves), and tip load versus tip deflection curves (Q-Z curves) were developed as input into the W-Frame Pushover Analysis of the proposed replacement bridge. P-Y curves were developed using the LPILE computer program. The computer program generated

internally these curves using Matlock (1970) for clayey and liquefiable soils and using Reese (1997) for sandy soils and weak rock. The T-Z and Q-Z curves were developed using the approach from Reese and O'Neil (1987). The P-Y, T-Y, Q-Z curves are presented as attachments, in both table and figure formats.

OBDS Data Tables 4 thru 6 (for the 48" CIDH piles)

Table 4 - Scour Data

Support No.	Long Term (Degradation and Contraction) Scour Elevation (ft)	Short Term (Local) Scour Depth (ft)
Abut 1	374	NA
Abut 2	374	NA

Table 5 - General Foundation Information

Support No.	Design Method	Pile Type	Finished Grade Elev. (ft)	Cut-off Elevation (ft)	Pile Cap Size (ft)		Permissible Settlement under Service Load (in)*	Number of Piles per Support
					B	L		
Abut 1	WSD	48" CIDH	376.2	372.25	NA	NA	2"	4
Abut 2	WSD	48" CIDH	376.4	372.40	NA	NA	2"	4

* Finished Grade Elevation is 3 ft below soffit.

* Based on CALTRANS' current practice, the total permissible settlement is one inch for structures with continuous spans or multi-column bents, and two inches for simple span structures.

Table 6 - Design Loads

Foundation Design Loads							
Support No.	Service-I Limit State (kips)			Strength Limit State (Controlling Group, kips)			
	Total Load		Permanent Loads	Compression		Tension	
	Per Support	Max. Per Pile		Per Support	Max. Per Pile	Per Support	Max. Per Pile
Abut 1	3,660	915	2,685	N/A	N/A	N/A	N/A
Abut 2	3,660	915	2,685	N/A	N/A	N/A	N/A

General Notes:

1. All support locations are to be plotted in plan view on the Log of Test Borings as stated in "Memo to Designers" 4-2. The plotting of support locations should be made prior to requesting a final foundation review.

Construction Notes:

1. The District engineer shall specify in the special provisions the requirements of Tunnel Safety Orders, for the Type II pile shaft work that meets the definition of a tunnel or shaft as described in the Highway Design Manual, Section 110.12 "Tunnel Safety Orders."
2. The CIH piles shall be constructed in accordance with Section 49-4, Cast-In-Place Concrete Piles, of the Standard Specifications, May, 2006.
3. Caving conditions may be encountered during CIDH pile construction due to the presence of very loose granular materials as discussed in the geology section of this report and shown in the 2008 LOTB sheet. Temporary casing may be necessary to control caving during construction. All temporary casing shall be removed during concrete placement.
4. Difficulties may be encountered attempting to drill thru the harder layer of rock starting from about elevation 295 ft. Rock cores drilled during the 2008 subsurface investigation are available for viewing at the Caltrans' Translab facilities located in Sacramento.
5. Groundwater was encountered during the 2008 field investigation and it is likely that the contractor will encounter groundwater during CIDH pile construction. Need for drilling slurry to stabilize the sides and the bottom of the excavation during construction should be anticipated.
6. Surface water may be encountered depending on the conditions at the time of construction. Also groundwater level indicated earlier in this report and on the LOTB reflects the measured groundwater level at the time of the Caltrans investigation. At the time of construction, the groundwater surface elevations may be significantly higher or lower than those shown on the LOTB due to seasonal fluctuations.
7. Although the 2008 field investigations did not yield a clast sample that can be considered a boulder (larger than 12 inches), boulders may be encountered during construction due to the following reasons. Boulders were observed along Pala Creek's banks around the proposed bridge location, and the length of retrieved samples may not completely reflect the size of the in-situ clasts.

The recommendations contained in this report are based on specific project information regarding structure type, location, and design loads that have been provided by the Office of Bridge Design. If any conceptual changes are made during final project design, OGDS2 should review those changes to determine if these foundation recommendations are still applicable.

MR. RAMIN RASHEDI
June 30, 2009
Page 8

Pala Creek Bridge (Replace)
Proposed Br# 57-1200
EA 11-273401

Any questions regarding the above recommendations should be directed to the attention of Farzad Qmehr, (916) 227-4519, or Angel Perez-Cobo, (916) 227-7167, TTY 711, at the Office of Geotechnical Design-South 2, Branch B.

Prepared by: Date: 6-30-09

Supervised by: Date: 6.30.09



Farzad Qmehr
Transportation Engineer
Office of Geotechnical Design-South II
Design Branch A

Angel Perez-Cobo
Senior Transportation Engineer
Office of Geotechnical Design-South II
Design Branch A

Attachments

cc: Angel Perez-Cobo -- OGDS-II
Project File-North and Project File-South

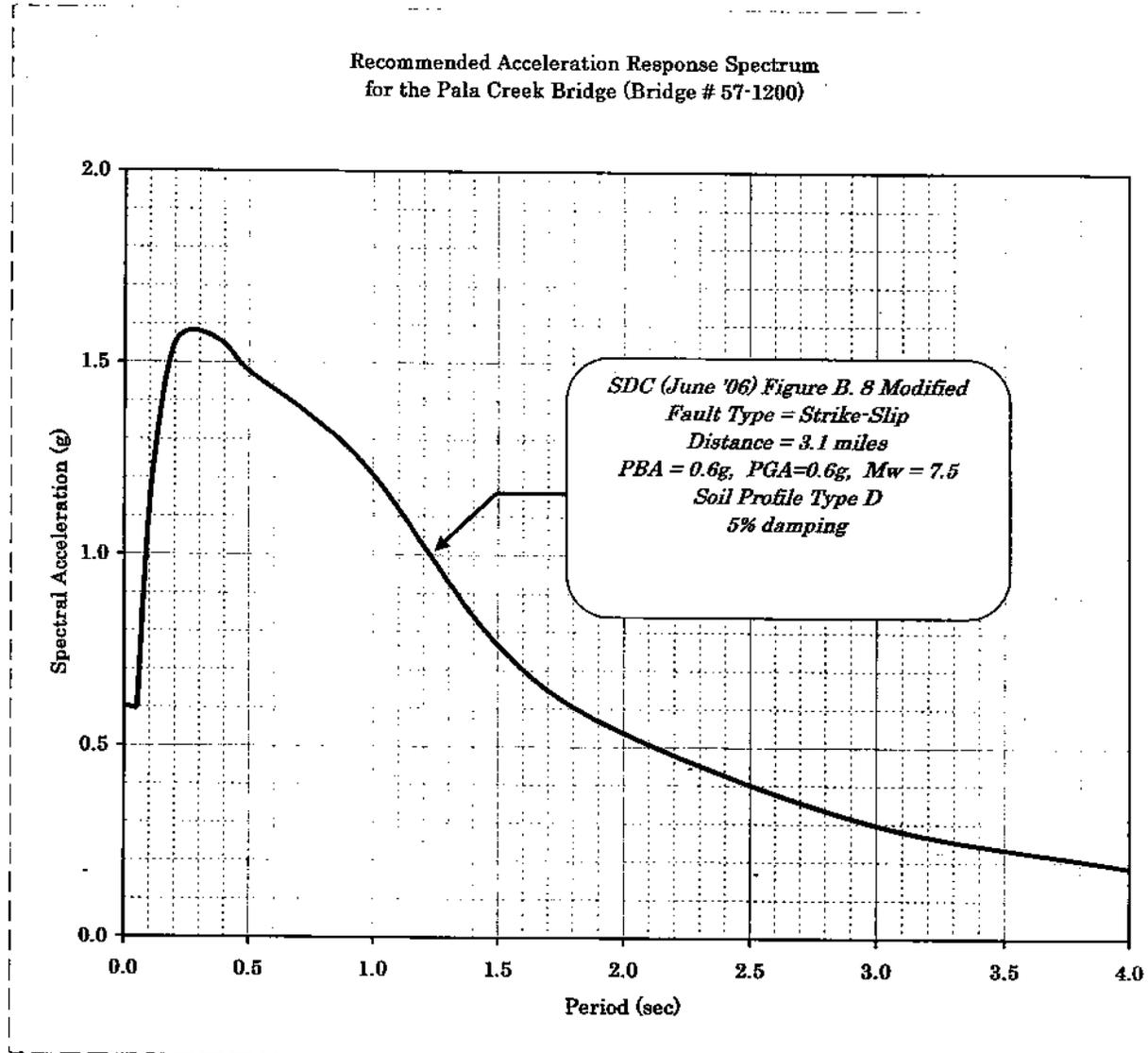


Figure 1 (ARS Curve)

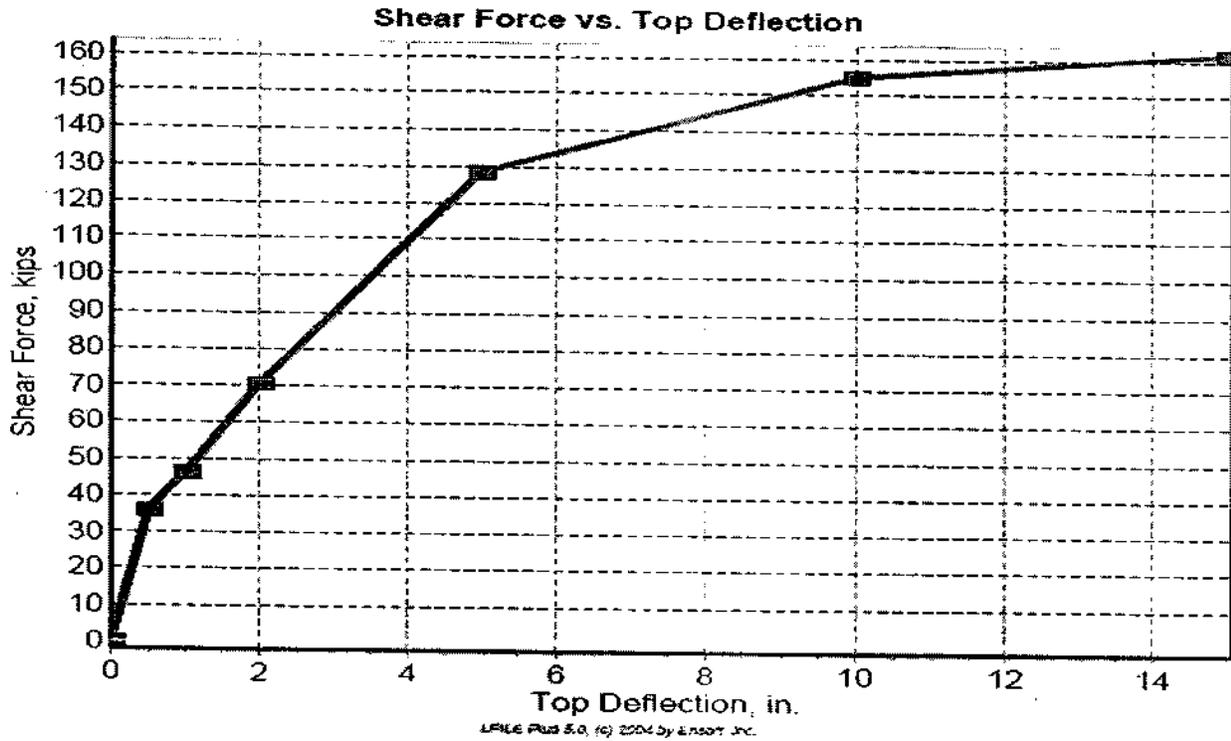


Figure 2 (48" CIDH)

Memorandum

To: RAMIN RASHEDI
Bridge Design Branch 11
Office of Bridge Design Services
Structures Design

Date: February 5, 2008

File: 11-SD-76-23.23
Pala Creek Bridge
Br. No. 57-0072
11-273401

From: SHARON B. ROPP, P.E. *SBR*
Hydraulic/Hydrology Engineer
Structures Hydraulics and Hydrology
Office of Design and Technical Services
DIVISION OF ENGINEERING SERVICES

Subject: Final Hydraulics Report for Pala Creek Bridge

The Final Hydraulic Report for the above referenced bridge is attached for your records.

If you have any questions or need any further assistance with this project, please contact me at 227-9470.

State of California Department of Transportation

Structure Hydraulics

DIVISION OF STRUCTURES FINAL HYDRAULIC REPORT

Pala Creek

Located West of the Town of Pala
on State Route 76 over Pala Creek in San Diego County

JOB:

Bridge No. 52-0072 Bridge Replacement

LOCATION:

11-SD-76-23.23

WRITTEN BY:

Sharon Ropp

DATE:

February 5, 2008

REVIEWED BY:

Ronald McGaugh

DATE:

February 5, 2008

Hydrology/Hydraulics Report

General:

It is proposed to replace the existing structure at Pala Creek (Br. No. 57-0072); located on route 76 in San Diego County, west of the town of Pala. According to the General Plan dated October 3, 2007, this project consists of a single span, cast-in-place, pre-stressed box girder bridge. The abutments will be seat type abutments on pile foundations. The new structure will be approximately 141 feet long and 83 feet wide.

The existing structure was constructed in 1938 as a 7 span continuous structure with cantilever ends. It is a reinforced concrete haunch slab with reinforced concrete open-end diaphragm abutments and five column bents, all founded on concrete piles. The existing structure is 122 feet long and 33 feet wide.ⁱ

Basin:

Pala Creek begins at approximately 2360 feet elevation in the Cleveland National Forest. It runs from the Pechanga Indian Reservation into the Pala Indian Reservation. The creek runs parallel to Interstate 15 in San Diego County until it eventually crosses under Route 76 at approximately 380 feet elevation. Just south of Route 76, Pala Creek drains into the San Luis Rey River at approximately 350 feet elevation. The watershed area above this structure is approximately 8.94 square miles.ⁱⁱ

Streambed:

According to the Preliminary Foundation Report, dated April 27, 2005, there were two borings drilled in February 2005, one adjacent to each of the abutments. The ground surface elevations of the borehole locations were 377 feet and 384 feet. The boreholes extended to depths of about 80 and 95 feet below the ground surface, to elevations 297 feet and 289 feet respectively. According to these borings the subsurface materials at this site consist of about 6 ½ feet of sandy fill followed by 30 to 40 feet of recent alluvium deposits, consisting of loose to medium dense sand with lenses of stiff silty clay. Decomposed cobbles in a sandy matrix were detected at a depth of about 33 to 40 feet. This layer is underlain by 16 ½ to 30 feet of older alluvium deposits, consisting of dense to very dense sand, silty sand, clayey sand and sandy gravel. Bedrock was encountered underlying the older alluvium deposits. Although subsurface water was not encountered during the subsurface investigations, it is expected to be very close to the bottom of the creek or at about elevation 367 feet. All earth materials at this site are susceptible to scour to the top of bedrock. The stream channel is relatively clear of vegetation. The banks upstream and downstream of the structures are vegetated with grasses, shrubs and trees.

Discharge:

The design 50-year and 100-year discharges for the proposed structure are approximately 4090 cfs (cubic feet per second) and 5850 cfs respectively. This was calculated using the basin transfer method with comparing gauged flow from nearby Sandia Creek.

Stage:

The 100-year discharge was modeled through the proposed bridge site using the Army Corps Hydraulic Engineering (HEC RAS) version 3.1.3 hydraulic modeling program. The average velocity and water surface elevation for the new structure are listed below. A manning's roughness coefficient of 0.045 was used in the channel.

<i>NEW PALA CREEK BRIDGE</i>	
Average Velocity (upstream of bridge)	8.37 ft/s
Water Surface Elevation ⁱⁱⁱ	376 feet

Scour:

The existing bridge is considered Scour Critical. The bridge foundations have been determined to be unstable for the calculated scour conditions. There is no existing information about the As-Built pile tip elevation nor an original Log of Test Borings. Soil borings at both ends of the bridge were completed in 2005 and testing was done to attempt to determine pile lengths. These tests were inconclusive, but using As-Built pay quantities and the acquired soils data, it was determined that the average pile length is approximately 35 feet long, with an estimated pile tip elevation of 347 feet. At this length, the piles are laterally stable, but the potential local scour of 5.43 feet would cause the piles to fail in bearing load.

This channel has degraded over 14 feet since the bridge was constructed in 1938. Approximately 4½ feet of this degradation occurred during the storms of December 2004 and January 2005. During these storms, an inactive mining pit approximately 1200 feet downstream was filled with sediment when a diversion levee was breached and the flows from Pala Creek and the San Luis Rey River returned to the channel bed that had historically run through the gravel mining site. The result at the bridge was a significant reduction in pile embedment at Bents 3, 4 and 5. Also, the bank erosion that resulted in the degradation resulted in partial undermining of the cantilevered abutment at the west end of the bridge.

Under the current channel conditions the projected pier scour for this structure during a 100-year storm event is estimated to be approximately 5.43 feet deep. This scour depth was calculated assuming that there is no natural armoring in the channel from the existing rock. Assuming the possibility of channel migration between Piers 4 and 5, the scour elevation would be to approximately 355.3 feet elevation. Assuming no channel migration with Piers 3 and 6, the approximate scour elevation would be to elevations 360.5 and 365.6 feet respectively.

The new structure is currently proposed to be a single span structure, so there isn't a concern for potential pier scour. District Hydraulics should be consulted to determine the need for rock slope protection (RSP) to protect the roadway.

Debris:

Debris has been noted at this structure in the past. Large branches and uprooted trees have collected at the site periodically but it does not appear to be a perennial problem. Debris was not factored into the scour calculation. The new structure should be designed to have a minimum of three feet of freeboard between the 50-year flood elevation and the soffit elevation to pass any potential debris under the structure during high flows.

Summary Information for Designers:

<i>HYDROLOGIC / HYDRAULIC DATA SUMMARY</i>		
	Design Flood	Base Flood
Frequency	50 yrs	100 yrs
Discharge	4090 cfs	5850 cfs
Water Surface Elevation w/ New Bridge ⁱⁱⁱ	374 ft	376 ft
Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements.		
The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation. Addendums may be necessary as Foundation Reports are completed.		

Proposed Bridge Length	141 ft
Minimum Soffit Elevation ⁱⁱⁱ	377 ft
Average Upstream Velocity	8.37 ft/s

This report has been prepared under my direction as the professional engineer in responsible charge of the work, in accordance with the provisions of the Professional Engineers Act of the State of California.

Sharon Bertozzi Ropp
 REGISTERED CIVIL ENGINEER SIGNATURE

REGISTRATION NUMBER: 65602 DATE: Feb 5, 2008



References:

ⁱ Bridge Inspection Report - Br. No. 57-0072 - November 2, 2006.

ⁱⁱ The following USGS quadrangles were used in determining the basin information: Pala and Pechanga

ⁱⁱⁱ These elevations are based on the NAVD 88 datum.

Memorandum

To: Mr. Bruce Lambert
District 11
Senior Transportation Engineer

Date: December 15, 2009

File: 11-SD-76-(PM) 23.2
Pala GRE
EA 11-273401

From: **DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Geotechnical Services
Office of Geotechnical Design – South 2**

Subject: Geotechnical Design Report for the Construction of Geosynthetic Reinforced Embankment.

Pursuant to your request, the Office of Geotechnical Design-South 2 (OGDS2) has prepared the following Geotechnical Design Report (GDR) for Geosynthetic Reinforced Embankment (GRE) to be constructed on the north of and parallel to State Route 76 (SR-76) both east and west of the proposed new Pala Creek Bridge (BR 57-1200). This report is provided to support an unanticipated design modification needed to facilitate construction of the new Pala Creek Bridge. This report is provided as an adjunct to the Bridge Foundation Report (FR) for the Pala Creek Bridge dated November 6, 2008 prepared by Farzad Omher for the Office of Bridge Design South. This report defines geotechnical conditions as evaluated from field test data and used in the development of the geotechnical design. This GDR provides recommendations and specifications for project design and construction. Geotechnical information not presented within the following report may be found in the Bridge Foundation Report.

OGDS2 staff is available for further assistance. Should you have any questions or comments regarding this report, please contact Jeff Kermode, at (858) 467-4062 or Zia Yazdani at (858) 467-4054.

Jeff Kermode
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Office of Geotechnical Design - South 2

Zia Yazdani
Associate Materials and Research Engineer
Office of Geotechnical Design - South 2

cc: Abbas Abghari
Brian Hinman
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- Figure 2: Geologic Map
- Figure 3: Typical Cross Section

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- APPENDIX A Trench Logs
- APPENDIX B Soil Probe Correlation To SPT “N” Values

1.0 INTRODUCTION

This report has been prepared by the Office of Geotechnical Design-South 2 (OGDS2) to address the geotechnical design considerations for the construction of two Geosynthetic Reinforced Embankments (GRE) embankments to be constructed along State Route 76 at Post Mile 23.2 located on the Pala Indian Reservation in San Diego County, California, and is hereafter referred to as the project; a location map is provided as Figure 1. The GRE embankments are being implemented upon recommendation of OGDS2 and will be used in lieu of two Type 5 retaining walls that had been proposed for this site. OGDS2 recommended that the GRE option be used in lieu of the retaining walls on spread footings because the subsurface conditions are not conducive for use of Standard Plan retaining structures on spread footings. Additionally the depths to competent strata render deep foundations for a 7 foot high retaining wall impractical.

The geotechnical investigation for this project included: site reconnaissance, research of archived resources, subsurface exploration, and data analysis.

The purpose of this report is to document subsurface geotechnical conditions, provide analyses of anticipated site conditions as they pertain to the project described herein, and to recommend design and construction criteria for the roadway portions of the project. This report also establishes a geotechnical baseline to be used in assessing the existence and scope of changed site conditions.

This report is intended for use by; the project design engineer, construction personnel, bidders and contractors.

2.0 EXISTING FACILITIES AND PROPOSED IMPROVEMENT

At the project site, SR-76 is comprised of an elevated two lane undivided rural highway with paved shoulders of variable width ranging up to 2 feet. The highway is founded upon embankment. Existing embankments vary up to 10 feet in height and exhibit side-slope ratios of 2 horizontal to 1 vertical (2:1) or flatter. At this location SR 76 crosses over Pala creek on Pala Creek Bridge, BR 57-0072; a multi-span structure supporting two traffic lanes and no shoulders.

The purpose of the project is to replace the existing Pala Creek Bridge with a longer and wider single span structure. To facilitate bridge replacement, the highway's alignment will be moved northward. The highway Right-of-Way (R/W) on this project is tightly constrained, especially to the north of the existing highway. Between station interval 40+80 + to 42+10 and between station interval 44+19 to 45+80, the R/W limits preclude the use of standard embankment slopes. In order to keep the proposed project footprint within the bounds of the existing R/W agreements either retaining structures or alternative design embankments (such as GRE) are needed along these intervals. The foundation soils found along the referenced interval, in their present condition, are not competent enough to support a Standard Plan retaining wall constructed on a spread footing without excessive settlement or overturning. Either deep foundations for retaining walls or an alternative design will be needed at this site to keep embankment footprints within the bounds of the current R/W agreement.

3.0 PERTINENT REPORTS AND INVESTIGATIONS

Caltrans Office of Geotechnical Design South 2: Foundation Report Pala Creek Bridge (Replace). November 6, 2008.

4.0 PHYSICAL SETTING

The following section describes the physical setting of the project including: topography and drainage; man-made and natural features of engineering and construction significance; regional geology and seismicity.

4.1 Topography & Drainage

The project is located within the interior upland physiomorphic province, which is comprised of intermediate canyons and low hills. The project site is situated within the 100 year Flood Plain of the San Luis Rey River at its confluence with Pala and Trujillo creeks. Local drainage patterns are braided where undisturbed (natural) ground occurs and are channelized/directed at the locations of previous site improvements.

Relief in the vicinity of the project site is comprised of flat lying floodplain interspersed with stair-stepped minor risers and terraces typical to a braided river environment. The project site is bounded on the north and on the south by high relief rugged hills that define the San Luis Rey River valley.

The site has been previously graded and portions of the grading have been engineered. Drainage at the project site is predominately by sheet flow toward localized rills and engineered swales. Runoff is directed and flows parallel to the existing alignment toward Pala Creek, which crosses SR-76 at the subject bridge.

4.2 Regional Geology and Seismicity

The project site is in the Peninsular Ranges Geomorphic Province of California. This province is comprised predominately of Mesozoic aged crystalline rock. The rock that defines this province typically manifests as dissected mountainous terrain with some marginal sediment filled basins.

The region containing the project is a seismically active. Numerous active faults occur regionally; however no active faults are known to cross the project. The bridge Foundation Report (FR, November, 2008) indicates that the Whittier-Elsinore Fault is the controlling active Fault for the project site and that this fault occurs 3.1 miles east of the project site.

5.0 EXPLORATION

The subsurface investigation methods used at this site include soil probe soundings, hand auger holes, backhoe trenching, and refraction seismic profiling. Soils exposed by excavations were logged and classified in conformance with the 2007 edition of the Caltrans Soils and Rock Logging, Classification, and Presentation Manual. Locations of auger holes, geotechnical trenches, soil probes, and the refraction seismic line are indicated on the Geologic Map, which is included as Figure 2. Due to the tight project schedule the development of geotechnical borings was not feasible.

5.1 Subsurface Investigation and Sampling

The number and type of each investigative method used is provided in Table 1 below.

Table 1 Summary of excavation methods used at each GRE site LOL.

METHOD	WESTERN GRE	EASTERN GRE
	Number Developed/Depth	Number Developed/Depth
SOIL PROBE	0	1/16
HAND AUGER	2/<13 ft	3/<13
TRENCH	1/10	1/10
Refraction Seismic Line	1	0

Hand auger holes were completed with a 3-inch diameter bucket auger. The auger holes were developed to the depth of refusal, which occurred whenever gravels and cobbles were encountered. Surface and subsurface soils were so loose that it was difficult to keep auger holes open.

Soil Probes are comprised of driving 1-inch diameter segmental steel rods into the ground with a 25-pound slide hammer. The number of blows required to advance the probe 1-foot is recorded for every foot of advance. Soil probe soundings were terminated at 16 feet depth, which is greater than twice the height of the previously proposed retaining walls and embankments.

Geotechnical Trenches were excavated with a John Deere Excavator equipped with a 3 foot wide bucket. Trenches were excavated to a depth of approximately 11 feet. Trench wall collapse limited the depth of these excavations. Even when walls were laid back to a slope ratio of 1.5:1 (H:V) soil from the side walls continued to flow into the trenches and prevented achieving additional depth with continued digging.

5.2 Geologic Mapping

The USGS Geologic Map of the Pala 7.5 Minute Quadrangle was used for preliminary geologic site characterization. A project Scale geologic map was developed by field mapping of geotechnical materials evident at the project site and is provided as Figure 2.

5.3 Geophysical Studies

One seismic refraction line was developed along the Lay Out Line (LOL) of the western-most GRE. An EGG&G 1225 12-channel seismograph was used to record vibrations from an array of 12 geophones. The separation between these geophones and the energy source was 11 feet. A twelve-pound sledgehammer was used as an energy source. The effective depth of this investigation was about 44 feet.

A reasonably clear signal was received on all geophones and the resulting data was resolved by use of an Excel spreadsheet and by Mulli 4, a Seismic Refraction Interpretation application. Resolution of field data generated a three-layer pressure-wave velocity profile. The interpreted velocities were 700 ft/sec (fps), 1000 fps, and 1300 fps. The pressure wave (p-wave) velocity of a material is a function of the material's density; therefore, wave propagation velocities can infer the type of material that a p-wave is passing through. The velocities observed at this site are consistent with those for very loose and loose sands and gravels and are consistent with

increasing density with depth. Rock like material was not detected to the effective depth of this investigation.

5.4 Exploration Notes

The fieldwork was conducted on October 29, November 2, and was completed the morning of November 3. Weather conditions in the time preceding and during the field investigation were clear, warm, and dry. Even under these conditions the rubber-tired backhoe had difficulty maneuvering in the loose sand

6.0 GEOTECHNICAL TESTING

6.1 In Situ Testing

Soil probe soundings are correlated to Standard Penetration Testing (ASTM 1586) “N” values and soil apparent density in the California Division of Highways Engineering Geology Field Manual (1958). The observed blows per foot from the soil sounding indicate an apparent density classification of very loose and loose to the total depth sounded (16 ft).

7.0 GEOTECHNICAL CONDITIONS

7.1 Site Geology

Three geotechnical earth-materials are manifest at or adjacent to the site. These include artificial fill (Qaf), alluvial deposits (Qal) and granitic bedrock (kg) their outcrop limits are presented in the Project Geologic map included as Figure 2.

Artificial Fill (Qaf)

These earth materials are created from the activities of man. They are derived from local materials and include silts, sands, gravels, and granitic boulders. The gravels and boulders are comprised of hard, rounded granitic rocks. Documentation indicating that the site fills were engineered was sought but not found during the course of this investigation. Fills are believed to be up to 15 feet thick within the footprint of the project.

