PLANS AND SPECIFICATIONS
FOR

CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE 2023 SEDIMENT REMOVAL

SPECIFICATION NO. WP24-01

PROJECT NO. 86025

PUBLIC WORKS
VENTURA COUNTY

county of ventura
WATERSHED PROTECTION DISTRICT
ZONE 3

EXHIBIT 3

PLANS AND SPECS

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
PUBLIC WORKS AGENCY

NOTICE INVITING BIDS, PROJECT INFORMATION FORM, & SPECIFICATIONS

FOR

PROJECT NAME: CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE 2023 SEDIMENT REMOVAL

LOCATION: CAMARILLO, CA

SPEC. NO.: WP24-01 **COST ACCOUNTING PROJECT NO.:** 86025

DESIGNED BY: Robert Macharia **CHECKED BY:** Salvador Diaz-Rubin

REVIEWED BY: Salvador Diaz-Rubin

PROJECT MANAGER:

REGISTERED PROFESSIONAL ENGINEER
SALVADOR DIAZ-RUBIN
No. 71625
CIVIL
STATE OF CALIFORNIA

RECOMMENDED BY:

Matthew Ehret
Deputy Director, Watershed Protection District

APPROVED BY:

Acting for
Glenn Shephard
Director, Watershed Protection District

APPROVED BY:

7/28/23
Jeff Pratt
Director, Public Works Agency

Construction bidding documents, including plans, specifications, addenda and any supplementary documents are only available on the Ventura County Public Works Agency Web Site.

NOTICE TO BIDDERS, SUBCONTRACTORS AND SUPPLIERS SOURCES OF INFORMATION

DURING BIDDING PERIOD

PROJECT DOCUMENTS, PLAN HOLDERS LIST, & OTHER INFORMATION IS AVAILABLE ON THE INTERNET AT THE BONFIRE WEBSITE AT:

https://ventura.bonfirehub.com/portal/?tab=openOpportunities#department=Public%20Works%20Agency

All questions concerning the plans, specifications, requirements, terms, schedule, addenda, and any other matters related to the solicitations shall be submitted using the Bonfire web site using the "Opportunity Q&A" tab.

Submit any questions early in the bidding period as an addendum may be required.

All addenda will be issued using the Bonfire web site.

Please do not call other staff members or consultant.

Note that our consultants are directed to refer all calls to the Project Managers.

AFTER BID OPENING

BID RESULTS are available on https://www.vcpublicworks.org/es/bidsandsubs/,

AFTER AWARD OF CONTRACT

ALL QUESTIONS concerning project AFTER AWARD should be directed to the Project Manager named in the Notice of Award

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Any other information can be requested at (805) 654-2039

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CALLEGUAS CREEK DS OF UPLAND ROAD BRIGDE
2023 SEDIMENT REMOVAL

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VENTURA COUNTY WATERSHED PROTECTION DISTRICT
NOTICE INVITING FORMAL BIDS

Bids will be received, electronically, until **2:00 p.m**. on **SEPTEMBER 7, 2023**, for **CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE 2023 SEDIMENT REMOVAL,** Specification No. **WP24-01,** which consists of the **clearing and grubbing, excavation of approximately 237,612 cubic yards (CY) of sediment, loading, hauling out excavated material and stockpiling at designated locations, see attached Exhibits A and B.**

Bids must be submitted on-line through Bonfire at:

https://ventura.bonfirehub.com/portal/?tab=openOpportunities#department=Public%20Works%20Agency

After the deadline for receiving bids, the bids will be opened, and the results made public.

The estimated cost of construction is **$5,420,000**.

All bidding documents, including plans, specifications, addenda, and any supplementary documents are available on the Bonfire website shown above.

A list of Plan Holders is available on the Bonfire website shown above.

An abstract of bids received will be available at https://www.vcpublicworks.org/es/bidsandsubs/

When projects are awarded, the award notification to the State will be posted at https://www.vcpublicworks.org/es/awardedcontracts/

Bids must be submitted electronically, using the forms provided on the Bonfire Website.

Subcontractor list must include a valid Contractor's License Number. Contractor and any subcontractors must be registered with the Department of Industrial Relations prior to bid time.

Each bid must be accompanied by a bid guarantee in the amount of not less than 10% of the amount bid, **PAYABLE TO THE VENTURA COUNTY WATERSHED PROTECTION DISTRICT** and guaranteeing that the bidder will enter into a contract in accordance with the terms of the bidding documents, if award is made. The bid guarantee shall be in one of the following forms: a bid bond written by an admitted surety insurer on the form included with the Proposal form, a cashier's check drawn by a national bank, a check certified by a national bank or cash. Bid bonds must be submitted in hard copy with the original signatures of the principal and surety. Copies of the completed bond will not be accepted.

Bidders must have a Class **A** California Contractors license. Upon award, the Contractor will be required to furnish a Performance Bond and a Payment Bond, each in the amount of 100% of the contract price.

In accordance with Section 22300 of the Public Contract Code, securities may be substituted for funds withheld.

Bidders, contractors, and other interested parties can obtain wage rates pertaining to Ventura County projects at the link provided below.

California general prevailing wage rates for construction can be obtained from the following Web site: http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm.

The awarded contractor must post copies of the prevailing wage determinations at each job site.

PROJECT INFORMATION

FOR

CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE 2023 SEDIMENT REMOVAL

LOCATED IN
VENTURA COUNTY, CALIFORNIA

MAKE BID GUARANTEE TO **VENTURA COUNTY WATERSHED PROTECTION DISTRICT**
USE FORM PROVIDED (SEE PARAGRAPH 9, INSTRUCTION TO BIDDERS).

SPECIFICATION NO. **WP24-01** INCLUDING **6** SHEETS OF PLANS

BIDS WILL BE RECEIVED ELECTRONICALLY UNTIL **SEPTEMBER 7, 2023,** AT **2:00 P.M.**

AGENCY IS ALLOWED **60** DAYS TO AWARD A CONTRACT (SEE SECTION 2-1.1).
THE STARTING DATE OF CONTRACT WILL BE **14** CALENDAR DAYS AFTER AWARD OF CONTRACT (SEE SECTION 6-7.4).

COMPLETION TIME IS **90** WORKING DAYS (SEE SECTION 6-7).

LIQUIDATED DAMAGES ARE **$1,700** PER CALENDAR DAY (SEE SECTION 6-9).

CONTRACTOR'S LICENSE CLASSIFICATION REQUIRED IS **CLASS A.**

LIABILITY INSURANCE CLASS REQUIRED PER SECTION 7-4 IS **L-C See Special Provisions Section 1000-17 and VCSS Section 7-4.2.4**

FEDERAL-AID CONTRACT PROVISIONS ARE **NOT** INCLUDED IN THESE SPECIFICATIONS.

NON-MANDATORY PREBID MEETING: **10:00 AM** on **08/23/2023** at the location: **Conference Room 347** on the third floor of the **Hall Administration Building**, 800 S. Victoria Ave., Ventura, CA 93009**.**

INSTRUCTION TO BIDDERS

1. LICENSING OF BIDDER. Before submitting bids, bidders shall be licensed in accordance with the provisions of Sections 7000 through 7145 of the Business and Professions Code of the State of California in the classification required for the work bid on. The bidder's license number, classification, and expiration date shall be inserted on Signature Sheet. The bidder's name shall correspond in all respects with the name shown on the license. License numbers and names are checked with the State.

2. **SITE INSPECTION**. Personally visit the worksite before submitting your bid to ascertain the existence of any surface or subsurface conditions affecting the cost of the work.

3. **INTERPRETATION AND QUESTIONS**. Carefully review the plans and specifications for any errors, omissions, or ambiguities. If you discover any or have specific questions, notify the Agency far enough in advance of the bid opening to allow time for the issuance of appropriate written addenda, if necessary. All questions concerning the plans, specifications, requirements, terms, schedule, addenda, and any other matters related to the solicitation shall be submitted through the Bonfire website using the “Opportunity Q&A” tab.

Written addenda shall be the sole means for modifying the plans and/or specifications prior to the bid opening. The Agency shall not be bound by oral communications purportedly modifying or interpreting the plans and/or specifications regardless of when or by whom such oral communications are made and you should not rely upon such oral communications in preparing your bid. Addenda will be posted on the Bonfire web site.

4. **BID ITEMS**. State in figures the unit prices, lump sum prices and extensions as indicated which shall be the prices for which you propose to supply all materials and services and perform all work required by the plans and specifications. All items described are to be construed as complete and in place. Include in the bid amount for items listed in the Bid Table the cost of performing all work shown on the plans or required by the specifications for which a specific bid item is not provided. Bid on all items listed under Schedule of Work and Prices unless otherwise indicated in the Bid Table.

5. **SIGNING OF BID**. Fill in all indicated blanks on the various forms provided. Bids will only be accepted if submitted electronically using the Bonfire website. Bids signed by an agent other than an owner, partner or corporate officer shal be accompanied by a power-of-attorney.

6. **NON-COLLUSION AFFIDAVIT**. The non-collusion affidavit required by Public Contract Code 7106 is included as a required document on the Bonfire website.

7. **BID FORM NOT TO BE ALTERED**. Do not change the wording of the Bid documents. Any additions, deletions, conditions, limitations or provisions by the bidder will render the Bid irregular and may cause its rejection.

8. **CORRECTING BID**. Corrections or adjustments to bids must be done using the Bonfire website and must be completed prior to the Bid Closure date and time.

9. **BID GUARANTEE**. A Bid Guarantee in the amount of not less than 10% of the amount bid and guaranteeing that the bidder will enter into a contract in accordance with the terms of the bidding documents if award is made to him must be submitted. The bid guarantee shall be in one of the following forms: A bid bond written by an admitted surety insurer on the form provided, a cashier's check drawn by a national bank, a check certified by a national bank or cash.

Original hard copies of the Bid Guarantee must be submitted and received by the County prior to the Time of Bid Closure. Bid Guarantee shall be mailed or delivered to:

Public Works Agency, County of Ventura
County Surveyor's Public Counter - 3rd Floor
Hall of Administration
800 South Victoria Ave.
Ventura, California 93009-1670

For proper handling, mark the envelope as “BID GUARANTEE – SEALED BID” and show the specification number, project title, and the Bidder’s name and address.

The bid bond must have the original wet signatures of the principal and surety.

Note: Performance and Payment Bonds are required from the bidder to whom a contract is awarded. See specifications Subsection 2-4 for contract bond requirements including limitations on the sureties that may issue the bonds.

10. **SUBMITTING BID**. Submit your bid using the Bonfire website at:

www.ventura.bonfirehub.com

Only bids submitted via the Bonfire website will be considered. All documentation listed as required on that website must be completed and submitted.

11. **TIME OF BID CLOSURE**. The time and date of the Bid closure is indicated on the Bonfire website solicitation as “Close Date”. No bids will be accepted after that time.

12. **REVISION OR WITHDRAWAL OF BID**. Bids submitted using the Bonfire website can only be revised or withdrawn using the website. Once submitted, a bid that requires revisions or withdrawal must be accessed via the “Completed” tab under the “Your Submissions” section and action taken to revise or “unsubmit” (withdraw).

13. **ERRORS**. Bidder will not be released on account of errors. Bids submitted using the Bonfire website will be considered final. Bidders shall be careful to ensure all information that is submitted is complete and accurate.

14. **SUBCONTRACTOR LICENSE NUMBERS.** License numbers for subcontractors must be provided at the time the bid is received using the forms provided.

15. **PUBLIC WORKS CONTRACTOR REGISTRATION PROGRAM.** No contractor or subcontractor may be listed on a bid for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)]

No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5

16. **LABOR COMPLIANCE MONITORING.** This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The Prime Contractor shall post job site notices prescribed by regulation.

(See Chapter 8, California Code Regulation section 16451(d) for notice that previously was required for projects monitored by the Compliance Monitoring Unit.)

NONCOLLUSION DECLARATION

NONCOLLUSION DECLARATION

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ , at _____, _____.
Date
City State

Signature of Officer: _____

Printed Name of Officer:_____

LIST OF SUBCONTRACTORS

CONTRACTOR NAME:_____

Listing shall comply with the provisions of California Public Contract Code, Section 4104.

Name of Subcontractor	Contractor's License Number	Contractor's DIR Registration Number	Business Address	Items of Work

If more space is needed, add additional pages.

Public Contract Code Section 4104 provides that bidders must list:

(a)(1) The name, the location of the place of business, and the California contractor license number of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent of the prime contractor's total bid or ten thousand dollars ($10,000), whichever is greater.

(b) The portion of the work that will be done by each subcontractor under this act. The prime contractor shall list only one subcontractor for each portion as is defined by the prime contractor in his or her bid.

BID TABLE

Schedule of work and prices for: **CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE 2023 SEDIMENT REMOVAL**

Item No.	**Units**	Approx Quantity	Item Description	Payment Reference	Unit-Prices (In Figures)	Item Total (In Figures)
1	LS	1	Mobilization	9-3.4.2		
2	LS	1	Water Pollution Control	1001-3		
3	LS	1	Diversion, Control, and Removal of Water	1002-3		
4	LS	1	Clearing and Grubbing	1003-3		
5	LF	1	Traffic Control	1004-6		
6	CY	118,859	Sediment Excavation	1005-3		
			Total Schedule I			
(Summation Items 1 through 6 Inclusive)						

Item No.	**Units**	Approx Quantity	Item Description	Payment Reference	Unit-Prices (In Figures)	Item Total (In Figures)
7	LS	1	Mobilization	9-3.4.2		
8	LS	1	Water Pollution Control	1001-3		
9	LS	1	Diversion, Control, and Removal of Water	1002-3		
10	LS	1	Clearing and Grubbing	1003-3		
11	LF	1	Traffic Control	1004-6		
12	CY	118,753	Sediment Excavation	1005-3		
			Total Schedule II			
(Summation Items 7 through 12 Inclusive)						
			Total Schedule I and II			

Bidders must bid on Schedules I and II. Award will be made to the lowest responsive bidder for Schedule I and Schedule II combined.

Bid Table is shown here for informational purposes.

Bid Table shall be filled out by Bidders using the Bonfire website. Bidders will access the Schedule of Work and Prices on the Bonfire website and input their Unit Prices.

SIGNATURE SHEET

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone Number: (_____)_____-_____

Email Address: _____

I make this proposal and certify or declare under penalty of perjury under the laws of the State of California that:

- The statements and attestations made and associated with this Proposal, and below my signature, are true and correct.
- The bidder has read the Bid documents and has abided by and agrees to the conditions herein and has carefully examined the project plans and read the specifications and does hereby propose to furnish all materials and do all the work required to complete the work in accordance with the plans and specifications for the unit prices or lump sums named in the Bid Table.
- The bidder, as Principal, acknowledges himself as being bound by the attached bond or other acceptable bid guarantee.

Dated: _____ At: _____
(City and State)

Signature: _____

Printed Name: _____

Position: _____
(Sole Owner, Partner, President, etc.)

Company Name: _____ Type of Organization: _____
(Individual, Partnership, Corp.)

License No.:_____ License Classification: _____

License Expiration Date: _____

DIR Registration Number: _____

BID BOND

Enter Name & Address of Bonding Company }

KNOW ALL MEN BY THESE PRESENTS: That we _____

_____, Principal,

and _____

_____, Surety, are held and firmly bound unto

VENTURA COUNTY WATERSHED PROTECTION DISTRICT Obligee,

in the sum of Ten Percent of the total amount of the Bid for the payment of which we bind ourselves, our legal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has submitted or is about to submit a bid or proposal to Obligee on a contract for

CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE
2023 SEDIMENT REMOVAL

NOW, THEREFORE, if that contract be awarded to principal and principal shall, within such time as specified, duly execute the contract in the prescribed form and deliver the same to obligee with all required bonds/performance securities, certificates of insurance and such other items as required in the bidding or contract documents then this obligation shall be null and void; otherwise to remain in full force and effect, and if the contract is awarded to principal and principal fails, within the time specified, to duly execute the contract in the prescribed form and deliver the same to obligee with all said required items, then surety shall pay obligee the full sum of this bond.

Surety, for value received, hereby agrees that no extension of time, change, alteration, modification, or addition to the bidding or contract documents, or of the work required thereunder, shall release or exonerate surety on this bond or in any way affect the obligation of this bond; and surety does hereby waive notice of same.

Signed, sealed and dated

_____
(Principal)

by _____ (Seal)

_____
(Surety)

by _____
Attorney-in-Fact

INDICATE COMPLETE ADDRESS OF SURETY TO WHICH CORRESPONDENCE CONCERNING THIS BOND SHOULD BE DIRECTED.

Telephone No. _____

PREVAILING RATES OF WAGES

COUNTY OF VENTURA
PUBLIC WORKS AGENCY

PREVAILING RATES OF WAGES

As provided in Subsection 7-2.2 of these specifications, and in accordance with Section 1770 *(Amended by Stats. 2017, Ch. 28, Sec. 17. (SB 96) Effective June 27, 2017),* et. seq. of the California Labor Code, determinations of the generally prevailing wages for various classes of workers in Ventura County have been made by the California Director of Industrial Relations as required by the California Labor Code.

As required by California Labor Code Section 1777.5, properly indentured apprentices shall be employed on the work in the minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification. Travel and subsistence shall be paid in accordance with California Labor Code Section 1773.8.
The body awarding the contract shall cause to be inserted in the contract stipulations to effectuate this section. The stipulations shall fix the responsibility of compliance with this section for all apprenticeable occupations with the prime contractor.

The determinations made by the State are available on the Internet at
http://www.dir.ca.gov/DLSR/PWD/Index.htm
and are on file in the office of the Public Works Agency
The rate fixed for each craft, classification, or type of work shall be not less than the prevailing rate paid in the craft, classification, or type of work.

The Contractor shall post a copy of the wage rates at each jobsite at a location readily available to the workers.

EXCERPTS FROM THE CALIFORNIA LABOR CODE

Excerpts from the
California Labor Code

These excerpts from the Labor Code include the sections listed in specification Section 7.2.2.2 that are required by Labor Code 1775(b)(1) to be included in all subcontracts. These excerpts also include sections recommended by the CA Department of Industrial Relations that contain information on the contractor registration requirements. These sections are furnished for the convenience of the contractor and in no way limit the required compliance with all laws.

1725.5. A contractor shall be registered pursuant to this section to be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code or engage in the performance of any public work contract that is subject to the requirements of this chapter. For the purposes of this section, "contractor" includes a subcontractor as defined by Section 1722.1.

(a) To qualify for registration under this section, a contractor shall do all of the following:
(1) (A) Register with the Department of Industrial Relations in the manner prescribed by the department and pay an initial nonrefundable application fee of four hundred dollars ($400) to qualify for registration under this section and an annual renewal fee on or before July 1 of each year thereafter. The annual renewal fee shall be in a uniform amount set by the Director of Industrial Relations, and the initial registration and renewal fees may be adjusted no more than annually by the director to support the costs specified in Section 1771.3.

(B) Beginning June 1, 2019, a contractor may register or renew according to this subdivision in annual increments up to three years from the date of registration. Contractors who wish to do so will be required to prepay the applicable nonrefundable application or renewal fees to qualify for the number of years for which they wish to preregister.

(2) Provide evidence, disclosures, or releases as are necessary to establish all of the following:

(A) Workers' compensation coverage that meets the requirements of Division 4 (commencing with Section 3200) and includes sufficient coverage for any worker whom the contractor employs to perform work that is subject to prevailing wage requirements other than a contractor who is separately registered under this section. Coverage may be evidenced by a current and valid certificate of workers' compensation insurance or certification of self-insurance required under Section 7125 of the Business and Professions Code.

(B) If applicable, the contractor is licensed in accordance with Chapter 9 (commencing with Section 7000) of the Business and Professions Code.

(C) The contractor does not have any delinquent liability to an employee or the state for any assessment of back wages or related damages, interest, fines, or penalties pursuant to any final judgment, order, or determination by a court or any federal, state, or local administrative agency, including a confirmed arbitration award. However, for purposes of this paragraph, the contractor shall not be disqualified for any judgment, order, or determination that is under appeal, provided that the contractor has secured the payment of any amount eventually found due through a bond or other appropriate means.

(D) The contractor is not currently debarred under Section 1777.1 or under any other federal or state law providing for the debarment of contractors from public works.

(E) The contractor has not bid on a public works contract, been listed in a bid proposal, or engaged in the performance of a contract for public works without being lawfully registered in accordance with this section, within the preceding 12 months or since the effective date of the requirements set forth in subdivision (e), whichever is earlier. If a contractor is found to be in violation of the requirements of this paragraph, the period of disqualification shall be waived if both of the following are true:

(i) The contractor has not previously been found to be in violation of the requirements of this paragraph within the preceding 12 months.

(ii) The contractor pays an additional nonrefundable penalty registration fee of two thousand dollars ($2,000).

(b) Fees received pursuant to this section shall be deposited in the State Public Works Enforcement Fund established by Section 1771.3 and shall be used only for the purposes specified in that section.

(c) A contractor who fails to pay the renewal fee required under paragraph (1) of subdivision (a) on or before the expiration of any prior period of registration shall be prohibited from bidding on or engaging in the performance of any contract for public work until once again registered pursuant to this section. If the failure to pay the renewal fee was inadvertent, the contractor may renew its registration retroactively by paying an additional nonrefundable penalty renewal fee equal to the amount of the renewal fee within 90 days of the due date of the renewal fee.

(d) If, after a body awarding a contract accepts the contractor's bid or awards the contract, the work covered by the bid or contract is determined to be a public work to which Section 1771 applies, either as the result of a determination by the director pursuant to Section 1773.5 or a court decision, the requirements of this section shall not apply, subject to the following requirements:

(1) The body that awarded the contract failed, in the bid specification or in the contract documents, to identify as a public work that portion of the work that the determination or decision subsequently classifies as a public work.

(2) Within 20 days following service of notice on the awarding body of a determination by the Director of Industrial Relations pursuant to Section 1773.5 or a decision by a court that the contract was for public work as defined in this chapter, the contractor and any subcontractors are registered under this section or are replaced by a contractor or subcontractors who are registered under this section.

(3) The requirements of this section shall apply prospectively only to any subsequent bid, bid proposal, contract, or work performed after the awarding body is served with notice of the determination or decision referred to in paragraph (2).

(e) The requirements of this section shall apply to any bid proposal submitted on or after March 1, 2015, to any contract for public work, as defined in this chapter, executed on or after April 1, 2015, and to any work performed under a contract for public work on or after January 1, 2018, regardless of when the contract for public work was executed.

(f) This section does not apply to work performed on a public works project of twenty-five thousand dollars ($25,000) or less when the project is for construction, alteration, demolition, installation, or repair work or to work performed on a public works project of fifteen thousand dollars ($15,000) or less when the project is for maintenance work.
(Amended by Stats. 2017, Ch. 28, Sec. 15. (SB 96) Effective June 27, 2017.)

1771. Except for public works projects of one thousand dollars ($1,000) or less, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the public work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in this chapter, shall be paid to all workers employed on public works.
This section is applicable only to work performed under contract, and is not applicable to work carried out by a public agency with its own forces. This section is applicable to contracts let for maintenance work.

(Amended by Stats. 1981, Ch. 449, Sec. 1.)

1771.1. (a) A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

(b) Notice of the requirement described in subdivision (a) shall be included in all bid invitations and public works contracts, and a bid shall not be accepted nor any contract or subcontract entered into without proof of the contractor or subcontractor's current registration to perform public work pursuant to Section 1725.5.

(c) An inadvertent error in listing a subcontractor who is not registered pursuant to Section 1725.5 in a bid proposal shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive, provided that any of the following apply:

(1) The subcontractor is registered prior to the bid opening.

(2) Within 24 hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in subparagraph (E) of paragraph (2) of subdivision (a) of Section 1725.5.

(3) The subcontractor is replaced by another registered subcontractor pursuant to Section 4107 of the Public Contract Code.

(d) Failure by a subcontractor to be registered to perform public work as required by subdivision

(a) shall be grounds under Section 4107 of the Public Contract Code for the contractor, with the consent of the awarding authority, to substitute a subcontractor who is registered to perform public work pursuant to Section 1725.5 in place of the unregistered subcontractor.

(e) The department shall maintain on its Internet Web site a list of contractors who are currently registered to perform public work pursuant to Section 1725.5.

(f) A contract entered into with any contractor or subcontractor in violation of subdivision (a) shall be subject to cancellation, provided that a contract for public work shall not be unlawful, void, or voidable solely due to the failure of the awarding body, contractor, or any subcontractor to comply with the requirements of Section 1725.5 or this section.

(g) If the Labor Commissioner or his or her designee determines that a contractor or subcontractor engaged in the performance of any public work contract without having been registered in accordance with this section, the contractor or subcontractor shall forfeit, as a civil penalty to the state, one hundred dollars ($100) for each day of work performed in violation of the registration requirement, not to exceed an aggregate penalty of eight thousand dollars ($8,000) in addition to any penalty registration fee assessed pursuant to clause (ii) of subparagraph (E) of paragraph (2) of subdivision (a) of Section 1725.5.

(h) (1) In addition to, or in lieu of, any other penalty or sanction authorized pursuant to this chapter, a higher tiered public works contractor or subcontractor who is found to have entered into a subcontract with an unregistered lower tier subcontractor to perform any public work in violation of the requirements of Section 1725.5 or this section shall be subject to forfeiture, as a civil penalty to the state, of one hundred dollars ($100) for each day the unregistered lower tier subcontractor performs work in violation of the registration requirement, not to exceed an aggregate penalty of ten thousand dollars ($10,000).

(2) The Labor Commissioner shall use the same standards specified in subparagraph (A) of paragraph (2) of subdivision (a) of Section 1775 when determining the severity of the violation and what penalty to assess, and may waive the penalty for a first time violation that was unintentional and did not hinder the Labor Commissioner’s ability to monitor and enforce compliance with the requirements of this chapter.

(3) A higher tiered public works contractor or subcontractor shall not be liable for penalties assessed pursuant to paragraph (1) if the lower tier subcontractor’s performance is in violation of the requirements of Section 1725.5 due to the revocation of a previously approved registration.

(4) A subcontractor shall not be liable for any penalties assessed against a higher tiered public works contractor or subcontractor pursuant to paragraph (1). A higher tiered public works contractor or subcontractor may not require a lower tiered subcontractor to indemnify or otherwise be liable for any penalties pursuant to paragraph (1).

(i) The Labor Commissioner or his or her designee shall issue a civil wage and penalty assessment, in accordance with the provisions of Section 1741, upon determination of penalties pursuant to subdivision (g) and subparagraph (B) of paragraph (1) of subdivision (h). Review of a civil wage and penalty assessment issued under this subdivision may be requested in accordance with the provisions of Section 1742. The regulations of the Director of Industrial Relations, which govern proceedings for review of civil wage and penalty assessments and the withholding of contract payments under Article 1 (commencing with Section 1720) and Article 2 (commencing with Section 1770), shall apply.

(j) (1) Where a contractor or subcontractor engages in the performance of any public work contract without having been registered in violation of the requirements of Section 1725.5 or this section, the Labor Commissioner shall issue and serve a stop order prohibiting the use of the unregistered contractor or the unregistered subcontractor on all public works until the unregistered contractor or unregistered subcontractor is registered. The stop order shall not apply to work by registered contractors or subcontractors on the public work.

(2) A stop order may be personally served upon the contractor or subcontractor by either of the following methods:

(A) Manual delivery of the order to the contractor or subcontractor personally.

(B) Leaving signed copies of the order with the person who is apparently in charge at the site of the public work and by thereafter mailing copies of the order by first class mail, postage prepaid to the contractor or subcontractor at the address on file with either of the following:

(i) The Contractors' State License Board.

(ii) The Secretary of State.

(3) The stop order shall be effective immediately upon service and shall be subject to appeal by the party contracting with the unregistered contractor or subcontractor, by the unregistered contractor or subcontractor, or both. The appeal, hearing, and any further review of the hearing decision shall be governed by the procedures, time limits, and other requirements specified in subdivision (a) of Section 238.1.

(k) Failure of a contractor or subcontractor, owner, director, officer, or managing agent of the contractor or subcontractor to observe a stop order issued and served upon him or her pursuant to subdivision (j) is guilty of a misdemeanor punishable by imprisonment in county jail not exceeding 60 days or by a fine not exceeding ten thousand dollars ($10,000), or both.

(l) This section shall apply to any bid proposal submitted on or after March 1, 2015, and any contract for public work entered into on or after April 1, 2015. This section shall also apply to the performance of any public work, as defined in this chapter, on or after January 1, 2018, regardless of when the contract for public work was entered.

(m) Penalties received pursuant to this section shall be deposited in the State Public Works Enforcement Fund established by Section 1771.3 and shall be used only for the purposes specified in that section.

(n) This section shall not apply to work performed on a public works project of twenty-five thousand dollars ($25,000) or less when the project is for construction, alteration, demolition, installation, or repair work or to work performed on a public works project of fifteen thousand dollars ($15,000) or less when the project is for maintenance work.
(Amended by Stats. 2018, Ch. 455, Sec. 2. (SB 877) Effective September 17, 2018.)

1775. (a) (1) The contractor and any subcontractor under the contractor shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit not more than two hundred dollars ($200) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rates as determined by the director for the work or craft in which the worker is employed for any public work done under the contract by the contractor or, except as provided in subdivision (b), by any subcontractor under the contractor.

(2) (A) The amount of the penalty shall be determined by the Labor Commissioner based on consideration of both of the following:

(i) Whether the failure of the contractor or subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the contractor or subcontractor.

(ii) Whether the contractor or subcontractor has a prior record of failing to meet its prevailing wage obligations.

(B) (i) The penalty may not be less than forty dollars ($40) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, unless the failure of the contractor or subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the contractor or subcontractor.

(ii) The penalty may not be less than eighty dollars ($80) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the contractor or subcontractor has been assessed penalties within the previous three years for failing to meet its prevailing wage obligations on a separate contract, unless those penalties were subsequently withdrawn or overturned.

(iii) The penalty may not be less than one hundred twenty dollars ($120) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Labor Commissioner determines that the violation was willful, as defined in subdivision (c) of Section 1777.1.

(C) If the amount due under this section is collected from the contractor or subcontractor, any outstanding wage claim under Chapter 1 (commencing with Section 1720) of Part 7 of Division 2 against that contractor or subcontractor shall be satisfied before applying that amount to the penalty imposed on that contractor or subcontractor pursuant to this section.

(D) The determination of the Labor Commissioner as to the amount of the penalty shall be reviewable only for abuse of discretion.

(E) The difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the contractor or subcontractor, and the body awarding the contract shall cause to be inserted in the contract a stipulation that this section will be complied with.

(b) If a worker employed by a subcontractor on a public works project is not paid the general prevailing rate of per diem wages by the subcontractor, the prime contractor of the project is not liable for any penalties under subdivision (a) unless the prime contractor had knowledge of that failure of the subcontractor to pay the specified prevailing rate of wages to those workers or unless the prime contractor fails to comply with all of the following requirements:

(1) The contract executed between the contractor and the subcontractor for the performance of work on the public works project shall include a copy of the provisions of this section and Sections **1771, 1776, 1777.5, 1813, and 1815.**

(2) The contractor shall monitor the payment of the specified general prevailing rate of per diem wages by the subcontractor to the employees, by periodic review of the certified payroll records of the subcontractor.

(3) Upon becoming aware of the failure of the subcontractor to pay his or her workers the specified prevailing rate of wages, the contractor shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subcontractor for work performed on the public works project.

(4) Prior to making final payment to the subcontractor for work performed on the public works project, the contractor shall obtain an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the specified general prevailing rate of per diem wages to his or her employees on the public works project and any amounts due pursuant to Section 1813.

(c) The Division of Labor Standards Enforcement shall notify the contractor on a public works project within 15 days of the receipt by the Division of Labor Standards Enforcement of a complaint of the failure of a subcontractor on that public works project to pay workers the general prevailing rate of per diem wages.
(Amended by Stats. 2011, Ch. 677, Sec. 1. (AB 551) Effective January 1, 2012.)

1776 (a) Each contractor and subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:

(1) The information contained in the payroll record is true and correct.

(2) The employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.

(b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the contractor on the following basis:

(1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.

(2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the body awarding the contract and the Division of Labor Standards Enforcement of the Department of Industrial Relations.

(3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the body awarding the contract or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the contractor, subcontractors, and the entity through which the request was made. The public may not be given access to the records at the principal office of the contractor.

(C) Unless required to be furnished directly to the Labor Commissioner in accordance with paragraph (3) of subdivision (a) of Section 1771.4, the certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division. The payroll records may consist of printouts of payroll data that are maintained as computer records, if the printouts contain the same information as the forms provided by the division and the printouts are verified in the manner specified in subdivision (a).

(d) A contractor or subcontractor shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested the records within 10 days after receipt of a written request.

(e) Except as provided in subdivision (f), any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body or the Division of Labor Standards Enforcement shall be marked or obliterated to prevent disclosure of an individual's name, address, and social security number. The name and address of the contractor awarded the contract or the subcontractor performing the contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a multiemployer Taft-Hartley trust fund (29 U.S.C. Sec. 186(c)(5)) that requests the records for the purposes of allocating contributions to participants shall be marked or obliterated only to prevent disclosure of an individual's full social security number, but shall provide the last four digits of the social security number. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (29 U.S.C. Sec. 175a) shall be marked or obliterated only to prevent disclosure of an individual's social security number.

(f) (1) Notwithstanding any other provision of law, agencies that are included in the Joint Enforcement Strike Force on the Underground Economy established pursuant to Section 329 of the Unemployment Insurance Code and other law enforcement agencies investigating violations of law shall, upon request, be provided nonredacted copies of certified payroll records. Any copies of records or certified payroll made available for inspection and furnished upon request to the public by an agency included in the Joint Enforcement Strike Force on the Underground Economy or to a law enforcement agency investigating a violation of law shall be marked or redacted to prevent disclosure of an individual's name, address, and social security number.

(2) An employer shall not be liable for damages in a civil action for any reasonable act or omission taken in good faith in compliance with this subdivision.

(g) The contractor shall inform the body awarding the contract of the location of the records enumerated under subdivision (a), including the street address, city, and county, and shall, within five working days, provide a notice of a change of location and address.

(h) The contractor or subcontractor has 10 days in which to comply, subsequent to receipt of a written notice requesting the records enumerated in subdivision (a). In the event that the contractor or subcontractor fails to comply within the 10-day period, he or she shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit one hundred dollars ($100) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. A contractor is not subject to a penalty assessment pursuant to this section due to the failure of a subcontractor to comply with this section.

(i) The body awarding the contract shall cause to be inserted in the contract stipulations to effectuate this section.

(j) The director shall adopt rules consistent with the California Public Records Act (Chapter 3.5 (commencing with Section 6250) of Division 7 of Title 1 of the Government Code) and the Information Practices Act of 1977 (Title 1.8 (commencing with Section 1798) of Part 4 of Division 3 of the Civil Code) governing the release of these records, including the establishment of reasonable fees to be charged for reproducing copies of records required by this section.
(Amended by Stats. 2014, Ch. 28, Sec. 71. (SB 854) Effective June 20, 2014.)

1777.5. (a) (1) This chapter does not prevent the employment upon public works of properly registered apprentices who are active participants in an approved apprenticeship program.

(2) For purposes of this chapter, “apprenticeship program” means a program under the jurisdiction of the California Apprenticeship Council established pursuant to Section 3070.

(b) (1) Every apprentice employed upon public works shall be paid the prevailing rate of per diem wages for apprentices in the trade to which he or she is registered and shall be employed only at the work of the craft or trade to which he or she is registered.

(2) Unless otherwise provided by a collective bargaining agreement, when a contractor requests the dispatch of an apprentice pursuant to this section to perform work on a public works project and requires the apprentice to fill out an application or undergo testing, training, an examination, or other preemployment process as a condition of employment, the apprentice shall be paid for the time spent on the required preemployment activity, including travel time to and from the required activity, if any, at the prevailing rate of per diem wages for apprentices in the trade to which he or she is registered. Unless otherwise provided by a collective bargaining agreement, a contractor is not required to compensate an apprentice for the time spent on preemployment activities if the apprentice is required to take a preemployment drug or alcohol test and he or she fails to pass that test.

(c) Only apprentices, as defined in Section 3077, who are in training under apprenticeship standards that have been approved by the Chief of the Division of Apprenticeship Standards and who are parties to written apprentice agreements under Chapter 4 (commencing with Section 3070) of Division 3 are eligible to be employed at the apprentice wage rate on public works. The employment and training of each apprentice shall be in accordance with either of the following:

(1) The apprenticeship standards and apprentice agreements under which he or she is training.

(2) The rules and regulations of the California Apprenticeship Council.

(d) If the contractor to whom the contract is awarded by the state or any political subdivision, in performing any of the work under the contract, employs workers in any apprenticeable craft or trade, the contractor shall employ apprentices in at least the ratio set forth in this section and may apply to any apprenticeship program in the craft or trade that can provide apprentices to the site of the public work for a certificate approving the contractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected. However, the decision of the apprenticeship program to approve or deny a certificate shall be subject to review by the Administrator of Apprenticeship. The apprenticeship program or programs, upon approving the contractor, shall arrange for the dispatch of apprentices to the contractor. A contractor covered by an apprenticeship program's standards shall not be required to submit any additional application in order to include additional public works contracts under that program. "Apprenticeable craft or trade," as used in this section, means a craft or trade determined as an apprenticeable occupation in accordance with rules and regulations prescribed by the California Apprenticeship Council. As used in this section, "contractor" includes any subcontractor under a contractor who performs any public works not excluded by subdivision (o).

(e) Before commencing work on a contract for public works, every contractor shall submit contract award information to an applicable apprenticeship program that can supply apprentices to the site of the public work. The information submitted shall include an estimate of journeyman hours to be performed under the contract, the number of apprentices proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to the awarding body, if requested by the awarding body. Within 60 days after concluding work on the contract, each contractor and subcontractor shall submit to the awarding body, if requested, and to the apprenticeship program a verified statement of the journeyman and apprentice hours performed on the contract. The information under this subdivision shall be public. The apprenticeship programs shall retain this information for 12 months.

(f) The apprenticeship program supplying apprentices to the area of the site of the public work shall ensure equal employment and affirmative action in apprenticeship for women and minorities.

(g) The ratio of work performed by apprentices to journeymen employed in a particular craft or trade on the public work may be no higher than the ratio stipulated in the apprenticeship standards under which the apprenticeship program operates if the contractor agrees to be bound by those stndards. However, except as otherwise provided in this section, in no case shall the ratio be less than one hour of apprentice work for every five hours of journeyman work.

(h) This ratio of apprentice work to journeyman work shall apply during any day or portion of a day when any journeyman is employed at the jobsite and shall be computed on the basis of the hours worked during the day by journeymen so employed. Any work performed by a journeyman in excess of eight hours per day or 40 hours per week shall not be used to calculate the ratio. The contractor shall employ apprentices for the number of hours computed as above before the end of the contract or, in the case of a subcontractor, before the end of the subcontract. However, the contractor shall endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the jobsite. When an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Administrator of Apprenticeship, upon application of an apprenticeship program, may order a minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification.

(i) A contractor covered by this section who has agreed to be covered by an apprenticeship program's standards upon the issuance of the approval certificate, or who has been previously approved for an apprenticeship program in the craft or trade, shall employ the number of apprentices or the ratio of apprentices to journeymen stipulated in the applicable apprenticeship standards, but in no event less than the 1-to-5 ratio required by subdivision (g).

(j) Upon proper showing by a contractor that he or she employs apprentices in a particular craft or trade in the state on all of his or her contracts on an annual average of not less than one hour of apprentice work for every five hours of labor performed by journeymen, the Administrator of Apprenticeship may grant a certificate exempting the contractor from the 1-to-5 hourly ratio, as set forth in this section for that craft or trade.

(k) An apprenticeship program has the discretion to grant to a participating contractor or contractor association a certificate, which shall be subject to the approval of the Administrator of Apprenticeship, exempting the contractor from the 1-to-5 ratio set forth in this section when it finds that any one of the following conditions is met:

(1) Unemployment for the previous three-month period in the area exceeds an average of 15 percent.

(2) The number of apprentices in training in the area exceeds a ratio of 1 to 5.

(3) There is a showing that the apprenticeable craft or trade is replacing at least one-thirtieth of its journeymen annually through apprenticeship training, either on a statewide basis or on a local basis.

(4) Assignment of an apprentice to any work performed under a public works contract would create a condition that would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large, or the specific task to which the apprentice is to be assigned is of a nature that training cannot be provided by a journeyman.

(l) If an exemption is granted pursuant to subdivision (k) to an organization that represents contractors in a specific trade from the 1-to-5 ratio on a local or statewide basis, the member contractors shall not be required to submit individual applications for approval to local joint apprenticeship committees, if they are already covered by the local apprenticeship standards.

(m) (1) A contractor to whom a contract is awarded, who, in performing any of the work under the contract, employs journeymen or apprentices in any apprenticeable craft or trade shall contribute to the California Apprenticeship Council the same amount that the director determines is the prevailing amount of apprenticeship training contributions in the area of the public works site. A contractor may take as a credit for payments to the council any amounts paid by the contractor to an approved apprenticeship program that can supply apprentices to the site of the public works project. The contractor may add the amount of the contributions in computing his or her bid for the contract.

(2) (A) At the conclusion of the 2002–03 fiscal year, and each fiscal year thereafter, the California Apprenticeship Council shall distribute training contributions received by the council under this subdivision, less the expenses of the Department of Industrial Relations for administering this subdivision, by making grants to approved apprenticeship programs for the purpose of training apprentices. The grant funds shall be distributed as follows:

(i) If there is an approved multiemployer apprenticeship program serving the same craft or trade and geographic area for which the training contributions were made to the council, a grant to that program shall be made.

(ii) If there are two or more approved multiemployer apprenticeship programs serving the same craft or trade and county for which the training contributions were made to the council, the grant shall be divided among those programs based on the number of apprentices from that county registered in each program.

(iii) All training contributions not distributed under clauses (i) and (ii) shall be used to defray the future expenses of the Department of Industrial Relations for the administration and enforcement of apprenticeship standards and requirements under this code.

(B) An apprenticeship program shall only be eligible to receive grant funds pursuant to this subdivision if the apprenticeship program agrees, prior to the receipt of any grant funds, to keep adequate records that document the expenditure of grant funds and to make all records available to the Department of Industrial Relations so that the Department of Industrial Relations is able to verify that grant funds were used solely for training apprentices. For purposes of this subparagraph, adequate records include, but are not limited to, invoices, receipts, and canceled checks that account for the expenditure of grant funds. This subparagraph shall not be deemed to require an apprenticeship program to provide the Department of Industrial Relations with more documentation than is necessary to verify the appropriate expenditure of grant funds made pursuant to this subdivision.

(C) The Department of Industrial Relations shall verify that grants made pursuant to this subdivision are used solely to fund training apprentices. If an apprenticeship program is unable to demonstrate how grant funds are expended or if an apprenticeship program is found to be using grant funds for purposes other than training apprentices, then the apprenticeship program shall not be eligible to receive any future grant pursuant to this subdivision and the Department of Industrial Relations may initiate the process to rescind the registration of the apprenticeship program.

(3) All training contributions received pursuant to this subdivision shall be deposited in the Apprenticeship Training Contribution Fund, which is hereby created in the State Treasury. Upon appropriation by the Legislature, all moneys in the Apprenticeship Training Contribution Fund shall be used for the purpose of carrying out this subdivision and to pay the expenses of the Department of Industrial Relations.

(n) The body awarding the contract shall cause to be inserted in the contract stipulations to effectuate this section. The stipulations shall fix the responsibility of compliance with this section for all apprenticeable occupations with the prime contractor.

(o) This section does not apply to contracts of general contractors or to contracts of specialty contractors not bidding for work through a general or prime contractor when the contracts of general contractors or those specialty contractors involve less than thirty thousand dollars ($30,000).

(p) An awarding body that implements an approved labor compliance program in accordance with subdivision (b) of Section 1771.5 may, with the approval of the director, assist in the enforcement of this section under the terms and conditions prescribed by the director. *(Amended by Stats. 2018, Ch. 704, Sec. 17. (AB 235) Effective September 22, 2018.)*

1813. The contractor or subcontractor shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit twenty-five dollars ($25) for each worker employed in the execution of the contract by the respective contractor or subcontractor for each calendar day during which the worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of this article. In awarding any contract for public work, the awarding body shall cause to be inserted in the contract a stipulation to this effect. The awarding body shall take cognizance of all violations of this article committed in the course of the execution of the contract, and shall report them to the Division of Labor Standards Enforcement.
(Amended (as added by Stats. 1997, Ch. 757, Sec. 6) by Stats. 2002, Ch. 28, Sec. 3. Effective January 1, 2003.)

