

INFORMATION HANDOUT

WATER QUALITY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION (401 Permit)

PERMITS

UNITED STATES ARMY CORPS OF ENGINEERS
NON-REPORTING NATIONWIDE (404 Permit)

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WATER QUALITY

Central Valley Regional Water Quality Control Board

5 August 2014

Javier Almaguer
California Department of Transportation
855 M St., Ste. 200
Fresno, CA 93721

CLEAN WATER ACT §401 TECHNICALLY CONDITIONED WATER QUALITY CERTIFICATION FOR DISCHARGE OF DREDGED AND/OR FILL MATERIALS FOR THE PRATHER CURVE CORRECTION PROJECT, WDID#5B10CR00071, FRESNO COUNTY

This Order responds to the 7 May 2014 application submitted by California Department of Transportation (Applicant) for the Water Quality Certification of a highway construction project permanently impacting 0.24 acres of waters of the United States.

This Order serves as certification of the United States Army Corps of Engineers' Nationwide Permit 14 under § 401 of the Clean Water Act, and a Waste Discharge Requirement under the Porter-Cologne Water Quality Control Act and State Water Board Order 2003-0017-DWQ.

WATER QUALITY CERTIFICATION STANDARD CONDITIONS:

1. This Certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to § 13330 of the California Water Code and § 3867 of Title 23 of the California Code of Regulations (23 CCR).
2. This Certification is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR § 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. The validity of any non-denial certification action shall be conditioned upon total payment of the full fee required under 23 CCR § 3860.
4. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under State law and § 401 (d) of the federal Clean Water Act. The applicability of any State law authorizing remedies, penalties, process, or sanctions for the violation or threatened violation constitutes a limitation necessary to ensure compliance with this Certification.

WATER QUALITY CERTIFICATION GENERAL CONDITIONS:

1. Certification is valid for the duration of the Prather Curve Correction Project (Project) described in the attached "Project Information Sheet." This Certification is no longer valid if the Project (as summarized in the "Project Information Sheet" and described in the water quality certification application) is modified, or coverage under the project permit issued by the U.S. Army Corps of Engineers pursuant to § 404 of the Clean Water Act has expired.

KARL E. LONGLEY ScD, P.E., CHAIR | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER

2. The Applicant shall provide a Notice of Completion (NOC) no later than 30 days after the project completion. The NOC shall demonstrate that the project has been carried out in accordance with the project description in the Certification and in any approved amendments. The NOC shall include a map of the project location(s), including final boundaries of any on-site restoration area(s), if appropriate, and representative pre and post construction photographs. Each photograph shall include a descriptive title, date taken, photographic site, and photographic orientation.
3. All reports, notices, or other documents required by this Certification or requested by the Central Valley Water Board shall be signed by a person described below or by a duly authorized representative of that person.
 - a. For a corporation: by a responsible corporate officer such as (1) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function; (2) any other person who performs similar policy or decision-making functions for the corporation; or (3) the manager of one or more manufacturing, production, or operating facilities if *authority* to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
 - c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official.
4. Any person signing a document under General Condition No. 3 shall make the following certification, whether written or implied:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

ADDITIONAL TECHNICALLY CONDITIONED CERTIFICATION CONDITIONS:

In addition to the standard and general conditions above, the Applicant shall satisfy the following:

1. The Applicant shall notify the Central Valley Water Board in writing **seven days** prior to beginning any in-water activities.
2. Except for activities permitted by the U.S. Army Corps of Engineers under § 404 of the Clean Water Act, soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.
3. All areas disturbed by Project activities shall be protected from washout or erosion.
4. The Applicant shall maintain a copy of this Certification and supporting documentation (Project Information Sheet) at the Project site during construction for review by site personnel and agencies. All personnel (employees, contractors, and subcontractors) performing work on the proposed Project shall be adequately informed and trained regarding the conditions of this Certification.

5. An effective combination of erosion and sediment control Best Management Practices (BMPs) shall be implemented and adequately working during all phases of construction.
6. All temporarily affected areas shall be restored to pre-construction contours and conditions upon completion of construction activities.
7. The Applicant shall perform surface water sampling: 1) when performing any in-water work; 2) in the event that Project activities result in any materials reaching surface waters or; 3) when any activities result in the creation of a visible plume in surface waters. Pollutants shall be analyzed using the analytical methods described in 40 Code of Federal Regulations Part 136; where no methods are specified for a given pollutant, the method shall be approved by Central Valley Water Board staff. The following monitoring shall be conducted immediately upstream out of the influence of the Project and approximately 300 feet downstream of the active work area. Sampling results shall be submitted to this office by the first day of the second month following sampling. The sampling frequency and monitoring locations may be modified for certain projects with written permission from the Central Valley Water Board Executive Officer.

Parameter	Unit	Type of Sample	Frequency of Sample
Turbidity	NTU	Grab	Every 4 hours during in-water work
Settleable Material	ml/L	Grab	Same as above
pH	Standard units	Grab	Daily during concrete activity
Visible construction related pollutants	Observation	Visible Inspections	Continuous throughout the construction period

8. Activities shall not cause in surface waters:

- (a) where natural turbidity is less than 1 Nephelometric Turbidity Units (NTUs), controllable factors shall not cause downstream turbidity to exceed 2 NTUs;
- (b) where natural turbidity is between 1 and 5 NTUs, increases exceeding 1 NTU;
- (c) where natural turbidity is between 5 and 50 NTUs, increases exceeding 20 percent;
- (d) where natural turbidity is between 50 and 100 NTUs, increases exceeding 10 NTUs;
- (e) where natural turbidity is greater than 100 NTUs, increases exceeding 10 percent.

In determining compliance with the above limits, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. Averaging periods may only be used with prior permission of the Central Valley Water Board Executive Officer.

9. Activities shall not cause settleable material to exceed 0.1 ml/L in surface waters as measured in surface waters downstream from the Project.
10. Activities shall not cause the pH in surface waters to be depressed below 6.5 nor raised above 8.5.
11. The discharge of petroleum products or other excavated materials to surface water is prohibited. Activities shall not cause visible oil, grease, or foam in the work area or downstream. The Applicant shall notify the Central Valley Water Board immediately of any spill of petroleum products or other organic or earthen materials.

12. The Applicant shall notify the Central Valley Water Board immediately if any of the above conditions are violated, along with a description of measures it is taking to remedy the violation.
13. The Applicant shall comply with all California Department of Fish and Game Code § 1600 requirements for the Project.
14. The Applicant must obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction Activities issued by the State Water Resources Control Board for any project disturbing an area of one acre or greater.
15. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under State law and § 401 (d) of the federal Clean Water Act. The applicability of any State law authorizing remedies, penalties, process, or sanctions for the violation or threatened violation constitutes a limitation necessary to ensure compliance with this Certification.
16. If the Applicant or a duly authorized representative of the Applicant fails or refuses to furnish technical or monitoring reports, as required under this Certification, or falsifies any information provided in the monitoring reports, the Applicant will be subject to civil liability, for each day of violation, or criminal liability.
17. In response to a suspected violation of any condition of this Certification, the Central Valley Water Board may require the Applicant to furnish, under penalty of perjury, any technical or monitoring reports the Central Valley Water Board deems appropriate, provided that the burden, including cost of the reports, shall be in reasonable relationship to the need for the reports and the benefits to be obtained from them.
18. The Applicant shall allow staff of the Central Valley Water Board, or an authorized representative(s), upon the presentation of credentials and other documents, as may be required by law, to enter the Project premises for inspection, including taking photographs and securing copies of project-related records, for the purpose of assuring compliance with this Certification and determining the ecological success of the Project.

CENTRAL VALLEY WATER BOARD CONTACT PERSON:

Debra Mahnke, Water Resource Control Engineer
1685 E Street
Fresno, CA 93706
(559) 445-6281
dmahnke@waterboards.ca.gov

WATER QUALITY CERTIFICATION:

I hereby issue an order certifying that the proposed discharge from the California Department of Transportation Prather Curve Correction Project, WDID# 5B10CR00071, will comply with the applicable provisions of § 301 ("Effluent Limitations"), § 302 ("Water Quality Related Effluent Limitations"), § 303 ("Water Quality Standards and Implementation Plans"), § 306 ("National Standards of Performance"), and § 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Resources Control Board Water Quality Order No. 2003-0017 DWQ "Statewide General Waste Discharge Requirements For Dredged Or Fill Discharges That Have Received State Water Quality Certification."

Except insofar as may be modified by any preceding conditions, all certification actions are contingent on (a) the discharge being limited to and all proposed mitigation being completed in strict compliance with the Applicant's project description, the attached "Project Information Sheet," and the Applicant's water quality certification application; and (b) compliance with all applicable requirements of the Central Valley Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised October 2011.

Any person aggrieved by this action may petition the State Water Resources Control Board to review the action in accordance with California Water Code § 13320 and California Code of Regulations, title 23, § 2050 and following. The State Water Resources Control Board must receive the petition by 5:00 p.m., 30 days after the date of this action, except that if the thirtieth day following the date of this action falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Resources Control Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.



for Pamela C. Creedon
Executive Officer

Enclosure: Water Quality Order No. 2003-0017 DWQ
Attachment: Project Information Sheet

cc: Jason Brush, Supervisor, Wetlands Regulatory Office, U.S. Environmental Protection Agency, Region 9, San Francisco (email)
Kate Dadey, Sacramento South Branch Chief, Regulatory Unit, Department of the Army, Corps of Engineers, Sacramento
Bill Orme, Water Quality Certification Unit Chief, Division of Water Quality, State Water Resources Control Board, Sacramento (email)
Jeffrey Single, Regional Manager, San Joaquin Valley-Southern Sierra Region, California Department of Fish and Wildlife, Fresno

PROJECT INFORMATION SHEET

Application Date: 7 May 2014

Applicant: California Department of Transportation

Applicant Representatives: Javier Almaguer, Biology Branch Chief

Project Name: Prather Curve Correction Project

Application Number: WDID# 5B10CR00071

Type of Project: Highway construction

Project Location: Section 25, Township 10 South, Range 22 East, MDB&M.
Latitude: 37.0283° and Longitude: -119.522401°

Project Duration: The Project is anticipated to take two years and is tentatively scheduled to begin in January 2015.

County: Fresno

Receiving Water: Unnamed tributary to Little Dry Creek, a tributary to the San Joaquin River, San Joaquin River Hydrologic Basin, San Joaquin River Hydrologic Unit #540.70, Little Dry Creek HA,

Water Body Type: Un-vegetated streambed

Designated Beneficial Uses: The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised October 2011 (Basin Plan) has designated beneficial uses for surface and ground waters within the region. Beneficial uses that could be impacted by the project include, but are not limited to: Municipal and Domestic Water Supply (MUN); Agricultural Supply (AGR); Industrial Supply (IND); Hydropower Generation (POW); Groundwater Recharge (GWR); Water Contact Recreation (REC-1); Non-Contact Water Recreation (REC-2); Warm Freshwater Habitat (WARM); Cold Freshwater Habitat (COLD); Preservation of Biological Habitats of Special Significance (BIOL); Rare, Threatened, or Endangered Species (RARE); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or Early Development (SPWN); and Wildlife Habitat (WILD). A comprehensive and specific list of the beneficial uses applicable for the project area can be found at http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/index.shtml.

Project Description: The Project consists of realigning the existing curve on SR 168 southwest of Prather. The Project requires blasting and excavation of a mountain slope and relocation and replacement of numerous culverts.

Preliminary Water Quality Concerns: Construction activities may impact surface waters with increased turbidity and settleable matter.

Proposed Mitigation to Address Concerns: Construction will take place when no water is present. The new culverts would be adequately armored to withstand high flows.

Fill/Excavation Area: Approximately 0.24 acres of un-vegetated streambed will be permanently impacted by placement of 9,900 cubic yards of fill, 62.1 cubic yards of rock rip rap, and 5,233 cubic yards of concrete.

Dredge Volume: None

U.S. Army Corps of Engineers Permit Number: Nationwide Permit 14

Department of Fish and Wildlife Streambed Alteration Agreement: The Applicant applied for a Streambed Alteration Agreement.

Status of CEQA Compliance: The California Department of Transportation approved a Mitigated Negative Declaration and filed a Notice of Determination on 14 March 2014 (State Clearinghouse Number SCH 2012091039).

As a Responsible Agency under California Environmental Quality Act (CEQA), the Central Valley Water Board reviewed the Mitigated Negative Declaration and found that the Project impacts to water quality were adequately addressed. Mitigation for impacts to water quality is discussed in the "Proposed Mitigation to Address Concerns" section above and the "Compensatory Mitigation" section below.

Compensatory Mitigation: The Applicant will purchase in-lieu fee credits to mitigate for permanent impacts to 0.24 acres of un-vegetated streambed.

Application Fee Provided: Total fees of \$2,441 have been submitted as required by 23 CCR §3833(b)(3)(A) and by 23 CCR §2200(e).

STATE WATER RESOURCES CONTROL BOARD

WATER QUALITY ORDER NO. 2003 - 0017 - DWQ

**STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
DREDGED OR FILL DISCHARGES THAT HAVE RECEIVED
STATE WATER QUALITY CERTIFICATION (GENERAL WDRs)**

The State Water Resources Control Board (SWRCB) finds that:

1. Discharges eligible for coverage under these General WDRs are discharges of dredged or fill material that have received State Water Quality Certification (Certification) pursuant to federal Clean Water Act (CWA) section 401.
2. Discharges of dredged or fill material are commonly associated with port development, stream channelization, utility crossing land development, transportation water resource, and flood control projects. Other activities, such as land clearing, may also involve discharges of dredged or fill materials (e.g., soil) into waters of the United States.
3. CWA section 404 establishes a permit program under which the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the United States.
4. CWA section 401 requires every applicant for a federal permit or license for an activity that may result in a discharge of pollutants to a water of the United States (including permits under section 404) to obtain Certification that the proposed activity will comply with State water quality standards. In California, Certifications are issued by the Regional Water Quality Control Boards (RWQCB) or for multi-Region discharges, the SWRCB, in accordance with the requirements of California Code of Regulations (CCR) section 3830 et seq. The SWRCB's water quality regulations do not authorize the SWRCB or RWQCBs to waive certification, and therefore, these General WDRs do not apply to any discharge authorized by federal license or permit that was issued based on a determination by the issuing agency that certification has been waived. Certifications are issued by the RWQCB or SWRCB before the ACOE may issue CWA section 404 permits. Any conditions set forth in a Certification become conditions of the federal permit or license if and when it is ultimately issued.
5. Article 4, of Chapter 4 of Division 7 of the California Water Code (CWC), commencing with section 13260(a), requires that any person discharging or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the State,¹ file a report of waste discharge (ROWD). Pursuant to Article 4, the RWQCBs are required to prescribe waste discharge requirements (WDRs) for any proposed or existing discharge unless WDRs are waived pursuant to CWC section 13269. These General WDRs fulfill the requirements of Article 4 for proposed dredge or fill discharges to waters of the United States that are regulated under the State's CWA section 401 authority.