Alluvium (Qal)

Several ages of alluvial deposits were observed in the vicinity of the project; however they were not differentiated. The differences in age are manifest by the variation of soil density and by evidence of soil development. The alluvial deposits beneath the GRE LOL are comprised of very loose to loose, interbedded, well graded and poorly graded sands. The sands are predominately clean, subangular to angular grains of granitic rock fragments, quartz, and feldspars. Based upon this investigation and the Bridge Log of Test Borings (LOTB's) these deposits may be up to 40 or more feet thick at the project site.

Granitic Rock of the Southern California Batholith (Kg)

This Cretaceous aged rock is termed basement rock and has been extensively mapped throughout the region and underlies the site alluvial deposits; however, it was not encountered in outcrop nor in the subsurface investigation on the project corridor.

7.2 Soil Conditions

The Site soils are very loose to loose interbedded well-graded sands and poorly-graded sands with some gravel and cobbles. Some thin interbeds of silty sand occur. The very loose to loose soil deposits are thick and will settle excessively under applied loading.

7.3 Surface Water

The site soils are dry to moist and are free draining. North of SR-76 and east of the existing bridge rills up to 2 feet deep and 3 feet wide were observed adjacent to and parallel to the toe of the existing highway embankment. Both offsite and embankment storm water flow to this area. These rills widen and deepen westward and eventually conjoin Pala Creek. The site is within the 100 year floodplain of the San Luis Rey River and therefore is subject to flooding during severe storms and/or prolonged rainy seasons.

7.4 Ground Water

Groundwater was not observed during this investigation; however, it was observed at an elevation of 364.2 feet in the Bridge boring designated as R-08-002. The project site is located within the 100 year floodplain of the San Luis Rey River. It is likely that shallow groundwater occurs beneath the site during and following prolonged and/or intense rainstorms.

8.0 GEOTECHNICAL ANALYSIS AND DESIGN

8.1 Earth Retaining Systems

A previous plan to retain new embankment at the project site was to use standard plan Type 5 retaining walls. The site investigation revealed that subsurface materials below the proposed wall alignment were comprised of very loose to loose sandy alluvial soils to the depth explored of about 9 feet. If retaining wall footings were founded on these materials the wall footings would be subjected to intolerable total and differential settlements with a high potential for wall tilt. Therefore remedial grading consisting of removal and recompaction of loose alluvial soils would have been required to assure that the wall footings would be adequately supported. Based on the standard plan width of the wall footing, the depth of removal and recompaction of existing very loose to loose alluvial soils would have been at least 10 feet. Owing to right of way constraints remedial grading was deemed to be impractical and the retaining wall alternative was abandoned.

Given the loose subsurface conditions and right of way issues, the concept of a GRE was considered and found to be an acceptable and practical alternative at this site. In contrast to a retaining wall, the GRE system requires no remedial foundation grading and thus there are no associated right of way issues that require attention. Moreover a GRE system can tolerate the large total and differential settlements that would likely occur at this site. In light of these conditions, a geotechnical analysis was performed to develop a design for a GRE system.

8.2 Geosynthetic Reinforced Embankment (GRE)

A GRE system is comprised of a compacted fill embankment layered with geogrid reinforcement. The compacted soil resists compression and shear and the geogrids provide tensile resistance. The combination of the tensile and compressive strength of the soil and geogrids improve the global strength of the composite material.

8.3 Geotechnical Analysis

The GSTAGL7 computer program was used to design the geogrid reinforced soil slope. The Modified Bishop Method of Slices was used to obtain the minimum factor of safety against a circular sliding failure. The most critical slope cross-section as represented by a slope of height 8 feet and slope ratio of 0.75:1 (H:V) was modeled in the analysis. Soil parameters input into in the analysis are presented in the following table. In addition to soil parameters, the ultimate design strength of the geotextile, its length, and vertical spacing were also specified in the analysis.

Table of Soil Parameters

Soil Type	Cohesion (psf)	Angle of Friction (degrees)	Soil Total Unit Weight (pcf)
Embankment Fill	0	32	120
Alluvium	0	28	120

The slope stability analysis of the geogrid reinforced soil slope yielded a safety factor of 1.7 which exceeds the minimum acceptable safety factor of 1.5.

8.4 GRE Design

Based on our slope stability analysis we recommend that the embankment fill slope be reinforced with a geotextile with a minimum long term design strength of 450 pounds per foot. The geogrid reinforcement should extend a minimum of 8 feet into the embankment from the slope face. The vertical spacing of the geogrid reinforcement should be 18 inches. The embankment fill soils should be compacted to 95 percent relative compaction. In order to protect the exposed GRE face from erosion and surficial instability caused by saturation of the slope face, it is recommended that the slope face be protected with a rock fill facing. Welded wire facing units filled with rockfill should be stacked up on the slope face. A typical section showing the geogrid reinforcement and the stone filled welded wire facing unit is presented in Figure 3.

8.5 Construction Recommendations

1. Temporary construction slopes should be cut at an inclination no steeper than 1:1 (H:V). Steeper cuts will require engineering analysis and will be subject to approval by the Resident Engineer.

2. Due to the anticipated presence of loose foundation soils along the alignment of the GRE, it is recommended that loose soils to a minimum depth of 2 feet be removed and recompacted to 95 percent relative compaction in accordance with CTM 216 prior to placement of the embankment fill.
3. Slope face wire baskets need not be placed horizontally. If desired these baskets may be placed at a gradient to match the existing profile grade.
4. Slope face wire baskets come in standard heights. To stay within the R/W, the first basket course may be installed below or partially below grade and subsequent courses may be stacked as needed.
5. Due to the presence of loose unconsolidated soils, rubber tired vehicles may become mired during and following rains.
6. The site is located in and/or is adjacent to the 100-year floodplain and may be subject to flooding during sever storms or prolonged rain storms.
7. The existing highway embankment contains large boulders of hard rock that may become problematic during the keying of new embankment into the existing slopes. Boulders may be difficult to remove or their removal may result in large excavations that undermine the existing traveled way.

References Used:

California Department of Transportation – District 11 Hydraulics, San Diego County 100 Year FEEMA Floodplain Reference map.

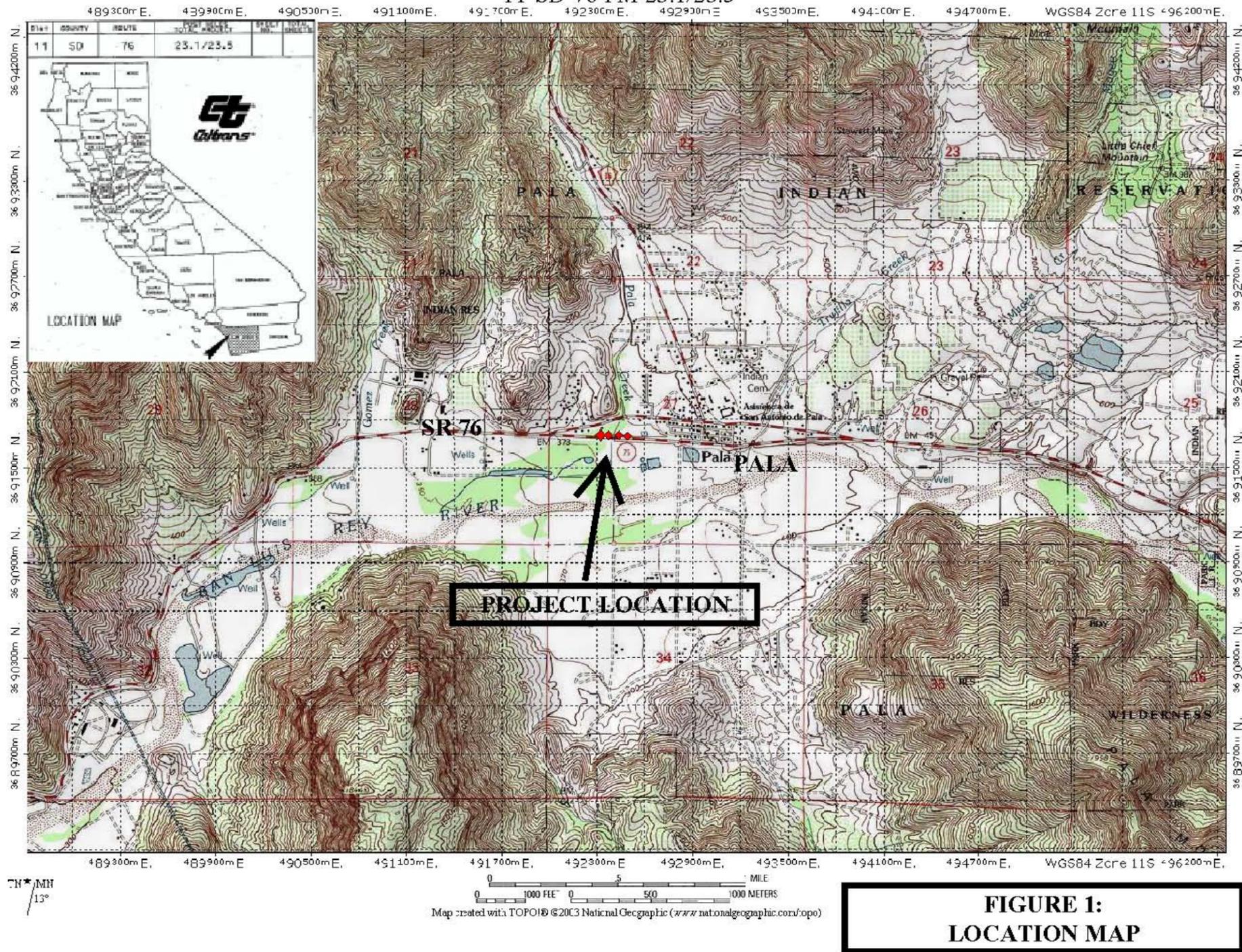
California State Department of Public Works Division of Highways – Bridge Department, Handbook of Engineering Geology; 1958.

Kennedy, Michael, P.; U.S.G.S.: Geologic Map of the Pala 7.5 Minute Quadrangle San Diego County, California: A Digital Database. Version 1.0; 2000.

United States Department of Agriculture, Soil Survey (1973) and General Soil Map (1973), San Diego Area, California.

Mualchin L; California Department of Transportation and Geology; California Seismic Hazard Map; 1996.

11-SD- PALA CREEK BRIDGE
 11-SD-76 PM 23.1/23.5



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
11	SD	76	23.1/23.5	

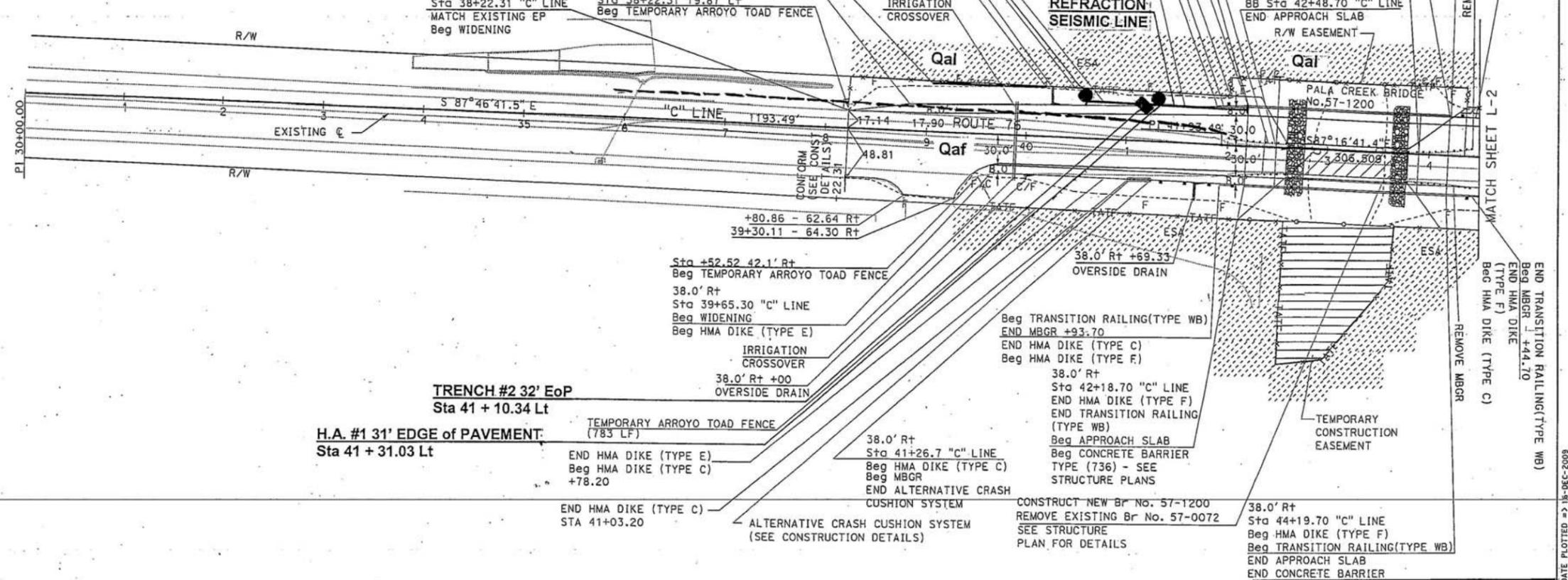
Michael S. Bettega	10/26/09
REGISTERED CIVIL ENGINEER	DATE
No. C 34348	Exp. 8/30/11
CIVIL	

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

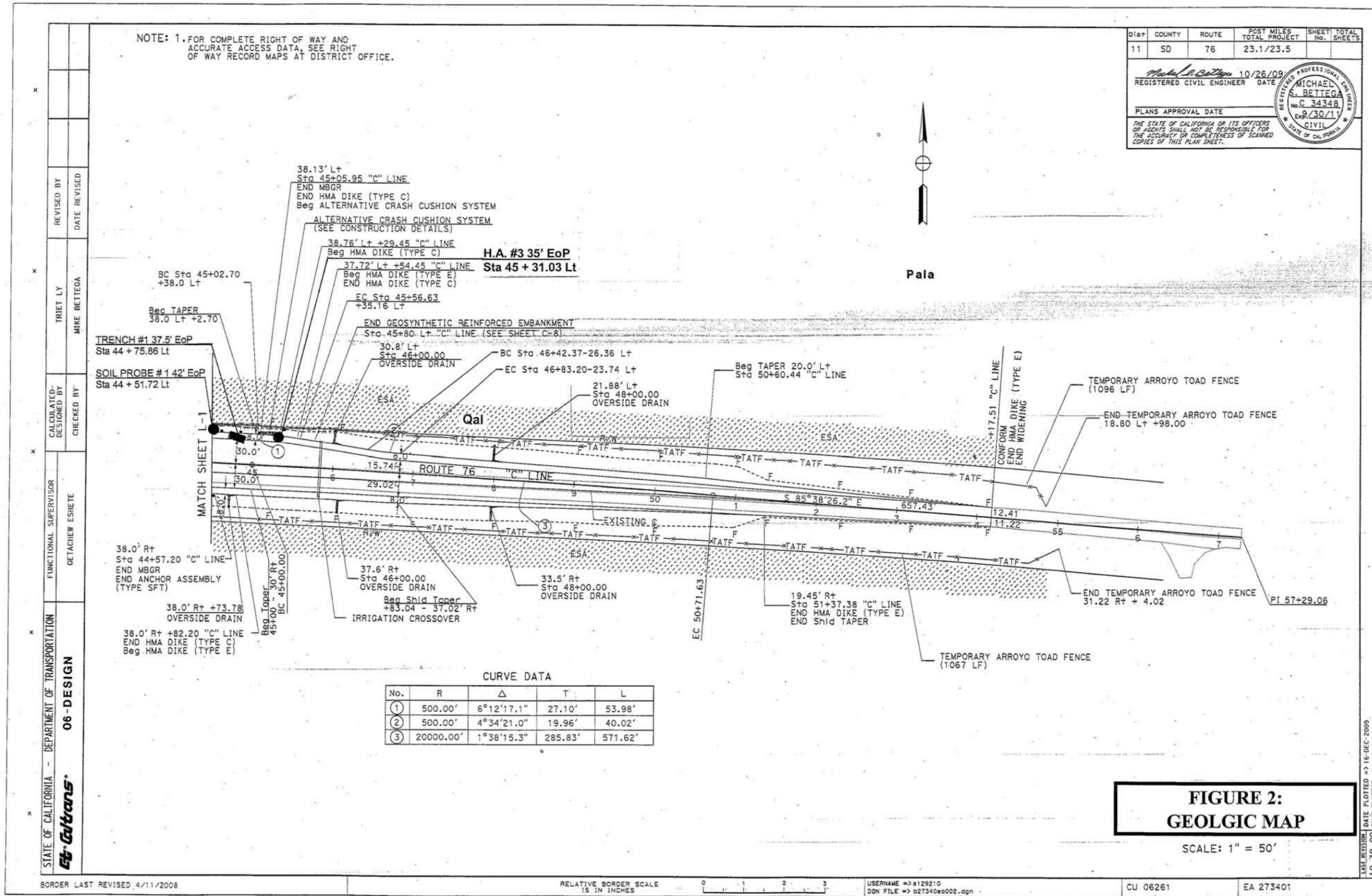
NOTE: 1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

- LEGEND**
- REMOVE EXISTING BRIDGE (SEE STRUCTURE PLANS)
 - TEMPORARY CONSTRUCTION EASEMENT
 - ROCK SLOPE PROTECTION (SEE CONSTRUCTION DETAIL SHEETS)
 - ENVIRONMENTALLY SENSITIVE AREA
 - OVERSIDE DRAINS (SEE CONSTRUCTION DETAIL SHEETS)
 - Quaternary Alluvium
 - Fill
 - Approximate Contact Location
 - PERMANENT EASEMENT
 - IRRIGATION CROSSOVER
 - TEMPORARY ARROYO TOAD FENCE (SEE CONSTRUCTION DETAIL SHEETS)



**FIGURE 2:
 GEOLGIC MAP**

SCALE: 1" = 50'

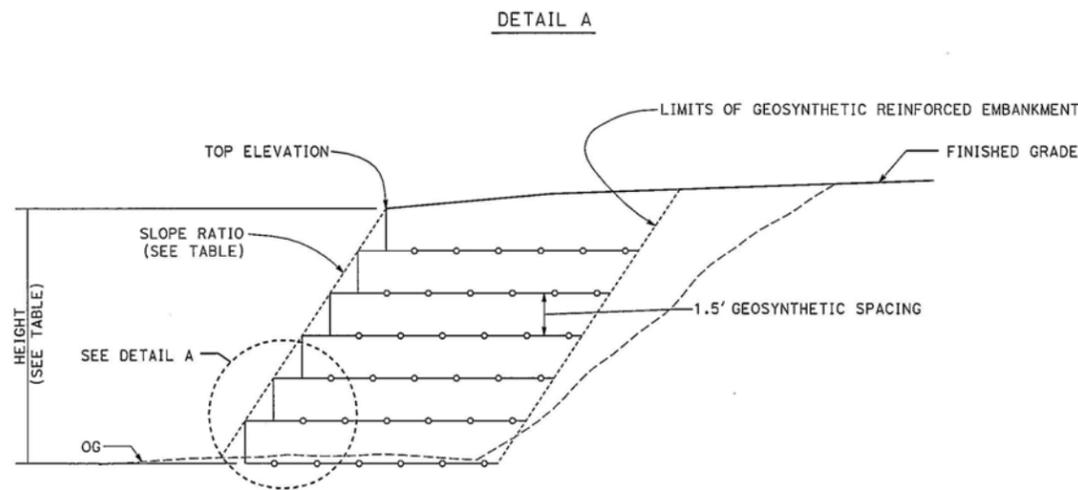
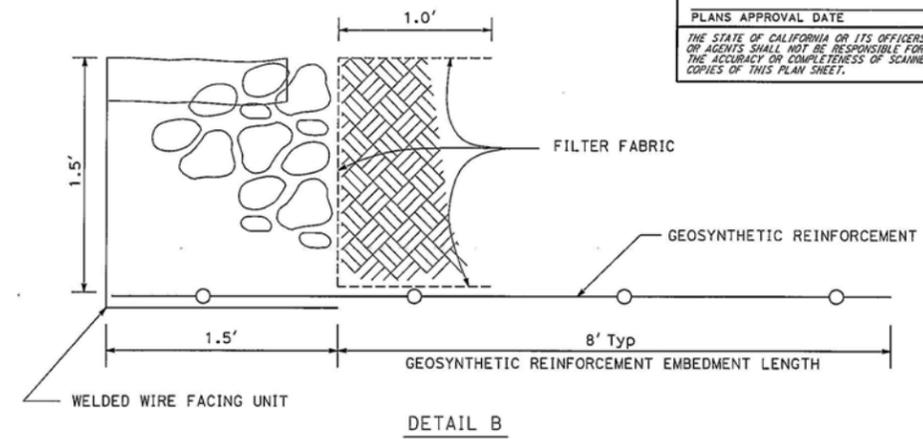
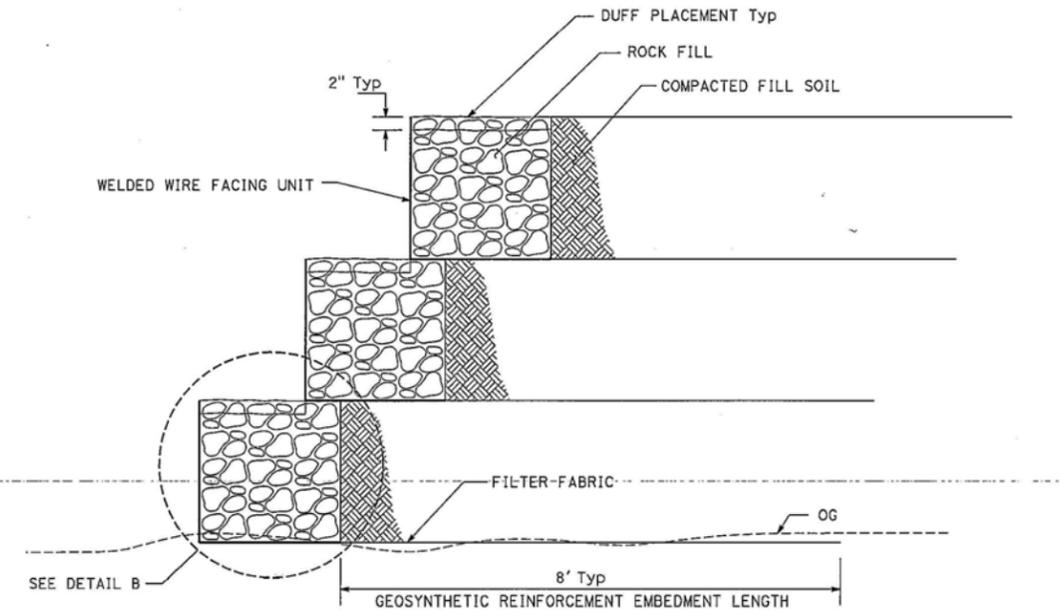


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
11	SD	76	23.1/23.5	

Michael S. Bettega 10/26/09
 REGISTERED CIVIL ENGINEER DATE
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 MICHAEL S. BETTEGA
 No. C 34348
 Exp. 9/30/11
 CIVIL
 STATE OF CALIFORNIA

NOTES: 1. GEOSYNTHETIC REINFORCEMENT REQUIRES MINIMUM LONG TERM DESIGN STRENGTH OF 450 POUNDS PER FOOT AT 10% TOTAL STRAIN



GEOSYNTHETIC REINFORCED EMBANKMENT TABLE

STATION	TOP ELEVATION	HEIGHT	SLOPE RATIO
40+80	384.42'	7.5'	1.5 : 1
41+00	384.55'	7.5'	1.0 : 1
41+20	384.68'	7.5'	1.0 : 1
41+40	384.78'	7.5'	1.0 : 1
41+50	384.83'	7.5'	1.0 : 1
41+60	384.88'	7.5'	1.0 : 1
41+75.88	384.93'	7.5'	0.8 : 1
42+00	384.92'	7.5'	0.8 : 1
42+10	384.92'	7.5'	1.5 : 1
44+19.7	385.38'	7.5'	1.5 : 1
44+35	385.26'	7.5'	0.8 : 1
44+40	385.25'	7.5'	0.8 : 1
44+50	385.22'	7.5'	0.8 : 1
44+60	385.19'	7.5'	0.8 ; 1
44+80	385.14'	6.0'	0.8 : 1
45+00	385.09'	6.0'	0.8 : 1
45+02.7	385.10'	6.0'	0.8 ; 1
45+20	385.14'	6.0'	0.8 : 1
45+40	385.20'	6.0'	1.0 : 1
45+50	385.24'	6.0'	1.0 : 1
45+56.58	385.26'	6.0'	1.0 : 1
45+60	385.28'	6.0'	1.0 : 1
45+80	385.36'	6.0'	1.5 : 1

GEOSYNTHETIC REINFORCED EMBANKMENT

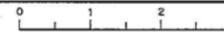
Sta 40+80.0 TO Sta 42+10 Lt "C" LINE
 Sta 44+19.7 TO Sta 45+80 Lt "C" LINE

FIGURE 3:
 TYPICAL SECTION

LAST REVISION: DATE PLOTTED => 10-DEC-2009
 10-26-09 TIME PLOTTED => 13:29

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE
 15 IN INCHES



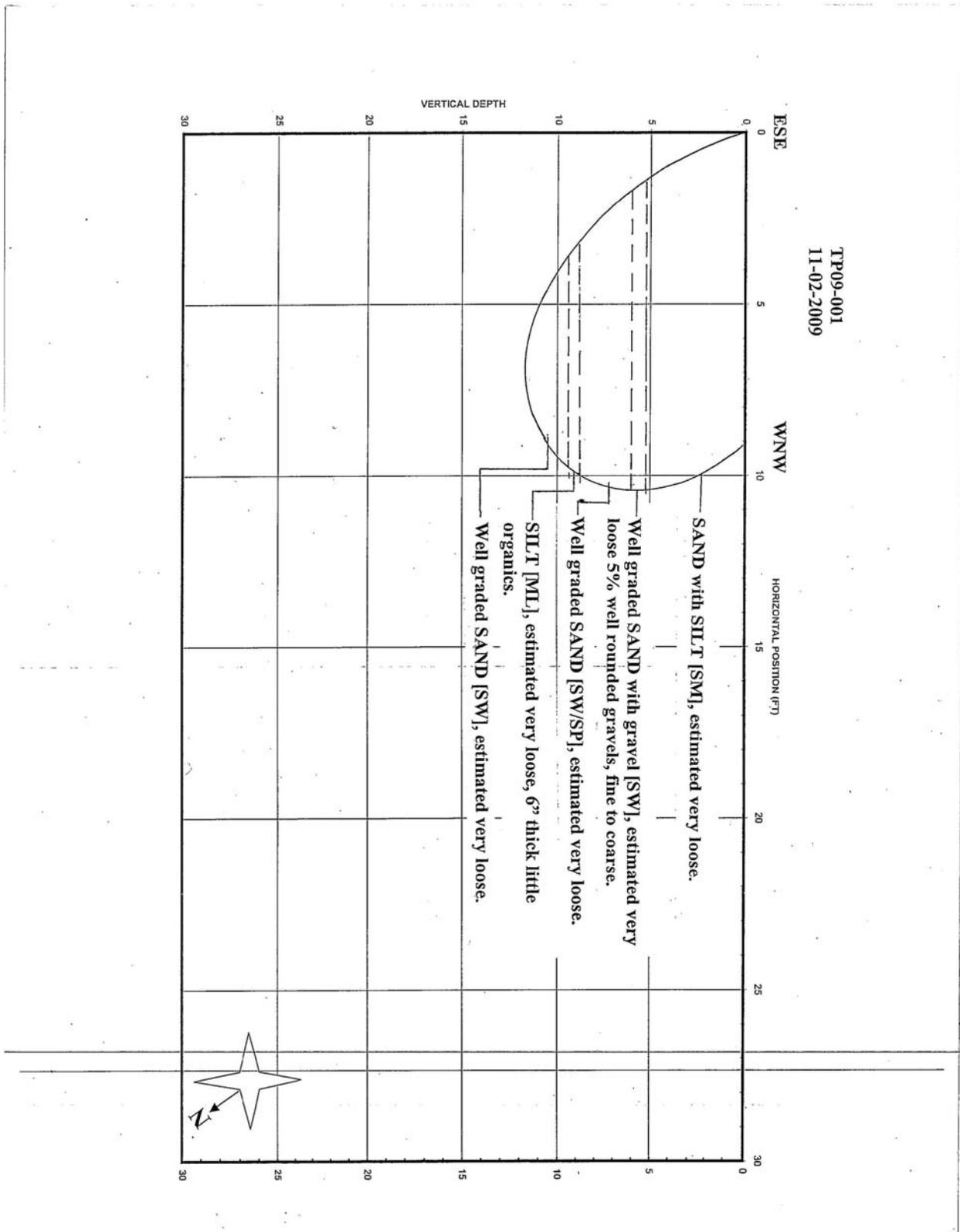
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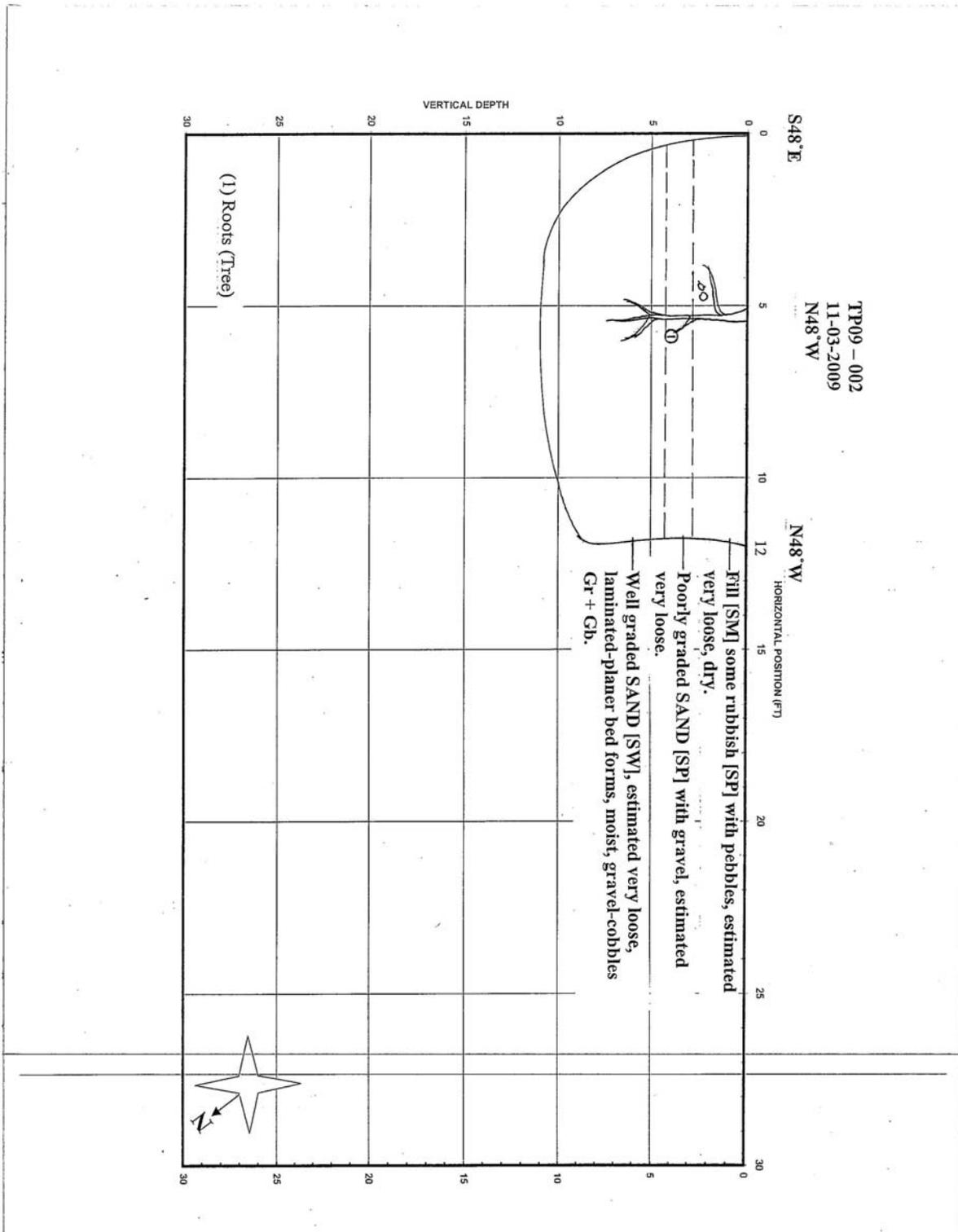
CU 06261