1815. Notwithstanding the provisions of Sections 1810 to 1814, inclusive, of this code, and notwithstanding any stipulation inserted in any contract pursuant to the requirements of said sections, work performed by employees of contractors in excess of 8 hours per day, and 40 hours during any one week, shall be permitted upon public work upon compensation for all hours worked in excess of 8 hours per day at not less than $1^1/_2$ times the basic rate of pay.
(Amended by Stats. 1963, Ch. 964.)

EXCERPTS FROM PCC 9204 JANUARY 1, 2017

EXCERPTS FROM PUBLIC CONTRACT CODE 9204

EFFECTIVE DATE JANUARY 1, 2017

Please note section 9204 of the Public Contract Code, set forth in full below. Contractor must follow the contractual dispute resolution process specified in the Ventura County Standard Specifications, which is consistent with section 9204.

* * *

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3)(A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) "Public entity" shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High–Speed Rail Authority.

(4) “Public works project” means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) “Subcontractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d)(1)(A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45–day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2)(A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public

entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a

public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2027, and as of that date is repealed, unless a later enacted statute that is enacted before January 1, 2027, deletes or extends that date.

VENTURA COUNTY STANDARD SPECIFICATIONS

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COUNTY OF VENTURA
PUBLIC WORKS AGENCY
STANDARD SPECIFICATIONS
PART 1 - GENERAL PROVISIONS

SECTION 0 - SSPWC ADOPTION AND MODIFICATIONS

0-1 STANDARD SPECIFICATIONS

Except as hereinafter provided or as modified by the Special Provisions, the provisions of Parts 2 through 5 of the 2015 edition of the Standard Specifications for Public Works Construction (referred to as SSPWC), published by BNi Building News, Los Angeles, are part of these Standard Specifications.

0-2 DELETIONS

The following portions of SSPWC are hereby deleted: Part 1 and Sections 200-1.6.2, and 301-1.4.

0-3 NUMBERING OF SECTIONS

The numbering in these modifications is compatible with the numbering in SSPWC. References to whole sections of SSPWC and these modifications are preceded by the word "Section", references to parts of sections show numbers only, such as "211-5", except at the beginning of a sentence, the word "Section" precedes the number. Standard Special Provisions, if included, are numbered as Sections 901 through 999. The Special Provisions are numbered starting with Section 1000 or higher.

Cross-references contained in SSPWC to sections deleted by 0-2 hereof shall be references to the sections of like number contained herein.

0-4 ADDITIONS

The sections that follow, either, replace sections of like number in SSPWC which were deleted in 0-2 above, modify sections of SSPWC, or add material not in SSPWC.

SECTION 1 - TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE AND SYMBOLS

1-1 GENERAL Unless otherwise stated, the words directed, required, permitted, ordered, instructed, designated, considered necessary, prescribed, approved, acceptable, satisfactory, or words of like meaning, refer to actions, expressions, and prerogatives of the Engineer.

1-2 TERMS AND DEFINITIONS

Acceptance--The formal written acceptance by the Agency of the Work which has been completed in all respects in accordance with the Plans and Specifications and any Modifications thereof.

Addendum--Written or graphic instrument issued prior to the opening of Bids which clarifies, corrects or changes the bidding or Contract Documents. The term "Addendum" shall include bulletins and all other types of written notices issued to potential bidders prior to opening of Bids.

Agency--The legal entity for which the Work is being performed.

Agreement--See Contract.

Base--A layer of specified material of planned thickness placed immediately below the pavement or surfacing.

Bid--The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work.

Bidder--Any individual, firm, partnership, corporation, or combination thereof, submitting a Bid for the Work, acting directly or through a duly authorized representative.

Board--The officer or body constituting the awarding authority of the Agency.

Bond--Bid, performance and payment bond or other instrument of security.

Cash Contract--A contract financed by means other than special assessments.

Certificate of Compliance—A written document signed and submitted by a supplier or manufacturer that certifies that the material or assembled material supplied to the Work site conforms to the requirements of the Contract Documents.

Change Order--A written order to the Contractor signed by the Agency directing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract time issued after the effective date of the Contract. A Change Order may or may not also be signed by the Contractor.

Code--The terms Government Code, Labor Code, etc. refer to codes of the State of California.

Consultant--A professional engineer, architect, landscape architect or other professional who designed the project or performed other services for the Agency on the project.

Contract--The written agreement between the Agency and the Contractor covering the Work.

Contract Documents--The Contract, Addenda, notice inviting bids, instruction to bidders; Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Contract, the Bonds, permits from jurisdictional regulatory agencies, Special Provisions, Plans, Standard Plans, Standard Specifications, Reference Specifications, Change Orders and Supplemental Agreements.

Contractor--The individual, partnership, corporation, joint venture, or other legal entity having a Contract with the Agency to perform the Work. In the case of work being done under permit issued by the Agency, the Permittee shall be construed to be the Contractor. The term "prime contractor" shall mean Contractor.

Contract Price--The total amount of money for which the Contract is awarded.

Contract Unit Price--The amount shown in the Bid for a single unit of an item of work.

County Sealer--The Sealer of Weights and Measures of the county in which the Contract is let.

Days--Days shall mean consecutive calendar days unless otherwise specified.

Daily Extra Work Reports--Reports on Agency furnished forms as required by 3-3.

Disputed Work--Work in which Agency and Contractor are in disagreement.

Due Notice--A written notification, given in due time, of a proposed action where such notification is required by the Contract to be given a specified interval of time (usually 48 hours or two Working Days) prior to the commencement of the contemplated action. Notification may be from Engineer to Contractor or from Contractor to Engineer.

Electrolier--Street light assembly complete, including foundation, standard, luminaire arm, luminaire, etc.

Engineer--The Director of Public Works Agency acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties delegated to them.

Field Directive--A written communication from the Engineer to the Contractor that does not make any Modification to the Contract Documents. It is used only to answer Contractor's questions and to provide decisions as specified in the Contract Documents.

Geotextile--Synthetic fiber used in civil engineering applications, serving the primary function of separation and filtration.

House Connection Sewer--A sewer, within a public street or right of way, proposed to connect any parcel, lot, or part of a lot with a main line sewer.

House Sewer--A sewer, wholly within private property, proposed to connect any building to a house connection sewer.

Luminaire--The lamp housing including the optical and socket assemblies (and ballast if so specified).

Major Bid Item--A single Contract item constituting 10% or more of the original Contract Price.

Mast Arm--The structural member or bracket, which, when mounted on a Standard, supports the luminaire.

Modification--Includes Change Orders and Supplemental Agreements. A Modification may only be issued after the effective date of the Contract.

Notice of Award--The written notice by the Agency to the successful Bidder stating that upon compliance by it with the required conditions, the Agency will execute the Contract.

Notice to Proceed--A written notice given by the Agency to the Contractor fixing the date on which the Contract time will start.

Owner--Same meaning as Agency.

Person--Any individual, firm, association, partnership, corporation, trust, joint venture, or other legal entity.

Plans--The drawings, profiles, cross sections, Standard Plans, working drawings, shop drawings, and supplemental drawings, or reproductions thereof, approved by the Engineer, which show the location, character, dimensions, or details of the Work.

Private Contract--Work subject to Agency inspection, control, and approval, involving private funds, not administered by the Agency.

Prompt--The briefest interval of time required for a considered reply, including time required for approval by a governing body.

Proposal--See Bid.

Reference Specifications--Those bulletins, standards, rules, methods of analysis or testing, codes, and specifications of other agencies, engineering societies, or industrial associations referred to in the Contract Documents. These refer to the latest edition, including amendments in effect and published at the time of advertising the project or issuing the permit, unless specifically referred to by edition, volume, or date.

Roadway--The portion of a street reserved for vehicular use.

Service Connection-All or any portion of the conduit cable or duct including meter, between a utility distribution line and an individual consumer

Service Lateral Connection-The interface of the House Connection Sewer with the host pipe.

Sewer--Any conduit intended for the reception and transfer of sewage and fluid industrial waste.

Shop Drawings—Drawings showing details of manufactured or assembled products proposed to be incorporated in the Work.

Special Provisions--Any provisions which supplement or modify the Standard Specifications.

Specifications--Standard Specifications, Reference Specifications, Standard Special Provisions, Special Provisions, and specifications in Change Orders or Supplemental Agreements between the Contractor and the Board.

Standard—The shaft or pole used to support street lighting luminaire, traffic signal heads, mast arms, etc.

Standard Plans--Details of standard structures, devices, or instructions referred to on the Plans or in the Specifications by title or number.

Standard Special Provisions-- Special Provisions prepared in standardized form numbered in the series 401 through 499.

Standard Specifications--Parts 1 through 6 of this document. See Section 0. References to whole sections will be preceded by the word "Section", references to parts of sections will show numbers only, such as "3-2", except at the beginning of a sentence, the word "Section" precedes the number.

State--The State of California.

State Standard Plans--Standard Plans prepared by State of California, Business and Transportation Agency, Department of Transportation.

Stipulated Unit Price--Unit prices established by Agency in the Contract Documents.

Storm Drain--Any conduit and appurtenances intended for the reception and transfer of storm water.

Street--Any road, highway, parkway, freeway, alley, walk or way.

Subbase--A layer of specified material of planned thickness between a base and the subgrade.

Subcontractor--An individual, firm or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work.

Subgrade--For roadways, that portion of the roadbed on which pavement, surfacing, base, subbase, or a layer of other material is placed. For structures, the soil prepared to support a structure.

Supervision--Supervision, where used to indicate supervision by the Engineer, shall mean the performance of obligations, and the exercise of rights, specifically imposed upon and granted to the Agency in becoming a party to the Contract. Except as specifically stated herein, supervision by the Agency shall not mean active and direct superintendence of details of the Work.

Supplemental Agreement--A written amendment of the Contract Documents signed by both parties.

Surety--See 2-4.

Utility--Tracks, overhead or underground wires, pipelines, conduits, ducts, or structures, sewers or storm drains owned, operated or maintained in or across a public right of way or private easement.

Work--That which is proposed to be constructed or done under the Contract or permit, including the furnishing of all labor, materials, equipment, and services.

Working Day--See 6-7.2 and 6.7.2.1.

Working Drawings—Drawings showing details not shown on the Plans which are required to designed by the Contractor

1-3 ABBREVIATIONS

1-3.1 General. The abbreviations herein, together with others in general use, are applicable to these Standard Specifications and to all other Contract Documents.

All abbreviations and symbols used on Plans for structural steel construction shall conform to those given by the "Manual of Steel Construction" published by the American Institute of Steel Construction, Inc.

1-3.2 Common Usage

Abbreviation	Word or Words	Abbreviation	Word or Words
Aban	Abandon	l	Liters
Aband	Abandoned	Lab	Laboratory
ABS	Acrylonitrile-butadiene-styrene	Lat	Lateral
AC	Asphalt Concrete	LD	Local depression
ACP	Asbestos cement pipe	LED	Light Emitting Diode
ADA	Americans with Disabilities Act of 1990 (Public Law 101-336, 104 Sat. 1990,42 USC 12101-12213 (as amended))	LH	Lamp hole
Alt	Alternate	LL	Live load
AmerStd	American Standard	LOL	Layout line
APC	Air Placed Concrete	Long	Longitudinal
ARAM	Asphalt Rubber Aggregate Membrane	LP	Lamp post
ARHM	Asphalt Rubber Hot Mix	LPS	Low pressure sodium (Light)
AWG	American Wire Gage (non-ferrous wire)	LS	Lump sum
B/W	Back of wall	LTS	Lime treated soil
BC	Beginning of curve	m	Meters
BCR	Beginning of curb return	Maint	Maintenance
Bdry	Boundary	Max	Maximum
BF	Bottom of footing	MC	Medium curing
BM	Bench mark	MCR	Middle of curb return
BMPs	Best Management Practices	Meas	Measure
BVC	Beginning of vertical curve	MH	Manhole, maintenance hole
C&G	Curb & Gutter	Mil Spec	Military specification
C&G	Curb and gutter	Min	Minimum
CAB	Crushed aggregate base	Misc	Miscellaneous

Abbreviation	Word or Words
CALOSHA	California Occupational Safety and Health Administration
CALTRANS	California Department of Transportation
CAP	Corrugated aluminum pipe
CB	Catch Basin
Cb	Curb
CBP	Catch Basin Connection Pipe
CBR	California Bearing Ratio
C-C	Center to center
CCFRPM	Centrifugally Cast Fiberglass Reinforced Plastic Mortar
CCR	California Code of Regulations
CCTV	Closed Circuit TV
CF	Cubic foot
CF	Curb face
CFR	Code of Federal Regulations
CFS	Cubic feet per second
CHDPE	Corrugated High Density Polyethylene
CIP	Cast iron pipe
CIPP	Cast-in-place pipe
CIPPC	Cast-in-place Concrete Pipe
CL	Clearance, center line
CLF	Chain link fence
CLSM	Controlled Low Strength Material
CMB	Crushed miscellaneous base
CMC	Cement mortar-coated
CML	Cement mortar-lined
cms	Cubic meters per second
CO	Cleanout (Sewer)
Col	Column
Conc	Concrete
Conn	Connection
Const	Construct, Construction
Coord	Coordinate
CQS	Cationic Quick-Setting
CRM	Crumb Rubber Modifier
CRS	Cationic Rapid-Setting
CSEP	Confined Space Entry Plan
CSP	Corrugated steel pipe
CSPA	Corrugated steel pipe arch
CSS	Cationic Slow-Setting
CT	California Test
CTB	Cement treated base
CV	Check valve
CY	Cubic yard
D	Depth, Load of pipe
db	Decibels
Dbl	Double
DF	Douglas Fir
Dia	Diameter
DIP	Ductile iron pipe
DL	Dead load
DT	Drain tile
Dwg	Drawing
Dwy Appr	Driveway approach
Dwy	Driveway
Ea	Each
EC	End of curve
ECR	End of curb return
EF	Each face
EG	Edge of gutter
EGL	Energy grade line
El	Elevation
ELC	Electrolier lighting conduit
ELT	Extra long ton of slurry
Eng	Engineer, Engineering
EP	Edge of pavement
Esmt	Easement
ETB	Emulsion treated base

Abbreviation	Word or Words
Mon	Monument
MSDS	Material Safety Data Sheet
Mult	Multiple
MUTCD	Manual on Uniform Traffic Control Devices
MVL	Mercury vapor light
N/A	No applicable
NRCP	Nonreinforced concrete pipe
Obs	Obsolete
oc	On center
OD	Outside diameter
OE	Outer edge
Opp	Opposite
Orig	Original
PAV	Pressure Aging Vessel
PB	Pull box
PC	Point of curvature
PCC	Point of compound curvature
PCC	Portland cement concrete
PCVC	Point of compound vertical curve
PE	Polyethylene
PG	Performance Graded
PI	Point of intersection
PL	Property line
PLI	Pounds per linear inch
PMB	Processed miscellaneous base
POC	Point on curve
POT	Point on tangent
PP	Power pole
PRC	Point of reverse curve
PRCB	Precast Reinforced Concrete Box
PRVC	Point of reverse vertical curve
PSI	Pounds per square inch
PT	Point of tangency
PVC	Polyvinyl chloride
Pvmt	Pavement
Pvt R/W	Private right of way
Q	Rate of flow in cms (CFS)
Quad	Quadrangle, Quadrant
R	Radius or Resistance value
R&O	Rock and Oil
R/W	Right of way
RA	Reclaimed Asphalt or Recycling agent
RAC	Recycled asphalt concrete
RAP	Reclaimed asphalt pavement
RBAC	Rubberized asphalt concrete
RC	Reinforced concrete or Rapid Curing
RCB	Reinforced concrete box
RCE	Registered civil engineer
RCP	Reinforced concrete pipe
RCV	Remote control valve
Ref	Reference
Reinf	Reinforced or reinforcement
Res	Reservoir
RGE	Registered geotechnical engineer
RPPCC	Reclaimed Plastic Portland Cement Concrete
RR	Railroad
RSE	Registered structural engineer
RTE	Registered traffic engineer
RTFO	Rolling Thin Film Oven
RW	Reclaimed Water
S	Slope
S/W	Sidewalk
SC	Slow curing
SCCP	Steel cylinder concrete pipe
SCNs	Supplementary Cementitious Materials
SD	Storm drain
SDR	Standard dimension ratio

Abbreviation	Word or Words
EVC	End of vertical curve
Exc	Excavation
Exist or Ex	Existing
Exp Jt	Expansion joint
F & C	Frame and cover
F & I	Furnish and install
F/W	Face of wall
Fab	Fabricate
FAS	Flashing arrow sign
FD	Floor drain
Fdn	Foundation
Fed Spec	Federal Specification
FG	Finished grade
FL	Flow line
FS	Finished surface
ft - lb	foot – pound
Ftg	footing
FW	Face of wall
Ga	Gauge
Galv	Galvanized
GG	Gap graded
GIP	Galvanized iron pipe
GL	Ground line or grade line
GM	Gas meter
GP	Guy pole
Gr	Grade
Grtg	Grating
GSP	Galvanized steel pipe
H	High or height
HB	Hose bib
HC	House connection
HDPE	High density Polyethylene
HDWL	Headwall
HGL	Hydraulic grade line
Hor, Horiz	Horizontal
Hp	Horsepower
HPG	High pressure gas
HPS	High pressure sodium (Light)
HRWRA	High Range Water Reducing Admixture
Hyd, Hydr	Hydraulic
ID	Inside diameter
Incl	Include, Including
Insp	Inspection
Inv	Invert
IP	Iron pipe
J	Joules
JC	Junction chamber
Jct	Junction
JS	Junction structure
Jt	Joint
kg	Kilograms
kPa	KiloPascals
L	Length

Abbreviation	Word or Words
SE	Sand Equivalent
Sec	Section
SF	Square foot
SG	Specific gravity
SI	International System of Units (Metric)
SLC	Service Lateral Connection
Spec	Specifications
SR	Standard ratio
SS	Sanitary sewer
SSB	Select sub-base
SSP	Structural steel plate pipe
SSPA	Structural steel plate pipe arch
St Hwy	State highway
Sta	Station
Std	Standard
Str Gr	Straight grade
Str	Straight
Struc	Structural/Structure
SW	Sidewalk
SWD	Sidewalk drain
SWPPP	Storm Water Pollution Prevention Plan
SY	Square Yard
T/W	Top of wall
Tan	Tangent
TC	Top of curb
TCP	Traffic control plan
Tel	Telephone
TF	Top of footing
Topo	Topography
Tr	Tract
Trans	Transition
TRMAC	Tire rubber modified asphalt concrete
TS	Traffic signal or transition structure
TSC	Traffic signal conduit
TSS	Traffic signal standard
TTC	Temporary traffic control
TW	Top of wall
Typ	Typical
U.S.	United States
U.S.C.	United States Code
USA	Underground Service Alert
Var	Varies, Variable
VB	Valve box
VC	Vertical curve
VCP	Vitrified clay pipe
Vert	Vertical
Vol	Volume
VTCSH	Vehicle Traffic Controls Signal Heads
W	Width or Wider
WATCH	Work Area Traffic Control Handbook
WI	Wrought iron
WM	Water meter
WPJ	Weakened plane joint
WTAT	Wet Track Abrasion Test
X Conn	Cross connection
x (as in 2x4)	by
X-Sec	Cross section

1-3.3 Institutions.

Abbreviation	Word or Words
AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGC	Associated General Contractors of America
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASHRAE	American Society of Heating, Refrigeration and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preserver's Association
AWS	American Welding Society
AWWA	American Water Works Association
CBSC	California Building Standards Commission
CRSI	Concrete Reinforcing Steel Institute
EIA	Electronic Industries Association
EPA	Environmental Protection Agency
ETL	Electrical Testing Laboratories
FCC	Federal Communications Commission
IAPMO	International Association of Plumbing and Mechanical Officials
ICC	International Code Council
IEEE	Institute of Electrical and Electronics Engineers
IMSA	International Municipal Signal Association
ITE	Institute of Traffic Engineers
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration (Department of Commerce)
RUS	Rural Utility Service
UL	Underwriters' Laboratories, Inc.
USGS	United State Geological Survey
WFCA	Western Fire Chiefs Association

1-3.4 Building Codes. The Ventura County Building Code (VCBC) and Ventura County Fire Code (VCFC) are applicable to the Work. VCBC and VCFC adopt by reference a number of uniform and national codes. Where such codes are referenced directly in the Specifications, such references shall be to the VCBC or VCFC which adopt and modify certain provisions in the referenced codes.

Abbreviation	Code	Publisher
CBC	California Building Code	CBSC
DBC	Uniform Code for Abatement of Dangerous Building	ICC
UBC	Uniform Building Code	ICC
UFC	Uniform Fire Code	ICC and WFCA
UHC	Uniform Housing Code	ICC
UMC	Uniform Mechanical Code	IAPMO
UPC	Uniform Plumbing Code	IAPMO
NEC	National Electrical Code	NFPA

1-3.5 Reference Documents.

Abbreviation	Document
HDM	Highway Design Manual, State of California, Department of Transportation, Latest Edition
MUTCD	Manual on Uniform Traffic Control Devices
SSP	Standard Plans, State of California, Department of Transportation, latest edition
SPPWC	Standard Plans for Public Works Construction, Latest edition, published by BNi Building News, Los Angeles,
SSPWC	Standard Specifications for Public Works Construction, (See Section 0-1)
SSS	Standard Specifications, State of California, Department of Transportation, latest edition
VCSS	Ventura County Standard Specifications (Division 1, Sections 0 through 10, of which this section is a part)

1-4 UNITS OF MEASURE

1-4.1 General. The International System of Units, also referred to as SI or the metric system, is the principal measurement system in these Specifications and shall be used for construction, unless otherwise stated in the Contract Documents. U. S. Standard Measure, also called U. S. Customary System, are included in parenthesis. SI units and U. S. Standard Measure in parenthesis may or may not be exactly equivalent. If U. S. Standard Measures are specified for use in the Contract Documents, then all values used for construction shall be U. S. Standard Measures shown in parentheses. However, certain material Specifications and test requirements contained herein use SI units specifically and conversions to U. S. Measures have not been included in these circumstances. When U. S. Standard Measures are not included in parentheses, the SI units shall control.

Reference is also made to ASTM E 380 for definitions of various units of the SI system and a more extensive set of conversion factors.

1-4.1.1 Units for Work. Where U. S. Standard Measure units are shown on the Plans or are specified, U. S. Standard Measure shall be used for the Work.

1-4.2 Units of Measure, Equivalents and Abbreviations

One U.S. Customary Unit	(abbreviation)	Is Equal To	#	SI Unit
mil (=0.001 in)		25.4	micrometers	(µm)
inch	(in)	25.4	millimeter	(mm)
inch	(in)	2.54	centimeter	(cm)
foot	(ft)	0.3048	meter	(m)
yard	(yd)	0.9144	meter	(m)
mile		1.6093	kilometer	(km)
square foot	(ft^2)	0.0929	square meter	(m^2)
square yard	(yd^2)	0.8361	square meter	(m^2)
cubic foot	(ft^3)	0.0283	cubic meter	(m^3)
cubic yard	(yd^3)	0.7646	cubic meter	(m^3)
acre (=43,560 ft^2)		0.4047	hectare (1ha=10,000m^2)	(ha)
gallon	(gal)	3.7854	Liter	(L)
fluid ounce	(fl. oz.)	29.5735	milliliter	(mL)
pound mass (avoirdupois)	(lbs)	0.4536	kilogram	(kg)
ounce mass	(oz)	0.02835	kilogram	(kg)
ounce mass	(oz)	28.35	grams	(g)
Ton (=2000 lb avoirdupois)		0.9072	Tonne (1 Tonne = 1000 kg)	
Poise		0.10	Pascal-second	(Pa-s)
centistoke	(cs)	1.00	square millimeter/sec.	(mm^2/s)
pound force	(lbf)	4.4482	Newton	(N)
pound per square inch	(psi)	6.8948	Kilopascal	(kPa)
pound force per foot	(lbf/ft)	14.594	Newton per meter	(N/M)
foot-pound force	(ft-lbf)	1.3558	Joules	(J)
foot-pound force per second	([ft-lbf]/s)	1.3558	Watt	(W)
part per million	(ppm)	1.00	milligram/liter	(mg/L)
Degree Fahrenheit	(°F)	0.5555	Degree Celsius	(°C)

Temperature: Celsius to Fahrenheit	Temperature: Fahrenheit to Celsius
Temperature °F = (1.8 x °C) + 32	Temperature °C = (°F - 32) / 1.8

SI Units Used in Both Systems		
Ampere (A)	second (s)	Candela (cd)
Volt (V)	decibel (db)	Lumen (lm)

Common Metric Prefixes					
kilo (k)	10^3	milli (m)	10^{-3}	nano (n)	10^{-9}
centi (c)	10^{-2}	micro (µ)	10^{-6}	pico (p)	10^{-12}

1-5 SYMBOLS

º	Degree	PL	Property line	%	Percent
'	Feet or minutes	SL	Survey line or station line	#	Number
"	Inches or seconds	CL	Center line	/	per or of (between words)
Δ	Delta, the central angle or angle between tangents			∠	Angle

SECTION 2 - SCOPE AND CONTROL OF WORK

2-1 AWARD AND EXECUTION OF CONTRACT

2-1.1 Award of Contract. The right is reserved to waive minor irregularities in the proposals and to reject any or all proposals. The award of the Contract, if it be awarded, will be to the lowest responsive, responsible Bidder, determined as provided on the Proposal Form, whose Proposal complies with all the requirements prescribed. Such award, if made, will be made within the number of Days stated in the Proposal form. If the lowest responsible Bidder refuses or fails to execute the Contract, the Agency may, within 45 additional Days, consider the next lowest Bidder to be the lowest responsive, responsible Bidder. The periods of time specified above within which the award of Contract may be made shall be subject to extension for such further period as may be agreed upon in writing by the Bidder concerned. If the Bidder's bid guarantee was in the form of a bid bond, the Bidder shall also submit a statement from the Surety that the bond has been extended for the same period.

Proposals not accompanied by a properly executed Noncollusion Affidavit required by Public Contract Code Section 7106 will be considered nonresponsive and will not be considered for award.

All bids will be compared on the basis of the quantities, amounts and unit prices, or lump sums, as shown on the Bid Proposal.

Before award, the Bidder may be required to furnish acceptable evidence of adequate capability, equipment and financial resources to adequately perform the Work. Bidders found not to be so qualified may have their bids rejected. If reasonable cause exists to believe collusion exists among Bidders, or that prices Bid are unbalanced between Bid items, any or all proposals may be rejected.

Award will not be made to a Bidder who is listed by the State Labor Commissioner as ineligible to bid, work on, or be awarded public works projects.

2-1.2 Notice of Award. Within one Day after award of Contract by the Board, the Bidder to whom Contract is awarded will be notified of award by email and telephone, or if no contact is made by telephone, then by mail. Within three business days after award of Contract, a Notice of Award will be sent, transmitting the Contract Documents to such Bidder for execution. If telephone contact is made, the Bidder may request that the Contract Documents be held in Agency's office to be picked up.

2-1.3 Execution of Contract Documents. On receipt of the Contract Documents, the Bidder shall promptly obtain the required insurance coverage, certificates of insurance, power-of-attorney and Contract bonds, execute the Contract, and transmit all required documents to the Agency.

2-1.4 Failure to Execute Documents. Should the Bidder fail to furnish Agency all required documents, properly executed, prior to the starting day of the Contract time computed as provided in 6-7.4 and stated in the Notice of Award, Agency may thereafter declare the Bidder to be in default and its Proposal guarantee forfeited.

2-1.5 Return of Proposal Guarantees. Within 10 Days after the award of the Contract, Agency will return the Proposal guarantees, other than Bidder's bonds, accompanying such of the proposals as are not to be further considered in making the award. The low and second Bidder's Proposal guarantee will be held until the Contract has been executed, after which all Proposal guarantees, except Bidders' bonds and any guarantees which have been forfeited, will be returned to the respective Bidders whose proposals they accompany.

2-2 ASSIGNMENT. No Contract or portion thereof may be assigned without consent of the Board except that the Contractor may assign money due or which will accrue to it under the Contract. If given written notice, such assignment will be recognized by the Board to the extent permitted by law, but any assignment of money shall be subject to all proper withholdings in favor of the Agency and to all deductions provided for in the Contract. All money withheld, whether assigned or not, shall be subject to being used by the Agency for completion of the Work, should the Contractor be in default.

2-3 SUBCONTRACTS.

2-3.1 General. Each Bidder shall comply with the Chapter of the Public Contract Code including Sections 4100 through 4113. The following excerpts or summaries of some of the requirements of that Chapter are included below for information.

The Bidder shall set forth in the Bid, as provided in 4104:

"(a) (1) The name, the location of the place of business, and the California contractor license number of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent of the prime contractor's total bid or ten thousand dollars ($10,000), whichever is greater.

(2) An inadvertent error in listing the California contractor license number provided pursuant to paragraph (1) shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected contractor's license number is submitted to the public entity by the prime contractor within 24 hours after the bid opening and provided the corrected contractor's license number corresponds to the submitted name and location for that subcontractor."

If the Contractor fails to specify a Subcontractor, or specifies more than one Subcontractor for the same portion of the Work to be performed under the Contract (in excess of one-half of 1 percent of the Contractor's total bid), the Contractor shall be qualified to perform that portion itself, and shall perform that portion itself except as otherwise provided in the Code.

Except as provided in Section 4107, no prime contractor, whose Bid is accepted, shall substitute any person or Subcontractor in place of the Subcontractor listed in the original bid other than for causes and by procedures established in Section 4107.5 which provides procedures to correct a clerical error in the listing of a Subcontractor.

Section 4110 provides that a Contractor violating any of the provisions of the Chapter violates the Contract and the Board may exercise the option either to cancel the Contract or assess the Contractor a penalty in an amount of not more than 10 percent of the subcontract involved, after a public hearing.

2-3.1.1 Use of Debarred Subcontractors Prohibited. The Contractor is prohibited from performing work using a Subcontractor who is listed by the State Labor Commissioner as ineligible to work on public works projects.

2-3.2 Additional Responsibilities. The Contractor shall give personal attention to the fulfillment of the Contract and shall keep the Work under its control.

Except where the required Contractor's License Class is "B", the Contractor shall perform, with its own organization, Contract work amounting to at least 50 percent of the Contract Price except that any designated "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the Contract Price before computing the amount required to be performed by the Contractor with its own organization. "Specialty Items" will be identified by the Agency in the Bid or Proposal with an "[S]". Where an entire item is subcontracted, the value of work subcontracted will be based on the Contract Unit Price. This will be determined from information submitted by the Contractor, and subject to approval by the Engineer.

Before the work of any Subcontractor is started, the Contractor shall submit to the Engineer for approval a written statement showing the work to be subcontracted giving the name, contractor license number, registration with the Department of Industrial Relations, and business of each Subcontractor and description and value of each portion of work to be subcontracted.

2-3.3 Status of Subcontractors. Subcontractors shall be considered employees of the Contractor, and the Contractor shall be responsible for their work.

2-3.3.1 Subcontracts. The Contractor shall incorporate into all subcontracts, and the Subcontractor shall incorporate into all lower tier subcontracts, all of the Plans and Specifications which are part of the Contract between the Contractor and the Agency.

2-3.3.2 Contractor Responsible. The Contractor is responsible for properly performing and completing all Work required by the Contract whether or not it employs subcontractors for certain portions of the Work. It shall coordinate the sequence and timing of its efforts and that of its subcontractors to insure the proper and timely completion of the Work.

2-3.3.3 Specialty Contractors. Where a specialty Contractor's license is required by law or by the Specifications in order to perform certain portions of the Work, the Contractor may perform such portion with its own forces if it holds the proper license. Otherwise, it shall employ a properly licensed subcontractor to perform that portion of the Work. Such requirement to employ a subcontractor does not modify the other requirements of 2-3.

2-4 CONTRACT BONDS. Before execution of the Contract by the Agency, the Bidder shall file surety bonds with the Agency to be approved by the Board in the amounts and for the purposes noted below. Bonds issued by a Surety who is listed in the latest version of U.S. Department of Treasury Circular 570, who is authorized to issue bonds in California, and whose bonding limitation shown in said circular is sufficient to provide bonds in the amount required by the Contract shall be deemed to be approved unless specifically rejected by the Agency. Bonds from all other sureties shall be accompanied by all of the documents enumerated in Code of Civil Procedure 995.660(a). The Bidder shall pay all bond premiums, costs, and incidentals.

Each bond shall incorporate, by reference, the Contract and be signed by both the Bidder and Surety and the signature of the authorized agent of the Surety shall be notarized.

The Bidder shall provide two good and sufficient surety bonds. The "Payment Bond" (Material and Labor Bond) shall be for not less than 100 percent of the Contract Price, to satisfy claims of material suppliers and mechanics and laborers employed by it on the Work. The bond shall be maintained by the Contractor in full force and effect until the Work is accepted by the Agency, and until all claims for materials and labor are paid, and shall otherwise comply with the Civil Code.

The "Performance Bond" shall be for 100 percent of the Contract Price to guaranty faithful performance of all Work, within the time prescribed, in a manner satisfactory to the Agency, and that all materials and workmanship will be free from original or developed defects. The bond must remain in effect until the end of the warranty period set forth in 6.8-2.

Should any bond become insufficient, the Contractor shall renew the bond within 10 Days after receiving notice from the Agency.

Should any Surety at any time be unsatisfactory to the Board, notice will be given the Contractor to that effect. No further payments shall be deemed due or will be made under the Contract until a new Surety shall qualify and be accepted by the Board.

Changes in the Work, or extensions of time, made pursuant to the Contract, shall in no way release the Contractor or Surety from its obligations. Notice of such changes or extensions shall be waived by the Surety.

2-4.1 Bond Forms. Bonds shall be on forms furnished by Agency.

2-5 PLANS AND SPECIFICATIONS

2-5.1 General. The Contractor shall keep at the work site a copy of the Plans and Specifications, to which the Engineer shall have access at all times.

The Plans, Specifications, and other Contract Documents shall govern the Work. The Contract Documents are intended to be complementary and cooperative. Anything specified in the Specifications and not shown on the Plans, or shown on the Plans and not specified in the Specifications, shall be as though shown or specified in both.

The Plans shall be supplemented by such working drawings and shop drawings as are necessary to adequately control the Work.

The Contractor shall ascertain the existence of any conditions affecting the cost of the Work through reasonable examination of the work site prior to submitting the Bid..

Existing improvements visible at the work site, for which no specific disposition is made on the Plans, but which interfere with the completion of the Work, shall be removed and disposed of by the Contractor.

The Contractor shall, upon discovering any error or omission in the Plans or Specifications, immediately call it to the attention of the Engineer.

2-5.1.1 Specifications Captions. Captions accompanying specification parts, sections and paragraphs are for convenience of reference only and do not limit the content of such part, section or paragraph.

The division of the Plans into parts and the division of the Specifications into divisions and sections are for the ease of reference only and does not imply the division of work between trades or subcontractors.

2-5.2 Precedence of Contract Documents. If there is a conflict between any of the Contract Documents, the document highest in precedence shall control. The precedence shall be as follows:

1) Permits issued by jurisdictional regulatory agencies.
2) Change Orders and Supplemental Agreements; whichever occurs last.
3) Contract/Agreement.
4) Addenda.
5) Bid/Proposal.
6) Special Provisions.
7) Plans.
8) Standard Plans.
9) Standard Specifications.
10) Reference Specifications.

Detail drawings shall take precedence over general drawings.

2-5.3 Shop Drawings, Working Drawings, and Submittals.

2-5.3.1 General. Submittals shall be provided, at the Contractor's expense, as required in 2-5.3.2, 2-5.3.3 and 2-5.3.4, when required by the Plans or Special Provisions, or when requested by the Engineer.

Materials shall neither be furnished nor fabricated, nor shall any work for which submittals are required be performed, before the required submittals have been reviewed and accepted by the Engineer. Neither review nor acceptance of submittals by the Engineer shall relieve the Contractor from responsibility for errors, omissions, or deviations from the Contract Documents, unless such deviations were specifically called to the attention of the Engineer in the letter of transmittal. The Contractor shall be responsible for the correctness of the submittals.

The Contractor shall allow a minimum of 20 working days for review of submittals unless otherwise specified in the Special Provisions. Each submittal shall be accompanied by a letter of transmittal.

2-5.3.2 Working Drawings. Working drawings shall be of a size and scale to clearly show all necessary details.

Six copies and one reproducible shall be submitted. If no revisions are required, 3 of the copies will be returned to the Contractor. If revisions are required, the Engineer will return one copy along with the reproducible for resubmission. Upon acceptance, the Engineer will return 2 of the copies to the Contractor and retain the remaining copies and the reproducible.

Working drawings are required in the following subsections:

TABLE 2-5.3.2 (A)

Item	Section Number	Title	Subject
1	7-8.5.2	Sanitary Sewers	Sewage Bypass and Pumping
2	7.8.6.3	Water Pollution Control	Storm Water Pollution Prevention Plan
3	7-8.6.6	Water Pollution Control	Dewatering Plan
4	7-10.2.2	Work Area Traffic Control	Traffic Control Plan
5	7-10.4..2.2	Safety	Trench Shoring
6	207-8.4	Joints	Vitrified Clay Pipe
7	207-10.2.1	General	Fabricated Steel Pipe
8	300-3.2	Cofferdams	Structure Excavation & Backfill
9	303-1.6.1	General	Falsework
10	303-1.7.1	General	Placing Reinforcement
11	303-3.1	General	Prestressed Concrete Construction
12	304-1.1.1	Shop Drawings	Structural Steel
13	304-1.1.2	Falsework Plans	Structural Steel
14	304-2.1	General	Metal Hand Railings
15	306-2.1	General	Jacking Operations
16	306-3.1	General	Tunneling Operations
17	306-3.4	Tunnel Supports	Tunneling Operations
18	306-6	Remodeling Existing Sewer Facilities	Polyethylene Liner Installation
19	306-8	Microtunneling	Microtunneling Operations

Working drawings listed above as Items 4, 5, 8, 9, 11, 12, 13, 15 and 18 shall be prepared by a Civil or Structural Engineer registered by the State of California.

2-5.3.3 Shop Drawings. Shop drawings are drawings showing details of manufactured or assembled products proposed to be incorporated into the Work. Shop drawings required shall be as specified in the Special Provisions.

2-5.3.4 Supporting Information. Supporting information is information required by the Specifications for the purposes of administration of the Contract, analysis for verification of conformance with the Specifications, the operation and maintenance of a manufactured product or system to be constructed as part of the Work, and other information as may be required by the Engineer. Six copies of the supporting information shall be submitted to the Engineer prior to the start of the Work unless otherwise specified in the Special Provisions or directed by the Engineer. Supporting information for systems shall be bound together and include all manufactured items for the system. If resubmittal is not required, three copies will be returned to the Contractor. Supporting information shall consist of the following and is required unless otherwise specified in the Special Provisions:

1) List of Subcontractors per 2-3.2.
2) List of Materials per 4-1.4.
3) Certificates of Compliance per 4-1.5.
4) Construction Schedule per 6-1.
5) Spill Prevention and Emergency Response Plan per 7-8.5.3
6) Confined Space Entry Program per 7-10.4.5.1
7) Lean concrete base mix designs per 200-4
8) Concrete mix designs per 201-1.1.
9) Asphalt concrete mix designs per 203-6.1.
10) Pipeline layout diagrams per 207-2.1
11) Equipment and materials list per 307-1
12) Controller cabinet wiring diagrams per 307-17.2.2
13) Data, including, but not limited to, catalog sheets, manufacturer's brochures, technical bulletins, specifications, diagrams, product samples, and other information necessary to describe a system, product or item. This information is required for irrigation systems, street lighting systems, and traffic signals, and may also be required for any product, manufactured item, or system.

2-5.4 Record Drawings. The Contractor shall prepare and maintain a set of prints in the Engineer's Field Office on which the locations and description of all plumbing, mechanical, and electrical facilities, which were not detailed fully on the Plans, are marked in colored pencil. Such prints shall also indicate any authorized changes from the original Plans. Such prints shall be furnished to the Engineer before final Acceptance of the Work.

2-6 WORK TO BE DONE. The Contractor shall perform all work necessary to complete the Contract in a satisfactory manner. Unless otherwise provided, it shall furnish all materials, equipment, tools, labor and incidentals necessary to complete the Work.

All work under the Contract shall be performed in accordance with the highest standards prevailing in the trades unless otherwise specified on the Plans or in the Special Provisions. Unless otherwise specified, it is the intent that the Contractor will construct a complete facility ready for use.

2-6.1 Manufacturer's Recommendations. Where the manufacturer of any materials or equipment provides written recommendations or instructions for its use or method of installation (including labels, tags, manuals, or trade literature), such recommendations or instructions shall be complied with except where the Contract Documents specifically require deviations.

2-6.2 Testing of Installed Components. Where the specifications provide that any component of the Work is to be tested, calibrated or adjusted during or after installation, such testing shall be performed by a qualified firm, approved by the Engineer. The firm performing the testing or calibration shall be employed by and paid for by the Contractor.

2-6.3 Training of Agency Personnel. Where the specifications provide for training of Agency personnel in the use or maintenance of any component of the Work, the Contractor shall arrange for and pay for competent personnel to perform the training. Contractor shall schedule the training with the Engineer.

2-7 SUBSURFACE DATA. All soil and test hole data, groundwater elevations, and soil analyses shown on the Plans or included in the Specifications apply only at the location of the test holes and to the depths shown. Soil test reports for test holes which have been drilled are available for inspection at the office of the Engineer. Additional subsurface exploration may be performed by Bidders or the Contractor at their own expense.

The indicated groundwater elevation is that existing at the date specified in the data. It is the Contractor's responsibility to determine and allow for the groundwater elevation on the date the Work is performed. A difference in groundwater elevation between what is shown in soil boring logs and what is actually encountered during construction will not be considered as a basis for Extra Work per 3-3.

Opinions, recommendations or conclusions contained in any soils report, soil boring logs, subsurface materials investigation, geological report or other similar studies, tests or reports, prepared for the Agency, are not a part of the Contract. Contractor shall be responsible for forming its own opinions and conclusions from the facts set forth in such reports.

2-8 RIGHTS-OF-WAY. Rights-of-way, easements or rights-of-entry for the Work will be provided by the Agency. Unless otherwise provided, the Contractor shall make arrangements, pay for, and assume all responsibility for acquiring, using, and disposing of additional work areas and facilities temporarily required. The Contractor shall indemnify and hold the Agency harmless from all claims for damages caused by such actions.

2-9 SURVEYING

2-9.1 Permanent Survey Markers. The Contractor shall notify the Engineer at least 7 Days before starting work to allow for the preservation of survey monuments, lot stakes (tagged), and bench marks. The Engineer, or the owner at its cost, shall file a Corner Record Form referencing survey monuments subject to disturbance in the Office of the County Surveyor prior to the start of construction and also prior to the completion of construction for the replacement of survey monuments. The Contractor shall not disturb survey monuments, lot stakes (tagged), or bench marks without the consent of the Engineer or the owner on Private Contracts. The Contractor shall bear the expense of replacing any that may be disturbed without permission. Replacement shall be done only under the direction of the Engineer by a Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state.

When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument is located, the Contractor shall adjust the monument cover to the new grade within 7 Days of finished paving unless otherwise specified.

2-9.2 Survey Service. The Engineer will set only the horizontal and vertical control survey points shown on the Plans. These will be set prior to the commencement of construction. The Contractor shall preserve these points as well as any other surveys established by the Engineer for use by the Contractor for the duration of their usefulness. If any survey points established by Engineer are lost or disturbed and need to be replaced, such replacement shall be by the Engineer at the expense of the Contractor. The Contractor shall employ engineers or surveyors to perform adequate surveys and staking necessary to construct the Work to the lines, elevations and grades shown on the Plans and for the Engineer's use in checking such work. Copies of the field notes or diagrams used in setting stakes shall be promptly furnished to the Engineer.

2-9.2.1 Open Areas. Where dimensions are not given on the Plans for parking lots, landscaped areas or graded areas, distances shall be scaled. Unless otherwise indicated, straight grades and smooth vertical curves shall be set between indicated elevations. Finished surfaces shall be sloped to drain in order to eliminate ponding of water.

2-9.2.2 Utilities. Section 5-5.1 requires the Contractor's cooperation during the relocation of utilities, which may require the setting of lines and grades when needed by utility owners performing relocations.

2-9.3 Contractor's Surveys. Surveying by private engineers and surveyors on the Work shall conform to the quality and practice required by the Engineer.