¹ "Waters of the State" as defined in CWC Section 13050(e)

6. These General WDRs require compliance with all conditions of Certification orders to ensure that water quality standards are met.
7. The U.S. Supreme Court decision of *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (the *SWANCC* decision) called into question the extent to which certain “isolated” waters are subject to federal jurisdiction. The SWRCB believes that a Certification is a valid and enforceable order of the SWRCB or RWQCBs irrespective of whether the water body in question is subsequently determined not to be federally jurisdictional. Nonetheless, it is the intent of the SWRCB that all Certification conditions be incorporated into these General WDRs and enforceable hereunder even if the federal permit is subsequently deemed invalid because the water is not deemed subject to federal jurisdiction.
8. The beneficial uses for the waters of the State include, but are not limited to, domestic and municipal supply, agricultural and industrial supply, power generation, recreation, aesthetic enjoyment, navigation, and preservation and enhancement of fish, wildlife, and other aquatic resources.
9. Projects covered by these General WDRs shall be assessed a fee pursuant to Title 23, CCR section 3833.
10. These General WDRs are exempt from the California Environmental Quality Act (CEQA) because (a) they are not a “project” within the meaning of CEQA, since a “project” results in a direct or indirect physical change in the environment (Title 14, CCR section 15378); and (b) the term “project” does not mean each separate governmental approval (Title 14, CCR section 15378(c)). These WDRs do not authorize any specific project. They recognize that dredge and fill discharges that need a federal license or permit must be regulated under CWA section 401 Certification, pursuant to CWA section 401 and Title 23, CCR section 3855, et seq. Certification and issuance of waste discharge requirements are overlapping regulatory processes, which are both administered by the SWRCB and RWQCBs. Each project subject to Certification requires independent compliance with CEQA and is regulated through the Certification process in the context of its specific characteristics. Any effects on the environment will therefore be as a result of the certification process, not from these General WDRs. (Title 14, CCR section 15061(b)(3)).
11. Potential dischargers and other known interested parties have been notified of the intent to adopt these General WDRs by public hearing notice.
12. All comments pertaining to the proposed discharges have been heard and considered at the November 4, 2003 SWRCB Workshop Session.
13. The RWQCBs retain discretion to impose individual or General WDRs or waivers of WDRs in lieu of these General WDRs whenever they deem it appropriate. Furthermore, these General WDRs are not intended to supersede any existing WDRs or waivers of WDRs issued by a RWQCB.

IT IS HEREBY ORDERED that WDRs are issued to all persons proposing to discharge dredged or fill material to waters of the United States where such discharge is also subject to the water quality certification requirements of CWA section 401 of the federal Clean Water Act (Title 33 United States Code section 1341), and such certification has been issued by the applicable RWQCB or the SWRCB, unless the applicable RWQCB notifies the applicant that its discharge will be regulated through WDRs or waivers of WDRs issued by the RWQCB. In order to meet the provisions contained in Division 7 of CWC and regulations adopted thereunder, dischargers shall comply with the following:

1. Dischargers shall implement all the terms and conditions of the applicable CWA section 401 Certification issued for the discharge. This provision shall apply irrespective of whether the federal license or permit for which the Certification was obtained is subsequently deemed invalid because the water body subject to the discharge has been deemed outside of federal jurisdiction.
2. Dischargers are prohibited from discharging dredged or fill material to waters of the United States without first obtaining Certification from the applicable RWQCB or SWRCB.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on November 19, 2003.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz
Gary M. Carlton
Nancy H. Sutley

NO: None.

ABSENT: None.

ABSTAIN: None.


Debbie Irvin
Clerk to the Board

PERMITS



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

December 9, 2014

Regulatory Division (SPK-2014-00445)

State of California
Department of Transportation, District 6
Attn: Suzanne K. Holdridge
2015 East Shields Avenue, Suite 100
Fresno, California 93726

Dear Ms. Holdridge,

We are responding to your May 8, 2014, request for a Department of the Army permit for the Prather Curve Correction project (EA 06-0M050). This approximately 9.207-acre project involves activities, including discharges of dredged or fill material, in waters of the United States to realign an existing curve on State Route (SR) 168. The project is located on SR 168, one mile southwest of the town of Prather, in Section 25, Township 10 South, Range 22 East, Mount Diablo Meridian, Latitude 37.027106°, Longitude -119.523104°, Fresno County, California.

Based on available information, we concur with the amount and location of waters on the site as depicted on the enclosed November 24, 2014 *Prather Curve Correction, Fresno County, SR 168 PM T29.0 - T29.4* drawings, prepared by Ms. Angela Gallardo of the California Department of Transportation (Caltrans). The approximately 0.57 acre of ephemeral drainages present within the survey area are potential waters of the United States regulated under Section 404 of the Clean Water Act.

We have enclosed a copy of the *Preliminary Jurisdictional Determination Form* for this site. Please sign and return a copy of the completed form to this office. You may request an approved JD for this site at any time prior to starting work within waters. In certain circumstances, as described in RGL 08-02, an approved JD may later be necessary.

Based on the information you provided, the proposed activity, resulting in the permanent loss of approximately 0.24 acre of ephemeral drainage is authorized by Nationwide Permit Number (NWP) Number 14, Linear Transportation Projects. The NWP information sheet and regional general conditions can be found on our website at <http://www.spk.usace.army.mil/Missions/Regulatory/Permitting/NationwidePermits.aspx>. If you do not have access to the internet, a hard copy of the NWP information sheet and regional general conditions will be provided upon request. Your work must comply with the general terms and conditions listed on the NWP information sheet, applicable regional conditions, and the following special conditions.

Special Conditions

1. To mitigate for the loss of 0.24 acre of ephemeral stream, you shall purchase at 3.8:1 ratio, 0.912 aquatic resource credits from the National Fish and Wildlife Foundation's (NFWF) Sacramento District California In-Lieu Fee Program for the San Joaquin River Watershed Service Area. Contact information for NFWF can be found on their website at: www.nfwf.org/ilf. Evidence of this purchase shall be provided to this office prior to initiation of construction activities within waters of the U.S.
2. All terms and conditions of the August 5, 2014, Section 401 Water Quality Certification are expressly incorporated as conditions of this permit.
3. This Corps permit does not authorize you to take an endangered species, in particular the threatened Valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*), or designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (e.g., an Endangered Species Act Section 10 permit, or a Biological Opinion under Endangered Species Act Section 7, with "incidental take" provisions with which you must comply). The enclosed Fish and Wildlife Service Biological Opinion (08ESMF00-2010-F-0623-1, dated January 8, 2013), contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the Biological Opinion. 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 Biological Opinion, 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 Biological Opinion, 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 U. S. Fish and Wildlife Service is the appropriate authority to determine compliance with the terms and conditions of its Biological Opinion, and with the Endangered Species Act. You must comply with all conditions of this Biological Opinion.
4. All equipment staging, disposal and stockpile areas, including Temporary Construction Areas (TCA's), shall take place within Corps of Engineers approved areas within the project boundary. Prior to construction implementation, you shall ensure all equipment staging, TCA's, demolition and excavation, off pavement detours, borrow and fill areas, and disposal and stockpile areas have been evaluated under National Environmental Policy Act, Section 401 and 404 of the Clean Water Act, Section 7 of the Endangered Species Act, Section 106 of the National Historical Preservation Act, and other applicable Federal laws.
5. You shall follow specifications and standards described in the Storm Water Pollution Prevention Plan (SWPPP) and/or Water Pollution Control Plan (WPCP), to prevent erosion and sedimentation during and after construction. Construction work within waters of the U. S. shall be performed when the flows are at their seasonal low or when they have ceased and the area is dry, typically late summer through early fall.
6. The enclosed November 24, 2014, *Prather Curve Correction, Fresno County, SR 168 PM T29.0 - T29.4 06-0M050* drawings are incorporated by reference as a condition of this authorization. Any deviations from the work as authorized, which result in additional impacts to waters of the U.S., including wetlands, must be coordinated with this office prior to impacts.

7. If any of the above conditions are violated or unauthorized activities occur, you shall stop work immediately and notify this office. You shall provide us with a detailed description of the unauthorized activity(s), photo documentation, and any measures taken to remedy the violation.

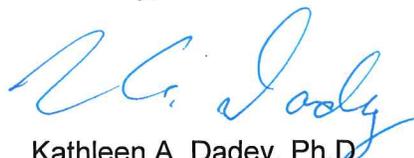
You must sign the enclosed Compliance Certification and return it to this office within 30 days after completion of the authorized work.

This verification is valid until March 18, 2017, when the existing NWP's are scheduled to be modified, reissued, or revoked. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified, reissued or revoked, you will have twelve (12) months from the date of the modification, reissuance or revocation of the NWP to complete the activity under the present terms and conditions. Failure to comply with the General and Regional Conditions of this NWP, or the project-specific Special Conditions of this authorization, may result in the suspension or revocation of your authorization.

We would appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2014-00445 in any correspondence concerning this project. If you have any questions, please contact Jason Deters at our California South Branch Office, 1325 J Street, Room 1350, Sacramento, California 95814-2922, by email at Jason.Deters@usace.army.mil, or telephone at 916-557-7152. For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,



Kathleen A. Dadey, Ph.D.
Chief, CA South Branch
Regulatory Division

Enclosures

cc: (w/o encls)

- Mr. Javier Almaguer, Central Region Biology Branch Chief, California Department of Transportation, Environmental Division, Javier.Almaguer@dot.ca.gov
- Mr. Matt Scroggins, Senior Water Resources Control Engineer, California Regional Water Quality Control Board, Central Valley Region, Fresno Branch Office, msscroggins@waterboards.ca.gov
- Mr. Jason Brush, Supervisor, Wetland Regulatory Office, U.S. Environmental Protection Agency, Region IX, Wetland Regulatory Office (WTR-8), Brush.Jason@epa.gov
- Mr. Thomas Leeman, Chief, San Joaquin Valley Division, Endangered Species Program, Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service, Chris_Nagano@fws.gov

AGREEMENTS

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
REGION 4 - CENTRAL REGION
1234 EAST SHAW AVENUE
FRESNO, CALIFORNIA 93710



STREAMBED ALTERATION AGREEMENT
NOTIFICATION No. 1600-2014-0074-R4
TRIBUTARY TO LITTLE DRY CREEK AND 4 UNNAMED DRAINAGES
FRESNO COUNTY

CALIFORNIA DEPARTMENT OF TRANSPORTATION
CALTRANS DISTRICT 6
JAVIER ALMAGUER
855 M STREET, SUITE 200
FRESNO, CALIFORNIA 93721

FRE-168 PRATHER CURVE CORRECTION EA 06-0M050 (PROJECT)

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and the California Department of Transportation (referred to as Permittee), represented by Javier Almaguer.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) Section 1602, Permittee notified CDFW on May 8, 2014, that Permittee intends to complete the Project described herein.

WHEREAS, pursuant to FGC Section 1603, CDFW has determined that the Project could substantially adversely affect existing fish or wildlife resources and has included Protective Measures in this Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed this Agreement and accepts its terms and conditions, including the Protective Measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the Project in accordance with this Agreement.

PROJECT LOCATION

The Project is located on the Little Dry Creek along State Route (SR) 168 between Post Mile (PM) 29.0-29.4, Fresno County, State of California; Township 10 South, Range 76 East, Section 25 United States Geological Survey (USGS) map Millerton Lake East, MDB&M; Latitude 37.0283, Longitude -119.522401(Figure 1).

PROJECT DESCRIPTION

The Project is part of a larger activity to realign the existing curve on SR 168 between PM T29.0 at STA 20+00.00 and PM T 29.4 at STA 37+91.94 approximately 60 feet to the north of its current alignment. As part of the activity, 491 feet of currently open bed, bank, and channel of the tributary to Little Dry Creek (referenced as System 1) running parallel to the south side of SR 168 will be culverted for permanent sight distance safety improvement. Three culverts running under SR 168 will be replaced and lengthened to the north, and are referred to as Systems 2, 3, and 4. At the final location, System 5, the current culvert will remain in place and will be extended to the north. Systems 2, 3, 4, and 5 are all tributaries of System 1; Systems 4 and 5 are upstream of the work to be done on System 1.

Project activity authorized by this Agreement is limited to:

- Definition of terms in the Project Description are as follows:
 - AFES = Alternative Flared End Section
 - CMP = Corrugated Metal Pipe
 - DI = Drainage Inlet
 - RCP = Reinforced Concrete Pipe
 - RSP = Rock Slope Protection
 - STA = Station – a survey system reference point
- All RSP will be installed by “Method B” Placement, a process that consists of excavating and backfilling the drainage trench, laying down geotextile fabric, placement of smaller-sized rocks onto the geotextile fabric, and placement of larger rocks over the smaller rock. The thickness of each rock layer will be at least 1.5 times the diameter of the median-sized rock. All RSP will be size “Backing No.1”, which consists of rocks 0 to 5 percent larger than 200 pounds, 50 to 100 percent larger than 75 pounds, and 90 to 100 percent larger than 25 pounds. The RSP slope will be 2:1(horizontal to vertical) or flatter. Cut and fill of the bank may be required to smoothly join the top of the RSP slope to the embankment above.
- **System 1** – The current 57.4-foot long 60-inch diameter CMP culvert running under SR 168 at STA 29+79 will be removed using a backhoe. A new headwall at the downstream end will be installed at STA 24+25 and will be 3.4 foot thick, 11.0 foot high, and 17.2 foot wide, and will require 9.7 cubic yards of concrete and 1,045 pounds of steel. Approximately 313 cubic yards of RSP size No. 1 will be placed at the outlet over 209 square yards of geotextile fabric. The new installation of 60-inch diameter RCP for System 1 will consist of 5 segments:
 - A 48.5-foot long RCP culvert will connect the downstream headwall to the tie-in with System 2. The connection point will require 4.8 cubic yards of concrete, 239 pounds of steel and will be 11.67 feet high and will be fitted with a Type G2 DI with a Type 24-12x grate at STA 24+77.
 - A 55.8-foot long RCP culvert will connect the System 2 tie-in with transition point for a slight eastward articulation. The connection point

will require 3.84 cubic yards of concrete, 239 pounds of steel and will be 8.94 feet high and will be fitted with a Type G2 DI with a Type 24-12x grate at STA 25+36.

- A 200.6-foot long RCP culvert will connect the eastward articulation point to the tie-in with System 3. The connection point will require 2.51 cubic yards of concrete, 326 pounds of steel and will be 7.7 feet high and will be fitted with a Type G2 DI with a Type 24-12x grate at STA 27+47.5.
- A 186.1-foot long RCP culvert will connect the System 3 tie-in with a westward articulation point. The connection point will require 4.9 cubic yards of concrete, 239 pounds of steel and will be 11.70 feet high and will be fitted with a Type G2 DI with Type 24-12x grate at STA 29+40.
- A 147.3-foot long RCP culvert will connect the westward articulation point, go under SR 168 replacing the removed culvert, and will connect with the upstream headwall. The RCP culvert under SR 168 will be installed using open trench.

The upstream headwall for System 1 will be installed at STA 30+60 and will be 3.3 feet thick, 11.0 feet high, and 17.1 feet wide and will require 9.7 cubic yards of concrete and 1,045 pounds of steel. RSP at the inlet will be approximately 36 cubic yards of rock size No. 1 over 71 square yards of geotextile fabric.

- **System 2** – The current 31.5-foot long 10-inch diameter CMP culvert west of SR 168 under a side road will be removed with backhoe, and a new 31.5-foot long 15-inch diameter CMP culvert will be installed in its place with a 15 inch diameter AFES at the outlet at STA 24+81. Approximately 7 cubic yards of RSP size No. 1 over 16 square yards of geotextile fabric will be installed at the outlet of the 15-inch CMP and concurrently at the inlet of the new 50-foot long and 24-inch diameter RCP culvert to be installed under SR 168 using open trench. The new 24-inch RCP will have a 24-inch AFES at the inlet and will connect with System 1 at STA 24+77. It will replace the current 47.1-foot long 12-inch diameter CMP culvert currently running under SR 168 at STA 24+92.7 and will be removed using a backhoe.
- **System 3** – The current 35.3-foot long 18-inch diameter CMP culvert under SR 168 at STA 27+67 will be removed using a backhoe. A new Type G1 DI with a Type 24-12x grate will be installed at STA 27+53.5, this will require 1.39 cubic yards of concrete and 239 pounds of steel, and will be 5.0 feet high. A new 59-foot long 30-inch diameter RCP culvert will be installed under SR 168 using open trench, and will tie in with System 1 at STA 27+47.5.
- **System 4** – The current 40.7-foot long 15-inch diameter CMP culvert east of SR 168 under a side road will be removed using a backhoe, and a new 103-foot long 18-inch diameter CMP culvert with an 18-inch AFES at the inlet will be installed in its place. A new 65-foot long and 24-inch diameter RCP culvert will be installed under SR 168 using open trench with a 24-inch AFES at the outlet at STA 31+92. Approximately 7 cubic yards of RSP size No. 1 will be placed at the

outlet over 16 square yards of geotextile fabric. The connection point between the smaller 18-inch CMP and the larger 24-inch RCP will require 1.73 cubic yards of concrete and 239 pounds of steel, and will be 5.0 feet high and fitted with a Type G0 DI with Type 24-12x grate at STA 31+92.