EA 273401

APPENDIX A

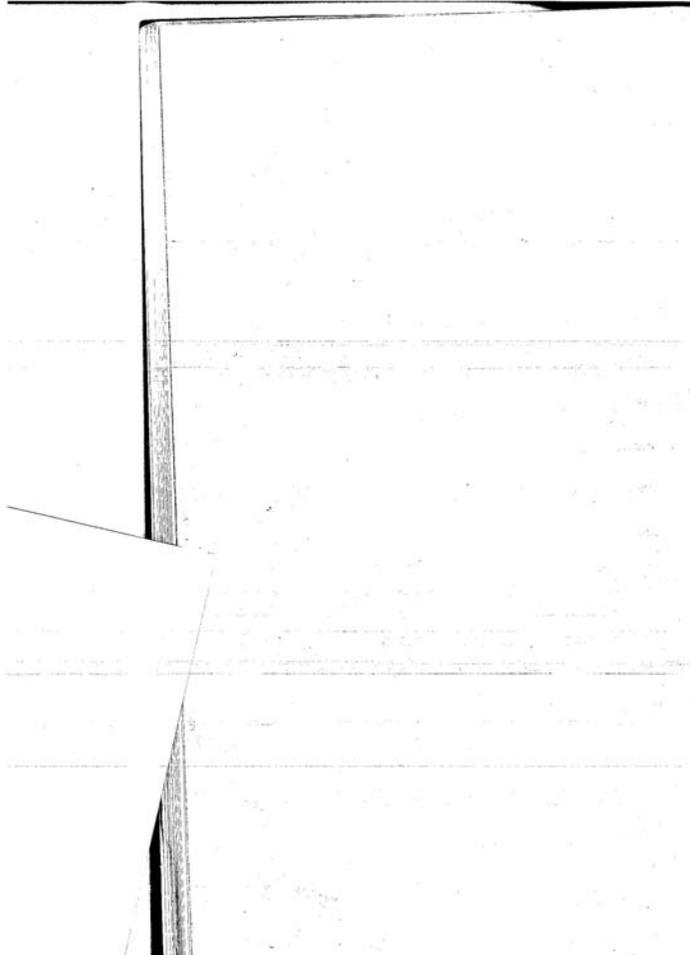
TRENCH LOGS





APPENDIX B

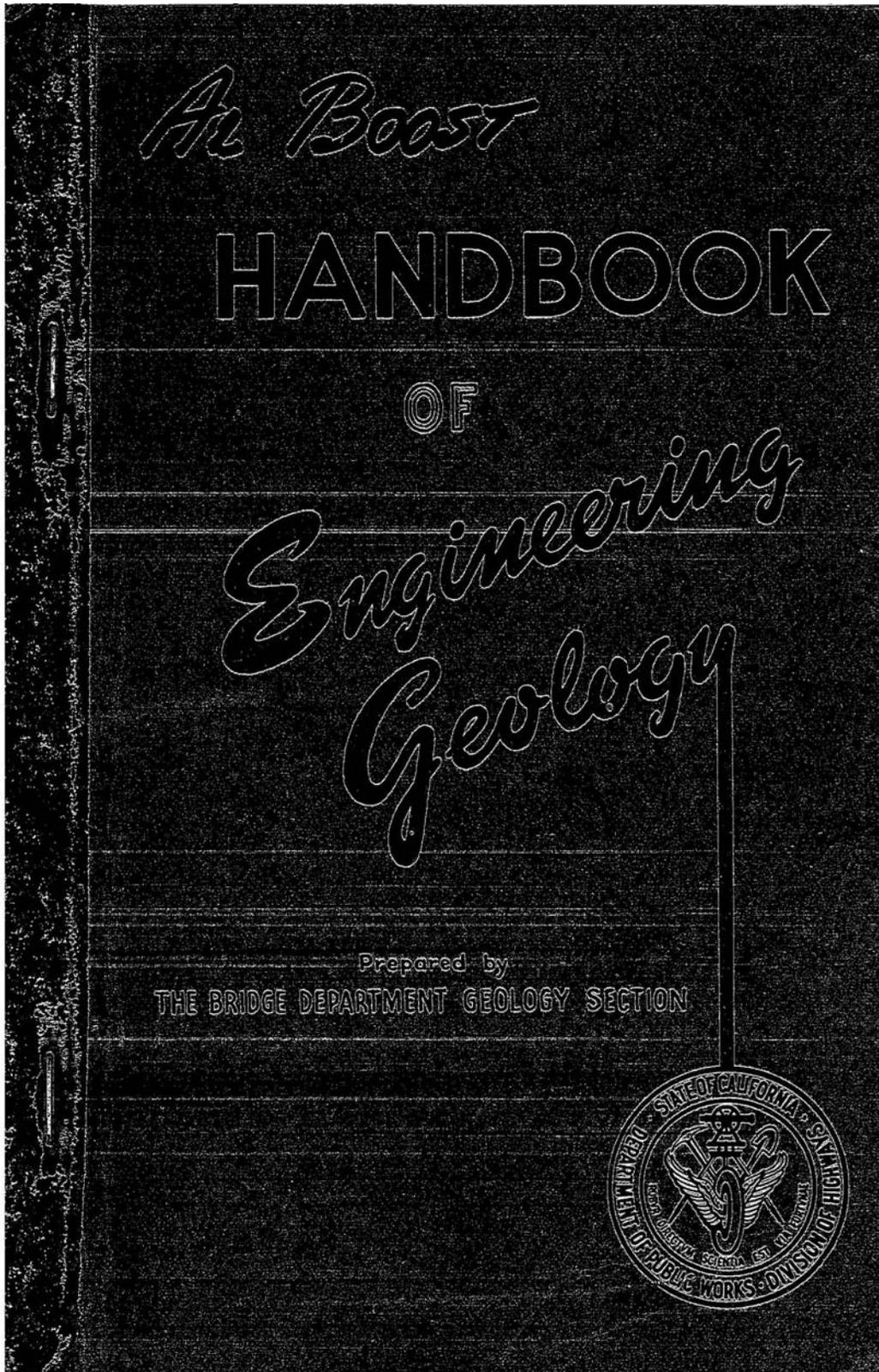
SOIL PROBE CORRELATION TO STANDARD PENETRATION “N” AND SOIL APPARENT DENSITY



STRENGTH CLASS DEFINITION
 BASED ON BLOWS PER FOOT PENETRATION
 (Unconsolidated Sediment)

CONSISTENCY	Engineering Classification	Standard Penetration Blows Per Foot (140 lb. SPT) 1.4" Id. Sample Spoon	1" Soil Tube - Blows Per Foot 25 lb Hammer - 12" drop	
			Sand & Gravel	Silt Clay
G(Granular) Very Loose	I	0 - 5	0 - 50	0 - 50 0 - 60
Loose	II	5 - 10	50 - 100	50 - 180 60 - 250
Slightly Compact	III	10 - 20	100 - 350	180 - 1000 250-1000
Compact	IV	20 - 35	350 - 525	1000-2000 1000-4000
Dense	V	35 - 70	525 - 1500	2000-5000 4000-5000
Very Dense	VI	70+	1500+	5000+ 5000+

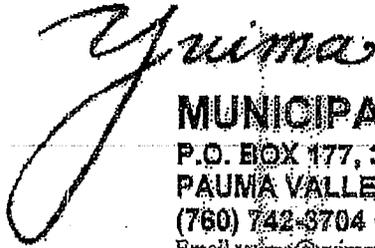
Description order: Consistency - Color - Material



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Karl Watkins, Director
Michael Fitzsimmons, Director

General Manager
Linda A. Bueppel

Counsel
Jeffrey G. Scott



MUNICIPAL WATER DISTRICT
P.O. BOX 177, 34928 VALLEY CENTER ROAD
PAUMA VALLEY, CALIFORNIA 92061-0177
(760) 742-3704 • fax (760) 742-2069
Email yuima@yuimamwd.com

May 11, 2009

Michael Bettega
CalTrans

RE: Pala Creek Bridge Project, SR76 @Pala, CA

Dear Michael,

Per our conversation on 5/11/09, regarding the Pala Creek Bridge project on SR76, and the contractor's need for an alternate construction water source for the completion of this project;

Yuima MWD does not have water lines in the immediate vicinity, however we do have pipelines further east on SR76 and an accessible fire hydrant located at the intersection of SR76 and Lazy 'H' Drive.

We can supply construction water for truck transport from this location to the job site at any delivery rate up to 400 GPM.

The contractor would be required to come to the district office, at the above address and fill out an application and submit a deposit, at which time the district will set a construction meter at that location for his use.

If you have any questions please call me at the above contact numbers

Sincerely,

Robert V. Fowler, Director of Operations and Maintenance



DEPARTMENT OF FISH AND GAME

South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201



November 2, 2009

Bruce April
California Department of Transportation
4050 Taylor Street
San Diego, CA 92110-2737

Dear Mr. April:

Enclosed is Streambed Alteration Agreement # 1600-2009-0228-R5, that authorizes work on the Pala Creek Bridge Replacement project impacting Pala Creek, a tributary to San Luis Rey River in San Diego County. This action is authorized under Section 1602 of the Fish and Game Code and has been approved by the California Department of Fish and Game. Pursuant to the requirements of the California Environmental Quality Act (CEQA), the Department filed a Notice of Exemption (NOE) on the project on November 2, 2009. Under CEQA regulations, the project has a 35-day statute of limitations on court challenges of the Department's approval.

The Department believes that the project fully meets the requirements of the Fish and Game Code and CEQA. However, if court challenges on the NOE are received during the 35-day period, then an additional review or even modification of the project may be required. If no comments are received during the 35-day period, then any subsequent comments need not be responded to. This information is provided to you so that if you choose to undertake the project prior to the close of the 35-day period, you do so with the knowledge that additional actions may be required based on the results of any court challenges that are filed during that period.

Please contact Pam Beare at pbeare@dfg.ca.gov or (760) 788-6760 if you have any questions regarding the Streambed Alteration Agreement.

Sincerely,

A handwritten signature in blue ink that reads "Stephen M. Juarez".

Stephen M. Juarez
Environmental Program Manager

Enclosure

cc:

Revised 11/05



CALIFORNIA DEPARTMENT OF FISH AND GAME
South Coast Region
4949 Viewridge Avenue
San Diego, California 92123

Notification No. 1600-2009-0228-R5

AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

THIS AGREEMENT, entered into between the State of California, Department of Fish and Game, hereinafter called the Department, and the State of California, Department of Transportation (Point of Contact: Mr. Bruce Lambert), District 11, 4050 Taylor Street, San Diego, CA 92110, hereinafter called the Applicant, is as follows:

RECITALS

WHEREAS, pursuant to Section 1602 of California Fish and Game Code, the Applicant, on the 3rd day of August, 2009, notified the Department that they intend to divert or obstruct the natural flow of, or change the bed, channel, or bank of, or use material from the streambed of Pala Creek, a tributary to the San Luis Rey River in northern San Diego County, California, (Southwest corner, Section 27, Range 2W, Township 9S, Pala Quadrangle).

WHEREAS, the Department (represented by Pam Beare through a site visit on the 19th day of August, 2009) has determined that such operations may substantially adversely affect those existing fish and wildlife resources within Pala Creek, specifically identified as follows: **Amphibians:** arroyo toad (*Bufo californicus*), western toad (*Bufo boreas*), Pacific tree frog (*Pseudacris regilla*), **Reptiles:** western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*); **Birds:** northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), western scrub jay (*Aphelocoma californica*), bush tit (*Psaltriparus minimus*), house wren (*Troglodytes aedon*), northern mockingbird (*Mimus polyglottus*), California thrasher (*Toxostoma redivivum*), phainopepla (*Phainopepla nitens*), least Bell's vireo (*Vireo belli pusillus*), yellow-rumped warbler (*Dendroica coronata*), spotted towhee (*Pipilo maculatus*), California towhee (*Pipilo crissalis*), song sparrow (*Melospiza melodia*), western meadowlark (*Stumella neglecta*), lesser goldfinch (*Carduelis psaltria*); **Mammals:** Virginia opossum (*Didelphis virginiana*), brush rabbit (*Sylvilagus bachmani*), desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), and all other aquatic and wildlife resources, including the riparian vegetation, such as mulefat (*Baccharis salicifolia*), coast live oak (*Quercus agrifolia* var. *agrifolia*), western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), narrow-leaf willow (*Salix exigua*), and arroyo willow (*Salix lasiolepis*), etc. which provides habitat for those species.

THEREFORE, the Department hereby proposes measures to protect fish and wildlife resources during the Applicant's work. The Applicant hereby agrees to accept the following measures/conditions as part of the proposed work.

If the Applicant's work changes from that stated in the notification specified above, this Agreement is no longer valid and a new notification shall be submitted to the Department of Fish and Game. Failure to comply with the provisions of this Agreement and with other pertinent code sections, including but not limited to Fish and Game Code Sections 5650, 5652, 5901, 5931, 5937, and 5948, may result in prosecution.

Nothing in this Agreement authorizes the Applicant to trespass on any land or property, nor does it relieve the Applicant of responsibility for compliance with applicable federal, state, or local laws or ordinances. A consummated Agreement does not constitute Department of Fish and Game endorsement of the proposed operation, or assure the Department's concurrence with permits required from other agencies.

Term and Effective Date

This Agreement becomes effective the date of Department's signature and terminates December 31, 2013 for project construction only. This Agreement shall remain in effect for that time necessary to satisfy the terms/conditions of this Agreement.

Extensions

Pursuant to Section 1600 *et seq.*, the Applicant may request one extension of this Agreement; the Applicant shall request extension of the Agreement prior to its termination. The one extension may be granted for up to five years from the date of termination of the Agreement and is subject to Department approval. The extension request and fees shall be submitted to the Department's South Coast Region at the above address. If the Applicant fails to request the extension prior to the Agreement's termination, then the Applicant shall submit a new notification with fees and required information to the Department. Any construction/impacts that occur under an expired Agreement are a violation of Fish and Game Code 1600 *et seq.*

Suspension and Revocation

The Department reserves the right to cancel this Agreement, after giving notice to the Applicant, if the Department determines that the Applicant has breached any of the terms or conditions of the Agreement.

The Department reserves the right to suspend or cancel this Agreement for other reasons, including but not limited to the following:

- a) The Department determines that the information provided by the Applicant in support of the Notification/Agreement is incomplete or inaccurate;
- b) The Department obtains new information that was not known to it in preparing the terms and conditions of the Agreement;
- c) The project or project activities as described in the Notification/Agreement have changed;
- d) The conditions affecting fish and wildlife resources change or the Department determines that project activities will result in a substantial adverse effect on the environment.

Before any suspension or cancellation of the Agreement, the Department will notify the Applicant in writing of the circumstances which the Department believes warrant suspension or cancellation. The Applicant will have seven (7) working days from the date of receipt of this notification to respond in writing to the circumstances described in the Department's notification. During the seven (7) day response period, the Applicant shall immediately cease any project activities which the Department specified in its notification. The Applicant shall not continue the specified activities until that time when the Department notifies the Applicant in writing that adequate methods and/or measures have been identified and agreed upon to mitigate or eliminate the significant adverse effect.

Amendment

This Agreement may be amended at any time by mutual agreement of the parties. Any amendments to this Agreement shall be made in a separate writing, signed by the parties, and attached to this Agreement. Any approved amendments shall become part of this Agreement.

Liability

The Applicant agrees that it shall be responsible for any violations of this Agreement, whether committed by the Applicant or any person acting on behalf of the Applicant, including its agents, officers, and employees, representatives, or contractors and subcontractors. This Agreement does not constitute the Department's endorsement of the authorized Project Activity.

It is understood the Department has entered into this Agreement for purposes of establishing protective features for fish and wildlife. The decision to proceed with the project is the sole responsibility of the Applicant, and is not required by this Agreement. It is further agreed that all liability and/or incurred cost related to or arising from the Applicant's project and the implementation of the fish and wildlife protective

conditions of this Agreement remain the sole responsibility of the Applicant. The Applicant agrees to hold harmless the State of California and the Department against any related claim made by any party or parties for personal injury or any other damages.

Enforcement

The Department reserves the right to enter the project site at any time to ensure compliance with the terms/conditions of this Agreement.

Project Location and Description

The project is located on State Route 76, east of I-15 at Pala Creek, in the community of Pala, in northern San Diego County (SR-76 Post Mile 23.2). The Applicant proposes to alter the stream by replacing the existing five-span bridge with a widened single-span box-girder bridge. The project includes removing all of the columns from the old bridge down to 6 feet below current ground level. Roadway runoff, which currently flows directly into the creek, will be directed away from the creek.

CONDITIONS

The following provisions constitute the limit of activities agreed to and resolved by this Agreement. The signing of this Agreement does not imply that the Applicant is precluded from doing other activities at the site. However, activities not specifically agreed to and resolved by this Agreement shall be subject to separate notification pursuant to Fish and Game Code Sections 1600 *et seq.*

General

1. The agreed work includes activities associated with the Project Location and Description that is provided above. Specific work areas and mitigation measures are described on/in the plans and documents submitted by the Applicant, including the *Biological Assessment, State Route 76/Pala Creek Bridge Replacement, Unincorporated San Diego County, California* (California Department of Transportation, March 2009), *Biological Opinion, State Route 76/Pala Creek Bridge Replacement, Unincorporated Northern San Diego County* (U.S. Fish and Wildlife Service, June 30, 2009), *Categorical Exemption/Categorical Exclusion Determination Form and Checklist* (California Department of Transportation, June 30, 2009), and *Project Plans for Construction on State Highway 76 in San Diego County at Pala Creek Bridge (selected pages)* (Department of Transportation, August – November 2008), *Storm Water Data Report, 11-SD-76, PM 23.2 Bridge Replacement* (California Department of Transportation, May 21, 2009); the project shall be implemented as proposed unless directed differently by this agreement.
2. The Applicant shall provide a copy of this Agreement to all contractors, subcontractors, and project supervisors. The Applicant shall ensure that all project personnel abide by all terms and conditions of this agreement. Copies of the Agreement shall be readily available at work sites at all times during periods of active work and must be presented to any Department personnel, or personnel from another agency, upon demand.
3. The Applicant shall notify the Department, in writing, at least five (5) days prior to initiation of construction (project) activities and at least five (5) days prior to completion of construction (project) activities. Notification shall be sent to the Department's South Coast Office at the address above, ATTN: Streambed Alteration Program – SAA # 1600-2009-0228-R5.

Impacts

4. The Applicant shall not impact more than 0.58 acre of streambed habitats, consisting primarily of southern willow scrub, but also including some sycamore and non-native species. Permanent impacts shall not exceed 0.11 acre; this includes 0.024 acre of riprap on the abutment banks, plus 0.09 acre of shading, minus the 0.004 acre footprint of the old bridge piers that will be removed from the streambed. Temporary impacts shall not exceed 0.47 acre.

Compensatory Mitigation

5. The Applicant shall compensate for the permanent loss of 0.11 acre of stream habitats by debiting 0.33 acre of created riparian woodland at the Marron mitigation site. The site is located adjacent to the San Luis Rey River just downstream of East Vista Way. It was created in 2002 to compensate for impacts resulting from repairs to the San Mateo Bridge on Interstate 5 (I-5). Approximately 2.8 acres of riparian habitat was created and an additional 1.8 acres of riparian habitat was enhanced through the removal of giant reed and tamarisk; only 1.9 acres were needed for the I-5 bridge project. The additional habitat was created/enhanced to compensate for other Caltrans projects, as appropriate. To date, a total of 2.084 acres of created habitat have been used as compensatory mitigation.

6. The Applicant shall mitigate for temporary impacts by restoring these areas to the pre-project habitat type, except for areas which were highly disturbed or those that supported exotic species, which shall be restored with the most appropriate native habitat for the location.

7. The Applicant shall submit plans for the restoration of all temporary impacts to the Department for review and approval at least 90 days prior to the scheduled commencement of the restoration work. Revegetation plans shall be prepared by persons with expertise in southern California ecosystems and native plant revegetation techniques. The plan shall include, at a minimum: (a) location, topography, grading plans if applicable, and erosion control measures; (b) the plant species to be used, container sizes, and seeding rates; (c) a schematic depicting the restoration and planting plan; (d) planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed maintenance and monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria. Only locally endemic species shall be used in the planting plan.

8. The goal of the restoration for temporary impacts shall be creation of self sustaining habitats with native species composition and plant densities similar to adjacent natural habitats. The Applicant shall ensure that those planting and maintaining the sites have demonstrated success in native habitat restoration, and an understanding of the function of the target vegetation communities. Any irrigation of the mitigation/restoration areas shall be done in a manner that promotes establishment of the desired habitat type, without creating a plant community that will not function well, or persist, once irrigation is removed. An annual report documenting the status of the habitat restoration areas shall be submitted to the Department by Dec. 31 of each year for 5 years after planting, or until the success criteria have been met, whichever is longer. The report shall include, at a minimum, a description of the methods used (methods must be appropriate for evaluating the site relative to the success criteria), the number of plants replaced by species along with the date of replacement, an evaluation of the revegetation effort, a description of any remedial actions that are needed along with a schedule for accomplishing those actions, and photos from designated photo stations. The Applicant is responsible for replacement planting, maintenance and monitoring until the success criteria are met; maintenance and monitoring shall continue for 5 years after the last replacement planting is done. In addition to meeting the success criteria, the mitigation/restoration sites shall not receive any supplemental irrigation for the final two (2) consecutive years, there shall be no non-native perennial plants and no more than 5% cover of non-native annuals, no more than 5% of the site shall consist of unplanned bare ground, and the site shall be completely free of those species on List A of the California Invasive Plant Council's most recent list

of "Exotic Pest Plants of Greatest Ecological Concern in California." If any invasive exotic plants are allowed to shed seed within the mitigation area, the Applicant shall add an additional 5 years of maintenance and monitoring over the entire site.

9. All mitigation for temporary impacts shall be installed as soon as construction has been completed. Any delay in the installation of mitigation will require an amendment to this Agreement, and may result in the application of higher mitigation ratios to offset the additional temporal loss of habitat function.

10. The Applicant shall submit a report to the Department, within 60 days after completion of site preparation and planting, acknowledging the completion of the installation phase of the mitigation, and documenting its as-built conditions. The report shall include a plan or diagram showing the mitigation area and the final as-built locations of plantings, irrigation, and other installations. Photographs from representative vantage points shall also be included to document the as-built conditions.

11. Disturbance or removal of vegetation shall not exceed the limits approved by the Department. The Applicant shall mitigate at a minimum 5:1 ratio for impacts beyond those authorized in this Agreement. In the event that additional mitigation is required, the type and location of mitigation must be approved by the Department.

12. The mitigation area shall be secured from trespass when, as determined by the Department, fish or wildlife resources are vulnerable to damage from public access.

13. If any sensitive species are observed in project or monitoring surveys, the Applicant shall submit a California Native Species Field Survey Form and survey map to the Natural Diversity Database (NDDB) within ten working days of the sightings. The form and instructions for completing the form are available on-line at <http://www.dfg.ca.gov/biogeodata/cnddb/>. The form and survey map shall be sent to the Department of Fish and Game, California Natural Diversity Database, 1807 13th Street, Suite 202, Sacramento, CA 95814, with copies sent to the Department's South Coast Office at the address above, ATTN: Streambed Alteration Program – SAA #1600-2009-0228-R5.

14. Maintenance and monitoring of all mitigation sites shall continue until the Applicant has requested and received written concurrence from the Department that the success criteria have been met.

Resource Protection

15. The Applicant shall have a qualified biologist on the project site as needed to ensure that no impacts occur to the adjacent habitats and species.

16. All stream and riparian habitats outside of the project footprint shall be designated as an Environmentally Sensitive Area (ESA) and depicted as such on project plans. Prior to any vegetation clearing, grading or construction activities within the project limits, the Applicant shall install temporary construction fencing to identify the agreed limits of disturbance and prevent damage to adjacent habitat. The biological monitor shall be onsite during installation of the temporary construction fencing. Except for the biological monitor, no personnel, vehicles, equipment or any project related activities or disturbance shall be allowed within the ESA at any time. All temporary fences, barriers, and/or flagging shall be completely removed from the project site and properly disposed of upon completion of project activities.

17. This Agreement does not authorize take, incidental or otherwise, of any protected species. For the purpose of this Agreement, "protected species" means the following: a species fully protected under state law; a species listed under the California Endangered Species Act (Fish & Game Code § 2050 *et seq.*) and/or Federal Endangered Species Act (16 U.S.C. § 1531 *et seq.*); or any other species for which take is prohibited under state or federal law.