2-9.3.1 Errors in Surveys. The Contractor is responsible for the accuracy of all surveys except those performed by the Engineer. To assure that a survey point set by the Engineer has not been disturbed since it was set and that it was accurately set, all surveys by the Contractor shall be based on at least two survey points set by the Engineer or by other governmental surveys, in accordance with good survey practice. Should discrepancies be found between such points, the Engineer shall be notified and construction shall not proceed until the discrepancy has been resolved.

2-9.4 Line and Grade. All Work upon completion shall conform to the lines, elevations, and grades shown on the Plans.

2-9.5 Quantity Surveys. The Engineer will perform all quantity surveys for payment purposes, however, in performing such quantity surveys, it may make use of surveys performed by the Contractor.

2-9.6 Payment for Surveys. Payment for performing all of the surveying and staking as required by the Specifications and such additional surveying and staking as required by the Contractor will be made at the lump sum price set forth in the Proposal and shall be full compensation for furnishing all labor, equipment, instruments and materials necessary to perform the Work. If no bid item for surveying is included in the Proposal, the cost of surveying shall be included in the prices bid for other applicable items of work.

2-10 AUTHORITY OF BOARD AND ENGINEER. The Board has the final authority in all matters affecting the Work. Within the scope of the Contract, the Engineer has the authority to enforce compliance with the Plans and Specifications. The Contractor shall promptly comply with instructions from the Engineer or its authorized representative.

On all questions relating to quantities, the acceptability of material, equipment, or work, the execution, progress or sequence of work, and the interpretation of Specifications or drawings, the decision of the Engineer is final and binding, and shall be precedent to any payment under the Contract, unless otherwise ordered by the Board.

2-10.1 Decisions in Writing. Any and all decisions of the Engineer interpreting Specifications or drawings shall be in writing. Any purported "interpretation" which is not in writing shall not be binding upon the Agency and should not be relied upon by the Contractor.

2-11 INSPECTION

The Work is subject to inspection and approval of the Engineer. The Contractor shall notify the Engineer before noon of the working day before inspection is required. Work shall be done only in the presence of the Engineer, unless otherwise authorized. Any work done without proper inspection will be subject to rejection. The Engineer and any authorized representatives shall at all times have access to the Work during its construction at shops and yards as well as the Work site. The Contractor shall provide every reasonable facility for ascertaining that the materials and workmanship are in accordance with these specifications. Inspection of the Work shall not relieve the Contractor of the obligation to fulfill all conditions of the Contract.

2-11.1 Permit Inspections. The Contractor shall arrange for code compliance inspections by all agencies issuing permits for the Work. The Work shall not continue beyond mandatory inspection points without clearance from the controlling agency. Each agency involved shall be notified in accordance with the code they enforce or in accordance with their standard operating procedures. No extensions of time will be granted for delays occasioned by such inspections except where, through no fault of the Contractor, the inspection is delayed more than one Day beyond normal response time after proper notification has been given.
It shall be the Contractor's responsibility to see that any required inspection record card is signed off before proceeding with the next phase of the Work and completely signed off on completion of the Work.

2-11.2 Structural Observation. When the plans indicate that "Structural Observation" of specific work is required prior to Permit Inspection, Contractor shall notify Engineer, in writing, at least five working days prior to the date Contractor plans to have the work ready for structural observation. If the work is not ready for structural observation on the date indicated, Contractor shall reimburse Agency the cost of structural observer's visit to the Work site. If the work to be observed is substantially complete but is found to need correction before approval by the structural observer, Contractor shall give notice of a new date, as required above.

2-12 SPECIAL NOTICES. When specified in the Specifications or as directed by the Engineer, any notice required to be given in accordance with this subsection shall be in writing, dated, and signed by the Contractor or the Engineer. Such notices shall be served by any of the following methods:

a) Personal delivery with proof of delivery which may be made by declaration under penalty of perjury by any person over the age of 18 years. The proof of delivery shall show that delivery was performed in accordance with these provisions. Service shall be effective on the date of delivery. Notices given to the Contractor by personal delivery may be made to the Contractor's authorized representative at the Work site; or

b) Certified mail addressed to the mailing address of the recipient postage prepaid; return receipt requested. Service shall be effective on the date of the receipt of the mailing.

Simultaneously, the Agency may send the same notice by regular mail. If a notice that is sent by certified mail is returned unsigned, then delivery shall be effective pursuant to regular mail, provided the notice that was sent by regular mail is not returned.

2-13 AGENCY PERSONNEL AND AUTHORITY

2-13.1 General. The Board has complete authority for the project within the limits prescribed by law. Pursuant to resolutions duly adopted by the Board, the authority to perform certain functions has been delegated to the Director of Public Works. Agency staff personnel and Consultants delegated thereto by the Director are authorized to perform functions limited as set forth in the following list of personnel and designated duties.

2-13.2 Engineer. The Director of the Public Works Agency of the County of Ventura is the Engineer and has general authority to administer the Contract. The Engineer has the following specific authority:

(a) To issue Contract Change Orders (CCO) and to settle claims subsequent to Acceptance as follows:

Original Contract Amount	Maximum Amount of any Change Order or Claim Settlement
$50,000 or less	$5,000
greater than $50,000 and not over $250,000	10% of the original Contract amount
greater than $250,000 and not over $3,950,000	$25,000 plus 5% of the original Contract cost in excess of $250,000.
greater than $3,950,000	$210,000

CCOs and claim settlements exceeding the amounts set forth above require Board approval.

(b) To make final adjustments of quantities (FAQ) on unit price items.

(c) To accept the Work when the Contractor has completed all obligations of the Contract, in accordance with the Plans, Specifications and other Contract Documents. The Engineer also has authority to make and record the Notice of Completion.

(d) To approve progress and final payments under the Contract, including the provisions for withholding funds.

(e) To determine whether performance on the Work is satisfactory. Satisfactory performance includes compliance with all contract requirements.

(f) To approve the substitution of a Subcontractor, where allowed by law, if the listed Subcontractor does not object when notified.

(g) To suspend the Work for the benefit of the Agency.

(h) In the absence of the Agency Director, a Public Works Agency Department Director, as Deputy Director of Public Works, may exercise the Engineer's authority. Such action will be indicated by "Acting" with the Department Director's signature.

2-13.3 Department Director (Public Works Agency). The Department Director responsible for the project is designated in the Notice to Proceed. The Department Director has the following authority:

(a) To issue Contract Change Orders (CCO) as follows:

Original Contract Amount	Maximum Amount of any Change Order
Less than $500,000	$5,000
$500,000 to $1,000,000	1% of Bid Price
Greater than $1,000,000	$10,000

(b) To issue extensions of Contract time in accordance with the Contract Documents.

(c) To make final adjustment of quantities where the total does not exceed the amounts listed in (a) above.

(d) To approve the substitution of subcontractors, where allowed by law, if the listed Subcontractor does not object when notified.

(e) To determine when the Work has been completed and acknowledge in writing the completion of the Work.

2-13.4 Project manager. The Project manager responsible for the project is designated in the Notice to Proceed. This person may also be referred to as Project Engineer. The Project manager has the following authority:

(a) To interpret the Plans and Specifications.

(b) To make minor changes in the location or features of the Work where no change in cost is involved. Such changes in cost may not be the net of multiple changes.

(c) To approve substitutes for material and equipment specified by proprietary names when such material and equipment meet the Contract requirements.

(d) To approve shop drawings and submittals.

(e) To issue stop work orders when necessary to enforce the provisions of the Contract.

(f) To make determinations of each Working Day to be charged against the Contract time in accordance with 6-7.3.

(g) To take over a portion of the Work for Agency's use in accordance with 6-10.

(h) To receive all correspondence and other documents from the Contractor.

(i) To inspect the Work and perform Final Inspection subject to review by the Department Director and the Engineer.

2-13.5 Inspector. One or more inspectors will be assigned to the project by the Project manager. Substitutes may be used during absence of the assigned inspector. The Inspector has the following authority subject to review by the Project manager, Department Director and the Engineer:

(a) To view and inspect the Work, sample and test components (at the Work site and at offsite manufacturing locations), and to discuss the Work with the Contractor's field representative.

(b) To determine compliance with the Plans, Specifications and other Contract Documents and to issue warnings of noncompliance.

(c) To issue stop work notices in the following two instances only:

1) Where a safety hazard exists that has an immediate potential for serious injury or death.

2) Where the operation in progress, if continued for even a short period of time, could be adverse to the Agency's interests.

2-13.6 Other Agency Personnel and Consultants.

2-13.6.1 Materials Engineer. The Materials Engineer is designated in the Notice to Proceed. The Materials Engineer may assign one or more Materials Inspectors to the project.

Materials Inspectors have authority to sample and test material at the Work site and at offsite manufacturing or storage locations. They may furnish available written test results to the Contractor's field representative. At batch plants, they may issue warnings of noncompliance, but stop notices require the signature of the Materials Engineer or Project manager.

2-13.6.2 Surveyors & Technicians. Surveyors and technicians shall have free access to the site to perform their duties but have no authority related to Contract administration.

2-13.6.3 Other Persons. Other Agency personnel who are not involved in construction administration and the general public may be present at the site because it is their present place of work, as client/customers, as visitors, as future users of the facility, or as persons who will maintain the completed facility. Where the facility is to continue in use during construction, work access for Agency workers and client/customers shall be maintained as provided in the Special Provisions. Where the facility (or portion where construction is being performed) is not in use during construction, admittance to the Work site by Agency personnel not involved in construction administration and visitors may be allowed by the Contractor or by the inspector, subject to compliance with safety regulations. Such persons have no authority under the Contract and the Agency is not responsible for their comments, suggestions or directions.

2-13.6.4 Consultants. Consultants hired by the Agency shall have free access to the site to perform their duties but have no authority related to Contract administration, unless such duties are specifically identified in writing to the Contractor. When so identified, Consultant may perform the duties of certain Agency personnel described above.

SECTION 3 - CHANGES IN WORK

3-1 CHANGES REQUESTED BY THE CONTRACTOR

3-1.1 General. Changes in specified methods of construction may be made at the Contractor's request when approved in writing by the Engineer. Changes in the Plans and Specifications, requested in writing by the Contractor, which do not materially affect the Work and which are not detrimental to the Work or to the interests of the Agency, may be granted by the Board to facilitate the Work, when approved in writing by the Engineer. Nothing herein shall be construed as granting a right to the Contractor to demand acceptance of such changes.

3-1.2 Payment for Changes Requested by the Contractor. If such changes are granted, they shall be made at a reduction in cost or at no additional cost to the Agency. All costs to the Agency in reviewing the proposed change, or testing materials involved therein, shall be paid for by the Contractor, whether or not the change is approved.

3-2 CHANGES INITIATED BY THE AGENCY

3-2.1 General. The Agency may change the Plans, Specifications, character of the Work, or quantity of work, provided the total arithmetic dollar value of all such changes, both additive and deductive, does not exceed 25 percent of the Contract Price. Should it become necessary to exceed this limitation, the change shall be by written Supplemental Agreement between the Contractor and Agency, unless both parties agree to proceed with the change by Change Order.

Change orders shall be in writing and state the dollar value of the change or establish method of payment, any adjustment in Contract time, and, when negotiated prices are involved, shall provide for the Contractor's signature indicating its acceptance.

3-2.2 Payment for Changes Initiated by the Agency.

3-2.2.1 Contract Unit Prices. If a change is ordered in an item of work covered by a Contract unit price, and such change does not involve a substantial change in the character of the Work from that shown on the Plans or included in the Specifications, an adjustment in payment will be made based upon the increase or decrease in quantity and the Contract unit price. In the case of such an increase or decrease in a Major Bid Item, the use of this basis for the adjustment of payment will be limited to that portion of the change which, together with all previous changes to that item, is not in excess of 25% of the total cost of such item based on the original quantity and Contract unit price.

If a change is ordered in an item of work covered by a Contract unit price, and such change does involve a substantial change in the character of the Work from that shown on the Plans or included in the Specifications, an adjustment in payment will be made in accordance with 3-2.2.3.

Should any Contract item be deleted in its entirety, payment will be made only for actual costs incurred prior to notification of such deletion.

3-2.2.2 Stipulated Unit Prices. Stipulated unit prices are those established by the Agency in the Contract Documents, as distinguished from Contract unit prices submitted by the Contractor. Stipulated unit prices may be used for the adjustment of Contract changes.

3-2.2.3 Pricing. Adjustments in payments for changes other than those set forth in 3-2.2.1 and 3-2.2.2 will be determined by agreement between Contractor and Agency. If unable to reach agreement, the Agency may direct the Contractor to proceed on the basis of Extra Work in accordance with 3-3 or as set forth in 3-2.2.4.

3-2.2.4 Non-Agreed Prices. Agency may issue a change order directing the Contractor to proceed at a price set by the Agency or on the basis of Extra Work. If the Agency sets a price for the work covered by the change order, Contractor is entitled to payment for such work in accordance with 3-3 to the extent payment in accordance with 3-3 exceeds the price set by the Agency.

3-3 EXTRA WORK

3-3.1 General. New or unforeseen work will be classed as "Extra Work" when the Engineer determines that it is not covered by Contract Unit Prices or Stipulated Unit Prices.

3-3.2 Payment.

3-3.2.1 General. When the price for the Extra Work cannot be agreed upon, the Agency will pay for the Extra Work based on the accumulation of costs as provided herein.

3-3.2.2 Basis for Establishing Costs

(a) Labor. The cost of labor will be the current cost for wages prevailing for each craft or type of workers performing the Extra Work at the time the Extra Work is done, plus payment of health and welfare, pension, vacation, apprenticeship funds, and other direct costs included in the prevailing rates applicable to the project, as well as assessments or benefits required by lawful collective bargaining agreements. To the total of these labor costs, the labor surcharge set forth in the current CALTRANS Labor Surcharge and Equipment Rental Rates publication shall be applied.

The use of a labor classification which would increase the Extra Work cost will not be permitted unless the Contractor establishes the necessity for such additional costs.

Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for the equipment rental. The labor cost for foremen shall be proportioned to all of their assigned work and only that applicable to Extra Work shall be paid. A foreman is defined as a lead working journeyman.

Nondirect labor costs including superintendence, payroll taxes, all types of insurance, and all other labor costs, not specifically provided for, shall be considered to be paid for as part of the markup of 3-3.2.3(a)(1).

(b) Materials. The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available and delivered to the Work site in the quantities involved, plus sales tax, freight and delivery.

The Agency reserves the right to approve materials and sources of supply, or to supply materials to the Contractor if necessary for the progress of the Work. No markup shall be applied to any material provided by the Agency.

(c) Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of $200 or less.

Regardless of ownership, the rates to be used for determining equipment rental costs shall not exceed the following:

(1) For equipment that is listed in the current CALTRANS Labor Surcharge and Equipment Rental Rates publication, the rates shown therein. The right of way delay and overtime/multiple shift factors contained therein shall be used as applicable.

(2) For equipment not listed in said CALTRANS publication, the listed rates prevailing locally at equipment rental agencies, or distributors, at the time the work is performed.

(3) For equipment rental that includes operators and helpers, the applicable cost from (1) or (2) above, plus the applicable labor costs as determined in accordance with (a) above.

The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Necessary loading and transportation costs for equipment used on the Extra Work shall be added to the other costs.

If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the Agency than holding it at the work site, it shall be returned, unless the Contractor elects to keep it at the work site at no expense to the Agency.

All equipment shall be acceptable to the Engineer, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment and it shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

The reported rental rates for equipment already at the work site shall be for the duration of its use on the Extra Work, commencing at the time it is first put into actual operation on the Extra Work, plus the time required to move it from its previous site, and move it back to its previous site or to a closer site of next use.

3-3.2.2 Basis for Establishing Costs (Continued)

(d) Other Items. The Agency may authorize other items which may be required on the Extra Work. Such items include labor, service, material and equipment which are different in their nature from those required for the Work specified in the Contract and which are of a type not ordinarily available from the Contractor or any of its subcontractors.

Invoices covering all such items in detail shall be submitted with the request for payment.

(e) Invoices. Vendors' invoices for material, equipment rental, and other expenditures, shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, the Agency may establish the cost of the item involved at the lowest price which was current at the time of the report.

3-3.2.3 Markup

(a) Work by Contractor. The following percentage shall be added to the Contractor's costs and shall constitute the markup for all overhead and profits, and all other cost not specifically provided for:

(1) Labor 33%
(2) Materials 15%
(3) Equipment Rental 15%
(4) Other Items and Expenditures ... 15%

To the sum of the cost and markups provided for in this section, 1 percent shall be added as compensation for bonding.

(b) Work by Subcontractor. When all or any part of the Extra Work is performed by a Subcontractor, the markup established in 3-3.2.3(a) shall be applied to the Subcontractor's actual cost of such work. A markup of 10% on the first $5,000 of the subcontracted portion of the Extra Work and a markup of 5% on work in excess of $5,000 of the subcontracted portion of the Extra Work may be added by the Contractor.

3-3.3 Daily Extra Work Reports by Contractor. When the price for the Extra Work cannot be agreed upon, the Contractor shall submit a Daily Extra Work Report to the Engineer on forms furnished by the Agency, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and for other services and expenditures when authorized. Failure to submit the Daily Extra Work Report, showing the labor and equipment hours and the quantity of materials used, by the close of the next Working Day may waive any rights for that day. Failure to submit fully completed Daily Extra Work Reports, with the required supporting documentation, within ten calendar days after the Engineer makes a written request for the such reports shall waive all rights for the work covered by the requested reports. An attempt shall be made to reconcile the Daily Extra Work Report daily, and it shall be signed by the Engineer and the Contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the Daily Extra Work Report. Daily Extra Work Reports by Subcontractors or others shall be submitted through the Contractor.

The Daily Extra Work Report shall:

1) Show names of workers, classifications, and hours worked.
2) Describe and list quantities of materials used.
3) Show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable.
4) Describe other services and expenditures in such detail as the Agency may require.

In addition to the Daily Extra Work Reports, the Contractor shall furnish Certified Payroll Records for the labor included in the reports before payment will be made.

3-4 CHANGED CONDITIONS. The Contractor shall notify the Engineer in writing of the following work site conditions, hereinafter called changed conditions, promptly upon their discovery and before they are disturbed:

1) Subsurface or latent physical conditions differing materially from those represented in the Contract;
2) Unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character being performed; and
3) Material differing from that represented in the Contract which the Contractor believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law.

The Engineer will promptly investigate conditions which appear to be changed conditions. If the Engineer determines that the conditions are changed conditions and that they will materially increase or decrease the costs of any portion of the Work, a Change Order will be issued adjusting the compensation for such portion of the Work in accordance with 3-2.2. If the Engineer determines that conditions are changed conditions and that they will materially affect the performance time, the Contractor, upon submitting a written request, will be granted an extension of time subject to the provisions of 6-6.

If the Engineer determines that the conditions of which it has been notified by the Contractor do not justify an adjustment in compensation, the Contractor will be so notified in writing. This notice will also advise the Contractor of its obligation to notify the Engineer, in writing, if the Contractor disagrees.

Should the Contractor disagree with such determination, it may submit a written notice of potential claim to the Engineer before commencing the disputed work. In the event of such a disagreement, the Contractor shall not be excused on account of that disagreement from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. However, the Contractor shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between the contracting parties. The Contractor shall proceed as provided in 3-5.

The Contractor's failure to give notice of changed conditions promptly upon their discovery and before they are disturbed shall constitute a waiver of all claims in connection therewith.

3-5 DISPUTED WORK. If the Contractor and the Agency are unable to reach agreement on disputed work, the Agency may direct the Contractor to proceed with the Work. Payment shall be as later determined by mediation or arbitration, if the Agency and the Contractor agree thereto, or as fixed in a court of law.

Although not to be construed as proceeding under Extra Work provisions, the Contractor shall keep and furnish records of disputed work in accordance with 3-3.

SECTION 4 - CONTROL OF MATERIALS

4-1 MATERIALS AND WORKMANSHIP

4-1.1 General. All materials, parts, and equipment furnished by the Contractor in the Work shall be new, high grade, and free from defects. Quality of work shall be in accordance with the generally accepted standards. Material and work quality shall be subject to the Engineer's approval.

Materials and work quality not conforming to the requirements of the Specifications shall be considered defective and will be subject to rejection. Defective work or material, whether in place or not, shall be removed immediately from the site by the Contractor, at its expense, when so directed by the Engineer.

If the Contractor fails to replace any defective or damaged work or material after reasonable notice, the Engineer may cause such work or materials to be replaced. The replacement expense will be deducted from the amount to be paid to the Contractor.

Used or secondhand materials, parts, and equipment may be used only if permitted by the Specifications.

4-1.1.1 Materials Furnished by Agency. Materials furnished by the Agency will be available at locations designated in the Special Provisions or if not designated in the Special Provisions, they will be delivered to a single location of Agency's choice within the project area. They shall be hauled to the site of installation by the Contractor at its expense, including any necessary loading and unloading that may be involved. The cost of handling and placing materials furnished by the Agency shall be considered as included in the price paid for the Contract item involving such furnished materials.

The Contractor will be held responsible for all materials furnished to it, and it shall pay all demurrage and storage charges. Furnished materials, after delivery to Contractor, lost or damaged from any cause whatsoever shall be replaced by the Contractor. The Contractor will be liable to the Agency for the cost of replacing lost or damaged furnished material and such costs may be deducted from any monies due or to become due the Contractor.

4-1.2 Protection of Work and Materials. The Contractor shall provide and maintain storage facilities and employ such measures as will preserve the specified quality and fitness of materials to be used in the Work. Stored materials shall be reasonably accessible for inspection. The Contractor shall also adequately protect new and existing work and all items of equipment for the duration of the Contract.

The Contractor shall not, without the Agency's consent, assign, sell, mortgage, hypothecate, or remove equipment or materials which have been installed or delivered and which may be necessary for the completion of the Contract.

4-1.3 Inspection Requirements

4-1.3.1 General. Unless otherwise specified, inspection is required at the source for asphalt concrete pavement mixtures, structural concrete, metal fabrication, metal casting, welding, concrete pipe manufacture, protective coating application, and similar shop or plant operations. Steel pipe in sizes less than 450 mm (18 inches), vitrified clay and cast iron pipe in all sizes are acceptable upon certification as to compliance with the Specifications, subject to sampling and testing by the Agency. Standard items of equipment such as electric motors, conveyors, elevators, plumbing fixtures, etc., are subject to inspection at the Work site only. Special items of equipment such as designed electrical panel boards, large pumps, sewage plant equipment, etc., are subject to inspection at the source, normally only for performance testing. The Specifications may require inspection at the source for other items not typical of those listed in this section.

4-1.3.2 Inspection of Materials Not Locally Produced. When the Contractor intends to purchase materials, fabricated products, or equipment from sources located more than 80 km (50 miles) outside the geographical limits of the Agency, an inspector or accredited testing laboratory (approved by the Engineer), shall be engaged by the Contractor at its expense, to inspect the materials, equipment or process. This approval shall be obtained before producing any material or equipment. The inspector or representative of the testing laboratory shall evaluate the materials for conformance with the Plans and Specifications. The Contractor shall forward reports required by the Engineer. No materials or equipment shall be shipped nor shall any processing, fabrication or treatment of such materials be done without proper inspection by the approved agent. Approval by said agent shall not relieve the Contractor of responsibility for complying with the Contract requirements.

4-1.3.3 Inspection by the Agency. The Agency will provide all inspection and testing laboratory services within 80 km (50 miles) of the geographical limits of the Agency.

4-1.3.4 Certificates of Compliance. The Engineer may require certificates of compliance with the Specifications for materials or manufactured items produced outside of the Work site. Such certificates will not relieve the Contractor from the requirements of providing material and manufactured items complying with the Specifications even though they have been incorporated into the Work.

4-1.4 Tests of Materials. Before incorporation in the Work, the Contractor shall submit samples of materials, as the Engineer may require, at no cost to the Agency. The Contractor, at its own expense, shall deliver the materials for testing to the place and at the time designated by the Engineer. Unless otherwise provided, all initial testing and a reasonable amount of retesting shall be performed under the direction of the Engineer, and at no expense to the Contractor. If the Contractor is to provide and pay for testing, the Specifications will so state.

The Contractor shall notify the Engineer in writing, at least 15 Days in advance, of its intention to use materials for which tests are specified, to allow sufficient time to perform the tests. The notice shall name the proposed supplier and source of material.

If the notice of intent to use is sent before the materials are available for testing or inspection, or is sent so far in advance that the materials on hand at the time will not last but will be replaced by a new lot prior to use on the Work, it will be the Contractor's responsibility to re-notify the Engineer when samples which are representative may be obtained.

4-1.5 Certification. The Engineer may waive materials testing requirements of the Specifications and accept the manufacturer's written certification that the materials to be supplied meet those requirements. Materials test data may be required as part of the certification.

4-1.6 Trade Names or Equals. The Contractor may supply any of the materials specified or offer an equivalent. The Engineer shall determine whether the material offered is equivalent to that specified. Adequate time shall be allowed for the Engineer to make this determination.

Whenever any particular material, process, or equipment is indicated by patent, proprietary or brand name, or by name of manufacturer, such wording is used for the purpose of facilitating its description and shall be deemed to be followed by the words **or equal**. A listing of materials is not intended to be comprehensive, or in order of preference. The Contractor may offer any material, process, or equipment considered to be equivalent to that indicated. The substantiation of offers shall be submitted as provided in the Contract Documents.

The Contractor shall, at its expense, furnish data concerning items offered by it as equivalent to those specified. The Contractor shall have the material tested as required by the Engineer to determine that the quality, strength, physical, chemical, or other characteristics, including durability, finish, efficiency, dimensions, service, and suitability are such that the item will fulfill its intended function.

Test methods shall be subject to the approval of the Engineer. Test results shall be reported promptly to the Engineer, who will evaluate the results and determine if the substitute item is equivalent. The Engineer’s findings shall be final. Installation and use of a substitute item shall not be made until approved by the Engineer.

If a substitute offered by the Contractor is not found to be equal to the specified material, the Contractor shall furnish and install the specified material.

The specified Contract completion time shall not be affected by any circumstance developing from the provisions of this section.

4-1.6.1 Compatibility with Design. Where the size, configuration, weight, fastening locations, fastening strength, utility rough-in locations, and utility capacities of equipment or devices offered by the Contractor as equivalents do not conform to those provided for in the Contract Documents or those which are necessary for equipment or devices indicated by brand names, the Contractor shall bear all costs of redesign and changes in construction necessary to adapt the offered equipment or device to the Work.

Equipment or devices will not be considered "equal" where the life cycle cost of operation, utilities and maintenance of the offered alternate is greater than those listed by brand names. Life cycle costs shall mean utility charges (demand and usage charges), maintenance, operating personnel and replacement (equipment, installation and down time expenses) all reduced to an average annual rate using the current interest rate earned on funds invested by the County Treasurer.

4-1.6.2 Trade Names Listed. Where the Agency has listed products by brand or trade name on the Plans or in the Specifications, or both, this shall not be construed as meaning every product may be used without furnishing shop drawings, without redesign of the facility or without a change in utility rough-in requirements.

Where use of products listed on the Plans or in the Specifications, or both, or where use of a substitute proposed as an "equal" product requires shop drawings, redesign of the facility, or revisions in the size and location of rough-in utility connections, or in connecting work, the Contractor shall provide any necessary shop drawings, or shall cause the preparation of any necessary redesign or revisions to the Plans at its own expense and shall bear the full cost of any necessary additional construction or reconstruction work. No work described in shop drawings, a redesign, or a revision to the Plans shall be undertaken until such shop drawings, redesign, or revisions have been approved by the Engineer. Any proposed redesign or revision to the Plans shall be accompanied by complete computations and details prepared by an appropriate licensed design professional.

4-1.7 Weighing Equipment. All scales used for proportioning materials shall be inspected for accuracy and certified within the past 12 months by the State of California Bureau of Weights and Measures, by the County Director or Sealer of Weights and Measures, or by a scale mechanic registered with or licensed by the County.

The accuracy of the work of a scale service agency, except as stated herein, shall meet the standards of the California Business and Professions Code and the California Code of Regulations pertaining to weighing devices. A certificate of compliance shall be presented, prior to operation, to the Engineer for approval and shall be renewed whenever required by the Engineer at no cost to the Agency.

All scales shall be arranged so they may be read easily from the operator's platform or area. They shall indicate the true net weight without the application of any factor. The figures of the scales shall be clearly legible. Scales shall be accurate to within 1 percent when tested with the plant shut down. Weighing equipment shall be so insulated against vibration or moving of other operating equipment in the plant area that the error in weighing with the entire plant running will not exceed 2 percent for any setting nor 1.5 percent for any batch.

4-1.8 Calibration of Testing Equipment. Testing equipment, such as, but not limited to, pressure gages, metering devices, hydraulic systems, force (load) measuring instruments, and strain-measuring devices shall be calibrated by a testing agency acceptable to the Engineer at intervals not to exceed 12 months and following repairs, modification, or relocation of the equipment. Calibration certificates shall be provided when requested by the Engineer.

SECTION 5 - UTILITIES

5-1 LOCATION. The Permittee (in the case of Private Contracts) and the Agency (in the case of Cash or Assessment Act Contracts), will search known substructure records and furnish the Contractor with copies of documents which describe the location of utility substructures, or will indicate on the Plans for the project those substructures (except for service connections) which may affect the Work. Information regarding removal, relocation, abandonment, or installation of new utilities will be furnished to prospective bidders.

Where underground main distribution conduits such as water, gas, sewer, electric power, telephone, or cable television are shown on the Plans, the Contractor shall assume that every property parcel will be served by a service connection for each type of utility.

As provided in Section 4216 of the California Government Code, at least 2 working days prior to commencing any excavation, the Contractor shall contact the regional notification center (Underground Service Alert of Southern California) and obtain an inquiry identification number.

The California Department of Transportation is not required by Section 4216 to become a member of the regional notification center. The Contractor shall contact it for location of its subsurface installations.

The Contractor shall determine the location and depth of all utilities, including service connections, which have been marked by the respective owners and which may affect or be affected by its operations. If no pay item is provided in the Contract for this work, full compensation for such work shall be considered as included in the prices bid for other items of work.

5-2 PROTECTION. The Contractor shall not interrupt the service function or disturb the support of any utility without authority from the owner or order from the Agency. All valves, switches, vaults, and meters shall be maintained readily accessible for emergency shutoff.

Where protection is required to ensure support of utilities located as shown on the Plans or in accordance with 5-1, the Contractor shall, unless otherwise provided, furnish and place the necessary protection at its expense.

Upon learning of the existence and location of any utility omitted from or shown incorrectly on the Plans, the Contractor shall immediately notify the Engineer in writing. When authorized by the Engineer, support or protection of the utility will be paid for as provided in 3-2.2.3 or 3-3.

The Contractor shall immediately notify the Engineer and the utility owner if any utility is disturbed or damaged. The Contractor shall bear the costs of repair or replacement of any utility damaged if located as noted in 5-1.

When placing concrete around or contiguous to any non-metallic utility installation, the Contractor shall at its expense:

1. Furnish and install a 50 mm (2 inch) cushion of expansion joint material or other similar resilient material; or
2. Provide a sleeve or other opening which will result in a 50 mm (2 inch) minimum-clear annular space between the concrete and the utility; or
3. Provide other acceptable means to prevent embedment in or bonding to the concrete.

Where concrete is used for backfill or for structures which would result in embedment, or partial embedment, of a metallic utility installation; or where the coating, bedding or other cathodic protection system is exposed or damaged by the Contractor's operations, the Contractor shall notify the Engineer and arrange to secure the advice of the affected utility owner regarding the procedures required to maintain or restore the integrity of the system.

5-3 REMOVAL. Unless otherwise specified, the Contractor shall remove all interfering portions of utilities shown on the Plans or indicated in the Bid documents as "abandoned" or "to be abandoned in place". Before starting removal operations, the Contractor shall ascertain from the Agency whether the abandonment is complete, and the costs involved in the removal and disposal shall be included in the Bid for the items of work necessitating such removals.

5-4 RELOCATION. When feasible, the owners responsible for utilities within the area affected by the Work will complete their necessary installations, relocations, repairs, or replacements before commencement of work by the Contractor. When the Plans or Specifications indicate that a utility installation is to be relocated, altered, or constructed by others, the Agency will conduct all negotiations with the owners and work will be done at no cost to the Contractor, except as provided in 301-1.6. Utilities which are relocated in order to avoid interference shall be protected in their position and the cost of such protection shall be included in the Bid for the items of work necessitating such relocation.

After award of the Contract, portions of utilities which are found to interfere with the Work will be relocated, altered or reconstructed by the owners, or the Engineer may order changes in the Work to avoid interference. Such changes will be paid for in accordance with 3-2.

When the Plans or Specifications provide for the Contractor to alter, relocate, or reconstruct a utility, all costs for such work shall be included in the Bid for the items of work necessitating such work. Temporary or permanent relocation or alteration of utilities requested by the Contractor for its convenience shall be its responsibility and it shall make all arrangements and bear all costs.

The utility owner will relocate service connections as necessary within the limits of the Work or within temporary construction or slope easements. When directed by the Engineer, the Contractor shall arrange for the relocation of service connections as necessary between the meter and property line, or between a meter and the limits of temporary construction or slope easements. The relocation of such service connections will be paid for in accordance with provisions of 3-3. Payment will include the restoration of all existing improvements which may be affected thereby. The Contractor may agree with the owner of any utility to disconnect and reconnect interfering service connections. The Agency will not be involved in any such agreement.

5-5 DELAYS. The Contractor shall notify the Engineer of its construction schedule insofar as it affects the protection, removal, or relocation of utilities. Said notification shall be included as a part of the construction schedule required in 6-1. The Contractor shall notify the Engineer in writing of any subsequent changes in the construction schedule which will affect the time available for protection, removal, or relocation of utilities.

The Contractor will not be entitled to damages or additional payment for delays attributable to utility relocations or alterations if correctly located, noted, and completed in accordance with 5-1.

The Contractor may be given an extension of time for unforeseen delays attributable to unreasonably protracted interference by utilities in performing work correctly shown on the Plans.

The Agency will assume responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities within the area affected by the Work if such utilities are not identified in the Contract Documents. The Contractor will not be assessed liquidated damages for any delay caused by failure of Agency to provide for the timely removal, relocation, or protection of such existing facilities.

If the Contractor sustains loss due to delays attributable to interferences, relocations, or alterations not covered by 5-1, which could not have been avoided by the judicious handling of forces, equipment, or plant, there shall be paid to the Contractor such amount as the Engineer may find to be fair and reasonable compensation for such part of the Contractor's actual loss as was unavoidable and the Contractor may be granted an extension of time.

5-5.1 Cooperation During Utility Relocation. When utilities are to be relocated during construction, the Contractor shall cooperate and coordinate with the respective utility owners so they may relocate their facilities to clear the Work. Delays in relocation of utilities which result from failure to cooperate and coordinate will not be a cause for an extension of time or Non-Working Days.

5-6 COOPERATION. When necessary, the Contractor shall so conduct its operations as to permit access to the Work site and provide time for utility work to be accomplished during the progress of the Work.

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK. The requirements of this section concerning submission of construction schedules shall not apply to projects where the time allowed to complete the Work is less than 25 Working Days or the total Contract Price bid is less than $75,000 unless required by the special provisions.

The Contractor shall submit a construction schedule concurrently with the submittal of signed Contract, Contract bonds, and certificate of insurance. The Notice to Proceed will be delayed until the schedule is received. See 6-7.4, Starting of Contract Time.

When required by the Special Provisions, a revised schedule shall be submitted monthly prior to each progress payment closure date. Processing of the progress payment will be delayed until such revised schedule complying with this section is received.

The construction schedule shall be in the form of a Construction Element vs. Time Chart as shown in Appendix B-1and a Work Complete vs. Time Chart as shown in Appendix B-2.

The B-1 Chart shall be in sufficient detail to show the chronological relationship of all activities of the project including, but not limited to, estimated starting and completion dates of various activities, submittal of shop drawings to the Engineer for approval, procurement of materials, and scheduling of equipment. The B-1 Chart shall recognize the requirements of 5-5. The B-1 Chart shall reflect obtaining all materials and completing all Work under the Contract within the specified time and in accordance with these Specifications. If the Contractor intends to complete the Work prior to the time for completion, the intended date of completion shall be set forth in the B-1 Chart and the Contractor shall execute a Contract Change Order that changes the number of Working Days allowed for completion to conform with such intended completion date. The Change Order shall not change the Contract Price.

The Contractor may submit a computer generated schedule in lieu of the form in Appendix B-1 and B-2, provided all of the elements shown on that form or specified herein are included.

An updated construction schedule shall be submitted prior to the next progress payment closure date whenever the actual percent Work complete versus percent time elapsed curve falls below and to the right of the dotted line shown on Appendix B-2.

If the Contractor desires to make a major change in its method of operations after commencing construction, or if its schedule fails to reflect the actual progress, it shall submit to the Agency a revised construction schedule in advance of beginning revised operations.

Revised and updated schedules shall show actual completion to the date of the revision in the lower segmented bar for each item.

The construction schedule shall be prepared as follows (see examples in Appendices C-1 and C-2):

1. On theB-1 Chart:
   a Enter the project name and Specification No. as shown on the notice inviting bids and the Contractors name.
   b. List the items of Work either individually or combined where items are part of the same element of the Work.
   c. Assign a value for each horizontal space plotting interval in Working Days as follows: 1 working day for total Contract time of less than 100 working days, 2 for 100 to 200 working days and 5 for longer projects. Enter the value used in the space provided in the lower part of the form.
   d. At the end of performance time and draw a vertical line and label it "End Performance Time". Enter numbers at 10 times the plotting interval at the top of intermediate vertical lines.
   e. Shade in a bar in the upper segmented section for each work item to indicate the period during which Work will be performed. Move-in time and delivery time for materials shall be shown if significant to the schedule.

2. On the B-2 Chart:
   a. Enter the project name and Specification No. as shown on the notice inviting bids.
   b. At time intervals of 10 or 20 working days:
      (1) Compute the cumulative dollar value of Work which is expected to be completed for each item of Work, including the value of the completed portion of lump-sum items.
      (2) Divide the values computed in "b(1)" by the Total Contract Price to determine the percentage of the entire Contract planned for completion at the end of each time interval.
      (3) Divide the days of performance time at the end of each time interval by the total Contract performance time to obtain the percentage of elapsed performance time.
   c. Plot each percentage of completion value figure computed in "b(2)" against the corresponding percentage of completion time computed in "b(3)" using scales on the bottom and left side of chart.
   d. Connect points plotted in "c" with a line which will show the planned progress for the entire job.

If the proposed percent Work complete versus percent time elapsed line falls below and to the right of the dotted line drawn on the B-2 Chart, the Contractor shall provide sufficient information and backup to show that the Work can be completed on time.

6-1.1 Beginning of Work. The issuance of Notice to Proceed by Agency shall constitute the Contractor's authority to enter upon the site of the Work and to begin operations provided it has also notified Engineer at least 24 hours in advance. Entry upon the site without authority will be treated as trespassing.

6-1.2 Starting Work. The Contractor may start work at any time after the Notice to Proceed is issued but work shall begin within 15 Days after the starting date for the Contract, or at such other time as may be indicated in the Special Provisions. The actual date on which the Contractor starts work will not affect the required time for completion as provided for in 6-7 and 6-7.1.

6-1.3 Work Sequence. If required by the Special Provisions, the Contractor shall start construction operations on that part of the Work designated by the Engineer.

6-1.4 Resources Required. The Work shall be conducted in such a manner and with sufficient materials, equipment, and labor to insure its completion in accordance with the Plans and Specifications within the time set forth in the Contract.

6-2 PROSECUTION OF WORK. To minimize public inconvenience and possible hazard and to restore streets and other Work areas to their original condition and former state of usefulness as soon as practicable, the Contractor shall diligently prosecute the Work to completion. If, in the Engineer's opinion, the Contractor fails to prosecute the Work to the extent that the above purposes are not being accomplished, the Contractor shall, upon orders from the Engineer, immediately take the steps necessary to fully accomplish said purposes. All costs of prosecuting the Work as described herein shall be absorbed in the Contractor's bid. Should the Contractor fail to take the necessary steps to fully accomplish said purposes, after orders of the Engineer to do so, the Engineer may suspend the Work in whole or in part, until the Contractor takes said steps.

As soon as possible under the provisions of these Specifications, the Contractor shall backfill all excavations and restore to usefulness all improvements existing prior to the start of the Work.

If Work is suspended through no fault of the Agency, all expenses and losses incurred by the Contractor during such suspensions shall be borne by the Contractor. If the Contractor fails to properly provide for public safety, traffic, and protection of the Work during periods of suspension, the Agency may elect to do so, and deduct the cost thereof from monies due the Contractor. Such action will not relieve the Contractor from liability.

6-3 SUSPENSION OF WORK

6-3.1 General. The Work may be suspended in whole or in part when determined by the Engineer that the suspension is necessary in the interest of the Agency. The Contractor shall comply immediately with any written order of the Engineer. Such suspension shall be without liability to the Contractor on the part of the Agency except as otherwise specified in 6-6.3.

6-3.2 Archaeological and Paleontological Discoveries. If discovery is made of items of archaeological or paleontological interest, the Contractor shall immediately cease excavation in the area of discovery and shall not continue until ordered by the Engineer. When resumed, excavation operations within the area of discovery shall be as directed by the Engineer.

Discoveries which may be encountered may include, but not be limited to, dwelling sites, stone implements or other artifacts, animal bones, human bones and fossils.

The Contractor shall be entitled to an extension of time and compensation in accordance with the provisions of 6-6.

6-3.3 Temporary Suspension of Work. Should suspension of Work be ordered by reason of the failure of the Contractor to carry out orders or to perform any provisions of the Contract; or by reason of weather conditions being unsuitable for performing any item or items of Work; the Contractor, at its expense, shall do all the work necessary to provide a safe, smooth, and unobstructed passageway through construction for use by public traffic during the period of such suspension. In the event that the Contractor fails to perform the work above specified, the Agency may perform such work and the cost thereof will be deducted from monies due or to become due the Contractor.

If the Engineer orders a suspension of all of the Work, or a portion of the Work which is the current controlling operation or operations, due to unsuitable weather or to such other conditions as are considered unfavorable to the suitable prosecution of the Work, the days on which the suspension is in effect shall not be considered Working Days.

If a portion of Work at the time of such suspension is not a current controlling operation or operations, but subsequently does become the current controlling operation or operations, the determination of Working Days will be made on the basis of the then current controlling operation or operations.

If a suspension of Work is ordered by the Engineer due to the failure on the part of the Contractor to carry out orders given or to perform any provision of the Contract, the Days on which the suspension order is in effect shall be considered Working Days if such days are Working Days as defined.

6-4 TERMINATION OF THE CONTRACT FOR DEFAULT..

6.4.1 General. If, prior to the acceptance of the Work, the Contractor:

a) becomes insolvent, assigns its assets for the benefit of its creditors, is unable to pay its debts as they become due, or is otherwise financially unable to complete the Work,

b) abandons the Work by failing to report to the Work site and diligently prosecute the Work to completion,

c) disregards written instructions from the Agency or materially violates provisions of the Contract Documents,

d) fails to prosecute the Work according to the schedule approved by the Engineer,

e) disregards laws or regulations of any public body having jurisdiction, or

f) commits continuous or repeated violations of regulatory or statutory safety requirements, then the Agency will consider the Contractor in default of the Contract.

Notices, and other written communications regarding default between the Contractor, the Agency, and the Surety shall be transmitted in accordance with 2-12.

6-4.2 Notice to Cure. The Agency will issue a written notice to cure the default to the Contractor and its Surety. The Contractor shall commence satisfactory corrective actions within 5 Working Days after receipt.

6-4.3 Notice of Termination for Default. If the Contractor fails to commence satisfactory corrective action within 5 Working Days after receipt of the notice to cure, or to diligently continue satisfactory and timely correction of the default thereafter, then the Agency will consider the Contractor in default of the Contract and:

a) will terminate the Contractor's right to perform under the Contract by issuing a written notice of termination for default to the Contractor and its Surety,

b) may use any materials, equipment, tools or other facilities furnished by the Contractor to secure and maintain the Work site, and

c) may furnish labor, equipment, and materials the Agency deems necessary to secure and maintain the Work site. The provisions of this subsection shall be in addition to all other legal rights and remedies available to the Agency.

6-4.4 Responsibilities of the Surety. Upon receipt of the written notice of termination for default, the Surety shall immediately assume all rights, obligations and liabilities of the Contractor under the Contract. If the Surety fails to protect and maintain the Work site, the Agency may do so, and may recover all costs incurred. The Surety shall notify the Agency that it is assuming all rights, obligations and liabilities of the Contractor under the Contract and all money that is due, or would become due, to the Contractor shall be payable to the Surety as the Work progresses, subject to the terms of the Contract.

