

INFORMATION HANDOUT

WATER QUALITY

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

**BOARD ORDER NO. 2003-0017-DWQ
NPDES PERMIT NO. CAS 401**

AGREEMENT

CALIFORNIA DEPARTMENT OF FISH AND GAME

NOTIFICATION NO. 2009-0089-R4

ARMY CORP OF ENGINEERS

Nationwide Permit

MATERIALS INFORMATION

FINAL FOUNDATION AND SEISMIC REPORT (SECOND REVISION)

FINAL HYDRULAIC REPORT

ADVISORY COUNCIL ON PREVERSATION (dated May 26, 1995)

ADVISORY COUNCIL ON PREVERSATION (dated July 21, 1995)



Linda S. Adams
Secretary for
Environmental
Protection

California Regional Water Quality Control Board Central Valley Region

Karl E. Longley, ScD, P.E., Chair

1685 E Street, Fresno, California 93706
(559) 445-5116 • Fax (559) 445-5910
<http://www.waterboards.ca.gov/centralvalley>



Arnold
Schwarzenegger
Governor

4 August 2009

Todd Barosso, Project Biologist
California Department of Transportation
2015 E. Shields Avenue, Suite 100
Fresno, CA 93612

ACTION ON REQUEST FOR CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION FOR DISCHARGE OF DREDGED AND/OR FILL MATERIALS ASSOCIATED WITH THE STATE ROUTE 180 WAHTOKE CREEK BRIDGE REPLACEMENT AND ASSOCIATED CULVERT PROJECT, FRESNO COUNTY

APPLICANT: California Department of Transportation

PROJECT: Refer to Attachment 1 for Project Information

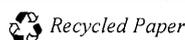
ACTION:

1. Order for Standard Certification
2. Order for Technically-conditioned Certification
3. Order for Denial of Certification

WATER QUALITY CERTIFICATION STANDARD CONDITIONS:

1. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section 13330 of the California Water Code and Section 3867 of Title 23 of the California Code of Regulations (23 CCR).
2. This certification action 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 subsection 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 is conditional upon total payment of the full fee required under 23 CCR Section 3833, unless otherwise stated in writing by the certifying agency.

California Environmental Protection Agency



4. Certification is valid for the duration of the described project. The California Department of Transportation shall notify the Central Valley Regional Water Quality Control Board (Central Valley Water Board) in writing within 7 days of project completion.

TECHNICAL CONDITIONS (for Certification Action 2):

In addition to the four standard conditions, the California Department of Transportation shall satisfy the following:

1. A finalized Streambed Alteration Agreement must be issued by the California Department of Fish and Game before this project may proceed. A copy of the finalized Streambed Alteration Agreement shall be submitted to the Central Valley Water Board.

CENTRAL VALLEY WATER BOARD CONTACT PERSON:

Bridget Supple, Environmental Scientist
(559) 445-5919
bsupple@waterboards.ca.gov

WATER QUALITY CERTIFICATION:

I hereby issue an order certifying that the proposed discharge from the State Route 180 Wahtoke Creek Bridge Replacement and Associated Culvert project will comply with the applicable provisions of Sections 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 (General WDRs)," which is enclosed.

Except insofar as may be modified by any preceding conditions, all certification actions are contingent on (a) the discharge being limited and all proposed mitigations being completed in strict compliance with the applicant's project description and the attached Project Information Sheet, and (b) compliance with all applicable requirements of the Central Valley Water Board's *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, Revised January 2004*.


for Pamela C. Creedon
Executive Officer

Enclosures: Project Information
Water Quality Order No. 2003-0017-DWQ

cc: See next page

cc: Dave Smith, Chief, Wetlands Regulatory Office, U.S. Environmental Protection Agency,
Region 9, San Francisco
Kathleen Dadey, Chief, Sacramento South Branch, 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
Jeffrey Single, Regional Manager, San Joaquin Valley-Southern Sierra Region,
California Department of Fish and Game, Fresno

**ATTACHMENT 1
PROJECT INFORMATION**

Application Date: 22 June 2009

Applicant: California Department of Transportation (Caltrans)

Applicant Representatives: Todd Barosso, Project Biologist

Project Name: State Route 180 Wahtoke Creek Bridge Replacement and Associated Culvert

Applicant Number: RN #380; WDID No. 5C10CR00039

Project Location: 36° 43' 11" Latitude, 119° 22' 47" Longitude; Section 8 of Township 14 South, Range 24 East, MDB&M.

Project Duration: February 2010 through February 2011

County: Fresno

Receiving Water(s) (hydrologic unit): Wahtoke Creek, Tulare Lake Hydrologic Basin, South Valley Floor Hydrologic Unit, Alta Hydrologic Area (# 551.60).

Water Body Type: Creek and unnamed drainage

Designated Beneficial Uses: The designated beneficial uses of Valley Floor Waters are: agricultural supply; industrial service supply; industrial process supply; contact recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; rare, threatened, or endangered species; and groundwater recharge.

Project Description: Replace the Wahtoke Creek Bridge on State Route 180. Work in the bed and bank of the creek will include: widening the channel at the bridge; excavation in the bank to place abutment footings; and installation of flow apron approaches and rock slope protection. A culvert will be placed in an unnamed drainage to the east of the bridge, and will include rock slope protection and wing walls with flow apron approaches.

Preliminary Water Quality Concerns: Increased turbidity, deposition of settleable material, and transport of pollutants to Wahtoke Creek.

Proposed Mitigation

To Address Concerns: Best Management Practices (BMPs) will be implemented during construction. Work will take place in Wahtoke Creek when the channel is expected to be dry. However, if flows are present, a water diversion plan will be implemented. All temporarily affected areas will be restored to pre-project contours and conditions upon completion of work activities.

Fill/Excavation Area: The project will result in the following permanent and temporary impacts:

	Permanent Impacts	Temporary Impacts
Unvegetated streambed of Wahtoke Creek	0.014 acres	0.376 acres
Unvegetated streambed of unnamed drainage	0.02 acres	0.01 acres

Dredge Volume (cy): None

U.S. Army Corps of Engineers Permit: Caltrans applied for coverage under Nationwide Permit No. 14 on 16 June 2009.

Department of Fish and Game Streambed Alteration Agreement: Caltrans applied for a Streambed Alteration Agreement on 14 June 2009.

CEQA Compliance: Caltrans prepared an Environmental Impact Report, and filed it with the State Clearinghouse (No. 1991022072) on 16 September 1994.

Compensatory Mitigation: None proposed, as the permanent impact is less than 0.10 acre.

Application Fee Provided: Caltrans submitted a fee of \$2,171.75 on 7 July 2009, as required by 23 CCR Section 3833(b)(2)(A).

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



Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
<http://www.dfg.ca.gov>

August 26, 2009

Zachary Parker
California Department of Transportation
2015 East Shields Avenue, Suite 100
Fresno, California 93726

Subject: Stream Alteration Agreement No. 2009-0089-R4
Wahtoke Creek and Unnamed Drainage - Fresno County

Dear Mr. Parker:

The Department of Fish and Game has completed the agreement process. A Notice of Determination will be filed with the Office of Planning and Research, in accordance with the California Environmental Quality Act (CEQA).

Your copy of the signed Agreement is enclosed. You may proceed with your Project according to the terms and provisions of your Stream Alteration Agreement, if you have obtained all other permits required by local, other State, and Federal agencies. The Department's determination may be legally challenged within 30 days following the filing of the Notice of Determination. As a result, you may wish, but are not required, to delay commencement of your Project until after the 30-day period expires.

If you have any questions regarding this matter, please contact Laura Peterson-Diaz, Environmental Scientist at the above letterhead address or by telephone at (559) 243-4014, extension 225. Thank you for your cooperation.

Sincerely,


Jeffrey R. Single, Ph.D.
Regional Manager

Enclosure

AGREEMENT



California Fish and Game Code Section 1602
Stream Alteration Agreement No. 2009-0089-R4
California Department of Transportation
Wahtoke Creek and unnamed drainage
Fresno County
FRE 180 PM 81.9-82.12 EA # 06- 472301

Parties:

California Department of Fish and Game
Central Region
1234 East Shaw Avenue
Fresno, California 93710

California Department of Transportation
Zachary Parker
2015 East Shields Avenue, Suite 100
Fresno, California 93726

WHEREAS:

1. Mr. Todd Barosso, representing the California Department of Transportation (referred to as "Caltrans") on June 19, 2009, notified ("Notification" No. 2009-0089-R4) the Department of Fish and Game ("Department") of their intent to divert or obstruct the natural flow of, or change the bed or banks of, or use materials from Wahtoke Creek in Fresno County, waters over which the Department asserts jurisdiction pursuant to Division 2, Chapter 6 of the California Fish and Game Code.
2. Caltrans may not commence any activity that is subject to Fish and Game Code Sections 1600 et seq., until the Department has found that such Project shall not substantially adversely affect an existing fish or wildlife resource or until the Department's proposals, or the decisions of a panel of arbitrators, have been incorporated into such projects.
3. Fish and Game Code Sections 1600 et seq., make provisions for the negotiation of agreements regarding the delineation and definition of appropriate activities, Project modifications and/or specific measures necessary to protect fish and wildlife resources.
4. The Department has determined that without the protective features identified in this Agreement, the activities proposed in the Notification could substantially adversely affect fish and wildlife.

Agreement No. 2009-0089-R4
Department of Transportation
Wahtoke Creek and unnamed drainage
Fresno County

1 **NOW THEREFORE, IT IS AGREED THAT:**

2
3 1. The receipt of this document ("Agreement"), by Caltrans, satisfies the
4 Department's requirement to notify Caltrans of the existence of an existing fish and
5 wildlife resource that may be substantially adversely affected by the Project that is
6 described in the Notification.

7
8 2. The contents of this Agreement constitute the Department's proposals as to
9 measures necessary to protect fish and wildlife resources, and satisfy the Department's
10 requirement to submit these proposals to Caltrans.

11
12 3. The signature of Caltrans' representative on this Agreement constitutes Caltrans'
13 commitment to incorporate the Department's proposals into the Project that is described
14 in the Notification.

15
16 4. This Agreement does not exempt Caltrans from complying with all other applicable
17 local, State and Federal law, or other legal obligations.

18
19 5. This Agreement, alone, does not constitute or imply the approval or endorsement
20 of a Project, or of specific Project features, by the Department, beyond the
21 Department's limited scope of responsibility, established by Code Sections 1600 et seq.
22 This Agreement does not therefore assure concurrence, by the Department, with the
23 issuance of permits from this or any other agency. Independent review and
24 recommendations shall be provided by the Department as appropriate on those
25 projects where local, State or Federal permits, or environmental reports are required.

26
27 6. This Agreement does not authorize the "take" (defined in Fish and Game Code
28 Section 86 as hunt, pursue, catch, capture, or kill; or attempt to hunt, pursue, catch,
29 capture, or kill) of State-listed threatened or endangered species. If the Operator, in the
30 performance of the agreed work, discovers the presence of a listed species in the
31 Project work area, work shall stop immediately. Caltrans shall not resume activities
32 authorized by this Agreement until such time as valid "take" permits are obtained from
33 the Department, pursuant to Fish and Game Code Sections 2081(a) and 2081(b), as
34 appropriate.

35
36 7. To the extent that the Provisions of this Agreement provide for the diversion of
37 water, they are agreed to with the understanding that Caltrans possesses the legal right
38 to so divert such water.

39
40 8. To the extent that the Provisions of this Agreement provide for activities that
41 require Caltrans to trespass on another owner's property, they are agreed to with the
42 understanding that Caltrans possesses the legal right to so trespass.

Agreement No. 2009-0089-R4
Department of Transportation
Wahtoke Creek and unnamed drainage
Fresno County

- 1 9. To the extent that the Provisions of this Agreement provide for activities that are
2 subject to the authority of other public agencies, said activities are agreed to with the
3 understanding that all appropriate permits and authorizations shall be obtained prior to
4 commencing agreed activities.
5
- 6 10. All Provisions of this Agreement remain in force throughout the term of the
7 Agreement. Any Provision of the Agreement may be amended at any time, provided
8 such amendment is agreed to in writing by both parties. Mutually approved
9 amendments become part of the original Agreement and are subject to all previously
10 negotiated Provisions. The Agreement may be terminated by either party, subject to
11 30 days written notification.
12
- 13 11. Caltrans shall provide a copy of the Agreement to the Project supervisors and all
14 contractors and subcontractors. Copies of the Agreement shall be available at work
15 sites during all periods of active work and shall be presented to Department personnel
16 upon demand.
17
- 18 12. Caltrans agrees to provide the Department access to the Project site at any time to
19 ensure compliance with the terms, conditions, and Provisions of this Agreement.
20
- 21 13. Caltrans and any contractor or subcontractor, working on activities covered by this
22 Agreement, are jointly and separately liable for compliance with the Provisions of this
23 Agreement. Any violation of the Provisions of this Agreement is cause to stop all work
24 immediately until the problem is reconciled. Failure to comply with the Provisions and
25 requirements of this Agreement may result in prosecution.
26
- 27 14. Caltrans assumes responsibility for the restoration of any fish and wildlife habitat
28 which may be impaired or damaged either directly or, incidental to the Project, as a
29 result of failure to properly implement or complete the mitigation features of this
30 Agreement, or from activities which were not included in the Caltrans' Notification.
31
- 32 15. It is understood that the Department enters into this Agreement for purposes of
33 establishing protective features for fish and wildlife, in the event that a Project is
34 implemented. The decision to proceed with the Project is the sole responsibility of
35 Caltrans, and is not required by this Agreement. It is agreed that all liability and/or
36 incurred costs, related to or arising out of Caltrans' Project and the fish and wildlife
37 protective conditions of this Agreement, remain the sole responsibility of Caltrans.
38 Caltrans agrees to hold harmless and defend the Department against any related claim
39 made by any party or parties for personal injury or other damage.
40
- 41 16. The terms, conditions, and Provisions contained herein constitute the limit of
42 activities agreed to and resolved by this Agreement. The signing of this Agreement
43 does not imply that Caltrans is precluded from doing other activities at the site.
44 However, activities not specifically agreed to and resolved by this Agreement are
45 subject to separate notification pursuant to Fish and Game Code Sections 1600 et seq.

1 **California Environmental Quality Act (CEQA) Compliance:** In approving this
2 Agreement, the Department is independently required to assess the applicability of
3 CEQA. The features of this Agreement shall be considered as part of the overall Project
4 description. Caltrans' concurrence signature on this Agreement serves as confirmation to
5 the Department that the activities that shall be conducted under the terms of this
6 Agreement are consistent with the Project described in Notification No. 2009-0089-R4.
7 This Project is part of the Route 180 between Temperance Avenue and Cove Road
8 Project for which Caltrans submitted an Environmental Impact Report to the State
9 Clearinghouse in September 1995. It was assigned SCH Number 1991022072.

10
11 The Department, as a CEQA Responsible Agency, shall make findings and submit a
12 Notice of Determination to the State Clearinghouse upon signing this Agreement.

13
14 This Agreement contains a Monitoring and Reporting Program (MRP), to incorporate
15 monitoring and reporting requirements for the activities authorized in this Agreement.