18. To avoid impacts to nesting birds, all vegetation removal and pile driving shall be completed from September 16 to March 14. However, the Applicant may remove vegetation and drive piles during this time if a qualified biologist conducts a survey for nesting birds within one week prior to vegetation removal, both within the area of work and in adjacent habitats that may be impacted by these activities. If an active nest is found, the nest and an appropriate buffer shall be designated as an ESA, and no work shall occur within this area until the young have fledged and will no longer be impacted by the project. The buffer area shall be determined in consultation with the Department.
19. Except for vegetation removal and pile driving, which are addressed in the previous condition, all other work may occur from March 15 to September 15, if a qualified biologist has surveyed all adjacent habitats that may be impacted by these activities, and determined that no nesting sensitive bird species will be impacted. If nesting birds will likely be impacted, work shall cease in the area until the young have fledged and will no longer be impacted by the project, or appropriate measures are taken to avoid such impacts. For the purpose of this condition, sensitive bird species include those listed pursuant to the Endangered Species Act, the California Endangered Species Act, and California Department of Fish and Game Fully Protected Species and Species of Special Concern.
20. To prevent impacts to arroyo toads, the Applicant shall implement all toad-related measures in the U.S. Fish and Wildlife Service Biological Opinion dated June 30, 2009.
21. The Applicant shall ensure that wildlife cannot become trapped in construction areas. All debris piles shall be removed before they become inhabited. Steep-walled trenches shall not be left open when not being worked on and shall be checked for trapped wildlife before work resumes. The Applicant shall take appropriate measures to prevent wildlife from inhabiting stockpiled materials, such as pipe, and these shall be checked before being moved. The biological monitor shall be called to remove any wildlife that cannot escape safely on its own.
22. During any nighttime construction, all project lighting shall be directed away from sensitive habitats, at the work area only, and be the minimum needed to ensure safety.
23. Any materials used for erosion control measures during or after construction, within or adjacent to the stream or riparian habitats, shall consist only of materials that are free from toxic chemicals, are biodegradable, and cannot ensnare fish or wildlife.
24. All project and project related activities shall be conducted in a manner that will not adversely affect water quality within any stream, or stream or riparian habitats outside of the project footprint.
25. Any necessary flow diversions shall be done in a manner that will prevent pollution and/or siltation and which will provide flows to downstream reaches. Flows to downstream reaches shall be provided during all times that the natural flow would have supported aquatic life. The quality and quantity of the natural flow shall not be adversely impacted by the project or project related activities. Diversions shall be engineered, installed, and maintained to avoid washout and erosion of the streambed and banks. The normal path of flow shall be restored to the effected stream immediately upon completion of work.
26. The Applicant shall implement all Conservation Measures listed in the Biological Assessment for the project. If any conflicts exist between those measures and the conditions herein, this Agreement shall take precedence.
27. The Department recommends the use of native plants to the greatest extent feasible in the landscape areas adjacent and/or near the mitigation/open space and wetland/riparian areas. The Applicant shall not plant, seed or otherwise introduce invasive exotic plant species to the landscaped areas adjacent and/or near the mitigation/open space and wetland/riparian areas. Exotic plant species not to be used include those species listed on the California Invasive Plant Council's *Invasive Plant Inventory*, available through their web site at <http://www.cal-ipc.org/ip/inventory/index.php>. This list

includes such species as: pepper trees, pampas grass, fountain grass, ice plant, myoporum, tree of heaven, black locust, capeweed, periwinkle, sweet alyssum, English ivy, French broom, Scotch broom, and Spanish broom.

Equipment and Access

28. Staging and storage areas for equipment and materials shall be located as far as possible from stream and riparian habitats.
29. No equipment maintenance shall occur within or near any stream channel or riparian areas, or where petroleum products or other pollutants could enter these areas under any flow.
30. Vehicles and equipment shall not be driven, operated or parked in water covered portions of a stream or lake, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed.
31. Any vehicles or equipment driven, operated or parked within the project footprint adjacent to the stream or riparian/wetland habitats, shall be checked and maintained daily to prevent leaks of materials that if introduced to water could be harmful to aquatic life.
32. Stationary equipment such as cranes, motors, pumps, generators, and welders, etc. which are located within or adjacent to the stream or riparian/wetland habitats shall be positioned over drip pans, or other appropriate means, to contain any toxic materials that may drip or spill from such equipment.
33. The clean-up of any spills shall begin immediately after the spill occurs. The Department shall be notified immediately by the Applicant of any spills.

Structures

34. This Agreement does not authorize the construction of any temporary or permanent dam, structure, flow restriction or fill except as described in the Applicant's Notification. Plans for any structure or fill not specifically described in the Applicant's Notification must be submitted to the Department for review and approval at least 30 days prior to initiating that activity. All such activities shall be the least environmentally damaging, and any temporary dam or other artificial obstruction that is constructed shall only be built from materials such as clean gravel which will cause little or no siltation. All temporary structures shall be removed as soon as they are no longer needed.
35. Bridges, culverts, and other structures shall be installed in a manner that does not impair water flow or wildlife movement.
36. Poured concrete shall be isolated from the flowing stream for a period of at least 30 days after it is poured. During that time, any runoff from the concrete shall not be allowed to enter the stream.
37. Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.

Pollution, Sedimentation, and Litter

38. If the stream's bed or banks have been altered, these shall be returned as nearly as possible to their original configuration and width, without creating additional or future erosion problems.
39. Water containing mud, silt or other materials or pollutants from the project or project related activities shall not be allowed to enter a lake, stream, or riparian/wetland habitats, be placed in locations where they may be washed into a lake, stream, or riparian/wetland habitats, or be placed in locations that may be subjected to high storm flows.

40. Silty/turbid water shall not be discharged into the stream. Erosion/silt control measures shall be utilized throughout all phases of operation where silt laden water from exposed slopes or disturbed areas could enter waters of the state. Any silt settling basins shall be located away from the stream to prevent discolored, silt-bearing water from reaching the stream during any flow level. Erosion control measures shall be monitored during and after each storm event. Modification, repairs, and improvement to erosion control measures shall be made as needed to maintain function. Upon Department determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation shall be halted until effective Department-approved control devices are installed.

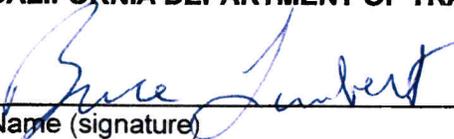
41. Spoil sites shall not be located within a stream/lake, where spoil may be washed back into a stream/lake, or where it will cover aquatic or riparian vegetation.

42. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, construction waste, cement or concrete or washings thereof, asphalt, paint, oil or petroleum products or other materials from any construction, or project related activity of any nature, shall be allowed to contaminate the soil or enter into or be placed where it may be washed by rainfall or runoff into a stream, lake or riparian habitat. When operations are completed, any excess materials or debris shall be removed and properly disposed of.

43. The Applicant shall keep the project site free of litter and waste that could attract predators, and shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws and it shall be the responsibility of the Applicant to ensure compliance.

CONCURRENCE

CALIFORNIA DEPARTMENT OF TRANSPORTATION

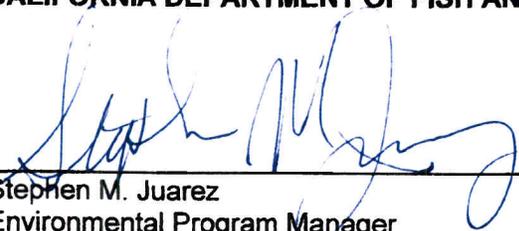

Name (signature)

Date: 10/28/09

Bruce Lambert
Name (printed)

Project Manager
Title

CALIFORNIA DEPARTMENT OF FISH AND GAME


Stephen M. Juarez
Environmental Program Manager
South Coast Region

Date: 2 Nov 09



California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201
www.dfg.ca.gov

ARNOLD SCHWARZENEGGER, Governor
JOHN McCAMMAN, *Director*



April 29, 2010

Bruce Lambert, Project Manager
California Department of Transportation
4050 Taylor Street, MS 322
San Diego, CA 92110

Subject: Amendment of Lake or Streambed Alteration Agreement
Notification No. 1600-2009-0228-R5
Pala Creek Bridge Replacement

Dear Mr. Bruce Lambert,

The Department of Fish and Game ("Department") has received your request to amend Lake or Streambed Alteration Agreement 1600-2009-0228-R5 ("Agreement") and the required fee in the amount of \$168.00 for a minor amendment.

The Agreement is hereby amended as follows.

Condition number 4 is replaced with:

4. The Applicant shall not impact more than 0.60 acre of streambed habitats, consisting primarily of southern willow scrub, but also including some sycamore and non-native species. Permanent impacts shall not exceed 0.17 acre; this includes 0.10 acre of riprap on the abutment banks, plus 0.074 acre of shading, minus the 0.004 acre footprint of the old bridge piers that will be removed from the streambed. Temporary impacts shall not exceed 0.43 acre.

Condition number 5 is replaced with:

5. The Applicant shall compensate for the permanent loss of 0.17 acre of stream habitats by debiting 0.51 acre of created riparian woodland at the Marron mitigation site. The site is located adjacent to the San Luis Rey River just downstream of East Vista Way. It was created in 2002 to compensate for impacts resulting from repairs to the San Mateo Bridge on Interstate 5 (I-5). Approximately 2.8 acres of riparian habitat was created and an additional 1.8 acres of riparian habitat was enhanced through the removal of giant reed and tamarisk; only 1.9 acres were needed for the I-5 bridge project. The additional habitat was created/enhanced to compensate for other Caltrans projects, as appropriate. To date, a total of 2.084 acres of created habitat have been used as compensatory mitigation.

Mr. Bruce Lambert
March 29, 2010
Page 2 of 2

All other conditions in the Agreement remain in effect unless otherwise noted herein.

Please sign and return one copy of this letter to acknowledge the amendment. Copies of the Agreement and this amendment must be readily available at project worksites and must be presented when requested by a Department representative or agency with inspection authority.

If you have any questions regarding this matter, please contact Darren Bradford, Environmental Scientist at (858) 467-4223 or DBradford@dfg.ca.gov.

Sincerely,



Darren Bradford
Environmental Scientist

ACKNOWLEDGEMENT

I hereby agree to the above-referenced amendment.

Print Name: Bruce Lambert

Date: 5/5/10

Signature: Bruce Lambert



DEPARTMENT OF THE ARMY

September 1, 2009

REPLY TO
ATTENTION OF:

Office of the Chief
Regulatory Division

DEPARTMENT OF THE ARMY NATIONWIDE PERMIT AUTHORIZATION

Bruce Lambert, Project Manager
CALTRANS - District 11
Attention: Bruce April
Chief, Environmental Stewardship Branch
North Coast Environmental Division
4050 Taylor Street, MS-242
San Diego, California 92110

Dear Mr. Lambert:

This is in reply to your application (File No. SPL-2009-00663-SJH) dated August 5, 2009, for a Department of the Army Permit to discharge temporary fill into a total of 0.08-acre/220 linear feet (0.04-acre wetlands; 0.04-acre non-wetlands) of waters of the United States. Discharge is associated with temporary access construction activities for the Pala Creek Bridge Replacement Project, on State Route (SR) 76, at Post Mile 23.2, in the community of Pala, San Diego County, California. The proposed work will take place within Pala Creek, a tributary to the San Luis Rey River, which is tributary to the Pacific Ocean.

Based on the information you have provided, the Corps of Engineers has determined that your proposed activity complies with the enclosed terms and conditions of **Nationwide Permit No. 33, Temporary Construction, Access, and Dewatering**, as described in enclosure 1.

Specifically, you are authorized to do the following:

1. Replace existing two-lane seven-span bridge with a four-lane, single-span Box Girder Bridge with a median barrier;
2. Construct a two-lane bridge immediately north of the existing bridge;
3. Attach existing two-lane structure to newly constructed two-lane structure;

4. Remove existing bridge columns to 6 feet below ground surface;
5. Construct temporary low-flow diversion culverts at stream crossing;
6. Temporarily de-water for placement of bridge false-work piles and re-divert water back to streambed downstream of project area;
7. Temporary placement of the following: fiber rolls, erosion control blankets, construction entrances, drainage inlet protection, concrete washouts, contour grading, silt fencing, ESA fencing check dams, and hydraulic mulch;
8. Remove all temporary structures and restore onsite areas of temporary impacts to pre-construction conditions.

Furthermore, you must comply with the following non-discretionary Special Conditions:

Special Conditions:

1. This project is located on tribal lands. Pursuant to the Environmental Protection Agency's (EPA's) Programmatic Conditional Clean Water Act Section 401 Certification of the 2007 Nationwide Permits for projects on applicable tribal lands, Nationwide 33 is pre-certified.
2. Prior to initiating construction in waters of the U.S., the Permittee shall submit to the Corps a complete set of final detailed grading/construction plans showing all work and structures in waters of the U.S. All plan sheets shall be signed, dated, and submitted on paper no larger than 11x 17 inches. No work in waters of the U.S. is authorized until the Permittee receives, in writing (by letter or e-mail), Corps approval of the final detailed grading/construction plans. The Permittee shall ensure that the project is built in accordance with the Corps-approved plans.
3. The Permittee shall clearly mark the limits of the workspace with flagging or similar means to ensure mechanized equipment does not enter preserved waters of the U.S. and riparian wetland/habitat areas shown on Figure 1. Adverse impacts to waters of the U.S. beyond the Corps-approved construction footprint are not authorized. Such impacts could result in permit suspension and revocation, administrative, civil or criminal penalties, and/or substantial, additional, compensatory mitigation requirements

Endangered Species Act:

1. This Corps permit does not authorize you to take any threatened or endangered species, in particular the Least Bell's Vireo and Arroyo Toad or adversely modify its designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g. ESA Section 10 permit, or a

Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply). The enclosed U.S. Fish and Wildlife Service (USFWS) Biological Opinion (BO)(FWS-SDG-08B0728-09F0189, dated June 30, 2009) contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO and with the ESA.

This letter of verification is valid through 01 September 2011. All nationwide permits expire on March 18, 2012. It is incumbent upon you to remain informed of changes to the nationwide permits. If the Corps of Engineers modifies, reissues, or revokes any nationwide permit at an earlier date, we will issue a public notice announcing the changes.

A nationwide permit does not grant any property rights or exclusive privileges. Also, it does not authorize any injury to the property or rights of others or authorize interference with any existing or proposed Federal project. Furthermore, it does not obviate the need to obtain other Federal, state, or local authorizations required by law.

Thank you for participating in our regulatory program. If you have any questions, please contact Stephanie Hall at 213-452-3410 or via e-mail at Stephanie.J.Hall@usace.army.mil.

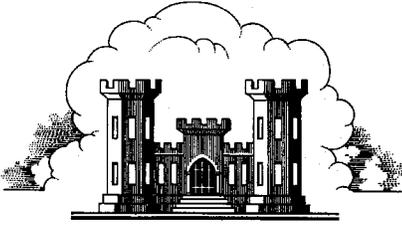
Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at: <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,



Stephanie J. Hall
Senior Project Manager
Regulatory Division

Enclosure



LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

CERTIFICATION OF COMPLIANCE WITH
DEPARTMENT OF THE ARMY NATIONWIDE PERMIT

Permit Number: *SPL-2009-00663-SJH*

Name of Permittee: *CALTRANS - District 11, Bruce Lambert*

Date of Issuance: *September 1, 2009*

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S Army Corps of Engineers
Regulatory Division
ATTN: CESPL-RG-SPL-2009-00663-SJH

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this nationwide permit you may be subject to permit suspension, modification, or revocation procedures as contained in 33 CFR 330.5 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit condition(s).

Signature of Permittee

Date

Enclosure 1: NATIONWIDE PERMIT NUMBER(S) NWP 33 Temporary Construction, Access, and Dewatering. TERMS AND CONDITIONS

1. Nationwide Permit(s) 33, Temporary Construction, Access, and Dewatering. Terms:

Your activity is authorized under Nationwide Permit Number(s) NWP 33 Temporary Construction, Access, and Dewatering, subject to the following terms:

33: Temporary Construction, Access, and Dewatering. Temporary structures, work, and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites, provided that the associated primary activity is authorized by the Corps of Engineers or the U.S. Coast Guard. This NWP also authorizes temporary structures, work, and discharges, including cofferdams, necessary for construction activities not otherwise subject to the Corps or U.S. Coast Guard permit requirements. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding. Fill must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. The use of dredged material may be allowed if the district engineer determines that it will not cause more than minimal adverse effects on aquatic resources. Following completion of construction, temporary fill must be entirely removed to upland areas, dredged material must be returned to its original location, and the affected areas must be restored to pre-construction elevations. The affected areas must also be revegetated, as appropriate. This permit does not authorize the use of cofferdams to dewater wetlands or other aquatic areas to change their use. Structures left in place after construction is completed require a section 10 permit if located in navigable waters of the United States. (See 33 CFR part 322.) Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 27). The pre-construction notification must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions. (Sections 10 and 404)

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

2. Nationwide Permit General Conditions:

The following general conditions must be followed in order for any authorization by an NWP to be valid:

1. *Navigation.*
 - (a) No activity may cause more than a minimal adverse effect on navigation.
 - (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
 - (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. *Aquatic Life Movements.* No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.
3. *Spawning Areas.* Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. *Migratory Bird Breeding Areas.* Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. *Shellfish Beds.* No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.
6. *Suitable Material.* No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
7. *Water Supply Intakes.* No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. *Adverse Effects From Impoundments.* If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. *Management of Water Flows.* To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the preconstruction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. *Fills Within 100-Year Floodplains.* The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. *Equipment.* Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. *Soil Erosion and Sediment Controls.* Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
13. *Removal of Temporary Fills.* Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.
14. *Proper Maintenance.* Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.
15. *Wild and Scenic Rivers.* No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).
16. *Tribal Rights.* No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
17. *Endangered Species.*

(a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected

or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWP. (e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> and <http://www.noaa.gov/fisheries.html> respectively.

18. *Historic Properties.*

(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the preconstruction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete preconstruction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the

applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. *Designated Critical Resource Waters.* Critical resource waters include: NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP's 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWP's 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWP's only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. *Mitigation.* The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require preconstruction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWP's. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWP's.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with

the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. *Water Quality.* Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.
22. *Coastal Zone Management.* In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.
23. *Regional and Case-By-Case Conditions.* The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.
24. *Use of Multiple Nationwide Permits.* The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.
25. *Transfer of Nationwide Permit Verifications.* If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

26. *Compliance Certification.* Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:
 - (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;
 - (b) A statement that any required mitigation was completed in accordance with the permit conditions; and
 - (c) The signature of the permittee certifying the completion of the work and mitigation.
27. *Pre-Construction Notification.*
 - (a) *Timing.* Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process

will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity:

- (1) Until notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
- (2) If 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);
- (4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;
- (5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan;
- (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and
- (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) *Form of Pre-Construction Notification:* The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) *Agency Coordination:*

- (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.
- (2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring

preconstruction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the preconstruction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each preconstruction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

- (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.
- (4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.
- (5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) *District Engineer's Decision:* In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either:

- (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit;
- (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or
- (3) that the project is authorized under the NWP with specific modifications or conditions.

Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

28. *Single and Complete Project.* The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

3. Regional Conditions for the Los Angeles District:

In accordance with General Condition Number 23, "Regional and Case-by-Case Conditions," the following Regional Conditions, as added by the Division Engineer, must be met in order for an authorization by any Nationwide to be valid:

1. For coastal watersheds from the southern reach of the Santa Monica Mountains in Los Angeles County to the San Luis Obispo County/Monterey County boundary, all road crossings must employ a bridge crossing design that ensures passage and/or spawning of steelhead (*Oncorhynchus mykiss*) is not hindered in any way. In these areas, bridge designs that span the stream or river, including designs for pier- or pile-supported spans, or designs based on use of a bottomless arch culvert simulating the natural stream bed (i.e., substrate and streamflow conditions in the culvert are similar to undisturbed stream bed channel conditions) shall be employed unless it can be demonstrated the stream or river does not support resources conducive to the recovery of federally listed anadromous salmonids, including migration of adults and smolts, or rearing and spawning. This proposal also excludes approach embankments into the channel unless they are determined to have no detectable effect on steelhead.
2. For the State of Arizona and the Mojave and Sonoran (Colorado) desert regions of California in Los Angeles District (generally north and east of the San Gabriel, San Bernardino, San Jacinto, and Santa Rosa mountain ranges, and south of Little Lake, Inyo County), no nationwide permit, except Nationwide Permits 1 (Aids to Navigation), 2 (Structures in Artificial Canals), 3 (Maintenance), 4 (Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities), 5 (Scientific Measurement Devices), 6 (Survey Activities), 9 (Structures in Fleeting and Anchorage Areas), 10 (Mooring Buoys), 11 (Temporary Recreational Structures), 20 (Oil Spill Cleanup), 22 (Removal of Vessels), 27 (Stream and Wetland Restoration Activities), 30 (Moist Soil Management for Wildlife), 31 (Maintenance of Existing Flood Control Projects), 32 (Completed Enforcement Actions), 35 (Maintenance Dredging of Existing Basins), 37 (Emergency Watershed Protection and Rehabilitation), 38 (Cleanup of Hazardous and Toxic Waste) and 47 (Pipeline Safety Program Designated Time Sensitive Inspections and Repairs), or other nationwide or regional general permits that specifically authorize maintenance of previously authorized structures or fill, can be used to authorize the discharge of dredged or fill material into a jurisdictional special aquatic site as defined at 40 CFR Part 230.40-45 (sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, and riffle-and-pool complexes).
3. For all projects proposed for authorization by nationwide or regional general permits where prior notification to the district engineer is required, applicants must provide color photographs or color photocopies of the project area taken from representative points documented on a site map. Pre-project photographs and the site map would be provided with the permit application. Photographs should represent conditions typical or indicative of the resources before impacts.
4. Notification pursuant to general condition 27 shall be required for projects in all special aquatic sites as defined at 40 CFR Part 230.40-45 (sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, and riffle-and-pool complexes), and in all perennial waterbodies in the State of Arizona and the Mojave and Sonoran (Colorado) desert regions of California in Los Angeles District (generally north and east of the San Gabriel, San Bernardino, San Jacinto, and Santa Rosa mountain ranges, and south of Little Lake, Inyo County), excluding the Colorado River from Davis Dam downstream to the north end of Topock and downstream of Imperial Dam (Federal Register dated March 12, 2007 (72 FR 11092) - regional conditions requiring notification do not apply to Nationwide Permit 47).
5. Notification pursuant to general condition 27 shall be required for projects in all areas designated as Essential Fish Habitat by the Pacific Fishery Management Council (i.e., all tidally influenced areas - Federal Register dated March 12, 2007 (72 FR 11092), regional conditions requiring notification do not apply to Nationwide Permit 47).
6. Notification pursuant to general condition 27 shall be required for projects in all watersheds in the Santa Monica Mountains in Los Angeles and Ventura counties bounded by Calleguas Creek on the west, by Highway 101 on the north and east, and by Sunset Boulevard and Pacific Ocean on the south (Federal Register dated March 12, 2007 (72 FR 11092) - regional conditions requiring notification do not apply to Nationwide Permit 47).
7. Individual permits shall be required for all discharges of fill material in jurisdictional vernal pools.
8. Individual permits shall be required in Murrieta Creek and Temecula Creek watersheds in Riverside County for new permanent fills in perennial and intermittent watercourses otherwise authorized under NWP's 29, 39, 42 and 43, and in ephemeral watercourses for these NWP's for projects that impact greater than 0.1 acre of waters of the United States. In

addition, when NWP 14 is used in conjunction with residential, commercial, or industrial developments the 0.1 acre limit would also apply.

9. Individual permits shall be required in San Luis Obispo Creek and Santa Rosa Creek in San Luis Obispo County for bank stabilization projects, and in Gaviota Creek, Mission Creek and Carpinteria Creek in Santa Barbara County for bank stabilization projects and grade control structures.
10. Notification pursuant to general condition 27 shall be required for projects in the Santa Clara River watershed in Los Angeles and Ventura counties, including but not limited to Aliso Canyon, Agua Dulce Canyon, Sand Canyon, Bouquet Canyon, Mint Canyon, South Fork of the Santa Clara River, San Francisquito Canyon, Castaic Creek, Piru Creek, Sespe Creek and the mainstem of the Santa Clara River (Federal Register dated March 12, 2007 (72 FR 11092) - regional conditions requiring notification do not apply to Nationwide Permit 47).

4. Further information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - (a) This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - (b) This permit does not grant any property rights or exclusive privileges.
 - (c) This permit does not authorize any injury to the property or rights of others.
 - (d) This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - (a) Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - (b) Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - (c) Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - (d) Design or construction deficiencies associated with the permitted work.
 - (e) Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
 - (a) You fail to comply with the terms and conditions of this permit.
 - (b) The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - (c) Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 330.5 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. This letter of verification is valid for a period not to exceed two years unless the nationwide permit is modified, reissued,

revoked, or expires before that time.

7. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition H below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
8. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

In Reply Refer To:
FWS-SDG-08B0728-09F0189

JUN 30 2009

Mr. Chris White, Chief
Environmental Resource Studies
Department of Transportation, District 11
4050 Taylor Street
San Diego, California 92110

Attention: Sue Scatolini

Subject: Formal Section 7 Consultation on the State Route 76/Pala Creek Bridge Replacement, Unincorporated Northern San Diego County, California

Dear Mr. White:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the California Department of Transportation's (Caltrans) proposed State Route 76 (SR 76)/Pala Creek Bridge Replacement Project (Project) located in unincorporated northern San Diego County, California, and its effects on the federally endangered least Bell's vireo (*Vireo bellii pusillus*, "vireo") and arroyo toad [*Bufo* (= *Anaxyrus*) *californicus*], as well as designated vireo critical habitat, in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). The project is receiving Federal funding through the Federal Highway Administration (FHWA), and Caltrans has assumed FHWA's responsibilities under the Act for this consultation in accordance with Section 6005 the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) 2005, as described in the National Environmental Policy Act (NEPA) Delegation Pilot Program Memorandum of Understanding between FHWA and Caltrans (effective July 1, 2007) and codified in 23 U.S.C. 327(a)(2)(A).

Based on our review of the Project, our knowledge of endangered and threatened species distribution in southern California, and an assessment of the potential impacts of the Project on listed species in the general project area, we have determined that the Project will not affect the endangered San Diego ambrosia (*Ambrosia pumila*) and southwestern willow flycatcher (*Empidonax traillii extimus*) or the threatened thread-leaved brodiaea (*Brodiaea filifolia*) and coastal California gnatcatcher (*Polioptila californica californica*). Therefore, these species are not addressed in this biological opinion. Although critical habitat has been designated for the arroyo toad, none occurs in San Diego County. Therefore, the proposed project will not affect designated critical habitat for the arroyo toad.

**TAKE PRIDE
IN AMERICA** 

This biological opinion is based on the information from the following sources: 1) the *Biological Assessment for State Route 76/Pala Creek Bridge Replacement* (Caltrans 2009); and 2) letters, memorandums, electronic mail messages, and maps obtained during formal and informal consultation between our respective staff.

BIOLOGICAL OPINION

CONSULTATION HISTORY

An informal consultation (FWS-SDG-4487.2) was conducted for an emergency repair project that was completed in 2007 to temporarily stabilize the damaged bridge by placing riprap around the columns (Service 2005a). Your December 3, 2008, request for formal consultation was received in our office on December 4, 2008. The Service, Caltrans, and the Pala Tribal representative participated in a site visit on February 26, 2009, to assess potential impacts from project access that will cross a mitigation site for the Pala Gaming Facility. We also attended a site visit to Caltrans' Marron Mitigation Bank to determine whether suitable arroyo toad foraging and/or aestivation habitat occurred on the property. A complete record of this consultation is on file at the Carlsbad Fish and Wildlife Office (CFWO).

DESCRIPTION OF THE PROPOSED ACTION

Caltrans proposes to replace the existing two-lane seven-span Pala Creek Bridge, which was built in 1938, with a four-lane wide, single-span Box Girder Bridge with a median barrier. Construction is expected to occur between September 2010 and January 2012. The existing two-lane bridge has four bents with four narrow columns in each bent. A new two-lane bridge will be built immediately north of the existing bridge, then traffic will be moved to the new bridge while the old bridge is demolished and the remainder of the new bridge is built in its place. At the end of construction, the new bridges will be attached into one bridge, which will be striped for one 12-foot (ft) [3.66-meter (m)] lane in each direction, two 6-ft (1.83-m) wide inside shoulders, a 2-ft (0.61-m) high concrete barrier, and two 8-ft (2.44-m) wide outside shoulders. All columns of the old bridge will be removed down to 6 ft (1.83 m) below ground surface; therefore, there will be a net decrease of fill/structures in the streambed. To accommodate the traffic shift to the north from construction of the new bridge, SR 76 will be widened for approximately 0.25 mile (mi) to 0.50 mi [0.40 kilometer (km) to 0.80 km] on each side of the bridge.

Areas outside of the proposed cut and fill for the widened lanes will be used for access and staging primarily on the northeastern side of the bridge and immediately south of the bridge. The same access route used during the 2007 emergency project, around the back of the casino and down the slope southwest of the bridge, is proposed for access from the south. The northwestern and southeastern banks of the creek will not be impacted, except immediately adjacent to the bridge.

During construction activities along Pala Creek, low flow stream diversion culverts may be used at crossings and to control debris that may fall into the channel. If the creek contains water at the time of construction, limited dewatering may be needed during placement of falsework piles, and water will be placed back in the streambed downstream of the Project.