Within 15 Working Days of receipt of the written notice of termination for default, the Surety shall submit to the Agency a written plan detailing the course of action it intends to take to remedy the default. The Agency will review the plan and notify the Surety if the plan is satisfactory. If the Surety fails to submit a satisfactory plan, or if the Surety fails to maintain progress according to the plan accepted by the Agency, the Agency may, upon 48 hours written notice, exclude the Surety from the premises, take possession of all material and equipment, and complete the Work in any way the Agency deems to be expedient. The cost of completing the Work by the Agency shall be charged against the Surety and may be deducted from any monies due, or which would become due, the Surety. If the amounts due under the Contract are insufficient for completion, the Surety shall pay to the Agency, within 30 days after the Agency submits an invoice, all costs in excess of the remaining Contract Price.

6-4.5 Payment. The Surety will be paid for completion of the Work in accordance with 9-3 less the value of damages caused to the Agency by acts of the Contractor.

6-5 TERMINATION OF CONTRACT. The Board may terminate the Contract at its own discretion or when conditions encountered during the Work make it impossible or impracticable to proceed, or when the Agency is prevented from proceeding with the Contract by act of God, by law, or by official action of a public authority.

The Agency will issue a written notice of termination for convenience in accordance with 2-12. Upon receipt, the Contractor shall immediately cease work, except work the Contractor is directed to complete by the Engineer or required to complete for public safety and convenience. The Contractor shall immediately notify Subcontractors and suppliers to immediately cease their work.

The Contractor will be paid without duplication for:

a) work completed in accordance with the Contract Documents prior to the effective date of termination for convenience;

b) reasonable costs incurred in settlement of terminated contracts with Subcontractors, suppliers and others; and

c) reasonable expenses directly attributable to termination.

The Contractor shall submit a final termination settlement proposal to the Agency no later than 90 days from the effective date of termination, unless extended, in writing, by the Agency upon written request by the Contractor.

If the Contractor fails to submit a proposal, the Agency may determine the amount, if any, due the Contractor as a result of the termination. The Agency will pay the Contractor the amount it determines to be reasonable. If the Contractor disagrees with the amount determined by the Agency as being reasonable, the Contractor shall provide notice to the Agency within 30 days of receipt of payment. Any amount due shall be as later determined by arbitration, if the Agency and the Contractor agree thereto, or as fixed in a court of law.

6-6 DELAYS AND EXTENSIONS OF TIME

6-6.1 General. If delays are caused by unforeseen events beyond the control of the Contractor, such delays will entitle the Contractor to an extension of time as provided herein, but the Contractor will not be entitled to damages or additional payment due to such delays, except as provided in 6-6.3. Such unforeseen events may include war, government regulations, labor disputes, strikes, fires, floods, adverse weather necessitating cessation of work, other similar action of the elements, inability to obtain materials, equipment or labor, required Extra Work, or other specific events as may be further described in the Specifications.

No extension of time will be granted for a delay caused by the Contractor's inability to obtain materials unless the Contractor furnishes to the Engineer documentary proof of the inability to obtain such materials in a timely manner in accordance with the sequence of the Contractor's operations and the approved construction schedule.

If delays beyond the Contractor's control are caused by events other than those mentioned above, but substantially equal in gravity to those enumerated, and an extension of time is deemed by the Engineer to be in the best interests of the Agency, an extension of time may be granted, but the Contractor will not be entitled to damages or additional payment due to such delays, except as provided in 6-6.3.

If delays beyond the Contractor's control are caused solely by action or inaction by the Agency, such delays will entitle the Contractor to an extension of time as provided in 6-6.2.

6-6.2 Extensions of Time. Extensions of time, when granted, will be based upon the effect of delays to the Work as a whole and will not be granted for noncontrolling delays to minor included portions of Work unless it can be shown that such delays did, in fact, delay the progress of the Work as a whole.

6-6.3 Payment for Delays to Contractor. The Contractor will be compensated for damages incurred due to delays for which the Agency is responsible if such delays are unreasonable in the circumstances involved and were not within the contemplation of the parties when the Contract was awarded to the Contractor and delay the Work as a whole. Such actual costs will be determined by the Engineer. The Agency will not be liable for, and in making this determination the Engineer will exclude, all damages which the Engineer determines the Contractor could have avoided by any reasonable means including, without limitation, the judicious handling of forces, equipment, or plant.

6-6.4 Written Notice and Report. If the Contractor desires payment for a delay as specified in 6-6.3 or an extension of time, it shall, within 30 Days after the beginning of the delay, file with the Agency a written request and report as to the cause and extent of the delay. The request for payment or extension must be made at least 15 Days before the specified completion date. Failure by the Contractor to file these items within the time specified will be considered grounds for refusal by the Agency to consider such request.

6-6.4.1 Documentation of Delays. When the Contractor requests an extension of time for delay due to inability to obtain materials or equipment, the documentary proof required by 6-6.1 shall include the following:

1. Date Engineer was notified of delay.
2. Date the delay began.
3. Exact description of material or equipment causing delay.
4. Documentation showing when and from whom ordered.
5. Documentation of promise to deliver.
6. Documentation of actual delivery date.
7. Description of how late delivery caused delay (include construction schedule).
8. Documentation of measures taken to get prompt delivery.
9. Documentation of attempts to get delivery from other sources.
10. Description of steps taken in project scheduling to minimize effects of late delivery.
11. Description of steps taken to get project back on schedule after actual delivery.
12. Statement of actual time lost as a result of late delivery.

6-7 TIME OF COMPLETION

6-7.1 General. The Contractor shall complete the Work within the time set forth in the Contract. The Contractor shall complete each portion of the Work within such time as set forth in the Contract for such portion. Unless otherwise specified, the time of completion of the Contract shall be expressed in Working Day

6-7.2 Working Day. A Working Day is any day within the period between the start of the Contract time as defined in 6-1 and the date provided in the Contract for completion or upon field acceptance by the Engineer of all Work provided for in the Contract, whichever occurs first, other than:

(1) Saturday,
(2) Sunday,
(3) any day designated as a holiday by the Agency,
(4) any other day designated as a holiday in a Master Labor Agreement entered into by the Contractor or on behalf of the Contractor as an eligible member of a Contractor Association,
(5) any day the Contractor is prevented from working at the beginning of the workday for cause as defined in 6-6.1,
(6) any day the Contractor is prevented from working during the first 5 hours of the workday with at least 60 percent of the normal work force for cause as defined in 6-6.1.

6-7.2.1 Holidays. Solely for the purposes of paragraph (3) of 6-7.2, the following days are designated as holidays by the Agency.

	A	B
MONTH	AGENCY EMPLOYEE HOLIDAYS	OTHER DESIGNATED HOLIDAYS
January	1st day; 3rd Monday	None
February	3rd Monday	12th day
March	None	31st day
March-April	None	One Friday between March 21 and April 23 designated as Good Friday
May	Last Monday	None
June	None	None
July	4th day	None
August	None	None
September	1st Monday	9th day
October	None	2nd Monday
November	11th day; 4th Thursday	the Friday following the 4th Thursday
December	25th	23rd day, only if Thursday or Friday; 24th day; 31st day

If any day listed above falls on Saturday, the preceding Friday is the holiday. If any day listed above falls on Sunday, the succeeding Monday is the holiday.

No extra holiday shall result when such Friday or Monday is already designated as a holiday.
A copy of a Working Day calendar incorporating the above-listed holidays and used by the Agency for Contract time accounting purpose will be furnished to the Contractor upon request.

The term "holiday" as used in this section shall not be construed as being the same as "holiday" within the meaning of 7-2.2.

The Contractor may perform work on the holidays designated in Column A above provided it has obtained prior written approval of the Engineer at least two Days in advance of performing the work. The Contractor may perform work on the holidays designated in Column B above provided the Contractor notifies the Engineer two Days in advance of the holiday.

6-7.2.2 Landscape Maintenance Period. Where a landscape maintenance period is specified, the portion of the time in such period that follows the completion of all other Work required by the Contract shall not be Working Days for Contract time accounting.

6-7.3 Contract Time Accounting. The Engineer will make a daily determination of each Working Day to be charged against the Contract time. These determinations will be discussed and the Contractor will be furnished a periodic statement showing the allowable number of Working Days of Contract time, as adjusted, at the beginning of the reporting period. The statement will also indicate the number of Working Days charged during the reporting period and the number of Working Days of Contract time remaining. If the Contractor does not agree with the statement, the Contractor must file a written protest within 15 Days after receipt, setting forth the facts of the protest. Otherwise, the statement will be deemed to have been accepted.

6-7.4 Starting Date for Contract Time and Notice to Proceed. The starting date for Contract time accounting will be determined by adding the number of Days indicated on the Proposal form to the date the Contract is awarded, however the Agency may, at its option, delay the starting date by not more than 60 calendar Days if necessary to obtain permits, rights-of-way, or approval of federal or State authorities, or when prevented from starting the project due to causes beyond its control. Notice to Proceed will be issued within 7 calendar Days after the Contract, bonds, certificates of insurance and other documents have been returned, properly completed by the Contractor, unless the starting date is delayed as herein provided. If the Agency delays the Contract starting date, Notice to Proceed will be issued at least 7 calendar Days prior to the new starting date. Any delay caused by failure of the Contractor to properly complete or timely return the Contract Documents shall not change the Contract starting date and shall not be a cause for extending the Contract time. The Notice of Award will indicate a probable Contract starting date. The Notice to Proceed will indicate the actual Contract starting date, computed as herein described.

6-8 COMPLETION, ACCEPTANCE AND WARRANTY.

6-8.1 Completion and Acceptance. Acknowledgment of completion of the Work will occur prior to Acceptance by the Agency. Acceptance will only occur after all Contract requirements have been fulfilled, such as training, submission of warranties, maintenance manuals, record drawings, Release on Contract and the like. Acceptance by the Agency will occur when the Engineer signs the Notice of Completion.

The Work will be inspected by the Engineer promptly upon receipt of the Contractor's written assertion that the Work has been completed. If, in the Engineer's judgment, the Work has been completed in accordance with the Plans and Specifications, the Engineer will acknowledge completion of the Work. Completion of the Work, as used above, shall include the Contractor showing evidence of having received an occupancy clearance from Building and Safety, or other permit issuing agency, when a building, plumbing electrical, grading, or other permit is required for the Work. The Engineer will, in acknowledging completion of the Work, set forth in writing the date when the Work was completed. This will be the date when the Contractor is relieved from responsibility to protect the Work. This will also be the date to which liquidated damages will be computed.

6-8.2 Warranty and Correction

6-8.2.1 Warranty The Contractor warrants to the Agency that materials and equipment furnished under the Contract will be new, unless otherwise specified in the Contract Documents, and of good quality, that the Work will be free from defects in materials and workmanship and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective by the Agency. This warranty excludes damage or defect caused by abuse (other than by the Contractor or those under the control of the Contractor), modifications not executed by the Contractor, or improper or insufficient maintenance. This warranty excludes normal wear and tear. Nothing in this warranty is intended to limit any manufacturer’s warranty which provides the Agency with greater warranty rights.

6-8.2.2 Correction Period For a period of one (1) year from the date of acceptance of the Work by the Agency, the Contractor shall repair or replace any defective workmanship or materials or Work not in conformance with the Contract Documents after notice to do so from the Engineer, and within the time specified in the notice. If the Contractor fails to make such repair or replacement within the time specified in the notice, the Agency may perform the repair or replacement and the Contractor and the Contractor’s sureties shall be liable for the cost thereof. The one (1) year period referenced in this section 6-8.2.2 applies only to the Contractor’s obligation to repair or replace defective workmanship or materials or Work not in conformance with the Contract Documents and is not intended to constitute a period of limitations for any other rights or remedies the Agency may have regarding the Contractor’s other obligations under the Contract Documents.

6-8.3 No Waiver of Legal Rights. The Agency shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after the completion and Acceptance of the Work and payment therefor from showing the true amount and character of the Work performed and materials furnished by the Contractor, nor from showing that any such measurement, estimate, or certificate is untrue or is incorrectly made, nor that the Work or materials do not in fact conform to the Contract.

The Agency shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor or its sureties, or both, such damages as it may sustain by reason of the Contractor's failure to comply with the terms of the Contract.

Neither the Acceptance by the Engineer or by its representative, nor any payment for or Acceptance of the whole or any part of the Work, nor any extension of time, nor any possession taken by the Engineer shall operate as a waiver of any portion of the Contract or of any power herein reserved, or of any right to damages.

A waiver of any breach of the Contract shall not be held to be a waiver of any other or subsequent breach.

6-8.4 Landscape Maintenance Period. Final Acceptance of the Contract shall follow the satisfactory completion of all Contract Work, including the landscape maintenance period if one is specified.

6-8.5 Non-complying Work. Neither the final certificate of payment nor any provision in the Contract Documents, nor partial or entire occupancy of the premises by the Agency, shall constitute an Acceptance of Work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship.

6-8.6 Written Warranties. The Contractor shall obtain and deliver to the Engineer all written warranties required to be furnished by the Specifications. Each of such warranty shall be underwritten by the Contractor for the full period prescribed therein, and shall bear its endorsement to such effect.

6-9 LIQUIDATED DAMAGES. Failure of the Contractor to complete the Work within the time allowed will result in damages being sustained by the Agency. Such damages are, and will continue to be, impracticable and extremely difficult to determine. For each consecutive calendar day in excess of the time specified, as adjusted in accordance with 6-6, for completion of the Work the Contractor shall pay to the Agency, or have withheld from monies due it, the sum of $250, unless otherwise provided in the Contract Documents.

Execution of the Contract under these Specifications shall constitute agreement by the Agency and Contractor that $250 per day is the minimum value of the costs and actual damage caused by failure of the Contractor to complete the Work within the allotted time, that such sum is liquidated damages and shall not be construed as a penalty, and that such sum may be deducted from payments due the Contractor if such delay occurs.

6-10 USE OF IMPROVEMENT DURING CONSTRUCTION. The Agency reserves the right to take over and utilize all or part of any completed facility or appurtenance. The Contractor will be notified in writing in advance of such action. Such action by the Agency will relieve the Contractor of responsibility for injury or damage to said completed portions of the improvement resulting from use by public traffic or from the action of the elements or from any other cause, except injury or damage resulting from the Contractor's operations or negligence. The Contractor will not be required to reclean such portions of the improvement before field completion, except for cleanup made necessary by its operations. Nothing in this section shall be construed as relieving the Contractor from full responsibility for correcting defective work or materials.

In the event the Agency exercises its right to place into service and utilize all or part of any completed facility or appurtenance, the Agency shall assume the responsibility and liability for injury to persons or property arising out of or resulting from the utilization of the facility or appurtenance so placed into service, except for any willful or negligent act or omission by the Contractor, Subcontractor, their officers, employees or agents.

6-10.1 Use of Improvements - Exceptions. The provisions of 6-10 shall not apply to projects for the repair, modification, enlargement or improvement of existing facilities that are to remain in use during construction except where a portion of the project which is completely independent from the rest of the Work can be completed and put into use by the Agency.

On projects on public roads, after satisfactory completion of an isolated section of the Work involving roadway improvements or repairs, when all temporary signs and other temporary Contractor facilities have been removed, the section is not being used as a detour, the section is no longer under the Contractor's control, and the section is opened to public traffic through the end of the Contract period, that section of the Work shall be taken over by the Agency as provided in 6-10. The Contractor shall indicate to the Engineer in writing when the conditions of this paragraph have been complied with and shall specify the limits of the section involved. Any taking over of the Work by the Agency shall be effective only when formal written notification is issued by the Agency.

6-11 NOTICE OF POTENTIAL CLAIM FOR ADDITIONAL COMPENSATION. Procedures for notice of claims in specific situations and circumstances are provided in the following sections:

3-4 ....Changed Conditions
6-6.4 ....Delay and Extensions of Time
6-7.3 ....Contract Time Accounting

Compliance with this section is not prerequisite to assertion of a claim involving those sections or based on differences in measurements or errors of computation as to Contract quantities.

Compliance with the provisions of this section is required in all other situations and circumstances.

It is the intention of this section that differences arising between the parties under and by virtue of the Contract be brought to the attention of the Engineer at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action taken to resolve such differences.

The Contractor shall give the Engineer written notice of a potential claim, setting forth: (1) the reasons for which the Contractor believes additional compensation will or may be due; (2) the nature of the costs involved; and (3) insofar as possible, the amount of the potential claim.

If the claim is based upon an act or failure to act by the Engineer, the said notice must be given to the Engineer prior to the date when the work giving rise to the potential claim is commenced; in all other cases the said notice must be given to the Engineer within 15 Days after the happening of the event, thing or occurrence giving rise to the potential claim.

The Contractor shall not be entitled to the payment of any additional compensation where the written notice of potential claim has not been given to the Engineer in the manner required by and within the time limitations of this section.

6-12 DISPUTES AND CLAIMS; PROCEDURE.

6-12.1 GENERAL. Any and all decisions made on appeal pursuant to this section shall be in writing. Any "decision" purportedly made pursuant to this section which is not in writing shall not be binding upon the Agency and should not be relied upon by the Contractor.

Filing or giving the notices required under 3-4, 6-6.4, 6-7.3 and 6-11 is prerequisite to recovery under a Contractor's claim for additional compensation; nothing in this section shall excuse the Contractor from its duty to file or give the required notices, or from performing other duties required by the Contract Documents.

6-12.2 ADMINISTRATIVE REVIEW. Prior to proceeding under 6-12.3 or filing a Complaint in Arbitration, the Contractor shall exhaust its administrative remedies by submitting its claim for review and decision by the following Agency staff in the following sequence:

Project Manager, responsible for the project
Department Director (Public Works Agency), responsible for the project.
Director of the Public Works Agency (the Engineer)

If the Contractor disputes the Project Manager's decision on its claim, the Contractor shall submit the claim to the Department Director. If the Contractor disputes the Department Director's decision on its claim, the Contractor shall submit the claim to the Engineer. Agency staff decisions shall state the portion of the claim that is undisputed if any.

The Project Manager may elect to forward a claim submitted by the Contractor directly to the Department Director. The Project Manager must give the Contractor notice of that election and the Contractor may supplement its claim within 7 Days of such notice (unless the parties agree in writing to a different time) and its claim will be deemed submitted on the earlier of the day it supplements its claim, the day it states in writing that it will not supplement its claim or the day time to supplement expires. The Department Director may forward a claim timely submitted by the Contractor directly to the Engineer instead of making a decision on the claim, in which case no notice or opportunity to supplement the claim is required, and the claim shall be deemed timely submitted to the Engineer.

The Engineer's decision on the claim shall be the Agency's final decision.

Claims submitted to the Department Director and the Engineer shall be submitted in writing and shall include:

a. A copy of the disputed decision.
b. A statement as to why the Contractor believes the decision is in error.
c. All information, argument, documents and evidence (collectively, materials) that the Contractor wishes to have considered in the review. Where the request for review is made to the Engineer, in lieu of resubmitting materials which have already been submitted to the Department Director, the Contractor may include with the request a list of the materials the Contractor wants the Engineer to consider. Any additional materials and evidence not previously submitted to the Department Director shall be included with the request to the Engineer, if the Contractor wishes them to be considered. If relevant evidence is not available at the time the request is made to the Department Director or the Engineer, the Contractor shall identify such evidence and include a statement as to when such evidence will be submitted.

The Project Manager shall issue a decision on a claim within 10 Days of receipt; if the Project Manager does not do so, then the Project manager will be deemed to have decided to reject the claim in its entirety as of the conclusion of the 10th Day after receipt. The Contractor shall submit a claim to the Department Director for review and decision within 7 Days of receipt of the Project Manager's decision or of the time the Project Manager is deemed to have decided to reject the claim, whichever is applicable. The Department Director shall issue a decision on a claim within 10 Days of the timely submission of the claim; if the Department Director does not do so, then the Department Director will be deemed to have decided to reject the claim in its entirety as of the conclusion of the 10th Day after timely submission. The Contractor shall submit a claim to the Engineer for review and decision within 7 Days of receipt of the Department Director's decision or of the time the Department Director is deemed to have decided to reject the claim, whichever is applicable. If a claim is timely submitted to the Engineer and the Engineer fails to issue a decision on that claim within the time limits prescribed for issuing a written statement under Public Contract Code, section 9204, subdivision (d)(1), the Engineer shall be deemed to have decided to reject the claim in its entirety. At any time after the Project Manager receives a claim, the Agency and Contractor may agree in writing to different time limits than those set forth in this paragraph.

6-12.3 MEET AND CONFER; MEDIATION If the Contractor disputes the Agency's final decision, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the Agency shall schedule a meet and confer conference within 30 Days for settlement of the dispute.

Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the Agency shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 Days after the Agency issues its written statement. Any disputed portion of the claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the Agency and the Contractor sharing the associated costs equally. The Agency

and Contractor shall agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the Agency and Contractor cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

Failure by the Agency to meet the time requirements of this section shall result in the portion of the claim that remains in dispute being deemed rejected in its entirety.

The parties may agree to waive, in writing, mediation under this section.

6-12.4 ARBITRATION. Claims and disputes arising under or related to the performance of the Contract, for which mediation under 6-12.3 was waived or unsuccessful except for claims which have been released by execution of the "Release on Contract" as provided in 9-4, shall be resolved by arbitration unless the Agency and the Contractor agree in writing, after the claim or dispute has arisen, to waive arbitration and to have the claim or dispute litigated in a court of competent jurisdiction. Arbitration shall be pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2 of the Public Contract Code and the regulations promulgated thereto, Chapter 4 (commencing with Section 1300) of Division 2 of Title 1 of the California Code of Regulations. The arbitration decision shall be decided under and in accordance with California law, supported by substantial evidence and, in writing, contain the basis for the decision, findings of fact, and conclusions of law.

Arbitration shall be initiated by a Complaint in Arbitration made in compliance with the requirements of said Chapter 4. A Complaint in Arbitration by the Contractor shall be filed not later than 90 calendar Days after receipt of the final written decision of the Agency on the claim or dispute or within 300 Days after Acceptance of the Work by the Agency if no written decision has been issued. For the purposes of this section, "Acceptance of the Work by the Agency" shall be defined as the date the Notice of Completion is filed.

Where an election is made by either party to use the Simplified Claims Procedure provided under Sections 1340-1346 of said Chapter 4, the parties may mutually agree to waive representation by counsel.

All contracts valued at more than $25,000 between the Contractor and its subcontractors and suppliers shall include a provision that the subcontractors and suppliers shall be bound to the Contractor to the same extent that the Contractor is bound to the Agency by all terms and provisions of the Contract, including this arbitration provision.

6-13 CONTRACTOR'S WORK HOURS

6-13.1 Working Hours Limitations. Except as otherwise specified, no work shall be performed by the Contractor at the Work site between the hours of 7:00 p.m. and 7:00 a.m. the following day, nor shall work be performed on Saturdays, Sundays or holidays listed in 6-7.2.1.

6-13.2 Regular Work Schedule. The Contractor shall furnish a work schedule with the Construction Schedule required by 6-1 and inform the Engineer at least two Days in advance of changing the schedule. The schedule shall include the times for starting and ending work on each day. Such starting and ending times shall not be more than 10 1/2 hours apart.

6-13.3 Exceptions. The limitations on working hours and days shall not apply to emergency work made necessary by unusual conditions where such work is necessary to protect the Work, to protect the property of others, to protect life, or to ensure the orderly flow of traffic.

The limitations of this section shall not apply where work at times other than allowed by 6-13.1 and 6-13.2 is necessary in order to make utility connections or is required by other provisions contained in these Specifications in order to perform the work in the manner specified. In these cases, the Contractor shall obtain prior written approval of the Engineer at least two Days in advance of performing the work.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-1 THE CONTRACTOR'S EQUIPMENT AND FACILITIES.

7-1.1 General. The Contractor shall furnish and maintain in good condition all equipment and facilities as required for the proper execution and inspection of the Work.

The Contractor shall provide and maintain enclosed toilets for the use of employees engaged in the Work. These accommodations shall be maintained in a neat and sanitary condition, and regularly pumped out.

7-1.2 Temporary Utility Services. The Contractor shall, at its own expense, make all arrangements necessary for the provision of temporary utility services necessary for its own use during performance of the Work.

The Contractor shall not draw water from any fire hydrant (except to extinguish a fire), without obtaining permission from the water utility owner.

7-1.3 Crushing and Screening Operations. Unless otherwise specified in the Special Provisions, the establishment and operation of portable screens and crushers will not be allowed on or adjacent to the Work site.

7-2 LABOR

7-2.1 General. The Contractor, its agents, and employees shall be bound by and comply with applicable provisions of the Labor Code and Federal, State, and local laws related to labor.
Any worker found by the Engineer to be incompetent, intemperate, troublesome, disorderly, or otherwise objectionable, or who fails to perform the Work properly and acceptably, shall be immediately removed from the Work site by the Contractor and shall not be reemployed in the performance on the Work.

7-2.1.1 Special Qualifications. Where the Engineer determines certain portions of the Work require experience, training, certification or other special qualifications that may not be possessed by the average journeyperson, such portions of the Work will be specifically identified in the Special Provisions and the special qualifications identified.

When work requiring special qualifications is being performed, a person with such qualifications must be in immediate charge of the work. The person may be a lead journeyperson, foreperson or trade superintendent. The general superintendent or a foreperson who is not specifically assigned to the area where the identified work is being performed will not be considered to be in immediate charge of the work.

Written certification of the required qualifications shall be furnished to the Engineer at least one week prior to the time work is commenced on the work requiring such qualifications. Such certification is subject to review and acceptance by the Engineer. If, during performance of work requiring special qualifications, the qualified person becomes temporarily or permanently unavailable to the Contractor, work shall not proceed until a qualified replacement has been accepted by the Engineer. The Engineer will promptly consider the certification of the replacement.

If identified work is performed without a person having the special qualifications in charge, the Engineer may, at its sole discretion, order such work removed and replaced at the Contractor's expense.

If, after certification is accepted, the Engineer finds that the certification was inaccurate, or work on the project indicates a lack of the knowledge and experience to supervise the work, the Engineer may order the work stopped until an acceptable replacement has been certified, accepted and is in charge.

7-2.2 Prevailing Wages. Pursuant to Section 1773.2 of the Labor Code, the current prevailing rate of per diem wages at the time of the Bid as determined by the Director of the Department of Industrial Relations (DIR) are on file at the office of the Engineer. The Contractor shall post a copy of these rates at the Work site. Pursuant to Section 1774 of the Labor Code, the Contractor and any Subcontractors shall pay not less than the specified prevailing rates of wages to workers employed on the Contract. If the Contract is Federally-funded, the Contractor and any Subcontractors shall not pay less than the higher of these rates or the rates determined by the United States Department of Labor. Pursuant to Section 1775 of the Labor Code, the Contractor and any Subcontractors, shall, as a penalty to the Agency, forfeit the prescribed amounts per calendar day, or portion thereof, for each worker paid less than the prevailing wage rates. The project is subject to the compliance monitoring and enforcement by the California Department of Industrial Relations (DIR). The contractor is responsible for posting job site notices as prescribed by regulation pursuant to Labor Code section 1771.4, subdivision (a)(2). The Contractor and each Subcontractor, if any, must be registered with the DIR pursuant to Labor Code section 1725.5 and section 1771.1. The Contractor and each Subcontractor, if any, must submit certified payrolls to the Labor Commissioner pursuant to Labor Code 1771.4.

7-2.2.1 Apprentices. Apprentices shall be employed on the Work in accordance with Labor Code Section 1777.5. The Contractor is responsible for compliance with Labor Code Section 1777.5 for all apprenticeable occupations whether employed directly or through subcontractors.

7-2.2.2 Contractors' Duties Concerning Labor Code Compliance. As required by Labor Code 1775(b)(1), Labor Code Sections 1771, 1775, 1776, 1777.5, 1813 and 1815 are required to be included in the contract between the Contractor and subcontractors. The Contractor agrees to comply with these sections and all remaining provisions of the Labor Code.

7-2.3 Payroll Records. Pursuant to Section 1776 of the Labor Code the Contractor and each Subcontractor, if any, shall keep, make available, and submit to the Engineer within ten (10) days of receipt of a written request,

certified payroll records. Pursuant to Labor Code section 1776, subsection (h), the Contractor and each Subcontractor, if any, shall, as a penalty to the Agency, forfeit the prescribed amount for each calendar day, or portion thereof, for each worker, the Contractor and each Subcontractor, if any, fails to comply with that subsection until strict compliance is effectuated. The Contractor and each Subcontractor, if any, waives any right to any notice or hearing on the forfeiture of such penalties pursuant to Labor Code sections 1726 or 1771.6. The contractor shall include the in its subcontracts as required to make this paragraph effective as to each Subcontractor. Upon written request, the Contractor shall withhold penalties forfeited by a Subcontractor pursuant to Labor Code section 1776,l subsection (h), and this paragraph from payment due to such Subcontractor and remit such penalties withheld to the Agency.

7-2.4 Hours of Labor. Pursuant to Section 1810 of the Labor Code, 8 hours of labor shall constitute a legal day's work. Pursuant to Section 1813 of the Labor Code, the Contractor and any Subcontractors, shall, as a penalty to the Agency, forfeit the prescribed amount per calendar day for each worker required or permitted to work more than 8 hours in any 1 calendar day and 40 hours in any 1 calendar week without being compensated in accordance with Section 1815.

Pursuant to Section 1810 of the Labor Code, 8 hours of labor shall constitute a legal day's work. Pursuant to Section 1813 of the Labor Code, the Contractor and each Subcontractor, if any, shall, as a penalty to the Agency, forfeit the prescribed amount per calendar day for each worker required or permitted to work more than 8 hours in any 1 calendar day and 40 hours in any 1 calendar week without being compensated in accordance with Section 1815. Contractor and each Subcontractor, if any, waives any right to any notice or hearing on the forfeiture of such penalties pursuant to Labor Code sections 1726 and 1771.6. Contractor shall include terms in its subcontracts as required to make this paragraph effective as to each Subcontractor. Upon written request, Contractor shall withhold penalties forfeited by a Subcontractor pursuant to Labor Code section 1813 and this paragraph from payments due to such Subcontractor and remit such penalties withheld to the Agency

7-3 INDEPENDENCE OF CONTRACTOR, INDEMNIFICATION AND POLLUTION

7-3.1 Independence of Contractor. It is understood and agreed that Contractor is at all times an independent contractor and that no relationship of employer-employee exists between the parties hereto. Contractor will not be entitled to any benefits payable to employees of County, including but not limited to overtime, retirement benefits, workers' compensation benefits, injury leave or other leave benefits. County is not required to make any tax or benefit deductions from the compensation payable to Contractor under the provisions of this Agreement. As an independent contractor, Contractor hereby holds County harmless from any and all claims that may be made against County based upon any contention by any third party that an employer-employee relationship exists by reason of the Agreement.

If, in the performance of this Agreement, any third persons are employed by Contractor, such persons will be entirely and exclusively under the direction, supervision and control of Contractor. All terms of employment, including hours, wages, working conditions, discipline, hiring and discharging or any other terms of employment or requirements of law, will be determined by Contractor. County will have no right or authority over such persons or the terms of such employment, except as provided in this Agreement.

7-3.2 Indemnification and Hold Harmless Clause. All activities arising out of or relating to the performance of the Work covered by this Contract shall be at the risk of Contractor. To the fullest extent permitted by law, Contractor shall defend (at Agency's request), indemnify and hold harmless Agency, and the County of Ventura if the County of Ventura is not the entity defined as Agency under this Contract, including all of their boards, agencies, departments, officers, employees, agents and volunteers (collectively, "Indemnitee"), against any and all claims, suits, actions, legal or administrative proceedings, judgments, debts, demands, damages, including injury or death to any person or persons, and damage to any property including loss of use resulting therefrom, incidental and consequential damages, liabilities, interest, costs, attorneys' fees and expenses of whatsoever kind of nature, whether arising before, during or after commencement or completion of this Contract, whether against Contractor and Indemnitee or which are in any manner, directly, indirectly, in whole or in part, arising from any act, omission, fault or negligence, whether active or passive, of Contractor, a Subcontractor or anyone directly or indirectly employed by them or anyone for whose acts they may be liable in connection with or incident to the Contract, even though the same may have resulted from the joint, concurring or contributory negligence, or from the passive negligence, of Indemnitee or any other person or persons, unless the same be caused by the sole negligence of Indemnitee, or except to the extent caused by the active negligence or willful misconduct of Indemnitee.

The Agency will notify the Contractor of the receipt of any third party claims.

7-3.3 Contamination and Pollution. Contractor, solely at its own cost and expense, will provide clean up of any premises, property or natural resources contaminated or polluted due to Contractor activities. Any fines, penalties, punitive or exemplary damages assigned due to contaminating or polluting activities of the Contractor will be borne entirely by the Contractor.

7-4 INSURANCE REQUIREMENTS

Contractor, at its sole cost and expense, shall obtain and maintain in full force during the term of this Contract the following types of insurance:

7-4.1 Workers' Compensation Insurance.

7-4.1.1 Coverage. Workers' Compensation coverage, in full compliance with Labor Code 3700, for all employees of Contractor and Employer's Liability in the minimum amount of $1,000,000. The Agency, the County of Ventura, its officers, employees or Consultants, will not be responsible for any claims in law or equity occasioned by failure of Contractor to comply with this paragraph.

7-4.1.2 Certification. Before execution of the Contract by Agency, Contractor shall file with the Engineer the following signed certification:

> "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract."

7-4.2 Commercial General Liability Insurance

7-4.2.1 Minimum Limits and Scope; Insurance Classes. "Occurrence" coverage in the minimum amount of:

Coverage Class	Coverage
L-A	$ 1,000,000 combined single limit (CSL) bodily injury and property damage each occurence and $1,000,000 aggregate
L-B	$ 1,000,000 CSL bodily injury and property damage each occurrence and $2,000,000 aggregate
L-C	$ 5,000,000 CSL bodily injury and property damage each occurrence and $5,000,000 aggregate
L-D	$ 10,000,000 CSL bodily injury and property damage each occurrence and $10,000,000 aggregate

If no coverage class is specified in "Proposal", coverage class L-B shall apply.

If Contractor maintains higher limits than the minimums shown above, the Agency requires and shall be entitled to coverage for the higher limits maintained by the Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the Agency.

Coverages shall include premises/operations; products/completed operations; independent contractors; underground, explosion and collapse hazards; personal and advertising injury; broad form property damage; and broad form blanket contractual.

7-4.2.2 Coverage Exceptions. On projects where no explosives will be used and no demolition is involved, the coverage for explosion may be omitted. On projects where no excavation is involved, the coverage for underground hazard may be omitted. The omission of said coverages is at Agency's option, and shall not abrogate Contractor's responsibilities for indemnification as set forth in these Specifications.

7-4.2.3 Excess Liability Policies. All Excess Liability policies, if used, shall be on an "umbrella" or following form of the primary layer of coverage.

7-4.3 Commercial Automobile Liability Insurance

Coverage in the minimum amount of $1,000,000 CSL bodily injury and property damage, including automobile liability, any auto.

7-4.4 Property Insurance

Contractor shall arrange for its own "Course of Construction" insurance on the project to protect its interests, as Agency does not have this coverage.

Contractor is responsible for delivering to Agency Work completed in accordance with the Contract except as provided in 7-18 (Acts of God). Should the Work being constructed be damaged by fire or other causes during construction, it shall be replaced by Contractor in accordance with the requirements of the Plans and Specifications without additional expense to Agency.

7-4.5 Other Insurance Provisions.

7-4.5.1 Insurance Company Qualifications. All insurance required shall be issued by (a) an admitted company or admitted companies authorized to transact business in the State of California which have a BEST rating of B+ or higher and a Financial Size Category (FSC) of VII or larger or (b) a California approved Surplus Line carrier or carriers which have a BEST rating of A or higher and a Financial Size Category (FSC) of VII or larger.

Workers compensation insurance not meeting the above requirements but meeting all other requirements of the specifications, will be accepted.

7-4.5.2 Primary Coverage. All insurance required shall be primary coverage as respects Agency and any insurance or self-insurance maintained by Agency or the County of Ventura shall be in excess of Contractor's insurance coverage and shall not contribute to it.

7-4.5.3 Aggregate Limits Exceeded. Agency shall not be notified immediately if any aggregate insurance limit is exceeded. Contractor shall purchase additional coverage to meet requirements.

7-4.5.4 Liability in Excess of Limits. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve Contractor for liability in excess of such coverage, nor shall it preclude Agency or the County of Ventura from taking such other actions as is available to it under any other provisions of this Contract or otherwise in law.

7-4.5.5 Additional Insured Endorsements. The Agency, the County of Ventura (if not defined as Agency) and all special Districts governed by the County of Ventura Board of Supervisors, and their officials, employees, and volunteers shall be named as Additional Insured as respects Work done by or on behalf of Contractor under the Contract on all policies required (except workers' compensation). With respect to Contractor's commercial general Liability insurance, Additional Insured coverage shall include both ongoing and completed operations.

7-4.5.6 Waiver of Subrogation Rights. Contractor agrees to waive all rights of subrogation against the Agency, the County of Ventura, including its boards, and all special Districts governed by the Board of Supervisors, for losses arising directly or indirectly from the activities or Work performed by Contractor under the Contract (applies only to Workers' Compensation and Commercial General Liability).

7-4.5.7 Cancellation Notice Required. In the case of policy cancellation, Agency shall be notified by the insurance company or companies as provided for in the policy. Contractor shall notify Agency of any and all policy cancellations within three working days of the cancellation.

7-4.5.8 Documentation Required. Prior to execution of the Contract by Agency, Contractor shall provide Agency with Certificates of Insurance for all required coverages (see Appendix A for example), all required endorsement(s) and a copy of its course of insurance policy.

It is the responsibility of Contractor to confirm that all terms and conditions of Section 7-4 Insurance Requirements are complied with by any and all subcontractors that Contractor may use in the completion of the Contract.

7-5 PERMITS. The Agency will obtain, at no cost to the Contractor, all encroachment and building permits necessary to perform Contract Work in streets, highways, railways or other rights of way, unless the necessity for such permit(s) is created by a method of operation chosen by the Contractor. The Contractor shall obtain and pay for all costs incurred for permits necessitated by its operations such as, but not limited to, those permits required for night Work, overload, blasting and demolition.

The Contractor shall pay all business taxes or license fees that are required for the Work.

7-5.1 Highway and Railroad Permits. The Engineer will obtain the basic State highway and railroad encroachment permits which will include checking of plans. However, the Contractor must also obtain permits from these agencies. Inspection fees charged by these agencies must be paid by the Contractor.

7-5.2 Grading Ordinance

7-5.2.1 General. All excavation, filling and grading operations in Ventura County are governed by the Ventura County Grading Ordinance or City Ordinances, except within the project right of way shown on the Plans.

7-5.2.2 Permits Required. Work outside the project right of way which involves excavation or filling of soils is subject to all requirements of the applicable grading ordinance. The requirements may include, but are not limited to, submitting of a grading plan prepared by a Civil Engineer, obtaining a grading permit, paying the permit fee, posting a grading bond, hiring professionals for engineering and testing services, compacting fills, constructing drainage facilities and providing erosion protection.

7-5.2.3 Imported and Exported Material. To insure that neither the Agency nor the Contractor is a party to aiding or abetting any property owner (who is ultimately responsible) to violate the applicable grading ordinance, no material shall be imported from or exported or wasted outside the project right of way until the Contractor has furnished the Engineer a copy of the grading permit covering such operation on land where material is to be deposited or excavated, unless exempt.

7-5.2.4 Exemptions from Permit. No grading permit is required of the Contractor for Work performed within the project right of way shown on the Plans or on borrow or disposal areas shown on the Plans or described in the Special Provisions and which are specifically designated as being exempt from such permit requirements.

7-5.3 Building Permit.

7-5.3.1 Agency Furnished Permits. Except as provided in **7-5.3.2**, Agency will submit the plans for the Work to Department of Building and Safety, and other building related permit issuing agencies, for plan check and make the corrections necessary for the issuance of building and related permits. Agency will Pay plan check and permit fees for the Work. The Contractor may be required to furnish information to the permit issuing agencies, as required for the issuance of permits, and sign the permit.

7-5.3.2 Contractor Furnished Permits. Components or systems, required by the Contract, may require the preparation of plans and calculations to obtain approvals or permits from state or local building, fire prevention, public health, safety, environmental protection and other agencies in addition to the basic permits arranged for by the Agency as provided in **7-5.3.1**. Contractor shall take all actions in a timely manner to obtain such approvals or permits so as not to delay completion of the Work beyond the time provided in **6-7**. Contractor shall include all costs and consider the time required to obtain approvals or permits in the Contract price bid.

7-5.4 Coastal Zone Permits

7-5.4.1 Agency Furnished Permits. Permits required for Work on the project within rights of way furnished by the Agency within the Coastal Zone will be obtained by the Agency.

7-5.4.2 Contractor Furnished Permits. Permits required for the Contractor's operations outside of rights of way furnished by the Agency must be obtained by the Contractor. Such permits are required for brush removal, grading, dredging, disposal of material and many other operations within the Coastal Zone.

7-6 THE CONTRACTOR'S REPRESENTATIVE. Before starting work, the Contractor shall designate in writing a representative who shall have complete authority to act for it. An alternative representative may be designated as well. The representative or alternate shall be present at the Work site whenever work is in progress or whenever actions of the elements necessitate its presence to take measures necessary to protect the Work, persons, or property. Any order or communication given to this representative shall be deemed delivered to the Contractor. A joint venture shall designate only one representative and alternate. In the absence of the Contractor or its representative, instructions or directions may be given by the Engineer to the superintendent or person in charge of the specific work to which the order applies. Such order shall be complied with promptly and referred to the Contractor or its representative.

In order to communicate with the Agency, the Contractor's representative, superintendent, or person in charge of specific work shall be able to speak, read, and write the English language.

7-7 COOPERATION AND COLLATERAL WORK. The Contractor shall be responsible for ascertaining the nature and extent of any simultaneous, collateral, and essential work by others. The Agency, its workers and contractors and others, shall have the right to operate within or adjacent to the Work site during the performance of such work.

The Agency, the Contractor, and each of such workers, contractors and others, shall coordinate their operations and cooperate to minimize interference.

The Contractor shall include in its Bid all costs involved as a result of coordinating its work with others. The Contractor will not be entitled to additional compensation from the Agency for damages resulting from such simultaneous, collateral, and essential work. If necessary to avoid or minimize such damage or delay, the Contractor shall redeploy its work force to other parts of the Work.

Should the Contractor be delayed by the Agency, and such delay could not have been reasonably foreseen or prevented by the Contractor, the Engineer will determine the extent of the delay, the effect on the Work, and any extension of time.

7-8 WORK SITE MAINTENANCE

7-8.1 General Throughout all phases of construction, including suspension of the Work, and until acceptance per 6-8, the Contractor shall keep the Work site clean and free from rubbish and debris. Rubbish and debris collected on the Work site shall only be stored in roll-off, enclosed containers prior to disposal. Stockpiles of such will not be allowed.

When required by the Special Provisions, the Contractor shall provide a self-loading motorized street sweeper equipped with a functional water spray system. The sweeper shall clean all paved areas within the Work site and all paved haul routes at least once each working day.

The Contractor shall ensure there is no spillage along haul routes. Any such spillage shall be removed immediately and the area cleaned.

Should the Contractor fail to keep the Work site free from rubbish and debris, the Engineer may suspend the Work per 6-3 until the condition is corrected.

7-8.2 Air Pollution Control The Contractor shall not discharge smoke, dust, equipment exhaust, or any other air contaminants into the atmosphere in such quantity as will violate any Federal, State, or local regulations.

The Contractor shall also abate dust nuisance by cleaning, sweeping and spraying with water, or other means as necessary. The use of water shall conform to 7-8.6.

7-8.3 Noise Control. Noise generated from the Contractor's operations shall be controlled as specified in the Special Provisions.

7-8.4 Storage of Equipment and Materials.

7-8.4.1 General Materials and equipment shall be removed from the Work site as soon as they are no longer necessary. Before inspection by the Engineer for acceptance, the Work site shall be cleared of equipment, unused materials, and rubbish so as to present a satisfactory clean and neat appearance.

Excess excavated material shall be removed from the Work site immediately unless otherwise specified in the Special Provisions.

Forms and form lumber shall be removed from the Work site as soon as practicable after stripping.

7-8.4.2 Storage in Public Streets. Construction materials and equipment shall not be stored in streets, roads, or highways for more than 5 days after unloading unless otherwise specified in the Special Provisions or approved by the Engineer. All materials or equipment not installed or used in construction within 5 days after unloading shall be stored at a location approved by the Engineer.

Excavated material, except that which is to be used as backfill in the adjacent trench, shall not be stored in public streets unless otherwise specified in the Special Provisions or approved by the Engineer. Immediately after placing backfill, all excess material shall be removed from the Work site.

7-8.5 Sanitary Sewers.