- **System 5** – The current 115.4-foot long and 48-inch diameter CMP culvert at STA 35+88 will be left in place and extended by 7.5 feet. The extension will be connected to the current culvert using open trench. The outlet will have an Alternative Flared End Section with approximately 25 cubic yards of RSP size No. 1 over 48 square yards of geotextile fabric.
- Work will be done in absence of surface flow during naturally dry conditions and during daylight hours.
- A total of 87 California buckeye with trunks sized over 4 inches but less than 9 inches diameter at breast height (DBH), 22 grey pine (18 with a DBH over 4 inches but less than 24 inches and 4 with a DBH greater than 24 inches), 87 Interior live oak (77 with a DBH over 4 inches but less than 24 inches and 10 with a DBH greater than 24 inches), 53 red willow with DBH over 4 inches but less than 24 inches and 1 sticky whiteleaf Manzanita with DBH of 4 inches will be removed as a result of Project implementation.
- Equipment to be used will include: an asphalt paver/roller, backhoe, Bidwell and roller screeds, bobcat, bulldozer/loader, chainsaw, compressor, concrete pump, Concrete truck mixers, crane, dump truck, excavator, flatbed truck, fork lift, front-end loader, Genie man lift, grader, haul truck, motor grader, paint/stripping truck, pavement roller, pile driver/drill rig, pump truck, Redi-mix truck, roller/compactor, saw cutting/stripping equipment, scraper, shoulder paver, truck with seed sprayer, and water truck.

PROJECT IMPACTS

The Project will result in approximately 1.93 acres of permanent impacts to riparian vegetation and 0.24 acres of permanent impacts to the streambed and bank. There will be no temporary impacts to either riparian vegetation or to the streambed and bank. Other potential impacts related to disturbance during Project implementation include but are not limited to those resulting from noise, vibration, trampling/crushing, erosion, and surface water contact with new concrete or other construction-related materials.

This Agreement is intended to avoid, minimize, and mitigate adverse impacts to the fish and wildlife resources that may occupy the Project area and the adjacent habitat. Absent implementation of the Protective Measures required by this Agreement, the following species and their habitat types could potentially be impacted: the Federally endangered valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), the State fully protected golden eagle (*Aquila chrysaetos*), the State species of special concern Western pond turtle (*Emmys marmorata*), and the CNPS List 1B.2 orange lupine (*Lupinus citrinus var. citrinus*), and tree anemone (*Carpenteria californica*), as

well other as birds, mammals, fish, reptiles, amphibians, invertebrates, and plants that compose the local riparian ecosystem.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative Protective Measure described below.

- 1.1 Documentation at Project Site. Permittee shall make this Agreement, any extensions and amendments to this Agreement, and all related Notification materials and California Environmental Quality Act (CEQA) documents, readily available at the Project site at all times and shall be presented to CDFW personnel or personnel from another State, Federal, or local agency upon request.
- 1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of this Agreement and any extensions and amendments to this Agreement to all persons who will be working on the Project at the Project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Notification of Conflicting Provisions. Permittee shall notify CDFW if Permittee determines or learns that a Protective Measure in this Agreement might conflict with a provision imposed on the Project by another local, State, or Federal agency. In that event, CDFW shall contact Permittee to resolve any conflict.
- 1.4 Project Site Entry. Permittee agrees that CDFW personnel may enter the Project site at any time to verify compliance with this Agreement.
- 1.5 Legal Obligations. This Agreement does not exempt Permittee from complying with all other applicable local, State, and Federal law, or other legal obligations.
- 1.6 Unauthorized Take. This Agreement does not authorize the "take" (defined in Fish and Game Code §86 as to hunt, pursue, catch, capture, or kill; or attempt to hunt, pursue, catch, capture, or kill) of State- or Federally-listed threatened or endangered species. Any such take shall require separate permitting as may be required.
- 1.7 Property Not Owned by Permittee. To the extent that the Protective Measures of this Agreement provide for activities that require Permittee to enter on another owner's property, they are agreed to with the understanding that Permittee possesses the legal right to so enter.
- 1.8 Construction/Work Schedule. Permittee shall submit a **construction/work schedule** to CDFW (Laura.Peterson-Diaz@wildlife.ca.gov with reference to Agreement No. 1600-2014-0074-R4) prior to beginning any activities covered by

this Agreement. Permittee shall also report to CDFW upon the completion of the activities covered by this Agreement.

- 1.9 Training. Prior to starting any Project activity, all employees, contractors, and visitors who will be present during Project activities shall receive training from a qualified individual on the contents of this Agreement, the resources at stake, and the legal consequences of non-compliance. A **training sign-in sheet** for the employees and contractors, including the date of the training and who gave the training shall be provided to CDFW (Laura.Peterson-Diaz@wildlife.ca.gov with reference to Agreement No. 1600-2014-0074-R4) within one (1) week of the training date.

2. **Avoidance and Minimization Measures**

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each Protective Measure listed below.

- 2.1 Construction/Work Hours. All non-emergency work activities shall be confined to daylight hours. For purposes of this Agreement, "daylight hours" are defined as that daytime period between sunrise and sunset.
- 2.2 Flagging/Fencing. Prior to any activity within the channel, Permittee shall identify the limits of the required access routes and encroachment into the stream. These "work area" limits shall be identified with brightly-colored flagging/fencing. Work completed under this Agreement shall be limited to this defined area only. Flagging/fencing shall be maintained in good repair for the duration of the Project. All CDFW jurisdictional areas beyond the identified work area limits shall be considered Environmentally Sensitive Areas (ESA) and shall not be disturbed.
- 2.3 Listed Species.
 - (a) This Agreement does not allow for the take of any State- or Federally-listed threatened or endangered species. Liability for any take of such listed species remains the separate responsibility of Permittee for the duration of the Project.
 - (b) Permittee affirms that no take of listed species shall occur as a result of this Project and shall take prudent measures to ensure that all take is avoided. Permittee acknowledges fully understand that they do not have State incidental take authority. If any State- or Federally-listed threatened or endangered species occur within the proposed work area or could be impacted by the work proposed, and thus taken as a result of Project activities, Permittee is responsible for obtaining and complying with required State and Federally threatened and endangered species permits or other written authorization before proceeding with this Project.

- (c) Permittee shall immediately notify CDFW of the discovery of any rare, threatened, or endangered species prior to and during Project implementation.
- (d) **Pre-activity surveys** for potential rare, listed, or other sensitive species shall be conducted by a qualified biologist within 30 days prior to commencement of Project activities unless otherwise specified in species-specific measures below. Surveys shall be conducted within the work area and all access routes to avoid and minimize incidental take, confirm previous observations, identify any areas occupied by listed or sensitive species, and clearly mark all resources to be avoided by Project activities. If any State- or Federally-listed threatened or endangered animal species are found or could be impacted by the work proposed, Permittee shall notify CDFW of the discovery prior to commencement of Project activity. A new Agreement and/or a 2081(b) State Incidental Take Permit may be necessary and a new CEQA analysis may need to be conducted, before work can begin.
- (e) **Valley Elderberry Longhorn Beetle:** No elderberry bushes (*Sambucus mexicana*) shall be trimmed or removed without appropriate regulatory agency approval. Ground-disturbing Project activity shall avoid elderberry shrubs by 100 feet. If this buffer cannot be maintained or elderberry bushes will be impacted, then the Permittee shall provide CDFW with a Biological Opinion or other documentation from the United States Fish and Wildlife Service (USFWS) authorizing the Permittee to transplant, remove, or otherwise impact elderberry bushes that are considered habitat for the Federally-threatened valley elderberry longhorn beetle.
- (f) **Golden Eagle:** No Project-related activities shall be completed from February 1 through August 31 unless a qualified biologist conducts visual surveys for nesting activity of golden eagle within a ½-mile radius of the Project site no more than two (2) weeks before Project activity begins. Surveys shall concentrate on suitable nesting structures. If active eagle nests are found, no Project activities shall occur until after the breeding season has ended or a qualified biologist has determined and CDFW has confirmed in writing that the young have fledged and are no longer dependent on parental care or the nest for survival. Permittee shall **submit surveys results** to CDFW no less than one (1) week prior to commencement of Project activities.
- (g) **Western Pond Turtle:** Any western pond turtles discovered at the site immediately prior to or during Project activities shall be allowed to move out of the area on their own volition. If this is not feasible, they shall be captured by a qualified biologist who holds a Scientific Collecting Permit for the species, and relocated out of harm's way to the nearest suitable habitat immediately upstream or downstream from the Project site.
- (h) **Sensitive Plant Species:** Sensitive plants (including but not limited to orange lupine and tree anemone) have the potential of existing on the Project site; therefore, if suitable habitat is present, Permittee shall conduct surveys for

these plants and natural communities on the Project site well in advance of any planned ground-disturbing activities. **Repeated floristic surveys** shall be conducted by a qualified botanist multiple times during the appropriate floristic period(s) in order to adequately assess the potential Project-related impacts to listed plant species. Survey results shall be submitted to CDFW for review in advance of Project commencement. If sensitive plant species are identified, Permittee shall identify them with flagging and avoid with a 25-foot no-disturbance buffer during Project activities. If this avoidance is not feasible, Permittee shall consult with CDFW to determine whether alternative avoidance measures are possible. CDFW may provide alternate guidance in writing.

2.4 General Wildlife.

- (a) If any fish or wildlife is encountered during the course of Project implementation, said fish or wildlife shall be allowed to leave the Project area unharmed.
- (b) Pursuant to FGC Sections 3503 and 3503.5, it is unlawful to take, possess, or destroy the nest or eggs of any bird or bird-of-prey. To protect nesting birds, no Project activity shall be completed from March 1 through August 31 unless the following surveys are completed by a qualified biologist within 30 days prior to Project initiation.

Due to their special status designation and differing nesting period, separate avian survey and avoidance requirements are listed above for Golden Eagle (see Avoidance and Minimization Measure 2.3(f)).

Raptor Species: Survey for nesting raptors within a 500-foot radius of the Project area. If any active nests are observed, these nests shall be designated an ESA and protected by a minimum 500-foot avoidance buffer until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

Other Avian Species: Survey for nesting activity within a 250-foot radius of the defined work area. If any nesting activity is found, Permittee shall designate nests and nest substrate (trees, shrubs, ground, or burrows) as an ESA protected with a minimum 250-foot buffer until the young have fledged and are no longer reliant upon the nest or parental care for survival.

CDFW may consider variances from these buffers when there is a compelling biological or ecological reason to do so, such as when the Project area would be concealed from a nest site by topography.

2.5 Vegetation.

- (a) Trimming and removal of vegetation shall be limited to the minimal amount necessary to complete the Project.
- (b) Permittee shall document the number and species of all woody-stemmed plants in excess of four (4) inches DBH that are cut, trimmed, or otherwise removed or damaged during Project activities. Trees and shrubs with a DBH of four (4) inches or greater that are damaged or removed shall be replaced by replanting appropriate native species at a 3:1 ratio (replaced to lost), except that heritage trees 24-inches or greater shall require replanting of like species at a 10:1 ratio according to Compensatory Measure 3.1(a) Revegetation/Restoration.
- (c) Vegetation or material removed from the Project site shall be disposed of at an appropriate and legal off-site location where the material cannot enter the stream channel. No such material shall be stockpiled in the streambed, banks, or channel, except that native vegetation removed from the channel may be chipped and the chips used as mulch for disturbed soil sites in or near the Project area.
- (d) To minimize the spread of invasive plant species to uninfested areas within and outside of the Project site, Permittee shall implement control and eradication activities prior to the initiation of ground-disturbing activities. Permittee shall utilize control and eradication methods that are specific to the target species, avoid the spread and proliferation of other invasive plant species, and minimize damage to and/or removal of native plant species. All non-native and invasive plants controlled or eradicated at the project site shall be removed and disposed of in a manner that prevents the introduction and establishment of those species to new areas.
- (e) Vehicles, heavy equipment and other machinery shall be inspected for the presence of undesirable plant species and cleaned prior to on-site use to reduce the risk of introducing exotic, invasive plant species into the Project site.

2.6 Vehicles.

- (a) Vehicles shall not be operated in areas where surface water is present. Vehicles shall only operate in the channel during naturally dry.
- (b) Vehicle access to the channel's banks and bed shall be limited to predetermined ingress and egress corridors on existing roads. All other areas adjacent to the work site shall be considered an ESA and shall remain off-limits to Project-related equipment. Vehicle corridors and the ESA shall be identified by Permittee's resident engineer in consultation with the CDFW representative.

- (c) Vehicles shall not be driven where vegetation or aquatic organisms may be destroyed, except as otherwise provided for in this Agreement and as necessary to complete the authorized work.
- (d) Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily to prevent leaks of materials that, if introduced to water, could be deleterious to aquatic and terrestrial life.
- (e) Staging and storage areas for equipment, materials, fuels, lubricants, and solvents shall be located outside of the stream banks. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the channel, shall be positioned over drip-pans. Vehicles shall be moved away from the stream prior to refueling and lubrication.

2.7 Structures. Permittee confirms that all structures shall be designed (i.e., size and alignment), constructed, and maintained such that they will accommodate high flows and not cause long-term changes in water flows that adversely modify the existing upstream or downstream channel bed/bank contours, increase sediment deposition, or cause significant new erosion.

2.8 Fill/Spoil.

- (a) Spoil storage shall not be located within the stream, where spoil will be washed into the stream, or where it will cover aquatic or riparian vegetation. Rock, gravel, and/or other materials shall not be imported into or moved within the stream bed or banks, except as otherwise addressed in this Agreement.
- (b) Fill shall be limited to the minimal amount necessary to accomplish the agreed activities. Excess fill material shall be moved off-site at Project completion.

2.9 Erosion.

- (a) No work within the banks of the channel will be conducted during or immediately following large rainfall events (defined as 1/4-inch of rain in any 24-hour period).
- (b) All disturbed soils within the Project site shall be stabilized to reduce erosion potential, both during and following Project activities. Temporary erosion control devices, such as straw bales, silt fencing, and sand bags, may be used, as appropriate, to prevent siltation of the channel. To minimize the risk of ensnaring and strangling wildlife, coir rolls, erosion control mats or blankets, straw or fiber wattles, or similar erosion control products shall be composed entirely of natural-fiber, biodegradable materials. Permittee shall not use "photodegradable" or other plastic erosion control materials.

- (c) Permittee's ability to minimize siltation shall be the subject of preconstruction planning and feature implementation. Precautions to minimize siltation may require that the work site be isolated so that silt or other deleterious materials are not allowed to pass to downstream reaches. The placement of any structure or materials in the channel for this purpose, not included in the original Project description, shall be coordinated with CDFW. If it is determined that silt levels resulting from Project-related activities constitute a threat to aquatic life, activities associated with the siltation shall be halted until effective CDFW-approved control devices are installed, or abatement procedures are initiated.

2.10 Pollution.

- (a) During Project implementation, Permittee shall not dump any litter or debris within the stream. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site.
- (b) Raw cement, concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to fish or wildlife resulting from Project-related activities, shall be prevented from contaminating the soil and/or entering the "Waters of the State".
- (c) Permittee shall install the necessary containment structures to control the placement of any wet concrete/cement and to prevent it from entering into the channel outside of those structures. No concrete/cement shall be poured or applied below the top of bank if the 10-day weather forecast indicates any chance of rain. At all times when Permittee is pouring or working with wet concrete/cement there shall be a designated monitor to inspect the containment structures and ensure that no concrete or other debris enters into the channel outside of those structures. Poured concrete/cement shall remain isolated from surface waters and soils that could become saturated, and allowed to cure for a minimum of 30 days. CDFW may approve a variance to this measure if Permittee proposes a plan to collect surface water (including rain) that comes in contact with concrete/cement and dispose of the water in a lawful manner at an off-site location. No variance shall be implemented unless CDFW has provided approval in writing and in advance.
- (d) Permittee and all contractors shall be subject to the water pollution regulations found in FGC Sections 5650 and 12015.
- (e) An **Emergency Response Plan** shall be prepared and submitted to CDFW for approval prior to the start of Project activities, and kept on-site during all phases of the Project. The Plan shall identify the actions that shall be taken in the event of a spill of petroleum products, concrete, contaminated soil, or other material harmful to fish, plants, or aquatic life. Emergency response materials shall be kept at the site and readily available to allow rapid

containment and cleanup of any spilled material. In the event that a spill occurs, all Project activities shall immediately cease until cleanup of the spilled materials is completed. CDFW shall be notified immediately by Permittee of any spills and shall be consulted regarding cleanup procedures.