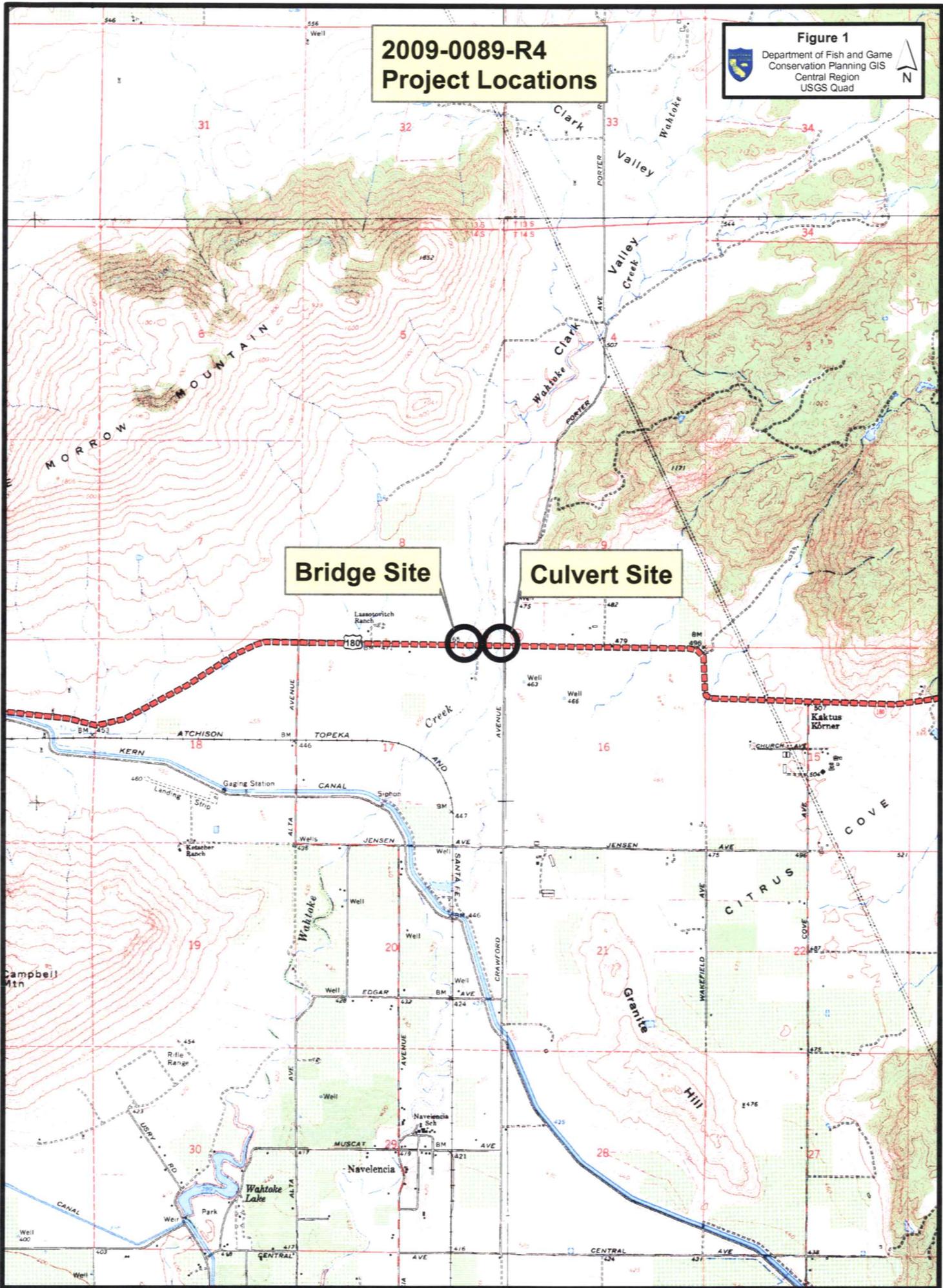
16
17 **Project Location:** The work authorized by this Agreement will occur at State Route
18 (SR) 180 where it crosses Wahtoke Creek and at the unnamed drainage just west of
19 Crawford Avenue, in Section 17 of Township 14 South, Range 24 East in Fresno
20 County (**Figure 1**).

21
22 **Project Description:** Caltrans' Notification includes Fish and Game Notification Form
23 FG2023 and construction plans. The Notification comprises Caltrans' Project
24 description, and it is used as the basis for establishing the protective Provisions that are
25 included in this Agreement. Any changes or additions to the Project as described in the
26 Notification shall require additional consultation and protective Provisions. The
27 Department's concurrence with Caltrans' CEQA Determination is based upon Caltrans'
28 commitment to full implementation of the Provisions of this Agreement. Caltrans has
29 proposed the following scope of work. The bulleted items comprise the activities
30 authorized by this Agreement.

- 31
- 32 • Replace the Wahtoke Creek Bridge and remove the existing bridge. The new
33 bridge will be a long simple span, cast in place/prestressed voided Slab Bridge.
34 The two bents will be located where the existing abutments are and the new
35 abutments will be 29 feet outside the existing abutments. The old bents will be
36 removed entirely allowing the water to move through without impedence.
37
 - 38 • The new bridge will be widened to the north to bring the bridge to current standard
39 design requirements for a two-lane bridge. The existing bridge has no shoulder,
40 and the new bridge will have slightly wider lanes and will have a shoulder. Also
41 the profile will be raised for better site distance and traffic visibility.

2009-0089-R4 Project Locations

Figure 1
Department of Fish and Game
Conservation Planning GIS
Central Region
USGS Quad



Bridge Site

Culvert Site

- 1 • Impacts from the bridge work include 0.39 acres of temporary impacts and
2 0.23 acres of permanent impacts, and the removal of some riparian trees.
3
- 4 • Wahtoke Creek is dry most of the year so a water diversion is not anticipated for
5 the bridge work, but if water is present a Diversion Plan shall be submitted.
6
- 7 • Work on the culvert will require removal of the current roadbed as well as
8 2,565 square feet of soil to allow for the new wing walls and cobble for water flow
9 restriction and energy dissipation purposes. This will result in 0.12 acres of
10 temporary impacts and 0.11 acres of permanent impacts for the actual wing wall
11 construction and the cobble apron.
12
- 13 • Work on the culvert shall be done when the unnamed drainage is dry.
14

15 **Plant and Animal Species of Concern:** This Agreement is intended to minimize and
16 mitigate adverse impacts to the wildlife resources that may occupy this area of Wahtoke
17 Creek and the immediate adjacent habitat. The California Natural Diversity Database
18 shows records of the following species in the Project vicinity:
19

- 20 Western pond turtle (*Actinemys marmorata*), Species of Special Concern
- 21 California tiger salamander (*Ambystoma californiense*), Federal Threatened, State
22 Candidate
- 23 Vernal pool fairy shrimp (*Branchinecta lynchi*), Federal Threatened
- 24 Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Federal
25 Endangered
- 26 San Joaquin adobe sunburst (*Pseudobahia peirsonii*), Federal Threatened, State
27 Endangered, CNPS 1B.1
- 28 Spiny-sepaled button-celery (*Eryngium spinosepalum*), CNPS 1B.2
29

30 Caltrans' Environmental Impact Report included a longer list of species that were
31 surveyed for back in 1991 and 1992 under Table 3-6. Western spadefoot (*Scaphiopus*
32 *hammondi*), Species of Special Concern, was found during the original surveys in the
33 vernal pool habitat just west of SR 180 and Crawford Avenue and approximately
34 0.16 miles east of Wahtoke Creek. Neither California tiger salamander (CTS) nor
35 vernal pool fairy shrimp were found at that time.
36

37 There is a 1974 CNDDDB record for CTS over a mile to the east of the Project. There is
38 also a 1991 record which shows the map location about a mile west of the Project, but
39 the verbal description of the location states 7.7 miles west of Highway 63 which puts the
40 sighting almost 2 miles from the Project site. Neither of these locations is close enough
41 to the Project site to require upland surveys.
42

43 The above species as well as birds, mammals, reptiles, amphibians, fish, invertebrates,
44 and plants that comprise the local ecosystem could be subject to potential generated
45 impacts from this Project if the following Provisions are not followed.

1 **PROVISIONS:**

2
3 General

4
5 1. The Notification, together with all supporting documents, is hereby incorporated
6 into this Agreement to describe the location and features of the proposed Project.
7 Caltrans agrees that all work shall be done as described in the Notification and
8 supporting documents, incorporating all wildlife resource protection features, mitigation
9 measures, and Provisions as described in this Agreement. Caltrans further agrees to
10 notify the Department of any modifications that need to be made to the Project plans
11 submitted to the Department. At the discretion of the Department, modifications may
12 be deemed minor, requiring an amendment to this Agreement, or substantial requiring
13 the submission of a new notification application. If the latter is the case, this Agreement
14 becomes null and void. Failure to notify the Department of changes to the original
15 plans or subsequent amendments to this Agreement may result in the Department
16 suspending or canceling this Agreement.

17
18 2. Before the start of construction/work activities covered under this Agreement, **all**
19 workers shall have received training from Caltrans' staff, or approved alternate trainer,
20 on the content of this Agreement, the resources at stake, and the legal consequences
21 of non-compliance.

22
23 3. When known, prior to beginning work, Caltrans shall provide a construction/work
24 schedule to the Department (fax to Laura Peterson-Diaz, Environmental Scientist, at
25 (559) 243-4020). Please reference the Agreement number. Caltrans shall also notify
26 the Department upon the completion of the activities covered by this Agreement.

27
28 4. Agreed activities within the bed, bank, or channel may commence any time after
29 the Department has signed this Agreement. This Agreement shall remain in effect for
30 five (5) years beginning on the date signed by the Department. If the Project is not
31 completed prior to the expiration date defined above, Caltrans shall contact the
32 Department to negotiate a new expiration date and any new requirements.

33
34 Flagging/Fencing

35
36 5. Within the riparian corridor, Caltrans shall identify the upstream and downstream
37 limits of the minimum work area required, access routes, the Project footprint, plus all
38 Environmentally Sensitive Areas (ESA). These boundaries shall be defined by the
39 Caltrans' Project engineer and biologist and flagged/fenced prior to the beginning of
40 construction. These limits shall not extend beyond Caltrans' right-of-way and/or the
41 construction easement, and shall be confined to the minimal area needed to
42 accomplish the proposed work. Flagging/fencing shall be maintained in good repair for
43 the duration of the Project.

1 Wildlife

2
3 6. An approved biologist shall perform general wildlife surveys of the Project area
4 (including access routes and storage areas) prior to Project construction start with
5 particular attention to evidence of the presence of the species listed above (including
6 Western spadefoot) and shall report any possible adverse affect to fish and wildlife
7 resources not originally reported. If the survey shows presence of any wildlife species
8 which could be impacted, Caltrans shall contact the Department and mitigation, specific
9 to each incident, shall be developed. If any State- or Federal-listed threatened or
10 endangered species are found within the proposed work area or could be impacted by
11 the work proposed, a new Agreement and/or a 2081(b) State Incidental Take Permit
12 may be necessary and a new CEQA analysis may need to be conducted, before work
13 can begin.

14
15 7. If work is done between March 1 and September 1, then in order to protect nesting
16 birds, Caltrans' biologist shall make a survey for nesting activity in and adjacent to the
17 defined "work area," before construction begins. If any nesting activity is observed
18 (including cavity nesting), the nests and trees shall not be damaged or removed until
19 the young have fledged and left the nest. Caltrans shall obtain Department approval
20 prior to damaging or removing nesting trees.

21
22 8. Swallows: If Caltrans cannot avoid work on the bridges where there is the
23 potential it would disturb nesting swallows (February 15 through August 15), then prior
24 to February 1, of each year, Caltrans shall remove all existing inactive nests which
25 would be destroyed by the Project. Caltrans shall continue to discourage new nest
26 building in places where they would be disturbed, using methods developed in
27 consultation with the Caltrans District Biologist and the Department. Prior to nesting
28 season, a swallow exclusion device, with visual warnings for the birds to prevent
29 entanglement must be installed. Where disturbance shall occur, nesting must be
30 discouraged throughout the nesting season.

31
32 9. Bats: No bats shall be disturbed without specific notice to and consultation with
33 the Department. Pre-construction surveys by a qualified biologist shall be performed to
34 determine if bat species are utilizing the bridge for roosting. If bats are using the
35 existing bridge as a roosting site, exclusion of these bats shall take place a minimum of
36 four (4) weeks prior to construction. If after four (4) weeks exclusion measures are
37 unsuccessful and bat species still utilize the bridge for roosting, Caltrans shall contact
38 the Department and mitigation shall be developed in consultation with the Department.

39
40 Vernal Pool Species:

41
42 10. In 1991 and 1992, under more favorable weather conditions, there were pools just
43 west of SR 180 and Crawford Avenue. Surveys done by Caltrans at that time found
44 neither California tiger salamander (CTS) nor vernal pool fairy shrimp. As long as the

1 current drought conditions persist, further surveys would not be required. However, if
2 conditions change and there is sufficient rain for the pools along Crawford Avenue to
3 hold water for the minimum ten (10) weeks for California tiger salamander to
4 metamorphose, then dipnet surveys would be required. If pool surveys are required
5 and have positive results, then upland surveys would be required at both the culvert
6 and the bridge work sites.

7
8 11. Work on the culvert shall be done only when the channel is dry with the absolute
9 minimum amount of disturbance required. Any vernal pools or swales in the vicinity
10 shall be designated as ESA even if they are also dry.

11
12 12. If any wildlife is encountered during the course of construction, said wildlife shall
13 be allowed to leave the construction area unharmed.

14 15 Vegetation

16
17 13. One willow and one cottonwood will need to be removed. Another cottonwood
18 may need to be either trimmed or possibly removed. Any riparian trees or shrubs with
19 trunks greater than or equal to four (4) inches in diameter at breast height (DBH),
20 removed during Project activities shall be mitigated for by implementation of a
21 Revegetation Plan described under Restoration below.

22
23 14. Precautions shall be taken to avoid any other damage to vegetation by people or
24 equipment for the duration of the Project.

25 26 Vehicles

27
28 15. Construction vehicles and equipment will need access to the stream banks and
29 bed for this Project. All other areas adjacent to the work site shall be considered an
30 ESA and shall remain off-limits to construction equipment.

31 32 Pollution

33
34 16. Caltrans and all contractors and subcontractors shall be subject to the pollution
35 protective and other features of Department of Transportation Standard Specifications
36 Section 7-1.01G and Fish and Game Code Sections 5650 and 12015.

37
38 17. Staging and storage areas for equipment, materials, fuels, lubricants, and solvents
39 shall be located outside of the stream channel and banks. Any equipment or vehicles
40 driven and/or operated within or adjacent to the creek shall be checked and maintained
41 daily to prevent leaks of materials that, if introduced to water, could be deleterious to
42 aquatic life. If a spill should occur, cleanup shall begin immediately. The Department
43 shall be notified as soon as possible by Caltrans and shall be consulted regarding
44 further cleanup procedures.

1 Erosion

2
3 18. All disturbed soils shall be stabilized to reduce erosion potential, both during and
4 following construction. Erosion control Best Management Practices (BMPs) shall be
5 applied to all disturbed areas.

6
7 Fill/Spoil

8
9 19. Rock, gravel, and/or other materials shall not be imported into or moved within the
10 stream, except as otherwise addressed in this Agreement. Only on-site materials and
11 clean imported fill shall be used to complete the Project. Fill shall be limited to the
12 minimal amount necessary to accomplish the agreed activities. Excess and temporary
13 fill material shall be moved off-site at Project completion.

14
15 20. Spoil storage sites shall not be located within the stream, or where spoil could be
16 washed into the stream, or where it shall cover vegetation.

17
18 Restoration

19
20 21. Excess material must be removed from the Project site, pursuant to Department of
21 Transportation Standard Specifications Section 7-1.13.

22
23 22. Caltrans shall make the final contour of the site match the adjacent slope of the
24 land and provide the appropriate surface water drainage. All areas subject to
25 temporary ground disturbance, including storage and staging areas, temporary roads,
26 pipeline corridors, etc., shall be recontoured, if necessary, and revegetated to promote
27 restoration of the area.