7-8.5.1 General. The flow of sewage shall not be interrupted. Should the Contractor disrupt the operation of existing sanitary sewer facilities, or should disruption be necessary for performance of the Work, the Contractor shall bypass the sewage flow around the Work. Sewage shall be conveyed in closed conduits and disposed of in a sanitary sewer system. Sewage shall not be permitted to flow in trenches nor be covered by backfill.

Whenever sewage bypass and pumping is required by the Plans or Specifications, or the Contractor so elects to perform, the Contractor shall submit per 2-5.3 a working drawing conforming to 7-8.5.2 detailing its proposed plan of sewage bypass and pumping.

7-8.5.2 Sewage Bypass and Pumping Plan. The plan shall indicate the locations and capacities of all pumps, sumps, suction and discharge lines. Equipment and piping shall be sized to handle the peak flow of the section of sewer line to be bypassed and pumped. Equipment and piping shall conform to 7-10, the Plans, and the Special Provisions. Bypass piping, when crossing areas subject to traffic loads, shall be constructed in trenches with adequate cover and otherwise protected from damage due to traffic. Lay-flat hose or aluminum piping with an adequate casing and/or traffic plates may be allowed if so approved by the Engineer. Bypass pump suction and

discharge lines that extend into manholes shall be rigid hose or hard pipe. Lay flat hose will not be allowed to extend into manholes. The Contractor shall provide a backup bypass pumping system in case of malfunction. The backup bypass system shall provide 100 percent standby capability, and be in place and ready for immediate use.

Each standby pump shall be a complete unit with its own suction and discharge piping. In addition to the backup system, the Contractor shall furnish and operate vacuum trucks when required by the Plans or Special Provisions.

7-8.5.3 Spill Prevention and Emergency Response Plan. The Contractor shall prepare and submit per 2-5.3 a spill prevention and emergency response plan. The plan shall address implementation of measures to prevent sewage spills, procedures for spill control and containment, notifications, emergency response, cleanup, and spill and damage reporting.

The plan shall account for all storm drain systems and water courses within the vicinity of the Work which could be affected by a sewage spill. Catch basins that could receive spilled sewage shall be identified Unless otherwise specified in the Special Provisions, these catch basins shall be sealed prior to operating the bypass and pumping system. The Contractor shall remove all material used to seal the catch basins when the bypass and pumping system operations are complete.

The Contractor shall be fully responsible for containing any sewage spillage, preventing any sewage from reaching a watercourse, recovery and legal disposal of any spilled sewage, any fines or penalties associated with the sewage spill imposed upon by the Agency and/or the Contractor by jurisdictional regulatory agencies, and any other expenses or liabilities related to the sewage spill.

7-8.6 Water Pollution Control The Contractor shall prevent, control, and abate discharges of pollutants from the construction site in order to protect the storm drain system, which includes pipes, channels, streams, waterways, and other bodies of water, by the construction, installation or performance of water pollution control measures as shown on the Stormwater Pollution Control Plan (SWPCP) or Stormwater Pollution Prevention Plan (SWPPP) depending on the land area affected by the construction activity. The Contractor shall ensure compliance with the current State NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activity (General Construction Permit), NPDES No. CAS000002 and current Ventura County NPDES Municipal Separate Storm Sewer System (MS4) Permit No. CAS004002.

7-8.6.1 Compliance with NPDES General Construction Permit

7-8.6.1.1 Construction Sites

If the Work involves construction activity that results in soil disturbance of one acre or more of total land area, or results in soil disturbances of less than one acre but is a part of a work area larger than one acre, the Contractor shall comply with the requirements of the General Construction Permit NPDES No. CAS000002. Construction activity includes clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. Construction activity does not include routine maintenance such as, maintenance of original line and grade, hydraulic capacity, or original purpose of the facility.

The Contractor shall comply with requirements of the General Construction Permit (NPDES No. CAS000002), obtained by the Agency, including a site-specific Storm Water Pollution Prevention Plan (SWPPP) for the Work to be developed by Qualified SWPPP Developer (QSD) and implemented by the Qualified SWPPP Practitioner (QSP). After July 1, 2010, the Agency will electronically file all required Permit Registration Documents (PRDs) through the State Water Board's Stormwater Multi-Application and Report Tracking System (SMARTS) website, as required prior to the commencement of construction activity. PRDs consist of the Notice of Intent (NOI), Risk Assessment, Post-Construction Calculations, a Site Map, the SWPPP, a signed certification statement by the Legally Responsible Party (LRP), and the first annual fee. For the Permit application, the Contractor shall submit to Project Manager the following:

- The completed site-specific Risk Assessment
- Post-construction calculations if applicable for the project, and
- Site-specific SWPPP developed in accordance with applicable Permits.

7-8.6.1.2 Linear Utility Projects; Contractor shall comply with the requirements of the General Construction Permit NPDES No. CAS000002 for Linear Underground/Overhead projects (LUPs) one acre or greater.

7-8.6.2 Compliance with NPDES MS4 Permit

7-8.6.2.1 Construction Sites Less Than One Acre The Contractor shall ensure implementation of an effective combination of erosion and sediment control Best Management Practices (BMPs) listed in **Table 6** of the Ventura County NPDES MS4 Permit. The Contractor shall develop and implement a Storm Water Pollution Control Plan (SWPCP).

7-8.6.2.2 Construction Sites One Acre but Less Than 5 Acres The Contractor shall ensure implementation of an effective combination of appropriate erosion and sediment control BMPs from **Table 7** (BMPs at Construction sites 1 acre or greater but less than 5 acres) of the Ventura County NPDES MS4 Permit in addition to the ones identified in **Table 6** (BMPs at Construction sites less than 1 acre) to prevent erosion and sediment loss, and the discharge of construction wastes. For all construction sites one acre or greater, the Contractor shall submit the SWPPP to the Agency for review and certification as the Local SWPPP.

7-8.6.2.3 Construction Sites 5 Acres and Greater The Contractor shall ensure implementation of an effective combination of the following BMPs in **Tables 8** (BMPs at Construction sites 5 acres or greater) in addition to the ones identified in **Table 6** (BMPs at Construction sites less than 1 acre) and **Table 7** (BMPs at Construction sites 1 acre or greater but less than 5 acres) at all construction sites 5 acres and greater to prevent erosion and sediment loss, and the discharge of construction wastes. For all construction sites one acre or greater, the Contractor shall submit the SWPPP to the Agency for review and certification as the Local SWPPP.

7-8.6.2.4 Enhanced Construction BMP Implementation

Construction sites located on hillsides, adjacent or directly discharging to CWA 303(d) listed waters for siltation or sediment, and directly adjacent to Environmentally Sensitive Areas are termed "high risk sites." Contractor shall implement enhanced practices that preclude impacts to water quality posed by the high risk sites.
Contractor shall ensure that high risk sites are inspected by the Qualified SWPPP Developer, Qualified SWPPP Practitioner, or Certified Professionals in Erosion and Sediment Control (CPESC) at the time of BMP installation, at least weekly during the wet season, and at least once each 24 hour period during a storm event that generates runoff from the site, to identify BMPs that need maintenance to operate effectively, that have failed or could fail to operate as intended.

During the wet season, the area of disturbance shall be limited to the area that can be controlled with an effective combination of erosion and sediment control BMPs. Enhanced sediment controls should be used in combination with erosion controls and should target portions of the site that cannot be effectively controlled by standard erosion controls described above. Effective sediment and erosion control BMPs proposed by the Contractor shall include the BMPs listed in Table 9 (Enhanced Construction BMP Implementation) of the NPDES MS4 Permit. The Contractor shall implement the BMPs listed in Table 9 unless shown unnecessary. Also, the Contractor shall retain records of the inspection and a determination and rationale of the BMPs selected to control runoff.

7-8.6.3 Plan.

7-8.6.3.1 The SWPCP, required for construction projects less than one acre, shall be prepared in accordance with the requirements of current Ventura County NPDES MS4 Permit No. CAS004002 and County Ordinance No. 4142.

7-8.6.3.2 The SWPPP, required for construction projects one acre or greater, shall be prepared in accordance with the requirements of the state's General Construction Permit NPDES Permit CAS000002, Ventura Countywide Stormwater Quality Management Program, NPDES MS4 Permit No. CAS004002, and County Ordinance No. 4142.

7-8.6.3.3 The SWPCP/SWPPP shall identify potential pollutant sources on the construction site that may affect the quality of discharges, whether non-stormwater or stormwater, from the site and design the use and placement of water pollution control measures, BMPs, to effectively prohibit the entry of pollutants from the site into the storm drain system during construction. At a minimum, and depending on the size of the project area, the SWPCP/SWPPP will include all appropriate minimum BMPs as required by the Ventura Countywide Stormwater Quality Management Program, NPDES MS4 Permit No. CAS004002 (Tables 6 through 9). The SWPCP/SWPPP must utilize the measures recommended in the California Stormwater Quality Association (CASQA) Stormwater BMPs Handbook for Construction (January 2003 version until July 1, 2010 and 2009 version after July 1, 2010). Starting July 1, 2010 SWPPP shall be prepared by QSD as defined in the NPDES Permit CAS000002. The Contractor shall complete, sign and submit the SWPCP/SWPPP for review and final approval by the Project Engineer, prior to issuance of the Notice to Proceed as provided in 6-7.4.

7-8.6.3.4 For all construction projects one acre and greater, the Contractor shall submit the SWPPP to the Agency for review and certification as Local SWPPP in accordance with NPDES MS4 Permit No. CAS004002 prior to the Notice to Proceed as provided in 6-7.4.

7-8.6.4 Measures. All water pollution control measures shall conform to the requirements of the submitted SWPCP/SWPPP. If circumstances during the course of construction require changes to the original SWPCP/SWPPP, a revised SWPCP/SWPPP shall be promptly submitted to the Project Manager in each instance. The SWPPP shall be amended or revised by QSD. A copy of the current SWPCP/SWPPP including revisions and amendments shall be kept at the site to ensure that field personnel has access to the current document at all times. If measures being taken are inadequate to control water pollution effectively, the Project Manager may direct the Contractor to revise the operations and no further work shall be performed until adequate water pollution control measures are implemented. Effective September 2, 2011, implementation of the SWPPP shall be overseen by the Contractor's QSP as defined in the General Construction Permit NPDES No. CAS000002. All work installed by the Contractor in connection with the SWPCP/SWPPP but not specified to become a permanent part of the Work shall be removed and the site restored in so far as practical to its original condition prior to completion of the Work.

7-8.6.4.1 Post-Construction Standards; Contractor shall ensure that applicable post-construction standards are implemented to meet applicable project requirements of the Ventura County NPDES MS4 Permit and General Construction Permit NPDES No. CAS000002 (effective September 2, 2012).

7-8.6.4.2 Active Treatment Systems; Contractor shall comply with requirements of the General Construction Permit NPDES No. CAS000002 for active treatment systems as applicable.

7-8.6.5 Monitoring and Reporting

7-8.6.5.1 Monitoring; In accordance with the General Construction Permit NPDES No. CAS000002, the Contractor shall develop and implement monitoring program for Risk Level 2 and 3 sites. In addition at Risk Level 3 sites, contractor shall perform receiving water monitoring to meet Permit requirements.

7-8.6.5.2 Reporting; the Contractor shall ensure that all submittals and reports are prepared and submitted to the RWQCB in accordance with the applicable Permits. At minimum the reports will include Annual Report (for applicable projects due September 1st), Rain Event Action Plan (due 48 hrs prior to the rain event for the applicable projects), Numeric Action Levels (NAL) Exceedance Report (as required), Numeric Effluent Limitations (NELs) Violation Report (within 24 hours after NEL exceedance is identified). Contractor shall submit required reports to the Project Manager for review and approval prior to submittal to the RWQCB.

7-8.6.6 Dewatering Activities. All dewatering activities shall be performed in accordance with applicable regulatory requirements issued by the Los Angeles Regional Water Quality Control Board, including specific requirements contained in the Waste Discharge Requirements (WDR) when issued for the Work.

7-8.6.7 Payment. The Contract lump sum price for water pollution control shall include full compensation for furnishing all labor, materials, tools, equipment, services and incidentals and for doing all work involved in water pollution control as specified herein. Payment for water pollution control will be made as the Work proceeds, and is in compliance with the approved Water Pollution Control Plan, on the following basis.

Partial payment estimate (excluding mobilization & water pollution control payments) as a percentage of the original Contract price (excluding the mobilization & water pollution control Bid items).		Cumulative amount of water pollution control pay item earned is the lesser of the amounts as computed by these two columns.	
Equal to or greater than	Less than	Percentage of water pollution control pay item	Percentage of the original Contract total.
5	10	10	1
10	20	20	2
20	50	50	3
50	Completion of Work	75	5
Completion of Work		100	

Where no Bid item is provided for water pollution control, payment for water pollution control shall be considered to be included in the other Bid items.

7-8.7 Drainage Control. The Contractor shall maintain drainage within and through the Work areas. Earth dams will not be permitted in paved areas. Temporary dams of sandbags, asphaltic concrete or other acceptable material will be permitted when necessary to protect the Work, provided their use does not create a hazard or nuisance to the public. Such dams shall be removed from the site as soon as their use is no longer necessary.

7-8.8 Final Cleaning. At the completion of the Work, the Contractor shall remove all waste materials and rubbish from and about the project, as well as all tools, construction equipment, temporary facilities, machinery, and surplus materials.

At completion of construction and just prior to final inspection, the Contractor shall thoroughly clean the interior and exterior of the buildings, including hardware, floors, roofs, sills, ledges, glass, or other surfaces where debris, plaster, paint, spots, and dirt or dust may have collected. All glass shall be washed clean and polished. Remove all grease, stains, labels, fingerprints, and other foreign materials from interior and exterior surfaces. Repair, patch, and touch up marred surfaces to match adjacent finishes.

The Contractor shall use only experienced workmen or professional cleaners for final cleaning. It shall use only cleaning materials recommended by the manufacturer of the surface to be cleaned, and use cleaning materials only on surfaces recommended by the cleaning material manufacturer.

It shall broom-clean all paved surfaces and rake-clean other surfaces of grounds.

The Contractor shall replace air conditioning filters if units were operated during construction, and clean all ducts, blowers, and coils if air conditioning units were operated without filters during construction.

After cleaning, the Contractor shall maintain the building in a clean condition until it is accepted by the Agency.

7-9 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS. The Contractor shall be responsible for the protection of public and private property adjacent to the Work and shall exercise due caution to avoid damage to such property.

The Contractor shall repair or replace all existing improvements within the right-of-way which are not designated for removal (e.g., curbs, sidewalks, driveways, fences, walls, signs, utility installations, pavement, structures, etc.) which are damaged or removed as a result of its operations. When a portion of a sprinkler system within the right-of-way must be removed, the remaining lines shall be capped. Repairs and replacements shall be at least equal to existing improvements and shall match them in finish and dimension.

Maintenance of street and traffic signal systems that are damaged, temporarily removed or relocated shall be done in conformance with 307-1.5.

Trees, lawns, and shrubbery that are not designated to be removed shall be protected from damage or injury. If damaged or removed because of the Contractor's operations, they shall be restored or replaced in as nearly the original condition and location as is reasonably possible. Lawns shall be reseeded and covered with suitable mulch.

The Contractor shall give reasonable notice to occupants or owners of adjacent property to permit them to salvage or relocate plants, trees, fences, sprinklers and other improvements which are designated for removal and would be destroyed because of the Work.

All costs to the Contractor for protecting, removing, and restoring existing improvements shall be absorbed in its bid.

In existing buildings, all surfaces, equipment, furniture and other property shall be protected from loss or damage by or as result of the Contractor's operations. The Contractor shall replace damaged property or shall repair and restore it to its previous condition. Patching, painting, replacement of wall, ceiling and floor covering and similar Work shall be done in such a manner that the repaired Work will not be readily noticeable.

7-10 PUBLIC CONVENIENCE AND SAFETY

7-10.1 Access.

7-10.1.1 General. The Contractor's operations shall cause no unnecessary inconvenience to the public or businesses in the vicinity of the Work. The Contractor shall have no greater length or quantity of Work under construction than can be properly prosecuted with a minimum of inconvenience to the public and other contractors engaged in adjacent or related work.

The Contractor shall provide continuous and unobstructed access to the adjacent properties unless otherwise specified in the Special Provisions or approved by Engineer. Work requiring traffic lane closures shall only be performed between the hours specified in the Special Provisions or shown on the TCP. Traffic shall be permitted to pass through the Work site, unless otherwise specified in the Special Provisions or shown on the TCP.

7-10.1.1.1 Vehicular Access. Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access. If backfill has been completed to the extent that safe access may be provided and the street is opened to local traffic, the Contractor shall immediately clear the street and driveways and provide and maintain access.

7-10.1.1.2 Pedestrian Access. Safe, adequate, and ADA compliant pedestrian access shall be maintained unless otherwise approved by the Engineer. 7-10.2 Work Area Traffic Control.

7-10.2 Traffic Control

7-10.2.1 General. Work area traffic control shall conform to the California MUTCD, WATCH, or as specified in the Special Provisions. The total length of the traffic control zone shall include a buffer space, advance signing, striping transitions in advance of the Work site, existing striping, signing, and raised medians.

7-10.2.2 Traffic Control Plan.

7-10.2.2.1 General. If so specified in the Special Provisions or on the permit, the Contractor shall submit a TCP in accordance with 2-5.3. The sheets of the TCP shall display the title, phase identification, name of the firm preparing the TCP, name and stamp of the Registered Traffic or Civil Engineer, approval block for each jurisdictional agency, north arrow, sheet number, and number of sheets comprising the TCP. General notes and symbol definitions shall be included when required. Adequate dimensioning shall be provided to allow for proper field installation. The TCP shall be drawn to a 1 inch = 40 feet scale on common size sheets, either 8-1/2 inches x 11 inches, 8-112 inches x 14 inches, 11 inches x 17 inches, or 2-foot x 3-foot plan sheets as dictated by the length of the Work.

The requirements in the Special Provisions shall govern the design of the proposed TCP.

7-10.2.2.2 Payment. Payment for preparation of the TCP shall be included in the appropriate lump sum Bid items. If no Bid items have been provided, payment shall be included in the various Bid items unless otherwise specified in the Special Provisions.

7-10.3 Haul Routes. Unless otherwise specified in the Special Provisions, the haul route(s) shall be determined by the Contractor.

7-10.4 Safety.

7-10.4.1 Work Site Safety.

7-10.4.1.1 General. The Contractor shall provide safety measures as necessary to protect the public and workers within, or in the vicinity of, the Work site. The Contractor shall ensure that its operations will not create safety hazards. The Contractor shall provide safety equipment, material, and assistance to Agency personnel so that they may properly inspect all phases of the Work. When asbestos is being removed, the requirements of the CCR Title 8, Div. 1, Chapter 4, Subchapter 4 and Subchapter 7 shall be implemented.

7-10.4.1.2 Work Site Safety Official. The Contractor shall designate in writing a "Project Safety Official" who shall be at the Work site at all times, and who shall be thoroughly familiar with the Contractor's Injury and Illness Prevention Program (IIPP) and Code of Safe Practices (CSP). The Project Safety Official shall be available at all times to abate any potential safety hazards and shall have the authority and responsibility to shut down an unsafe operation, if necessary.

7-10.4.2 Safety Orders.

7-10.4.2.1 General. The Contractor shall have at the Work site, copies or suitable extracts of Construction Safety Orders, Tunnel Safety Orders, and General Industry Safety Orders issued by the State Division of Industrial Safety. Prior to beginning any excavation 5 feet in depth or greater, the Contractor shall submit to the Engineer, the name of the "Competent Person" as defined in CCR, Title 8, Section 1504, in accordance with 2-5.3. The "Competent Person" shall be present at the Work site as required by Cal-OSHA.

7-10.4.2.2 Shoring Plan. Before excavating any trench 5 feet (105m) or more in depth, the Contractor shall submit in accordance with 2-5.3 a detailed working drawing (shoring plan) showing the design of the shoring, bracing, sloping, or other provisions used for the workers' protection. If the shoring plan varies from the shoring system standards, the shoring plan shall be prepared by a registered Structural or Civil Engineer. The shoring plan shall accommodate existing underground utilities. No excavation shall start until the Engineer has accepted the shoring plan and the Contractor has obtained a permit from the State Division of Industrial Safety. A copy of the permit shall be submitted to the Engineer in accordance with 2-5.3. If the Contractor fails to submit a shoring plan or fails to comply with an accepted shoring plan, the Contractor shall suspend work at the affected location(s) when directed to do so by the Engineer. Such a directive shall not be the basis of a claim for Extra Work and the Contractor shall not receive additional compensation or Contract time due to the suspension.

7-10.4.2.3 Payment. Payment for shoring shall be included in the Bid item provided therefor. Payment for compliance with the provisions of the safety orders and all other laws, ordinances, and regulations shall be included in the various Bid items.

7-10.4.3 Use of Explosives. Explosives may be used only when authorized in writing by the Engineer, or as otherwise specified in the Special Provisions.

Explosives shall be handled, used, and stored in accordance with all applicable regulations.

Prior to blasting, the Contactor shall comply with the following requirements:

a) The jurisdictional law enforcement agency shall be notified 24 hours in advance of blasting.

b) The jurisdictional fire department shall be notified 24 hours in advance of blasting.

c) Blasting activities and schedule milestones shall be included in the Contractor's construction schedule per 6-1.

For a Private Contract, specific permission shall be obtained from the Agency in writing, prior to any blasting operations in addition to the above requirements.

The Engineer's approval of the use of explosives shall not relieve the Contractor from liability for claims caused by blasting operations.

7-10.4.4 Hazardous Substances. An MSDS as described in CCR, Title 8, Section 5194, shall be maintained at the Work site for all hazardous material used by the Contractor. Material usage shall be accomplished with strict adherence to California Division of Industrial Safety requirements and all manufacturer warnings and application instructions listed on the MSDS and on the product container label. The Contractor shall notify the Engineer if a specified product cannot be used under safe conditions. 7-10.4.5 Confined Spaces. 7-10.4.5.1 Confined Space Entry Program (CSEP). The Contractor shall be responsible for implementing, administering and maintaining a CSEP in accordance with CCR, Title 8, Sections 5156, 5157 and 5158.

Prior to the start of the Work, the Contractor shall prepare and submit a CSEP in accordance with 2-5.3. The CSEP shall address all potential physical and environmental hazards and contain procedures for safe entry into confined spaces such as the following:

a) Training of personnel

b) Purging and cleaning the space of materials and residue

c) Potential isolation and control of energy and material inflow

d) Controlled access to the space

e) Atmospheric testing of the space

f) Ventilation of the space

g) Special hazards consideration

h) Personal protective equipment

i) Rescue plan provisions

The submittal shall include the names of the Contractor's personnel, including each Subcontractor's personnel, assigned to the Work that will have CSEP responsibilities, their CSEP training, and their specific assignment and responsibility in carrying out the CSEP.

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c) Potential isolation and control of energy and material inflow.

d) Controlled access to the space.

e) Atmospheric testing of the space.

f) Ventilation of the space.

g) Special hazards consideration.

h) Personal protective equipment.

i) Rescue plan provisions.

The submittal shall include the names of the Contractor's personnel, including each Subcontractor's personnel, assigned to the Work that will have CSEP responsibilities, their CSEP training, and their specific assignment and responsibility in carrying out the CSEP.

7-10.4.5.2 Permit-Required Confined Spaces. Entry into permit-required confined spaces as defined in CCR, Title 8, Section 5157 may be required as a part of the Work. Manholes, tanks, vaults, pipelines, excavations, or other enclosed or partially enclosed spaces shall be considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise. The Contractor shall implement a permit-required CSEP prior to performing any work in a permit-required confined space. A copy of the permit shall be available at all times for review by the Contractor and the Engineer at the Work site.

7-10.4.5.3 Payment. Payment for the CSEP shall be included in the Bid items for which the CSEP is required.

7-10.5 Security and Protective Devices.

7-10.5.1 General. Security and protective devices shall consist of fencing, steel plates, or other devices as specified in the Special Provisions to protect open excavations

7-10.5.2 Security Fencing. The Contractor shall completely fence open excavations. Security fencing shall conform to 304-3.5. Security fencing shall remain in place unless workers are present and construction operations are in progress during which time the Contractor shall provide equivalent security..

7-10.5.3 Steel Plate Covers. The Contractor shall provide steel plate covers as necessary to protect from accidental entry into openings, trenches, and excavations.

7-11 PATENT FEES OR ROYALTIES. The Contractor shall absorb in its Bid, the patent fees or royalties on any patented article or process which may be furnished or used in the Work. The Contractor shall indemnify and hold the Agency harmless from any legal action that may be brought for infringement of patents.

7-12 ADVERTISING. The names of contractors, subcontractors, architects, or engineers, with their addresses and the designation of their particular specialties, may be displayed on removable signs. The size and location of such signs shall be subject to the Engineer's approval.

Commercial advertising matter shall not be attached or painted on the surfaces of buildings, fences, canopies, or barricades.

7-13 LAWS TO BE OBSERVED. The Contractor shall keep fully informed of State and National laws and County and Municipal ordinances and regulations which in any manner affect those employed in the Work or the materials used in the Work or in any way affect the conduct of the Work. It shall at all times observe and comply with all such laws, ordinances and regulations.

7-13.1 Mined Materials. Mined material from California surface mines, used on the Work, shall be from a mine identified in the list published by the California Department of Conservation (referred to as 3098 List), as required by Public Contract Code 20676. This list is available on the Internet at www.conservation.ca.gov/OMR/ab_3098_list/index.htm.

7-14 ANTITRUST CLAIMS. Section 7103.5 of the Public Contract Code provides:

> "In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgement by the parties."

7-15 RECYCLABLE CONSTRUCTION & DEMOLITION WASTES. Ventura County Ordinance Code Section, 4421 et seq, requires that if any recyclable solid wastes or marketable reusable materials will be generated on the site of the Work within the unincorporated areas of Ventura County, the Contractor shall prepare a Construction & Demolition Debris Waste Diversion Plan and submit it to the Ventura County Public Works Agency, Water & Sanitation Department - Integrated Waste Management Division (IWMD). The Contractor shall prepare and file Construction & Demolition Debris Waste Diversion Reporting Forms as required by the IWMD.

For projects within the unincorporated areas of Ventura County, the Contractor shall submit an IWMD Form B-Recycling Plan approved by IWMD prior to issuance of the Notice to Proceed as provided in 6-7.4.

For projects within the unincorporated areas of Ventura County, the Contractor shall submit an IWMD Form C-Reporting Form approved by IWMD prior to the Engineer preparing the final estimate as provided in 9-3.2.

If the site of the Work is within an incorporated city, the Contractor shall comply with all the recycling, solid waste diversion, and hauling requirements of that incorporated city.

7-16 BLANK

7-17 LOSS OR DAMAGE TO THE WORK. The Contractor is responsible for delivering to the Agency Work completed in accordance with the Contract except as provided in 7-18. Should the Work being constructed be damaged by fire or other causes before Acceptance by the Agency, it shall be replaced in accordance with the requirements of the Plans and Specifications without additional expense to the Agency. The Agency does not carry "Course of Construction" insurance on the Work. Contractor should arrange for its own insurance to protect its interests.

7-18 ACTS OF GOD. As provided in Section 7105 of the California Public Contract Code, the Contractor shall not be responsible for the cost of repairing or restoring damaged portions of the Work determined to have been proximately caused by an act of God in excess of 5 percent of the contracted amount, provided that the Work damaged was built in accordance with accepted and applicable building standards and the Specifications and Drawings. The Contractor shall obtain insurance to indemnify the Agency for any damage to the Work caused by an act of God if the premium of said insurance coverage is called for as a separate bid item in the bidding schedule for the Work. For purposes of this section, the term "acts of God" shall include only the following occurrences or conditions and effects: earthquakes in excess of a magnitude of 3.5 on the Richter Scale, and tidal waves.

SECTION 8 - FACILITIES FOR AGENCY PERSONNEL

8-1 GENERAL. A field office shall be provided when required by the Plans or Special Provisions. The field office shall be at a suitable location approved by the Engineer.

A field office shall be a weather-tight building of suitable proportions with 16 m^2 (120 sq. ft.) of floor area, at least one door, and a window area of 2 m^2 (22 Sq. Ft.). A field office may be a building or a separate room in a building the Contractor may be required to provide or that it may desire to provide for its own use. In either case, the room shall have a separate exterior door. All doors shall be provided with hasps for padlocks.

The office shall be convenient to the Work. It shall be adequately heated, ventilated, electrically lighted, and provided with telephone service, all at the expense of the Contractor or plant owner. Offices are for the exclusive use of Agency personnel, unless otherwise provided herein.

Field offices at the worksite shall be removed upon completion of the Work.

All costs incurred in furnishing, maintaining, servicing, and removing a field office required at the Work site shall be included in the price bid for such item. If such item is required by the Plans or Specifications and no bid item is provided in the Proposal, the costs shall be absorbed in the other items for which bids are entered. Buildings and equipment furnished by the Contractor at the Work site under the provisions of this section are the property of the Contractor.

The first progress payment will not be approved until all facilities are in place and fully comply with the Specifications.

8-2 EQUIPMENT FOR FIELD OFFICES. Unless otherwise specified, a field office shall be equipped with:

Plan table, 0.75 m x 1.5 m (2 1/2 ft. x 5 ft.) or larger
Plan rack, capacity to hold two sets of project Plans plus all shop drawings
Desk and chair
Two lockers with hasps for padlocks

SECTION 9 - MEASUREMENT AND PAYMENT

9-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORK

9-1.1 General. Unless otherwise specified, quantities of work shall be determined from measurements or dimensions in horizontal planes. However, linear quantities of pipe, piling, fencing, and timber shall be considered as being the true length measured along longitudinal axis.

Unless otherwise provided in Specifications, volumetric quantities shall be the product of the mean area of vertical or horizontal sections and the intervening horizontal or vertical dimension. The planimeter shall be considered an instrument of precision adapted to measurement of all areas.

9-1.2 Methods of Measurement. Materials and items of Work which are to be paid for on the basis of measurement shall be measured in accordance with the methods stipulated in the particular sections involved.

9-1.3 Certified Weights. When payment is to be made on the basis of weight, the weighing shall be done on certified platform scales or, when approved by the Engineer, on a completely automated weighing and recording system. The Contractor shall furnish the Engineer with duplicate licensed weighmaster's certificates showing actual net weights. The Agency will accept the certificate as evidence of weights delivered.

9-1.4 Units of Measurement. Measurements shall be in accordance with 1-4.1 and 1-4.2. A metric ton or “tonne” is equal to 1000 kilograms and the unit of liquid measure is a Liter (in U.S. Standard Measures, a pound is an avoirdupois pound; a ton is 2000 pounds avoirdupois; and the unit of liquid measure is a gallon).

9-2 LUMP SUM BID ITEMS. Items for which quantities are indicated as "Lump Sum", "L.S." or "Job" shall be paid for at the price indicated in the Proposal. Such payment shall be full compensation for the items of Work and all Work appurtenant thereto.

When required by the Specifications or requested by the Engineer, the Contractor shall submit to the Engineer within 15 Days after award of Contract, a detailed schedule in triplicate, to be used only as a basis for determining progress payments on a lump sum contract or any designated lump sum bid item. This schedule should equal in total the lump sum bid and shall be in such form and sufficiently detailed as to satisfy the Engineer that it correctly represents a reasonable apportionment of the lump sum. If Mobilization or Water Pollution Control are included in the detailed schedule, those items will be paid for as provided in 9-3.4.2 and 7-8.6.4, receptively.

9-3 PAYMENT

9-3.1 General. The quantities listed in the Bid schedule will not govern final payment unless identified by Agency on the Proposal as [F]. The symbol "[F]" indicates that the quantities shown on the Proposal form are the final pay quantities. Payment to the Contractor (except those items identified as [F]) will be made only for the actual quantities of Contract items constructed in accordance with the Plans and Specifications. Upon completion of construction, if the actual quantities show either an increase or decrease from the quantities given in the Bid schedule, the Contract Unit Prices will prevail subject to the provisions of 3-2.2.1. Payment for those items identified as [F] will be based on the quantities shown on the Proposal unless changed as provided in 3-2.2.1.

The unit and lump sum prices to be paid shall be full compensation for the items of work and all appurtenant work, including furnishing all materials, labor, equipment, tools and incidentals.

Payment for items shown on the Plans or required by the Specifications, for which no pay item is provided, shall be considered included in the prices named for the other items shown on the Proposal.

Payment will not be made for materials wasted or disposed of in a manner not called for under the Contract. This includes rejected material not unloaded from vehicles, material rejected after it has been placed and material placed outside of the Plan lines. No compensation will be allowed for disposing of rejected or excess material.

Whenever any portion of the Work is performed by the Agency at the Contractor's request, the cost thereof shall be charged against the Contractor, and may be deducted from any amount due or becoming due from the Agency.

Whenever immediate action is required to prevent injury, death, or property damage, and precautions which are the Contractor's responsibility have not been taken and are not reasonably expected to be taken, the Agency may, after reasonable attempt to notify the Contractor, cause such precautions to be taken and shall charge the cost thereof against the Contractor, or may deduct such cost from any amount due or becoming due from the Agency. Agency action or inaction under such circumstances shall not be construed as relieving the Contractor or its Surety from liability.

9-3.1 General. (Continued)

Payment shall not relieve the Contractor from its obligations under the Contract; nor shall such payment be construed to be Acceptance of any of the Work. Payment shall not be construed as the transfer of ownership of any equipment or materials to the Agency. Responsibility of ownership shall remain with the Contractor who shall be obligated to store, protect, repair, replace, rebuild, or otherwise restore any fully or partially completed work or structure for which payment has been made; or replace any materials or equipment required to be provided under the Contract which may be damaged, lost, stolen or otherwise degraded in any way prior to completion of the Work under the Contract, except as provided in 6-10.

Warranty periods shall not be affected by any payment but shall commence on the date equipment or material is placed into service at the written direction of the Engineer. In the event such items are not placed into service prior to partial or final completion of the Work, the warranty periods will commence on the date set forth as the date of field completion in the Engineer's acknowledgement of completion.

If, within the time fixed by law, a properly executed notice to stop payment is filed with the Agency, due to the Contractor's failure to pay for labor or materials used in the Work, all money due for such labor or materials will be withheld from payment to the Contractor in accordance with applicable laws.

At the expiration of 35 Days from the date of recording of the Notice of Completion, or as prescribed by law, the amount deducted from the final estimate and retained by the Agency will be paid to the Contractor except such amounts as are required by law to be withheld by properly executed and filed notices to stop payment, or as may be authorized by the Contract to be further retained.

9-3.2 Partial and Final Payment. The Engineer will, after award of Contract, establish a closure date for the purpose of making monthly progress payments. The Contractor may request in writing that such monthly closure date be changed. The Engineer may approve such request when it is compatible with the Agency's payment procedure.

Each month, the Engineer will make an approximate measurement of the Work performed to the closure date and, as a basis for making monthly payments, estimate its value based on the Contract Unit Prices or as provided for in 9-2. When the Work has been satisfactorily completed, the Engineer will determine the quantity of Work performed and prepare the final estimate.

Work not conforming to the Contract Documents shall not be measured for payment.

Conformance with the Contract Documents shall be, in addition to constructing the Work in accordance with the Contract Documents, the Contractor's compliance with those portions of the Contract Documents not directly related to the completed Work, including but not limited to: construction and maintenance of detours; diversion and control of water; protection and repair of existing facilities of the Agency and adjacent owners; site maintenance; coordination with utilities and other contractors on the site; proper survey procedures and records; obtaining required permits and inspections; complying with working hour limitations; providing a Contractor's representative while Work is being performed; complying with environmental requirements; maintaining access and safety for users of facilities that are to remain in service during construction; and obeying all laws affecting the Work.

Payment for Extra Work will be made only on approved Daily Extra Work Reports with supporting documentation as required in 3-3.

From each progress estimate, 5 percent will be deducted and retained by the Agency, and the remainder less the amount of all previous payment will be paid to the Contractor.

No progress payment made to the Contractor or its sureties will constitute a waiver of the liquidated damages under 6-9.

9-3.2 Partial and Final Payment. (Continued)

As provided for in Sections 22300 of the California Public Contract Code, the Contractor may substitute securities for any monies withheld by the Agency to ensure performance under the Contract. In substituting securities, the Contractor may either:

a. Deposit qualifying securities already owned by the Contractor with the Escrow prior to the Contract payment date, or

b. Direct the Agency to send retained funds to the Escrow to be invested by the Escrow in qualifying securities as directed by the Contractor.

9-3.2.1 Release of Withheld Contract Funds. Pursuant to Public Contract Code Section 22300, Contractor has the option to deposit securities with an Escrow Agent as a substitute for retention earnings required to be withheld by Agency pursuant to the construction Contract between the Agency and the Contractor. A form of Escrow Agreement for Security Deposits in Lieu of Retention has been adopted by the Agency as one of the Contract Documents; procedures for implementing the provisions of the Escrow Agreement are contained in Escrow Instructions which shall become effective upon exercise of the option by the Contractor.

The Contractor shall take the following steps if it desires to substitute securities:

a. Execute the Escrow Agreement for Security Deposits in Lieu of Retention.
b. Furnish to the Escrow Agent a power of attorney and other forms necessary to empower the Escrow Agent to convert the securities to cash.
c. Furnish to the Escrow Agent the securities described.
d. Pay the Escrow Agent's fees and costs.

When the Contractor deposits with the Escrow Agent securities in lieu of money required to be withheld from progress payments, a sum of money equivalent to the current cash value of the securities as determined by the Escrow Agent shall be released to the Contractor by, or upon the direction of, the Agency.

If the total of the money plus the current cash conversion value of securities on deposit should fall below the aggregate amount of the sums required to be withheld from progress payments pursuant to 9-3.1 and 9-3.2, an amount equal to the difference shall be withheld from the next regular progress payment in addition to the amount which would ordinarily be withheld pursuant to 9-3.1 and 9-3.2. If the next regular progress payment is less than the total of the amounts to be withheld therefrom, the Contractor shall immediately either deposit with the Agency cash in the amount of the difference or deposit with the Escrow Agent additional securities having a current cash conversion value equal to or greater than the difference.

The Contractor shall be the beneficial owner of any such securities on deposit with the Escrow Agency and shall be entitled to any interest earned thereon prior to conversion. The Agency may direct the Escrow Agency to convert securities with the Escrow Agency into cash, and to deliver the cash to the Agency, in any case where the Contractor is in default, including the following:

a. where the Agency would be entitled to use funds withheld pursuant to 9-3.1 and 9-3.2 to satisfy claims of workers, materials suppliers or subcontractors, or to complete or correct work which the Contractor has failed or refused to complete or correct, or

b. where the Contractor has failed to comply with the requirements of this section respecting the deposit of additional cash or securities to make up for a fall in the value of securities already on deposit with the Escrow Agency.

The Agency may hold and use cash resulting from such a conversion of securities in the same manner as it would be entitled to hold and use funds withheld pursuant to 9-3.1 and 9-3.2.

9-3.2.2 Timely Progress Payments. As required by Public Contract Code Section 20104.50, the Contractor is informed that should a progress payment not be made within 30 Days after receipt of an undisputed and properly submitted payment request from the Contractor, the Agency shall pay interest to the Contractor on the unpaid amount at the rate set forth in the Code of Civil Procedures, Section 685.010(a). Agency shall promptly review payment requests, and if not determined to be proper, document to the Contractor, within 7 Days, the reasons why the request is not proper.

Contractor should refer to the code sections cited for further information.

9-3.3 Delivered Materials. Payment for the cost of materials and equipment delivered to the Work site but not incorporated in the Work will be included in the progress estimate if, prior to the closure date for the monthly progress payment, the material or equipment is listed by the Contractor on the Agency's form together with date of delivery, vendor's or Subcontractor's name and cost; is accompanied by a copy of an invoice showing the cost thereof; has an aggregate cost in excess of $5,000 for each progress payment; is currently on the Work site at an approved location and in good condition; and is one of the following:

1. Precast concrete units weighing more than 100 kilograms (200 pounds) each.
2. Structural steel members weighing more than 100 kilograms (200 pounds) each.
3. Individual pieces of electrical equipment costing over $1,000 each.
4. Individual pieces of mechanical equipment costing over $1,000 each.
5. Reinforced concrete pipe of any size.
6. Storm drainage pipe 900 mm (36") in diameter and larger.
7. Water and sewer pipe 300 mm (12") in diameter and larger.
8. Finish hardware for doors.
9. Other individual items of equipment costing over $1,000 each
10. Materials where the aggregate value of a single type of material exceeds $1,000 and is either:
    a) Fabricated or cut to fit the Work before delivery, or
    b) Of a size or type not available from any manufacturer without a special production run.

On unit price Bid items, the amount paid for materials or equipment delivered but not incorporated in the Work shall not exceed 75% of the amount of the Bid item which includes such material or equipment.

On lump sum Bid items, the amount paid for materials and equipment delivered and not incorporated in the Work shall not exceed 75% of the item in the approved schedule submitted in accordance with 9-2 of which such materials or equipment is a part.

Should materials or equipment previously paid for be damaged, destroyed, stolen or removed from the Work site, the payment previously made therefor will be deducted from the next progress payment, unless such materials or equipment are replaced prior thereto.

On the closure date for progress payments, as provided in 9-3.2, the Contractor shall certify that all materials and equipment not incorporated into the Work, for which payment has previously been made or is being requested, is still at the Work site and in good condition. Failure to provide such certification will be cause for deducting previous payments for materials not incorporated in the Work from the amount due the Contractor in the progress payment.

Payment for materials or equipment, as provided herein, shall not constitute approval or acceptance thereof nor shall such payment modify or abridge any of the rights the Agency has under the Specifications or at law nor relieve the Surety of any of its obligations under the bonds.

9-3.4 Mobilization

9-3.4.1 Scope. Mobilization includes preliminary services, work and operations, including but not limited to, furnishing required bonds, obtaining necessary permits and work areas, providing a specified field office, the movement of labor, supplies, equipment and incidentals to the Work site, and for all other work, services and operations which must be performed or for which costs are incurred prior to performing work of the other Contract items.

9-3.4.2 Payment. The Contract lump sum price bid for mobilization shall include full compensation for furnishing all labor, materials, tools, equipment, services and incidentals and for doing all work involved in mobilization as specified herein. Payment for mobilization will be made as the Work proceeds on the following basis except that where a field office is required by the Specifications, no payment for mobilization will be made until the specified field office has been provided:

Partial payment estimate (excluding mobilization & water pollution control payments) as a percentage of the original Contract price (excluding the mobilization & water pollution control Bid items).		Cumulative amount of mobilization pay item earned is the lesser of the amounts as computed by these two columns.	
Equal to or greater than	Less than	Percentage of mobilization pay item	Percentage of the original Contract total.
5	10	50	5
10	20	75	7.5
20	50	95	9.5
50	Completion of Work	100	10
Completion of Work		100	

Where no Bid item is provided for mobilization, payment for mobilization shall be considered to be included in the other Bid items.

9-4 TERMINATION OF AGENCY LIABILITY. After completion of all work required by the contract, Agency will furnish Contractor a Release on Contract form stating the amount of total authorized payments for the project. Contractor shall execute and return said form within 21 days of receipt. Said form shall release and discharge the Agency from all claims of and liability to the Contractor for all manner of debts, demands, accounts, claims, and causes of action under or by virtue of said Contract except:

a. The claim against the Agency for the remainder, if any, of the amounts retained as provided in 9-3.2, and any amounts retained as required by Stop Notices or Labor Code provisions.

b. Any unsettled claims or disputes listed on the Release on Contract form which has been processed in compliance with the requirements for making claims under the Contract, including given timely notice pursuant to the applicable provisions of the Contract and following the procedure set forth in 6-12.

Acceptance of the Release on Contract by the Agency shall not be deemed a waiver or release of the Agency's right to contest either the substantive or procedural validity of any listed unsettled claims or disputes.

When executing the Release on Contract, the Contractor shall certify that each unsettled claim or dispute listed thereon has been processed in compliance with the requirements for making claims under the Contract, including giving timely notice pursuant to the applicable provisions of the Contract and following the procedures for resolution of disputes or claims set forth in 6-12 and that acceptance of the Release on Contract by the Agency shall not be deemed a waiver or release of the Agency's right to contest either the substantive or procedural validity of any listed unsettled claims or disputes.

If Contractor fails to execute and submit a Release on Contract within the 21 day time period set forth above, the Release on Contract shall be deemed to have been submitted with no unsettled claims or disputes listed on the Release on Contract. A payment of $1.00 will be made to the Contractor for such Release on Contract and waiver.

SECTION 10 - DIVERSION, CONTROL AND REMOVAL OF WATER

10-1 DESCRIPTION. This section covers the diversion, control and removal of all water entering into the construction area or otherwise affecting construction activities.