- (f) All Project-generated debris, building materials, and rubbish shall be removed from the stream bed and banks, and from areas where such materials could be washed into the stream bed and banks.

3. Compensatory Measures

To compensate for adverse impacts to fish and wildlife resources identified above that cannot be avoided or minimized, Permittee shall implement each measure listed below.

3.1 Revegetation/Restoration.

- (a) For any trees four (4) inches in DBH or greater that are removed as part of the Project, Permittee shall develop a **Revegetation Plan** for the site and submit it to CDFW for approval at least 30 days prior to Project commencement. The Revegetation Plan shall specifically address plantings of native trees, shrubs, herbs and grasses removed, as indicated in Avoidance and Minimization Measure 2.5(b) above, and include monitoring and maintenance to ensure a minimum of 70 percent survival for the plantings after five (5) years, including up to three (3) years with supplemental water and at least two (2) years without such assistance. The Plan shall also include final and interim success performance criteria, and define remedial actions to take if those criteria are not met. The Plan shall describe an initial planting date (Year 0) that commences within one year of Project completion, unless otherwise approved in advance by CDFW; describe the location(s) and species of plantings; and include a reporting format to be used for annual reporting to CDFW. CDFW shall review reports and beginning with Year 5 post-planting shall determine whether performance criteria have been met; if performance criteria have been met, CDFW shall provide written documentation.
- (b) If the Project causes any exposed slopes or exposed areas on the stream banks, these areas shall be seeded (with weed-free straw or mulch) with a blend of a minimum of three (3) locally native grass species. One (1) or two (2) sterile non-native perennial grass species may be added to the seed mix provided that amount does not exceed 25 percent of the total seed mix by count. Locally native wildflower and/or shrub seeds may also be included in the seed mix. The seeding shall be completed as soon as possible, but no later than November 15 of the year Project activity ends in any location. A **seed mixture** shall be submitted to CDFW for approval prior to application. At the discretion of CDFW, all exposed areas where seeding is considered unsuccessful after 90 days shall receive appropriate soil preparation and a

second application of seeding, straw, or mulch as soon as is practical on a date mutually agreed upon.

- (c) Where suitable vegetation cannot be reasonably expected to become established, non-erodible materials shall be used for such stabilization. Any installation of non-erodible materials not described in the original Project description shall be coordinated with CDFW. Coordination may include the negotiation of additional Protective Measures for this activity.

4. Reporting Measures

Permittee shall meet each reporting requirement described below.

4.1 Obligations of Permittee.

- (a) Permittee shall have primary responsibility for monitoring compliance with all Protective Measures included in this Agreement. Protective Measures shall be implemented within the time periods indicated in this Agreement and the reporting program described below.
- (b) Permittee (or Permittee's designee) shall ensure the implementation of the Protective Measures of this Agreement, and shall monitor the effectiveness of the Protective Measures.

4.2 Reports. Permittee shall submit the following Reports to CDFW:

- Construction/work schedule, submitted to CDFW prior to commencing Project activities (Administrative Measure 1.8).
- Training sign-in sheet, submitted to CDFW within one (1) week of completing the training (Administrative Measure 1.9).
- Results of the pre-activity surveys for special status species, submitted to CDFW at least one (1) week prior to Project initiation (Avoidance and Minimization Measure 2.3(d)).
- Results of surveys for golden eagle nests if Project activities occur during the golden eagle nesting season, submitted to CDFW within ten (10) days of completing surveys (Avoidance and Minimization Measure 2.3(f)).
- Results of surveys for sensitive plants, submitted to CDFW at least one (1) week prior to the start of Project activities (Avoidance and Minimization Measure 2.3(h)).
- Results of surveys for nesting birds if any Project activities are scheduled during the avian nesting season, submitted to CDFW at least one (1) week prior to Project initiation (Avoidance and Minimization Measure 2.4(b)).

- An Emergency Response Plan, submitted to CDFW for approval at least two (2) weeks prior to Project commencement (Avoidance and Minimization Measure 2.10(e))
- A seed mixture to be used to control erosion, submitted to CDFW prior to application (Compensatory Measure 3.1 (b)).
- A Final Project Report to be submitted within 30 days after the Project is completed. The final report shall summarize the Project and address the implementation of each Protective Measure included in this Agreement. "Before and after" photo documentation of the Project site shall be included in the report.

CONTACT INFORMATION

Any communication that Permittee or CDFW submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or CDFW specifies by written notice to the other.

To Permittee:

California Department of Transportation (Caltrans)
Angela Gallardo
855 M Street, Suite 200
Fresno, California 93721
(559) 445-6459
Fax: (559) 445-6260
angela.gallardo@dot.ca.gov

To CDFW:

California Department of Fish and Wildlife
Region 4 - Central Region
1234 East Shaw Avenue
Fresno, California 93710
Attn: Lake and Streambed Alteration Program – Laura Peterson-Diaz
Notification No. 1600-2014-0074-R4
Phone: (559) 243-4017, extension 225
Fax: (559) 243-4020
Laura.Peterson-Diaz@wildlife.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of this Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers,

employees, representatives, agents or contractors and subcontractors, to complete the Project or any activity related to it that this Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of, or require Permittee to proceed with the Project. The decision to proceed with the Project is Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety this Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with this Agreement.

Before CDFW suspends or revokes this Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before CDFW suspends or revokes this Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in this Agreement precludes CDFW from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking this Agreement.

Nothing in this Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other Federal, State, or local laws or regulations before beginning the Project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in this Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend this Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend this Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and Permittee. To request an amendment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in CDFW's fee schedule at the time of the request (see Cal. Code Regs., Title 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of this Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of this Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in CDFW's fee schedule at the time of the request (see Cal. Code Reg., Title 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), Permittee may request one (1) extension of this Agreement, provided the request is made prior to the expiration of this Agreement's term. To request an extension, Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's fee schedule at the time of the request (see Cal. Code Reg., Title 14, § 699.5). CDFW shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend this Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the Project this Agreement covers (FGC § 1605, subd. (f)).

EFFECTIVE DATE

This Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after Permittee's signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.wildlife.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall remain in effect for five (5) years beginning on the date signed by CDFW, unless it is terminated or extended before then. All Protective Measures in this Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any Protective Measures specified herein to protect fish and wildlife resources after this Agreement expires or is terminated, as FGC section 1605(a) (2) requires.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) COMPLIANCE

In approving this Agreement, CDFW is independently required to assess the applicability of CEQA. The features of this Agreement shall be considered as part of the overall Project description.

Permittee's concurrence signature on this Agreement serves as confirmation to CDFW that the activities conducted under the terms of this Agreement are consistent with the Project as described in the CEQA Mitigated Negative Declaration prepared by California Department of Transportation as the Lead Agency for the Prather Curve Correction Project (SCH No. 2012091039), approved on March 8, 2013. A copy of the Mitigated Negative Declaration was provided to CDFW by Permittee.

CDFW, as a CEQA Responsible Agency, shall submit a Notice of Determination to the State Clearinghouse upon signing this Agreement.

EXHIBITS

The document listed below is included as an exhibit to this Agreement and is incorporated herein by reference.

Figure 1. Project Location USGS Quad Map.

AUTHORITY

If the person signing this Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the terms herein.

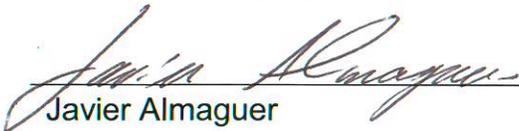
AUTHORIZATION

This Agreement authorizes only the Project described herein. If Permittee begins or completes a Project different from the Project this Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all the terms of this Agreement.

**FOR CALIFORNIA DEPARTMENT OF
TRANSPORTATION**



Javier Almaguer

Branch Chief – Caltrans Central Region Biology
South

12/15/14

Date

**FOR CALIFORNIA DEPARTMENT OF FISH AND
WILDLIFE**



Jeffrey R. Single, Ph.D.

Regional Manager – Central Region

12/17/14

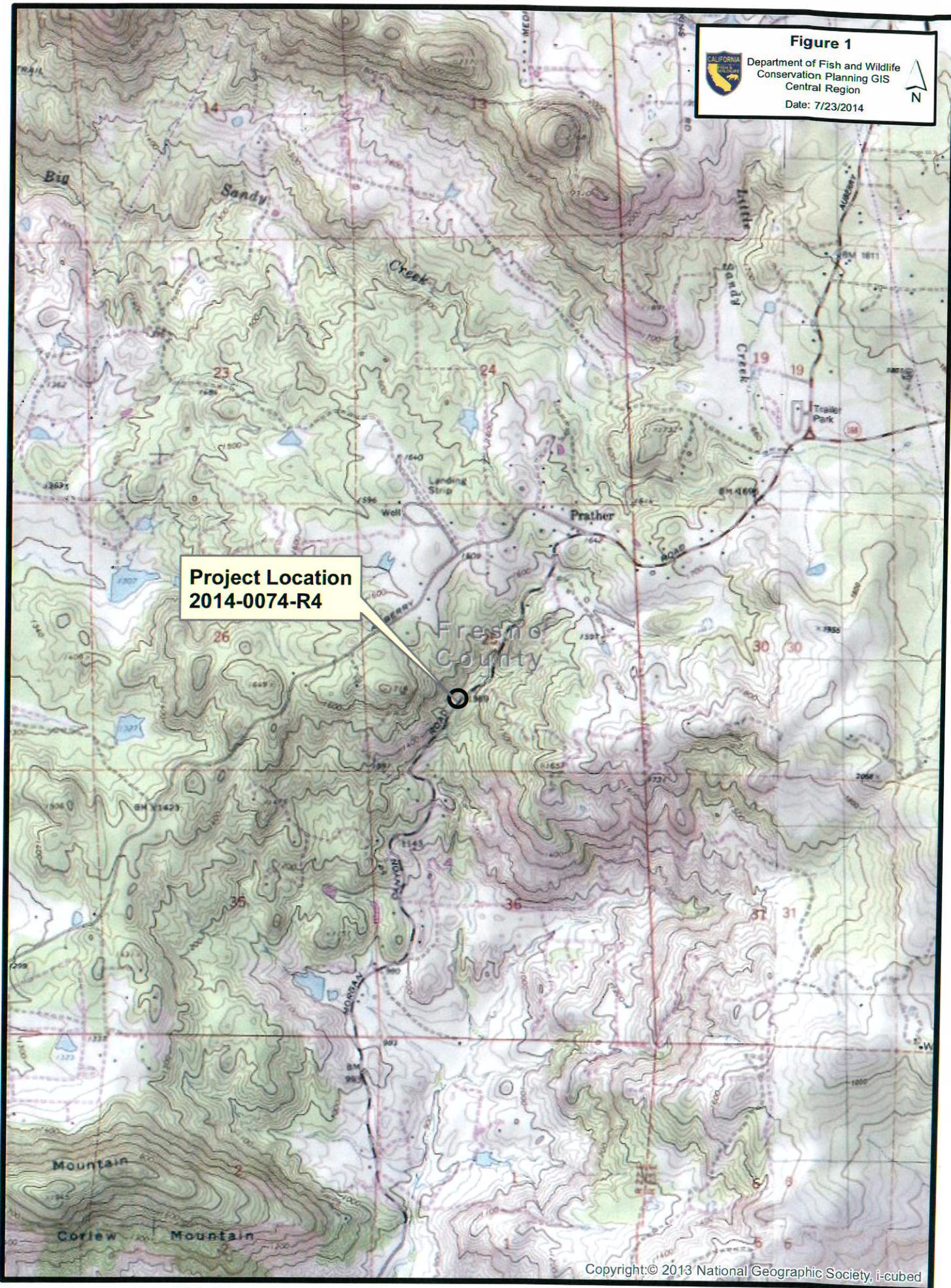
Date

Prepared by: Laura Peterson-Diaz
Environmental Scientist

Figure 1

Exhibit A

Figure 1
CALIFORNIA Department of Fish and Wildlife
Conservation Planning GIS
Central Region
Date: 7/23/2014



**Project Location
2014-0074-R4**



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:

08ESMF00-2012-F-0623-1

January 8, 2013

Mr. Javier Almaguer
Chief, Central Region Biology South Branch
California Department of Transportation, District 6
855 M Street, Suite 200
Fresno, California 93721

Subject: Formal Consultation for the Prather Curve Connection Project, Fresno County, California (California Department of Transportation EA 06-0M050; 06-FRE-168-PM T29.0- T29.4)

Dear Mr. Almaguer:

This is the U.S. Fish and Wildlife Service's (Service) response to the California Department of Transportation's (Caltrans) request for formal consultation on the Prather Curve Correction Project (project) in Fresno County, California. Under the provisions of the July 1, 2007, Pilot Program Memorandum of Understanding between the Federal Highway Administration (FHWA) and Caltrans, FHWA assigned, and Caltrans assumed, FHWA's responsibilities under the National Environmental Policy Act as well as its responsibilities for environmental review, consultation, and coordination under other Federal environmental laws.

Your letter requesting formal consultation, dated August 6, 2012, was received in this office on August 10, 2012. Caltrans determined, and the Service agreed, that the project be considered for inclusion with the Service's March 11, 1997, *Formal Programmatic Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle within the Jurisdiction of the Sacramento Field Office, California* (Programmatic) (Service file number 1-1-96-F-0156). At issue are the effects of this proposed project on the federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). This document has been prepared in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 *et seq.*) (Act).

The findings and recommendations of this biological opinion are based on: (1) the consultation history; and (2) other information available to the Service.

Consultation History

April 30- May 2, 2012. Caltrans requested early guidance from the Service regarding the federally-listed as threatened Mariposa pussypaws (*Calyptridium pulchellum*) and its likelihood to occur at the proposed project site.

July 31, 2012. Caltrans telephoned the Service to provide a brief description of the project and to inquire about four elderberry shrubs (*Sambucus* sp.) that were located approximately 10 feet (ft.) from the cut/fill line on the edge of a slope. The Service recommended that Caltrans leave the shrubs intact if construction will not directly eliminate them, but there could still be adverse effects to those shrubs because of the proximity of construction activities to the shrubs' driplines.

August 10, 2012. The Service received Caltrans' letter requesting to append the project to the Programmatic. Included in the initiation package with the letter were the Natural Environment Study (NES), two figures of the project location, and design layouts.

September 10 & 12, 2012. The Service e-mailed Caltrans with questions regarding the NES and request letter. Caltrans responded to the Service on September 12.

September 21, 2012. Caltrans e-mailed the Service to ask whether the Service had all the information it needed to proceed with consultation. The Service responded to say that the initiation package was complete as of September 12.

October 23 & 26, 2012. The Service e-mailed Caltrans with additional questions regarding the project. Caltrans responded on October 26.

BIOLOGICAL OPINION

Project Description

Caltrans proposes to realign the existing curve on State Route (SR) 168 from post miles (PM) T29.0 to T29.4 located south of the town of Prather in Fresno County. Construction will improve traffic safety by increasing the curve radius to meet the design speed standard of 45 miles per hour. The project also will move the right-of-way (ROW) line about 60ft. north and will acquire approximately 3.91 acres (ac) of additional ROW to allow for the excavation of a section of the mountain slope. The roadway will be widened to accommodate two 12ft. lanes, each with an 8 ft. shoulder, which will serve to increase sight distance for both eastbound and westbound traffic. Utility poles also will be relocated, while storm drainages will be improved within the project limits.

A seasonal creek is located within the project area, of which an approximately 0.25 ac section (approximately 700ft. of waterway) will be impacted by the project. A culvert will be installed there to facilitate construction of the roadway. Work in the creek-bed will be restricted either to when there are low flows in the waterway, or to when it is dry. In the spring and summer of 2012, there was little water present in the creek in April; by June, the creek was completely dry.