28
29 23. Caltrans shall implement any and all restoration activities proposed in its
30 Notification. Where proposed restoration is not consistent with this Provision, Caltrans
31 shall incorporate the restoration guidelines below and submit a revised mitigation plan
32 to the Department for approval prior to commencement of the proposed work. Caltrans
33 shall submit a Revegetation Plan that includes the following:

- 34
35 • Compensation for removed shrubs and trees by:
- 36
37 ○ Identifying species damaged or removed during Project activities. Native
38 riparian trees and shrubs (e.g., willow, cottonwood, sycamore, etc.) between
39 four (4) to 25-inches DBH shall be replaced in-kind at a ratio of 3:1, and trees
40 greater than 25-inches DBH shall be replaced at a ratio of 10:1.
 - 41
42 ○ Describing, when, where, and how replacement shrubs and trees will be
43 planted.
- 44

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- “When” should be the first suitable season after construction is complete.
 - “Where” should be on-site and may be both north and south of the bridge.
 - “How” shall include measures to be implemented (i.e., planting layout design with sufficient space appropriate for each species, irrigation methods, weed management and maintenance and replanting if necessary) to ensure a minimum of 70 percent survivorship for three (3) years, after the last planting, (i.e., if up to 30 percent of any of the species are at risk of not surviving and repeated plantings are necessary, then monitoring, maintenance, and annual reporting shall continue for the subsequent three (3) years).
- Seeding and mulching exposed slopes, or stream banks not revegetated with riparian shrubs or trees:
 - The seed blend shall include a minimum of three (3) locally native grass species. Locally native wildflower and/or shrub seeds may also be included in the mix. 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.
 - Seeding shall be completed as soon as possible, but no later than November 15 of the year construction ends.

24. At the discretion of the Department, 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.

MONITORING AND REPORTING PROGRAM (MRP):

PURPOSE

The purpose of the MRP is to ensure that the protective measures required by the Department are properly implemented, and to monitor the effectiveness of those measures.

1 OBLIGATIONS OF THE OPERATOR

2
3 Caltrans shall have primary responsibility for monitoring compliance with all protective
4 measures included as "Provisions" in this Agreement. Protective measures must be
5 implemented within the time periods indicated in the Agreement and the program
6 described below.

7
8 Caltrans shall submit the following Reports to the Department:

- 9
- 10 • Verification of employee training (Provision 2).
 - 11
 - 12 • Construction/work schedule (Provision 3).
 - 13
 - 14 • Wildlife survey results (Provisions 6 through 10).
 - 15
 - 16 • Revegetation Plan (Provision 13 and 23). Plan shall be implemented for a
17 minimum of three (3) years with annual reports on survivorship due January 31
18 each year until the minimum of 70 percent survivorship has been achieved, at
19 which time a Final Restoration Report shall be submitted.
 - 20
 - 21 • A Final Project Report submitted within 30 days after the Project is completed.
22 The final report shall summarize the Project construction, including any problems
23 relating to the protective measures of this Agreement. "Before and After" photo
24 documentation of the Project site shall be required and included in the final report.
 - 25

26 In addition to the above monitoring and reporting requirements, the Department
27 requires as part of this MRP that Caltrans:

- 28
- 29 • Immediately notify the Department in writing if monitoring reveals that any of the
30 protective measures were not implemented during the period indicated in this
31 program, or if it anticipates that measures will not be implemented within the time
32 period specified.
 - 33
 - 34 • Immediately notify the Department if any of the protective measures are not
35 providing the level of protection that is appropriate for the impact that is occurring,
36 and recommendations, if any, for alternative protective measures.
 - 37

38 **VERIFICATION OF COMPLIANCE:**

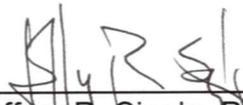
39
40 The Department shall verify compliance with protective measures to ensure the
41 accuracy of Caltrans' monitoring and reporting efforts. The Department may, at its sole
42 discretion, review relevant Project documents maintained by Caltrans, interview
43 Caltrans' employees and agents, inspect the Project area, and take other actions to
44 assess compliance with or effectiveness of protective measures for the Project.

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CONCURRENCE:

APPROVED BY THE CALIFORNIA DEPARTMENT OF FISH AND GAME

on 8/29, 2009.



Jeffrey R. Single, Ph.D.
Regional Manager
Central Region

ACKNOWLEDGMENT

The undersigned acknowledges receipt of this Agreement and, by signing, accepts and agrees to comply with all terms and conditions contained herein. The undersigned also acknowledges that adequate funding shall be made available to implement the measures required by this Agreement.

By: 

Zachary Parker
California Department of Transportation

Date: 8/19/2009

NOTICE OF DETERMINATION

TO: Office of Planning and Research
Post Office Box 3044
Sacramento, California 95814

FROM: California Department of Fish and Game
Central Region
1234 East Shaw Avenue
Fresno, California 93710

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code

PROJECT TITLE: State Route 180 – Wahtoke Bridge & Culvert Project - Agreement 2009-0089-R4

STATE CLEARINGHOUSE NUMBER: 1991022072

LEAD AGENCY: California Department of Transportation
CONTACT: Todd Barosso (559) 243-8154

RESPONSIBLE AGENCY: California Department of Fish and Game
CONTACT: Laura Peterson-Diaz (559) 243-4017, ext. 225

PROJECT LOCATION: Where State Route (SR) 180 crosses Wahtoke Creek and at the unnamed drainage, just west of Crawford Avenue, in Section 17 of Township 14 South, Range 24 East in Fresno County.

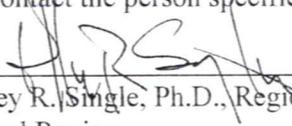
PROJECT DESCRIPTION: The California Department of Fish and Game is executing a Lake and Streambed Alteration Agreement, pursuant to Section 1602 of the Fish and Game Code, to the Project applicant. Caltrans proposes to remove the existing Wahtoke Creek Bridge and replace it with a new simple span, cast in place voided Slab Bridge, with two bents located where the existing abutments are and new abutments 29 feet outside the existing abutments. The new bridge will be widened to the north to bring the bridge to current standard design requirements for a two-lane bridge. Impacts from the bridge work include the removal of some riparian trees. A water diversion is not anticipated for the bridge work. Work on the culvert will require removal of the current roadbed as well as 2,565 square feet of soil to allow for the new wing walls and cobble for water flow restriction and energy dissipation purposes. Work on the culvert shall be done when the unnamed drainage is dry.

This is to advise that the California Department of Fish and Game as a Responsible Agency approved the Project described above and has made the following determinations regarding the above described Project.

1. The Project will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this Project, pursuant to the provisions of CEQA.
3. Mitigation measures were made a condition of the approval of the Project.
4. A Statement of Overriding Considerations was not adopted for this Project.
5. Findings were made pursuant to the provisions of CEQA.

This is to certify that a copy of the Environmental Impact Report prepared for this Project is available to the general public and may be reviewed at: Caltrans- District 6 Environmental Planning, 2015 Shields Avenue, Suite 100, Fresno, California 93726. Please contact the person specified above.

Date: 8/29/09



Jeffrey R. Single, Ph.D., Regional Manager
Central Region
California Department of Fish and Game

Date received for filing at OPR: _____

Nationwide Permit Information

Project Information

District No: 6

Project Title: Wahtoke Creek Bridge (Rebuild)

County: Fresno

Project EA: 06-472301

Route: 180

Post Miles: FRE (81.9)

Project Manager: Suzie Holridge

Phone No.: (559) 445-6726

Project Biologist/Contact: Todd Barosso

Phone No.: (559) 243-8154

7.5-Minute Quadrangle Name: Wahtoke/Reedly

Waterway/Watershed: Wahtoke Creek/ Wahtoke Lake

Project Description:

The purpose of the proposed project is to repairing a structurally deficient bridge resulting in improved safety.

Wahtoke Creek Bridge is a concrete and wood structure built in 1953. It crosses Wahtoke Creek along State Route 180 in Fresno County. Winter storms caused flood level flows, undermining the southern abutment. The high water encroached along the bridge underside and eventually washed out riprap and cobble. The Office of Structures, Maintenance, and Investigation evaluated the structure for stream flow and vertical loading considerations after the 2006 flood event. They determined from their analysis that this structure should be replaced.

The proposed project would replace the Wahtoke Creek Bridge at the Fresno County line (Attachment A: Topographic Map). Scope of work will be a full bridge replacement. Two alternatives exist for this project; Alternative one would include a 70 ft long simple span, cast in place/prestressed voided Slab Bridge. Alternative two would include a 103 ft long simple span, precast/prestressed concrete voided slab bridge. Both alternatives involve excavations to a depth of 20 ft to place the abutment footings below the projected scour elevation; new abutments will be constructed 29 ft. outside the existing abutments outside the OHWM.

Lead Federal Agency

Army Corps of Engineers (ACOE)

Federal Endangered Species Act (FESA)

The above activities will have no effect on any federally listed threatened or endangered species. No critical habitat will be affected. Through use of BMP's and minimization efforts, Caltrans proposes to improve water flow, increase riparian areas, and stabilize erosion improving the overall habitat of the affected area. Past storm related events have caused major damage to not only linear structures, but severely impacted the bank of the watercourse.

Essential Fish Habitat Consultation (EFH)

The above activities will not have an adverse effect on EFH. Therefore, no consultation is needed.

Permit Being Requested (check one that applies)

Reporting Nationwide Permit (NWP)

Non-Reporting NWP

Corps Authority Information

Section 10:

Wahtoke Creek flows into Wahtoke Lake and would not be considered a navigable waterway in the project area.

Section 404:

A Section 404 permit is required from the ACOE when a project requires fill or other modification of waters of the U. S. During construction, Temporary fill will be entirely removed and all temporary impacts to waters of the U. S. will be restored to pre-project conditions, 0.39 acres (115 linear feet) of temporary impacts will occur, cast in place drill holes would be constructed in the same location as the old abutments. Permanent impacts will occur from scraping down to a twenty (20) foot grade to match line contours of new abutments (constructed 29 ft outside existing abutments) and two bents. Permanent impacts will total 0.014 acres (57 sq. ft) (numbers include bents and RSP measures). Rock slope protection and riprap with cobble would be used for erosion control and protective measure to combat scour issues. (See attached general plan) Culvert is located at the west end of the project. Temporary impacts total 0.12 acres, this includes current roadbed removal with 2565 square feet of soil removal to allow for new wing walls and cobble for water flow restriction and energy displacement purposes. Permanent impacts total 0.002 acres; this would include the actual wing wall construction and placement of the apron for water flow dissipation.

Minimal Impact Criteria

The project will result in minimum impact to the aquatic environment. The contractor must take steps to eliminate potential impacts as directed in Caltrans' Standard Specifications. The contractor is also required by the same Standard Specifications section to give the Resident Engineer in charge of the job a written Storm Water Pollution Prevention Plan and a Water Pollution Control Plan. Temporary fill will be entirely removed and all temporary impacts to waters of the U. S. will be restored to pre-project conditions. No fill would be discharged or placed within the defined watercourse. 0.025 acres (115 linear feet) of temporary impacts will occur, cast in place drill holes would be constructed in the same location as the old abutments.

Permit Compliance Information

Compliance with Nationwide General Conditions:

1. Navigation: Wahtoke creek is not navigable water at the location of the State Route 180 crossing. Therefore, there will be no effect on navigation.
2. Proper Maintenance: The maintenance of the repaired Wahtoke Creek Bridge will be the responsibility of Caltrans.
3. Soil Erosion and Sedimentation Controls: Caltrans' standard erosion controls will be utilized to prevent soil erosion and prevent sedimentation. To further reduce erosion, the new structure will have riprap in place as stabilization, rock slope protection to guard against scour, flow apron approaches, small increase in channel width, re-vegetation to outside banks with native plantings (cottonwood).
4. Aquatic Life Movements: No disruption of aquatic life movement will take place as a result of this project. Near normal downstream flows will be maintained to the greatest extent possible. However, this project is anticipated to occur during the dry months.
5. Equipment: Crane, drill, excavators, backhoe loader, forklift, generator set, grader, pumps, bidwell, concrete mixer, concrete pump, trucks.
6. Regional and Case-by-Case Conditions: Any regional or case specific conditions added by the ACOE or the State in its 401 Certification will be complied with.
7. Wild and Scenic Rivers: There are no wild and scenic rivers within the project area.
8. Tribal Rights: There are Archeological Sites located near the project, Section 106 will be completed.
9. Water Quality: A 401-certification package has been completed and submitted to the State Regional Water Quality Control Board.
10. Coastal Zone Management: Does not apply to this project.

11. Endangered Species: No threatened or endangered species will be impacted as a result of this project.
12. Historic Properties: There are no historic properties listed, or eligible for listing, in the National Register of Historic Places within the project area.
13. Notification: A NWP #14 does not require a preconstruction notification.
14. Compliance Certification: N/A
15. Use of Multiple Nationwide Permits: Caltrans is only applying for a NWP # 14 for this project.
16. Water Supply Intakes: There will be no discharge of dredged or fill material in the proximity of a public water supply intake.
17. Shellfish Beds: There are no areas of concentrated shellfish production within the project area.
18. Suitable Material: Fill will meet suitable material standards and will be free from toxic pollutants. Fill will be limited to the minimal amount necessary to accomplish the project.
19. Mitigation: This project has been designed to avoid and minimize adverse effects to waters of the U. S. to the maximum extent practicable at the project site. Temporary impacts will be kept to the minimum necessary to complete the project. The flood plain will be opened as a result of this project, allowing the area to return to a more natural state. Project construction would be strictly limited to the site.
20. Spawning Areas: There are no spawning areas within the project area.
21. Management of Water Flows: The project is designed to maintain pre-construction downstream flow conditions. The project will not permanently restrict or impede the passage of normal or expected high water flows. The structure and fill material will withstand expected high flows. The fill that supports the south side of the existing bridge will be removed, which will open the floodplain to allow for unrestricted flow during periods of high water, as well as restoring the floodplain to a more natural state.
22. Adverse Effects From Impoundments: Near normal downstream flows will be maintained to the greatest extent possible during construction.
23. Waterfowl Breeding Areas: There are no waterfowl breeding areas within the project area.
24. Removal of Temporary Fills: The temporary fill used in this project will be removed and the fill area will be returned to pre-existing elevation and contour.
25. Designated Critical Waters: There are no designated critical resource waters within the project area.
26. Fills within 100-Year Floodplains: Caltrans Hydraulic Department conducted a field investigation and provided a Flood Plain Evaluation Summary Report (dated April 3, 2000). The summary report stated that the proposed action would not constitute a significant floodplain encroachment as defined in FHPM 6-7-3-2, paragraph 4q. This report determined that the nature of the project would have no significant impact upon the floodplain.

Nationwide Permit Requested

Nationwide Permit #14: Linear Transportation Projects

NWP #14 Activities related to: 1.) The repair, rehabilitation, or replacement of any previously authorized structure; 2.) Discharges of dredged or fill material, including excavation, to remove accumulated sediments in the vicinity of existing structures or the placement of riprap to protect the structure; 3.) Discharges of dredged or fill material, including excavation, associated with the restoration of upland areas damaged by storm, flood, or other event, including the construction, placement, or installation of upland protection structures.

Project Impact Information [Area Affected (acres)]

Wetlands (permanent): none

Wetlands (temporary): none

Waters of the US (permanent): none

Waters of the US (temporary): 0.039 acres

Linear extent of impact within ACOE jurisdiction: N/A

Project Mitigation Information

Best Management Practices: Best Management Practices (BMPs) will be followed for this work and the contractor will be required to submit a Storm Water Pollution Prevention Plan and a Water Pollution Control Plan for review and approval.

Proposed Mitigation:

Any spills of hazardous materials within sensitive habitats shall be cleaned up immediately if they present a potential hazard to wetlands and/or endangered wildlife. Such spills shall be reported to the ACOE and the resource agencies.

A biologist shall monitor the construction site during all critical construction activities within sensitive habitats.

All areas of natural habitat adjacent to the project impact area will be designated as Environmentally Sensitive Areas (ESAs) and will be closed to construction equipment and personnel.