10-2 REQUIREMENTS. All permanent construction shall be performed in a site free from water unless otherwise provided for in the Special Provisions. The Contractor shall construct, maintain, and operate all necessary cofferdams, pumps, channels, flumes, drains, well points and/or other temporary diversion, protective, and water removal works required for diversion, control and removal of all water, whether surface or groundwater, whatever its source, during construction.

Inundation of partially completed Work due to lack of control during non-working periods will not be permitted, and may be cause for requiring removal and replacement of Work already completed.

The Contractor shall be responsible for obtaining the use of any property in addition to that provided for in the Plans and Specifications, which may be required for the diversion, protective, and water removal works so as not to create a hazard to persons or property or to interfere with the water rights of others.

It shall be understood and agreed that the Contractor shall hold the Agency and the Engineer harmless from legal action taken by any third party with respect to construction and operations of the diversion and protective works.

10-3 DIVERSION AND CONTROL WORKS.

Prior to beginning of work involving diversion, control and removal of water, the Contractor shall submit a water control plan to the Engineer. In the event circumstances during the course of construction require changes to the original water control plan, a revised water control plan shall be promptly submitted to the Engineer in each instance. No responsibility shall accrue to the Engineer or the Agency as a result of the plan or as a result of knowledge of the plan.

Construction and operation of the diversion, control and removal works shall be in accordance with the water control plan submitted, except deviations therefrom may be specifically approved by the Engineer.

All works installed by the Contractor in connection with dewatering, control, and diversion of water but not specified to become a permanent part of the Work, shall be removed and the site restored, insofar as practical, to its original condition prior to completion of construction or when directed by the Engineer.

10-4 PAYMENT. No separate Bid item is included. Payment for this item of Work will be considered to be included in the payments made for other items of Contract Work to which water control is incidental.

200-1 ROCK PRODUCTS

200-1.6 Stone for Riprap

200-1.6.1A Alternate Stone for Riprap. As an alternate to the requirements of Subsection 200-1.6, the sample may be subject to the following tests:

TESTS	TEST METHOD NO.	REQUIREMENTS
Apparent Specific Gravity	ASTM C 127	2.40 Min.
Resistance to Abrasion	ASTM C 535, Grading 1	35% Max.
Soundness	Section 211-8	10% Max.
Wet and Dry Loss	Section 211-9	5% Max.
Solubility	Section 211-10	No Loss

All rock shall be angular or subangular in shape. Angular shall be defined as having sharp corners and straight planes on all faces, with no evidence of wear caused by wind, water or abrasion. Subangular shall be defined the same as angular except that evidence of wear by wind, water or abrasion may be allowed. Determination of angularity will be made by the Engineer.

200-1.6.2 Riprap Size

The individual classes of rock used for riprap shall conform to the following:

Rock Sizes	RIPRAP CLASSES					
	1-Tonne (1-Ton)	½-Tonne (½-Ton)	¼-Tonne (¼-Ton)	Light	Facing	Cobble
	PERCENTAGE LARGER THAN					
2-Tonne (2-Ton)	0-5					
1-Tonne (1-Ton)	50-100	0-5				
½-Tonne (½-Ton)		50-100	0-5			
¼-Tonne (¼-Ton)	90-100		50-100	0-5		
100-kg (200-lb)		90-100		50-100	0-5	
35-kg (75-lb)			90-100	90-100	50-100	0-5
10-kg (25-lb)					90-100	95-100
0.5-kg (1-lb)	100	100	100	100	100	100

The amount of material smaller than the smallest size listed in the table for any class of riprap shall not exceed the percentage limit listed in the table determined on a weight basis.

Compliance with the percentage limit shown in the table for all other sizes of the individual pieces of any class of riprap shall be determined by the ratio of the number of individual pieces larger than the specified size compared to the total number of individual pieces larger than the smallest size listed in the table for that class.

Flat or needle shapes will not be accepted unless the thickness of individual pieces is greater than 1/3 the length.

Before placing in final location, depositing, or stockpiling within the project limits, each individual load of riprap must meet the size requirements of the class specified.

SECTION 206 - MISCELLANEOUS METAL ITEMS

206-3 GRAY IRON AND DUCTILE IRON CASTINGS

206-3.3.2A Manhole Frame and Cover Sets

Unless otherwise specified, manhole frames and covers shall be in accordance with the following Standard Plans contained in the SPPWC:

Clear Opening Diameter mm (Inches)	SPPWC Plan No.	Catalog Numbers	
		Alhambra Foundry	Long Beach Iron Works
600 (24)	630-1	A-1495	X-162
675 (27)	631-1	A-1496	X-164
750 (30)	632-1	A-1497	X-163
900 (36)	633-1	A-1498	X-106A

206-5 METAL RAILINGS.

206-5.2 Flexible Metal Guard Rail Materials.

206-5.2A Flexible Metal Guard Rail Materials; Modification. The "Construction" grade Douglas Fir for "posts, including blocks" does not have to be "free of heart center".

SECTION 210 - PAINT AND PROTECTIVE COATINGS

210-6 STORM DRAIN HARDWARE. All storm drain hardware, including manhole frames and covers, grates, protection bars, steps, etc., shall be protected from corrosion.

Storm drain hardware made of cast iron shall be protected by painting with, or dipping in, a commercial grade asphalt paint. Storm drain hardware made of steel shall be galvanized.

211-6 SIEVE ANALYSIS. Sieve analysis shall be performed in accordance with ASTM C136.

211-7 Sand Equivalent Test. This test is intended to serve as a field test to indicate the presence or absence of plastic fine material. The test shall be run in accordance with Calif. test 217 or ASTM D2419. When testing material containing asphalt, this test method shall be modified by drying the sample at a temperature not exceeding 38°C (100°F).

211-8 R-VALUE. Resistance (R-value) shall be determined by California Test 301.

211-9 SPECIFIC GRAVITY AND ABSORPTION. Apparent specific gravity, bulk specific gravity and absorption shall be determined by California Test 206, 207, 208, 209, 224, 225, or 308, Method C where zinc stearate may be substituted for paraffin.

211-10 LOS ANGELES RATTLER TEST. Loss in Los Angeles Rattler shall be determined by California Test 211.

211-11 SOUNDNESS. For riprap, the soundness shall be determined in accordance with Calif. Test 214, excluding sections D, E, G.2.b, and H, and adding the following:

a. The test sample shall be prepared by breaking or sawing a representative sampling of riprap into particles passing the 75 mm (three inch) and retained on the 50 mm (two inch) sieve. If there are a variety of rock types or degrees of weathering within a rock type, each unique type or condition must meet the loss requirement.

b. The test sample size shall be 25,000 grams (55 lbs.) ± 1 percent.

c. All particles of test sample which break into three or more pieces during testing shall be discarded. The remaining sample shall be washed on a 4.75 mm (#4) sieve and all particles retained shall be oven dried.

d. The loss in weight shall be determined by subtracting from the original weight of the test sample the final weight of all particles retained on the 4.75 mm (#4) sieve. Divide the loss in weight by the original weight and multiply by 100 to determine the percent loss.

e. Report the following:

   (1) The percent loss.

   (2) The number of pieces affected, classified as to number disintegrating, splitting, crumbling, cracking, flaking, etc.

211-12 WET AND DRY LOSS. Wet and dry loss shall be determined as follows:

A sample of rock shall be crushed, screened, oven dried, and 1,000 g (2.2 lbs.) to 1,500 g (3.3 lbs.) of the 19 mm (3/4 inch) to 9.5 mm (3/8 inch) fraction shall be taken for the test.

The crushed and graded sample shall be submerged in tap water for 8 hours at room temperature, after which the sample shall be drained and oven dried at 78°C (140°F). When dry, the sample shall be cooled to room temperature. This completes one cycle.

After 10 cycles, the percent loss shall be computed as follows:

$$\% \text{ Loss} = \frac{100 \times \text{Weight of Material Passing 4.75 mm (No. 4) Sieve}}{\text{Total Weight of Sample}}$$

211-13 SOLUBILITY. Approximately 0.5 kg (one pound), air dried samples shall be immersed in local tap water and in Pacific Ocean water (or a 3.5% sodium chloride solution) for 8 hours each at 78°C (140°F). After immersion, the samples shall be washed with tap water, air dried and reweighed.

211-14 Permeability Test. Permeability tests for granular soils shall be performed in accordance with ASTM D2434, using samples compacted to the specified field density.

PART 3 CONSTRUCTION METHODS

SECTION 301 - TREATED SOILS, SUBGRADE PREPARATION AND PLACEMENT OF BASE MATERIALS

301-1 SUBGRADE PREPARATION

301-1.3 Relative Compaction

301-1.3.1 Firm, Hard and Unyielding. The term "firm, hard and unyielding" as used in 301-1.3 shall mean that when the heaviest construction and hauling equipment used on the Work drives over the subgrade, no permanent deformation shall occur either before or during pavement construction.

301-1.4 Subgrade Tolerances. Subgrade for pavement, sidewalk, curb and gutter, driveways, or other roadway structures shall not vary more than 15 mm (0.05 feet) from the specified grade and cross section. Subgrade for subbase or base material shall not vary more than 15 mm (0.05 feet) from the specified grade and cross section.

Variations within the above specified tolerances shall be compensating so that the average grade and cross section specified are met.

301-2 UNTREATED BASE

301-2.3 Compacting

301-2.3.1 Tolerances. The tolerance requirement in 301-2.3 is modified from 6 mm (0.02 foot) to 15 mm (0.05 foot).

SECTION 302 - ROADWAY SURFACING

302-5 ASPHALT CONCRETE PAVEMENT

302-5.1 General

302-5.1.1 Asphalt Concrete Berms. Asphalt concrete berms shall be constructed of Class III-D-PG70-10 asphalt concrete by mechanical means to conform to the details and location as shown on the Plans.

A tack coat, as provided in 302-5.4, shall be applied to the existing or new pavement preceding the placement of the asphalt concrete berms.

302-5.4 Tack Coat

302-5.4.1 Fog Seal. When specified, a fog seal consisting of material meeting the requirements of 203-3 shall be applied to the surfaces of all completed asphalt concrete at the rate of 0.36 liter per square meter (0.08 gallon per square yard) of the combined emulsion or such lesser rate ordered by the Engineer. Surface to be sealed shall be free from dust, dirt, and other foreign material. Surface shall be sealed within 7 Days after paving.

302-5.9 Measurement and Payment

302-5.9.1 Measurement and Payment for Asphalt Berm. Asphalt concrete berms will be paid for at the Contract Unit Price per linear meter (feet) of berm in place. No separate measurement or payment will be made for asphalt, aggregate, or tack coat.

302-5.9.2 Measurement and Payment for Fog Seal, Tack Coat, and Prime Coat. Measurement and payment for the specified material shall be by the tonne (ton) in place. Emulsions shall be measured after the specified dilution has been made.

SECTION 303 - CONCRETE AND MASONRY CONSTRUCTION

303-5 CONCRETE CURBS, WALKS, GUTTERS, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS AND DRIVEWAYS

303-5.1 Requirements

303-5.1.4 Concrete Substitution. Class 280-C-14 (470-C-2000) may be used in lieu of Class 310-C-17 (520-C-2500) and Class 280-D-14 (470-D-2000) in lieu of Class 310-D-17 (520-D-2500) as specified in 201-1.1.2 for street surface improvements, excluding concrete pavement, when no class is specified on the Plans or in the Special Provisions.

SECTION 306 - UNDERGROUND CONDUIT CONSTRUCTION

306-1 OPEN TRENCH OPERATIONS

306-1.2 Installation of Pipe

306-1.2.1 Bedding

306-1.2.1.1 Bedding Material. When native material is allowed for backfill in the bedding zone, no rocks larger than 40 mm (1½") in maximum dimensions shall be included. Material containing ashes, cinders, and types of refuse or other deleterious material shall not be used as bedding.

306-1.2.1.2 Sewer Pipe Bedding. Bedding for sewer pipe from 100 mm (4") below the pipe to the spring line (horizontal diameter) of the pipe shall be free draining, granular material with a maximum size of 15 mm (1/2 inch), unless another bedding method is shown on the Plans.

Densification of the bedding material may be by the application of water or by mechanical means. Unless otherwise specified, all bedding material shall be densified to a relative density of 90%. Acceptability of densification in the bedding zone will be determined by visual inspection and probing to determine that no voids exist in the backfill material. In this paragraph, the word "voids" does not include intergranular voids in the soil structure.

306-1.2.1.3 Flexible Pipe Bedding. Bedding for flexible drainage and sewer pipe shall be granular material having a sand equivalent of at least 50. The bedding material shall be placed and compacted from 150 mm (six inches) below the pipe to the top of the bedding as defined in 306-1.2.1. A 1 m (three foot) long section of low permeability material (50% passing 75 μm (200) sieve) shall be installed and mechanically compacted in lieu of the above specified bedding material at intervals of 60 m (200 feet) or as otherwise indicated on the Plans.

306-9 DISINFECTION. All water mains and appurtenances shall be disinfected before being placed in service in accordance with AWWA C651 except as specified herein:

a. The water mains shall be chlorinated so that a chlorine residual of not less than 20 ppm remains in the water after standing in the pipe for 24 hours.

b. The Agency will perform sampling and testing of bacteriologic samples. Disinfection shall be repeated until two or more consecutive samples are negative for coliform organisms.

The pressure in the line being chlorinated shall be maintained at least 35 kPa (5 psi) lower than that existing in any Agency line to which it is connected.

306-10 WATERWORKS APPURTENANCES

306-10.1 Valves. Valves shall be located as shown on the drawings.

Each valve shall be operated prior to its installation to assure proper functioning. Valves shall be installed plumb and in alignment with the water main. Valves shall be anchored by metal ties to a concrete base. Line valves may be moved to the closest joint upon approval of the Engineer.

306-10.2 Valve Boxes. Each underground valve shall be provided with a valve box. The valve boxes shall be installed plumb and centered over the operating nut of the valve. Valve boxes shall be installed with concrete collars.

Where valve boxes are to be placed in asphaltic type pavement, they shall not be set to grade until after paving has been completed.

Where valve boxes are to be placed in concrete pavement, they shall be set to grade prior to paving operations.

306-10.3 Thrust Devices. A reaction or thrust device shall be provided on all dead ends, tees, elbows, and bends with more than 5 degrees deflection on pressure pipe lines.

Thrust devices shall be cast-in-place concrete, poured against undisturbed or compacted earth. Thrust devices shall be sized and constructed in accordance with the Plans.

Thrust devices and anchor blocks shall be constructed of Class 280-C-14 (420-C-2000) concrete. Thrust devices and anchor blocks shall be cured at least 7 Days where Type IP or II cement is used or at least 48 hours where Type III cement is used.

Metal tie-rods or clamps shall be of adequate strength to prevent movement of pipe. All metal shall be coated in accordance with AWWA C110.

306-10.4 Fire Hydrants. Fire Hydrants shall be installed as shown on the Plans.

All hydrants shall stand plumb and shall have their nozzles parallel with or at right angles to the curb, with the pumper nozzle facing the curb, except that hydrants having only two hose nozzles 90 degrees apart shall be set with each nozzle facing the curb at an angle of 45 degrees.

In uncurbed public road rights of way, fire hydrants shall be located as far as possible from the traveled way while providing a 1 m (3-foot) wide clear space between the fire hydrant and the right of way line. In curbed public road rights of way, fire hydrants shall be installed so that there is 300 mm (12 inches) clear between the face of curb and the fire hydrant.

306-10.5 Fire Hydrant Barricades. Fire hydrant barricades shall consist of 100 mm (4-inch) standard steel pipe, schedule 40, filled with concrete, and having a total length of 2 m (72 inches). They shall be embedded in concrete blocks 300 mm (12 inches) in diameter and 1000 mm (40 inches) deep below ground surface with the barricade pipe embedded to 100 mm (4 inches) above the bottom of the concrete so 1 m (36 inches) extends above ground surface. The steel pipe above ground shall be painted chrome yellow in accordance with AWWA C503.

Barricades shall be installed between the fire hydrant and vehicle traffic paths at locations indicated on the Plans or where required by the water purveyor or Fire Department. Barricades shall not be installed within public road rights of way.

Fire hydrant barricades shall not obstruct the hydrant outlets.

310-5 Painting Various Surfaces

310-5.6 Painting Traffic Striping, Pavement Markings, and Curb Markings.

310-5.6.8A Application of Paint - Two Coats All painted traffic striping and markings shall be applied in two coats. The price named in any Bid item for painting traffic striping and markings shall include all costs for both applications, including any delays entailed for the required drying time between applications. If bleeding, curling or discoloration occurs following application of the second coat, unsatisfactory areas shall be given an additional coat, or coats, of paint. No additional payment will be made for work necessary to correct bleeding, curling or discoloration.

PART 4

SECTION 400 - ALTERNATE ROCK PRODUCTS, ASPHALT CONCRETE, PORTLAND CEMENT CONCRETE AND UNTREATED BASE MATERIAL

400-1 Rock Products

400-1.1 Requirements

400-1.1.1 General

Alternate rock material, Type S, as specified in Section 400 may be used on the Work.

400-3 Portland Cement Concrete

Suppliers of portland cement concrete shall file mix designs as required by 400-1.1.2

400-4 Asphalt Concrete

Suppliers of asphaltic cement concrete shall file mix designs as required by 400-1.1.2

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A :	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	GENERAL LIABILITY						EACH OCCURRENCE	$ See VCSS 7-4.2
	[X] COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
	[ ] CLAIMS-MADE [X] OCCUR						MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
							GENERAL AGGREGATE	$ See VCSS 7-4.2
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$
	[X] POLICY [ ] PRO-JECT [ ] LOC							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	[X] ANY AUTO						BODILY INJURY (Per person)	$
	[ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$ 1,000,000
	[ ] HIRED AUTOS [ ] NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$ 1,000,000
								$
	UMBRELLA LIAB [X] OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$
	DED [ ] RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						WC STATU-TORY LIMITS [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICE/MEMBER EXCLUDED? [ ] N / A						E.L. EACH ACCIDENT	$
	(Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

(Agency) - (Project Name) (Project Specification number)

The Agency and the County of Ventura, including its boards, all special Districts governed by the Board of Supervisors, agencies, departments, officers, consultants, employees, agents and volunteers, is named as Additional Insured as respects work done by Contractor under the terms of the contract on General Liability and Auto Liability Policies. Waiver of Subrogation is applicable to the Agency and the County of Ventura, its boards, districts, agencies, departments, officers, employees, agents and volunteers for Work Comp and General Liability. Endorsements required for referenced contract will be issued by the Insurance Company.

CERTIFICATE HOLDER	CANCELLATION
County of Ventura Public Works Agency L-1670 800 S. Victoria Avenue Ventura, CA 93009-1670	**SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.** AUTHORIZED REPRESENTATIVE

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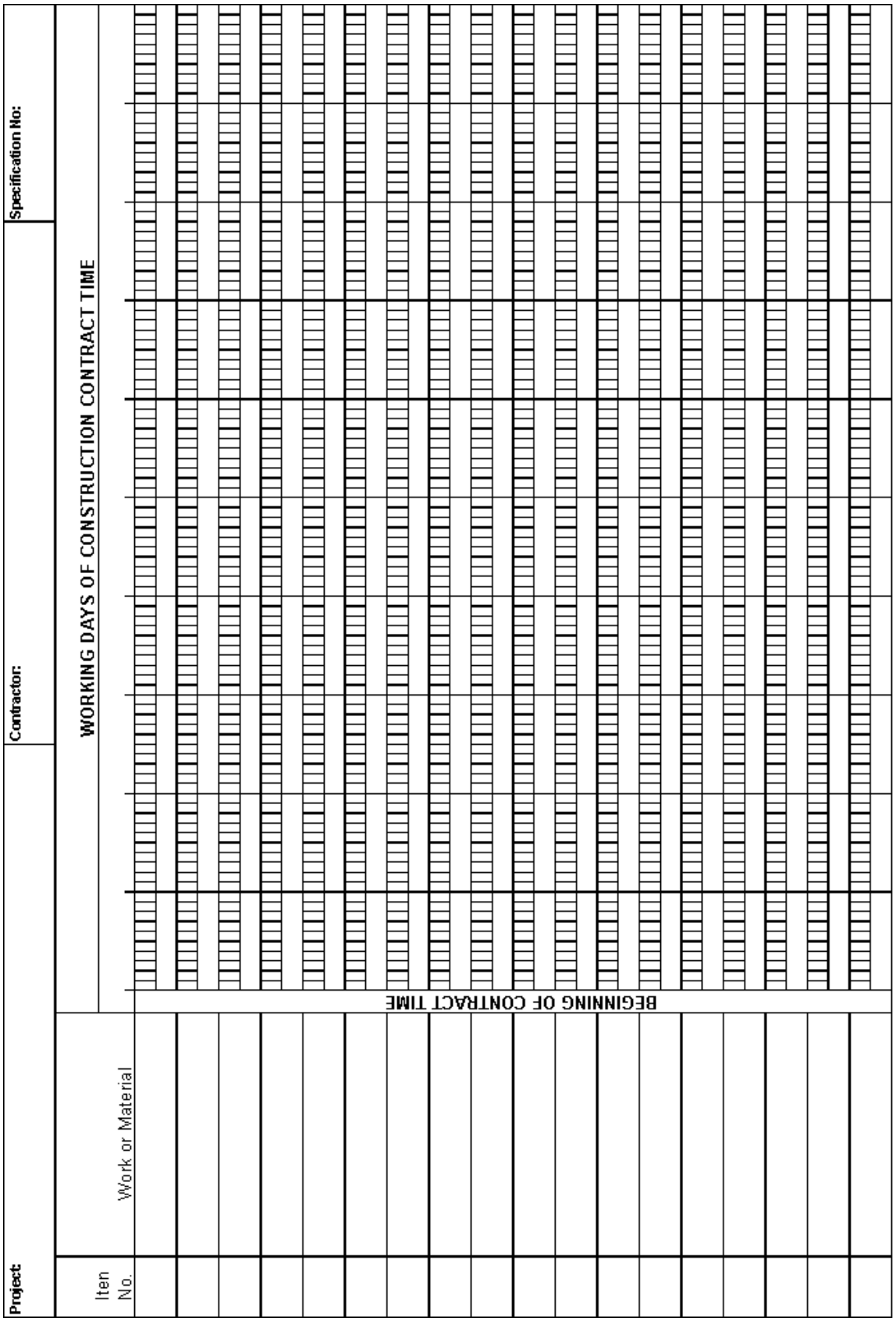
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Contractor:
Specification No:
WORKING DAYS OF CONSTRUCTION CONTRACT TIME
Item No.
Work or Material
BEGINNING OF CONTRACT TIME
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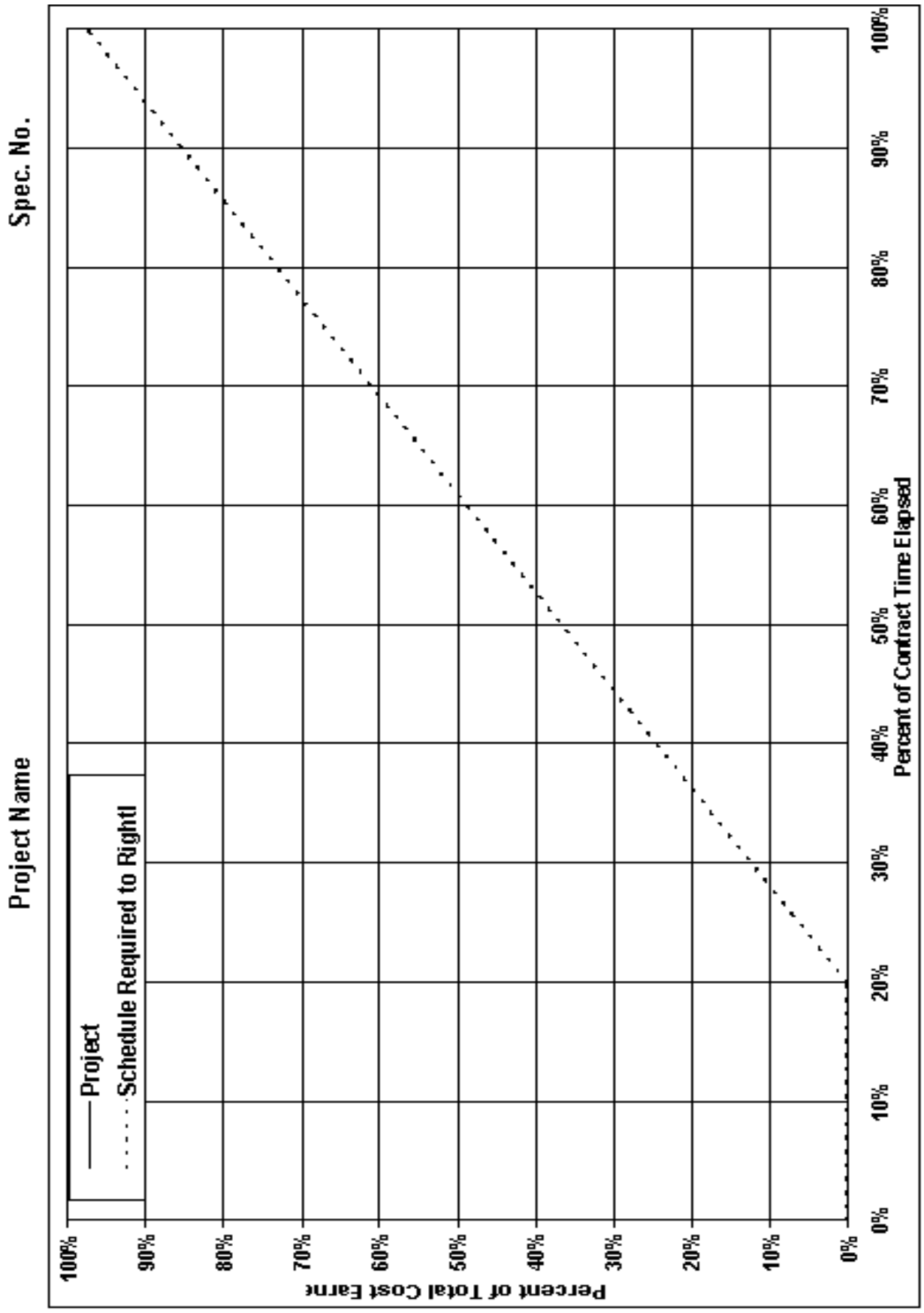
Submitted
Contractor
By
Date
Title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Spec. No.
Project
Schedule Required to Right!
Percent of Total Cost Earne
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90%
80%
70%
60%
50%
40%
30%
20%
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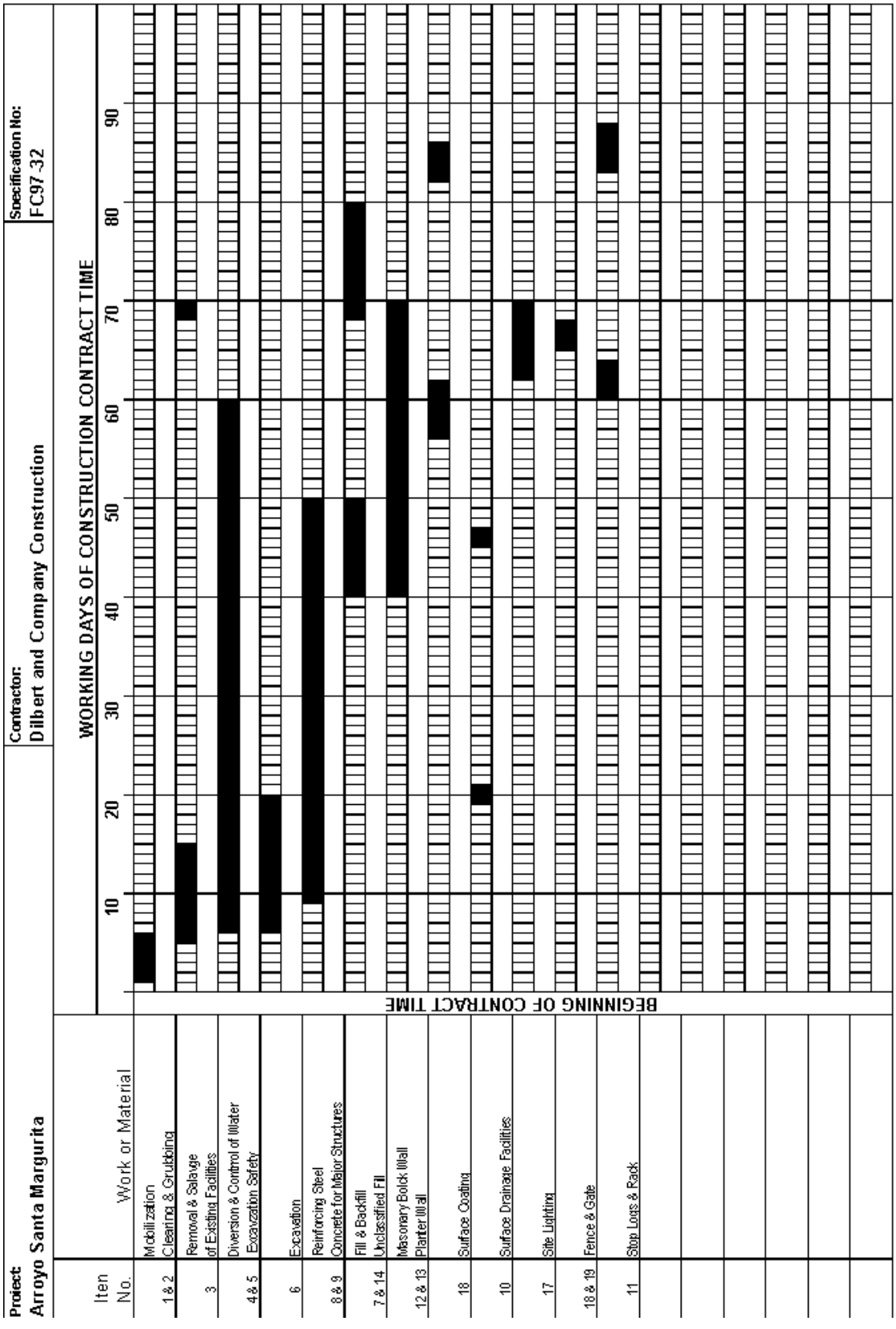
90%
100%
Percent of Contract Time Elapsed



Project: Arroyo Santa Margurita

Contractor: Dilbert and Company Construction

Specification No: FC97-32

Item No.	Work or Material
1 & 2	Mobilization Clearing & Grubbing
3	Removal & Salvage of Existing Facilities
4 & 5	Diversion & Control of Water Excavation Safety
6	Excavation
8 & 9	Reinforcing Steel Concrete for Major Structures
7 & 14	Fill & Backfill Unclassified Fill
12 & 13	Masonary Bolck Wall Planter Wall
18	Surface Coating
10	Surface Drainage Facilities
17	Site Lighting
18 & 19	Fence & Gate
11	Stop Logs & Rack

WORKING DAYS OF CONSTRUCTION CONTRACT TIME

10 20 30 40 50 60 70 80 90

BEGINNING OF CONTRACT TIME

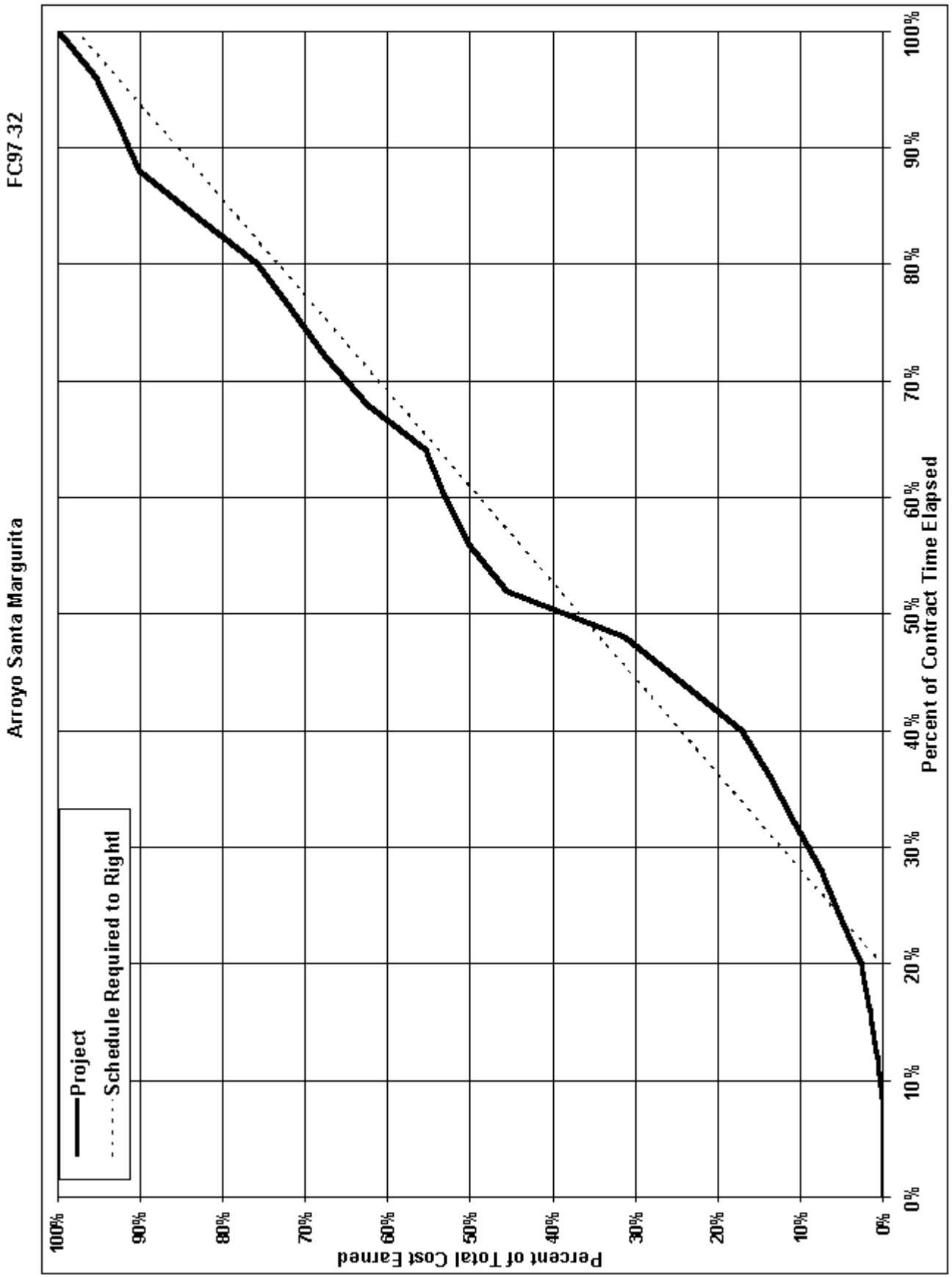
EACH HORIZONITAL INTERVAL EQUALS 1 WORKING DAYS OF CONTRACT TIME

Submitted Dilbert and Company Construction
Contractor

By *Tina Blair*

Title President

5/22/97
Date


FC97-32
Arroyo Santa Margurita
Project
Schedule Required to Right
Percent of Total Cost Earned
100%
90%
80%
70%
60%
50%
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30%
20%
10%
0%
0 %
10 %
20 %
30 %
40 %
50 %
60 %
70 %
80 %
90 %
100 %
Percent of Contract Time Elapsed

APPENDIX D ESCROW AGREEMENT FORM SAMPLE

ESCROW AGREEMENT FOR
SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between
("Agency") whose address is _____ and
("Contractor") whose address is _____ and
("Escrow Agent") whose address is _____.

For the consideration hereinafter set forth, the Agency, Contractor and Escrow Agent agree as follows:

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by Agency pursuant to the Construction Contract entered into between the Agency and Contractor for _____ in the amount of dated _____, (hereinafter referred to as the "Contract") which Contract is identified by Spec. No._____ and Auditor Controller's Contract No._____. Alternatively , on written request of the Contractor, the Agency shall make payments of the retention earnings directly to the Escrow Agent. When Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the Agency within ten days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between the Agency and Contractor. Securities shall be held in the name of _____ , and shall designate the Contractor as the beneficial owner.

(2) The Agency shall make progress payments to the Contractor for those funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the Agency makes payments of retentions earned directly to Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until such time as the escrow created under this contract is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the Agency pays the Escrow Agent directly.

(4) Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the escrow account. These expenses and payment terms shall be determined by the Agency, Contractor and Escrow Agent.

(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the Agency.

(6) Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from Agency to the Escrow Agent that Agency consents to the withdrawal of the amount sought to be withdrawn by Contractor.

(7) The Agency shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven days' written notice to the Escrow Agent from the Agency of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the Agency.

(8) Upon receipt of written notification from the Agency certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, the Escrow Agent shall release to the Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the Agency and the Contractor pursuant to Sections (1) to (8), inclusive, of this Agreement and the Agency and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the Agency and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of Agency:

_____, Director,
Public Works Agency

_____, Director
Central Services Department

_____, Director
Engineering Services Department

Address for all of the above:
Public Works Agency
800 South Victoria Avenue
Ventura, CA 93009

SAMPLE FORM

Form used for escrow will have names and signatures of persons authorized in accordance with paragraph 10.

On behalf of Contractor:

_____
Title

_____
Name

_____
Signature

_____
Street Address

_____
City & State Zip Code

On behalf of Escrow Agent:

_____
Title

_____
Name

_____
Signature

_____
Street Address

_____
City & State Zip Code

At the time the Escrow Account is opened, the Agency and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date first set forth above.

Agency:
(Agency name)

_____
Title

_____
Name

_____
Signature

Contractor:
(Contractor company name)

_____
Title

_____
Name

_____
Signature

EXHIBIT "A"
ESCROW INSTRUCTIONS

The parties to this escrow are _____("Agency") and _____ ("Contractor") and _____("Escrow Agent"). Agency and Contractor have entered into a contract for the construction of _____which contract is identified by Spec. No. _____ and Auditor-Controller's Contract No. _____ and was entered into by and between Agency and Contractor ("Construction Contract"). Pursuant to Public Contract Code Section 22300, Contractor may substitute certain securities for an equivalent amount of money required to be withheld from progress payments by Agency to Contractor pursuant to the Construction Contract.

The Escrow Agent is hereby instructed as follows:

1. Contractor may deliver to Escrow Agent:
   (a) Securities of the types specified in Sections 22300 of the Public Contract Code and Section 16430 of the Government Code.
   (b) Such other documents as are necessary to enable Escrow Agent to convert such securities into cash.
2. Upon receipt of such securities and other documents, Escrow Agent shall notify Agency within ten days of the deposit, and shall examine them to determine whether they are in a form sufficient to effect conversion of the securities into cash. Escrow Agent shall thereupon send written notice of its determination to Agency.
3. Escrow Agent shall hold such securities as trustee for Agency. The right of Agency to such securities is superior to any other lien or claim of lien; provided, however, that Contractor shall be entitled to any interest earned by such securities prior to their conversion to cash pursuant to section 5 hereof, and further provided that such interest may be withdrawn by Contractor at any time and from time to time without notice to Agency.

   Securities may be substituted by Contractor, but any securities substituted for securities previously deposited shall not reduce the current cash value of securities held below that last reported to Agency by Escrow Agent.
4. Escrow Agent shall determine the current cash value of such securities held by it as of the close of business on the first business day following the _____ day of each month and, in addition, on any other days which the Agency may from time to time specify in a written notice to Escrow Agent. Current cash value shall be determined as follows:
   (a) For securities traded over-the-counter or on a stock exchange:
      (1) Determine either the current bid price for the securities as of the close of business or the face value of the securities, whichever is less.
      (2) Subtract the cost of sale (broker commission).
      (3) Subtract all unpaid escrow fees and costs associated therewith.
   (b) For certificates of deposit:
      (1) Determine the face amount.
      (2) Subtract the potential interest penalty for immediate conversion.
      (3) Subtract all unpaid escrow fees and costs associated therewith.
   (c) Determine the value of other securities by procedures calculated to determine net realizable value. Promptly upon making each such determination, Escrow Agent shall notify Agency of the securities held and current cash value of such securities.

5. At any time or times that Agency believes it has a right to do so under the provisions of the Construction Contract, Agency may, without the consent of Contractor, deliver to Escrow Agent a written demand that Escrow Agent convert to cash all or any part of such securities. Upon seven days' written notice from Agency of such demand, Escrow Agent shall convert to cash all or part of such securities as demanded and shall distribute the cash as instructed by the Agency.

6. When the Construction Contract has been satisfactorily completed on the part of Contractor and any stop notices filed against the Construction Contract have been released, Agency shall give written notice to Escrow Agent that such securities may be returned to Contractor. Upon receipt of such written notice and payment of all escrow fees and costs, the Escrow Agent shall deliver to Contractor all money, interest, securities and other documents remaining in escrow and the escrow shall terminate.

7. Contractor, and not Agency, shall be liable to Escrow Agent for all of Escrow Agent's fees and costs associated with this escrow.

8. The Director of the Ventura County Public Works Agency, a Department Director of said Agency, or other person authorized in writing by such Director or Department Director is authorized to give written notice and to make written demands on behalf of Agency pursuant to sections 4, 5 and 6 hereof.

9. All written notices and demands pursuant to the escrow agreement and these Instructions shall be addressed as follows:

(a) To Agency:

Director, Ventura County Public Works Agency
800 South Victoria Avenue
Ventura, California 93009

(b) To Contractor:

(c) To Escrow Agent:

DATED: _____

_____	_____	_____
_____	_____	_____
By _____	By _____	By _____
Title _____	Title _____	Title _____
AGENCY	CONTRACTOR	ESCROW AGENT Bank Charter: State [ ] Federal [ ] Escrow Agent's Address:
		_____
		_____

APPENDIX E BLANK

RELEASE ON CONTRACT

CONTRACT NAME: _____

SPEC. NO. _____, PROJECT NO. _____

WHEREAS, by the terms of the contract dated ____ _, 20___ entered into by _____

_____and the undersigned CONTRACTOR,

_____

_____

_____

undersigned CONTRACTOR agreed to perform certain work for the compensation specified in said contract; and

WHEREAS, the CONTRACTOR represents that said work is fully completed and that final payment is due to the CONTRACTOR under terms of said contract,

NOW, THEREFORE, in consideration of the promises and the payment by [AGENCY NAME] to the CONTRACTOR of the amount due under the contract, to wit, the sum of $_____ and the additional consideration of $1.00, receipt of which is hereby acknowledged by the CONTRACTOR, the CONTRACTOR hereby releases and forever discharges _____ of and from all manner of debts, dues, demands, sum or sums of money, accounts, claims and causes of action, in law and in equity, under or by virtue of said contract except the claim against the Agency for the remainder, if any, of the amounts retained as provided in 9-3.2, any amounts retained as required by Stop Notices or Labor Code Provisions, and any unsettled claims or disputes as follows: (If none, leave blank)

Description of Claim or Dispute	Amount	Date of Claim	Date of Notice of Potential Claim

The CONTRACTOR certifies that each unsettled claim or dispute listed hereon has been processed in compliance with the requirements for making claims under the contract, including giving notice pursuant to the applicable provisions of the contract, and following the procedures for resolution of disputes or claims set forth in subsection 6-12 of the contract. Acceptance of this Release on Contract by the [Agency Name] shall not be deemed as a waiver or release of its right to contest either the substantive or procedural validity of any listed unsettled claims or disputes.

IN WITNESS WHEREOF, the hand and seal of the CONTRACTOR have been hereunto set this ___ day of _____, 20___.

THIS FORM MUST BE ACCOMPANIED
by a proper acknowledgement form
(See Civil Code Section 1189)

Contractor

By

Title

Bond No._____

SURETY BONDS
PERFORMANCE BOND

Whereas, the «Agency», hereinafter called "Agency", and «Contr», hereinafter called "principal", have entered into a contract dated «ContrDate» whereby principal agrees to complete certain designated work identified as project «ProjName» (Spec. No.«SpecNo»), and to perform other duties and obligations as described in said contract, which is incorporated herein by this reference and made a part hereof; and

Whereas, principal is required under the terms of said contract to furnish a bond to guarantee principal's faithful performance of the work and all terms and conditions of the contract;

Now, therefore, we the principal and the undersigned, as corporate surety, are held and firmly bound unto Agency in the penal sum of «CostText» ($«OrigCostFmtd») lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the principal, its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and provisions in the said contract and any alteration thereof made as therein provided, on principal's part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless Agency, its officers, agents and employees, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The above obligation shall continue after Agency's acceptance of the work for the duration of the warranty period as specified in the contract during which time if principal fails to make full, complete, and satisfactory repair or replacement to the work and/or fails to protect Agency from loss or damage resulting from or caused by defective materials or faulty workmanship, the obligation of surety hereunder shall continue so long as any obligation of principal remains.