Since the seasonal creek receives water from rain events, it would be unlikely to hold water again until later in the year when winter rains begin. If water is present when construction commences, it will be diverted or pumped out; no work will be conducted in the creek during the rainy season.

The contractor will follow best management practices during construction. Equipment parking, project access, supplies logistics, equipment maintenance, and other related activities will occur within temporary construction easements. Designated staging areas for equipment storage and vehicle parking will be pre-approved by a Caltrans biologist. Currently, project staging is proposed to occur at an existing pull-out area at the northeastern end of the roadway segment.

Caltrans has not yet determined the total amount of cut and fill required for the project, but those areas that will be cut will then be used as fill where needed. Construction is anticipated to begin in February or March of 2015 and take approximately six months to complete.

Conservation Measures

Caltrans proposes to implement the following specific measures, drawn from the Service's 1999 *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (Guidelines), to minimize and avoid effects to sensitive natural communities and the valley elderberry longhorn beetle.

1.
 - a. Prior to the commencement of groundbreaking, construction and staging areas will be surveyed by a Service-approved biologist(s) and the limits of these areas staked and marked as Environmentally Sensitive Areas (ESAs) in order to prevent encroachment by construction vehicles, equipment, and personnel. Elderberry shrubs that will not be transplanted will be designated as ESAs and identified with high visibility fencing and appropriate signs.
 - b. Fencing will be checked and maintained weekly until all construction is completed.
2. A qualified Service-approved biologist(s) will conduct an environmental education program for construction employees and contractors, covering the status of the valley elderberry longhorn beetle, how to avoid damaging the elderberry shrubs, the importance of avoiding impacts to the valley elderberry longhorn beetle, and the penalties for not complying with minimization requirements. New construction personnel who are added to the project after the training is first conducted will also be required to take the training. An environmental awareness handout will be provided to each worker.
3. Caltrans will ensure that the project employs dust control measures such as the spraying of water on un-vegetated graded and disturbed areas. This way, dirt will be prevented from becoming airborne and accumulating on elderberry shrubs. To avoid attracting Argentine ants (*Linepilhema humile*), water will not be sprayed within the dripline boundaries of the elderberries.
4.
 - a. Prior to groundbreaking, Caltrans proposes to compensate for disturbance to 10 elderberry shrubs during the course of construction and to minimize the resulting

effects to the valley elderberry longhorn beetle by transplanting five of the 10 affected shrubs, which are located within construction cut and fill boundaries. Caltrans also proposes to plant a total of 84 elderberry seedlings and 84 associated native plants (Table I) within a minimum area of 0.70 ac at the French Camp Conservation Bank (FCCB), or at another Service-approved conservation bank; this equates to the purchase of 17 credits at an appropriate conservation bank.

- b. The survey results used to determine appropriate compensation will not be more than two years old. Prior to the start of construction, additional surveys will be conducted to update elderberry findings and conservation measure 4a will be modified, if necessary.

Table 1. The number of elderberry stems affected by the project and the proposed compensation, as based on the ratios in the Service's Guidelines

# Shrubs	Stem Size	#of Stems	Exit Holes	Riparian Habitat	Elderberry Seedling Ratio	# Elderberry Seedlings	Associated Native Ratio	# Associated Natives
10	2:1"- :S3"	33	NO	NO	1:1	33	1:1	33
	>3" & <5)'	12	NO	NO	2:1	24	1:1	24
	2:5"	9	NO	NO	3:1	27	1:1	27
	Total	54				84		84

Action Area

The action area is defined in 50 CFR § 402.02, as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area includes a segment of an unnamed creek and portions of interior live oak woodland located within both the existing and newly proposed Caltrans right-of-way (ROW) that will be affected by construction activities and used for staging, access, and as temporary easements. This land within the ROW also incorporates the 0.4 mi segment of SR 168 hardscape that will be widened and realigned.

Appending to the Programmatic Biological Opinion

Caltrans has requested and the Service has agreed that it is appropriate to append the Prather Curve Correction Project to the Programmatic. This letter is an agreement by the Service to append the proposed project to the Programmatic and represents the Service's biological opinion on the effects of the proposed action. Compensation for projects appended to the Programmatic involves adhering to the Service's Guidelines, except as approved by the Service. A copy of these Guidelines is found as an appendix to the Programmatic.

The compensation identified in the Programmatic involves transplanting alienectl elderberry shrubs (those which cannot be avoided by construction activities) to a compensation area(s).

Those shrubs that do not necessitate removal will instead have ESA fencing installed around them at the project site. Numbers of elderberry seedlings/cuttings and associated native species, as proposed by Caltrans (Table 1), also will be planted at the compensation area(s).

The proposed project will adversely affect 10 elderberry shrubs that are suitable habitat for the valley elderberry longhorn beetle; five of these, which are located within the construction limits, will be transplanted to a conservation area(s). As of May 2012, surveys identified 54 stems one inch in diameter or greater at ground level. Caltrans proposes to provide compensatory measures for the anticipated adverse effects, which will minimize the effect of the take on the species (see Table 1). Plantings will occur on a Service-approved site that meets the requirements documented in the Service's most recently available (revised July 28, 2011), *Selected Review Criteria for Conservation Banks and Section 7 Off-Site Compensation* (Review Criteria). Caltrans has proposed to use the FCCB or another available Service-approved conservation bank as the compensation area. If a site other than those identified is proposed, the Service will require additional information on the site, the protections afforded the site (see Review Criteria), and who will be responsible for the monitoring and maintenance under the Review Criteria.

Analytical Framework for the Jeopardy/No Jeopardy Determination

In accordance with policy and regulation, the following analysis relies on four components to support the jeopardy/no jeopardy determination for the valley elderberry longhorn beetle: (1) the *Status of the Species*, which evaluates the range-wide condition of the valley elderberry longhorn beetle, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the condition of the valley elderberry longhorn beetle in the action area, the factors responsible for that condition, and the role of the action area in the species' survival and recovery; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed project and the effects of any interrelated or interdependent activities on the valley elderberry longhorn beetle; and (4) *Cumulative Effects*, which evaluates the effects of future, non-Federal activities in the action area on the valley elderberry longhorn beetle.

In accordance with policy and regulation, the jeopardy/no jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of the valley elderberry longhorn beetle, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the species in the wild.

The following analysis places an emphasis on consideration of the range-wide survival and recovery needs of the valley elderberry longhorn beetle, and the role of the action area in meeting those needs as the context for evaluating the significance of the effects of the proposed project, combined with cumulative effects, for purposes of making the jeopardy/no jeopardy determination. In short, a non-jeopardy determination is warranted if the proposed action is consistent with maintaining the role of habitat for the valley elderberry longhorn beetle populations in the action area for the survival and recovery of the species.

Effects of the Proposed Action

According to the CNDDDB (2012)¹, there are two records of the valley elderberry longhorn beetle within the Millerton Lake East United States Geological Survey (USGS) 7.5-minute quadrangle, in which the project area is located. The records date from 1995 and 2003 and note that those elderberry shrubs observed contained valley elderberry longhorn beetle exit holes. The record from 1995 also noted the discovery of an adult valley elderberry longhorn beetle foraging on the shrub. Focused surveys of the present project site were conducted for suitable habitat for the species on May 3-4, 2012. Suitable habitat for the valley elderberry longhorn beetle was identified in the action area in the form of a total of 15 elderberry shrubs, which have multiple stems measuring at least one inch in diameter at ground level. No shrubs with exit holes were observed. Survey information will require updating prior to the start of construction. Because the action area is within the range of the species, there are known occurrences from the vicinity of the action area, and suitable habitat is present, the Service concludes that it is reasonably likely for the valley elderberry longhorn beetle to occupy the action area.

The Service considers there to be adverse effects to elderberry shrubs, and consequently to any valley elderberry longhorn beetles inhabiting these shrubs, from work activities occurring within 20ft. of a shrub's dripline. Adverse effects would result in take through directly killing the valley elderberry longhorn beetle in the shrubs, and through harm resulting from loss of or disturbance to habitat that affects the species' essential life functions. Five of the total 15 shrubs identified during surveys are located within the construction cut and till line and will be affected directly by realignment work conducted at this segment of SR 168; the shrubs cannot be avoided and therefore will be destroyed if left in place. Consequently, these shrubs will be removed and transplanted off-site to an appropriate conservation bank. However, mortality of the valley elderberry longhorn beetle could still occur as a result of removal methods used to displace and transplant these shrubs. Another five shrubs, while not located in the direct path of the construction limits, also will be affected due to their proximity to construction activities involving the excavation of the mountain slope in order to realign and widen the highway; potential effects to the shrubs could result from soil compaction and possible alterations in the hydrology of the section of seasonal creek that will be impacted on-site. The remaining five shrubs are located further away from construction work and are unlikely to be adversely affected; potential effects from soil compaction and changes to local hydrology are unlikely to be significant to a degree that will adversely affect these elderberry shrubs and any valley elderberry longhorn beetles inhabiting them. These five shrubs will be identified as ESAs with fencing installed at a minimum of 20ft. from the dripline of each shrub, with the exception of one shrub situated up a steep slope; this shrub is unlikely to be adversely affected by construction due to its location.

When surveyed in 2012, the shrubs contained a total of 54 stems; 33 with a diameter of greater than or equal to one, and less than or equal to three inches at ground level; 12 stems with a diameter of greater than three inches and less than five inches at ground level; and nine stems with a diameter of greater than or equal to five inches. Caltrans will minimize the potential for losing all valley elderberry longhorn beetles within 10 adversely affected elderberry shrubs by

¹ **California Natural Diversity Database. 2012. Natural Heritage Division, California Department of Fish and Game. Rare Find 4.** Accessed October 23, 2012. Sacramento, California.

transplanting five shrubs (those that would otherwise be eliminated on-site), and compensating for the loss of and disturbance to habitat provided by all 10 shrubs. Caltrans proposes to plant 84 elderberry seedlings and 84 associated native plants at the FCCB or at another appropriate and available Service-approved conservation bank, in accordance with the Guidelines (see Table 1). The proposed preservation of suitable elderberry habitat, along with the plantings of new elderberry seedlings and associated natives will minimize the effects of the permanent loss of and disturbance to the shrubs considered in this biological opinion. The compensation measures will help protect and manage the habitat for the conservation of the species in perpetuity. The protected land and plantings purchased through credits will provide habitat commensurate with or better than habitat lost as a result of the project, ensuring that the valley elderberry longhorn beetle can continue to breed, feed, and develop in conjunction with its host plant.

Conclusion

Based on the current status of the valley elderberry longhorn beetle, the environmental baseline, and cumulative effects as analyzed in the Programmatic, in addition to the project-specific effects of the proposed Prather Curve Correction Project, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the valley elderberry longhorn beetle.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. 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. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are nondiscretionary, and must be undertaken by Caltrans so that they become binding conditions of any grant or permit issued to Caltrans, as appropriate, for the exemption in section 7(o)(2) to apply. Caltrans has a continuing duty to regulate the activity covered by this Incidental Take Statement. If Caltrans (1) fails to assume and implement the terms and conditions, or (2) fails to require any of its contractors to adhere to the terms and conditions of the Incidental Take Statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, 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

The Service anticipates that implementation of the proposed project will result in the incidental take of all valley elderberry longhorn beetles inhabiting 10 elderberry shrubs containing 54 stems measuring one inch or greater in diameter at ground level. Upon implementation of the Programmatic's *Reasonable and Prudent Measures, Terms and Conditions*, and the *Conservation Measures* considered herein, incidental take in the form of mortality as a result of removal methods used to displace and transplant those shrubs within the construction cut and fill limits to facilitate the construction of the roadway widening and realignment; and in the form of harm as a result of construction activities occurring proximate to shrubs remaining on-site, leading to loss of and disturbance to habitat that affects the species' essential life functions, will become exempt from the prohibitions described under section 9 of the Act.

Effect of the Take

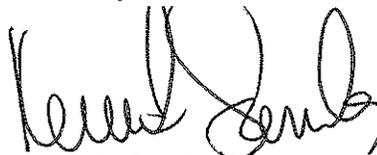
The effects of this project fall within the parameters established within the Programmatic; the Service has determined that this level of anticipated take is not likely to jeopardize the continued existence of the valley elderberry longhorn beetle.

REINITIATION-CLOSING STATEMENT

This concludes the Service's review of the Prather Curve Correction Project. As provided in 50 CFR §402.16, reinitiation or formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if (!) 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 that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

If you have any questions regarding this biological opinion, please contact Jen Schofield, Fish and Wildlife Biologist, or Thomas Leeman, Chief, San Joaquin Valley Division, at the letterhead address or at (916) 414-6600.

Sincerely,



Kenneth Sanchez
Assistant Field Supervisor

cc:

Ms. Annee Ferranti, California Department of Fish and Wildlife, Fresno, California



United States Department of the Interior



In Reply Refer to:
08ESMF00-2012-
F-0623-R001

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

Ms. Dena Gonzalez
Chief, Central Region Biology Branch
California Department of Transportation, District 6
855 M Street, Suite 200
Fresno, California 93721

DEC 23 2014

Subject: Amendment to the Biological Opinion for the Prather Curve Correction Project, Fresno County, California (California Department of Transportation 06-FRE-168-PM T29.0 -T29.4; EA 06-0M050), as appended to the Valley Elderberry Longhorn Beetle Programmatic Consultation

Dear Ms. Gonzalez:

This is the U.S. Fish and Wildlife Service's (Service) response to the California Department of Transportation's (Caltrans) request to amend the biological opinion for the Prather Curve Correction Project in Fresno County, California (project). The biological opinion (Service file number 08ESMF00-2012-F-0623-1) was issued on January 8, 2013, and was appended to the Service's March 11, 1997, *Formal Programmatic Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle within the Jurisdiction of the Sacramento Field Office, California* (Service file number 1-1-96-F-0156). The biological opinion analyzed the project's effects on the federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

The Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law on July 16, 2012. Caltrans was approved to participate in the MAP-21 Surface Transportation Project Delivery Program through the National Environmental Policy Act (NEPA) assignment Memorandum of Understanding (MOU) between the Federal Highway Administration (FHWA) and Caltrans (effective October 1, 2012), as codified in 23 U.S.C. 327. The MOU allows Caltrans to assume the FHWA's responsibilities under NEPA as well as FHWA's consultation and coordination responsibilities under Federal environmental laws for the majority of transportation projects in California.

Your original letter requesting to reinitiate consultation, dated August 14, 2014, was received in this office by e-mail the same day. At that time you requested to change the consultation type to informal consultation based on additional information drawn from recent entomological surveys and a re-analysis of the project's effects on the valley elderberry longhorn beetle. Your subsequent December 10, 2014 letter withdrawing the previous August 14, 2014 letter, and requesting to amend the biological opinion, was received by email on December 11, 2014. In this letter, you addressed a reduction in the number of elderberry shrubs (*Sambucus* sp.) expected to be affected by the project, which will result in a decrease in take of the valley elderberry longhorn beetle. Your letter also

informed us of your modified conservation measure regarding the purchase of conservation credits for the valley elderberry longhorn beetle.

This response was prepared in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

In reviewing the request, the Service has relied upon: (1) Caltrans' original August 14, 2014 letter; (2) the Service's January 8, 2013 biological opinion; (3) ongoing email and telephone correspondence between Caltrans and the Service; (4) Dr. Richard Arnold's June 2014 pheromone survey report (see footnote on page two), as well as his June 2014 pheromone dosage study report (see footnote on page three); (5) Caltrans' December 10, 2014 amendment request letter; and, (6) other information available to the Service.

On pages 3-4 of the January 8, 2013 biological opinion, conservation measures #1-4 are now removed from the Conservation Measures. This section is being replaced with the following new text:

Caltrans originally identified 10 elderberry shrubs out of a total of 15 that were expected to be affected by construction. During a field visit to the project site on July 24, 2014, Caltrans discovered that two of the total 15 shrubs (ID# 12 and 13) had died, likely as a result of drought conditions. Of the remaining 13 shrubs, Caltrans proposes to:

1. Avoid nine shrubs (ID# 3, 4, 5, 6, 8, 9, 10, 11, and 15); construction activities are likely to encroach closely on the driplines of three of these shrubs (ID# 8, 9, and 10).
2. Compensate for the loss of four elderberry shrubs (ID# 1, 2, 7, and 14) and to minimize the resulting effects to the valley elderberry longhorn beetle by purchasing four credits (one credit per elderberry shrub) at the French Camp Conservation Bank (FCCB) or at another Service-approved conservation bank. Caltrans proposes to purchase these credits prior to project completion. Caltrans does not propose to transplant any of the four elderberry shrubs.