Vegetation clearing within the flagged/fenced work area shall be limited to nonwoody-stemmed plants and woody-stemmed plants that are less than two inches in diameter measured at breast height (dbh). No vegetation with a dbh greater than two inches shall be damaged or removed from the Project area without mitigating for lost trees at a 3:1 ratio (replaced to lost). When possible, roots and stumps shall be left to facilitate regrowth. No vegetation outside of the flagged fenced work area shall be disturbed. The Operator shall document the number and species of all woody-stemmed plants in excess of two inches dbh that are to be removed or damaged. This documentation shall be used as the basis for replacement mitigation.

Two cottonwood trees that have been damaged by flooding and cattle crossing may be trimmed or removed during construction of this project. Both trees are located on the north side of the bridge.

Based on the information provided above, I hereby certify that the this project qualifies for a nationwide permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the U.S. Rivers and Harbors Act (33 U.S.C. 406) and that the District of the Engineer of the U.S. Army Corps of Engineers.

Prepared by:



Todd A. Barosso, Biologist
Central California Biology Branch

Date: 06/16/09

Supervisory Concurrence:



Zachary Parker, Chief of Branch
Central California Biology Branch

Date: 06/26/09

Attachments

A: Topographic Map

D: Project Photographs

DREDGE AND FILL FEE CALCULATOR v6

TO CALCULATE FEE: Enter the "Discharge Size" and/or check the check-boxes in the applicable fee categories. The fee owed will appear in the "Total Fee" box at the bottom of the Fee Calculator. Expand Category (v) to see full text.

CCR 23 §2200(a)(2): Dredge and Fill Operation fees shall be assessed as follows, not to exceed \$40,000, plus applicable surcharge(s)⁴

	FEE CATEGORY	RATE	DISCHARGE SIZE		FEE	
(i)	Fill & Excavation⁵ Discharges. Size of the discharge area as expressed in hundredths of acres (0.01 acre; 436 square feet) rounded up.	Discharge Area Acres x \$2150	0		\$ -	Does not include \$500 Base Price for categories (i)-(iii)
	To Non-Federal Waters (per fee cat. iv)	Discharge Area Acres x \$2150 x 2	0		\$ -	
(ii)	Dredging Discharges Dredge volume expressed in Cubic Yards.	Dredge Volume CY x \$0.08	0		\$ -	
	To Non-Federal Waters (per fee cat. iv)	Dredge Volume CY x \$0.08 x 2	0		\$ -	
(iii)	Channel and Shoreline Discharges. Discharge length shall be reported in Linear Feet. Includes linear discharges to drainage features and shorelines, e.g., bank stabilization, revetment, and channelization projects. (Note): The fee for channel and shoreline linear discharges will be assessed under the "Fill and Excavation" or "Channel and Shoreline" schedules, whichever results in the higher fee.	Discharge Length Feet x \$5.00	115	\$ 575.00	\$ 1,171.75	
		Discharge Area Acres x \$2150	0.545	\$ 1,171.75		
	To Non-Federal Waters (per fee cat. iv)	Discharge Length Feet x \$5.00 x 2	0	\$ -	\$ -	
		Discharge Area Acres x \$2150 x 2	0	\$ -		
(iv)	Discharges to Non-federal (e.g. "Isolated") Waters. Discharges to waters or portions of waterbodies not regulated as "waters of the United States", including waters determined to be "isolated" pursuant to the findings of <i>Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers</i> (2001) 121 S. Ct. 675. Double the otherwise applicable fee except restoration projects, which shall be charged the normal fee.					
(v)	Low Impact Discharges. Projects may be classified as low impact discharges if they meet the following criteria: 1. The discharge affects less than (a) 0.1 acre, (b) 200 linear feet, and (c) 25 cubic yards. 2. Demonstrate that the discharger: (a) has taken all practicable measures to avoid impacts	\$500 Flat fee.	Check if Applicable	<input type="checkbox"/>	\$ -	
(vi)	Restoration Projects. Projects funded or sponsored by a government program with the primary purpose of restoring or enhancing the beneficial uses of water. This schedule does not apply to projects required under a regulatory mandate or to projects undertaken primarily for some other non-restorative purpose, e.g., land development.	\$500 Flat fee	Check if Applicable	<input checked="" type="checkbox"/>	\$ 500.00	
(vii)	General Orders. Projects which are required to submit notification of a proposed discharge to the State and/or Regional Board as a condition of compliance with a general waste discharge requirement associated with permitting discharges authorized by a federal general permit or license, e.g., a U.S. Army Corps of Engineers nationwide permit.	\$60 Flat Fee	Check if Applicable	<input type="checkbox"/>	\$ -	
TOTAL FEE Includes \$500 Base Price for Categories (i)-(iii) as applicable					\$ 2,171.75	

⁴When a single project includes multiple discharges within a single dredge and fill category, the fee for that category shall be assessed based on the total area, volume, or length of discharge (as applicable) of the multiple discharges. When a single project includes discharges that are assessed under multiple fee categories, the total fee shall be the sum of the fees assessed under each applicable fee category; however a \$500 base fee, if required, shall be charged only once.

⁵"Excavation" refers to moving sediment or soil in shallow waters or under no-flow conditions where impacts to beneficial uses are best described by the area of discharge. It typically is done for purposes other than navigation. Example includes trenching for utility lines, other earthwork preliminary to construction, removing sediment to increase channel capacity, and aggregate mining in fresh waters.



U S Army Corps of
Engineers
Sacramento District

Nationwide Permit Summary

33 CFR Part 330; Issuance of Nationwide Permits - March 19, 2007 includes corrections of May 8, 2007 and addition of regional conditions December 2007

14. Linear Transportation Projects. Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10 acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 27.) (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4)

A. Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact

the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

1. Navigation.

(a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3 **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. **Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. **Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or

restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species.

(a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No

activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

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

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

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

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

18. Historic Properties.

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

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

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

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

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

notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

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

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

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

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

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

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

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the

aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

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

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

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

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

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

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR

330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

22. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

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

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification.

(a) **Timing.** Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

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

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

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic

property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

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

(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWP and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

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

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant

submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

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

B. Regional Conditions:

I. Sacramento District (All States, except Colorado)

1. When pre-construction notification (PCN) is required, the prospective permittee shall notify the Sacramento District in accordance with General Condition 27 using either the South Pacific Division Preconstruction Notification (PCN) Checklist or a completed application form (ENG Form 4345). In addition, the PCN shall include:

a. A written statement explaining how the activity has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States;

b. Drawings, including plan and cross-section views, clearly depicting the location, size and dimensions of the proposed activity. The drawings shall contain a title block, legend and scale, amount (in cubic yards) and size (in acreage) of fill in Corps jurisdiction, including both permanent and temporary fills/structures. The ordinary high water mark or, if tidal waters, the high tide line should be shown (in feet), based on National Geodetic Vertical Datum (NGVD) or other appropriate referenced elevation; and

c. Pre-project color photographs of the project site taken from designated locations documented on the plan drawing.

2. The permittee shall complete compensatory mitigation required by special conditions of the NWP verification before or concurrent with construction of the authorized activity, except when specifically determined to be impracticable by the Sacramento District. When project mitigation involves use of a mitigation bank or in-lieu fee program, payment shall be made before commencing construction.

3. The permittee shall record the NWP verification with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property against areas (1) designated to be preserved as part of mitigation for authorized impacts, including any associated covenants or restrictions, or (2) where structures such as boat ramps or docks, marinas, piers, and permanently moored vessels will be constructed in or adjacent to navigable waters (Section 10 and Section 404). The recordation shall also include a map showing the surveyed location of the authorized structure and any associated areas preserved to minimize or compensate for project impacts.

4. The permittee shall place wetlands, other aquatic areas, and any vegetative buffers preserved as part of mitigation for impacts into a separate "preserve" parcel prior to discharging

dredged or fill material into waters of the United States, except where specifically determined to be impracticable by the Sacramento District. Permanent legal protection shall be established for all preserve parcels, following Sacramento District approval of the legal instrument.

5. The permittee shall allow Corps representatives to inspect the authorized activity and any mitigation areas at any time deemed necessary to determine compliance with the terms and conditions of the NWP verification. The permittee will be notified in advance of an inspection.

6. For NWPs 29, 39, 40, 42, 43, 44, and 46, requests to waive the 300 linear foot limitation for intermittent or ephemeral waters of the U.S. shall include an evaluation of functions and services provided by the waterbody taking into account the watershed, measures to be implemented to avoid and minimize impacts, other measures to avoid and minimize that were found to be impracticable, and a mitigation plan for offsetting impacts.

7. Road crossings shall be designed to ensure fish passage, especially for anadromous fisheries. Permittees shall employ bridge designs that span the stream or river, utilize pier or pile supported structures, or involve large bottomless culverts with a natural streambed, where the substrate and streamflow conditions approximate existing channel conditions. Approach fills in waters of the United States below the ordinary high water mark are not authorized under the NWPs, except where avoidance has specifically been determined to be impracticable by the Sacramento District.

8. For NWP 12, clay blocks, bentonite, or other suitable material shall be used to seal the trench to prevent the utility line from draining waters of the United States, including wetlands.

9. For NWP 13, bank stabilization shall include the use of vegetation or other biotechnical design to the maximum extent practicable. Activities involving hard-armoring of the bank toe or slope requires submission of a PCN per General Condition 27.

10. For NWP 23, the PCN shall include a copy of the signed Categorical Exclusion document and final agency determinations regarding compliance with Section 7 of the Endangered Species Act, Essential Fish Habitat under the Magnuson-Stevens Act, and Section 106 of the National Historic Preservation Act.

11. For NWP 44, the discharge shall not cause the loss of more than 300 linear feet of streambed. For intermittent and ephemeral streams, the 300 linear foot limit may be waived in writing by the Sacramento District. This NWP does not authorize discharges in waters of the United States supporting anadromous fisheries.

12. For NWPs 29 and 39, channelization or relocation of intermittent or perennial drainage, is not authorized, except when, as determined by the Sacramento District, the relocation would result in a net increase in functions of the aquatic ecosystem within the watershed.

13. For NWP 33, temporary fills for construction access in waters of the United States supporting fisheries shall be accomplished with clean, washed spawning quality gravels where practicable as determined by the Sacramento District, in consultation with appropriate federal and state wildlife agencies.

14. For NWP 46, the discharge shall not cause the loss of greater than 0.5 acres of waters of the United States or the loss of more than 300 linear feet of ditch, unless this 300 foot linear foot limit is waived in writing by the Sacramento District.

15. For NWPs 29, 39, 40, 42, and 43, upland vegetated buffers shall be established and maintained in perpetuity, to the maximum extent practicable, next to all preserved open waters, streams and wetlands including created, restored, enhanced or preserved waters of the U.S., consistent with General Condition 20. Except in unusual circumstances, vegetated buffers shall be at least 50 feet in width.

16. All NWPs except 3, 6, 20, 27, 32, 38, and 47, are revoked for activities in histosols and fens and in wetlands contiguous with fens. Fens are defined as slope wetlands with a histic epipedon that are hydrologically supported by groundwater. Fens are normally saturated throughout the growing season, although they may not be during drought conditions. For NWPs 3, 6, 20, 27, 32, and 38, prospective permittees shall submit a PCN to the Sacramento District in accordance with General Condition 27.

17. For all NWPs, when activities are proposed within 100 feet of the point of groundwater discharge of a natural spring, prospective permittees shall submit a PCN to the Sacramento District in accordance with General Condition 27. A spring source is defined as any location where ground water emanates from a point in the ground. For purposes of this condition, springs do not include seeps or other discharges which lack a defined channel.

II. California Only

1. In the Lake Tahoe Basin, all NWPs are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.

2. In the Primary and Secondary Zones of the Legal Delta, NWPs 29 and 39 are revoked. New development activities in the Legal Delta will be reviewed through the Corps' standard permit process.

III. Nevada Only

1. In the Lake Tahoe Basin, all NWPs are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.

IV. Utah Only

1. For all NWPs, except NWP 47, prospective permittees shall submit a PCN in accordance with General Condition 27 for any activity, in waters of the United States, below 4217 feet mean sea level (msl) adjacent to the Great Salt Lake and below 4500 feet msl adjacent to Utah Lake.

2. A PCN is required for all bank stabilization activities in a perennial stream that would affect more than 100 linear feet of stream

3. For NWP 27, facilities for controlling stormwater runoff, construction of water parks such as kayak courses, and use of grout or concrete to construct in-stream structures are not authorized. A PCN is required for all projects exceeding 1500 linear feet as measured on the stream thalweg, using in stream structures exceeding 50 cubic yards per structure and/or incorporating grade control structures exceeding 1 foot vertical

drop. For any stream restoration project, the post project stream sinuosity shall be appropriate to the geomorphology of the surrounding area and shall be equal to, or greater than, pre project sinuosity. Sinuosity is defined as the ratio of stream length to project reach length. Structures shall allow the passage of aquatic organisms, recreational water craft or other navigational activities unless specifically waived in writing by the District Engineer.

V. Colorado Only

1. Final Regional Conditions Applicable to Specific Nationwide Permits within Colorado.

a. Nationwide Permit Nos. 12 and 14, Utility Line Activities and Linear Transportation Projects. In the Colorado River Basin, utility line and road activities crossing perennial water or special aquatic sites require notification to the District Engineer in accordance with General Condition 27 (Pre-Construction Notification).

b. Nationwide Permit No. 13 Bank Stabilization. In Colorado, bank stabilization activities necessary for erosion prevention in streams that average less than 20 feet in width (measured between the ordinary high water marks) are limited to the placement of no more than 1/4 cubic yard of suitable fill* material per running foot below the plane of the ordinary high water mark. Activities greater than 1/4 cubic yard may be authorized if the permittee notifies the District Engineer in accordance with General Condition 27 (Pre-Construction Notification) and the Corps determines the adverse environmental effects are minimal. [* See (g) for definition of Suitable Fill]

c. Nationwide Permit No. 27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities.

(1) For activities that include a fishery enhancement component, the Corps will send the Pre-Construction Notification to the Colorado Division of Wildlife (CDOW) for review. In accordance with General Condition 27 (Pre-Construction Notification), CDOW will have 10 days from the receipt of Corps notification to indicate that they will be commenting on the proposed project. CDOW will then have an additional 15 days after the initial 10-day period to provide those comments. If CDOW raises concerns, the applicant may either modify their plan, in coordination with CDOW, or apply for a standard individual permit.

(2) For activities involving the length of a stream, the post-project stream sinuosity will not be significantly reduced, unless it is demonstrated that the reduction in sinuosity is consistent with the natural morphological evolution of the stream (sinuosity is the ratio of stream length to project reach length).

(3) Structures will allow the upstream and downstream passage of aquatic organisms, including fish native to the reach, as well as recreational water craft or other navigational activities, unless specifically waived in writing by the District Engineer. The use of grout and/or concrete in

building structures is not authorized by this nationwide permit.

(4) The construction of water parks (i.e., kayak courses) and flood control projects are not authorized by this nationwide permit.

d. Nationwide Permits Nos. 29 and 39; Residential Developments and Commercial and Institutional Developments. A copy of the existing FEMA/locally-approved floodplain map must be submitted with the Pre-Construction Notification. When reviewing proposed developments, the Corps will utilize the most accurate and reliable FEMA/locally-approved pre-project floodplain mapping, not post-project floodplain mapping based on a CLOMR or LOMR. However, the Corps will accept revisions to existing floodplain mapping if the revisions resolve inaccuracies in the original floodplain mapping and if the revisions accurately reflect pre-project conditions.