Project Location and Action Area

The Project is located along Pala Creek and SR 76, upstream of the San Luis Rey River (Figure 1). The action area encompasses 14.96 acres (ac) [6.05 hectare (ha)] and was defined as between the main casino entrance on the west to approximately 0.33 mi (0.53 km) east of the Pala Creek Bridge along SR 76, extending 100 ft (30.48 m) on either side of the road and along Pala Creek from the Pala Mission Road at the northern end to the confluence with the San Luis Rey River (Figure 2). This delineation approximates the extent of anticipated construction-related disturbance. The action area also includes the Marron Mitigation Bank (Marron), located north of and parallel to SR-76 from Post Mile 8.9 to Post Mile 9.2, and the Groves Mitigation Bank (Groves), located at the southwest corner of SR-76 and Olive Hill Road in the community of Bonsall (Figure 3). Both properties are located along the San Luis Rey River west of the Project. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon this action area.

Conservation Measures

The proposed action includes the following conservation measures that will be implemented as part of the development of the Project to avoid and minimize potential adverse effects to listed species.

General

1. All native habitats outside the Project limits will be designated as Environmentally Sensitive Areas (ESAs) on project plans. ESAs will be temporarily fenced during construction with orange plastic snow fence. No access will be allowed within the ESAs to avoid additional impacts to the vireo and arroyo toad.
2. Lighting used at night for construction will be shielded away from ESAs to minimize impacts to vireo and arroyo toad outside the Project footprint.
3. Permanent impacts to 0.10 ac (0.04 ha) of southern willow scrub (including disturbed) and 0.34 ac (0.14 ha) of elderberry savannah used by the vireo, and likely for movement or aestivation by the arroyo toad, will be offset by preservation of 0.97 ac (0.49 ha) of wetland credits at Marron (Figure 3).

4. Permanent impacts to 0.01 ac (0.004 ha) of disturbed coastal sage scrub and 0.23 ac (0.09 ha) of non-native grassland, likely used for foraging and/or aestivation by the arroyo toad, will be offset by preservation of 0.24 ac (0.10 ha) of upland credits at Groves (Figure 3).
5. Temporary impacts to 0.03 ac (0.01 ha) of coastal sage scrub, 0.41 ac (0.17 ha) of elderberry savannah, 0.32 ac (0.13 ha) of non-native grassland, likely used by arroyo toad on the terraces and banks, will be revegetated with coastal sage scrub species, native grasses, and native trees following completion of the construction.
6. Temporary impacts to 0.25 ac (0.10 ha) of southern willow scrub (including disturbed) and 0.04 ac (0.02 ha) of unvegetated Waters of the U.S., which includes vireo and/or arroyo toad habitat within the creek, will be revegetated with willow, mulefat, and cottonwood cuttings and with a riparian seed mixture. Due to the high flood flow nature and scour within the creek, southern willow scrub habitat in the creek is likely to remain as sparse as the current conditions.
7. Temporary impacts to approximately 0.05 ac (0.02 ha) of bare ground on an upland berm within a previously preserved area set aside by the Pala Gaming Facility will be seeded with a native grass, mulefat, and coastal sage scrub seed mixture.
8. A qualified Caltrans biologist or Service-approved biologist¹ (the Project Biologist) will be responsible for overseeing compliance with protective measures for the vireo, arroyo toad, and their habitats during clearing and construction activities within the action area. The Project Biologist will be familiar with the habitats, plants, and wildlife of Pala Creek and the San Luis Rey River watershed and maintain communications with the Resident Engineer (RE) to ensure that issues relating to biological resources are appropriately managed. The Project Biologist will perform the following duties:
 - a. Review grading plans, implement all protection measures for sensitive biological resources, and monitor ongoing work.
 - b. Designate areas that need temporary fencing.
 - c. Monitor the work area weekly to ensure that construction-related activities do not generate excessive amounts of dust or cause disturbances. Erosion control measures will be regularly checked by project inspectors, the Project Biologist, and the RE.

¹ A Service-approved biologist will be able to identify vireo and arroyo toad visually and vocally and will have a minimum of 20 hours of survey experience for these species. To receive approval, the Project Biologist will submit his/her resume and references to the Service for review and approval at least 10 days prior to initiation of project-related activities.

- d. Monitor construction activities within designated areas during critical times, such as vegetation removal and the installation of Best Management Practice (BMP) and ESA fencing, to ensure that all avoidance and minimization measures are properly constructed and followed. The Project Biologist will immediately notify the RE to halt all associated Project activities that are not in compliance with the project as described in this biological opinion. In such an event, the RE will halt all construction activities and contact the Service within 24 hours.
- e. Submit weekly reports during initial grading and clearing, and when construction occurs near sensitive biological resources; and provide a final report documenting compliance with avoidance and minimization measures within 60 days of Project completion.

Arroyo Toad

- 9. Caltrans will develop an arroyo toad translocation monitoring program to be implemented during all construction activities that have the potential to adversely affect the arroyo toad. This program will be coordinated with the Service and finalized prior to initiation of construction activities. This program will be reviewed and approved by the Service and will be finalized prior to initiation of construction activities. The program will include the following requirements:
 - a. The Project Biologist will monitor the arroyo toad exclusion fence integrity weekly during the active season for the arroyo toad (March 15 to July 31), and monthly outside of the active season for the arroyo toad (August 1 to March 14). Problem areas in the fencing will be repaired within five working days.
 - b. If the exclusion fencing is found damaged, thereby allowing arroyo toads access to the impact area, the Project Biologist will conduct arroyo toad surveys within the fenced area per Conservation Measure 12 prior to any additional construction activities occurring in the area.
 - c. The Project Biologist will monitor all groundbreaking activities that occur within areas demarcated with arroyo toad exclusion fencing to ensure compliance with the Conservation Measures and Terms and Conditions of the biological opinion, salvage and relocate captured individuals, and quantify any take of arroyo toads that may have occurred as a result of the activities.
 - d. The Project Biologist will maintain a complete record of all arroyo toads encountered and relocated. Monthly letter reports (including photographs of impact areas) will be submitted to the Service during all construction activities within areas demarcated by arroyo toad exclusion fencing. The monthly reports will document general compliance

with all conditions and report all incidents not in compliance with this biological opinion. The reports will also outline the duration of arroyo toad monitoring, the location of construction activities, the type of construction that occurred, and equipment used. These reports will specify numbers, location, and sex of arroyo toads (if present), observed arroyo toad behavior, and remedial measures employed to avoid, minimize, and offset impacts to arroyo toads.

10. Prior to clearing, grubbing, and construction activities, the Project Biologist will monitor arroyo toad breeding activity in those project areas containing or adjacent to breeding habitat. The Project Biologist will determine when egg clutches or larvae are no longer present in the waterway (generally late May at lower elevation, June at higher elevation). When sign of breeding is no longer evident, an exclusionary fence will be installed and clearance surveys initiated.
11. Prior to clearing, grubbing, and construction activities, temporary silt fencing will be installed around the entire perimeter of the temporary impact areas on each side of Pala Creek, leaving the streambed open (Figure 4). The intent of the fence is to fully contain the area(s) to be impacted and to remove and exclude arroyo toads from the work areas. Exclusionary fence in aestivation habitat will not be installed prior to May 1. The Project Biologist will be present during the exclusionary fence installation, reconfigurations, breach repairs, and weekly during the breeding season.

The fence will consist of fabric or plastic at least 2-ft (0.61-m) high, staked firmly to the ground with the lower 1 ft of material stretching outward along the ground and secured with a continuous line of gravel bags. No digging or vegetation removal will be associated with the installation of this fence, and all materials will be removed when the Project is complete. The removal of some vegetation, without disturbing the soil, within the Project footprint to improve visibility and collection of arroyo toads is acceptable. All fencing will be removed following construction. Ingress and egress of construction equipment and personnel will be kept to a minimum, but when necessary, equipment and personnel will use a single access point to the site and to the streambed. This access point will be as narrow as possible and will be closed off by exclusionary fencing each night and when project personnel are not on the site.

12. Prior to construction activities, but after exclusionary fencing has been installed, the Project Biologist will perform a minimum of six protocol level surveys for arroyo toads inside the exclusionary fence and remove all arroyo toads found within its perimeter. The Project Biologist will continue until there have been 2 consecutive nights without arroyo toads inside the fencing. Any breach in the exclusionary fence during times when arroyo toads are active above ground will result in repeating the 3-day minimum clearance surveys for that particular area. Surveys will be conducted during the appropriate climatic conditions

during the appropriate time of day or night to maximize the likelihood of encountering arroyo toads.

13. If climatic conditions are not appropriate for arroyo toad movement during the surveys, the Project Biologist may attempt to illicit a response from the arroyo toads, during nights (*i.e.*, at least 1 hour after sunset) with temperatures above 50 degrees Fahrenheit, by spraying the Project area with water to simulate a rain event.
14. Whether or not a simulated precipitation event is done, arroyo toads found within the Project footprint will be captured and translocated by the Project Biologist to the closest area of suitable habitat. The Project Biologist will coordinate with the Service on where the arroyo toads will be placed.
15. To avoid transferring disease or pathogens between aquatic habitats during surveys and handling of arroyo toads, the Biologist will follow the Declining Amphibian Population Task Force's Fieldwork Code of Practice (DAPTF 1998), or newer version when available.
16. If construction will occur during the arroyo toad breeding season while water is flowing in the creek or has ponded within the action area, the Project Biologist will monitor potential arroyo toad breeding habitat to determine whether egg clutches, larvae, or juveniles are present in the waterway. If eggs, larvae, or juvenile arroyo toads are found, work will cease until sign of breeding is no longer evident.
17. Project-related vehicle travel and construction activities off of the paved road will be limited to daylight hours as arroyo toads can be found on roadways primarily at night.
18. Standard construction practices will be used to minimize the potential for erosion and sedimentation and to control fugitive dust during construction by implementing BMPs (*e.g.*, straw bales, silt fences, and water bars). All straw material will be weed free. No sediment or debris will be allowed to enter the creek. Proper routine maintenance of all vehicles and equipment will be implemented to prevent leaks and ensure efficient operation.
19. Fueling of construction equipment will only occur at a designated area at a distance greater than 100 ft (30.48 m) from drainages and associated plant communities to preclude adverse water quality impacts. Fuel cans and fueling of tools will take place outside the drainages.
20. All fuel spills will be cleaned up immediately. Major fuel spills will be contained by constructing an earthen dike around the spill and applying a petroleum absorbent to contain the spill. All fuel spills will be cleaned up to pre-spill levels.

Least Bell's Vireo

21. Permanent impacts to 0.32 ac (0.13 ha) of vireo critical habitat supporting primary constituent elements (PCEs) will be offset through the use of 0.97 ac (0.49 ha) of wetland credit at Marron and 0.24 ac (0.10 ha) of upland credit at the Groves in accordance with Conservation Measures 3 and 4 above.
22. All aboveground vegetation will be removed from the impact areas between September 16 and March 14, outside the vireo breeding season of March 15 through September 15. Work may begin before September 16 if the Project Biologist demonstrates to the satisfaction of the Service that all nesting is complete.
23. Pile driving will be completed outside of the vireo breeding season (March 15 to September 15).
24. Temporary plywood walls along portions of the right-of-way south of SR 76 and muffled equipment will be used, as feasible, to minimize noise levels during the vireo breeding season.

STATUS OF THE SPECIES

Arroyo toad

The Service listed the arroyo toad as endangered on December 16, 1994 (59 FR 63264). Critical habitat was designated for the arroyo toad on February 7, 2001 (66 FR 9474), but it was vacated by court order on October 30, 2002, and remanded for re-designation. Critical habitat for the arroyo toad was re-proposed on April 28, 2004 (69 FR 23254), and it was finalized on April 13, 2005 (70 FR 19562); no critical habitat was designated within the Project area. A recovery plan for the arroyo toad was completed on September 24, 1999 (Service 1999). According to Frost *et al.* (2006) and Crother (2008), the currently recognized name for the arroyo toad is *Anaxyrus californicus*.

The arroyo toad was historically found in California from Monterey County to San Diego County and southward to the vicinity of San Quintín, Baja California, Mexico. They have been extirpated from an estimated 75 percent of their former range in the United States and now occur primarily in small, isolated areas in the middle to upper reaches of streams. The current distribution in the United States is from the Salinas River Basin in Monterey County, south to the Tijuana River and Cottonwood Creek Basin along the border with Mexico. Although the arroyo toad occurs principally along coastal drainages, it also has been recorded at several locations on the desert slopes of the Transverse Range (Patten and Myers 1992, Jennings and Hayes 1994). The current elevational range for most arroyo toad populations in San Diego County is about 1,000 to 4,600 ft (305 to 1,402 m), although they were historically known to extend into the

lower portions of most river basins (Service 1999), and populations on Camp Pendleton extend down to just above sea level (Holland and Goodman 1998).

Please refer to the biological opinion for Caltrans' widening of SR 76 from Melrose Drive to South Mission, *Formal Section 7 Consultation on the State Route 76 Melrose Drive to South Mission Highway Improvement Project* (FWS-SDG-08B0136-08F0900, Service 2008) for detailed information on arroyo toad biology, ecology, range-wide status, threats, and conservation needs. Also, see the *Arroyo Toad (*Bufo microscaphus californicus*) Recovery Plan* (Service 1999) at: http://ecos.fws.gov/docs/recovery_plan/990724.pdf, for additional information on arroyo toad.

Least Bell's Vireo

In response to the dramatic decline of the vireo population and widespread loss of its riparian habitat, the vireo was listed as endangered on May 2, 1986 (51 FR 16474). Critical habitat was designated for the vireo on February 2, 1994 (59 FR 4845), and encompasses about 38,000 ac (15,379 ha) at 10 locations in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego counties. PCEs that support feeding, nesting, and sheltering are essential to the conservation of the least Bell's vireo and include riparian woodland vegetation that generally contains both canopy and shrub layers and some associated upland habitats (Service 1994b). A draft recovery plan was published in March 1998 (Service 1998); a final plan has not been approved. We completed a 5-year review for vireo in September 2006 in which we indicated that, due to new information on the species and an improved understanding of ongoing recovery actions to reduce threats, the recovery goals and strategies should be modified and refined. In addition, we recommended that the vireo should be downlisted from endangered status to threatened status because of a ten-fold increase in population size since its listing in 1986, expansion of locations with breeding vireo throughout southern California, and conservation and management of suitable breeding habitat throughout its range (Service 2006).

The vireo historically occupied willow riparian habitats from Tehama County, in northern California, southward to northwestern Baja California, Mexico, and as far east as Owens Valley, Death Valley, and the Mojave River (Grinnell and Miller 1944, Service 1998). Except for a few outlying pairs, the vireo is currently restricted to southern California south of the Tehachapi Mountains and northwestern Baja California [Wilbur 1980, Garrett and Dunn 1981, Franzreb 1989, U.S. Geological Survey (USGS) 2002]. Greater than 99 percent of the remaining vireos occur in southern California, although the populations are now more evenly distributed in southern California with 54 percent of the total population occurring in San Diego County and 30 percent of the population occurring in Riverside County (Service 2006); however, there has been only a slight shift northward in the species' overall distribution. Thus, despite a significant increase in overall population numbers, the population remains restricted to the southern portion of its historic range (Service 2006).

Please refer to the biological opinion for Caltrans' widening of SR 76 from Melrose Drive to South Mission, *Formal Section 7 Consultation on the State Route 76 Melrose Drive to South Mission Highway Improvement Project* (FWS-SDG-08B0136-08F0900, Service 2008) for detailed information on vireo biology, ecology, range-wide status, threats, and conservation needs. Also see, the *Draft Recovery Plan for the Least Bell's Vireo* (Service 1998) at http://ecos.fws.gov/docs/recovery_plan/980506.pdf and the *Least Bell's Vireo (Vireo bellii pusillus) 5-Year Review Summary and Evaluation* for an updated status review (Service 2006) for trends.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR §402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation, and the impacts of State and private actions which are contemporaneous with the consultation in progress.

Project Location and Vegetation Communities

The Project is located along SR 76 and Pala Creek, a tributary of the San Luis Rey River. The topography of the area is a broad, level floodplain and valley floor with flood terraces. The predominant soil type that underlies the creek, adjacent terrace, and much of the slopes, is Riverwash. Tujunga sand with 0 to 5 percent slopes is also present along the eastern bank of the creek. These two soil series have positive hydric ratings on the National List of Hydric Soils.

Nine different vegetation communities plus developed areas occur within the project footprint portion of the action area (Table 1, Figure 5). The streambed area is a combination of unvegetated Waters of the U.S., sparse southern willow scrub, and bare terraces on the banks. The area west of the bridge is ornamental or disturbed habitat near the casino, while the area east of the bridge supports elderberry savannah, non-native woodland, disturbed coastal sage scrub, non-native grassland, and disturbed southern willow scrub. In addition to the habitats listed below, several mature coast live oak (*Quercus agrifolia* var. *agrifolia*), cottonwood (*Populus fremontii*), and western sycamore (*Platanus racemosa*) occur within the action area (Figure 5).

Table 1. Permanent and Temporary Impacts to Vegetation Communities in Project Footprint

Vegetation Community	Permanent Impact*s		Temporary Impacts**	
	Acres	Hectares	Acres	Hectares
Southern willow scrub (including disturbed)	0.10	0.04	0.25	0.10
Elderberry savannah	0.34	0.14	0.41	0.17
Disturbed coastal sage scrub	0.01	0.004	0.03	0.01
Non-native grassland	0.23	0.09	0.32	0.13
Non-native woodland	0.12	0.05	0.17	0.07
Disturbed habitat	0.09	0.04	0.12	0.05
Ornamental	0.37	0.15	0.17	0.07
Bare ground	0.02	0.01	0.29	0.12
Developed	1.24	0.50	0.49	0.20
Unvegetated water of the U.S.	0.00	0.00	0.04	0.02
TOTAL IMPACTS	2.52	1.02	2.29	0.94

* Permanent impacts will be offset through the use of credits at Marron and/or Groves.

** Temporary impacts will be offset through the onsite restoration of impacted areas to pre-impact condition with native species.

A delineation of Federal jurisdictional wetlands within Pala Creek was completed in April 2008. Approximately 0.07 ac (0.03 ha) of jurisdictional Waters of the U.S., including approximately 0.04 ac (0.02 ha) of wetland, were identified within the Project limits. The California Department of Fish and Game (CDFG) regulates impacts to streambeds that extend from the bed to the bank of the stream. Therefore, all of Pala Creek from the bed of the stream to the banks is considered to be within the jurisdiction of the CDFG.

Status of the Species within the Action Area

Arroyo Toad

During the 1995 surveys for the Pala Gaming Facility, arroyo toad larvae were found within pools in Pala Creek and two adult male arroyo toads were heard calling at the confluence of the creek and San Luis Rey River. Another male was heard approximately 492-820 ft (150-250 m) east of the site (Tierra Environmental Services 1999, 2000).

Protocol arroyo toad surveys were conducted to determine the presence or absence of arroyo toads in the action area in 2006 and 2008 and general surveys for arroyo toads were completed in 2005 and 2006 after construction of the arroyo toad exclusionary fencing was completed around the work area for the Pala Creek Bridge Emergency Bridge Repair and Roadway Rehabilitation Project (Service 2005a). Surveys followed Service survey protocol for the arroyo toad (Service 1999).

No arroyo toads were detected on Pala Creek between Pala Mission Road upstream of SR 76 and the San Luis Rey River during the 2006 and 2008 protocol surveys, or during surveys completed in 2005 and 2006, after construction of the arroyo toad exclusionary fencing was completed around the work area for the Pala Creek Bridge Emergency Stabilization Project. Pala Creek is

shallow and has intermittent flow. The flow during smaller rainfall events often does not extend all the way to the San Luis Rey River. Tadpoles and adults of Pacific tree frog (*Pseudacris regilla*) and western toad (*Bufo boreas*) were identified during protocol surveys; however, no adults, tadpoles or eggs of arroyo toads were observed on site (Caltrans 2009).

Least Bell's Vireo and Designated Critical Habitat

West of Lake Henshaw, the San Luis Rey River flows through oak woodlands, chaparral, and coastal sage scrub canyons as it passes through three Indian Reservations. The native plant communities have been (and continue to be) gradually replaced by citrus and avocado orchards, cattle and horse ranches, golf courses, and resort condominiums (Faber *et al.* 1989). Farther west and downstream, much of the natural San Luis Rey River flood plain has been converted into agricultural fields, high- and medium-density residential areas, commercial zones, and industrial parks. Despite the habitat conversion/loss that has occurred, the San Luis Rey River and its tributaries continue to support substantial vireo populations.

The action area is within the San Luis Rey Area of critical habitat for the vireo (Figure 6). Approximately 6,000 ac (2,428 ha) of critical habitat exist within the San Luis Rey Area. Approximately 7.80 ac (3.16 ha) occur within the action area with 0.39 ac (0.16 ha) occurring within the direct Project footprint. Approximately 233 vireo territories are known from the San Luis Rey River. Focused surveys for the vireo within the action area and adjacent habitat were conducted in 2006 using the methodology recommended by the Service (2001). Three singing males were identified within the Project vicinity. All three were found primarily in the upper terrace surrounding Pala Creek in habitats that are not typical for vireo. The habitat ranged from disturbed southern willow scrub with an understory of non-native upland grasses to elderberry savannah that had non-native grasses with sparsely scattered Mexican elderberry shrubs and a few scattered cottonwood and coast live oak trees. Vegetation in the creek itself is sparse southern willow scrub; the vireos used this habitat, but they did not spend the majority of their time there. One of the vireo territories was north of SR 76 and east of the Pala Creek and the other two were closer to the San Luis Rey River east of Pala Creek and south of SR 76 (Figure 7).

Offsite Preservation Areas

Marron Mitigation Bank

Marron is a 10.50 ac (4.25 ha) parcel located north of and parallel to SR-76 from Post Mile 8.9 to Post Mile 9.2 (see Figure 3). The San Luis Rey River runs parallel to the site directly north. The property is bordered to the north and northeast by agriculture and to the west by the Feck Mitigation Site (City of Oceanside). Marron has habitat suitable for vireo breeding and foraging, as well as arroyo toad foraging and aestivation along a sandy bench within the southern willow scrub creation and enhancement area. Approximately 2.43 ac (0.98 ha) of wetland credits and

4.14 ac (1.68 ha) of coastal sage scrub credits are available for use at Marron. Caltrans currently owns and manages the property to maintain conservation values.

Groves Mitigation Bank

The Groves is located in proximity to the San Luis Rey River, which supports a significant arroyo toad population. Although the Groves property does not provide breeding habitat for the arroyo toad, it does contain upland habitat appropriate for burrowing, dispersing and foraging. Caltrans currently owns and manages the property to maintain conservation values.

Existing Consultations in the Action Area

Two previous section 7 consultations, a formal consultation with the National Indian Gaming Commission and an informal consultation with Caltrans, were completed within the last nine years to address impacts to the arroyo toad within the action area.

Informal consultation FWS-SDG-4487.2 for the Pala Creek Bridge Emergency Bridge Repair and Roadway Rehabilitation Project on State Route 76. This informal consultation (FWS-SDG-4487.2), issued in 2005, addressed impacts to the arroyo toad within the emergency Pala Creek bridge repair and SR 76 rehabilitation project within the action area (Service 2005a). The project placed riprap around the existing bridge columns within Pala Creek to prevent further scouring. Minor excavations occurred around the columns to facilitate the placement of riprap and a temporary access road was graded through the existing Pala Gaming Facility buffer area on the west side of the creek. In July 2005, Caltrans installed arroyo toad exclusion fence around the project footprint. Clearance surveys were conducted by an approved biologist within the exclusion fence, but no arroyo toads were detected. The project was not implemented in 2005. An amendment (FWS-SDG-4487.3) was issued in 2006, changing the implementation period to between September 15, 2006, and March 1, 2007. No arroyo toads were detected within the arroyo toad exclusion fence during clearance surveys in 2006. No take of arroyo toads was authorized for this project. Banks and terraces were re-contoured to pre-construction conditions.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat that will be added to the environmental baseline, along with the effects of other activities that are interrelated and interdependent with that action. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.

Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

This biological opinion does not rely on the regulatory definition of “destruction or adverse modification” of critical habitat at 50 CFR 402.02. Instead, we have relied upon the statute and the August 6, 2004, Ninth Circuit Court of Appeals decision in *Gifford Pinchot Task force v. U.S. Fish and Wildlife Service* (No. 03-35279) to complete our effects analyses for critical habitat.

The existing bridge has four bents with four narrow columns in each bent. Two bents are within the Waters of the U.S. and two are in the streambed. Columns of the old bridge will be removed down to 6 ft (1.83 m) below ground surface and backfilled with native material from the Project area. The new bridges will span the creek; therefore, there will be a net reduction of fill within Pala Creek of 0.004 ac (0.002 ha) from removal of the two bents within the Waters of the U.S. allowing the water to flow more naturally through the streambed.

The Project will result in permanent and temporary impacts to upland and wetland communities (Figure 5). Permanent impacts will result from widening of the SR 76 lanes approaching the bridge and from the riprap placed on the abutments of the bridge. Riprap currently on the existing abutment will be augmented with additional riprap for the new bridge abutment. Temporary impacts will result from access, equipment staging, and removal of the existing bridge and riprap.

Conservation Measures will be implemented by Caltrans to avoid or minimize potential adverse effects to listed species and their habitat. Permanent impacts will be offset through the offsite preservation of wetland habitat at Marron, suitable for use by arroyo toad and vireo; and the preservation of upland habitat at Groves, suitable for arroyo toad foraging and aestivation. In addition, all temporary impacts will be revegetated with native vegetation and much of the temporarily impacted areas are expected to resprout. Willow and mulefat cuttings and a riparian seed mix will be placed within the creek; the slopes of the creek will be seeded with southern willow scrub species and mulefat. Due to the high flood flows and scour in this creek, it is unlikely that mature riparian habitat will form; only sparse southern willow scrub is expected. The slopes of SR 76 and the temporary access areas will be revegetated with oak, cottonwood, and sycamore trees with an understory of native grasses and mulefat. Due to the lack of irrigation water in this area, all hydroseeding and planting will be done between November and January, and the trees will be watered with tree drip irrigation bags.

Arroyo Toad

No arroyo toads were detected on Pala Creek between the Pala Mission Road upstream of SR 76 and the San Luis Rey River during the 2006 and 2008 protocol surveys or during surveys completed in 2005 and 2006 after construction of the arroyo toad exclusionary fencing around

the work area for the Pala Creek Bridge Emergency Stabilization Project (FWS-SDG-4487.2). However, arroyo toads have been detected in Pala Creek downstream of the Project in the past and likely use the creek for breeding when sufficient water is present and upland habitats outside of the creek banks for foraging and/or aestivation.

Because construction activities are proposed during the arroyo toad breeding season (March 15-July 31) within suitable breeding habitat, Caltrans has committed to installing arroyo toad exclusionary fencing around the Project footprint and conducting a minimum of six protocol-level surveys. If arroyo toads are found, the Project Biologist will move the arroyo toads to a location determined in the arroyo toad translocation monitoring program (Conservation Measure 9).

Direct Effects

Arroyo toads could be killed or injured during construction activities involving excavation or filling activities or by simply driving equipment through arroyo toad habitat where toads are burrowed into the soil. Toads moving through the action areas could also be killed or injured via trampling by work crews. In addition, the effects related to the translocation of arroyo toads are unknown. Handling procedures are detailed in the *Declining Amphibian Population Task Force's Code of Practice* (1998). Following these procedures, as Caltrans has committed, should reduce or eliminate direct death or injury if arroyo toads react uniformly. However, eliciting the emergence of arroyo toads and translocating them could result in unknown physiological, ecological and biological impacts, because the translocation effort could occur anytime of the year including mid-aestivation.

No permanent direct impacts will occur within the creek bed or in arroyo toad breeding habitat. Temporary impacts to approximately 0.04 ac (0.02 ha) of unvegetated Waters of the U.S. will occur while the four existing bridge columns are removed.

Direct impacts to suitable upland aestivation habitat will result from the permanent loss of approximately 0.10 ac (0.04 ha) of southern willow scrub (including disturbed), 0.34 ac (0.14 ha) of elderberry savannah, 0.01 ac (0.004 ha) of disturbed coastal sage scrub, and 0.23 ac (0.09 ha) of non-native grassland. Temporary disturbance will impact an additional 0.25 ac (0.10 ha) of southern willow scrub, 0.41 ac (0.17 ha) of elderberry savannah, 0.03 ac (0.01 ha) of disturbed coastal sage scrub, and 0.32 ac (0.13 ha) of non-native grassland that are suitable for arroyo toad aestivation.²

Implementation of Conservation Measures 3 and 4 will offset permanent impacts to suitable arroyo toad upland aestivation habitat through the preservation of 0.44 ac (0.18 ha) of wetland

² Upland habitats, which the arroyo toad may use for aestivation, include coastal sage scrub, non-native grassland, and agricultural land.

habitat with a sandy substrate suitable for arroyo toad aestivation at Marron and 0.24 ac (0.10 ha) of arroyo toad upland habitat at Groves (Table 2).