On pages 6-7 of the January 8, 2013 biological opinion, the **Effects of the Proposed Action** is being replaced with the following new text:

In the spring of 2014, Caltrans' environmental consultant conducted a new survey of the project area to determine if the valley elderberry longhorn beetle occurs within the project limits. Richard A. Arnold, Ph.D., of Entomological Consulting Services, Ltd., conducted the survey, which uses the recently identified female sex pheromone, (R)-desmolactone, to attract male beetles. Pheromone traps with lures containing a 10mg dose of (R)-desmolactone dissolved in isopropyl alcohol were placed at six locations where either solitary or small groups of elderberry shrubs were situated. The site was visited eight times between April 15, 2014 and May 23, 2014. Visual surveys and trap inspections were carried out during all visits. According to Dr. Arnold's final survey report¹, one live adult male beetle was detected over the approximately 6-week survey period and was visually identified on May 8, 2014 as the non-listed California elderberry longhorn beetle (*Desmocerus californicus californicus*). The individual was observed on a branch near trap location A (or elderberry

¹ Arnold, Richard A. 2014. Report on Surveys for the Threatened Valley Elderberry Longhorn Beetle between post miles T29.0 and T29.4 of the Prather Curve Correction Project on State Route 168 near Prather (Fresno County), California. Pleasant Hill, California. June 2014. 13 pages.

shrub #6) towards the northern end of the project area. Dr. Arnold posited that this beetle could have been dispersing through, rather than inhabiting, the project area. No other beetles were captured or observed throughout the survey period, and no fresh or old exit holes were identified on any of the elderberry shrubs.

Only a single individual was observed over the entire course of the approximately 6-week survey period (an average of 0.17 beetle per week, or an average of 0.028 beetle per trap-week). This activity level result is in contrast to activity Dr. Arnold observed at a study site on three units of the Sacramento River National Wildlife Refuge: McIntosh Landing South and Ord Bend Units in Glenn County, and Pine Creek Unit in Butte County. A pheromone-based survey was conducted here between March 27 and May 16, 2014, which is approximately the same period during which the survey at the Prather site was conducted. Pheromone traps with lures containing five different dosages of (R)-desmolactone (0mg, 1.0mg, 3.3mg, 10.0mg, and 33.0mg) dissolved in isopropyl alcohol were established as five traps in a replicate; six replicates resulted in a total of 30 traps, with six traps per dosage. According to Dr. Arnold's report², a total of 43 male beetles were attracted to traps containing the 10mg dose of pheromone over the course of the seven week survey period (an average of 6.14 beetles per week, or an average of 1.024 beetles per trap-week, which is 36.6 times greater than the rate of beetle attraction at the Prather site). These 43 males were visually identified as the valley elderberry longhorn beetle. This indicates that the level of elderberry longhorn beetle activity at the Prather site (regardless of subspecies type) is likely to be very low, and therefore the extent of adverse effects from construction activities to the valley elderberry longhorn beetle also is likely to be very low.

Dr. Arnold's report concluded that the California elderberry longhorn beetle inhabits the action area. However, there is no established protocol for determining absence of the valley elderberry longhorn beetle at a site. Furthermore, the action area is within the range of the valley elderberry longhorn beetle described in the Service's September 17, 2014 withdrawal of the proposed rule to delist the valley elderberry longhorn beetle.³ Based on the survey results, the Service concludes that the likelihood that the valley elderberry longhorn beetle occurs in the action area is greatly reduced, though not eliminated.

Four elderberry shrubs will be eliminated as a result of construction activities. Consequently, there may be some mortality of the valley elderberry longhorn beetle due to the removal and destruction of its habitat; however, the extent of this mortality is likely to be very low given that elderberry longhorn beetle activity at the project site is likely to be very low. Caltrans will minimize the potential for losing all valley elderberry longhorn beetles within these four shrubs by compensating for the loss of all suitable habitat. Caltrans proposes to purchase four credits (one credit per shrub) at the FCCB or at another Service-approved conservation bank. This purchase will reduce the effects of the permanent loss of those shrubs considered in this amendment, and will protect and manage habitat for the conservation of the species in perpetuity.

On page 8 of the January 8, 2013, the **Amount or Extent of Take** is being replaced with the following new text:

² Arnold, Richard A. 2014. Report on Sex Pheromone Dosage Response Study for the Threatened Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) at the Sacramento River National Wildlife Refuge. Pleasant Hill, California. June 2014. 10 pages.

³ 79 FR 55874. September 17, 2014. Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule to Remove the Valley Elderberry Longhorn Beetle from the Federal List of Endangered and Threatened Wildlife. Proposed rule; withdrawal. U.S. Fish and Wildlife Service, Department of the Interior.

It is infeasible for the Service to quantify the exact number of valley elderberry longhorn beetles that will be taken as a result of the proposed action because the number of individuals in the action area is unknown and estimates of population density in the action area are unavailable. In instances in which the number of individuals that may be taken cannot be determined, the Service may quantify take in the amount of lost or degraded habitat as a result of the project action; since take is expected to result from these effects to habitat, the quantification of habitat becomes a direct surrogate for the species that will be taken. Therefore, the Service quantifies take incidental to this project as the four elderberry shrubs that will be removed and eliminated. Upon implementation of the revised *Conservation Measures* considered herein, incidental take in the form of mortality as a result of removal methods used to displace and destroy the shrubs in order to facilitate curve realignment activities, will become exempt from the prohibitions described under section 9 of the Act.

Reinitiation – Closing Statement

The conclusion of the jeopardy analysis for the January 8, 2013 biological opinion is unchanged: the action is not likely to jeopardize the continued existence of the valley elderberry longhorn beetle. This concludes the amendment to the biological opinion for the Prather Curve Correction 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 maintained 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 that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

Please contact Jen Schofield, Wildlife Biologist, or Thomas Leeman, Chief, San Joaquin Valley Division, at the letterhead address or at (916) 414-6600 if you have any questions regarding this letter.

Sincerely,



Kenneth Sanchez
Assistant Field Supervisor

cc:

Craig Bailey, California Department of Fish and Wildlife, Fresno, California

MATERIALS INFORMATION

Lian, Joe@DOT

From: Nijhawan, Amit@DOT
Sent: Wednesday, November 19, 2014 4:24 PM
To: Lian, Joe@DOT
Subject: FW: EA 06-0M0501-Fre-168-PM 29.0/29.4-Portable water source for a project

FYI

Amit Nijhawan, PE
Design 1, Branch M
Ph. (559) 243-3811
Fax. (559) 243-3840

From: Lisa Koehn [<mailto:lisak@ci.clovis.ca.us>]
Sent: Wednesday, November 19, 2014 3:46 PM
To: Nijhawan, Amit@DOT
Cc: Rob Rush; Richardson, Ronald J@DOT; Ramirez, Arthur A@DOT; Fuller, Steve D@DOT; Lian, Joe@DOT; Glenn Eastes
Subject: RE: EA 06-0M0501-Fre-168-PM 29.0/29.4-Portable water source for a project

Hi,

1. Yes.
2. Contact Glenn Eastes @ 324-2684. He can approve your truck setup.
3. The rate is \$0.74/1,000 gallons with a minimum charge per month. The services are metered and Caltrans pays the bill so it will be up to you to work out internally how you pay for your share.

Lisa Koehn
Assistant Public Utilities Director
155 N. Sunnyside Avenue
Clovis, CA 93611
(559) 324-2607
Fax (559) 324-2862

From: Nijhawan, Amit@DOT [<mailto:amit.nijhawan@dot.ca.gov>]
Sent: Wednesday, November 19, 2014 3:27 PM
To: Lisa Koehn
Cc: Rob Rush; Richardson, Ronald J@DOT; Ramirez, Arthur A@DOT; Fuller, Steve D@DOT; Lian, Joe@DOT
Subject: RE: EA 06-0M0501-Fre-168-PM 29.0/29.4-Portable water source for a project

Ms. Koehn,

Thank you for your prompt response to my inquire. I was talking to our Office Engineer regarding this water source, our Office Engineer had few following questions

1. Per Caltrans Standard Specification the recycled water needs to meet the California Department of Public Health (CDPH) and appropriate Regional Water Quality Control Board (RWQCB) requirements. Does this water source on Temperance Ave. meets requirements from both of the agencies?

2. Who should contractor contact from the City, if contractor decides to use Temperance Ave. water source for this project? Please provide contact information.

3. What is the rate for recycled water per gallon?

Thank you for helping us out on this project.

Amit Nijhawan, PE
Design 1, Branch M
Ph. (559) 243-3811
Fax. (559) 243-3840

From: Lisa Koehn [<mailto:lisak@ci.clovis.ca.us>]
Sent: Tuesday, November 18, 2014 4:51 PM
To: Nijhawan, Amit@DOT
Cc: Rob Rush; Martin, David R@DOT; Ramirez, Arthur A@DOT; Lian, Joe@DOT; Musni, Rolando B@DOT; Richardson, Ronald J@DOT; Glenn Eastes
Subject: RE: EA 06-0M0501-Fre-168-PM 29.0/29.4-Portable water source for a project

Mr. Nijhawan,

The water for your project may be provided from the State's recycled water connections on Temperance Avenue at 168. Please work with Mr. Ron Richardson, the Site Supervisor regarding the training required for any employees. Per the attached construction water requirements, the trucks need to be labeled as carrying recycled water. Per the attached standard drawing, the tank must include the wording "Recycled Water – Do Not Drink, Agua De Desperdicio Reclamada – No Tome" and the symbol shown of the line through the glass. Let me know if you have any questions.

Lisa Koehn
Assistant Public Utilities Director
155 N. Sunnyside Avenue
Clovis, CA 93611
(559) 324-2607
Fax (559) 324-2862

From: Nijhawan, Amit@DOT [<mailto:amit.nijhawan@dot.ca.gov>]
Sent: Tuesday, November 18, 2014 4:21 PM
To: Lisa Koehn
Cc: Rob Rush; Martin, David R@DOT; Ramirez, Arthur A@DOT; Lian, Joe@DOT; Musni, Rolando B@DOT
Subject: EA 06-0M0501-Fre-168-PM 29.0/29.4-Portable water source for a project

Ms. Koehn,

Caltrans is working on a project in Prather area. The purpose of the project is to realign the 0.5 mile section of Route 168 approximately 0.8 mile west of the Auberry Rd. This project was generated because of the safety analysis. This project will be in construction from 07/1/2015 to 12/01/2015. The project will have 80 working days. Due to the new requirements State needs to provide the portable water source for the projects. Water source can be Recycled water. We estimate 7500 gal/day of recycled water would needed for 80 day. David Martin from our Landscape department contacted you previously regarding this matter. It is my understanding that you have concurred that City of Clovis will

provide the recycled water for this project. If that's the case, please provide your concurrence and guide us with necessary steps what State needs to do in order to secure the water source for this project.

I really appreciate your help with this project. Please contact me in the event of any questions at the number listed below.

Thanks

Amit Nijhawan, PE
Design 1, Branch M
Ph. (559) 243-3811
Fax. (559) 243-3840

June 10, 1988

State of California
Department of Health Services
Environmental Management Branch
GUIDELINES FOR THE USE OF RECLAIMED WATER
FOR
CONSTRUCTION PURPOSES

Post-It™ brand fax transmittal mt

To	CG
Co	PH
Dept.	FR
Fax #	

Controls at Treatment Plant

1. Reclaimed water used for soil compaction, dust control, and other construction purposes where the workers or the public have similar access or exposure shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last seven days for which analyses have been completed, and the number of coliform organisms does not exceed 240 per 100 milliliters in any two consecutive samples.
2. Unless otherwise specified, all applicable sections of the Wastewater Reclamation Criteria must be complied with, including the design, operational, and reliability requirements.
 - a. Exceptions to specified sections of the criteria will be considered by the Department of Health Services on an individual case basis.

Controls on Hauling and Use

1. Use sites must be approved by the Regional Water Quality Control Board and the State and local health departments.
2. Truck drivers should be instructed as to the requirements contained herein and the potential health hazards involved with the reuse of wastewater.
3. Tank trucks and other equipment which contain or come in contact with reclaimed water should be clearly identified with warning signs.
4. Tank trucks used for reclaimed water should be thoroughly cleaned of septage or other contaminants prior to use.
5. Use of reclaimed water should not create any odor or other nuisance.
6. Reclaimed water should be confined to the authorized use area.
 - a. Ponding or runoff of reclaimed water should not occur.
 - b. Aerosol formation during uses involving spraying should be minimized.
7. Reclaimed water should be applied so as to prevent public or employee contact with the water.

-2-

8. Reclaimed water must not be introduced into any permanent piping system and no connection shall be made between the tank truck and any part of a domestic water system.
9. Tank trucks should be cleaned and disinfected after the project is completed.
10. Tank trucks used to transport reclaimed water shall not be used to carry domestic water.

SE5061680

Memorandum

*Flex your power!
Be energy efficient!*

To: MR. THANH NGUYEN
Design Engineer
Office of Design I, Branch M

Date: March 27, 2014

File:
06-FRE-168-T29.0/29.4
06-0M0501
0600000353
Prather Curve Correction

From: DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
OFFICE OF GEOTECHNICAL SERVICES – MS 5

Subject: Geotechnical Design Report for Curve Correction

Introduction

The Office of Geotechnical Design North (OGDN) has prepared this report for the curve correction project referenced above. The project site is located on Route 168 approximately 0.5 mile southwest of Auberry Road in the community of Prather.

This project proposes to improve the existing horizontal alignment to increase traffic safety.

The project improvements are to include extending the existing cut slopes back and the placement of new compacted fills and culverts.

This report includes a review of data from California Geologic Survey publications, a site reconnaissance and a geophysical refraction study. No exploratory drilling or laboratory testing was conducted for this report.

The project plan layout and design study cross sections provided by your Office were used for providing the following recommendations.

This report is intended for use by roadway design engineers, construction personnel, bidders and contractors.

Pertinent Resources

The following documents were used in the preparation of this report:

- 1) District Preliminary Geotechnical Report, 06-0M050K, dated April 15, 2010.

- 2) Layout sheets dated 4/22/2013. It should be noted that the project stationing was changed in February, 2014. 2000 feet was added to each station number. This report reflects that change. The original project stationing began at STA 00+16.25 which reflects in this report as 20+16.25.
- 3) Seismic refraction survey report for rippability, dated January 23, 2014

Climate

Weather data are available at the Western Regional Climate Center internet website tool. Rainfall records from July, 1915 to February, 2013 from a weather station named Auberry 1 NW (040379) indicate an average total precipitation of 25.0 inches, an average total snowfall of 3.6 inches, a maximum average temperature of 73.6°F and a minimum average temperature of 47.3°F per year.

Drainage

Primary drainage is along the creek below the existing roadway and to the southwest. Some mass wasting effects from excessive surface runoff was observed in the area of STA 30+50 to 31+00. No other areas of potential excessive surface runoff were observed.

Site Geology

The project site is located in the western portion of the Sierra Nevada Mountains geomorphic province. The primary geologic unit within the project site is a granitic type of rock called tonalite (Plate 1). This type of rock will be encountered for the majority of the excavations and fills on the project. The rock at this site is massive, highly weathered to fresh, weakly to moderately fractured and hard. The geologic structure of the rock consists of weak joint sets which strike primarily east-west and dip 70 to 80 degrees to the north with some vertical joints.

These rocks are overlain by rocky colluvium that is approximately 0 to 5 feet thick.

Exploration

The Office of Geotechnical Support, Geophysics and Geology Branch performed a seismic refraction survey at the project site in January, 2014. Two seismic refraction lines were completed above the existing slopes in the area of the proposed cuts. The survey was done to estimate the distribution and depth of potentially non-rippable rock in the area of the proposed cut slopes.

A copy of the seismic refraction report is attached.