2. Final Regional Conditions Applicable to All Nationwide Permits within Colorado

e. Removal of Temporary Fills. General Condition 13 (Removal of Temporary Fills) is amended by adding the following: When temporary fills are placed in wetlands in Colorado, a horizontal marker (i.e. fabric, certified weed-free straw, etc.) must be used to delineate the existing ground elevation of wetlands that will be temporarily filled during construction.

f. Spawning Areas. General Condition 3 (Spawning Areas) is amended by adding the following: In Colorado, all Designated Critical Resource Waters (see enclosure 1) are considered important spawning areas. Therefore, In accordance with General Condition 19 (Designated Critical Resource Waters), the discharge of dredged or fill material is not authorized by the following nationwide permits in these waters: NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50. In addition, in accordance with General Condition 27 (Pre-Construction Notification), notification to the District Engineer is required for use of the following nationwide permits in these waters: NWP 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37 and 38”.

g. Suitable Fill. In Colorado, use of broken concrete as fill material requires notification to the District Engineer in accordance with General Condition 27 (Pre-Construction Notification). Permittees must demonstrate that soft engineering methods utilizing native or non-manmade materials are not practicable (with respect to cost, existing technology, and logistics), before broken concrete is allowed as suitable fill. Use of broken concrete with exposed rebar is prohibited in perennial waters and special aquatic sites.

h. Invasive Aquatic Species. General Condition 11 is amended by adding the following condition for work in perennial or intermittent waters of the United States: If heavy equipment is used for the subject project that was previously working in another stream, river, lake, pond, or wetland within 10 days of initiating work, one the

following procedures is necessary to prevent the spread of New Zealand Mud Snails and other aquatic hitchhikers:

(1) Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and keep the equipment dry for 10 days. OR

(2) Remove all mud and debris from Equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with either a 1:1 solution of Formula 409 Household Cleaner and water, or a solution of Sparquat 256 (5 ounces Sparquat per gallon of water). Treated equipment must be kept moist for at least 10 minutes. OR

(3) Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with water greater than 120 degrees F for at least 10 minutes.

3. Final Regional Conditions for Revocation/Special Notification Specific to Certain Geographic Areas

i. Fens: All Nationwide permits, except permit Nos. 3, 6, 20, 27, 32, 38 and 47, are revoked in fens and wetlands adjacent to fens. Use of nationwide permit Nos. 3, 20, 27 and 38, requires notification to the District Engineer, in accordance with General Condition 27 (Pre-Construction Notification), and the permittee may not begin the activity until the Corps determines the adverse environmental effects are minimal. The following defines a fen:

Fen soils (histosols) are normally saturated throughout the growing season, although they may not be during drought conditions. The primary source of hydrology for fens is groundwater. Histosols are defined in accordance with the U.S. Department of Agriculture, Natural Resources Conservation Service publications on Keys to Soil Taxonomy and Field Indicators of Hydric Soils in the United States (<http://soils.usda.gov/technical/classification/taxonomy>).

j. Springs: Within the state of Colorado, all NWPs, except permit 47 (original ‘C’), require preconstruction notification pursuant to General Condition 27 for discharges of dredged or fill material within 100 feet of the point of groundwater discharge of natural springs. A spring source is defined as any location where groundwater emanates from a point in the ground. For purposes of this regional condition, springs do not include seeps or other discharges which do not have a defined channel.

4. Additional Information

The following provides additional information regarding minimization of impacts and compliance with existing general Conditions:

a. Permittees are reminded of the existing General Condition No. 6 which prohibits the use of unsuitable material. Organic debris, building waste, asphalt, car bodies, and trash are not suitable material. Also, General Condition 12 requires appropriate erosion and sediment controls (i.e. all fills must be permanently stabilized to

prevent erosion and siltation into waters and wetlands at the earliest practicable date). Streambed material or other small aggregate material placed along a bank as stabilization will not meet General Condition 12. Also, use of erosion control mats that contain plastic netting may not meet General Condition 12 if deemed harmful to wildlife.

b. Designated Critical Resource Waters in Colorado. In Colorado, a list of designated Critical Resource Waters has been published in accordance with General Condition 19 (Designated Critical Resource Waters). This list will be published on the Albuquerque District Regulatory home page (<http://www.spa.usace.army.mil/reg/>)

c. Federally-Listed Threatened and Endangered Species. General condition 17 requires that non-federal permittees notify the District Engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project. Information on such species, to include occurrence by county in Colorado, may be found at the following U.S. Fish and Wildlife Service website: http://www.fws.gov/mountain%2Dprairie/endspp/name_county_search.htm

C. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

D. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration, establishment (creation), enhancement, or preservation of aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Discharge: The term "discharge" means any discharge of dredged or fill material.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic

resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands

contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWP, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects waterbodies with their adjacent uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 20.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete project: The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete project must have independent utility (see definition). For linear projects, a "single and complete project" is all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal

interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWP, a waterbody is a jurisdictional water of the United States that, during a year with normal patterns of precipitation, has water flowing or standing above ground to the extent that an ordinary high water mark (OHWM) or other indicators of jurisdiction can be determined, as well as any wetland area (see 33 CFR 328.3(b)). If a jurisdictional wetland is adjacent--meaning bordering, contiguous, or neighboring--to a jurisdictional waterbody displaying an OHWM or other indicators of jurisdiction, that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.

Memorandum

*Flex your power!
Be energy efficient!*

To: GORDON DANKE
Design Branch Chief, Branch 9
Structure Design
Division of Engineering Services

Attention: Isaias Yalan

Date: June 1, 2009

File: 06-FRE-180-PM 81.9
EA: 06-472301
Br. # 42-0438
Wahtoke Creek Bridge

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

Subject: Final Foundation and Seismic Report (Second Revision)

Introduction

The Office of Geotechnical Design – North has prepared this Revised Final Foundation and Seismic Report for the Wahtoke Creek Bridge replacement project on Route 180 located at post mile (PM) 81.9 in unincorporated Fresno County, California. The reason for this revision was in regards to updating the LOTB text to meet current logging manual requirement. This report supercedes previous reports. The project proposes to replace the existing bridge due to foundation scour. The bridge has been deemed scour critical according to the Hydraulic Evaluation Report, dated June 24, 2003.

The existing structure is a three span continuous RC slab bridge supported on wall piers and abutments on spread footings. The existing bridge was built in 1953 and utilized the previous timber bridges foundation. Widening of the bridge occurred in 1973 and in 1995 the deck was resurfaced. Three alternative bridge replacement designs were evaluated. A three span design was chosen based in part by the environmentally and archeological sensitive nature of the bridge site and potential scour impact. The three span bridge is designed as a CIP solid slab structure supported on 4 columns per pier with each column on CIDH pile extensions. The abutments will be support on 6 piles per support.

This report preparation is based on data obtained during the subsurface exploration; subsequent laboratory analysis, information derived from the review of 'As-Built' and other pertinent bridge file information.

Field Exploration

Our subsurface investigation was performed on June 17th and 18th, 2008. Two, 94-mm diameter mud rotary borings (08-01 and 08-02) were drilled to depths of approximately of 57 and 35 feet below existing ground surface at the proposed abutment locations. Soil and rock was collected in each boring using a split spoon Standard Penetration Testing (SPT) sampler in the soil and a wire-line retrieval core barrel system in the rock. The SPT samples were taken at approximately 5-foot (1.5 meter) intervals and the rock coring was continuous.

In addition, full-sized Logs of Test Borings (LOTB), to be incorporated in the project plans, are prepared by the Geotechnical Services, Office of Geotechnical Support, Branch D – Contracts, Graphics & Records. Irma Gamarra-Remmen of the Contracts, Graphics & Records branch may be contacted directly for information on the LOTB(s).

Site Geology and Subsurface Conditions

The Wahtoke Creek Bridge (approximate ground elevation 463 ft) is situated near the center of a small upland reentrant valley that joins with the southeast edge of the San Joaquin Valley (Great Valley Geomorphic Province). At the bridge site this valley is bound on the north by Jesse Morrow Mountain (JMM), to the south by Campbell Mountain (CM) and to the east several miles by the Sierra Nevada Mountain Range. The JMM and CM rise to elevations of approximately 1400 to 1600 feet and are composed of predominately Mesozoic Age basic intrusive rocks. The bulk of the Sierra Nevada in the local region is composed of Mesozoic granite, granodiorite, tonalite and diorite. The valley floor is covered in Pleistocene alluvium composed of sand, gravel and cobbles, except for recent alluvium present in the active stream channels including Wahtoke Creek and localized patches of residual soil (decomposed granite) and out crops of relatively fresh hard granite that protrude sharply from the generally flat to gently rolling landscape (Geologic Map of California, Fresno Sheet, Divisions of Mines and Geology 1966 and field observations). At the bridge site a north-south trending band of these granite rocks extend south from the west abutment (southwest corner) several hundred feet. The Wahtoke Creek channel passes along the edge of these outcrops and at least here, the creek is inhibited from easily migrating to the west.

Based on the extrapolation of the present and 1973 boring logs, relatively shallow alluvial deposits underlying the existing bridge and these deposits seem to increase in depth from approximate 2 feet under its west abutment to approximately 15 feet under its east abutment. Below the alluvium to the maximum depth explored (57 feet) granite bedrock was encountered. The alluvium consisted of mainly loose, fine to medium grained silty Sand. To a depth of about 20 feet below the base of the alluvium, weathered generally soft highly fractured granite rock was

encountered. This granite tended to be friable (moderate scour potential) that is it would tend to disaggregate with out much physical effort. Rock Quality Designation (RQD) was zero and rock strength ranged from 302 psi to 508 psi within this weathered zone. Below to the maximum depth explored (57 feet) the granite became unweathered, hard and exhibited little fracturing. RQD ranged from 50 to 99 percent and rock strength ranged from 7222 psi to 19626 psi. See the attachment LOTB(s) for details of subsurface conditions.

Groundwater

Groundwater was not encountered during the June 2008 field investigation. At that time Wahtoke Creek was dry. It will be assumed that the groundwater depth will correlate roughly with the level of water in the creek and typically, the creek should be flowing during the winter and spring seasons. The 1973 LOTB(s) show a groundwater elevation of 356.1 ft (7 feet below existing grade at that time). For design purposes it will be assumed that the water level in the creek and groundwater level will reach an elevation of 462.3 ft.

Laboratory Testing

Laboratory testing was performed on samples from both borings. Selected soil samples were analyzed to determine gradation, moisture, and corrosion.

Corrosion

According to the Corrosion Test Summary Report (June 27, 2008) provided by the Materials Engineering and Testing Services Corrosion Technology Branch the Wahtoke Creek bridge site in not corrosive to foundation elements.

Scour Potential

According to the final hydraulic report (Sharon Ropp, July 15, 2008), the pier/pile extensions for the three span bridge chosen should be designed for channel degradation to elevation 440.94 feet and a local scour of 4.06 feet. In the case of the abutments, they will be place sufficient distance from the existing creek channel to preclude impact from scour.

Seismic Study

Based on the Caltrans California Seismic Hazard Map 1996, the controlling fault is the Owens Valley (WVY, Strike-Slip) with a maximum credible earthquake of $M_w=8$ located approximately 107 kilometers north east of the site. The Peak Bedrock Acceleration at this site, based on the

map is estimated to be 0.2g. The potential for surface rupture at the site due to fault movement is considered insignificant since there are no known faults projecting towards or passing directly through the site.

Liquefaction analysis based on the samples taken from the recent subsurface investigation indicates that potential for loose granular materials to liquefy during a seismic event is considered to be insignificant.

Based on the recent foundation investigation, the foundation materials correspond to soil profile Type C as defined by Caltrans Seismic Design Criteria (SDC) Version 1.4. The recommended Acceleration Response Spectrum curve for design is attached as Figure 1.

Foundation Recommendations

The foundation recommendations are based on present field investigation and analysis in conjunction with the General Plan and Foundation Design Data Sheet dated September 10, 2008 provided by Isaias Yalan on September 10, 2008. Based on the known lithology and creek hydraulics we recommend that the new bridge be supported on cast-in-drilled-hole (CIDH) piles, 24-inch diameter piles at the Abutments and 36-inch diameter piles at the Bents. We expect that the CIDH foundations proposed for the bents are constructible. However, based on the expected seasonal occurrence of groundwater at the site, CIDH pile construction may require wet method construction. Foundation Design Recommendations and Pile Data are presented in Table 1 through 3 below.

Table 1. Abutment Foundations Design Recommendations for the proposed bridge replacement.

Abutment Foundations Design Recommendations									
Support Location	Pile Type	Cut-off Elevation (ft)	LRFD Service-I Limit State Load (kips) per Support		LRFD Service-I Limit State Total Load (kips) per Pile (Compression)	Nominal Resistance (kips)	Design Tip Elevations (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance Required (kips)
			Total	Permanent					
Abut. 1	24-inch CIDH	461.25	650	650	108	216	433.2 (a)	433.2	N/A
Abut. 4	24-inch CIDH	460.5	650	650	108	216	420.3 (a)	420.3	N/A

Notes:

- 1) Design tip elevations are controlled by: (a) Compression.
- 2) Specified tip elevations are controlled by a minimum 3 feet of embedment into fresh hard bedrock.
- 3) There is no design tip elevation for Settlement.
- 4) Unsuitable penetrated soil/rock layers (very soft, liquefiable, scourable, etc.), that do not contribute to the design resistance at Abutment 1 extend to elevation of 440.3 ft and extend to elevation 428.2 ft at Abutment 4. These elevations are based on boring data; the borings were located on the north side of the bridge. It is noted that the depth to sound bedrock may be different on the south side of the bridge and therefore pile tip elevations may require adjusting to achieve the minimum embedment depth provided in note 2 above.
- 5) Structure Design Typically provides Design tip elevations for Lateral Load.

Table 2. Bent foundations Design Recommendations for the proposed Bridge Replacement.

Bent Foundations Design Recommendations											
Support Location	Pile Type	Cut-off Elevation (ft)	Service-I Limit State Load per Support (kips)	Total Permissible Support Settlement (inches)	Required Factored Nominal Resistance (kips)				Design Tip Elevations (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance Required (kips)
					Strength Limit		Extreme Event				
					Comp. ($\phi=0.7$)	Tension ($\phi=0.7$)	Comp. ($\phi=1$)	Tension ($\phi=1$)			
Bent 2	36-inch CIDH	451.75	1200	1	450	0	325	0	433.1 (a-I) 435.0 (a-II)	433.1	N/A
Bent 3	36-inch CIDH	451.75	1200	1	450	0	325	0	419.0 (a-I) 421.6 (a-II)	419.0	N/A

Notes:

- 1) Design tip elevations are controlled by compression: (a-I) Strength Limit State, (a-II) Extreme Limit State.
- 2) Specified tip elevations are controlled by a minimum of approximately 4 to 5 feet of embedment into sound (fresh) hard bedrock.
- 3) There is no design tip elevation for Settlement.
- 4) Unsuitable penetrated soil/rock layers (very soft, liquefiable, scourable, etc.), that do not contribute to the design resistance at Bent 2 extend to elevation of 437.8 ft and extend to elevation 428.2 ft at Bent 3. These elevations are based on boring data; the borings were located on the north side of the bridge. It is noted that the depth to sound bedrock may be different on the south side of the bridge and therefore pile tip elevations may require adjusted to achieve the minimum embedment depth provided in note 2 above.
- 5) Structure Design Typically provides Design tip elevations for Lateral Load.

Table 3. Pile Data Table for the proposed bridge replacement.