Table 2. Proposed Offsite Conservation for Permanent Impacts

Vegetation Community	Permanent Impacts		Vireo and Vireo Critical Habitat Conservation*		Arroyo Toad Upland Habitat Conservation**	
	Acres	Hectares	Acres	Hectares	Acres	Hectares
Southern willow scrub (including disturbed)	0.10	0.04	0.29	0.12	0.10	0.04
Elderberry savannah	0.34	0.14	0.68	0.28	0.34	0.14
Disturbed coastal sage scrub	0.01	0.004	0.00	0.00	0.01	0.004
Non-native grassland	0.23	0.09	0.00	0.00	0.23	0.09
TOTAL	0.68	0.27	0.97	0.40	0.68	0.27

* Offsite vireo conservation will be through the preservation of previously created/restored wetland habitat at Marron.

** Offsite arroyo toad conservation will be met through the preservation of 0.437 ac (0.18 ha) of previously created/restored wetland habitat at Marron (included in the vireo acreage) and the preservation of 0.24 ac (0.10 ha) of arroyo toad upland habitat at Groves.

All temporary impacts to suitable arroyo toad breeding and aestivation habitats will be restored to pre-impact condition with native species, which will ensure that these areas are available for foraging and aestivation through implementation of the revegetation and seeding efforts of Conservation Measures 5 through 7. The slopes of SR 76 and the temporary access areas will be revegetated with oak, cottonwood, and sycamore trees with an understory of native grasses and mulefat. Due to the lack of irrigation water in this area, all hydroseeding and planting will be done between November and January, and the trees will be watered with tree drip irrigation bags. In addition, temporary impacts to approximately 0.05 ac (0.02 ha) of bare ground on an upland berm within a previously preserved area set aside by the Pala Gaming Facility will be revegetated with native grasses, willow and mulefat cuttings, and a riparian seed mixture.

Adult and juvenile arroyo toads may be burrowed within or moving through the access road, bridge and road widening construction areas. These arroyo toads may be killed or injured if they are excavated or crushed by construction equipment or trampled by work crews. Caltrans will install a temporary exclusionary fence around the perimeter of the temporary impact areas on either side of the creek leaving the creek open to facilitate movement up or down stream (Conservation Measure 11). Ingress and egress of construction equipment and personnel will be kept to a minimum, but where necessary, equipment and personnel will use a single access point to the Project site or creek. This access point will be as narrow as possible and will be closed off by exclusionary fencing at night or when personnel are not on the Project site. After installation of the fence, but prior to construction, the Project Biologist will conduct surveys inside the fence to locate and remove arroyo toads from the work area (Conservation Measures 12 through 16). In addition, Conservation Measure 17 will limit Project-related vehicle travel and construction activities off the paved road to daylight hours when wildlife movement by the arroyo toad is less frequent.

Pala Creek is generally too dry to support arroyo toad breeding habitat. However, if there is sufficient rainfall at the appropriate time of year, the creek could be used by arroyo toad for breeding. If construction is scheduled to occur within the creek during the arroyo toad breeding season (March 15 to August 31) and conditions could support breeding, the Project Biologist will

monitor suitable breeding habitat to determine whether eggs, larvae, or juvenile arroyo toads are present. If arroyo toads are found, work will cease until Caltrans consults with the Service to determine the appropriate measures to avoid impacts to breeding arroyo toads (Conservation Measure 16).

Quantifying the number of arroyo toads that may be located within the proposed construction areas is difficult for a number of reasons. The exact distribution and population size is difficult to estimate due to the dynamic conditions associated with their habitat. Suitable habitat may change from year to year depending on climatic conditions, flooding, or other natural or human-related events (Service 1999), which in turn influence reproductive success and juvenile survival. Therefore, it is anticipated that the arroyo toad population subject to impacts from the Project will experience population fluctuations making it difficult to determine the precise number of arroyo toads that could be adversely affected at any given time.

In addition, except during the early juvenile stage (first 4-5 weeks), arroyo toads forage at night and burrow during the day. Nocturnal activity is usually associated with rainfall and moderate temperatures and some nights of very high relative humidity (Service 1999). Arroyo toads may be found in upland habitat up to 0.62 mi (1 km) from a known breeding area. Therefore, detection of arroyo toads outside of the breeding season is very difficult, with limited ability for anticipating when the species may be active. Lastly, no reliable survey method exists for determining the locations or densities of arroyo toads that may be burrowed within upland habitat.

Due to these constraints, the precise number of arroyo toads that may be located within the Project area is not known. However, we do have a point in time estimate of arroyo toad density for Harrah's Rincon Casino, located approximately 11.5 mi southeast of the action area, which was constructed adjacent to the San Luis Rey on the Rincon Indian Reservation in 2001. Approximately 144 arroyo toads were located on the 65-ac (26.3-ha) casino site for an approximate density of 2 arroyo toads per ac (5 arroyo toads per ha). Based on an assumed density of 2 arroyo toads per ac (5 arroyo toad per ha), we anticipate that up to 4 arroyo toads could be supported within the 0.68 ac (0.27 ha) of permanent and 1.01 ac (0.41 ha) of temporary impacts resulting from the Project.

We are not aware of any studies that have determined the carrying capacity for arroyo toads within the habitat along the San Luis Rey, or similar habitat. However, given the fact that a large amount of suitable arroyo toad breeding and upland habitat will remain adjacent to and downstream of the action area after Project construction, we do not anticipate that the translocation of arroyo toads within the impact areas to suitable habitat downstream will result in adverse impacts associated with overcrowding. Furthermore, precautions will be taken to avoid transferring disease or pathogens between aquatic habitats during surveys and handling (translocating) arroyo toads through implementation of Conservation Measure 15.

It is anticipated that impacts to adult and juvenile arroyo toads would be minimal with the implementation of the fencing and translocation measures described above as Conservation Measures 9 through 15. Of the 144 arroyo toads removed from the Harrah's Rincon Casino footprint prior to construction, 50 were implanted with Passive Integrated Transponders (PIT tags) and translocated to adjacent, suitable habitat on the Rincon Reservation. Follow-up studies conducted in 2006 (5 years post-translocation) located 3 of the pit-tagged arroyo toads (6 percent of the total number of marked arroyo toads) within the vicinity of the translocation site. Since few arroyo toads may survive past 5 years in the wild, the results of the monitoring suggest that this was an effective method for minimizing project-related impacts to arroyo toads.

Some arroyo toads could be killed, injured, or stressed during capture and relocation efforts. We anticipate that this number will be very low since the trapping and relocation efforts will be conducted by individuals knowledgeable of arroyo toad biology and ecology whose qualifications will be subject to review by the Service.

Indirect Effects

Increased invasive flora and fauna, and associated habitat degradation/predation, could occur to arroyo toads and arroyo toad upland habitat as a result of the Project because seeds of invasive plant species could be transported through the project area on construction vehicles. Invasive species are now recognized as a threat to biodiversity in native plant communities, second only to direct habitat loss and fragmentation (Pimm and Gilpin 1989, Scott and Wilcove 1998). Non-native, weedy species may out-compete and exclude native species potentially altering the structure of the vegetation, degrading or eliminating upland habitat used by the arroyo toad, and providing food and cover for undesirable non-native animals (Bossard *et al* 2000). Furthermore, the increased irrigation required by many common landscaping species may provide suitable conditions for the establishment of introduced Argentine ants (*Linepithema humile*) within the adjacent habitat areas. Argentine ants can build up to large colonies and eliminate the native ant fauna that is a major food source of the arroyo toad (Ward 1987, Holway 1995, Human and Gordon 1997). In addition, human activity in the project area during construction may result in accumulation of trash and food, attracting predators that may prey on arroyo toads.

Indirect effects to the arroyo toad and arroyo toad upland habitat will be minimized through the implementation of proposed Conservation Measures 1, 5 through 8, and 18 through 20, including, but not limited to: (1) using temporary construction fencing to demarcate environmentally sensitive areas (ESAs); (2) implementing Best Management Practices; (3) keeping the project site as clean of debris as possible; (4) shielding lighting used at night for construction away from the ESAs; and (5) restoring temporary impact areas to pre-construction condition using appropriate native species without irrigation.

Least Bell's Vireo

The proposed action is likely to result in adverse effects to the vireo through temporal and permanent removal of habitat and indirect effects. All vegetation that may provide breeding and foraging habitat will be removed outside the breeding season of the vireo (March 15 to September 15), and all pile driving for false work will be completed outside the breeding season to avoid the potential for direct impacts to individual vireo, nests, eggs, or young within the action area. Demolition and construction of the bridge will continue year round.

Direct Effects

The Project will result in permanent impacts to a total of approximately 0.44 ac (0.18 ha) of suitable vireo breeding and foraging habitat, including approximately 0.10 ac (0.04 ha) of southern willow scrub and 0.34 ac (0.14 ha) of elderberry savannah. Temporary impacts will affect an additional 0.25 ac (0.10 ha) of southern willow scrub and 0.41 ac (0.17 ha) of elderberry savannah (see Table 1). Loss of habitat will be offset by Conservation Measure 21, as described above.

Based on territories typically ranging in size from 0.5 to 7.5 ac (0.2 to 3.0 ha) for vireos (Service 1998), we estimate that up to one vireo territory could be affected by Project construction-related activities through removal of a small (less than one ac/ha) portion of the territory. In areas where occupied vireo nesting habitat is removed, we anticipate that vireos returning will shift their territories to avoid the areas directly affected by construction; however, we do not anticipate that these birds will die as a result of the construction-related habitat losses. Extensive riparian/elderberry savannah habitat will remain and the local population is sufficiently small to allow successful relocation of any affected vireos into adjoining habitat. Implementation of Conservation Measures 3, 6, 22 through 24 will minimize permanent and temporary effects associated with the removal of suitable breeding and foraging habitat for the vireo by restoring and protecting similar habitat, and scheduling the most damaging construction activities to avoid the breeding season.

Indirect Effects

Within the action area, vireos may be indirectly affected by degradation of vireo habitat through an increase in dust, night lighting, human activities, and noise during construction. Because of the small amount of permanent habitat destruction resulting from Project construction, indirect effects from habitat fragmentation and isolation are not anticipated.

Dust generated from construction activities could decrease plant vigor within vireo habitat. Dust will be minimized through implementation of dust control measures, as described in Conservation Measure 8c. In addition, lights used for night construction will be shielded and directed away from habitat (Conservation Measure 2).

The Project will result in increased human activity and noise during the demolition of the old bridge and construction of the new bridges. Because birds depend on sound for a variety of functions and can be sensitive to noise, construction noise associated with the Project may have a temporary adverse effect on vireo during the breeding season. Up to approximately 12.46 ac (5.02 ha) of the action area may be temporarily affected as a result of increased noise during project construction.

In particular, 'masking' may be detrimental to small perching birds, like the vireo. In essence, "excess sound can interfere with the perception of important, relevant auditory signals" (Miller 1974). Whether a vireo receives potentially vital auditory information depends on such noise parameters as environmental attenuation, signal to noise ratios, and discrimination of the receiver given the background noise. The pertinent biological literature suggests that birds use their sense of hearing to locate their young and mates, to establish and defend territories, and to locate and evade predators (Scherzinger 1970, Shen 1983). The life of a vireo may well depend upon its detection of an alarm call given by another vireo (or other source) that warns of the approach of potential predators.

Masking noise may also affect the breeding behaviors of affected birds. Dooling (1980) concluded that if "noise masks vireo song for the human (at some given distance) then it probably also significantly masks vireo song for the vireo." Dooling continued that "the human almost certainly does better than the vireo in hearing a signal in noise around 2 to 4 kilohertz (probably about twice as good)." Given Dooling's remarks concerning the relative acuities of human and vireo hearing and the aforementioned dependence of the vireo on their sense of hearing, unabated masking noise could adversely affect vireo pairs or individuals that are present within the action area.

Construction of this project is anticipated to begin in September 2010 and be completed in January 2012; therefore, one vireo breeding season will be affected by construction activities. Completing vegetation clearing and pile driving activities outside the breeding season for the vireo (Conservation Measures 22 and 23) will minimize the potential for construction noise to affect vireo breeding. Temporary plywood walls along portions of the right-of-way south of SR 76 and muffled equipment will be used, as feasible, to minimize noise levels during the vireo breeding season (Conservation Measure 24).

Vireo Critical Habitat

The action area includes approximately 7.80 ac (3.16 ha) within the San Luis Rey Area of critical habitat. Given this area's proximity to a busy highway (SR 76) and the relatively sparse tree and shrub cover that are not typical nesting habitat, the PCEs within this area likely function only as foraging habitat within this critical habitat designation. The Project will directly impact PCEs within approximately 0.39 ac (0.16 ha) of designated critical habitat representing 0.01 percent of

the vireo critical habitat within the San Luis Rey Area and 0.001 percent of the total designation. An additional 0.25 ac (0.10 ha) of southern willow scrub and 0.41 ac (0.17 ha) of elderberry savannah (*i.e.*, PCEs) will be temporarily impacted by the Project. This small loss of PCEs is not expected to significantly decrease the overall function of the San Luis Rey Area of designated critical habitat to provide adequate foraging, nesting, and sheltering habitat for the vireo.

Moreover, the permanent loss of 0.39 ac (0.16 ha) of PCEs within designated critical habitat will be offset through the preservation of 0.97 ac (0.49 ha) of wetland credit supporting PCEs for vireo at Marron, which is also located within vireo critical habitat (Conservation Measure 21). In addition, implementation of Conservation Measures 5 and 6 will improve the quality of the PCEs remaining within the action area relative to their current condition because temporary impacts will be restored to pre-impact condition with native species. Temporary impacts to approximately 0.05 ac (0.02 ha) of bare ground on an upland berm within a previously preserved area set aside by the Pala Gaming Facility will be revegetated with native grasses, willow and mulefat cuttings, and a riparian seed mixture (Conservation Measure 7).

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. The Service is not aware of any future actions that may result in cumulative effects to the vireo and/or arroyo toad in the action area of this project.

CONCLUSION

After reviewing the current status of the arroyo toad and vireo, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the replacement of the Pala Creek Bridge, as proposed, is not likely to jeopardize the continued existence of the arroyo toad or vireo or result in the destruction or adverse modification of designated critical habitat for the vireo. We base our conclusions on the following:

Arroyo Toad

1. The San Luis Rey River and its associated tributaries provide habitat to one of the largest populations of arroyo toads throughout its range and the largest population in San Diego County; the San Luis Rey River is one of the few remaining occupied drainages that has habitat conditions conducive to supporting a large, robust population; however, the number of arroyo toads likely inhabiting the action area is low and represents a very small portion of

the overall population of arroyo toads in the watershed and an even smaller proportion of the range-wide population of this species;

2. No permanent impacts to arroyo toad breeding habitat will occur; temporary impacts will affect a very small area that will be restored to unvegetated Waters of the U.S.;
3. The permanent removal of less than 1 ac (0.40 ha) of suitable wetland arroyo toad habitat will be offset by the preservation of previously created/restored wetland habitat at Marron that is suitable for arroyo toad foraging and aestivation. In addition, the loss of less than 1 ac (0.40 ha) of suitable arroyo toad upland habitat will be offset at Groves. Both sites are owned and managed by Caltrans to preserve long-term habitat function and values of the arroyo toad;
4. Injury and death of aestivating arroyo toads in upland areas will be minimized through the installation of arroyo toad exclusionary fencing around portions of the Project impact area that contain suitable upland habitat, surveys for arroyo toads within all fenced areas, and relocation of any arroyo toads found within the fenced areas to suitable habitat outside of the Project impact area;
5. Injury and death of arroyo toads crushed by construction equipment or trampled by work crews will be minimized by limiting Project-related vehicle travel and construction activities off the paved road (*e.g.*, SR 76 or parking lot) to daylight hours when arroyo toads are less likely to be on the roads; and
6. With implementation of the Conservation Measures, impacts to arroyo toads are expected to be minimized and fully offset and are not expected to appreciably reduce the numbers, reproduction, or distribution of the arroyo toad in the action area, the San Luis Rey River, or throughout the species' range. The Conservation Measures that provide for perpetual preservation and management of arroyo toad foraging and aestivation habitat are beneficial actions that will support the recovery of the arroyo toad.

Least Bell's Vireo

1. The least Bell's vireo population in the U.S. has increased 10-fold since the species' listing in 1986, from 291 to 2,968 known territories, with significant population growth documented in southern California counties (Service 2006);
2. Because riparian and wetland habitat removal will take place outside of the vireo breeding season, no adults, nestlings, or eggs will be killed or injured from removal of habitat;
3. Less than 1 ac (0.40 ha) of riparian and wetland vegetation will be removed, affecting a portion of only one vireo territory;

4. The preservation of less than 1 ac (0.40 ha) of previously created/restored southern willow scrub and elderberry savannah at Marron and the onsite restoration with native species of approximately 1.76 ac (0.71 ha) of temporarily impacted areas will offset the direct loss of habitat associated with the proposed action and directly benefit vireo populations in the action area;
5. With implementation of the Conservation Measures, impacts to vireo are expected to be minimized and fully offset and are not expected to appreciably reduce the numbers, reproduction, or distribution of the vireo in the action area or throughout the species' range. The Conservation Measures that provide for perpetual preservation and management of vireo breeding and foraging habitat are beneficial actions that will support the recovery of the vireo.

Least Bell's Vireo Critical Habitat

1. Within the action area, only 0.39 ac (0.16 ha) of PCEs within designated critical habitat for vireo will be removed, which represents impacts to 0.01 percent of the San Luis Rey Area and 0.001 percent of the total critical habitat designated for the vireo;
2. The preservation of previously created/restored southern willow scrub [0.29 ac (0.12 ha)] and elderberry savannah [0.68 (0.28 ha)], representing PCEs within designated vireo critical habitat at Marron and the onsite restoration with native species of approximately 1.76 ac (0.71 ha) of temporarily impacted areas will increase the amount and quality of PCEs for vireo and fully offset the loss of the small acreage of PCEs removed by the Project.
3. Preservation of previously created/restored vireo habitat and restoration of onsite temporary impacts will provide dispersal habitat for these birds from the action area to other areas of designated critical habitat upstream and downstream from the action area, thereby maintaining and enhancing the primary functions of critical habitat for these species within the San Luis Rey River, and supporting the recovery of the vireo.

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, 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 behavior 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 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 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 and must be undertaken by FHWA or Caltrans, as appropriate, for the exemption in section 7(o)(2) to apply. FHWA and Caltrans have a continuing duty to regulate the activity that is covered by this incidental take statement. If FHWA or Caltrans (1) fails to assume and implement the terms and conditions or (2) fails to adhere to the terms and conditions of this incidental take statement, the protective coverage of section 7(o)(2) may lapse.

To monitor the impact of incidental take, FHWA or Caltrans 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)].

AMOUNT OR EXTENT OF TAKE

Arroyo Toad

The Service anticipates that it would be difficult to quantify the precise number of arroyo toads that will be affected by the proposed action for the following reasons:

1. The exact distribution and population size is difficult to estimate due to the dynamic conditions associated with their habitat and biology and because detection of arroyo toads outside of the breeding season is very difficult. Moreover, finding dead or injured arroyo toads within the construction area is unlikely as the individuals may be underground during construction activities, and arroyo toads are cryptic making them difficult to recognize/detect.
2. Except during the early juvenile stage (first 4-5 weeks), arroyo toads forage at night and burrow during the day. Nocturnal activity is usually associated with rainfall and moderate temperatures and some nights of very high relative humidity (Service 1999a). Arroyo toads may be found in upland habitat up to 0.62 mi (1 km) from a known breeding area. Therefore, detection of arroyo toads outside of the breeding season is very difficult, with limited opportunities for anticipating when the species may be active. In addition, we currently do not have a reliable survey method for determining the locations or densities of arroyo toads that may be burrowed within upland habitat.
3. Finding dead or injured arroyo toads within the construction area is unlikely as the individuals may be underground during construction activities.

Thus, exclusion fencing will be erected, and toads will be captured and relocated outside of the construction footprint. Some toads may be missed and subsequently die as a result of project clearing and grading activities. Some toads may also be injured or killed as a result of the capture and relocation efforts. Because we are unable to quantify the precise number of toads that will be injured or killed during construction, take thresholds are authorized as follows based on an assumed density of two (2) arroyo toads per ac [five (5) arroyo toads per ha] as discussed above in our effects analysis:

- Capture of no more than four (4) arroyo toads within the project construction footprint and release of these animals outside of the construction footprint; and
- Death of 1 toad as a direct result of exclusionary fencing, capture, and release efforts.

Least Bell's Vireo

No harm, death, or injury of adults, juveniles, nestlings, or eggs during habitat clearing for bridge construction is anticipated; therefore, none is exempted from the section 9 prohibitions under the Act by this incidental take statement.

EFFECT OF TAKE

In the accompanying biological opinion, we determined that this level of anticipated take is not likely to jeopardize the continued existence of the arroyo toad or least Bell's vireo.

REASONABLE AND PRUDENT MEASURES

Caltrans is implementing significant Conservation Measures as part of the proposed action to minimize the incidental take of arroyo toads and vireos. We anticipate that implementation of these measures will avoid take of the vireo. In addition to these Conservation Measures, the following reasonable and prudent measure is necessary to monitor and report the take of arroyo toads:

1. FHWA or Caltrans shall monitor and report any project-related incidental take of arroyo toads to the Service.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, FHWA, Caltrans and/or its contractors must comply with the following terms and conditions, which implements the reasonable and prudent measure described above. These terms and conditions are non-discretionary.

- 1.1 If any killed or injured toads are observed during project construction activities, the Project Biologist shall verify the species of toad that was impacted and shall immediately notify the CFWO if the toad is identified as an "arroyo toad."
- 1.2 The Project Biologist responsible for the capture and relocation of arroyo toads within construction impact areas shall notify the CFWO 10 days prior to any capture and relocation effort for information on updated Service protocols for arroyo toad surveys, capture techniques, or relocation methods.
- 1.3 Following any capture and relocation effort, the Project biologist shall provide the CFWO with a report within 30 calendar days documenting the number of toads captured and released, information on relocation sites, observed physiological responses of toads to capture and relocation, and any other relevant issues concerning observed problems or successes during the capture and relocation effort. All field notes and other documentation generated by the Project Biologist shall be made available upon request to the Service.
- 1.4 If the level of take exempted in this biological opinion is exceeded at any time, the Project Biologist shall immediately contact the CFWO.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize 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 critical habitat, to help implement recovery plans or to develop information. We have not identified any additional conservation recommendations that will further benefit the arroyo toad or vireo within the action area of the Project.

REINITIATION NOTICE

This concludes formal consultation on the State Route 76/Pala Creek Bridge Replacement Project. 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 or critical habitat 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 or critical habitat not considered in this opinion; or, (4) a new species is listed or critical habitat designated 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.

Mr. Chris White (FWS-SDG-08B0728-09F0189)

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If you have any questions about this biological opinion, please contact Janet Stuckrath of my staff at (760) 431-9440.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim A. Bartel". The signature is stylized with a large initial "J" and a long horizontal stroke at the end.

Jim A. Bartel
Field Supervisor

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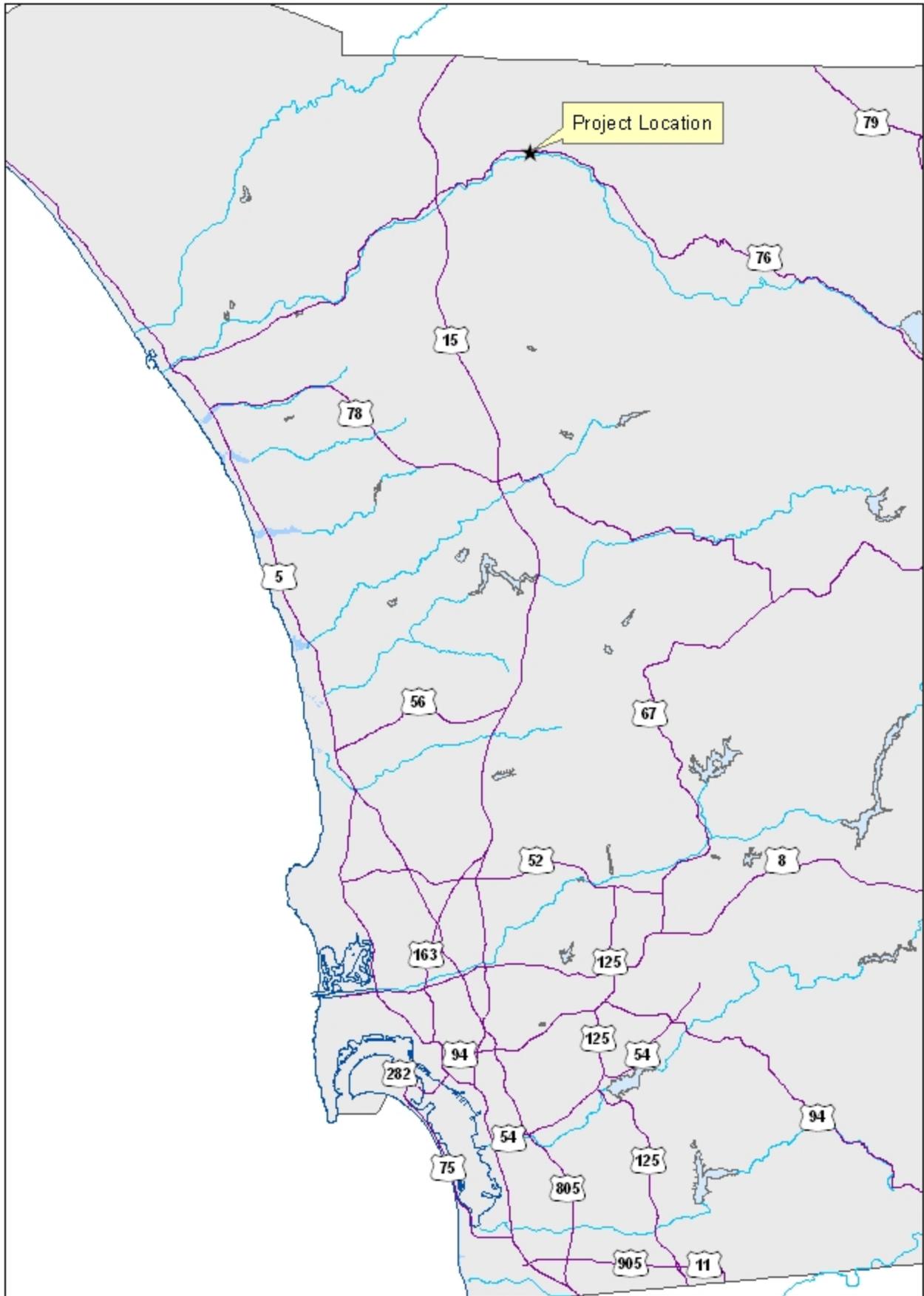