CONCLUSIONS AND RECOMMENDATIONS

General

Based on the preliminary design study dated April, 2013 provided to us , OGDN concludes that the site is suitable for the proposed curve correction improvements provided the recommendations presented in this report are incorporated into the design and construction of the project.

Fill Slopes

The maximum slope gradient of all engineered compacted fills, except from STA 35+80 to 36+20 should be 2:1 (horizontal:vertical) or flatter and compacted to a 90% relative density.

Due to right-of-way boundary restrictions, the fill at STA 35+80 to 36+20 may be placed at a 1.5:1 gradient and compacted to 95% relative density.

The native, on-site borrow soils created by excavation of the cut slope areas should be considered to be suitable for use as fill material.

Grading Factor

Earthwork factors for this project will vary from a low of 0.9 in colluvium to a maximum of 1.2 in the underlying tonalite granitics. The majority of the volume of the proposed cuts for this project will be within weathered and un-weathered tonalite with earthwork factors >1. We recommend that the District utilize a general earthwork factor of 1.15 for quantity estimating purposes.

Cut Slopes

It is proposed to complete portions of the curve correction by cutting into the existing slopes on both the east and west sides the existing highway. It is our understanding that the District would like to utilize a slope ratio of 1:1 (horizontal:vertical) for the cuts shown in table below.

Based on the results of the seismic refraction survey and our field mapping we find that the construction of the cut slopes at a gradient of 1:1 is suitable throughout the project limits. Our recommended slope ratios are provided in the table below:

Length	Proposed Gradient	Proposed Max. Height	@ STA	Recommended Build Gradient	Recommended Build Height
20+25 to 24+25	1:1	30 feet	23+25	1:1	30 feet
26+50 to 27+25	1:1	23 feet	26+50	1:1	23 feet
30+50 to 34+25	1:1	18 feet	31+25	1:1	18 feet

The District should consider reducing erosion potential on the new cut at STA 30+50 to 31+00 (Plates 2 and 3) by planning on-slope rounding in the upper 5 feet at the crest of the cut in this area and/or placing V-ditch's paralleling the cut crest to slow or prevent sheet flow down the slope face.

Landscape Architecture and/or District Hydraulics should be consulted to verify and/or provide other erosion control mitigation options that may be suitable at other project cut locations.

Rippability

Our site reconnaissance and map review indicates that the project area is underlain by a massive, hard, weakly to moderately fractured granitic type of rock termed tonalite.

During our site visit the presence of drilled holes (half-round drill and blast remnants) were observed in the lower portions of the existing cut around the area of STA 23+00.

Based on the attached seismic refraction survey report, non-rippable rock with seismic velocities up greater than 9000 ft./sec. will be encountered within the excavation limits.

We estimate that the extent of non-rippable materials will be 30% (+/-5%) of the project excavation volumes and will require excavation using explosives or other hard rock excavation methods such as hydraulic splitters, hoe-rams and chemical expanders. Blasting is typically the most cost effective and efficient method to complete hard rock excavation. If the District approves blasting as a hard rock excavation method, our Office recommends that Caltrans Standard Special Provisions (SSP) 19-4, "Controlled Blasting" be included in the project specifications.

It is recommended that the use of presplitting not be implemented and that clean, uniform cut faces can be achieved by detailing with standard equipment such as a hoe ram.

We estimate that the extent of easily-ripped to moderately difficult rippable materials will be 70% (+/-5%) of the project excavation volumes and will be removable using conventional roadway excavation equipment. It is expected that the spoils generated from these materials will contain boulders estimated to be up to 10 feet in largest dimension and that boulder reduction (de-sizing) will be required.

Groundwater

Groundwater will not be a factor during construction. A small spring was observed at the toe of the mass wasting feature at STA 30+50 to 31+00 during our site visit in October, 2013.

Rockfall

There is no rockfall presently occurring at the site and none is expected to occur after construction.

Area of Erosion

An area of instability was observed during our site reconnaissance at approximately STA 30+50 to 31+00 (See Plates 2-3). The design study cross-sections indicate that some of this material may not be removed in the proposed cut.

This area may need mitigation based on a field determination during construction. It is recommended that the new slopes be observed by this Office when 80% of the excavation for the planned cut slopes has been completed.

If all of this debris is not removed during construction, it is recommended that additional excavation be done to remove this material or other remedial measures be undertaken based on the field review.

Construction Considerations

Contractors should be aware that we have made our best attempts, based on field mapping and seismic refractions surveys, to identify the elevation and volumes of non-rippable rock that will be encountered. These estimates were obtained by surveying at discrete points and are by no means an interpretation of the exact rippable condition of granitic rock at all depths and project stationing points.

Rock boulders estimated to be 10 feet or larger in diameter should be anticipated in the borrow materials created by standard roadway excavation portions of cut slopes. Boulder reduction using hoe rams or other types of rock splitting equipment will be necessary.

Keying of the toes-of-fill into native material prior to fill placement is critical in the areas of STA 20+50 to 22+00, 36+25 to 36+50 and 38+25.

All fills slopes should conform to the Standard Specification, Section 19.

Coarse materials placed in new fill shall be well distributed within the fill.

Cut slopes that are near 80% of completion should be observed by a geoprofessional from this Office.

Project Information

The following is information originating from Geotechnical Services to be included in the bid package Information Handout:

THANH NGUYEN
March 27, 2014
06-0M0501

Prather Curve Correction
06-FRE-168-T29.0/29.4
0600000353

Data and information attached with the project plans are:
None.

Data and information included in the Information Handout provided to the bidders and contractors are:
This report.

Data and information available for inspection at the District Office:
None.

Data and information available for inspection at the Transportation Laboratory are:
None.

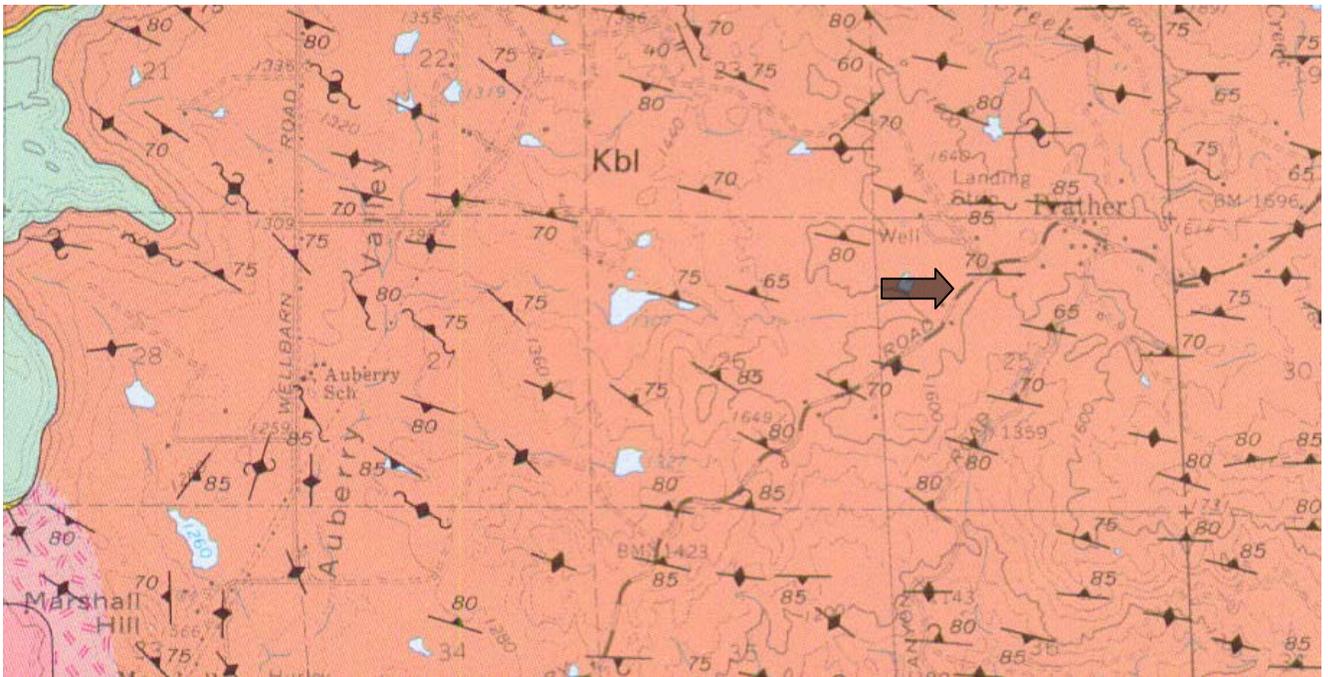
If you have any questions or comments, please call Christopher Koepke at (916) 227-1040 or John (Qiang) Huang at (916) 227-1037.




CHRISTOPHER KOEPKE, C.E.G. 2207
Engineering Geologist
Office of Geotechnical Design North, Branch D

Attachments
Seismic Refraction Study

cc : R.E. Pending,, GDN File, D06 PCE, D06 DME, Qiang Huang



Source: Geologic Map of the Millerton Lake Quadrangle, U.S.G.S., 1982.

Explanation: Kbl = Tonalite of Blue Canyon

➡ = Site location.



NO SCALE



CALTRANS
 Division of Engineering Services
 Geotechnical Services
 Geotechnical Design - North

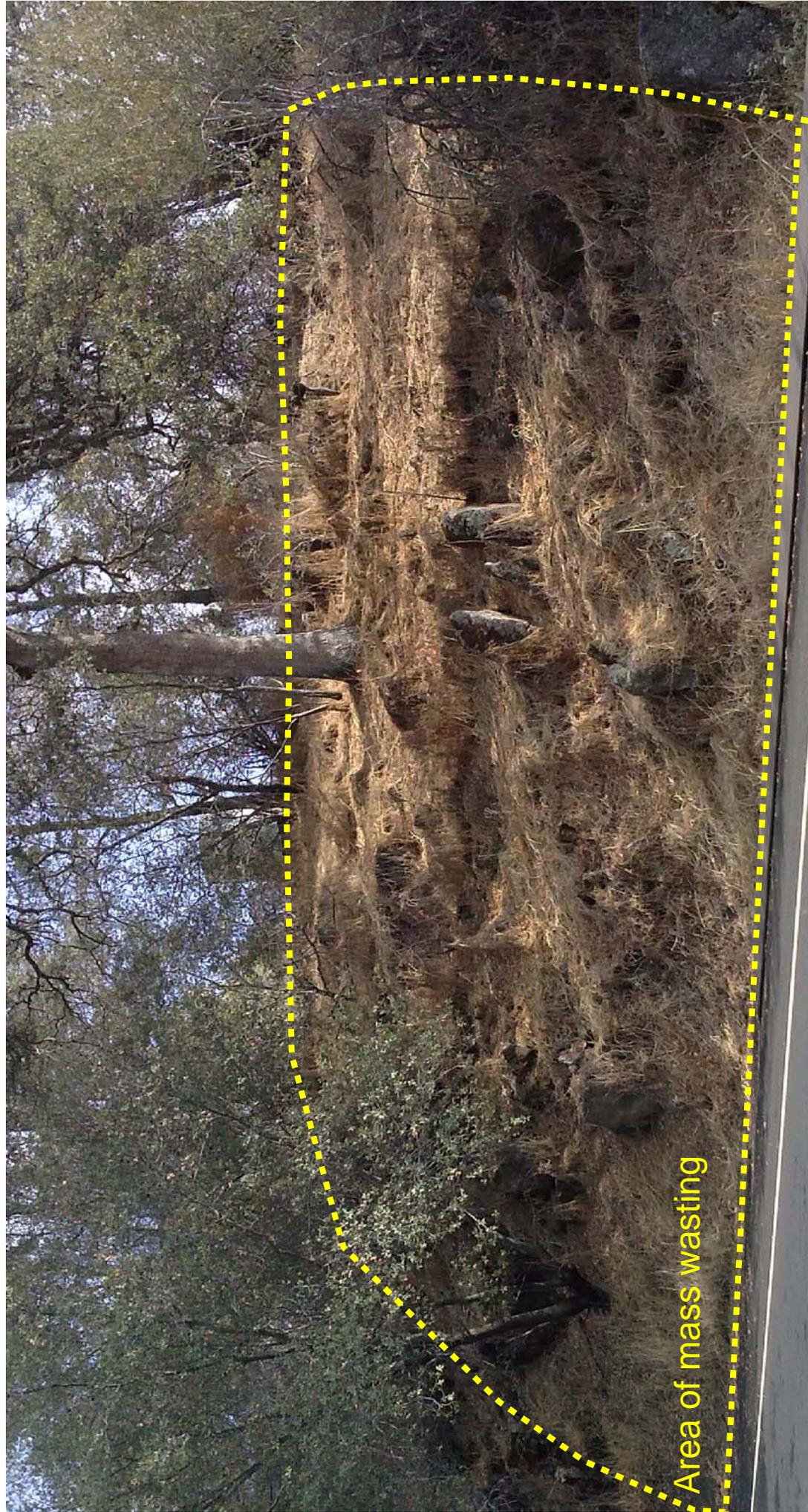
EA: 06-0M0501

Date: March, 2014

GEOLOGIC MAP

06-FRE-168-29.0
 Prather Curve Realignment
 GEOTECHNICAL DESIGN REPORT

Plate
 No. 1



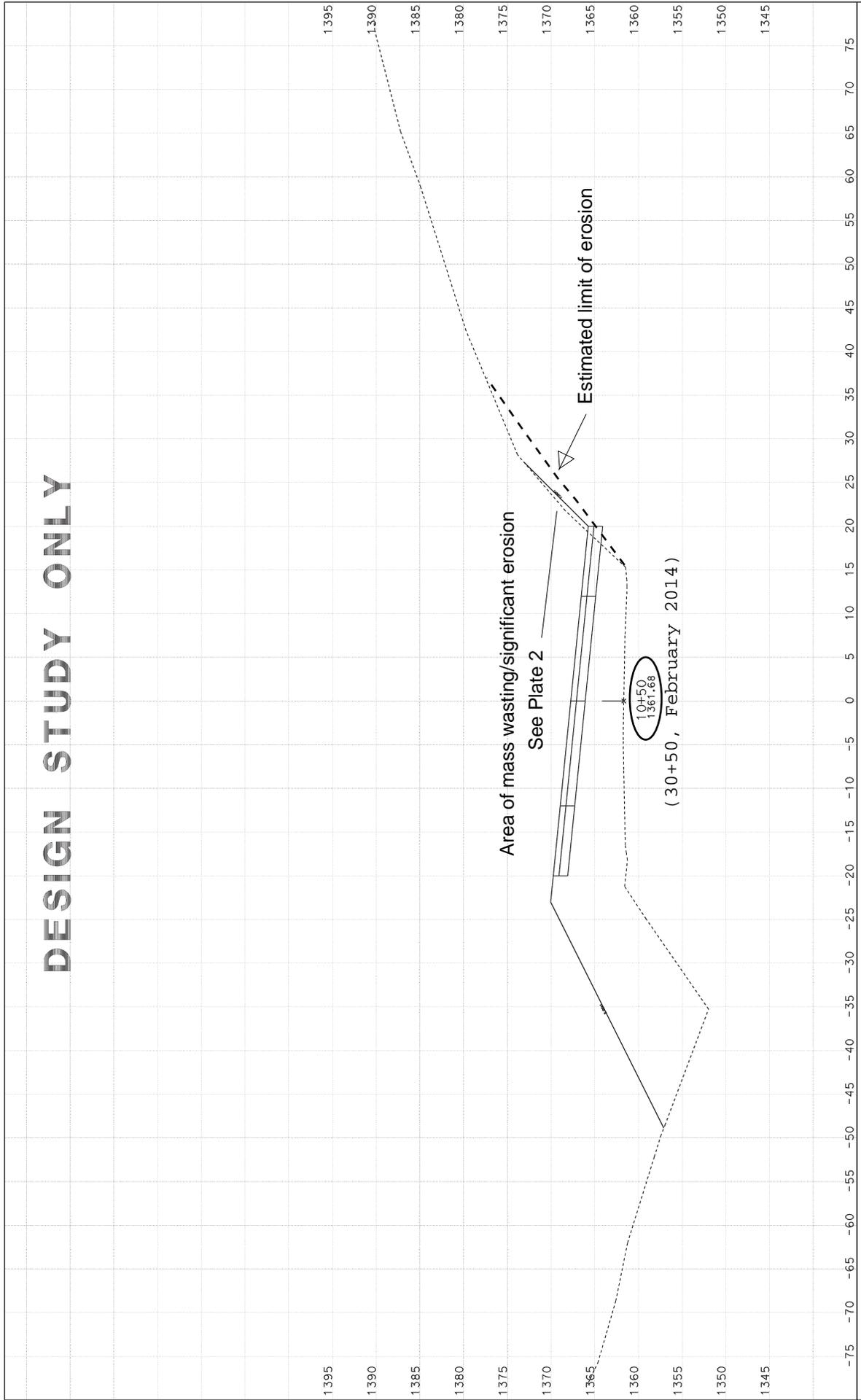
Area of mass wasting



PM 29.34

Approx. STA 30+50

DESIGN STUDY ONLY



SCALE: 1" = 5' Horiz.
1" = 5' Vert.
All Dimensions are US Survey Feet

A2
CROSS SECTIONS
SHEET 41 OF 072

Memorandum

*Flex your power!
Be energy efficient!*

To: **Qiang Huang**
Senior M&R Engineer
Geotechnical Design West
Division of Engineering Services

Date: January 23, 2014

File: 06-FRE-168-29

Project: 06-0000-0353

Attn: Chris Koepke

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES-MS#5

Subject: Results of Seismic Refraction Survey for Route 168 Widening, Postmile 29 in Fresno County

Introduction

This memo documents the results of a refraction seismic survey to assist in the design of a roadway widening project at the above referenced project. This survey was intended to evaluate the rippability of the material to be excavated. Two seismic refraction profiles were surveyed. Elevations used in this report were approximated from plans furnished by the Office of Geotechnical Design West. These elevations should be verified and corrected where needed for final design. A temporary benchmark (TBM) was established for each seismic line at the site for future reference.