Pile Data Table						
Location	Pile Type	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance (kips)
		Compression	Tension			
Abut. 1	24-inch CIDH	216	0	433.2 (a)	433.2	N/A
Bent 2	36-inch CIDH	643	0	433.1(a)	433.1	N/A
Bent 3	36-inch CIDH	643	0	419.0 (a)	419.0	N/A
Abut. 4	24-inch CIDH	216	0	420.3(a)	420.3	N/A

Notes:

- 1) *Design tip elevations for Abutments and Bents are controlled by: (a) Compression.*
- 2) *Specified Tip elevations for Abutments and Bents are controlled by a minimum of approximately 4 to 5 feet of embedment into fresh hard bedrock.*
- 3) *Unsuitable soil/rock layers (very soft, liquefiable, scourable, etc.) that do not contribute to the design nominal resistance exist at all support locations; see Note 4 above for associated elevations.*

General Notes to Designer

1. The structure engineer shall show on the plans, in the pile data table, the minimum pile tip elevation required to meet the lateral load demands.
2. Should the specified pile tip elevation required to meet lateral load demands exceed the specified pile tip elevation given within this report, the Office of Geotechnical Design North should be contacted for further recommendations.
3. Support locations are to be plotted on the Log of Test Borings, in plan view, as stated in "Memos to Designers" 4-2. The plotting of the support locations should be made prior to the foundation review.

File Settlement

Vertical movement of piles will be less than the 0.25-inches under service limit state.

Construction Considerations

CIDH Piles

1. Difficult pile installation is anticipated due to the presence of groundwater, caving alluvial soils and the presence of hard bedrock. The contractor should be prepared to install all CIDH piles under "Guidelines for CIDH Piles Cast in Wet Conditions." Temporary casing maybe be needed.
2. Prior to placement of concrete, the interior surface of the shaft including the bottom should be cleaned of residue from drilling operations.
3. The contractor has the option of using full-length temporary casing. The use of temporary casing will require that it be removed while the concrete is being placed in order to develop the expected pile capacity and to facilitate the casing removal.
4. The drilling of the CIDH piles, the placement of the rebar cage, and concrete pour shall be completed in a continuous operation.
5. The contractor shall submit the drilling logs for CIDH piles for review after the completion of drilling. The drilling log shall include penetration rate, material descriptions, estimated volume of cuttings (poor, good, excessive) and other information pertaining to the drilling process (loss of circulation, zones of caving, down pressure, etc.).
6. Excavated materials and drilling fluids shall be handled and disposed of in accordance with the contract plans.

Disclaimer and Contract Information

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

are made during final project design, the Office of Geotechnical Design – North should review those changes to determine if these foundation recommendations are still applicable.

Project Information

Standard Special Provision (SSP) S5-280, "Project Information", discloses to bidders and contractors a list of pertinent information available for their inspection prior to bid opening. The Following is an excerpt from SSP S5-280 disclosing information originating from Geotechnical Services. Items listed to be included in the information Handout will be provided in Acrobat (.pdf) format to the addressee(s) of this report via electronic mail.

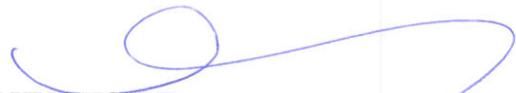
Data and information attached with the project plan are:

- A. *Log of Test Borings for Wahtoke Creek Bridge Replace, Bridge No. 42-0078 (present investigation).*
- B. *Acceleration Response Spectrum Curve (present investigation).*
- C. *Log of test borings, dated August 24, 1973.*

If you have any questions, please call William Bertucci at (916) 227-1045 or John Huang at (916) 227-1037.



WILLIAM BERTUCCI
Associate Engineering Geologist
Office of Geotechnical Design - North
Geotechnical Services
Division of Engineering Services



JOHN HUANG, PE
Senior materials and Research Engineer
Office of Geotechnical Design - North
Geotechnical Services
Division of Engineering Services



REZA MAHALATI, PE
Senior materials and Research Engineer
Office of Geotechnical Design - North
Geotechnical Services
Division of Engineering Services



Wahtoke Creek Bridge (Replace)
Br. No. 42-0438
06-472301

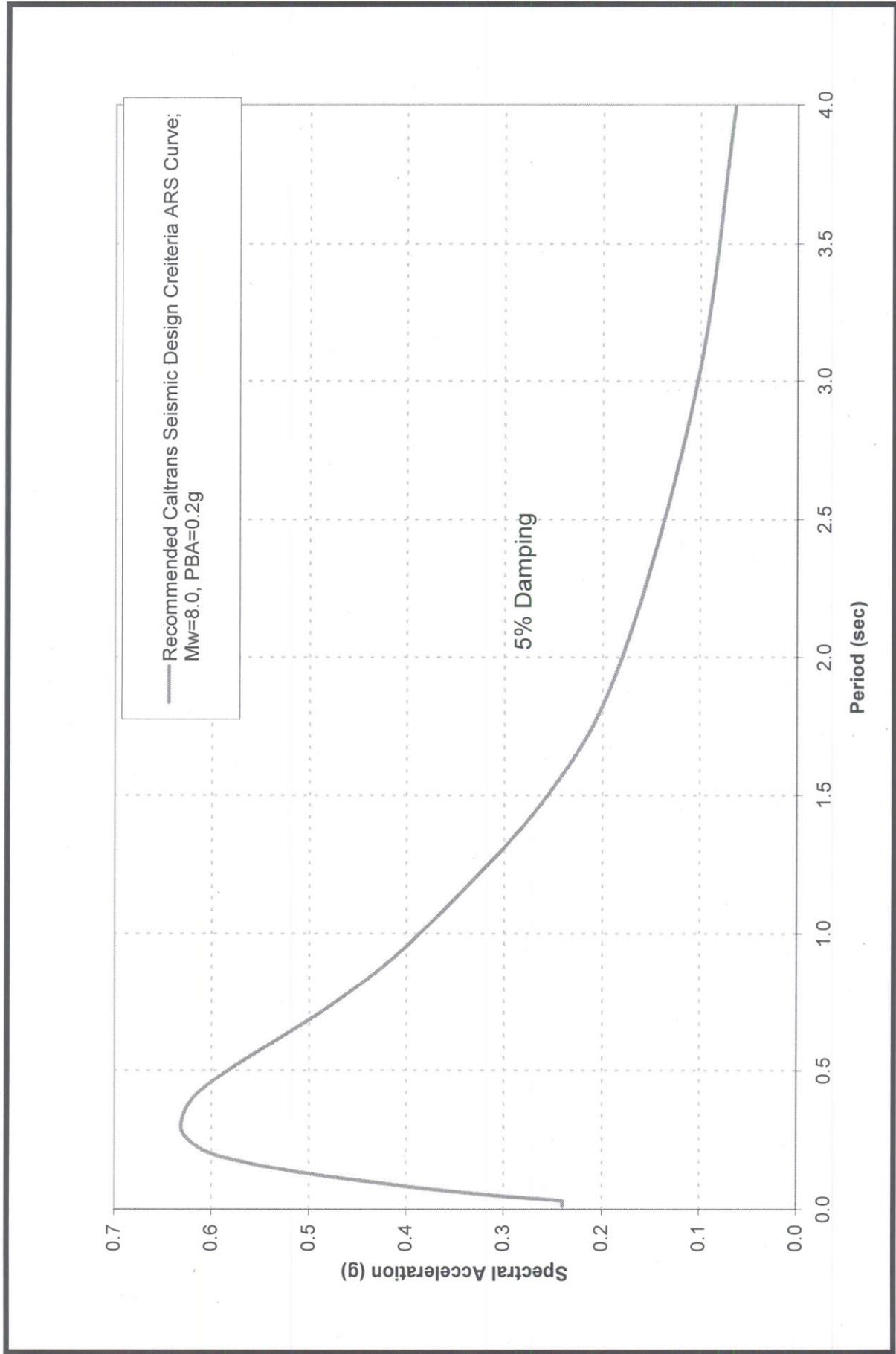


Figure 1. Acceleration Response Spectrum Recommended for Design

DIVISION OF STRUCTURES FINAL HYDRAULIC REPORT

Wahtoke Creek

Located between the City of Fresno and Kings Canyon National Park
on State Route 180 over Wahtoke Creek in Fresno County

JOB:

Bridge No. 42-0078 Bridge Replacement

LOCATION:

06-Fre-180-81.9

WRITTEN BY:

Sharon Ropp

DATE:

July 15, 2008

REVIEWED BY:

Tony Nedwick

DATE:

July 15, 2008

Hydrology/Hydraulics Report

General:

It is proposed to replace the existing structure at Wahtoke Creek (Br. No. 42-0078), located on Route 180 in Fresno County, between the City of Fresno and the Kings Canyon National Park. According to the General Plans dated April 2008, there are three alternatives being considered for the replacement structure. For this report the potential alternatives will be referred to as Alternatives 1, 2 and 3. All 3 alternatives are designed to be constructed on the same alignment as the existing structureⁱ.

Alternative 1 is a single span pre-cast (PC) I-girder structure with the abutments on cast-in-drilled-hole (CIDH) piles. The structure depth is 3.83 feet. The width of this structure is 43.5 feet and the overall length is 70 feet.

Alternative 2 is also a single span structure. This alternative is designed as a cast-in-place (CIP) pre-stressed (PS) voided slab structure with the abutments on CIDH piles. The structure depth is 2.5 feet. The width of this structure is 43.5 feet and the overall length is 70 feet.

Alternative 3 is a three span structure. This alternative is designed as a CIP solid slab structure with a structure depth of 1.83 feet. The piers are six column piers, with each column measuring two foot diameter, all on CIDH pile extensions. The width of this structure is 43.5 feet and the overall length is 103 feet.

The existing structure was built in 1953. It is a three span, continuous, reinforced concrete slab structure on reinforced concrete pier walls with closed end cantilever abutments and spread footings. The substructure is from the original timber bridge. The existing structure is 28.5 feet wide and 46 feet long.ⁱⁱ

Basin:

Wahtoke Creek begins at approximately 840 feet elevation at the base of Tivy Mountain and Harmen Peak. It runs through Clark Valley where it passes under Route 180 at approximately 460 feet elevation. Wahtoke Creek continues in a south-westerly direction where it forms Wahtoke Lake at the base of Campbell Mountain. It then flows out of Wahtoke Lake and runs through agricultural land where it feeds into the Kings River at about 300 feet elevation, just north of the town of Reedleyⁱⁱⁱ. The watershed area above this structure is approximately 19.13 square miles.

Discharge:

The design 50-year and 100-year discharges for the proposed bridge are approximately 800 cubic feet per second (cfs) and 1,000 cfs respectively. The 100-year discharge was computed using the known high-water elevation on the 1953 as-built plans and the 50-year discharge was derived from the 100-year flow rate. A slope of 0.0011 ft/ft and a mannings "n" value of 0.035 were also used.

Scour:

The existing bridge is considered Scour Critical. This channel has a history of migration and degradation problems. Due to the footing at Pier 2 being undermined and the footing at Pier 3 being exposed, temporary countermeasures were installed in span 2 in 2001. This countermeasure consisted of round RSP (Rock Slope Protection) with fabric lining. In April of 2006, an emergency field inspection revealed that the footing at Abutment 4 was scoured and undermined, along with degradation in span 3. It is assumed that these new scour issues were due to the flow of the creek being pushed into span 3 after the countermeasures that were placed in span 2 in 2001. In May of 2006 emergency countermeasures were installed in span 3. This consisted of forming and placing cement and sand slurry under the Abutment 4 footing to reestablish a load path from the bottom of the footing to the undisturbed streambed material and also placing round RSP with fabric in spans 1 and 3.

Under the current channel conditions the projected local pier scour for the existing structure during a 100-year storm event is estimated to be approximately 4.5 feet. This is assuming that there is no natural armoring in the channel and that the thalweg has migrated. Channel degradation at this site has averaged 0.09 ft/yr. Assuming 20 years of degradation added to the local pier scour, the anticipated scour elevation at the existing structure would be to elevation 445.6 ft.

For alternatives 1 and 2 there would be no local pier scour since these are designed as single span structures. The abutments should be designed assuming potential scour and degradation to elevation 454 feet. This assumes thalweg migration in the channel and accounts for 75 years of degradation at a rate of 0.09 ft/yr.

For alternative 3 the piers should be designed for 4.06 feet of local pier scour. This is assuming that there is no natural armoring in the channel, no hydraulic skew and no debris build up on the piles. A channel degradation rate of 0.09 ft/yr for 75 years is also assumed. The potential scour elevation for this alternative is to elevation 440.94 ft. Since these abutments are designed to be so far out of the flood plain, there is no concern with scour or degradation occurring at the abutments.

Stage:

The 50-year and the 100-year discharge were modeled through the proposed bridge site using the Army Corps Hydraulic Engineering (HEC RAS) version 3.1.1 hydraulic modeling program. The average velocity and water surface elevations for the structure are listed below.

NEW WAHTOKE CREEK (Alternatives 1,2 &3)		
Flow	50-year (800 cfs)	100-year (1,000 cfs)
Average Velocity (upstream of bridge)	3.7 ft/s	4.1 ft/s
Water Surface Elevation	461.75	462.37 feet

Streambed:

According to the Geology Profile dated June 30, 2008 the surface layer in the channel bed at this site consists of silty sand alluvium. Below the channel bed is a layer of weathered soft granite which has a moderate potential for erosion. This layer is 20 – 30 feet deep. It starts near Abutment 1 at approximately 463 ft elevation and falls to approximately 445 ft elevation near Abutment 4. Below the weathered soft granite is un-weathered fresh hard granite with a very low potential for erosion. This layer starts near Abutment 1 at approximately 435 ft elevation and falls to approximately 423 ft elevation near Abutment 4. All earth materials above this hard granite are susceptible to scour.

The stream channel is relatively clear of vegetation. The banks upstream and downstream of the structures are heavily vegetated with grasses, shrubs and trees.

Debris:

Drift accumulations have been noted in the past at this structure. If the new structure is designed as a multi span structure, it should be designed with the longest span lengths as possible to minimize catching debris on the piers. Single column bents or columns that are widely spaced apart are also preferred to pass debris in the channel. The 50-year flood elevation would have a WSEL of 461.75 feet. The new structure should be designed to have a minimum of three feet of freeboard between the 50-year flood elevation and the soffit elevation to pass debris under the structure during high flows.

Summary Information for Designers:

<i>HYDROLOGIC / HYDRAULIC DATA SUMMARY</i>		
	Design Flood	Base Flood
Frequency	50 yrs	100 yrs
Discharge	800 cfs	1,000 cfs
Water Surface Elevation w/ New Bridge (Alt. 1 & 2)	461.75 ft	462.37 ft
Water Surface Elevation w/ New Bridge (Alt. 3)	461.75 ft	462.37 ft
Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements.		
The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation. Addendums may be necessary as Foundation Reports are completed.		

	Alternative 1	Alternative 2	Alternative 3
Proposed Bridge Length	70 ft	70 ft	103 ft
Minimum Soffit Elevation (includes 3' freeboard)	464.75 ft	464.75 ft	464.75 ft
Potential Pier Scour Elevation	n/a	n/a	440.94 ft
Average Upstream Velocity	4.09 ft/s	4.09 ft/s	4.09 ft/s

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

Sharon B Ropp

REGISTERED CIVIL ENGINEER SIGNATURE

REGISTRATION NUMBER: C65602 DATE: July 15, 2008



References:

ⁱ All elevations given are based on the NGVD29 vertical datum. To convert As-Built elevations to the NGVD29 datum - add 365.29 feet to the As-Built elevations.

ⁱⁱ Bridge Inspection Report - Br. No. 42-0078, October 31, 2007.

ⁱⁱⁱ The following USGS quadrangles were used in determining the basin information: Reedley, Wahtoke, Orange Cove North and Pine Flat Dam.

Advisory
Council On
Historic
Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

Reply to: 730 Simms Street, #401
Golden, Colorado 80401

May 26, 1995

Karen Nissen
California Department of Transportation
District 6
4545 N.W. Ave
Fresno, CA 93705

REF: Reconstruction of State Route 180 between Temperance Avenue
and Cove Road: Engineering Report for Archaeological Site
CA-FRE-61

Dear Dr. Nissen:

On April 26, 1995, we received a copy of the Engineering Report for Archaeological Site CA-FRE-61 and documentation concerning the creation of a permanent Environmentally Sensitive Area around site CA-FRE-61. These carefully prepared documents should provide significant protection for this archaeological site. The Engineering Report is an especially good example of this sort of document and we request your permission to provide copies of it to other agencies to demonstrate the types of information and the levels of analysis that may comprise such a report.