PAYMENT BOND

And, whereas, under the terms of said contract, principal is required before entering upon the performance of the work, to file a good and sufficient payment bond with the Agency to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code of the State of California.

Now, therefore, said principal and the undersigned, as corporate surety, are held firmly bound unto the Agency and all contractors, subcontractors, laborers, material suppliers and other persons employed in the performance of the aforesaid contract and referred to in the aforesaid Civil Code in the like sum of «CostText» dollars ($«OrigCostFmtd») for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, or for any amounts required to be deducted, withheld and paid over to the Franchise Tax Board from the wages of employees of the contractor and the contractor's subcontractors, that said surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees including reasonable attorney's fees incurred in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should this condition of this bond be fully performed, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

GENERAL TERMS

The surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said contract or the plans and specifications accompanying the same shall in any manner affect its obligations on these bonds, and it does hereby waive notice of any such change, extension, alteration or addition.

Nothing herein shall limit the Agency's rights or surety's obligations under the contract or applicable law, including, without limitation, California Code of Civil Procedure section 337.15.

In witness whereof, this instrument has been duly executed by the principal and surety above named

on ,_____, 20 .

«Contr»
Name of Principal

By_____

Title_____

_____
Name of Surety

By_____
Attorney-in-Fact

Address _____

City_____ State___ Zip_____

INDICATE COMPLETE ADDRESS OF SURETY TO WHICH CORRESPONDENCE CONCERNING THIS BOND SHOULD BE DIRECTED.

Telephone No._____

A-467/9-Tmpl

SAMPLE BOND FORM

Agency will prepare the Bond in this format and transmit it to the Contractor along with the Contract and the Notice of Award letter.

Surety shall fill in the Bond No., date identification and signature of surety in places provided.

Contractor shall sign and indicate title in place provided.

SPECIAL PROVISIONS

TABLE OF CONTENTS – SPECIAL PROVISIONS

VENTURA COUNTY WATERSHED PROTECTION DISTRICT

CALLEGUAS CREEK DS UPLAND ROAD
BRIGDE 2023 SEDIMENT REMOVAL

SPECIFICATION NO. WP24-01 PROJECT NO. 86025

Special Provisions ..... 21 pages

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Best Management Practices (BMPs) ..... 22 pages

Water Diversion Guide ..... 23 pages

CDFW Streambed Alteration Agreement No.1600-2004-0512-R5..... 32 pages

California Regional Water Quality Control Board 401 Certification File No. 14-038 ..... 54 pages

USACE Individual Permit SPL- 2018-00040-AJS ..... 25 pages

USFWS Reinitiated Biological Opinion 2018 ..... 24 pages

USFWS Reinitiated Biological and Conference Opinion 8-8-15-F-7R..... 39 pages

USFWS Biological and Conference Opinion 8-8-11-F/C-12 ..... 98 pages

Exhibits: Stockpile location maps ..... 2 pages

Plans ..... 6 sheets

SECTION 1000

GENERAL RESPONSIBILITIES OF THE CONTRACTOR

Bid Item No. 1 – Schedule I
Bid Item No. 7 – Schedule II

1000-1 **SCOPE**

General responsibilities and miscellaneous administrative requirements shall be complied with as specified in the Standard Specifications, the plans, and these Special Provisions.

1000-2 **PRE-BIDDING CONFERENCE**

The pre-bid conference will be held at the place and time indicated on Page 1 of the Proposal for the purpose of answering any questions concerning the project. None of the information transmitted at this meeting will be construed to in any way modify the plans and specifications. Any modifications will be forwarded to all plan holders as an addendum.

1000-3 **CONTRACTOR'S REPRESENTATIVE**

The Contractor to whom the contract is awarded shall provide the following information in writing and submit it at the time and concurrently with the signed contract, contract bonds and certificates of insurance. Failure to comply may result in delays in the processing of the contract documents.

1. Name of authorized representative at the job site.

2. Address and telephone number where the above person can be reached.

3. Address of the nearest office of the Contractor, if any, and the name and telephone number of a person at that office who is familiar with the project.

4. Address and telephone number of the Contractor's main office and the name and telephone number of the person at that office familiar with the project.

1000-4 CONSTRUCTION SCHEDULE

In addition to the requirements of 6-1, the following shall apply: An updated construction schedule shall be submitted monthly prior to each progress payment closure date. Processing of progress payments will be delayed until the schedule complying with this Special Provision and the Standard Specification is received and approved. If the Contractor intends to submit a computer-generated schedule, it shall be generated in Microsoft Project, and submitted in electronic and hard copy forms.

1000-5 CONSTRUCTION SURVEYS

Surveys provided by the Contractor pursuant to 2-9.3 through 2-9.6 required for construction of facilities shall conform to the general industry standards and the following minimum quality and standards.

1000-5.1 Performance and Accuracy

The surveys shall be accomplished with sufficient precision to result in the required accuracy and shall be performed under the supervision of a Land Surveyor or Civil Engineer licensed by the State of California. The requirements herein shall apply to the minimum essential control required to accomplish establishment of lines and grades by the Contractor, and to provide the Engineer the necessary references for insuring construction accuracy. The method used to establish working stakes will be at the Contractor's option.

1000-5.2 Details of Staking

1000-5.2.1 Alignment

Centerline alignment stakes or offset stakes shall be set at a maximum of 50-foot intervals and at all curve points, angle points, and changes in elevation or wall height. On curves, stakes shall be set at 25-foot intervals.

1000-5.2.2 Right-of-Way and Temporary Work Area Limits

If required by the plans, Contractor shall establish those limits using ties to the centerline provided on the plans. The accuracy shall be within plus or minus one-half foot.

1000-5.2.3 Rough Grade Stake

For rough grading, with cuts or fills, at least one line of stakes shall be set on catch or hinge points, or an offset line. These stakes shall be marked

with cut or fill to permit rough finishing of the grading plane. Where slope checkpoints have been set near the elevation of the grading plane, they may be used as rough grade stakes. The longitudinal interval shall be 50 feet.

1000-5.2.4 Final Grade Stakes – Watershed Protection and Drainage Structures

For RC concrete channels and box conduits 10-foot or less in width, earth channels 20 feet or less in width, and levees, one set of final grade stakes shall be established in the invert to control and to check all elements of the structural section, earth channel or levee slopes. Two sets, one on each side of the invert, shall be established for any facility in excess of the above. These shall be in addition to those set outside the limits of the structure or the excavation. Offset distance from each edge of structure or centerline shall be a constant.

Grade shall refer to the plane of the finished invert or slope surface. The mark on the stake shall be on the plane or at a uniform vertical offset from the plane of the finished surface. Longitudinal spacing will be 50 feet for tangent alignment and grade. Spacing will be reduced to 25 feet when radius of curvature is less than 1,000 feet, or when rate of change of slope is less than 0.005 ft/ft. Prior to concrete placement, grade stakes and forms shall be checked. Any displacement shall be corrected. If the displacement resulted from settlement or heave, or if the stakes were not used within a reasonable period of time after being set, they shall be restaked.

For pipe conduits, stakes shall be set at the ends and at grade and line breaks. If conduit is to be constructed in stages, the ends of the staged lengths shall be staked. When ends of long, straight runs are not intervisible, intermediate stakes shall be set. The finished pipe grades shall be controlled by optical sighting devices. Use of stringline will not be allowed.

1000-5.2.5 Final Grade Stakes – Roadways

One set of final grade stakes shall be set to control and to check all elements of the structural section of each roadbed, including CMB, AC, and PCC pavements. Two lines, one on each side, shall be set for each roadbed. They shall be set outside the limits of the structural section. Offset from each edge of pavement is to be a constant. On wide roadway, grade stakes may be required on the centerline to control the crown. Grade will be referred to the plane of the pavement's surface. Longitudinal spacing will be 50 feet for tangent alignment and grade. Spacing will be reduced to 25 feet when radius of curvature is less than 3,000 feet, or when rate of change of grade is more than 0.8 percent per station. Prior to cement treated base and/or paving operations final grade stakes shall be checked.

1000-5.2.6 **Minor Drainage Structure Stakes**

References shall be established to the end of all side inlets and drains and to grade and line breaks. In certain cases, supplemental stakes may be necessary. If a drain is required to be constructed in stages, the ends of the staged lengths shall be staked. When ends of long, straight runs are not intervisible, intermediate stakes shall be set. Such intermediate stakes are to be intervisible, but the general spacing shall not be less than 200 feet. Horizontal and vertical locations of junctions, drop inlets, risers, and manholes shall be staked. A minimum of two stakes shall be set in each case. Show elevations on reference point.

1000-5.2.7 **Fence**

For fence along a right-of-way line not parallel to the channel centerline, the Engineer shall establish some right-of-way references for use by the Contractor and the remaining references shall be set as follows:

(1) For tangent alignment, set intervisible points at breaks in terrain or at a maximum interval of 200'±.

(2) Set points for changes in alignment.

(3) Set stakes at regular intervals on curves. Use an interval of 50 feet for radii of 1,000 feet and greater; use 25 feet for shorter radii.

1000-5.2.8 **Miscellaneous**

Survey staking for miscellaneous facilities shall be performed as required by the Engineer.

1000-5.2.9 **Survey Notes**

All survey notes shall be kept on 8-1/2" x 11", standard Agency forms. Notes shall indicate the name of the project, the Contractor, the firm performing surveys and party chief, and shall be dated. Copies of the notes shall be provided to the Engineer or their representative within one day of performance. No construction work shall be initiated on an increment of the project before survey notes are received by the Engineer or their field representative. The original notes shall be retained by the surveyor and submitted to the Engineer upon completion of work, organized in a proper order in a loose-leaf folder.

1000-6 WORKING HOURS

Delete Section 6-13.1. Working Hours shall be as follows: No work shall be performed by the Contractor at the Work site between the hours of 7:00 PM and 7:00 AM, the following day, nor shall work be performed on Sundays or holidays listed in 6-7.2.1.

In the event that the Contractor chooses to work on Saturdays, a 3-day notice shall be given to the Engineer via correspondence (letter or email). Upon approval by the Engineer, the Agency will provide inspection for that day at no cost to the Contractor.

1000-7 SECURE WORK AREA

It is the responsibility of the Contractor to maintain safe and secure work areas at all times. Safe work areas will include the use of barricades, guards, lights, signs, and any other devices necessary to protect the public.

1000-8 WATER FOR CONSTRUCTION

The Contractor shall make independent arrangements for water supply at the construction site at their expense.

1000-9 EQUIPMENT AND MATERIALS STORAGE

The Contractor shall arrange and maintain a secure storage site for all equipment and materials. The proposed storage site shall be submitted to the Project Engineer for approval before it may be used. All equipment and unused materials shall be returned to this site at the end of each workday. All deliveries of materials to the job site shall be planned and executed so that traffic is not obstructed or interfered with in any fashion.

Construction and stored equipment and supplies shall not be permitted within the road rights-of-way and shall not obstruct access to residences or businesses, nor shall sight distance be restricted by stored equipment and supplies.

The Contractor may use the access road within the work area downstream of Upland Road and the equipment storage area upstream of Upland Road shown on sheet 1 of the plans for the storage of equipment. The Contractor shall access the storage area upstream of the Upland Road from Seminary Road to minimize impacts to the creek.

1000-10 CONSTRUCTION SITE MAINTENANCE

In accordance with Section 7-8 of the Standard Specifications, the contractor shall provide the means to maintain a construction site free from dust and excessive noise. The Contractor is required to control dust during the entire contract period, including holidays and weekends.

If the Contractor fails to maintain a clean construction site in accordance with these specifications, the Agency reserves the right to hire another Contractor or agency to perform this work on a "force account" basis. The cost of performing this work will be deducted from the total contract price at final payment.

1000-11 AIR QUALITY MITIGATION MEASURES

The Contractor shall be responsible to implement the following Air Quality Mitigation Measures for this project as follows:

- Off-road equipment with engines larger than 50 horsepower shall have engines that meet or exceed U.S. Environmental Protection Agency (USEPA) / California Air Resources Board (CARB) Tier 3 Emissions Standards. Exceptions will be allowed only on a case by case basis for three specific situations: (1) an off-road equipment item that is a specialty, or unique, piece of equipment that cannot be found with a Tier 3 or better engine after a due diligence search; and /or (2) an off-road equipment item that will be used for a total of no more than five (5) days; and/or (3) the off-road equipment is registered under CARB's Statewide Portable Equipment Registration Program. Additionally, all off-road equipment engines shall be maintained in good operating condition and in tune per manufacturers' specification, and equipment idling shall be limited to no more than five (5) minutes unless needed for proper operation.

- All non-employee on-road vehicle engines shall be turned off when not in use. Engine idling shall not exceed five (5) minutes unless required for proper operation. All non-employee on-road vehicle engines shall be maintained in good operating condition and in tune per manufacturers' specification.

- Apply environmentally safe chemical stabilization, which can be water or other non-toxic soil binder(s), at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with public paved surface to the working areas of the Project site, with an acceptable width to accommodate traffic ingress and egress from the site.

- The area disturbed by clearing, excavation, earth moving, surface disturbance, and grading operations shall be minimized to the extent feasible to prevent excessive dust generation.

- Pre-water areas to be graded or excavated, and water during grading/excavation activities so that soils being handled are moist (12 percent moisture or greater).

- Install a properly functioning and well-maintained track-out control device(s) that prevents track-out of soil onto paved public roads.

- Remove track-out from pavement as soon as possible but no later than one hour after it has been deposited on the paved road.

- Disturbed soils and soil piles shall be watered as necessary to reduce fugitive dust emissions.

- Clearing and grading activities shall cease during periods of high winds (25 miles per hour for more than 5 minutes in any hour).

- Silt-containing material excavated, stockpiled or transported during construction shall be watered as necessary to reduce fugitive dust emissions.

- Trucks transporting earth material off-site shall be covered using properly secured tarps or covering that covers the entire surface area of the earthen fill, or other fine bulk material loads.

- Limit vehicle speeds, including off-road scrapers, on unpaved roads and work areas to 15 mph. Speed limit signs shall be posted on site at points of ingress to unpaved areas and within the unpaved work areas.

1000-12 **ARCHEOLOGICAL RESOURCES**

Archeological and Paleontological discoveries shall conform to 6-3.2.

If human remains are unearthed, State Health and Safety Code Section 7050.5 require that no further disturbance shall occur until the Ventura County Coroner has made the necessary findings as to the origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will identify the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by PRC

Section 5097.98. The MLD should make his/her recommendation within 48 hours of their notification by the NAHC. This recommendation may include (A) non-destructive removal and analysis of human remains and items associated with Native American human remains; (B) preservation of Native American human remains and associated items in place; (C) relinquishment of Native American human remains and associated items to the descendants for treatment; or (D) other culturally appropriate treatment.

In the event that archaeological or historic resources are found during Project implementation, an approved archaeological consultant shall be contacted immediately. Additionally, all ground-disturbing activities shall be halted at the discovery site and within 100 feet of it until the discovery has been evaluated by the approved archaeological consultant and all appropriate agencies have been notified. If the discovery is recommended as eligible for listing in the California Register of Historic Resources, mitigation of the impacts may include archaeological data recovery and/or monitoring.

1000-13 PERSONNEL EDUCATION

The Agency's Biological Monitor shall brief all project personnel on environmental concerns, including conducting all activities within the Project work limits, special status plant and wildlife species expected to be encountered within the Project area, protective measures that must be implemented to avoid harming plants and wildlife, proper protocol in the event wildlife enters or is injured or killed in the work area during contractor activities, and buffers in the event active bird nests are encountered. All project personnel shall participate in the environmental education program conducted by the Agency's Biological Monitor before they may work on site. Attendees shall sign in on the day they attend and wear an emblem documenting their attendance on their hard hat.

1000-14 ENVIRONMENTAL COORDINATION

The Contractor shall coordinate and fully cooperate with the Agency and the Agency's Biological Monitor as follows:

a) Provide a minimum of fifteen (15) working days' notice to the Engineer prior to mobilization to facilitate mandatory surveying of native species in the path of construction at least three (3) times within a 15-day period immediately prior to the start of work. Temporary no-work buffer zones may be required if surveys determine the presence of nesting birds within or immediately adjacent to the work limits.

b) The Agency's Biological Monitor will be present on site full-time to part-time throughout construction and will coordinate with the Agency Inspector and Contractor to ensure that work activities comply with Project permits, do not harm wildlife, and do not extend beyond permitted work boundaries.

1006-15 COMPLIANCE WITH REGULATORY PERMITS AND AGREEMENTS

1000-15.1 Permits

This project is part of the Agency's ongoing Operations and Maintenance (O&M) Program. The Best Management Practices (BMPs) and Water Diversion Guide which are part of this program are attached hereto and are a part of these specifications.

Regulatory permits required for this project include a California Department of Fish and Game Streambed Alteration Agreement 1600-2004-0512-R5, U.S. Fish and Wildlife Service Biological Opinions (08EVEN00-2012-F-0531, 08EVEN00-2015-F-0055, 08EVEN00-2018-F-0330), California Regional Water Quality Control Board Section 401 Water Quality Certification (File No. 14-038), and U.S. Army Corps of Engineers Individual General Permit SPL-2018-00040-AJS. These general O&M permits are attached hereto and are part of these specifications.

1000-15.2 Liability

The Contractor shall indemnify and hold harmless the Agency from all damage to the Agency, including but not limited to penalties, legal fees, and other expenses, resulting from any violation of any permit set forth above if the damage is caused in whole or in part by any action or omission of the Contractor. Contractor and its sureties shall be liable for the amount necessary to indemnify and hold harmless the Agency for all damage resulting from any such violation and that amount may be deducted from any amount due or becoming due to Contractor from the Agency.

1000-16 HAUL PERMITS

The Contractor at Contractor's expense shall obtain all State, County, City, or local permits required to haul waste materials and equipment on public roadways.

1000-17 SPECIAL INSURANCE REQUIREMENTS

The City of Camarillo and the California Department of Transportation (Caltrans) shall be named as additional insured as respect to work done by Contractor under the Terms of the Contract on all General Liability Policies required.

1000-18 GENERAL BEST MANAGEMENT PRACTICES

The following general best management practices must be adhered to at all times during periods of active work, as follows:

No debris, soil, silt, sand, rubbish, construction waste, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or placed where it may be washed by rainfall or runoff into the project work area. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within the channel. Prior to removal from the site, all trash shall be stored outside the channel within designated trash receptacles.

The Contractor shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws.

Any equipment or vehicles driven and/or operated within or adjacent to the channel shall be checked and maintained daily to prevent leaks of materials that, if introduced into the water, could be deleterious to aquatic life.

All wheeled or tracked equipment shall be removed from the channel at the end of each workday and stored in a secure storage area.

Stationary equipment such as motors, pumps, generators, and welders, located adjacent to the channel shall be positioned over drip pans.

No equipment maintenance shall be done within or near the project work area where petroleum products or other pollutants from the equipment may enter the channel via rainfall or runoff.

The clean-up of all spills shall begin immediately. The Agency shall be notified immediately by the Contractor of any spills and shall be consulted regarding clean-up procedures.

Water containing mud, silt, or other pollutants from equipment washing or other activities, shall not be allowed to enter the channel or placed in locations that may be subjected to high storm flows.

Rock, gravel, and/or other materials shall not be imported to, taken from or moved within the channel, except as otherwise addressed in these specifications.

1000-19 ACCESS TO THE PROJECT SITE

Contractor's access to the project site shall be from Upland Road as shown on the plans. Before completion of the project, the Contractor, at its own expense, shall restore the access routes, including City streets, driveway entrances and Agency access roads, used by the Contractor, to conditions equal or better than that, which existed prior to use by the Contractor and to the satisfaction of the Engineer.

1000-20 TEMPORARY WORK AREA LIMITS

Prior to ground disturbance of any kind, the temporary work area limits shown on the plans shall be clearly staked with visible flagging at distances no greater than 100' on center. The Contractor shall restore all existing surface and subsurface facilities within the temporary work areas to their original condition and the Engineer's satisfaction upon completion of the project. Restoring shall include but not be limited to fencing, asphalt concrete, pavement markings, curb and gutter, cross gutter, concrete sidewalk, irrigation system, lights, and utilities as indicated on the plans.

1000-21 PAYMENT

No separate payment will be made for compliance with all provisions of 1000. All costs involved shall be absorbed in the Contractor's total bid price for the project.

SECTION 1001

WATER POLLUTION CONTROL

Bid Item No. 2 – Schedule I
Bid Item No. 8 – Schedule II

1001-1 SCOPE

These items shall consist of preventing, controlling, and abating discharges of pollutants from the construction site, and shall be performed in accordance with the Standard Specifications, the Plans, and these Special Provisions.

1001-2 CONSTRUCTION METHODS

The Contractor shall submit a Water Pollution Control Drawing (WPCD) to the Engineer for review and approval prior to implementation. All work shall be performed in accordance with the Clean Water Act Section 401 Water Quality Certification (File No. 14-038) and Order for the Ventura County Routine Maintenance Program (4WQC40114038). Special attention shall be given to Section G, Best Management Practices, and the Water Diversion Guide contained herein.

1001-3 LIABILITY

The Contractor shall indemnify and hold harmless the Agency from all damages to the Agency including, but not limited to penalties, legal fees, and other expenses resulting from any violation of the permits issued and applicable to this Project, if the damage is caused in whole or in part by any action or omission of the Contractor. Contractor and its sureties shall be liable for the amount necessary to indemnify and hold harmless the Agency for all damages resulting from any such violation, and that amount may be deducted from any amount due or becoming due to Contractor from the Agency.

1001-4 MEASUREMENT AND PAYMENT

Delete 7-8.6.7. Progress payments for the Water Pollution Control will be computed by the Engineer based on their estimate of the percentage completion of this item of the work. In general, this will be proportional to the percentage completion of the major items of work to which water

pollution control is incidental. Payment will be made on a lump sum basis at the contract price bid for Bid Item Nos. 2 and 8, respectively. Such payment shall be considered full compensation for preparation of the plan and installation and removal of water pollution control works, including all labor, equipment, materials, and all other necessary and incidental items required to complete the work.

SECTION 1002

DIVERSION, CONTROL, AND REMOVAL OF WATER

Bid Item No. 3 – Schedule I
Bid Item No. 9 – Schedule II

1002-1 **SCOPE**

These items shall consist of diversion, control, and removal of all water entering into the construction area or otherwise affecting construction activities and shall be performed in accordance with the Standard Specifications, the Plans, and these Special Provisions.

1002-2 **CONSTRUCTION METHODS**

The Engineer shall approve all work for diversion, control and removal of water proposed by the Contractor. All work shall be performed in accordance with 10-1, 10-2, and 10-3. Diversions shall be designed in accordance with the Water Diversion Guide for the Ventura County Maintenance Program EIR.

1002-3 **MEASUREMENT AND PAYMENT**

Delete 10-4. Payment for Diversion, Control and Removal of Water will be computed by the Engineer based on their estimate of the percentage completion of this item of the work. In general, this will be proportional to the percentage completion of the major items of work to which diversion of water is incidental. Payment will be made on a lump sum basis at the contract price bid for Bid Item Nos. 3 and 9, respectively. Such payment shall be considered full compensation for installation and removal of diversion and control works, including all labor, equipment, materials, and all other necessary and incidental items required to complete the work.

SECTION 1003

CLEARING AND GRUBBING

Bid Item No. 4 – Schedule I
Bid Item No. 10 – Schedule II

1003-1 **SCOPE**

These items shall consist of Clearing and Grubbing the project work area and disposal of materials removed in accordance with the requirements of 300-1. Items to be removed shall include, but not be limited to vegetation (including native and non-native species), trees, logs, tree stumps and roots, tree branches, shrubs, grass, weeds, trash, and all other artificial objectionable materials within the limits of construction as shown in the Plans.

1003-2 **DISPOSAL SITES**

All material designated for removal and disposal shall be disposed of in the following order of priority: 1) at a County-recognized recycling/buyback facility, 2) lawfully at a site in accordance with local ordinances.

For giant reed (*Arundo Donax*), the Contractor shall haul away to a legal off-site disposal location approved by the Engineer.

1003-3 **MEASUREMENT AND PAYMENT**

Payment for Clearing and Grubbing will be made on a lump sum basis at the contract price bid for Bid Item Nos. 4 and 10, respectively, and in accordance with 300-1.4. Such payment shall be considered full compensation for removal (outside the project site) and proper disposal of all the resulting materials, furnishing all labor, materials, tools, equipment and incidental items required to complete the work.

SECTION 1004

TRAFFIC CONTROL

Bid Item No. 5 – Schedule I
Bid Item No. 11 – Schedule II

1004-1 **SCOPE**

These items shall consist of Traffic Control and Detour for the construction activities of the project. All traffic control detour and appurtenant work shall be in accordance with the 7-10 and current requirements set forth in the California Manual on Uniform Traffic Control Devices (CMUTCD), the Department of Transportation, State of California (Caltrans) Standard Plans and Standard Specifications, latest editions, the Standard Specifications (GREENBOOK) 2021 Edition, the Plans, and these Special Provisions.

1004-2 **TRAFFIC CONTROL PERMIT**

The Contractor shall submit a Traffic Control Plan (TCP) to the Agency for review and approval. The TCP shall be prepared and stamped by a Traffic or Civil Engineer registered in the state of California and in accordance with 7-10.2.2. After Agency's approval, the Contractor shall obtain Traffic Control Permits from the City of Camarillo and the California Department of Transportation (Caltrans) for their respective right of ways on roads to be used by the Contractor and his Sub-Contractors, impacting traffic due to staging of trucks to be loaded and unloaded with sediment. Please contact the City of Camarillo Department of Public Works at (805) 383-5340 and Caltrans Permit Office at (213) 897-3631 to obtain information on permit requirements, permit review times, and permit costs.

The Contractor's equipment and personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders at any time, except as provided in the approved Traffic Control and Detour Plan.

All construction work and traffic control shall be scheduled and constructed to provide for a minimum inconvenience and maximum safety to the public vehicular and pedestrian traffic.

Contractor shall provide flagmen and other personnel as required for staging of trucks to be loaded with sediment to comply with permits and minimize inconvenience to the public.

1004-3 CONSTRUCTION MATERIALS

Traffic control work shall include all labor, materials, tools, equipment, transportation and incidentals necessary to maintain and control all vehicular and pedestrian traffic at the project access locations and through the construction site.

All such work shall conform to the applicable provisions of the Standard Specifications for Public Works Construction (GREENBOOK) 2021 Edition, the project Plans and these Special Provisions.

All work relative to maintaining and controlling traffic shall additionally conform to the applicable sections, tables, and figures in the latest edition of the California Manual on Uniform Control Devices (CMUTCD) as issued by the Federal Highway Administration, the State of California Department of Transportation (Caltrans) Standard Plans and Standard Specifications latest edition, and the Work Area Traffic Control Handbook (W.A.T.C.H) Manual, latest edition.

1004-4 CONSTRUCTION WORK SIGNING

The Contractor shall furnish and install all advance warning signs and other traffic control devices. Only those signs, lights, and devices shown in the current California Department of Transportation Traffic Manual are authorized for use during construction.

Whenever construction operations create a condition hazardous to the public, the Contractor shall furnish, erect and maintain, at their expense, such fences, barricades, lights, signs, delineators, flagmen, and other devices as deemed necessary by the Engineer to prevent accidents or damage or injury to the public in accordance with said Manual and the Standard Specifications.

1004-5 ACCESS ROAD CLOSURE U/S OF LAS ESTRELLAS COURT

The access road/recreation trail from Las Estrellas Court to Upland Road is within the project temporary work area. Contractor shall provide trail closure and detour signage on the access road/recreation trail and on Upland and Flynn Roads. The Contractor shall also install temporary fencing at the access road bollards and along the limits of the access road to Upland Road to exclude the public from this portion of the access road/recreation trail for the Contractors use.

1004-6 **MEASUREMENT AND PAYMENT**

Measurement and payment for Traffic Control and Detour will be paid on lump sum basis and will be made at the contract price bid for Bid Item Nos. 5 and 11, respectively. Such payment shall be considered full compensation for furnishing all labor, materials, tools, equipment, and all incidentals required for Traffic Control and Detour for the duration of the work.

SECTION 1005

EXCAVATION

Bid Item No. 6 – Schedule I
Bid Item No. 12 – Schedule II

1005-1 **SCOPE**

These items shall consist of excavation and loading of sediment from Calleguas Creek. All work shall be performed in accordance with the Standard Specifications, the Plans, and these Special Provisions.

1005-2 **CONSTRUCTION METHODS**

1005-2.1 **Excavation**

The sediment excavation and removal sequence shall be performed as follows: 1) from the downstream end to the upstream end of Schedule I, then, 2) from the downstream end to the upstream end of Schedule II. See Plans for the stations pertaining to Schedule I and Schedule II.

The Contractor shall excavate all deposited sediment material and other material located in Calleguas Creek, between the existing sediment channel grades and limits of excavation as shown on the Plans. All excavated material shall comply with the following:

a) Non-sediment material, including trash, woody debris, buried vegetation, and other objectionable material, shall be removed from the sediment and hauled away to a disposal site per 1003-2.

b) Excavated sediment shall be hauled away, unloaded, and stockpiled in the County-approved sites as follows:

Site 1, the Watershed Operation and Maintenance (O&M) facility on the west bank terrace of Calleguas Creek, located approximately 1,600 feet upstream of Upland Road Bridge. See attached Exhibit A.

Site 2, the O&M stockpile yard on the west bank terrace of Calleguas Creek, known as Mount Calleguas, which is located approximately 6.5 miles downstream of the project site or 0.88 miles downstream of the west access road gate (metal pipe) on Potrero Road. See attached Exhibit B.

All sediment material shall be stockpiled along Site 1 and/or 2 in a trapezoidal cross- sectional shape with side slopes 1.5:1 and not to exceed 18 feet above existing access road elevations, unless otherwise authorized by the Engineer.

1005-2.2 **Sediment Loading**

The Contractor shall load the sediment into trucks and provide adequate equipment to load a minimum of 3,000 cubic yards per day (between the hours of 7:30-4:00). The Contractor shall devise a plan to load sediment and create and maintain a circulation path adequate for road trucks to travel on, from the concrete ramp off of east-bound Upland Road, under the bridge, out of the creek at an earthen ramp, and onto west-bound Upland Road.

1005-3 **MEASUREMENT AND PAYMENT**

Original ground lines shown on the Plans are based on the June 2023 aerial topographic mapping. The Agency does not warrant the accuracy of such information as of the date of bid submittal. It is the Contractor's responsibility to ascertain the existence of any conditions affecting the cost of the work by reasonable examination of the site.

Upon the completion of sediment removal and restoration of the site of Schedules I and/or II, the Agency will immediately cause the preparation of a field survey of cross sections at the same locations as shown on the Plans. The field survey of the cross-sections will extend a minimum of 20 feet beyond the limits of sediment removal as shown on the Plans in order to accurately depict the creek bed conditions. Subsequently, the Agency will perform final quantity calculations based on the above surveys, using the end area method. The Agency shall provide all data for review and comment by the Contractor; however, the Agency’s quantity calculations shall be considered as final.

The Agency will review the cross-sections generated from the field survey performed by the County Surveyor and will compare them to the original design cross-sections shown on the Plans. Any material shown above the original design ground and pay lines will be subtracted from the Contract and any overexcavation shown below the original design ground and pay lines shall be absorbed at Contractor’s own expense. In other words, the quantities used in determining payment for excavation will be based upon the original design ground and pay lines indicated on the Plans and no allowance will be made in the event that the excavation quantities based on the volume capacity of the total number of hauling trucks used to remove the sediment material do not equal the actual amount shown on the

Proposal form as provided in the specifications.

Measurement and payment for the Excavation will be paid on cubic yard basis for the contract unit price bid for Bid Item Nos. 6 and 12, respectively. Such payment shall be considered full compensation for furnishing all labor, materials, tools, equipment and doing all work including grading, shaping, and restoring ground to the conditions shown on the Plans and other work required under this subsection.

ENVIRONMENTAL BEST MANAGEMENT PRACTICES (BMP'S)

ENVIRONMENTAL BEST MANAGEMENT PRACTICES and PERMIT CONDITIONS SUMMARY

This document was created as a permit compliance reference tool for District staff. The Best Management Practices (BMPs) have been altered from the originals evaluated during the CEQA and permitting processes to clarify content without changing regulatory requirements. These BMPs incorporate all permit conditions received for the Routine Operations & Maintenance Program, including the Biological Opinions from federal agencies (Table 1). Four new BMPs were developed to clarify permit conditions and incorporate other regulatory requirements related to erosion control, environmental training, and invasive aquatic species control. Also included for easy reference are: summaries of the "grandfathered" streambed alteration agreements incorporated by reference to the permits, summaries of endangered species additional conditions, and regulatory agency contact information.

Table 1. Routine Operation & Maintenance Programmatic Permits

AGENCY	PERMIT NO.	DATE ISSUED
U.S. Army Corps of Engineers	Individual Permit	2/25/2020
U.S. Fish and Wildlife Service	Biological Opinion	12/31/2019
U.S. Fish and Wildlife Service	Biological Opinion	10/19/2015
U.S. Fish and Wildlife Service	Biological Opinion	12/12/2012
National Marine Fisheries Service	Biological Opinion	4/10/2019
California Department of Fish and Wildlife	Streambed Alteration Agreement No. 1600-2004-0512-R5	8/3/2009
Los Angeles Regional Water Quality Control Board	Section 401 Water Quality Certification File No. 14-038	12/20/2019

BEST MANAGEMENT PRACTICES: PAGE 2

GRANDFATHERED STREAMBED ALTERATION AGREEMENTS: PAGE 14

ENDANGERED SPECIES ADDITIONAL CONDITIONS: PAGE 17

REGULATORY AGENCY CONTACT INFORMATION: PAGE 21

For inquiries regarding these permits or conditions, please contact:

Pam Lindsey, Watershed Ecologist 805-654-2036

ENVIRONMENTAL BEST MANAGEMENT PRACTICES

BMP 1: Avoid Channel Earthwork During the Rainy Season/Events.

- Avoid earthwork in earthen and soft bottom channels from December 1 to April 1 unless water is absent.
- If work is considered critical, work in flowing water is acceptable, provided flow is diverted according to the Water Diversion Guide and sensitive aquatic species not present.
- No earthwork shall be conducted during rain events, or if 0.25 inches or more of rain is forecast within 12 hours of scheduled work.

BMP 2: Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning.

- Prevent the discharge of silt-laden water or pollutants downstream when removing sediments, vegetation, algae, and trash from concrete channels.
- Install BMPs: silt barriers, sand bags, straw bales, as appropriate per Board Order No. 10-0108; NPDES Permit No. CAS004002, July 8, 2010.
- Follow the Water Diversion Guide if a flow diversion is installed.

BMP 3: Location of Temporary Stockpiles.

- Temporary stockpiles in the channel bottom shall be limited to one working day and not overnight.
- Temporary stockpiles may be placed in channel bottoms or debris basins if they are placed in such a manner that they would not be exposed to flowing water.
- Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.

BMP 4: Survey for Habitat (nesting) Prior to Routine Maintenance Work.

- A biological survey for nesting birds required prior to work from February 1 to September 15 if in or adjacent to suitable habitat.
- Nesting habitat defined as cattail patches, short and tall trees, and shrubby areas. Open gravel, bridges, culverts, and fence posts may also support nests.
- Work= mowing/disking, earth work, clean outs, access road work lasting more than one day, and repairs where nesting bird habitat is in work area or within 300 feet.
- If active bird nests are identified, work within 300 feet (500 feet for raptors) must be postponed until after September 15, unless the biologist determines the nest becomes inactive or a reduced buffer is approved by regulatory agencies.
- No bio survey needed for routine herbicide application in/on facilities to sparse, short (<3 foot) weedy vegetation (includes young (<1year old mule fat, willows or cattails).

BMP 5/6: Survey for Steelhead Migration/Rearing Conditions and Sensitive Aquatic Species Prior to Routine Maintenance Work.

- Applies to earthwork/repairs in surface water and within 100 feet of water:

ZONE 1:	ZONE 2:
• Matilija Creek • San Antonio Creek • Thacher Creek • Ventura River	• Hopper Creek • Piru Creek • Pole Creek (unlined portions) • Santa Clara River • Santa Paula Creek • Sespe Creek

- Approved biologist must survey for steelhead migration or rearing conditions and other sensitive aquatic species prior to earthwork in or within 100 feet of surface water.
- If flows are deemed sufficient for steelhead migration, earthwork within or adjacent to the channel shall be postponed until after June 15 and before October 31.
- If rearing habitat is present, approved biologist shall determine if steelhead are present.
- If other sensitive species are found in the work area, work will stop while District environmental staff contact CDFW/USFWS. The approved biologist may be authorized to relocate these species to nearby suitable habitat.
- **Special authorization is required for water diversion** if flow conditions are suitable for steelhead or other aquatic species, even if the Water Diversion Guide is followed.
- Steelhead presence notification to NMFS at least 10 days prior to work by District environmental staff.
- If authorized by NMFS, an approved biologist shall isolate the work area with block nets and relocate any steelhead in the work area to suitable habitat with perennial surface water. The biologist shall continuously monitor during water diversion and any work within occupied steelhead habitat.
- Steelhead relocations or other impacts by flow diversion or dewatering shall be documented and reported to the NMFS within 30 days of completion of the maintenance work.
- Concrete, grout, brick & mortar or other cement products shall not be used to construct stream diversions when steelhead and other sensitive aquatic species are likely present.
- If steelhead are found dead or injured at the work site, environmental staff shall notify NMFS immediately.
- Any steep-walled excavations that may trap California red-legged frog that will be left overnight in areas within or adjacent to the Ventura River or San Antonio Creek shall be covered.

BMP 7: Continue Existing Procedures for Sediment Removal and Vegetation Control for Specific Reaches in Calleguas Creek Watershed.

- Conduct sediment removal and in-stream vegetation control along unimproved channels along Calleguas Creek, Conejo Creek, Revolon Slough, Arroyo Las Posas and generally throughout Zone 3 in accordance with previous Streambed Alteration Agreements.

  See Attached "Grandfathered Streambed Alteration Agreement Conditions."

BMP 8: Avoid Disturbance to Native Beach or Wetland Species.

- Applies to facilities maintained in beach/coastal strand.
- Prior to beach access March 1 to September 15, approved biologist shall survey for western snowy plovers or California least terns nesting or roosting on beach. If present, maintenance work shall be postponed until after the breeding season, unless a species protection plan is be prepared, approved by USFWS/CDFW, and implemented.
- Avoid driving over beach dune vegetation when accessing storm drain outlets.
- Minimize native beach plant removal during outlet maintenance.
- Prior to beach outlet maintenance, environmental staff shall determine if suitable habitat is present at the outlet for tidewater gobies. If suitable habitat is present, approved biologist shall conduct fish surveys. If present and maintenance work affects habitat, work shall be postponed until surface water is absent, unless a species protection plan is prepared, approved by USFWS, and implemented.

BMP 9: Aquatic Pesticide Application.

- Follow the most up-to-date Best Management Practices and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan.
- Comply with the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides, including working under the direction of a Qualified Applicator, using materials approved for aquatic use, following the manufacturer's application directions, avoiding application prior to forecasted storm events and ensuring wind conditions are suitable to avoid spray drift.

BMP 10: Leave Vegetation on Upper Basin Slopes.

- Leave native vegetation on the debris and detention basin slopes above the 20 percent capacity debris line unless any of the following apply:
  - Shrubs and trees are hazards to the stability and function of the basin
  - Sediment meets or exceeds the 20 percent capacity line
  - Slope re-grading is required to correct or prevent rill erosion or other damage
  - Vegetation is on engineered fill
  - Vegetation constitutes a fire hazard to nearby properties.

BMP 11: Leave Patches of Vegetation in Channel Bottom.

- Minimize vegetation removal or thinning in earthen or earthen bottom channels; remove the least amount necessary to achieve the specific maintenance objectives for the reach.
- Remove native vegetation in a non-continuous manner, leaving small patches intact, provided they will not adversely affect conveyance capacity.

BMP 12: Leave Herbaceous Wetland Vegetation in Channel Bottom.

- Minimize removal or thinning of emergent native vegetation rooted in or adjacent to the low flow channel or aquatic habitats, unless inconsistent with maintenance objectives or capacity requirements.

BMP 13: Maximum 15-foot Vegetation-Free Zone at the Toe of the Bank.

- Do not exceed a 15-foot wide vegetation-free zone at levee and bank toes when thinning or removing vegetation for inspection purposes.

BMP 14: Avoid Road Base Discharge.

- Do not place or spill road base, fill, sediments, and asphalt beyond the previously established road bed when working adjacent to channels and basin bottoms.

BMP 15: Mitigate/Replace Temporary Impacts to Habitat.

- Restore native vegetation in temporary work areas after completion of repair or reconstruction work. Prior to work, a vegetation restoration plan must be submitted to the regulatory agencies for approval.
- No habitat restoration sites shall be placed within the routine maintenance limits of the repaired structures.
- Habitat restoration shall only be required if the impacted area supports native wetland or riparian vegetation; no restoration is required for barren areas or areas dominated by non-native plants.

BMP 16: Oak Tree Mitigation Ratio.

- Replace native oak trees removed by maintenance activities if greater than 3 inches in diameter at breast height (dbh), or 2 inches dbh if multi-trunked.
- Oak tree replacement ratios:

TRUNK SIZE (dbh)	RATIO
4 to 6 inches	3:1
6 to 12 inches	5:1
12 to 24 inches	10:1
24 to 36 inches	15:1
>36 inches	20:1

- A tree replacement plan consistent with County Policy or permit requirements, whichever is greater, shall be prepared and submitted to the regulatory agencies prior to implementation.

BMP 17: Concrete Wash-Out Protocols.

- Fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin.
- Concrete wastes (liquid, dust, solids) shall be stockpiled separately from sediment and protected by erosion control measures to prevent discharge to the channel, basin, or waters of the State.
- Conduct appropriate waste management practices based on considerations of flow velocities, site conditions, suitability of erosion control materials, and construction costs.

BMP 18: Water Diversion Guide.

- Follow water diversion methods and procedures established in the District's Water Diversion Guide.
- Baseline water quality monitoring is required PRIOR to installation of any water diversion, daily for the first 5 days the diversion is in place, and weekly thereafter. Contact District environmental staff to contract for/conduct monitoring.
- Fish mortality associated with stream flow diversion or dewatering shall be reported by environmental staff to the California Department of Fish & Wildlife within 24 hours of discovery.

BMP 19: Minimize Erosion from Stream Gauge Maintenance.

- Cut interfering vegetation with chain-saw or hand tools to near ground surface. No herbicide application to stumps. No excavation of roots.
- Implement additional erosion control methods as needed, based on considerations of flow velocities, site conditions, availability of materials, construction costs, durability and maintenance requirements.

BMP 20: Implementation of Integrated Pest Management Program.

- Implement the approved Integrated Pest Management (IPM) program.
- Apply appropriate rodent control methods at each facility as appropriate for site conditions (rodent population, type of facility, season).
- Maintain uniform inspection records for each facility and all control efforts.
- Report IPMP activities to the regulatory agencies annually in the Annual Monitoring Report.

BMP 21: Avoid Spills and Leaks.

- Keep all equipment in good working condition and free of leaks.

- No equipment maintenance or refueling in a channel or basin bottom.
- Place drip pans under all stationary equipment such as motors, pumps, generators, compressors, and welders.
- Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse.
- Train all maintenance crews in spill containment and response.
- Immediately clean up all spills. Submit report to the Office of Spill Prevention and Response.

BMP 22: Biological Surveys in Appropriate Habitat Prior to Vegetation Maintenance.

- Biologists conducting surveys for tidewater goby, California red-legged frog, least Bell's vireo and southwestern willow flycatcher shall be approved by the U.S. Fish & Wildlife Service in writing.
- Prior to sediment removal, vegetation control, or repair work in earthen or earthen bottom facilities, an approved biologist shall survey for threatened, endangered, or sensitive species if suitable habitat occurs in or near work area. If such species are within or in close proximity to the work areas, the District shall reschedule the work when the species are not present.
- If it is necessary to conduct the work while sensitive species are present or in proximity to the work areas, a species protection plan shall be developed, approved by USFWS/NMFS/CDFW, then implemented.
- An approved biologist shall periodically monitor the work area during maintenance activities for wildlife and relocate species as needed to minimize mortality.
- Exotic fish, invertebrate, amphibian and reptile species shall be captured when feasible, dispatched and properly disposed by a qualified biologist.

BMP 23: Invasive Plant Removal Protocols.