Results and Discussion

The geologic environment restricted the effectiveness of the seismic refraction method. Seismic refraction assumes layering dominates the geomorphology. At this location, granitic outcrops dominate the area and soil horizons pinch out where outcrops are present. Geologic settings as described do not exhibit continuous layering and can be dominated by diffractions (seismic arrivals originating from rock edges rather than layer interfaces). This can render refraction interpretation extremely difficult or even impossible. Those conditions were present on our data and limited our interpretations. However, we were still able to obtain meaningful information from the survey and those results are provided below.

The results of our findings are summarized in Table 1 on the following page. Plate 1 is an aerial photo showing the locations of the two seismic lines. Seismic lines were positioned to image the soil and rock in the vicinity of the planned cut. Traffic control was not available for this survey, so work was limited to areas off the traveled way.

Seismic Line 1 is north of the existing roadway. It was laid out with 1.5 - m (4.9 ft) geophone spacing and was 36.0 m (125.0 ft) long excluding off-set shots (see Plate 2). The model indicates a surficial layer consisting of about 2 ft to 5 ft of rocky colluvium (material interpretation is based on site observations). This layer (designated V1) has a seismic velocity of 2000 ft/s. The second velocity unit (V2) is interpreted as weathered granite with a seismic velocity range of 4260 ft/s to 5950 ft/s. A deeper velocity unit was not detected where this

seismic line was surveyed. Bedrock is exposed at road grade at project station 22+80. Evidence of prior blasting was observed. A higher-velocity segment (5950 ft/s) was identified in velocity unit 2 over nearly the same interval and correlates with the area noted for having evidence of prior blasting. The raw trace data also show evidence of at least one fracture or joint just east of the high velocity zone. The attenuated signal was consistently at the trace representing 44.3 ft along the line. The attenuation is not severe, however, so we believe the joint is infilled with soil or saprolite.

Seismic Line 2 was south of the roadway. Plate 3 shows the profile for Seismic Line 2. It was also laid out using 1.5 - m (4.9 ft) geophone spacing and was 36.0 m (125.0 ft) long, excluding off-set shots. The southern end of seismic line 2 terminates at an outcrop of large granitic blocks. The model indicates V1 is 2.0 ft to 10.0 ft thick, averaging about 6.0 ft. It is interpreted to consist of colluvium and has a seismic velocity of 1860 ft/s. V2 is 10 ft to 30 ft thick, averaging 19 feet. It consists of weathered granite with a seismic velocity of 4550 ft/s. The third velocity unit (V3) was deeper than 20 ft and is interpreted as less weathered granite. Measured seismic velocity for this unit is 9000 ft/s from the beginning of the line to station 31+18, then increases to over 13,500 ft/s eastward. The processed model for seismic line 2 shows several diffractions in the third velocity unit. The presence of diffractions where seismic velocity decreases suggests the refractor contains infilled or open joints. Anticipate jointing in this velocity unit.

The geologic environment supports the potential for unrippable corestones within the V2 weathering horizon. Granitic rocks do not typically display a uniform weathering pattern downward. There, weathering occurs mainly along joints and fractures. Corestones can develop as the edges of the granite blocks become rounded as weathering propagates into the rock mass from the joints and fractures. It is possible that corestones exist within V2 that will require on-site reduction.

Table 1 Results of Seismic Refraction Survey

Line	Layer	Average Thickness ft.	Velocity Range (ft/s)	Line Length (ft)	Project Stationing	Inferred Material	Rippability
1	1	6.0	2000	125.0	22+65 - 23+80	Rocky Colluvium	ER
1	2	N/A	4260 - 5950			Weathered Granite	MD
2	1	4.0	1860	125.0	30+75 - 31+90	Colluvium	ER
2	2	19.0	4550			Weathered Granite	MD
2	3	N/A	9000 - 13580			Less Weathered Granite	NR

¹ER = Easily Ripped, MD = Moderately Difficult, DR = Difficult Ripping, NR = Not Rippable,

Ripping ability is based on unpublished Caltrans data for the Caterpillar D9 series bulldozer with a single-tooth ripper. These values are as follows:

Velocity ft/s	Rippability
<3440	Easily Ripped
3440-4920	Moderately Difficult
4920-6560	Difficult Ripping
>6560	Not Rippable

Different excavation equipment may experience different results. Penetrating efficacy of the ripping tooth is often more important in predicting ripping success than seismic velocity alone. Undetected blocks or lenses of high-velocity material should be expected within rippable zones, requiring blasting or other means of mechanical breakage for excavation.

Data Acquisition and Processing

Seismic refraction data were recorded using an EG&G Smartseis 24-channel seismograph with 14 MHz geophones. The energy source employed was a hammer and striker plate. Refraction data from each shot were stored in the seismograph's memory. Both profile geometry and refraction data were backed up to paper and floppy disk upon completion of the survey.

Profiles in this report are presented in terms of velocity units. A velocity unit is a three-dimensional unit, which due to its elastic properties and density, propagates seismic waves at a characteristic velocity or within a characteristic velocity range. Velocities denoted in this report and in the seismic refraction sections are expressed in feet per second. At least one velocity is present within a geological rock unit. In addition, each zone of weathering, or fracturing within that geological unit can constitute its own velocity unit. Conversely, when two rock units such as water saturated gravel and moderately weathered rock propagate seismic waves at the same velocity and are adjacent to each other, both units would be part of the same velocity unit. Lastly, discontinuous velocities might result from variation in the degree of alteration in the form of physical and chemical weathering and should be considered in the interpretation of the data.

Thank you for the opportunity to work on this project. If you have any questions or need additional assistance, please contact Dennison Leeds at (916) 227-1307 or Mr. Bill Owen at (916) 227-0227.

Report by:



Dennison Leeds
Engineering Geologist
Geophysics and Geology Branch

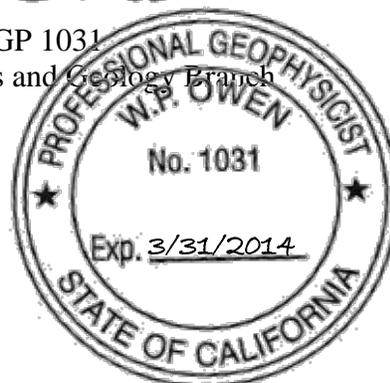
Reviewed By:



William Owen, PGP 1031
Chief, Geophysics and Geology Branch

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EA 0M0501
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Location Map
 06-FRE-168-29

Plate
 No.1

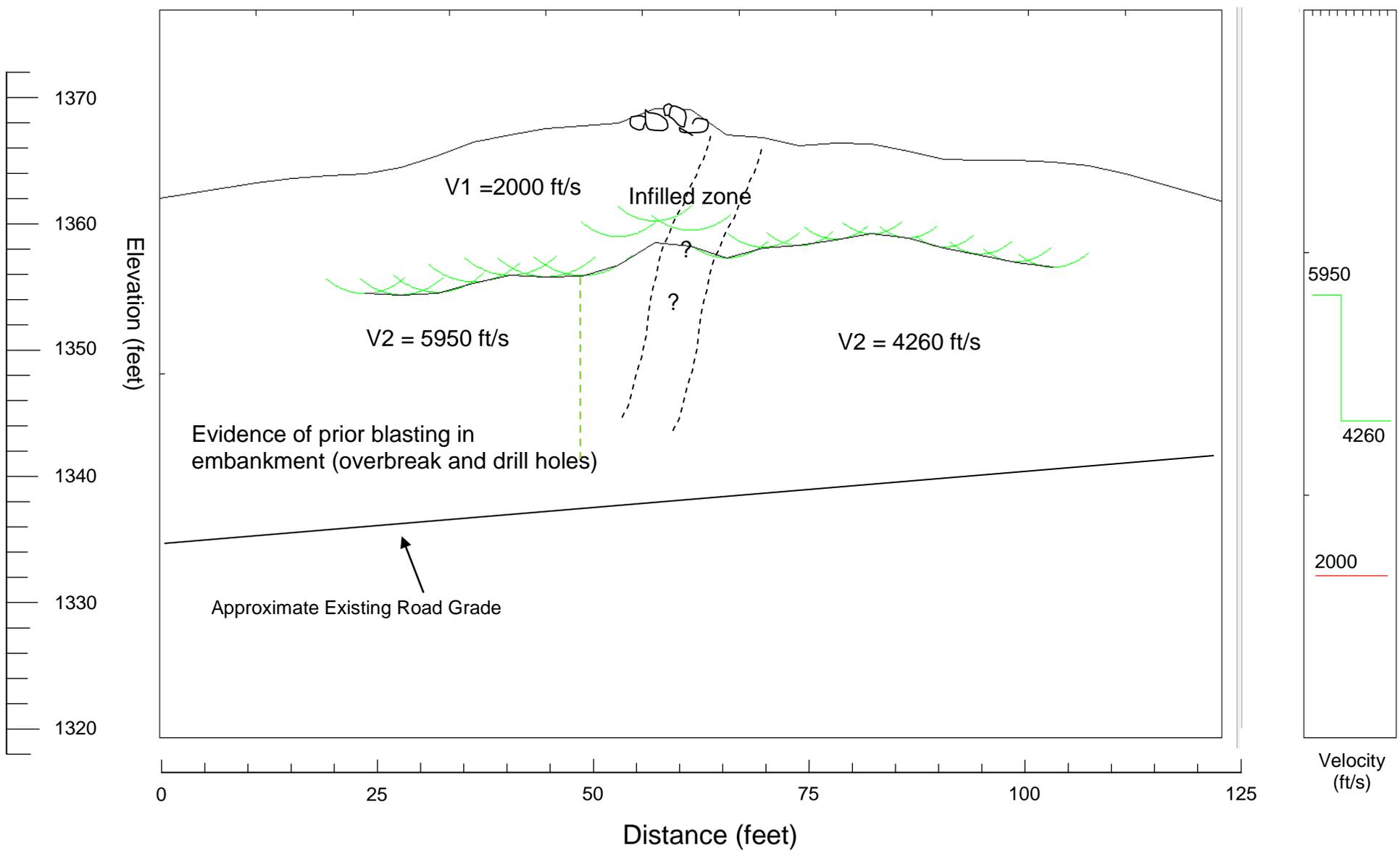
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Project Stationing

N

23+00

23+60



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EA 0M0501
 ID 0600000353

Hwy 168 Line 1
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Plate
 No.2

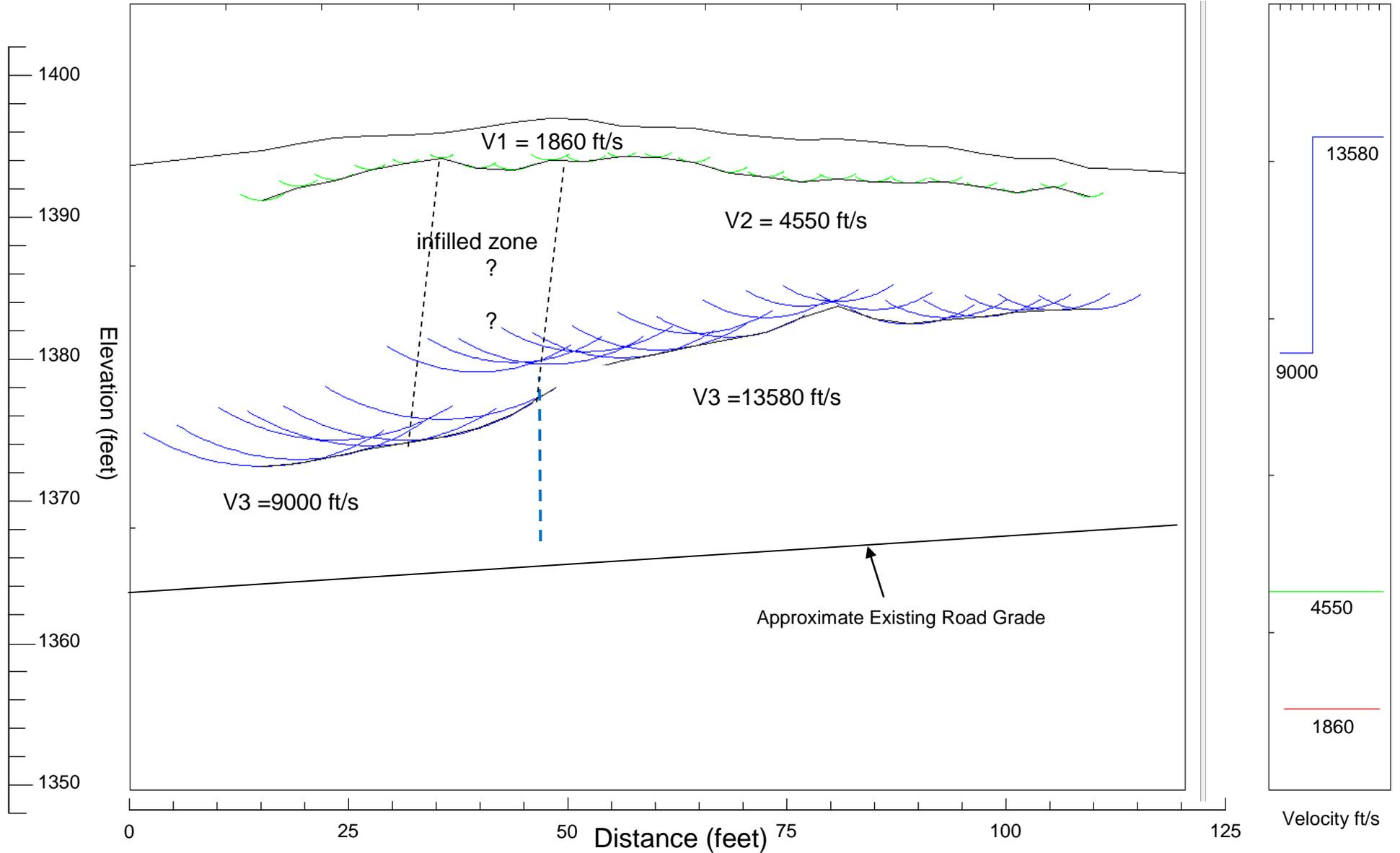
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Project Station

N

31 +00

32 +00



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Plate
 No.3