Thank you for providing these documents for our review. If you have questions concerning our comments, please do not hesitate to contact Catherine Cameron of our staff at (303) 231-5320.

Sincerely,



for Claudia Nissley
Director, Western Office
of Review

CONFIDENTIAL:
RESTRICTED INFORMATION
NOT FOR PUBLICATION

K. Nielsen

Memorandum

DEPT. OF TRANSP. DIST. 6

To : MR. ROBERT BINGER - 06
District Director

95 FEB 17 PM 12:05 : February 15, 1995

Attention: MR. RON SEKHON
District Materials Engineer

ATTENTION: _____ File No.: 06-FRE-180-81.9
06-342500

From : DEPARTMENT OF TRANSPORTATION
ENGINEERING SERVICE CENTER
Office of Structural Foundations

Subject : Assessment and Mitigation of Construction Activities at an Archeological Site at Wahtoke Creek

This memorandum is in response to a verbal request for assessment and recommendations related to minimizing the effects to artifacts at an identified archeological site during a roadway widening. As background, the Wahtoke Bridge and the approach lanes are proposed for widening to the north of the existing alignment. The area of new construction will traverse through a site of archeological significance. The construction will involve a small fill, 0.91 m (3 ft) or less in height, and, depending upon the profile grade selected, will also involve a low-height cut through existing materials of about the same dimension. A meeting was held on January 5 at District 6 to discuss this project. The area has been discussed from the archeological perspective by Krislyn Tate and Randy Bothard in the final report titled "Test Excavation at CA-FRE-61" prepared by District 6 (pages 67 through 72, not attached but available from the District).

of 3 (0.91m) of less in height, do not need to submit any proposed profile

This report will discuss engineering conditions of interest at the site, typical design requirements, and the type of construction and equipment needed to construct the approach fill and cut section. It will also present recommendations for special construction materials and techniques which can be employed to minimize construction-induced degradation of the artifacts at the site.

Used for this study were: two Log of Test Borings (one undated and unsigned but believed of 1950s origin, one produced by Caltrans in 1973); the Foundation Report for the Wahtoke Creek Bridge Widening (1973); topography maps provided by the District; the above referenced report by District 6; and several references on site preservation listed on Appendix 1.

Site geology, topography, and general description

The project is in the Central Valley geomorphic range. Borings at the site disclosed silty sands to a depth of up to 3.05 m (10 ft), with granitic rock of varying soundness as its underlying layer. The topography is gently rolling, except for vertical relief forming the banks of the Wahtoke Creek and for the presence of rock outcrops (which are south of the existing bridge). The profile grade of the new construction will closely, though perhaps not exactly, match that of the existing roadway and structure.

Standard Penetration Test blow counts range from 10 at the ground surface and increasing to 100 just above the interface with the rock material.

The artifacts have been located largely from 1.05 to 1.75 m (3.5 to 5.7 ft) below the ground surface as stated in the archeological perspective. However, we will use 0.91 m (3 ft) as the limiting constraint (i.e. uppermost limit) for the depth of artifacts.

Design Requirements for Compaction

A relative compaction requirement of 95% would normally apply to the cut and fill areas under discussion; these are: a) the approach fill (embankment placed within 45.72 m (150 ft) of the bridge); b) for the width between the outer edges of the shoulders and for a depth of 0.15 m (0.5 ft) below the grading plane, defined as the surface of the basement material upon which the lowest layer of the pavement structural section is placed; and c) whether in excavation or embankment, for the width of the traveled way (that is, all pavement except the shoulder areas) plus three feet on each side for a depth of 0.76 m (2-1/2 ft) below the finished grade.

Discussion

The dual goals for this project are to construct a roadway with typical design standards while minimizing the potential damage to the artifacts at the site. Due to the limited height of the cut and fill it is concluded that the stresses exerted just below the construction equipment pose the highest risk for the artifacts rather than from the embankment itself or the normal load imposed by traffic. Therefore design requirements for compaction serve as prime importance for purposes of this study. It is noted that, since the artifacts have mainly been located at 1.05 m (3.4 ft) below original ground, even the construction stresses seem minimal (see Figure 1 for illustration). Our results parallel those shown in Figure 1. Stresses will decrease dramatically with depth when finite loading conditions are applied at the surface. Our values were generated from assumed failure conditions provided by a series of technical notes from the U.S. Army Engineer Waterways Experiment Station. Through applications of our own independent safety considerations we were able to approximate a safe yet easy to construct failure criteria.

Additionally, reports from the 1954 renovation of the bridge indicated that some areas north of the existing bridge were used for a temporary detour. Minimal details were provided on the description of work performed then, but certainly fewer precautions were taken compared to what our recommendations shall be. Thus, any damage may have already occurred to existing artifacts.

Recommendations for construction are presented below separately for the embankment and cut sections.

Field Recommendations - Embankment Section

The following are recommended to minimize construction-induced damage at the site for embankment placement (that is, for construction of the profile grade placed at or above the elevation of the original ground plus the thickness of the pavement structural section):

- Using hand or hand-guided equipment, clear and grub the area to remove all loose boulders, cobbles, vegetation, or other items which would damage subgrade enhancement fabric;

- Use material meeting Section 26-1.02A, class 2 aggregate of the Standard Specifications as embankment material;

MR. RON SEKHON

February 15, 1995

Page 3

- If "proof rolling" is necessary, a load limit of 253.54 kN (57 kips) shall be used for construction equipment upon initial contact with original ground with a spacing of 6.096 m (20 ft) between separate pieces of construction equipment, then/else;
- Place a subgrade reinforcement fabric at the interface of the original ground/embankment material to reinforce subgrade if a 95% compaction could not be obtained on the first lift of material and/or as a means to determine the proximity of artifacts by defining the elevation of the original ground should the site be re-investigated at a later date;
- After placement of 0.31 m (1 ft) of compacted embankment material, a maximum load of 293.57 kN (66 kips) with 6.10 m (20 ft) of spacing may be applied on ground surface;
- Once an embankment height of 0.46 m (1.5 ft) is attained then normal construction equipment weighing in the order of 320.26 kN (72 kips) may be utilized using the 6.10 m (20 ft) spacing.

Field Recommendations - Excavated Section

An examination of the three conditions listed indicates that the maximum depth for which 95% relative compaction would be required is about 0.381 m (1-1/4 ft) below the profile grade (assuming the structural section measured about 0.381 m (1-1/4 ft) with the profile grade being the responsibility of others). However, after interpreting the Standard Penetration Test data, the site is already fairly compact and, after making adjustments for the depth of the exploration there could conceivably exist a 95% relative compaction in the entire soil mantle. For that reason, the following are the recommendations for the cut section (that is, for construction of the profile grade below the limits defined for embankment construction):

- Proceed with the planned cut to the elevation of the grading plane using equipment weighing no more than 253.54 kN (57 kips);
- "Proof roll" for a minimum of five passes using a static roller weighing no more than 253.54 kN (57 kips) (it is expected that no groundwater will be encountered but if construction takes place shortly after rain, any pumping of the subgrade can be ignored; in areas where the construction finds rock or rock-like material even the proof rolling may be ignored);
- Place subgrade enhancement fabric and proceed as described above for embankment placement.

Materials Recommendations

Other recommendations are for testing of the embankment and roadway structural section material (apart from the asphalt concrete or Portland cement concrete section) for pH. The material placed above the original ground should have the same pH as the in-situ material which translates to between 5.8 - 6.4; it is my belief that, since the aggregate material is a processed material from largely inert sand and aggregate, this range can be easily achieved using Caltrans specified aggregate base material.

MR. RON SEKHON
February 15, 1995
Page 4

Other Comments

Construction-induced compression damage or damage related to movement of soil particles during compaction, and damage due to a change in the chemical or pH environment are minimized by these recommendations. The purpose of the 95% relative compaction in approach fills is to limit seismically-induced settlement; as the total height of the fill is very limited, within the dimensions of engineering interest there are minimal to no reduction in the effectiveness of the approach fill. Similarly, the 95% relative compaction under the pavement relates to long term performance of the pavement and seems relatively unaffected at this site given the favorable conditions.

Also, it is important to note that the recommendations given in this report are for this site only and do not represent an overall "rule of thumb" methodology for construction since recommendations will be site and artifact dependent.

If you have questions or need further information, please contact me at (916) 227-7157 or CalNet 498-7157. Recommendations concerning the cut section and use of subgrade enhancement fabric have been discussed with Joe Hannon, Supervising Materials and Research Engineer of the METS Pavement Consulting Services Branch.



TINU MISHRA
Associate Materials and Research Engineer
Roadway Geotechnical Engineering-North

Attachment

cc: RHPrysock
GGarofalo
JHannon
RAnderson-Dist.6
✓KNissen-Dist.6
RGE(N) Files-(3)
Read File-green



Appendix 1

References

1. *The Archeological Sites Protection and Preservation Notebook - Technical Notes: #4: Site Burial as a Means of Preserving Archeological Sites*, US Army Engineer Waterways Experiment Station, September 1989
2. *The Archeological Sites Protection and Preservation Notebook - Technical Notes: #5: Laboratory Experiments to Study the Effects of Compaction and Pressure on Artifacts in Archeological Sites*, US Army Engineer Waterways Experiment Station, September 1989
3. *Burial as a Means of Archeological Site Protection*, Prepared for the Department of the Army, US Army Corps of Engineers, 1992
4. *Effects of High Embankment Construction on Archeological Materials*, Garfinkel, Alan, and Bobby Lister, Transportation Laboratory, Caltrans, 1983
5. *Filter Fabric: A Technique for Short-term Site Stabilization*, Archeological Assistance Program, U. S. Department of the Interior, National Park Service, Technical Brief No. 1, 1988
6. *Intentional Site Burial: A Technique to Protect against Natural or Mechanical Loss*, by Robert M. Thorn, for the Archeological Assistance Program, U. S. Department of the Interior, National Park Service, Technical Brief No. 5, revised 1991
7. *Reducing the Effects of Heavy Equipment Compaction through a Program of In-situ Site Preservation*, by Anthony J. Ardito in cooperation the New York State Historic Preservation Office, (no date available)
8. *Site Stabilization Information Sources*, Archeological Assistance Program, U. S. Department of the Interior, National Park Service, Technical Brief No. 12, 1991

MR. RON SEKHON

February 15, 1995

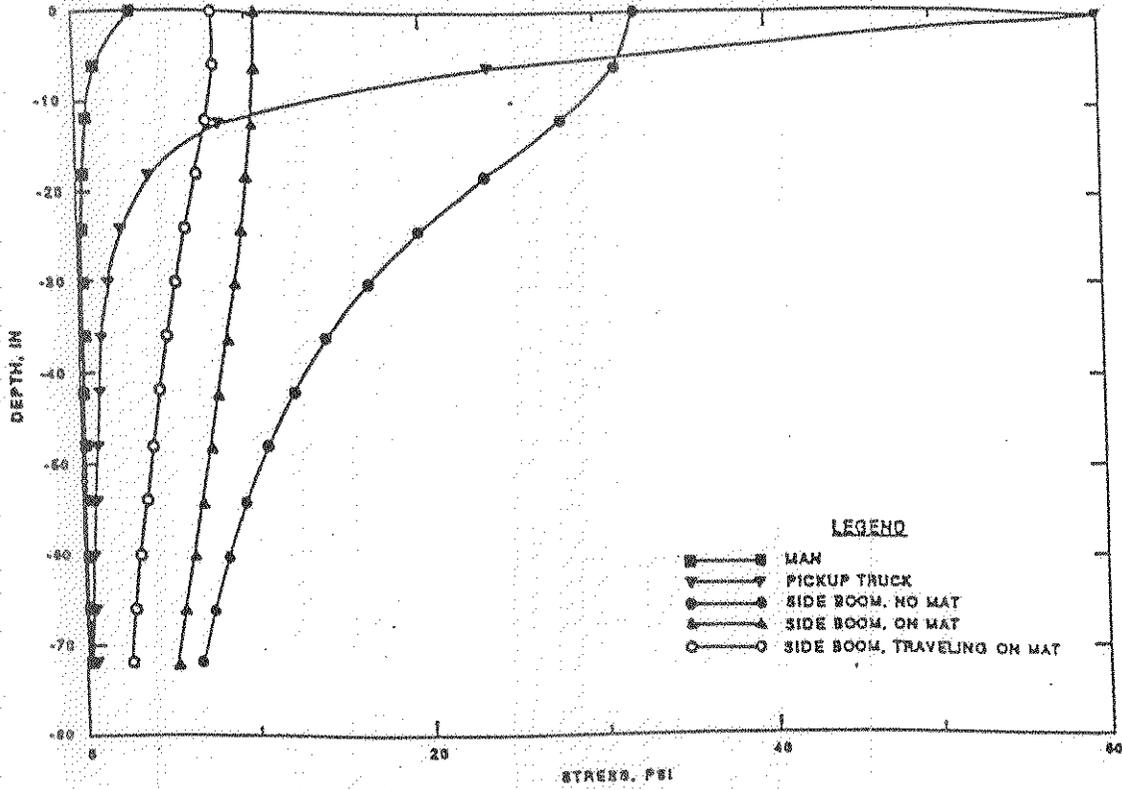
Page 6

Appendix 2

Figures

1. *The Archeological Sites Protection and Preservation Notebook - Technical Notes: #5: Laboratory Experiments to Study the Effects of Compaction and Pressure on Artifacts in Archeological Sites*, US Army Engineer Waterways Experiment Station, September 1989

SOIL STRESSES DUE TO SURFACE LOADING



CALCULATED SOIL STRESSES FOR VARIOUS CONDITIONS

Calculated soil stresses for various conditions

Figure 1

**Advisory
Council On
Historic
Preservation**

MOA

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

Reply to: 730 Simms Street, #401
Golden, Colorado 80401

July 21, 1995

Fred J. Hempel
Division Administration
Federal Highway Administration
Region Nine
California Division
980 9th Street, Suite 400
Sacramento, Ca 95814-2724

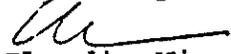
REF: *Memorandum of Agreement regarding improvements to Rural Route
180 from near Temperance Avenue to Cove Avenue, Fresno County,
California*

Dear Mr. Hempel:

The enclosed Memorandum of Agreement regarding the above referenced project has been executed by the Council. This action constitutes the comments of the Council required by Section 106 of the National Historic Preservation Act and the Council's regulations. Please send copies of the signed Agreement to the California State Historic Preservation Officer and your Federal Preservation Officer.

The Council appreciates your cooperation in reaching a satisfactory resolution of this matter.

Sincerely,


Claudia Nissley
Director, Western Office
of Review

REC'D FHWA

JUL 27 1995

Enclosure

MEMORANDUM OF AGREEMENT
BY AND AMONG THE FEDERAL HIGHWAY ADMINISTRATION,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER AND
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
PURSUANT TO 36 CFR § 800.5 (e)(4)
REGARDING CONSTRUCTION OF THE RURAL ROUTE 180 PROJECT IN
FRESNO COUNTY, CALIFORNIA

WHEREAS, the Federal Highway Administration (FHWA) has determined that widening and minor realignment of Highway 180 between P.M. 64.6 and 84.0 in Fresno County (Undertaking) will have an effect upon archaeological site CA-FRE-61, an historic property eligible for inclusion in the National Register of Historic Places (NRHP), and possibly on archaeological site CA-FRE-2663, the NRHP eligibility of which has not yet been determined, and has consulted with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (NHPA) as amended through 1992 (16 U.S.C. § 470) to resolve the adverse effect of the undertaking on historic properties; and

WHEREAS, FHWA has sought the comments of interested Native Americans (Choinumni Cultural Association) and considered their views regarding recovery, analysis and disposition of human remains and grave goods, taking into account the Advisory Council on Historic Preservation's policy statement of September 27, 1988, and applicable laws of the State of California relating to the treatment of Native American human remains; and

WHEREAS, Native American concerns regarding human remains and grave goods will be specified in a Pre-Excavation Agreement between a representative of the Choinumni Cultural Association and the California Department of Transportation (Caltrans); and

WHEREAS, Caltrans and the Choinumni Cultural Association have participated in the consultation and have been invited to concur in this Memorandum of Agreement (MOA);

NOW, THEREFORE, FHWA, the California SHPO, and the Council agree that the FHWA shall ensure that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the Undertaking on historic properties.