Figure 1. Project Vicinity





Figure 2. Pala Creek Bridge Replacement Project Location



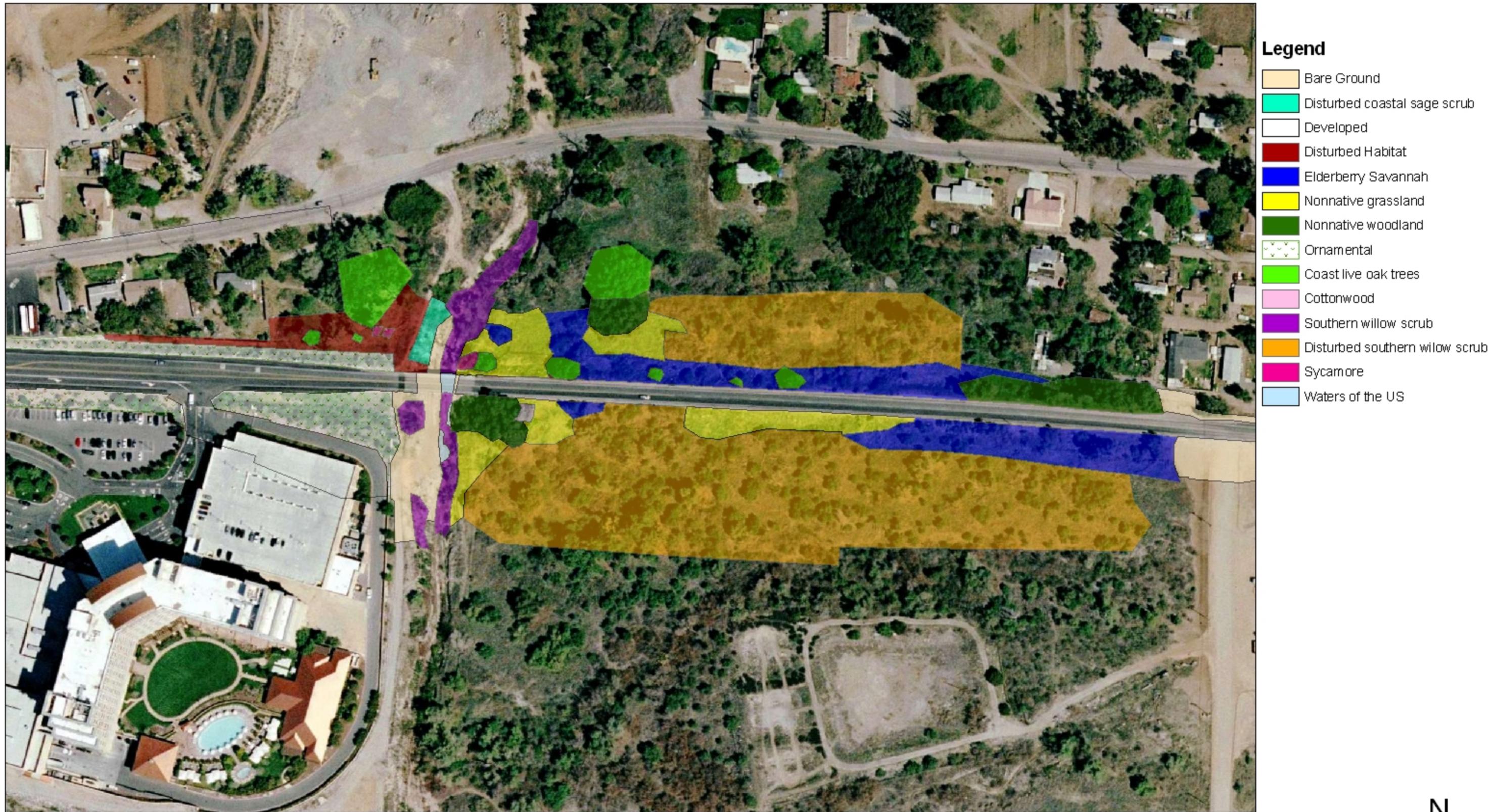
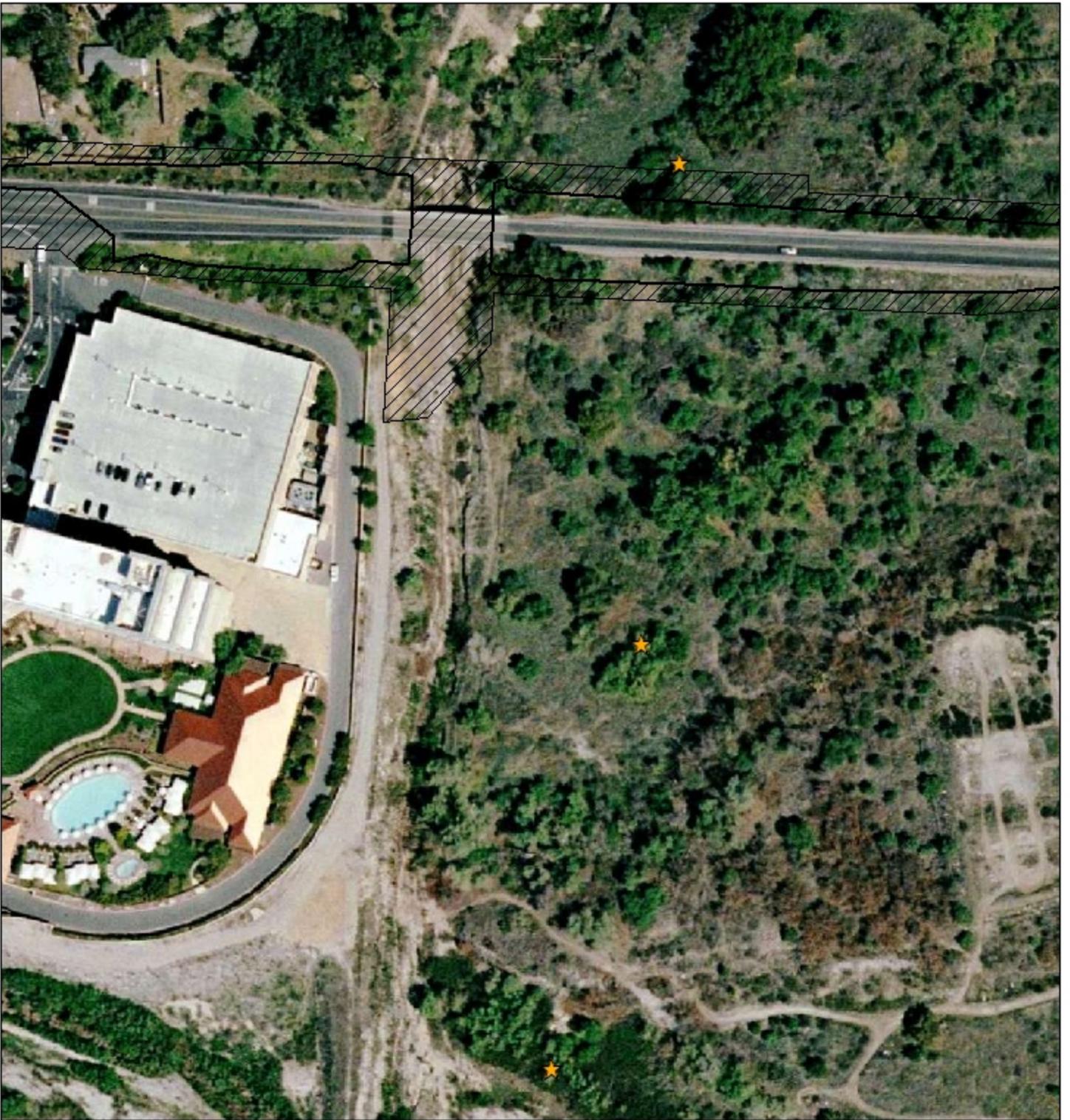


Figure 3. Vegetation Communities within the Pala Creek Project Vicinity





Legend

- ★ least Bell's vireo
- Permanent Impacts
- ▨ Temporary Impacts



Figure 4. Least Bell's Vireo Locations within the Project Vicinity



Legend

-  Permanent Impacts
-  Temporary Impacts
-  Vireo Critical Habitat

Figure 5. Critical Habitat for the Least Bell's Vireo within the Project Limits



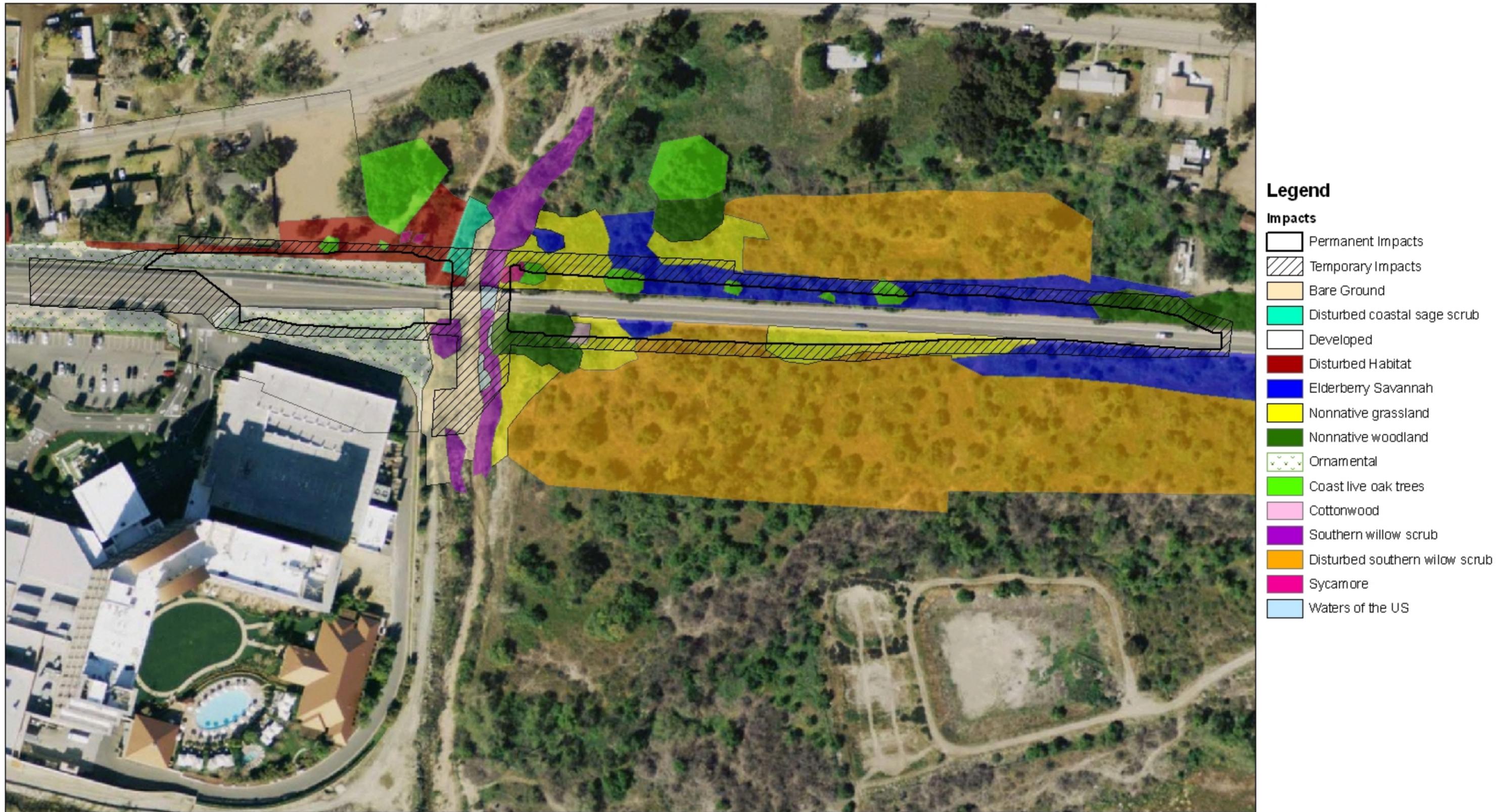


Figure 6. Permanent and Temporary Impacts to Vegetation Communities





United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011



In Reply Refer To:
FWS-SDG-08B0728-10F0673

MAY 11 2010

Kim T. Smith
Branch Chief, Environmental Resource Studies
California Department of Transportation
4050 Taylor Street
San Diego, California 92110

Attention: Sue Scatolini, District Biologist

Subject: Amendment to the Formal Section 7 Consultation for the State Route 76/Pala Creek Bridge Replacement Project, San Diego County, California

Dear Ms. Smith:

This is in response to your correspondence dated April 5, 2010, requesting that our biological opinion (FWS-SDG-08B0728-10F0673) for the State Route 76/Pala Creek Bridge Replacement project be amended to address modifications to the project that will result in effects to the federally endangered arroyo toad [*Anaxyrus* (=Bufo) *californicus* "toad"] and least Bell's vireo (*Vireo bellii pusillus*, "vireo") and its designated critical habitat that were not addressed in the original biological opinion. The project is receiving Federal funding through the Federal Highway Administration (FHWA), and Caltrans has assumed FHWA's responsibilities under the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), for this consultation in accordance with Section 6005 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) 2005, as described in the National Environmental Policy Act (NEPA) Delegation Pilot Program Memorandum of Understanding between FHWA and Caltrans (effective July 1, 2007) and codified in 23USC327(a)(2)(A). We initiated consultation on April 6, 2010, the date we received your request.

The project is located along Pala Creek and SR-76, upstream of the San Luis Rey River in unincorporated northern San Diego County, California, and will result in the widening of both the bridge over Pala Creek and SR-76 for approximately 0.25 mile (mi) to 0.50 mi [0.40 kilometer (km) to 0.80 km] on each side of the bridge. The proposed modifications to the project are a result of final bridge design and right-of-way acquisition changes that have slightly altered the temporary and permanent impact areas, as summarized in Table 1 below. In order to offset these impacts, the proposed offsite conservation for permanent impacts has been slightly altered, as summarized in Table 2 below. In addition, this amendment addresses proposed nighttime work that will occur off of paved roads.



Table 1. Permanent and Temporary Impacts to Vegetation Communities

Vegetation Community	Original Permanent Impacts (acres/ha)	Original Temporary Impacts (acres/ha)	New Permanent Impacts (acres/ha)	New Temporary Impacts (acres/ha)
Southern willow scrub (including disturbed)	0.10 / 0.04	0.25 / 0.10	0.13 / 0.05	0.25 / 0.10
Elderberry Savannah	0.34 / 0.14	0.41 / 0.17	0.35 / 0.14	0.38 / 0.15
Disturbed coastal sage scrub	0.01 / 0.004	0.03 / 0.01	0.03 / 0.01	0.01 / 0.002
Nonnative grassland	0.23 / 0.09	0.32 / 0.13	0.36 / 0.15	0.15 / 0.06
Nonnative woodland	0.12 / 0.05	0.17 / 0.07	0.09 / 0.04	0.12 / 0.05
Disturbed habitat	0.09 / 0.04	0.12 / 0.05	0.08 / 0.03	0.05 / 0.02
Ornamantal	0.37 / 0.15	0.17 / 0.07	0.38 / 0.15	0.14 / 0.06
Bare ground	0.02 / 0.01	0.29 / 0.12	0.03 / 0.01	0.25 / 0.10
Developed	1.24 / 0.5	0.49 / 0.2	1.42 / 0.57	0.05 / 0.02
Unvegetated water of the U.S.	0.00 / 0.00	0.04 / 0.02	0.00 / 0.00	0.04 / 0.02
TOTAL IMPACTS	2.52 / 1.02	2.29 / 0.94	2.85 / 1.15	1.43 / 0.58

Bold Text indicates an increase over the original BO impacts

Red Text indicates a decrease from the original BO impacts

Table 2. Proposed Offsite Conservation for Permanent Impacts

Vegetation Community	Permanent Impacts		Vireo and Vireo Critical Habitat Conservation*		Arroyo Road Upland Habitat and Proposed Critical Habitat Conservation**	
	Acres	Hectares	Acres	Hectares	Acres	Hectares
Southern willow scrub (including disturbed)	0.13	0.05	0.39	0.16	0.13	0.05
Elderberry savannah	0.35	0.14	0.70	0.28	0.35	0.14
Disturbed coastal sage scrub	0.03	0.01	0.00	0.00	0.03	0.01
Non-native grassland	0.36	0.15	0.00	0.00	0.36	0.15
Total	0.87	0.35	1.09	0.44	0.87	0.35

* Offsite vireo conservation will be through the preservation of previously created/restored wetland habitat at Marron.

** Offsite arroyo toad conservation will be met through the preservation of 0.48 ac (0.19 ha) of previously created/restored wetland habitat at Marron (included in the vireo acreage) and the preservation of 0.39 ac (0.16 ha) of arroyo toad upland habitat at Groves.

The following amended conservation measures are proposed to avoid and minimize potential impacts to the toad and vireo and its critical habitat:

3. Permanent impacts to 0.13 ac (0.05 ha) of southern willow scrub (including disturbed) and 0.35 ac (0.14 ha) of elderberry savannah used by the vireo, and likely for movement or aestivation by the arroyo toad, will be offset by preservation of 1.09 ac (0.44 ha) of wetland credits at Marron (Figure 3).

4. Permanent impacts to 0.03 ac (0.01 ha) of disturbed coastal sage scrub and 0.36 ac (0.15 ha) of non-native grassland, likely used for foraging and/or aestivation by the arroyo toad, will be offset by preservation of 0.39 ac (0.16 ha) of upland credits at the Groves (Figure 3).

5. Temporary impacts to 0.01 ac (0.002 ha) of coastal sage scrub, 0.38 ac (0.15 ha) of elderberry savannah, 0.15 ac (0.06 ha) of non-native grassland, likely used by arroyo toad on the terraces and banks, will be revegetated with coastal sage scrub species, native grasses, and native trees following completion of the construction.

17. To the maximum extent practicable, project-related vehicle travel and construction activities off of the paved road at night will be limited to the area within the toad exclusion fencing. It is anticipated that some amount of nighttime vehicle travel and construction activity will be required to access the exclusion fencing area via the dirt access road. All nighttime work outside of the toad exclusion fencing area that occurs during the time of year when toads are not aestivating will be monitored by a qualified biologist to ensure that unanticipated take of toads does not occur.

21. Permanent impacts to 0.52 ac (0.21 ha) of vireo critical habitat supporting primary constituent elements (PCEs) will be offset through the debiting of 1.09 ac (0.44 ha) of wetland credit at Marron and 0.39 ac (0.16 ha) of upland credit at the Groves in accordance with the conservation measures above.

We have determined that the above modifications will not change the conclusion or alter the incidental take statement of our June 30, 2009, biological opinion. Therefore, the interagency consultation requirements of section 7 of the Act have been satisfied. With the exception of the conservation measures amended above, all conservation measures and terms and conditions will be implemented as written in the biological opinion (FWS-SDG-08B0728-09F0189) previously issued for the proposed action. By copy of this letter, we are formalizing these changes to the June 30, 2009 biological opinion. If you have any questions regarding this amendment, please contact Sally Brown of this office at 760-431-9440, extension 278.

Sincerely,



Karen A. Goebel
Assistant Field Supervisor

cc:

Stephanie Hall, U.S. Army Corps of Engineers, Los Angeles District, California



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

JAN 17 2007

General John McMahon
Division Engineer, South Pacific Division
U.S. Army Corps of Engineers
333 Market St.
San Francisco, CA 94105

Subject: Conditional Clean Water Act (CWA) §401 certification of the 2007 Nationwide Permits (NWP) for projects on applicable tribal lands

Dear General McMahon:

EPA Region 9 has reviewed the Corps' 26 September 2006 Federal Register notice *Proposal to Reissue and Modify Nationwide Permits* (FR Notice) pursuant to our roles and responsibilities under sections 401 and 404 of the CWA. The purpose of this letter is to provide conditional water quality certification of the NWP for activities proceeding on tribal lands within Region 9. These conditions do not apply, however, to activities proceeding in the territories of the seven tribes within Region 9 which have been approved as certifying authorities—the Navajo Nation, Hualapai Nation, and White Mountain Apache Tribe in Arizona; and the Hoopa Valley Tribe, Bishop Paiute Tribe, Big Pine Paiute Tribe, and Twenty-Nine Palms Band in California.

As a general matter, we are concerned that the proposed changes to the NWP may lack adequate safeguards against degradation of aquatic resource functions and values, including protection of water quality and beneficial uses. A number of NWP characteristics may cause more than minimal adverse effects to aquatic resources including lack of maximum impact thresholds; authorization of broad, unrelated activities; and terminology that invites varying interpretation by permittees without Corps oversight. We believe the NWP, as newly proposed, could weaken the program through relaxed reporting standards (*e.g.*, for applicants' explicit avoidance and minimization of discharges of pollutants), and by placing greater burdens on Corps staff to ensure permittees are in compliance.

In addition, EPA does not believe that the Corps has collected data sufficient to demonstrate that the NWP program results in minimal adverse impacts to the aquatic environment on an individual or cumulative basis. The lack of required Preconstruction Notifications (PCN)s, or any mandatory reporting for nearly half of the NWP, is one of several factors which have precluded detailed programmatic analysis of the aerial extent, location, and type of aquatic resources impacted within a watershed context. These issues should be of paramount concern to the Corps given that Corps data indicate approximately 88% of the authorizations under the §404 program are implemented via General Permits—chiefly, the NWP.

Printed on Recycled Paper

To protect water quality and beneficial uses of waters of the U.S. on tribal territories under the new NWP program, EPA Region 9 hereby institutes the attached general and permit-specific conditions pursuant to section 401 of the Clean Water Act. In summary, we are programmatically certifying thirty of the NWPs with general conditions, and certifying fifteen of the NWPs with permit-specific conditions (including new NWPs A, E and F). In addition, we are requiring that all permittees submit notification to EPA Region 9 when proceeding under any of the NWPs on tribal lands.

With the implementation of the enclosed general and permit-specific conditions, we are also reducing the number of NWPs denied certification (previously twelve, we are now denying certification for four permits: NWP 43, and new NWPs B, C and D). Applicants proposing activities on tribal lands under NWPs for which certification has been denied should preferably pursue alternative forms of authorization from the Corps (*e.g.*, individual permit, Letter of Permission, etc.). If this is not practical, these applicants must pursue individual project certification from EPA. A summary table at the end of the attached certifications and conditions is provided for easy reference to the status of all NWPs on tribal lands.

This conditional certification of the NWP program will remain in effect for the authorization period of the new NWPs, and will be revisited and potentially revised when the NWPs are next revisited and potentially revised by the Corps (*i.e.*, 2011). If you have any questions regarding our conditional certification of the NWPs for activities on tribal lands, you may contact me at 415-972-3572, or Jason Brush of my staff at 415-972-3483.

Sincerely,

 17 January 2007
Alexis Strauss
Director, Water Division

Cc:

Jane Hicks, Regulatory Branch Chief, San Francisco District
Michael Jewel, Regulatory Branch Chief, Sacramento District
David Castanon, Regulatory Branch Chief, Los Angeles District
Donald Borda, Regulatory Branch Chief, Albuquerque District

General Conditions

01. Classes of Aquatic Resources

Jurisdictional aquatic resources of all hydrological regimes are explicitly included in all general and permit-specific conditions to follow. In recognition of the importance of seasonal, ephemeral and intermittent waters for the protection and maintenance of water quality and other ecosystem services in the arid southwest, this certification hereby adopts the Corps' proposed inclusion of ephemeral and intermittent streams in the impact limitations listed throughout the 2007 NWP. If any of the final NWPs assign impact limitations differently by hydrological regime (e.g., allowing ¼ acre impacts to perennial systems and ½ acre to intermittent or ephemeral under the same NWP), the more protective standard shall apply under this certification universally to all covered waters (in the example above, therefore, no more than ¼ acre of impacts would be authorized to either perennial or ephemeral/intermittent waters).

02. Notification

To improve the government's ability to demonstrate whether the NWP program has minimal adverse impacts to the aquatic environment, individually and cumulatively, all NWP-authorized projects proceeding on tribal lands within Region 9 shall submit a form of notification to EPA Region 9.¹

Under existing NWP rules, for the purposes of PCN notification, projects proposing to use a given NWP will fall under one of the following four categories:

1. The Corps requires a PCN, subject to criteria in the Corps' General Condition 27, because the project proposes use of an NWP that requires a PCN for any activities authorized by the NWP.
2. The Corps requires a PCN, subject to criteria in the Corps' General Condition 27, because the project proposes to exceed impact thresholds triggering a PCN under the NWP.
3. The Corps does not require a PCN, because proposed impacts fall below thresholds identified in the NWP for a PCN.
4. The Corps does not require a PCN for any activities authorized under the NWP the applicant is proposing to use.

To be eligible for any NWP under this certification, applicants under any of the above categories are required to submit a notice to EPA. However, **no response or approval is required from EPA for the project to proceed under the NWP.** For categories 1 and 2 above, applicants must simply forward a second copy of the PCN already required by the Corps to EPA Region 9. For applicants in categories 3 and 4, a modified PCN (MPCN) must be submitted to EPA Region 9 subject to the following criteria:

- 1) **Timing.** Applicants shall submit an MPCN to EPA Region 9 as early as possible, and in advance of any authorization letter from the Corps allowing the applicant to proceed under a given NWP. However, upon review, EPA reserves the right to make

¹ NOTE: this requirement does not modify or eliminate existing Corps requirements regarding PCNs for projects proceeding on tribal lands (or elsewhere).

after-the-fact assessments of likely direct and indirect impacts to water quality and may require mitigation. EPA shall make any such determinations, in writing, within 45 days of receipt of the MPCN.

- 2) **Content.** MPCNs must be in writing (electronic mail submittal is acceptable) and include the following information:
 - a) Name, address and telephone numbers of the applicant and any agents or representatives. If available, the electronic mail address and fax numbers for these persons.
 - b) Location of the proposed project.
 - c) A description of the proposed project and impacts including
 - i) the project's purpose;
 - ii) direct and indirect adverse environmental effects the project would cause, including the proposed acreages of waters impacted, avoided, and, where applicable, created or otherwise mitigated;
 - iii) any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity; and
 - iv) a list of other state, tribal and federal permits or authorizations necessary for the project.The description should be sufficiently detailed to determine compliance with NWP and EPA 401 conditions and the need for appropriate compensatory mitigation. Maps, drawings and/or photographs of the project area and aquatic resources are not mandatory, but usually help to clarify the project and allow for faster review. At minimum, a narrative description of any special aquatic sites and other waters of the United States on the project site must be included.
 - d) A statement describing impact avoidance and minimization measures, as required by EPA General Condition 03 of the CWA §401 certification of the 2007 NWP program.
 - e) To the extent not covered by d) above, a statement describing how the project will protect, and where practicable improve, water quality.
 - f) The name(s) of any species listed as endangered or threatened under the Endangered Species Act which may be adversely affected by the proposed work, either directly or by impacting designated critical habitat.
 - g) Identification of any cultural or historic properties listed in, or eligible for listing in, the National Register of Historic Places that may be adversely affected by the proposed work.

03. Mitigation

Mitigation begins with the avoidance and minimization of adverse impacts to waters, followed by compensatory measures if a loss of aquatic function or acreage is unavoidable. Proposed modifications to the NWP program include the removal of explicit reference to avoidance, minimization and compensation in the body of several permits in favor of generally less explicit, less protective language in General Condition 20. For example, in many of the proposed NWPs, mitigation activities that had been required of the permittee would become discretionary on the part of the District Engineer (and for nearly half of the NWPs, the DE does not receive a PCN from the permittee and is thus precluded from exercising this discretion).

To protect water quality and beneficial uses of U.S. waters on tribal lands, all projects using NWP must avoid discharges to the maximum extent practicable, and utilize the best available and practicable means of minimizing the adverse impact of discharges that cannot be avoided. A statement documenting the project's avoidance and minimization methodology will be provided to EPA and the Corps with each PCN (pursuant to Corps General Condition 27, paragraphs (a)(3) and (a)(5)), or MPCN. To the extent practicable, impact sites will be returned to pre-construction contours and, if necessary, banks shall be reseeded or replanted with native vegetation. Maintenance and monitoring activities will include regular and post-storm event inspections, on a schedule determined by the applicant's discretion, but no less frequent than once per year. Inspections should include photographs of culvert conditions after any heavy rainfall as well as conditions pre- and post-construction. Any adverse impacts to water quality resulting from the gradual or immediate failure of project or mitigation components shall be reported to EPA and the Corps immediately.

In some cases, compensatory mitigation may be required in addition to the avoidance and minimization measures outlined above. When required, compensatory mitigation will be implemented on a minimum 2:1 basis (acres created and/or enhanced: acres impacted) for impacts to special aquatic sites, and 1:1 (no net loss) for all other waters of the U.S. Except under unusual circumstances as approved by EPA, upland buffers, vegetated where practicable, shall be maintained around impacted and restored, created or enhanced waters, and will extend a minimum of 50 feet laterally from the Ordinary High Water Mark of each bank, or perimeter of a jurisdictional wetland. Representatives of EPA and the Corps must be allowed access to the site to inspect the project area and any mitigation areas upon reasonable notice.

Should EPA determine that compensatory measures are required, said determination shall not delay a project proceeding under a NWP, nor is a determination on this matter in response to an applicant's MPCN required to begin work (see General Condition 02. Notification, above). When they are appropriate, these determinations for compensatory mitigation will therefore likely be after-the-fact, but nevertheless will remain a condition of water quality certification and thus a condition of the Corps' permit. Failure to address an EPA mitigation requirement would therefore place a permittee out of compliance with their NWP and potentially subject to a range of Corps and EPA enforcement actions.

04. Prohibition on Multiple Use of One NWP for a Single Project

Permittees may not use the same NWP multiple times for one single and complete project; to do so effectively eliminates acreage limitations of the NWPs and may result in more than minimal adverse impacts to water quality and other ecosystem services. For example, under this certification, linear transportation projects on tribal lands must sum the impacts of each proposed crossing of individual waters of the U.S. and use that total to determine eligibility for NWP 14 (Linear Transportation Projects). If the acreage or linear foot impacts exceed the thresholds of the applicable NWP (or combination of applicable *different* NWPs), minimal adverse impacts to water quality may be exceeded and 401 certification is automatically denied without prejudice. In this event, the NWP in question is not available to the applicant on tribal lands. Applicants in these circumstances may need to apply to the Corps for authorization under a different General Permit, a Letter of Permission, or Individual Permit as appropriate and

determined by the Corps. EPA would review these other proposed permit actions for case-by-case certification. However, EPA may waive this requirement and allow the use of multiple NWP's on a case-by-case basis if the applicant so appeals, and demonstrates in their PCN or MPCN that authorization under the NWP will result in minimal and/or completely mitigated impacts to the aquatic environment, individually and cumulatively. EPA's discretionary waiver of this requirement may be accomplished informally via electronic mail to the Corps and applicant.

05. Use of Appropriate Fill Material

To the extent practicable, local, native materials should be used as fill material. (*e.g.*, soil, sand, or rock from the site or near the site; clean building materials or clean imported earthen fill). Inappropriate and unauthorized fill materials include, but are not limited to: tires, junked or abandoned vehicles, appliances, or other equipment; garbage; debris; oil drums or other chemically contaminated vessels; artificial turf; non-native vegetation; etc. If an applicant has any doubts or questions about the suitability of a proposed fill material, they should consult with the Corps and/or EPA prior to discharging into waters of the U.S. Such consultation may be via phone, or written letter, fax or electronic mail.