STIPULATIONS

FHWA shall ensure that the following measures are carried out:

I. EFFECTS ON ARCHÆOLOGICAL SITE CA-FRE-61

A. Site Protection Prior to and Following Construction

FHWA shall ensure that those portions of archaeological site CA-FRE-61 located within Caltrans right of way are protected from damage until the applicable treatment measures stipulated below are implemented. Protection against possible damage by Caltrans maintenance activities, permits issued by Caltrans for encroachments, or other activities under the domain of Caltrans discretionary powers within the site area has been provided by establishing a permanent Environmentally Sensitive Area (ESA). Information concerning the boundaries of the ESA has been supplied to Caltrans District 6 divisions of Construction, Maintenance, Right of Way, Advance Planning

and Programming, and Intergovernmental Review. Any ground disturbing activities required by Maintenance will be monitored by an archaeologist and, if necessary, a Native American observer. Reports on such work will be forwarded to the SHPO, the ACHP, and the Choinumni Cultural Association.

B. Preservation of a Portion of the Site in Place

FHWA shall ensure that approximately 916 m² within proposed Caltrans right of way at CA-FRE-61, a National Register eligible property known to contain human remains, will be covered with fill to a height of approximately 1 meter which will be underlain by geotextile fabric following methods detailed in the engineer's report. The fill will match the soils present at the site. Ground preparation for fill emplacement will be monitored by a qualified archaeologist and a representative from the Choinumni Cultural Association. If diagnostic artifacts are uncovered during ground scarification, they will be collected and analyzed. If features are exposed during ground preparation activities, they will be excavated according to current scientific standards. Areas of the site outside the construction zone are protected through establishment of an Environmentally Sensitive Area, which will be depicted in the field by brightly colored fencing or flagging along the edge of the construction zone.

C. Preparation of Data Recovery Plan

FHWA shall ensure that Caltrans, in consultation with SHPO and the ACHP, supervises and implements the formulation of a Data Recovery Plan (DRP) for the recovery of archaeological data from CA-FRE-61. The Data Recovery Plan shall be consistent with the *Secretary of the Interior's Standards and Guidelines for Archeological Documentation* (48 CFR 44734-37), and take into account the publications *Treatment of Archeological Properties* (Advisory Council on Historic Preservation [draft] 1980) subject to any revisions the Council may make in the publication prior to completion of the DRP, the California State Office of Historic Preservation, Preservation Planning Bulletin Number 5, *Guidelines for Archaeological Research Designs* (State of California, Office of Historic Preservation 1991), and any applicable SHPO and ACHP guidance. The DRP will not be drafted until at least a year prior to planned construction, which is currently scheduled for the period 2004-2006. This will allow for inclusion of current research issues and scientific methods to be incorporated into the research design and DRP.

D. Minimum Content of Data Recovery Plan

1. Identification and description of the portion of the property where data recovery is to be undertaken;
2. Identification and description of any portion of the property that will be destroyed without data recovery;
3. Research questions to be addressed through data recovery with an explanation of their relevance and importance, with particular attention given toward the study of environmental and cultural changes that may have been responsible for the transition from millstone technology to mortar technology;
4. Field and laboratory analysis methods to be used, with an explanation of their relevance to the research questions;

5. Methods to be used in analysis, data management, and dissemination of data, including a schedule;
6. Proposed disposition of recovered materials and records;
7. Proposed methods by which the Choinumni Cultural Association will be kept informed of the work and afforded the opportunity to participate;
8. Proposed methods for involving the interested public in the data recovery;
9. Proposed methods for disseminating results of the work to the interested public;
10. A proposed schedule for the submission of progress reports to FHWA, the Council, SHPO, Caltrans, and the Choinumni Cultural Association;
11. Methods for evaluating and treating discoveries of newly identified cultural resources.

E. Review and Implementation of Plan

1. FHWA will submit the draft DRP to the ACHP, the SHPO and the Choinumni Cultural Association for review. All reviewing parties will have 30 calendar days following receipt to comment on the draft DRP. Failure of the reviewing parties to comment within this time period shall not preclude FHWA from finalizing and implementing the DRP. FHWA shall revise the DRP in accordance with any comments received and shall submit the revised DRP to the reviewing parties for a 15 calendar day review period. Failure of the reviewing parties to comment within 15 calendar days of receipt of the revised DRP shall not preclude the FHWA from finalizing and implementing the DRP.
2. Any reviewing party objecting to the revised DRP within the time period afforded for review shall in writing identify the nature of the objection and the reasons for the objection. Upon receipt of a written objection, FHWA shall consult with the objecting party for a period not to exceed 10 calendar days to resolve the objection. If the objection cannot be resolved within that time period, FHWA shall consult with the Council in accordance with Stipulation III, subsection D.

F. Construction Monitoring and Late Discovery

1. If cultural deposits are discovered during construction for which there is no data recovery plan, Caltrans will cause a temporary halt to construction activities and immediately notify the FHWA, the SHPO, the Council, and appropriate Native American representatives if none are present, in accordance with 36 CFR 800.11(b)(2). The FHWA shall ensure that a plan is developed for treating the unexpected discovery. The SHPO and the Council will be given 48 working hours (excluding weekends and holidays) to comment on the plan. The FHWA shall guarantee that the plan is implemented, taking into account comments by the SHPO and the Council.
2. After completion of the fieldwork component of the data recovery, the FHWA shall ensure that those portions of CA-FRE-61 to be affected by construction activities are graded under the supervision of an archaeologist meeting the *Secretary of the Interior's*

Professional Qualifications Standards (48 FR 44738-9) and in accordance with the following procedures:

- a. Grading is to be conducted with equipment capable of maintaining high vertical and horizontal control, in levels not to exceed fifteen (15) centimeters.
- b. All grading is to be under the direct supervision of the supervising archaeologist or personnel reporting directly to the supervising archaeologist.
- c. The supervising archaeologist and staff are to be equipped with video recording equipment for fast documentation of discoveries.
- d. A transit team is to be maintained on station during all grading to record locations of all discoveries.
- e. The supervising archaeologist will be empowered to halt or redirect grading to provide time for excavation and recordation of significant features.
- f. All materials and records, including videotapes, will be curated and disposed of as specified in Stipulation I, subsections G and H.
- g. Results of the supervised grading will be incorporated into the final project reports.

G. Curation

FHWA shall ensure that all records resulting from the data recovery project are curated by an institution acceptable to all the parties signatory to this Memorandum of Agreement in accordance with 36 CFR Part 79 and that all materials resulting from the data recovery are maintained by such institution in accordance with 36 CFR Part 79, provided, however, that human remains and grave associated artifacts will be disposed of as outlined in Stipulation I, subsection H.

H. Reburial of Human Remains and Associated Grave Goods

Prior to commencement of any ground disturbing activities, a Pre-Excavation Burial agreement will be developed with the Choinumni Cultural Association. If any human remains are uncovered during data recovery or construction which cannot be left in place, the FHWA shall ensure that the human remains and grave-associated goods are delivered to the Choinumni Cultural Association for reburial after analysis. All analysis of human remains and grave associated artifacts must be completed within six months after their exhumation. Documentation of the reburial site shall be provided to the California Native American Heritage Commission for inclusion in its Sacred Lands Inventory.

I. Section 110(b) Documentation

1. FHWA shall ensure that all final archaeological documents resulting from actions pursuant to this agreement are provided, within 30 days of completion, to: the California SHPO; the Council; the Choinumni Cultural Association; the California Native American Heritage Commission; the Southern San Joaquin Valley Information Center, California State University, Bakersfield; the National Park Service for possible submission to the National Technical Information Service of the Department of

Commerce; Fresno City College; and California State University, Bakersfield. The FHWA shall ensure that all reports are responsive to contemporary research standards and to the Department of the Interior's *Format Standards for Final Reports of Data Recovery Program* (42 FR 5377-79).

2. Caltrans will prepare an educational packet documenting Choinumni and Mono prehistory, ethnohistory, history and ethnography for distribution to local schools for classroom use.

3. Caltrans is working with the Bureau of Reclamation (BR) to arrange for access by Native American basketweavers to an area which will be used for biological mitigation. This area has whiteroot, *Carex barbarae*, a basketry material which is difficult for basketweavers to obtain.

J. Post Construction Monitoring

For a period of three (3) years following completion of construction at CA-FRE-61, the FHWA shall ensure that the site area is monitored to ascertain whether there are any drainage problems that could affect site deposits. A letter report will be prepared and forwarded to the Council and the SHPO. If problems are identified, the FHWA will consult with the Council and the SHPO to develop measures to prevent any effects to undisturbed deposits within or immediately adjacent to Caltrans right of way.

II. DETERMINATION OF NATIONAL REGISTER ELIGIBILITY AND PROJECT EFFECTS AT ARCHAEOLOGICAL SITE CA-FRE-2663

Determination of National Register eligibility and project effects have not been evaluated at this small bedrock milling site due to denial of access by the landowner. Once right of way has been acquired by Caltrans, FHWA shall ensure that the site will be tested to determine National Register eligibility and effects of the undertaking pursuant to 36 CFR § 800.4(c). If the site is found to be eligible for listing on the NRHP, data recovery will be undertaken following guidelines noted in Stipulation I, subsections C-I of this MOA.

III. ADMINISTRATIVE STIPULATIONS

A. Professional Supervision

The FHWA shall ensure that all activities regarding archaeology carried out pursuant to this MOA are performed by or under the direct supervision of a person or persons meeting at a minimum the *Secretary of the Interior's Professional Qualifications Standards for Archeology* (48 FR 44739). However, nothing in this stipulation may be interpreted to bar the FHWA or any agent or contractor of the FHWA to utilize the properly supervised services of employees and volunteers who do not meet the above standards.

B. Alterations to Project Documents

The FHWA shall not alter any plan, scope of services, or other document that has been reviewed and commented on pursuant to this MOA, except to finalize documents commented on in draft, without first affording the SHPO, Council, and the Choinumni Cultural Association the opportunity to review the proposed change and determine whether it shall require that this MOA be amended. If one or more of the above parties determines that an amendment is needed, the parties to this MOA shall consult in accordance with 36 CFR Part 800.5(e) to consider such an amendment.

C. Annual Report and Review

1. Beginning one year from the execution date of this MOA until the FHWA, Council and SHPO agree in writing that the terms of this MOA have been fulfilled, the FHWA shall prepare and provide an annual report to the SHPO, the Council, and the Choinumni Cultural Association addressing the following topics:

- a. Progress in design and construction of the Rural Route 180 Project;
- b. The results of monitoring activities;
- c. Progress in archaeological data recovery;
- d. Any problems or unexpected issues encountered during the year; and
- e. Any changes that the FHWA believes should be made in implementation of this MOA.

2. The FHWA shall ensure that its annual report is made available for public inspection, that potentially interested members of the public are made aware of its availability, and that interested members of the public are invited to provide comments to the Council and the SHPO as well as to the FHWA. Confidential information regarding site locations will be restricted as stipulated in 16 U.S.C. § 470hh.

3. The SHPO and Council shall review the annual report and provide comments to the FHWA. The Choinumni Cultural Association may review and comment on the annual report at its discretion.

4. At the request of any party to this MOA, a meeting or meetings shall be held to facilitate review and comment, to resolve questions, or to resolve adverse comments.

5. Based on this review, the FHWA, SHPO, and Council shall determine whether this MOA shall continue in force, be amended, or be terminated.

D. Resolving Objections

1. Should any party to this MOA object within 30 days to any action specified in this MOA, the FHWA shall promptly consult with the objecting party to resolve the objection through consultation. If, after initiating such consultation, the FHWA determines that the objection cannot be resolved, FHWA shall forward to the Council all documentation relevant to this dispute. Within 30 calendar days after receipt of all pertinent documentation, the Council shall exercise one of the following options:

- a. Advise the FHWA that the Council concurs with the FHWA's final decision, whereupon the FHWA will respond to the objection accordingly;

- b. Provide the FHWA with recommendations, which the FHWA shall take into account in reaching a final decision regarding the dispute; or
 - c. Notify the FHWA that it will comment, within an additional 30 calendar days following such notification, pursuant to 36 CFR 800.6(b). Any Council comments provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR 800.6(c)(2) with reference to the subject of the dispute.
2. Should the Council not exercise one of the above options within 30 days after receipt of all pertinent documentation, the FHWA may assume the Council's concurrence in the proposed response to the objection.
 3. The FHWA shall take into account any Council recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection; the FHWA's responsibility to carry out all actions under this MOA that are not the subjects of the objection shall remain unchanged.
 4. At any time during implementation of the measures stipulated in this MOA, should an objection be raised by a member of the public, the FHWA shall notify the parties to this MOA and take the objection into account, consulting with the objector and, should the objector so request, with any of the parties to this MOA to resolve the objection.

E. Amendments

Any party to this MOA may propose to the FHWA that the MOA be amended, whereupon the FHWA shall consult with the other parties to this MOA to consider such an amendment. 36 CFR § 800.5(e) shall govern the execution of any such amendment.

F. Termination

1. If the FHWA determines that it cannot implement the terms of this MOA, or if the SHPO or Council determines that the MOA is not being properly implemented, the FHWA, SHPO, or Council may propose to the other parties to this MOA that it be terminated.
2. The party proposing to terminate this MOA shall so notify all parties to this MOA as well as the California Department of Transportation and the Choinumni Cultural Association, explaining the reasons for termination and affording them at least thirty (30) days to consult and seek alternatives to termination.
3. Should such consultation fail and the MOA be terminated, the FHWA shall either:
 - a. Consult in accordance with 36 CFR § 800.5(e) to develop a new MOA; or
 - b. Request the comments of the Council pursuant to 36 CFR § 800.5(e)(6).
4. Any consulting parties to this MOA may terminate the Agreement by providing 30 calendar days written notice to the other signatories, provided that all signatories will consult prior to termination to seek agreement on amendments or other actions that avoid termination. In the event of termination, FHWA will comply with 36 CFR 800.4 through 800.6.

G. Failure to Carry out the Terms of This MOA

Failure to carry out the terms of this MOA require that FHWA again request the Council's comments in accordance with 36 CFR 800. If FHWA cannot carry out the terms of the MOA, it will not take or sanction any action or make any irreversible commitment that would result in an adverse effect to a historic property or that could foreclose the Council's consideration of modifications or alternatives to the undertaking.

Execution of this Memorandum of Agreement by the FHWA, the SHPO, and the Council, and implementation of its terms, evidence that the FHWA has afforded the Council an opportunity to comment on the FHWA's Highway 180 Improvement Project between P.M. 64.6/84.0 in Fresno County and its effects on historic properties, and that FHWA has taken into account the effects of that undertaking on historic properties.

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By Robert W. Bush Date 7/12/95

Title Executive Director

FEDERAL HIGHWAY ADMINISTRATION

By Patricia M. Miller Date 4/20/95

Title Division Administrator

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

By Ray Zedell Date 8/22/95

Title State Historic Preservation Officer

CONCUR

CALIFORNIA DEPARTMENT OF TRANSPORTATION

By *By J. Aron* Date *3/22/95*

Title *Chief, Office of Environmental Management*

CHOINUMNI CULTURAL ASSOCIATION

By *Lorrie Plummer* Date *3/21/95*