06. Dewatered Conditions

In-channel work will not be performed proximate in time to high flow events or rainy periods; discharges must occur and be completed prior to a minimum 5-day clear weather forecast. To the extent practicable, discharges below the ordinary high water mark or within jurisdictional wetlands should occur when the discharge site is naturally dewatered (*e.g.*, seasonally dry), or artificially dewatered by the permittee, thereby avoiding direct discharge of pollutants into the water column. If the site is artificially dewatered, permittees shall, to the extent practicable, avoid dewatering techniques that require additional temporary or permanent discharges of fill material within jurisdictional waters (*e.g.*, coffer dams) in favor of temporary, structural techniques (*e.g.*, sheet pile or "porta-dams").

07. Fills Within 100-Year Floodplains

Projects requiring NWP authorization for discharges of fill material within 100-year floodplains shall comply with Executive Order 11988 (Floodplain Management). Such projects shall include a statement of compliance in the PCN. However, discharges within the FEMA-mapped 100-year floodplain that would result in permanent, above-grade structures are not certified for use under the NWP program on tribal lands.

08. Best Management Practices

Any excess material from construction, demolition wastes, wastewater, or any other pollutant must be appropriately disposed of outside jurisdictional waters. Water used in dust suppression shall not contain contaminants that could violate surface water or aquifer standards. Permittees and their contractors shall take necessary steps to minimize channel and bank erosion within waters of the United States during and after construction. Silt fences, straw wattles, and other techniques shall be employed as appropriate to protect waters of the U.S. from sedimentation and other pollutants. A copy of these permit conditions shall be provided to all contractors and subcontractors, and will be posted visibly at project construction sites.

09. Transportation Projects

Permittees shall implement State transportation agencies' guidelines for construction sites to protect water quality and aquatic habitat. In California, CALTRANS has guidance in the *CALTRANS Storm Water Quality Manuals and Handbooks*²; in Nevada, NDOT has guidance in their *NDOT 2006 Water Quality Manuals*³; and in Arizona, ADOT has guidance in their *Erosion and Pollution Control Manual*.

10. Utility Line Projects

Permittees shall implement BMPs established by the Office of Pipeline Safety and recommended for permit streamlining of pipeline maintenance and repair projects.⁴ Projects include below and above grade utility installation and maintenance and repair.

Specific Nationwide Permits

NWP-01 Aids to Navigation

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-02 Structures in Artificial Canals

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-03 Maintenance

"Existing serviceable structures" which may be maintained under this permit do not include undersized culverts or structures that cause or exacerbate channel incision, bank destabilization, and/or prevent fish passage due to inadequate design or construction standards. Such structures continuously impair the hydrologic, sediment transport, and habitat functions of waters by remaining in place, and their maintenance under this NWP would discourage applicants from replacing inappropriately designed structures that require frequent maintenance and degrade water quality. Certification of this permit is granted only if the existing structure proposed to be maintained demonstrably preserves (via design, flow modeling or other information in the PCN) the natural functions of the affected aquatic resource when the structure is fully operational. Otherwise, an alternative permit should be utilized as appropriate (*e.g.*, NWP 13 Bank Stabilization). Where bank stabilization structures are to be maintained, bioengineered structures shall be utilized to the extent practicable in lieu of "rip-rap" or other hardscape engineered materials. This permit shall not authorize the enlargement of, or increase in, the footprint of a structure within waters of the U.S., unless that enlargement consists of the replacement of existing artificial channel armoring materials (*e.g.* rip-rap, soil cement, etc.) with low-impact bioengineered natural channel design structures (*e.g.*, log revetments, geotextile rolls/mats, root wads, brush mattresses, willow wattling, etc.⁵).

² <http://www.dot.ca.gov/h1/construc/stormwater/manuals.htm>

³ http://www.nevadadot.com/reports_pubs/Water_Quality/

⁴ <http://environment.ops.dot.gov>

⁵ See, *e.g.*, Allen, H. A., and Leech, J. R. (1997). "Bioengineering for Streambank Erosion Control-Report 1: Guidelines," Technical Report EL-97-8, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

NWP-04 Fish and Wildlife Harvesting, Enhancement and Attraction

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-05 Scientific Measurement Devices

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-06 Survey Activities

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-07 Outfall Structures and Maintenance

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-08 Oil and Gas Structures

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-09 Structures in Fleeting and Anchorage Areas

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-10 Mooring Buoys

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-11 Temporary Recreational Structures

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-12 Utility Line Activities

According to the cumulative impact analysis in the Corps' Draft Environmental Assessment (DEA), this permit is the second most commonly used of the Nationwides, and use of this permit results in a net loss of aquatic resources (estimated at 684 acres/year with zero acres of compensation). Proposed changes to this NWP include the removal of PCN requirements for a broad range of activities. In compliance with EPA General Condition 02. Notification above, applicants will provide a PCN for all activities under this NWP, and will clearly indicate the impacts proposed to be temporary, permanent, or secondary (*e.g.*, conversion of one type of aquatic resource to another). No more than ½ acre or 300 linear feet of permanent loss of waters is authorized under this certification.

NWP-13 Bank Stabilization

The Corps provides no rationale for the proposed 500-foot limitation on this permit (the programmatic standard is otherwise 300 feet). Under this certification, the 300-foot limit is retained. The proposed modification to allow use of NWP-13 in special aquatic sites is counter to the purposes of the permit (bank protection), as it would contribute to losses of riparian fringe wetlands important for maintenance of natural channel geomorphology, flood attenuation, and water filtration services. Under this certification, this permit is not available for projects in special aquatic sites. Traditionally, this NWP, used multiple times at the same site or in combination with other NWPs, has frequently resulted in the armoring of many miles of streambank. However, with adherence to EPA general condition 04. above, this problem should be reduced or eliminated. Bank stabilization must incorporate use of planting and/or seeding of

native vegetation; bioengineered solutions should be employed to the maximum extent practicable. Hard channel armoring is discouraged under this certification, and is more likely to require compensatory mitigation. In their PCN, applicants should pay particular attention to describing avoidance, minimization and/or compensation measures.

NWP-14 Linear Transportation Projects

According to the DEAs, this NWP authorizes activities that result in a net loss of aquatic resources. The Corps' proposed removal of language in the permit regarding compensatory mitigation will exacerbate these losses, especially given the lack of a linear foot limitation and lack of any programmatic estimate of indirect and secondary effects or mitigation for those impacts. In our experience, many permittees use multiple NWP-14 permits for one project, thus impacting substantially more than a ½ acre of waters in sum. Due to the significant secondary adverse effects often caused by culverts (*e.g.*, upstream deposition and bank erosion, downstream bed and bank erosion) lower-impact techniques (*e.g.*, bottomless and embedded culverts) are encouraged. Consistent with other NWPs, this permit is limited under this certification to the lesser of ½ acre or 300 linear feet of impacts. Applicants' PCNs or MPCNs should specifically address sequencing avoidance and minimization of impacts in project design, and address potential indirect effects up and downstream of the proposed discharges.

NWP-15 U.S. Coast Guard Approved Bridges

Subject to the General Conditions above, this NWP is hereby programmaticly certified.

NWP-16 Return Water from Upland Contained Disposal Areas

Subject to the General Conditions above, this NWP is hereby programmaticly certified.

NWP-17 Hydropower Projects

Subject to the General Conditions above, this NWP is hereby programmaticly certified.

NWP-18 Minor Discharges

Subject to the General Conditions above, this NWP is hereby programmaticly certified.

NWP-19 Minor Dredging

Subject to the General Conditions above, this NWP is hereby programmaticly certified.

NWP-20 Oil Spill Cleanup

Subject to the General Conditions above, this NWP is hereby programmaticly certified.

NWP-21 Surface Coal Mining Activities

We are concerned that the lack of impact limitations under this NWP results in a net loss of aquatic resources (the Corps' cumulative impact analysis in the DEA indicates this permit results in 81 acres of impact per year without compensation). A review of activities authorized by this permit would likely show that many of these impacts are permanent and occur in important and sensitive headwater streams. Consistent with other NWPs, impacts authorized by this permit shall be limited to the greater of ½ acre or 300 linear feet of waters under this certification. Before an applicant may use this permit, EPA must approve a compensatory

mitigation plan meeting all of the criteria set forth in the national *Mitigation Action Plan*⁶ including a minimum replacement-to-impact ratio of one-to-one (minimum two-to-one for special aquatic sites). Similar plans which may be required by the Interior Department's Office of Surface Mining under the Surface Mining Control and Reclamation Act may be presented for EPA approval as functionally equivalent.

NWP-22 Removal of Vessels

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-23 Approved Categorical Exclusions

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-24 Indian Tribe or State Administered Section 404 Program

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-25 Structural Discharges

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-26 --Reserved--

This NWP is no longer in use. No certification is necessary.

NW-27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities

We are concerned that the lack of reporting, impact limits, and clear language in this permit contribute to its misuse and authorization of more than minimal adverse impacts to the aquatic ecosystem. Corps data indicate this permit accounts for the greatest level of impacts in the entire program, exceeding the next highest permit's impacts by a factor of 2.5, and experience has shown that permittees may use this permit for activities that are not truly restoration projects and/or do not result in a net benefit to aquatic functions. Recreational aquatic features are not authorized under this NWP (e.g., water parks such as kayak courses). This permit may not be used to authorize stormwater control structures for the purpose of reducing downstream erosion, water quality degradation or flooding, and grade control structures may not exceed one linear foot vertical drop unless it is clearly demonstrated that a greater drop is necessary to restore aquatic resource functions. Concrete and grout are not acceptable fill materials under this NWP and certification. Any structures placed within waters will allow the passage of aquatic organisms and preserve existing human navigational needs, unless removal of such existing navigational uses is part of the project purpose.

Consistent with other NWPs, use of this permit shall be limited to the lesser of ½ acre or 300 linear feet of waters under this certification. This requirement may frequently be waived upon petition in the applicant's PCN, but these limits will ensure the added level of scrutiny required to eliminate misuse of this permit and greatly reduce the impact of the program as a whole.

NWP-28 Modification of Existing Marinas

Subject to the General Conditions above, this NWP is hereby programmatically certified.

⁶ <http://www.mitigationactionplan.gov/>

NWP-29 Single-family Housing

Much of NWP 39's residential components are proposed to be moved to NWP 29. EPA does not believe the activities currently authorized under NWP-29 are similar enough to multi-unit commercial/residential development to warrant this combination. This move would combine relatively modest activities, such as expanding a single-family home or constructing attendant features (*e.g.*, a garage, driveway, storage shed, septic field) with much larger residential developments that are generally new, include a change in land-use, and are much larger in scope and purpose. If these permits are combined as proposed, then the impact threshold for single-family homes shall remain ¼ acre under this certification (not increase to ½ acre, as proposed).

In addition to avoidance and minimization requirements explained above under EPA General Condition 03., paragraph "f" from NWP-39 shall also attach under this certification, explaining that compensatory mitigation will "normally" be required for unavoidable losses. Existing text regarding maintenance of vegetated buffers shall remain. Finally, "recreational facilities such as playgrounds, playing fields, and golf courses" are not authorized under this certification. These projects are separate and distinct from housing, are not required to be included in a housing project for it to be practicable, and their construction within waters is normally avoidable. This NWP shall not authorize the channelization or relocation of any stream or wetland, regardless of size or rate of flow.

NWP-30 Moist Soil Management for Wildlife

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-31 Maintenance of Existing Flood Control Facilities

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-32 Completed Enforcement Actions

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-33 Temporary Construction, Access and Dewatering

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-34 Cranberry Production Activities

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-35 Maintenance Dredging of Existing Basins

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-36 Boat Ramps

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-37 Emergency Watershed Protection and Rehabilitation

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-38 Cleanup of Hazardous and Toxic Waste

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-39 Residential, Commercial, and Institutional Developments

As with NWP 29 above, existing requirements for "avoidance and minimization," "single and complete project," "maintenance of buffers," and "compensatory mitigation," which the Corps now proposes to remove, shall be retained for purposes of this certification. This NWP shall not authorize the channelization or relocation of any stream or wetland, regardless of size or rate of flow.

NWP-40 Agricultural Activities

We are concerned that the text of NWP-40 and proposed modifications will cause more than minimal impacts to aquatic resources. Consistent with the other NWPs, ephemeral and intermittent waters shall not be subject to waiver of the 300 foot limitation under this certification. Activities authorized by this NWP, such as construction of drainage tiles, ditches, and relocation of existing serviceable structures, may be used to convert wetlands to uplands in preparation for future development. These activities could have a considerable indirect impact on aquatic resources that would go undetected under the proposed NWP terms. Under this certification, no discharges are authorized which would impact hydrological connectivity between jurisdictional waters to such an extent as to convert waters of the U.S. to uplands, or otherwise isolate waters to eliminate federal regulatory jurisdiction.

NWP-41 Reshaping Existing Drainage Ditches

We are concerned that the text of this NWP and proposed modifications will result in more than minimal impacts to aquatic resources. The cumulative impact analysis provided in the DEA suggests that this permit results in a net loss of waters. Consistent with other NWPs, impacts under this certification are limited to the lesser of ½ acre or 300 feet of waters. As with NWP-C below, allowing sidecasting of dredged material into waters of the United States will cause and contribute to degradation of water quality as sediment is re-suspended in the water column. Sediment problems are among the most common water quality problems in the nation. This NWP assumes that returning a drainage ditch to its original configuration will improve water quality, but lacks guidance or standards that describe methods for demonstrating an improvement in water quality. All "sidecast" materials from excavation must be stored and/or disposed of within non-jurisdictional uplands under this certification. A statement must be included in the notification as to how the applicant's activities will improve water quality.

As with NWP-40 above, we are concerned that this NWP will have significant indirect adverse affects on waters of the U.S. by draining wetlands upstream in an attempt to convert large wetland areas to developable uplands through relatively small regulated discharges. These activities could have a considerable indirect impact on aquatic resources that would go undetected under the NWP terms. Under this certification, no discharges are authorized which would impact hydrological connectivity between jurisdictional waters to such an extent as to convert waters of the U.S. to uplands, or otherwise isolate waters to eliminate federal regulatory jurisdiction.

NWP-42 Recreational Facilities

As a general matter, recreational facilities such as those listed by the Corps in discussion of this NWP (FR Notice p. 56272-3) are not water-dependent (*e.g.*, golf courses, playing fields, basketball courts), and impacts to waters of the U.S. should be avoidable. This is especially true in the most common cases (according to the Corps) where “the proposed project area is predominantly uplands.” However, given the notification requirements herein, and subject to a 300 foot or ½ acre limit, this NWP is hereby programmatically certified. Under this certification, waiver of the impact limits for ephemeral streams is not permitted.

NWP-43 Stormwater Management Facilities

NWP authorization of constructing stormwater facilities within waters of the U.S. discourages applicants from using practicable construction options that locate stormwater retention and detention facilities “off line” from streams. For example, retention facilities are often built as sediment (or debris) basins within a stream. This practice includes constructing a dam in the stream, excavating out a basin, and regular sediment removal to maintain the structure. These facilities cause considerable and unnecessary damages to stream functions as retention facilities can be located “off line” by constructing a high flow diversion channel above the ordinary high water mark. If applicants can continue to use the traditional, more damaging practices that are sanctioned by this NWP, there is no incentive for these management practices to improve. Although maintenance of existing facilities may be necessary, we do not believe NWP-43 for new facilities complies with the CWA Section 404(b)(1) Guidelines.

CWA section 401 Water Quality certification for this proposed NWP is denied without prejudice. Applicants for projects on tribal lands must apply, via MPCN, to EPA for individual certification if this NWP is proposed to be used.

NWP-44 Mining Activities

We are concerned that activities authorized by this NWP will have a more than minimal adverse effect on aquatic resources. As proposed, this NWP could authorize in-stream mining operations impacting more than a mile of a 4-foot wide stream, exacerbated by indirect effects up and downstream of the discharges such as headcutting and downcutting. This permit is certified only for impacts up to 300 linear feet or ½ acre, consistent with other NWPs. When used for in-stream aggregate mining activities, compensatory mitigation is likely to be required due to extensive indirect impacts and temporal losses typical of this type of impact.

Proposed New Permits

NWP-A Emergency Repair Activities

This permit as proposed places no limits on project scale or scope of impacts, discharge or excavation volumes, or length of banks that may be “reconstructed.” The ambiguous language of the proposed permit may be read to authorize repeated excavation activities within waters and permanent stabilization of stream banks, both of which will frequently entail more

than minimal adverse impacts to the aquatic resource. The proposed permit may be used following “recent storms, floods, or other discrete events.” Clearly, the lack of a definition of “other discrete events” invites wide and varying interpretation. Flashy events with significant flows are routine in much of the arid southwest. Under this permit, regular invasive hydrological modification of ephemeral or intermittent streams could be authorized after each of these normal storm events. We believe this NWP is inappropriate and should not be issued; in our experience, “Emergency Repairs” are best handled via Regional General Permits through local Corps Districts.

Under this certification, impacts shall be limited to 300 linear feet or ½ acre, consistent with other NWPs, and the permittee’s MPCN must contain a description of the CWA permitting history of the site. We understand that certain emergencies (e.g. rapidly eroding banks during a storm event) may require the immediate placement of hard materials such as riprap into waters of the U.S. to protect public safety or property. However, if these materials are placed on an immediate emergency basis in lieu of bioengineered structures that maintain natural channel geomorphology (see NWP 13 and footnote 5 for examples), applicants are required to submit a restoration plan for the project site, to ensure that the aquatic functions and values of the site are ultimately restored.⁷ This permit does not authorize the permanent discharge, retention or maintenance of riprap or other hardscape bank armoring, unless the applicant clearly demonstrates that these materials are appropriate and protect biological and hydrological functions. The MPCN must include an analysis explaining the reasons for site failure (i.e., the “emergency” situation). If restoration is impracticable, the MPCN must include documentation that the proposed repair is an appropriate long-term solution for the project site.

NWP-B Discharges in Ditches and Canals

From the discussion in the FR Notice (p. 56274), the purpose of this NWP is to “allow a landowner to return his or her land to its prior condition” if the ditches in question are “(1) constructed in uplands; (2) receive water from another water of the United States; and (3) divert water to another water of the United States.” Thus, restoration to the “prior condition” is to convert a water of the U.S. to non-jurisdictional uplands (per criterion one), and eliminate hydrological connectivity and/or isolate down- and up-stream waters (per criteria two and three). As with NWPs 40 and 41 above, we believe it prudent to apply the same conditions that such effects are prohibited, but as they appear to be the purpose of the permit, it is difficult to place appropriate conditions on this permit outside the context of a specific project proposal.

CWA section 401 Water Quality certification for this proposed NWP is denied without prejudice. Applicants for projects on tribal lands must apply, via MPCN, to EPA for individual certification if this NWP is proposed to be used.

NWP-C Pipeline Safety Program Designated Time-Sensitive Inspections and Repairs

According to the DEA, Corps’ surveys suggest that this permit would result in the loss of ~320 acres of waters of the United States over the next 5 years. There is no anticipated compensation for these losses. It is unclear how this NWP advances the programmatic “no net loss/net gain” goals or results in minimal impacts, individually or cumulatively. Criteria “b” allows material from trench excavation to be temporarily sidecast, threatening water quality for

⁷ Additional permit authorization (e.g., NWP 27) may be required.

at least three months. The Corps is not requiring PCNs for this permit, thereby preventing the Corps from determining how often it is used, what its impacts are, and when or if sidecast material has been removed. It is not clear that Corps will have access to the Pipeline Repair and Environmental Guidance System (PREGS) that records post construction reports. This NWP is also unique in that it proposes a prohibition on issuance of regional conditions, but there is no explanation or data supporting this dramatic policy change.

CWA section 401 Water Quality certification for this proposed NWP is denied without prejudice. Applicants for projects on tribal lands must apply, via MPCN, to EPA for individual certification if this NWP is proposed to be used.

NWP-D Commercial Shellfish Aquaculture Activities

As proposed, this permit would deviate from existing NWPs 4, 19, and 36 which prohibit activities in Submerged Aquatic Vegetation (SAV), with no explanation as to why this deviation would not result in minimal adverse impacts to SAV. The nature and types of discharges covered by this permit are not defined, inviting completely unrestricted use of the permit. Similarly, limits such as "existing project area" can be interpreted many ways and it is not clear from the proposed NWP text how the Corps intends the regulated public to understand the phrase.

CWA section 401 Water Quality certification for this proposed NWP is denied without prejudice. Applicants for projects on tribal lands must apply, via MPCN, to EPA for individual certification if this NWP is proposed to be used.

NWP-E Coal Remining Activities

Although efforts to restore lands disturbed by mining are encouraged, limiting impacts authorized under NWP 21 is preferable to creating a new NWP for remining and restoring these areas. Indeed, the perceived necessity of NWP-E suggests that NPW 21 may have more than minimal adverse effects on aquatic resources as proposed. If this permit is issued, its use is limited under this certification to ½ acre or 300 feet of waters, and limited to application at abandoned mine sites. Applicants must provide information in the PCN illustrating that activities authorized under NWP-E will result in a net increase in aquatic resource functions.

NWP-F Underground Coal Mining Activities

The lack of impact limits under this proposed NWP is likely to result in a net loss of aquatic resources. The cumulative impact estimate in the DEA indicates that NWP-F would result in 97 acres of impact per year and 11 acres of compensatory mitigation per year. A review of activities authorized by this permit would likely show that many of these impacts are permanent and occur in important and sensitive headwater streams. A 300 linear foot and ½ acre impact limit is required under this certification, consistent with other NWPs. A compensatory mitigation plan meeting all of the criteria set forth in the national *Mitigation Action Plan*, including a minimum replacement-to-impact ratio of one-to-one, is also required under this certification.

Summary Table – EPA §401 Certification of NWP for projects on tribal lands

NWP	Certification Status	Notification required?*	Impact Limits	Notes
1	Certified, general conditions only	YES – MPCN	None	
2	Certified, general conditions only	YES – MPCN	None	
3	Certified, permit conditions	YES – (M)PCN	Generally no increase in fill footprint.	No maintenance of undersized structures; bioengineering used whenever practicable.
4	Certified, general conditions only	YES – MPCN	None	
5	Certified, general conditions only	YES – MPCN	25 yrd ³	
6	Certified, general conditions only	YES – MPCN	25 yrd ³	
7	Certified, general conditions only	YES – PCN	None	
8	Certified, general conditions only	YES – PCN	None	
9	Certified, general conditions only	YES – MPCN	None	
10	Certified, general conditions only	YES – MPCN	None	
11	Certified, general conditions only	YES – MPCN	None	
12	Certified, permit conditions	YES – (M)PCN	½ acre or 300'	Identify temporary impacts.
13	Certified, permit conditions	YES – (M)PCN	300' and <1 yrd ³ / running ft.	No use in special aquatic sites; bioengineered stabilization whenever practicable.
14	Certified, permit conditions	YES – (M)PCN	½ acre or 300'	Address indirect impacts.
15	Certified, general conditions only	YES – MPCN	None	
16	Certified, general conditions only	YES – MPCN	None	
17	Certified, general conditions only	YES – PCN	None	
18	Certified, general conditions only	YES – (M)PCN	1/10 acre or 25 yrd ³	
19	Certified, general conditions only	YES – MPCN	25 yrd ³	
20	Certified, general conditions only	YES – MPCN	None	
21	Certified, permit conditions	YES – PCN	½ acre or 300'	EPA approves mitigation plan before work.
22	Certified, general conditions only	YES – (M)PCN	None	
23	Certified, general conditions only	YES – (M)PCN	None	
24	Certified, general conditions only	YES – MPCN	None	
25	Certified, general conditions only	YES – MPCN	None	
26	N/A	N/A	N/A	N/A
27	Certified, permit conditions	YES – (M)PCN	½ acre or 300'	Fill material, project purpose limitations.
28	Certified, general conditions only	YES – MPCN	Authorized marina	
29	Certified, permit conditions	YES – PCN	¼ acre or 300'	No impact limit waivers, no recreational.
30	Certified, general conditions only	YES – MPCN	None	
31	Certified, general conditions only	YES – PCN	Corps-approved	
32	Certified, general conditions only	YES – MPCN	5 acres non-tidal, or 1 acre tidal wetlands	
33	Certified, general conditions only	YES – PCN	None	
34	Certified, general conditions only	YES – PCN	10 acres	No net loss of acreage permitted.
35	Certified, general conditions only	YES – MPCN	Lesser of previously authorized or controlling depths	
36	Certified, general conditions only	YES – (M)PCN	50 yrd ³ , 20'-wide ramp	
37	Certified, general conditions only	YES – PCN	None	
38	Certified, general conditions only	YES – PCN	None	
39	Certified, permit conditions	YES - PCN	½ acre or 300'	
40	Certified, permit conditions	YES - PCN	½ acre or 300'	
41	Certified, permit conditions	YES – (M)PCN	½ acre or 300'	Water quality assessments in notification; sidecast material to uplands only.
42	Certified, permit conditions	YES – PCN	½ acre or 300'	No impact limit waivers.
43	DENIED	YES – (M)PCN	N/A	Must apply to EPA for individual cert.
44	Certified, permit conditions	YES – PCN	½ acre or 300'	
A	Certified, permit conditions	YES - PCN	½ acre or 300'	Site permit history, restoration plan required
B	DENIED	YES – (M)PCN	N/A	Must apply to EPA for individual cert.
C	DENIED	YES - MPCN	N/A	Must apply to EPA for individual cert.
D	DENIED	YES – (M)PCN	N/A	Must apply to EPA for individual cert.
E	Certified, permit conditions	YES – PCN	½ acre or 300'	
F	Certified, permit conditions	YES – PCN	½ acre or 300'	Compensatory mitigation plan required.

* "PCN" = Corps-required notification; "MPCN" = EPA-required notification; "(M)PCN" = either, depending on impact limits.



Goldmann.Elizabeth@epamail.epa.gov

08/27/2009 04:03 PM

To pauline_lamphere@dot.ca.gov

cc

bcc

Subject 401 water quality - #0342

Dear Ms. Lamphere:

EPA is in receipt of your request for section 401 of the Clean Water Act water quality certification for the proposed Pala Creek Bridge Replacement located on State Route 76 within the Pala Band of Mission Indians Reservation in San Diego County, CA. The project will result in the discharge of dredged or fill material associated with the replacement of Pala Creek Bridge. The project will result in temporary impacts of 0.08 acre of waters of the United States. EPA received a copy of your request for section 401 water quality certification on August 27, 2009. Based on the information you have provided, it appears the project would qualify for NWP 33. Pursuant to EPA's Programmatic Conditional Clean Water Act Section 401 Certification of the 2007 Nationwide Permits for projects on applicable tribal lands, NWP 33 has been certified by EPA. **Therefore, your project is certified.** I have attached a copy of EPA's NWP section 401 certification letter for your review. If your project changes, or does not meet the terms and conditions of NWP33, please notify our office and we will review your project for appropriate certification or waiver.

Sincerely, Elizabeth Goldman



EPA.R9.Programmatic.Tribal.401.cert.2007.NwPs.pdf

To: **Claire Dodge – Office Engineer**

Date: April 30, 2010

File: 11-SD-76
PM 23.1/23.5
11-273401

From: **DEPARTMENT OF TRANSPORTATION
DISTRICT 11 – Pavement Management**

Subject: Limited Use & Restrictions to the TCE (Road Behind Pala Casino)

The following information should be included as part of the information handout per agreement with Pala Casino.

1. Copy of map showing the location of the access road. See Attachment
2. Contact person, address, phone number, and email for Pala Band of Mission Indians:

Andrew Moro
Business Manager
Pala Band of Mission Indians
35008 Pala Temecula Rd. PMB 60, Pala CA 92059
Phone: (760) 891-3533
Fax: (760) 891-3588
Cell: (760) 802-5209
amoro@palatribe.com
3. Begin Project Construction: 09/23/2010
4. End Project Construction: 05/01/2012
5. Caltrans project contact persons and phone numbers: Bruce Lambert (Project Manager), Phone: (619) 688-3313. Rahim Akhondzadeh (Resident Engineer: RE), Phone: (858) 688-1318.
6. Type of work to be performed and actual duration of work to be performed: Pala Creek Bridge Replacement Project (Begin Construction: 09/23/10 & End Construction 05/01/12).
7. Any pertinent information as agreed with the property owner:

Per Agreement with Pala Tribe, use of the access road in the rear of Casino should be limited to only delivery or pick up of equipment or material used to construct the bridge. The access road cannot be used as a haul road for other construction material placed in the work area (i.e. - rock, soil, etc). The access road can only be used with the prior approval of the RE (Rahim Akhondzadeh) and the Pala Casino (Andrew Moro) with a minimum of 48-hour advanced notice. The access road could be used to pull in the

falsework with prior notice to "Tribe". The access road should be used in such a way as to impart the least amount of impact to the public using Pala Casino.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce Lambert". The signature is fluid and cursive, with a long horizontal stroke at the end.

BRUCE LAMBERT
Chief Pavement Management



SR 76 PM 22.6
EA: 273402
04/07/2010

PALA CASINO ACCESS EXHIBIT "A"

DEPARTMENT OF RIGHT OF WAY ENGINEERING