- Remove invasive plant species in a manner that prevents propagation.
- Spray or mow plants before seeds ripen, when feasible.
- All cut/removed invasive vegetation shall be taken to a dump as a destruction load.
- Do not stockpile invasive vegetation (including mulch) where materials would wash downstream or allowed to propagate.
- For giant reed (*Arundo donax*), minimize ground disturbance and use foliar glyphosate treatment on smaller infestations, as feasible. Best to apply herbicide May 1 to October 1, if breeding birds absent. No grading to remove root masses unless earthwork is part of routine maintenance work.

BMP 24: Air Quality (Dust Control). The following measures shall be incorporated into maintenance activities to minimize fugitive dust emissions during grading, excavation, and construction activities.

- Minimize the areas disturbed at any one time by clearing, grading, earth moving, or excavation operations to prevent excessive dust.
- Water grading/excavation areas prior to and during work.
- Cover all truck loads; required by California Vehicle Code §23114.
- Prevent fugitive dust (via treatment) on all graded and excavated material, exposed soil areas, stockpiles, including unpaved parking and staging areas, and other active portions of the construction site.
- District staff shall weekly monitor contractor graded and/or excavated inactive areas of the construction site for dust stabilization.
- No grading/earth work during periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties) to prevent excessive fugitive dust.
- Use rumble strips or track out devices where vehicles enter and exit unpaved roads onto paved road.
- All on site construction roads that have a daily traffic volume of more than 50 daily trips shall be stabilized as to minimize transport of earthen material from the site.
- There shall be at least one qualified District staff on site each work day to monitor the provisions of the Fugitive Dust Mitigation Plan and any other applicable fugitive dust rules, ordinances, or conditions.
- Personnel involved in grading operations shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health Regulations.
- All project construction operations shall be conducted in compliance with all applicable APCD Rules and Regulations with emphasis on Rule 50 (Opacity) and Rule 51 (Nuisance).

BMP 25: Construction Noise.

- Noise-generating construction activities shall be restricted to the daytime (i.e., 7:00 AM to 7:00 PM, Monday through Friday).
- Minimize sustained construction noise adjacent to sensitive wildlife during the nesting season, as directed by the biological monitor.
- When construction noise is anticipated to affect sensitive wildlife, environmental staff shall consult with regulatory agencies regarding additional mitigation measures.

BMP 26: Stabilize Exposed Soil.

- To limit erosion, minimize soil disturbance work in channels and basins to that which can be stabilized prior to rain events.

BMP 27: Native Tree Removal (see BMP 16 for oaks).

- Prior to vegetation removal, a qualified biologist shall prepare an inventory of all native trees in the work area exceeding 4 inches dbh.

- Native trees in temporary impact areas shall be cut to ground level to facilitate regrowth, and not removed by heavy equipment.
- Native California black walnut, cottonwood and sycamore trees exceeding 4 inches dbh shall be replaced at a 10:1 ratio, if removed.
- Replacement trees shall attain a survival rate of 75 percent the first year and 100 percent thereafter, and monitored and maintained for a 5 years after planting.

BMP 28: Environmental Training.

- Prior to any sediment removal, vegetation control, or repair work in earthen or earthen-bottomed channels and basins that contain surface water or native vegetation, a qualified biologist familiar with the work site shall provide training to the work crew regarding potential species present, habitats to avoid, measures to implement to minimize impacts, and events/situations that require work to be stopped and the biologist to be contacted.

BMP 29: Work in California Red-legged Frog Habitat.

- Any steep-walled excavations that may trap California red-legged frogs that will be left overnight in suitable habitat (Ventura River, San Antonio Creek) shall be covered.
- Approved biologists handling California red-legged frogs shall not use gloves, unless they are well-rinsed and composed of vinyl.
- Approved biologists working in California red-legged frog habitat shall follow the Declining Amphibian Task Force Fieldwork Code of Practice.

BMP 30: New Zealand Mudsnail Control Protocols

The protocols have been developed to address the sixty work code activities described in the District's 2012-2013 Annual Work Plan. The work code activities have been lumped into general types of materials/activities to allow the assignment of protocols to be followed to minimize the spread of this invasive species (see Table 2). These protocols address three general modes of potential spread of New Zealand mudsnail; hand tools & boots, mobile equipment and vehicles, and reusable instream materials.

First, determine if the reach to be maintained supports New Zealand mudsnail by reviewing maps and the infested reach list (Table 3). If so, implement Part A.

Second, determine if the equipment to be used was borrowed from the Transportation Department OR last used in another Zone. If so, implement Part B.

Table 2. New Zealand Mudsnail Protocols by Work Code

Protocol	Work Codes
1	PS41, PS42, PT20, PT21, PT22, PT23, PT24, PT25, PT26, PT27, PT28, PT29, PT31, PT32, PT33, PT34, PT35, PT36, PT37, PT38, PT41, PT42, PT43, PT44, PT45, PT47, PT48, PT49, PT51, PT53, PT55, PT56, PT57, PT60, PT61, PT62, PT64, PT65, PT66, PT68, PT70, PT72, PT74, PT76, PT77, PT80, PT83, PT85, PT86, PT88, PT89, PT90, PT91, PT92, PT93
2	PS41, PS42, PT20, PT21, PT22, PT23, PT24, PT25, PT26, PT27, PT28, PT32, PT33, PT34, PT35, PT36, PT37, PT38, PT41, PT42, PT43, PT44, PT45, PT47, PT48, PT49, PT51, PT53, PT55, PT56, PT57, PT60, PT61, PT62, PT64, PT65, PT66, PT68, PT70, PT72, PT74, PT76, PT77, PT80, PT83, PT85, PT86, PT88, PT89, PT90, PT91, PT92, PT93
3	PS41, PS42, PT 22, PT 29, PT31, PT32, PT33, PT40, PT41, PT42, PT43, PT45, PT45, PT48, PT49, PT51, PT53, PT54, PT57, PT60, PT61, PT62, PT64, PT 66, PT68, PT80, PT83, PT85, PT86, PT88, PT89, PT90, PT91, PT92, PT93
4	PT20, PT21, PT23, PT24, PT25, PT26, PT27, PT28, PT34, PT35, PT36, PT37, PT38, PT44, PT51, PT53, PT68, PT70, PT72, PT74, PT76, PT77, PT80, PT85

Part A (infested reaches):

- Wash hand tools, boots and power tools that contact surface water using Protocol 1.
- Wash mobile equipment used in surface water that may have incidental soil attached (e.g., dozers, excavators, discing equipment, wheeled loaders and motor graders) using Protocol 2A (on-site power wash, on-site or off-site hot pressure wash).
- Wash equipment that infrequently crosses the wetted channel and does not have incidental soil attached (e.g., herbicide trailers, chipper, water pumps [hand carried and trailer-mounted], mowers and motor vehicles) using Protocol 3 (on-site or off-site hot or cold pressure wash).
- Wash hard surfaced instream materials that may be transported between work sites (e.g., K-rail, diversion pipe, water hoses and concrete forms) using Protocol 4 (on-site or off-site hot pressure wash).
- Discard sand bags (and other fibrous materials that could harbor mudsnails) which have been immersed in surface waters in a landfill. Do not re-use at other sites.

Table 3. New Zealand Mudsnail Infested Reaches

ZONE	REACH NO.	NAME
2	42011	Pacific Ocean to Harbor Blvd.
2	42012	Harbor Blvd. to Victoria Avenue
2	42151	Camarillo Hills Drain to Hwy 101
2	42152	Hwy 101 to Central Avenue
3	42154	Central Avenue to Wright Road
3	45241	Wright Road to U/S to Drop Structure #2
3	45243	Drop Structure #2
3	45245	Beardsley Wash Drop Structure #2 U/S to Triple Arch
3	45246	Connelly Triple Arch
3	45247	Connelly Triple Arch U/S to Milligan Barranca
3	46101	Arroyo Santa Rosa to Arroyo Conejo N.Fork
3	46102	Arroyo Conejo N. Fork to Arroyo Conejpo South Branch
3	46103	Arroyo Conejo S. Branch to Hillcrest Drive
3	46104	Hillcrest Drive to Moorpark Road
3	46111	Arroyo Conejo to Ventu Park Road
3	46112	Ventu Park Road to Borchard Road
3	46161	Arroyo Conejo to Lynn Road
4	48061	L.A.County Line to Kanan Road
4	48071	L.A. County Line to Conifer Street
4	48072	Conifer Street to Oak Hills Drive
4	48073	Oak Hills Drive through Kanan Road
4	48076	Medea Creek @ Mile 1.2, U/S
4	48101	L.A. County Line U/S North
4	48107	Las Virgines Creek @ Mile 2.6, U/S

U/S: upstream

Part B (borrowed equipment or used in other Zone):

- Wash mobile equipment used in surface water that may have incidental soil attached (e.g., dozers, excavators, discing equipment, wheeled loaders and motor graders) using Protocol 2B (on-site or off-site hot pressure wash).
- Wash equipment that infrequently crosses the wetted channel and does not have incidental soil attached (e.g., herbicide trailers, chipper, water pumps [hand carried and trailer-mounted], mowers and motor vehicles) using Protocol 3 (on-site or off-site hot or cold pressure wash).

Protocol 1 - Hand Tools, Boots and Wetted Power Tools

This control protocol involves cleaning any hand tools, boots and wetted portions of power tools (weed whipper, drill, concrete vibrator, etc.) that come in contact with potentially infected surface water prior to leaving the work site each day OR leaving these materials at the site until the work is complete. Hand tools, boots and wetted portions of power tools must be cleaned before leaving the site using the following procedure:

1. Remove any accumulated mud/soil from the article to be cleaned;
2. Fill a portable plastic tub (child's swimming pool, or equivalent) to a depth allowing complete submersion of the boots or tools with a 4 percent solution (5 fluid ounces per gallon) of a commercial disinfectant (GS High Dilution Disinfectant 256, Spartan Chemical Company);
3. Scrub all surfaces with a brush;
4. Let soak in the disinfectant for approximately 10 minutes;
5. Rinse with **potable** water; and
6. Dispose of the used disinfectant solution in a sewer or upland area where it cannot enter surface waters.

Protocol 2A – Instream Mobile Equipment (Infested Reaches)

This Protocol applies to equipment that is used in the wetted channel and likely to have incidental soil attached, such as dozers, excavators, discing equipment, wheeled loaders and motor graders.

1. All attached soil must be removed at the project site using a pressurized water hose provided by a water truck (or equivalent pressurized water source);
2. Wash water must be contained and not allowed to run-off into a storm drain or drainage feature;
3. The equipment must be washed on-site using a portable hot pressure washer OR taken to the nearest O & M washing facility (Saticoy or Moorpark) for a hot pressure wash.
4. Care must be taken to pressure wash all surfaces with hot water that typically come in contact with surface water and/or wet sediments, such as wheels, tires, discs, dozer tracks, excavator and loader buckets, dozer and grader blades, undercarriage, hydraulic cylinders and hoses, and fenders.

Protocol 2B – Instream Mobile Equipment (All Other Reaches)

This Protocol applies to equipment that is used in the wetted channel and likely to have incidental soil attached, such as dozers, excavators, discing equipment, wheeled loaders and motor graders.

1. The equipment must be washed on-site using a portable hot pressure washer OR taken to the nearest O & M washing facility (Saticoy or Moorpark) for a hot pressure wash.
2. Care must be taken to pressure wash all surfaces with hot water that typically come in contact with surface water and/or wet sediments, such as wheels, tires, discs, dozer tracks, excavator and loader buckets, dozer and grader blades, undercarriage, hydraulic cylinders and hoses, and fenders.

Protocol 3 – Other Mobile Equipment and Vehicles

This Protocol applies to equipment that infrequently crosses the wetted channel and does not have incidental soil attached, such as herbicide trailers, chipper, water pumps (hand carried and trailer-mounted), mowers and motor vehicles.

1. The wheels, tires and undercarriage of this equipment must be pressure washed, either on-site or the nearest O & M washing facility (Saticoy or Moorpark).
2. If washed on-site, wash water must be contained and not allowed to run-off into a storm drain or drainage feature.

Protocol 4 - Reusable Instream Materials

Materials that may be transported between work sites may include sand bags, K-rail, diversion pipe, water hoses and concrete forms (wood). Sand bags immersed in surface waters cannot be fully cleaned, and must be emptied of sand (on-site or the District's maintenance yard) and the bag deposited in a proper trash receptacle.

1. Wash hard surfaced materials on-site using a portable hot pressure washer OR take to the nearest O & M washing facility (Saticoy or Moorpark) for a hot pressure wash.
2. Care must be taken to remove all attached soil or sediment and fully contact all surfaces.

GRANDFATHERED STREAMBED ALTERATION AGREEMENT CONDITIONS

SAA 5-270-92: REVOLON SLOUGH

- Control vegetation (banks and bottom) annually after July 1 for 100 feet upstream, under, and 100 feet downstream of all bridges.
- Control vegetation (banks and bottom) annually after July 1 for 50 feet upstream and 50 feet downstream of all grade control structures.
- Sediment may be removed when deposition exceeds two feet above design grade.
- Vegetation control may be by hand, herbicide, or mechanical methods.

Hwy 1 to Las Posas Road Bridge 45101:

- Herbicide inside banks, maintain access road as needed during year.
- No bottom vegetation maintenance.

Las Posas Road Bridge to Hueneme Road Bridge 45103:

- Herbicide inside banks, maintain access road as needed during year.
- July 1 to February 1: on west side bottom allow 50 foot long by 15 foot wide pockets of riparian vegetation separated by 100 foot long vegetation management (non-native species removal) zones. Remove willows greater than 3 inches dbh in pockets.
- July 1 to February 1: Outside riparian pockets, allow 20 percent of bottom with vegetation for two out of three years.
- July 1 to February 1: Outside riparian pockets, all vegetation may be removed every third year.

Hueneme Road Bridge to Wood Road Bridge 45105:

- Herbicide inside banks, maintain access road as needed during year.
- July 1 to February 1: one west side bottom allow solid strip of riparian vegetation 15 feet wide. Remove willows greater than 3 inches dbh annually.
- July 1 to February 1: Outside riparian pockets, allow 20 percent of bottom to retain vegetation. Remove willows greater than 3 inches dbh annually.
- July 1 to February 1: Outside riparian pockets, all vegetation may be removed every other year from Hueneme Road to Etting Road. Remove willows greater than 3 inches dbh annually.

SAA 5-388-90: PORTIONS OF CALLEGUAS CREEK WATERSHED

- Control vegetation (banks and bottom) annually July 1 to February 1 for 100 feet upstream, under, and 100 feet downstream of all bridges/culverts (except as noted below).
- Control vegetation (banks and bottom) annually July 1 to February 1 for 25 feet upstream and 25 feet downstream of all grade control structures (except as noted below).
- Vegetation control may be by hand, mechanical, or herbicide methods.

Arroyo Simi from Beltramo Road to No. 2 Canyon 47013:

- Herbicide inside banks, maintain access road as needed during year.
- July 1 to February 1: allow 10 foot wide strip of riparian vegetation at toe of each bank. Alternate removal of strips each year.
- July 1 to February 1: maintain up to 16 foot wide vegetation free pilot channel in center of creek bottom.

Arroyo Simi Sycamore Canyon to Erringer Road 47021:

- Herbicide inside banks, maintain access road as needed during year.
- Control vegetation (banks and bottom) as needed 100 feet upstream and 50 feet downstream of all bridges and grade control structures.
- Minimize maintenance activities March 1 to July 1.
- All willow and woody plant species may be controlled.
- Allow up to 25 percent cover of cattails/tules in channel bottom.

Arroyo Simi Erringer Road to Royal Avenue 47021:

- Herbicide inside banks, maintain access road as needed during year.
- July 1 to February 1: control all vegetation (banks and bottom) as needed.
- Vegetation control may be by hand, mechanical, or herbicide methods.

SAA 5-540-91: CALLEGUAS CREEK

- Control vegetation (banks and bottom) annually after July 1 for 100 feet upstream, under, and 100 feet downstream of all bridges/culverts.
- Vegetation control may be by hand, mechanical, or herbicide methods, unless specifically noted below.

Calleguas Creek Highway 1 to Hueneme Road 45021/45023:

- Herbicide inside banks and 25 feet from toe in bottom, maintain access road as needed during year. No other herbicide use in bottom.
- July 1 to February 1: each year allow a 10 foot wide (minimum) strip of riparian vegetation along one side of low flow channel. Alternate mechanical removal of strips each year.

Calleguas Creek Hueneme Road to 850 ft Upstream of University Road 45025/45027:

- Herbicide inside banks and 25 feet from toe in bottom, maintain access road as needed during year. No other herbicide use in bottom.
- July 1 to February 1: each year allow a 10 foot wide (minimum) strip of riparian vegetation along one side of low flow channel. Alternate mechanical removal of strips each year.

Calleguas Creek Pleasant Valley Road to Seminary Road 45033/45035/45037:

- Herbicide armored banks and 15 feet from toe in bottom, maintain access road as needed

during year.

- No removal of native vegetation on natural (unarmored) banks of channel.
- Control vegetation (banks and bottom) annually July 1 to February 1 for 100 feet upstream, under, and 100 feet downstream of all bridges/culverts and stabilizers.
- Allow 20 percent cover of riparian vegetation in channel bottom each year, if feasible.

SAA 5-541-91: ARROYO LAS POSAS CREEK

Covers reaches: 1) Below Hitch Road 45065

2) From S. Grimes Canyon Road to the Moorpark WWTP 45063

3) Stabilizer upstream of Somis 45053

4) Junction of Seminary Road and Arroyo Las Posas 45051

- Vegetation control may be by hand, mechanical, or herbicide methods.
- Control vegetation (banks and bottom) annually July 1 to February 1 for 100 feet upstream, under, and 100 feet downstream of all bridges/culverts and stabilizers.
- Herbicide armored banks and 15 feet from toe in bottom (except established willows), maintain access road as needed during year.

SAA 5-542-91: CONEJO CREEK (LINKED TO SAA 5-115-89)

- Herbicide routinely cleared portions of banks, maintain access road as needed during year.
- Control vegetation (banks and bottom) annually July 1 to February 1 for 100 feet upstream, under, and 100 feet downstream of all bridges.
- Vegetation control may be by hand, herbicide, or mechanical methods, except as noted below.

Conejo Creek -Calleguas Creek Confluence to Highway 101 46011/46012/46013/46014:

- Permanently allow a strip of riparian vegetation along one side of low flow channel.

Conejo Creek Highway 101 to Upland Drain 46015/46016:

- Herbicide inside banks and 25 feet from toe in bottom, maintain access road as needed during year. No other herbicide use in bottom.
- July 1 to February 1: mechanical or hand removal of vegetation in other portions of bottom; allow two 20 foot wide vegetated strips or allow 20 percent of bottom vegetated. If practical, allow vegetated strips along low flow channel.
- July 1 to February 1: remove allowed vegetation the following year; allow new equivalent vegetated areas.

ENDANGERED SPECIES ADDITIONAL CONDITIONS

Facilities and reaches with the potential for endangered species are mapped in the District's GIS system.

GAMBEL'S WATERCRESS AND MARSH SANDWORT: Conduct full (spring/summer 2014) surveys in 6.98 acres of facilities with suitable habitat. Opportunistically survey for these species during any field visits to facilities with suitable habitat.

SOUTHERN STEELHEAD: See BMP 5/6 above. For Calleguas Creek watershed, steelhead are generally not present, but an occasional stray may occur and we must stop work and notify NMFS and CDFW immediately.

CALIFORNIA GNATCATCHER: See survey triggers and protocols in table below. If species present, stop work and notify USACE and USFWS to determine course of action.

WORK TYPE	SURVEYS NEEDED
A. Heavy equipment more than 1 day adjacent to identified habitat per maps.	A. 3 bird surveys within 7 days prior to work.
B. Heavy equipment work more than 3 days adjacent to identified habitat per maps.	B. Morning bird survey prior to every third day of work.

WESTERN SNOWY PLOVER: Beach grooming at BEMP (near J St. Drain) during March 1 to September 15 requires nesting surveys and coordination with USFWS. Use lifeguard paths for access to minimize impacts to habitat. See also BMP 8.

CALIFORNIA LEAST TERN: Beach grooming at BEMP (near J St. Drain) during March 1 to August 15 requires nesting surveys and coordination with USFWS. Use lifeguard paths for access to minimize impacts to habitat. See also BMP 8.

CALIFORNIA RED-LEGGED FROG: USFWS Biological Opinion identified the following impact minimization measures. “Work” includes herbicide, earthwork, and other maintenance, except access road and fence maintenance. See also BMPs 6 and 29. Applies only in Zone 1.

MEASURE #	ACTION: Zone 1 only
CRLF-1	Approved biologist conducts daily pre-work surveys. Relocate all life stages potentially affected by work.
CRLF-2	Relocation site will be shortest distance to suitable habitat not affected by work.
CRLF-3	Biologist will maintain detailed descriptions of relocated individuals to determine if same individuals are recaptured.
CRLF-4	Biologist will train all O&M personnel and contractors regarding species and work type/boundaries.
CRLF-5	Biologist required to remain on site until all frogs have been relocated, worker education is complete, and vegetation removal has been completed.
CRLF-6	Biologist to permanently remove non-native aquatic species, when feasible.

Take Limits: Must report acreage of habitat affected by maintenance and mitigation each year in the Ventura River Watershed.

TAKE TYPE	ACRES/INDIVIDUALS ANNUALLY
Suitable habitat affected by maintenance and repair activities	2.5 acres per year
Expected take (relocation, harassment, etc) by maintenance and repair	25 individuals (eggs, tadpoles or frogs)
Suitable habitat affected by mitigation or restoration activities	10 acres per year
Expected take by mitigation	50 individuals per year (eggs, tadpoles, frogs)
Critical habitat affected by maintenance and repair activities	2.3 acres per year
Critical habitat affected by mitigation activities	10 acres per year

TIDEWATER GOBY: USFWS Biological Opinion identified the following impact minimization measures. “Work” includes earthwork, and other maintenance, except access road and fence maintenance. See also BMPs 8 and 22.

MEASURE #	ACTION
TWG-1	J St Drain downstream of Hueneme Road 42321 & Oxnard Industrial Drain just upstream and downstream of Hueneme Road 42302: channel cleanouts only when water naturally absent (no pumping or diversion of surface water)
TWG-2& 4	Sediment removal or dewatering in other facilities: biologist to use block nets and relocate gobies from work area to suitable nearby habitat per B.O.
TWG-3	Any pump intakes in occupied goby habitat must be screened.
TWG-5	Biologist required to remain on site to observe fish and potential turbidity levels during all dewatering activities; relocate fish as needed.
TWG-6	Block nets may be left overnight if inspected for efficacy..
TWG-7	Do not release gobies into areas scheduled for work on subsequent days.

Take Limits: Must report acreage of habitat affected by maintenance and mitigation each year in all watersheds.

TAKE TYPE	VENTURA	SANTA CLARA	ORMOND LAGOON	CALLEG CREEK	TOTAL
Suitable habitat affected by maintenance and repair	3 ac /year	0.1 ac./yr	0.1 ac/yr	2 ac/yr	5.2 ac/yr
Expected take (relocation, harassment, etc) by maintenance and repair	All individuals within affected area				Indeterminate
Suitable habitat affected by mitigation or restoration	0	0	0	0	0
Expected take by mitigation	0	0	0	0	0
Critical habitat affected by maintenance and repair	0.2 ac/yr	0	0	N/A	0.2 ac/yr
Critical habitat affected by mitigation or restoration	0	0	0	N/A	0

LEAST BELL'S VIREO/SW WILLOW FLYCATCHER: USFWS Biological Opinion identified the following impact minimization measures. "Work" includes earthwork, and other maintenance, except access road and fence maintenance. See also BMPs 4, 7, and 22.

MEASURE #	ACTION
LBV-1	If feasible, conduct work between Sept 16 to Feb 28 in facilities with LBV suitable habitat within 500 feet of work area.
LBV -2	March 1 to September 15: approved biologist conduct surveys for LBV/SWFL prior to work with habitat within 500 feet. (see list of facilities)
LBV -3	If LBV/SWFL nest detected, minimum 500 foot buffer between work and nest unless otherwise agreed to by USFWS. Biologist must monitor nest during work.
LBV -4	Mitigation/restoration projects in suitable LBV/SWFL habitat: avoid removal of willow and cottonwood trees >8 inch dbh..

Take Limits: Must report acreage of habitat affected by maintenance and mitigation each year in all watersheds.

TAKE TYPE LBV	VENTURA	SANTA CLARA	CALLEGUAS CREEK	TOTAL
Suitable habitat affected by maintenance and repair	3.5 ac/yr	4.6 ac/yr	17.4 ac/yr	25.5 ac/yr
Expected take by maintenance and repair	3 pairs	4 pairs	10 pairs	17 pairs
Suitable habitat affected by mitigation or restoration	10 ac/yr	15 ac/yr	10 ac/yr	35 ac/yr
Expected take by mitigation	6 pairs	9 pairs	6 pairs	21 pairs

(see SWFL limits next page)

TAKE TYPE SWFL	VENTURA	SANTA CLARA	CALLEGUAS CREEK	TOTAL
Suitable habitat affected by maintenance and repair	3.2 ac/yr	4.5 ac/yr	8.4 ac/yr	16.1 ac/yr
Expected take by maintenance and repair	1 pair	1 pair	1 pair	3 pairs
Suitable habitat affected by mitigation or restoration	10 ac/yr	15 ac/yr	10 ac/yr	35 ac/yr
Expected take by mitigation	1 pair	1 pair	1 pair	3 pairs
Critical habitat affected by maintenance and repair	3 ac/yr	3 ac/yr	N/A	6 ac/yr
Critical habitat affected by mitigation or restoration	10 ac/yr	15 ac/yr	N/A	25 ac/yr

REGULATORY AGENCY CONTACT LIST

Contact Pam Lindsey BEFORE contacting regulatory personnel.

AGENCY	NAME	PHONE	EMAIL
USACE	Antal Szijj	805-585-2147	Antal.J.Szijj@usace.army.mil
USFWS	Chris Dellith	805-667-3308	Chris_Dellith@fws.gov
NMFS	Brittany Struck Anthony Spina	562-432-3905 562-980-4045	Brittany.Struck@noaa.gov Anthony.Spina@noaa.gov
CDFW	Steve Gibson Emily Galli	562-342-2106 No phone	Steve.Gibson@wildlife.ca.gov Emily.Galli@wildlife.ca.gov
LARWQCB	Valerie Carrillo Zara	213-576-6759	Valerie.CarrilloZara@waterboards.ca.gov

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WATER DIVERSION GUIDE VCPWA-WP

WATER DIVERSION GUIDE

FOR THE

VENTURA COUNTY
MAINTENANCE PROGRAM EIR

VENTURA, CALIFORNIA

Prepared for:

Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, California 93009-1600

Prepared by:

URS
130 Robin Hill Road, l Suite 100
Santa Barbara, California 93117
(805) 964-6010 ✦ Fax: (805) 964-0259

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1.0 INTRODUCTION

1.1 BACKGROUND

The Ventura County Watershed Protection District's (District) ongoing maintenance program focuses on the proper operation and function of the District's flood control facilities. Routine maintenance and repair activities preserve the engineered flow conveyance and retention capacities of the District's flood control facilities and prevent/remove the accumulation of obstructing vegetation and sediments that could increase existing flood or erosion hazards.

This Water Diversion Guide was developed in conjunction with the 2008 Maintenance Program Environmental Impact Report (Program EIR) to address potential impacts to water quality and aquatic habitat during routine maintenance and repair activities. This guidance provides detailed Best Management Practices (BMPs) for the District and its contractors to use during water diversion activities to reduce environmental impacts to hydrology, water quality, and aquatic habitat.

1.2 PURPOSE

During routine maintenance and repair operations, flowing or ponded water may be present at a flood control facility. Water flowing through work areas can potentially impact downstream water quality through the discharge of sediment, debris, construction materials and other pollutants. Construction activity may also impact water quality or native aquatic life by altering flow channels and hydrology, mechanically damaging aquatic habitat or contributing to siltation and turbidity.

Temporary water diversion is required during a routine maintenance or repair activity when work in flowing or ponded water has the potential to negatively impact water quality or native aquatic life. A water diversion facility must be constructed, operated, maintained, and removed to minimize impacts. BMPs implemented as part of the water diversion reduces water quality impacts by minimizing the discharge of sediments and other pollutants from the work area. BMPs for the protection, removal, and relocation of native aquatic life during water diversion reduce impacts to aquatic life. Water quality monitoring is usually required during the operation and removal of a water diversion. The results of water quality monitoring can be used to assess the performance of BMPs and address any potential impacts to water quality from the water diversion.

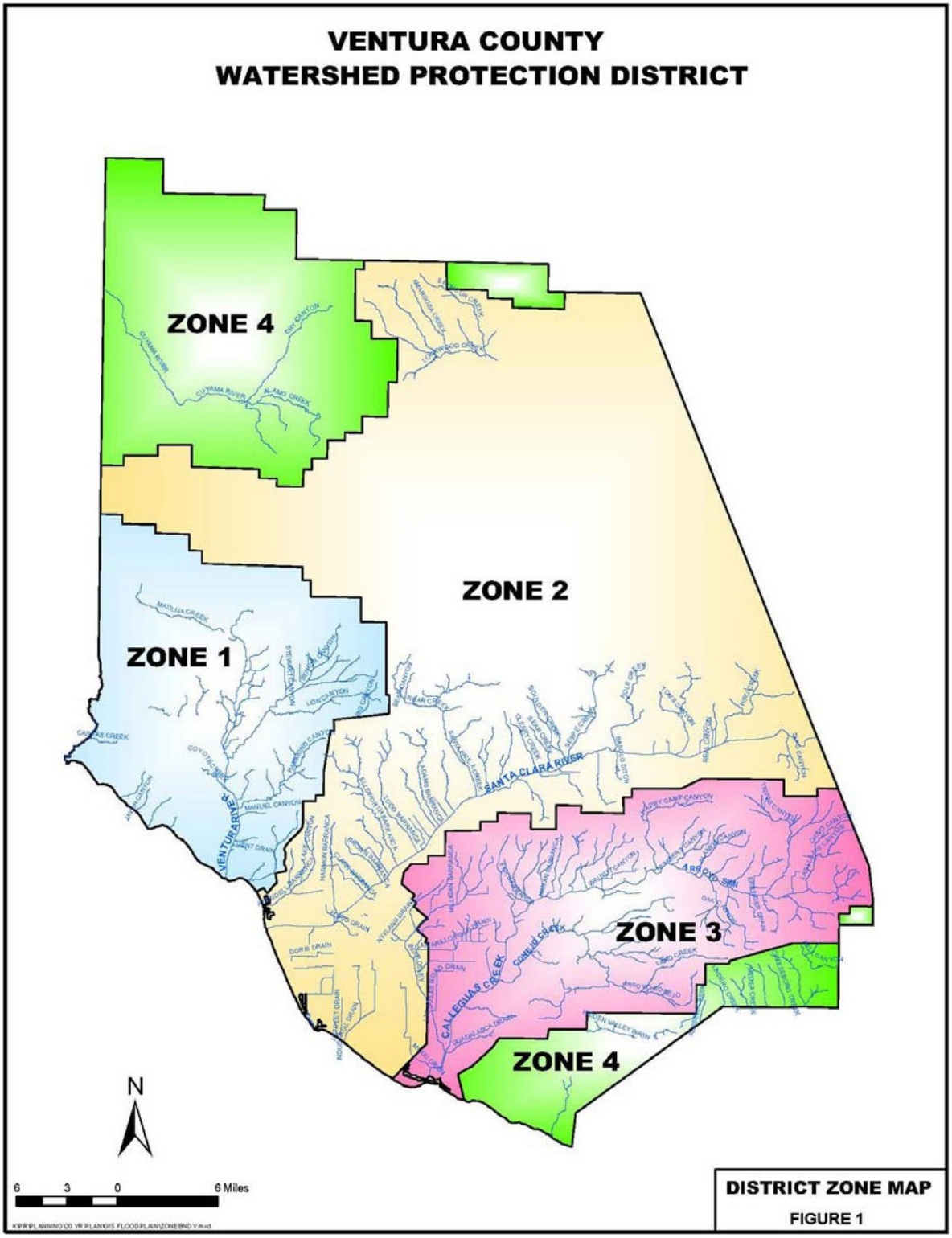
1.3 DISTRICT ZONES

The District operates and maintains projects that have been either constructed by the District or constructed by others and transferred to the District. The District has divided Ventura County into four management zones (Table 1-1 and Figure 1).

TABLE 1-1
SUMMARY OF DISTRICT ZONES

Zone No.	Watershed	Major Drainages	Cities and Communities
1	Ventura River Watershed	Ventura River, San Antonio Creek, tributaries in the Ojai Valley	Ojai, Ventura, Oak View, Casitas Springs, Live Oak Acres, Meiners Oaks
2	Santa Clara River Watershed and Oxnard Plain	Santa Clara River and its tributaries, various Oxnard Plain drains	Piru, Fillmore, Santa Paula, Ventura, El Rio, Saticoy, Oxnard, Port Hueneme, Nyeland Acres
3	Calleguas Creek Watershed	Arroyo Conejo, Arroyo Simi, Arroyo Santa Rosa Creek, Conejo Creek, Arroyo Las Posas Calleguas Creek, Revolon Slough	Simi Valley, Moorpark, Camarillo, Thousand Oaks, Newbury Park, Somis
4	Potrero Creek Watershed, Upper Cuyama River Watershed	Potrero Creek, Medea Creek	Agoura Hills, Westlake Village

FIGURE 1
DISTRICT MANAGEMENT ZONES



2.0 FACILITY TYPES AND DESCRIPTIONS

A variety of basin and linear facilities are maintained by the District. A comprehensive list of the District's facilities and their location, dimensions, capacities, and other pertinent information is included in the District's Catalog of Facilities (2008 Environmental Protection Measures for the ongoing Routine Operations and Maintenance Program EIR, Appendix C, periodically updated) and the Debris and Detention Basin Manual (EIR Appendix D, updated December 2017). The main types of linear facilities are Open Channel; Open Channel Inlets, Outlets, and Transitions; Bank Protection and Related Facilities; and Pipe and Box Culverts (Underground Facilities). There are about 216 miles of maintained linear facilities with open channels accounting for one-half of the total. There are 56 debris and detention basins that are maintained by the District.

2.1 OPEN CHANNELS

2.1.1 Channel Types

More than 50 percent of the District's linear facilities are some type of open channel. The most abundant type is the reinforced rectangular or trapezoidal concrete channel. This is a fully lined concrete structure with either a trapezoidal or rectangular (vertical wall) channel geometry. Some of the open channels are graded, earthen channels or unlined channels, while others are grouted (i.e., concreted) riprap channels with earthen bottoms. Channel geometries for earthen channels are usually trapezoidal.

Open channels in the District can be categorized as "improved" or unimproved" channels. Improved channels have been designed for a specific storm flow conveyance capacity, with engineering drawings that specify a certain width and depth. Most "improved" channels are fully or partially lined with concrete. "Improved" earthen channels have design dimensions that must be maintained. "Unimproved" channels are full earthen channels or channels with bank protection (i.e., riprap, gunite) and a soft bottom that do not have engineered design specifications but are maintained to specific configurations as part of the District's ongoing maintenance program.

2.1.2 Maintenance Activities in Channels

Several types of routine maintenance and repair operations are conducted by the District on an annual basis. Any of these activities can occur at a facility with flowing or ponded water that would require a water diversion and appropriate BMPs.

2.1.2.1 Channel Cleanout

The District is the Principal co-permittee of the Ventura Countywide NPDES Permit and responsible for implementation of the Ventura Countywide Stormwater Quality Management Program (VCSQMP) [1]. The VCSQMP requires co-permittees to routinely clean catch basins, drainage facilities, detention/retention basins, and reinforced concrete open channels at least once each year prior to the wet season. At most sites, sediments are removed from the channel bottom using an excavator or a crane working from the top of the banks.

[1] The Ventura Countywide Stormwater Quality Management Program (VCSQMP) complies with the requirements of the Ventura Countywide National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit (Order R4-2010-0108; NPDES Permit No. CAS004002) issued by the Los Angeles Regional Water Quality Control Board (RWQCB).

2.1.2.2 Channel Bed and Bank Repair

Repair activities include the re-shaping and compaction of earthen channels to repair erosion damage, replacement of damaged concrete in lined channels and other in-kind replacement bank protection. Minor additions of rock riprap and/or concrete may occur in locations with repetitive scour or erosion damage. These types of repairs do not substantially alter the facility footprint or change the type of construction.

2.2 DEBRIS AND DETENTION BASINS

The District operates and maintains 56 debris and detention basins. The number, location, and capacity of the District's detention basins are provided in the VCWPD Debris and Detention Basin Manual. They are typically located in headwaters above developed areas. The basins are usually formed by the construction of an earthen dam that may or may not have rock facing. If basin volumes or dam designs exceed certain state criteria, they are regulated by the California State Division of Safety of Dams (DSOD). State-size facilities store more than 50 acre-feet of water or have dams that are more than 25 feet high.

2.2.1 Debris Basins

Most of the District basins are "debris basins" which capture large debris (sediment, boulders, trees, etc.) during winter storms. These types of basins function by allowing flood waters to pond in the basin, thereby slowing water velocity so that debris and sediment settle out in the basin.

2.2.2 Detention Basins

The District maintains several "detention basins," which detain large volumes of water during the early phases or peak of a storm event, then slowly release the water over time. These basins reduce the peak downstream flows, which reduces flooding.

2.2.3 Maintenance Operations

Basins require a certain storage volume to perform in accordance with the design criteria. As sediments accumulate, the design storage volume is decreased, and the basin will not function as designed. Hence, sediments must be removed to maintain the design volume. Basins are cleaned on an as-needed rather than annual basis. A debris basin "cleanout" occurs in advance of each upcoming rainy season and/or immediately following the rainy season if any sediment and debris have accumulated to fill approximately 25% of the design capacity. If the watershed upstream of the basin is burned in the preceding five years, the basins will be cleaned in advance of the rainy season and may be cleaned several times per year until the vegetation in the watershed recovers.

3.0 ASSESSING FIELD CONDITIONS

Prior to a maintenance or repair activity in a channel or basin with ponded or flowing water, the District or its contractor will determine the need for a water diversion, the appropriate type of water diversion and appropriate BMPs for the activity. This requires the District or its contractor to perform a pre-construction assessment of field conditions, including the type of facility, flow conditions and the potential for aquatic habitat.

3.1 ASSESSMENT OF FLOW CONDITIONS

3.1.1 Open Channels

Some open channels within the District have year-round or perennial flow. Most substantial flows occur in the channels during and immediately following rain events. However, water can be present year-round due to "nuisance" discharges from storm drains, high ground water seeping from "weepholes" in concrete lined channels and agricultural return flows. Some channels have perennial flows due to permitted discharges from water or wastewater treatment plants.

Although the rainy season runs approximately from October to April, intermittent flows can be present any time of the year due to urban or agricultural discharges or monsoonal storms. Provisions for water diversions should always be incorporated into project planning. For coastal facilities, the influence of tidal flows will need to be taken into consideration.

Water diversion and incorporation of appropriate BMPs during a routine maintenance or repair operation in an open channel is indicated under the following flow conditions:

- The maintenance or repair activity is to be conducted in the rainy season between October and April.
- The channel is normally dry, but intermittent urban or agricultural discharge may occur.
- The channel conveys tidal flows or is tidally influenced,
- The channel conveys perennial flows from either man-made or natural upstream sources.
- Flow or ponded water is present in an earthen bottom channel.
- Flows or ponded water within a concrete-lined channel are 2 inches or deeper. Routine cleaning of dry or nearly dry concrete lined channels with less than 2 inches of water is conducted with downstream BMPs (e.g. wattles) to prevent turbidity.

3.1.2 Debris and Detention Basins

A water diversion is needed in a debris or detention basin when water is either flowing into the basin or ponded within it and the maintenance activity will potentially impact downstream water quality or aquatic habitat. Water may be ponded within a basin due to groundwater seepage or retained storm flows. A water diversion with appropriate BMPs is indicated for routine maintenance under the following flow conditions:

- Water is flowing or may flow into the basin from an upstream source.
- Water is ponded within the basin.

3.2 ASSESSMENT OF POTENTIAL AQUATIC HABITAT

Most District flood control facilities in the District are managed to minimize riparian, wetland, and aquatic habitat. However, measures must be taken during water diversions to protect aquatic habitat and species if they are present. Facilities that convey flows for sensitive species are identified in the Catalog of Facilities (Table 3-1).

A biological survey must be conducted by a qualified biologist for facilities with potential habitat for native aquatic species prior to initiation of the water diversion and any maintenance or repair activity. Prior to initiating work the District must determine if the following conditions that may require a biological survey are present at the facility:

- The facility may support special status species (Table 3-1).
- The facility supports wetland or riparian vegetation, or aquatic wildlife, or these resources occur downstream.
- The facility is an earthen bottom channel or debris basin with ponded or flowing water.
- The facility conveys perennial or intermittent flows from a man-made or natural upstream source.
- The facility conveys tidal flows or flows that are tidally influenced.
- The facility is a concrete-lined channel conveying flows deeper than two inches.

Prior to initiating work, if the District or its contractor observes the above conditions at a facility with flowing or ponded water, the District will assign a qualified biologist to conduct the biological survey.

TABLE 3-1
WATERSHED SUMMARY OF POTENTIAL SPECIAL STATUS SPECIES

Watershed	Zone	Aquatic Sensitive Species with Potential to Occur
Ventura River	1	California Red-Legged Frog, Southwestern Pond Turtle, Southern Steelhead, Tidewater Goby
Santa Clara River	2	Arroyo Toad, Southwestern Pond Turtle, Southern Steelhead, Tidewater Goby
Calleguas Creek	3	Arroyo Chub, Southwestern Pond Turtle
Malibu Creek	4	Southwestern Pond Turtle

If the pre-construction biological survey indicates that the facility or reach downstream of the facility has the potential for native aquatic habitat, BMPs for the protection of aquatic life must be implemented as part of the water diversion. BMPs for the protection and relocation of aquatic life are included in Section 5.6 of this document and additional recommendations or requirements may be provided by the qualified biologist as part of the survey.

If the biological survey indicates the potential presence of a threatened, endangered, or sensitive aquatic species, District requirements for the protection of listed species must be implemented as

required under the District's biological opinion and take permit for that species or other appropriate documentation.

3.3 GROUNDWATER DEWATERING

A high-water table is usually associated with a basin but may also occur within channels. Maintenance and repair activities requiring excavation below the water table require groundwater dewatering to maintain a dry work area. The RWQCB prohibits activities involving wet excavations (i.e., excavations below the seasonal high-water table) unless authorized by an NPDES or Waste Discharge Requirement.

To comply with the requirements established by the Los Angeles RWQCB for groundwater dewatering, the following applies to maintenance or repair activities requiring excavation.

- In non-coastal areas, groundwater tables fluctuate seasonally, and high groundwater may be avoided by scheduling maintenance and repair activities in the dry season.
- A minimum 5-foot buffer zone must be maintained above the existing activities, unless authorized by RWQCB.
- If groundwater dewatering is proposed or anticipated, the District will file a Report of Waste Discharge to the RWQCB and obtain any necessary NPDES permits/ Waste Discharge Requirements prior to discharging groundwater to a waterway.
- If groundwater is encountered without the benefit of appropriate permits, the District or District contractor will cease all activities in the areas where groundwater is present until the RWQCB is notified and the necessary NPDES permits/Waste Discharge Requirements are obtained.

4.0 WATER DIVERSION METHODS

4.1 WATER DIVERSION COMPONENTS

The purpose of water diversion is to prevent flowing or tidal waters from entering a work area. In general, the work area may be isolated by the impounding of flows behind a coffer dam or within an in-stream excavated basin. Flows from the coffer dam or excavated basin are routed around or through the work area by a bypass system. The bypass system may consist of a pipeline, excavated channel, lined flume, or a bermed portion of the existing channel. Because of the potential of the water diversion to impact water quality and potential aquatic life, appropriate BMPs must be incorporated into the design and operation of the water diversion. Water diversion design and planning must typically consider the following:

- Design and construction of cofferdam or excavated basin
- Design of bypass system
- Management of sediment
- Bypass outlet
- Water quality monitoring
- Protection of aquatic species and habitat
- Equipment and website use

4.2 COFFERDAMS

4.2.1 Types of Cofferdams

Temporary cofferdams are used to keep flowing or ponded water out of facility work areas. Cofferdams are used with bypass systems to divert water either around or through the work area. Cofferdams can be generally categorized as transverse or longitudinal, and with or without tidal conditions (Figure 2). BMPs for the design and construction of cofferdams are provided in Section 5 of this document.

Coffer dams may be constructed of sandbags or native earthen materials wrapped in visqueen, inflatable dams, compacted earth, brick and mortar, or k-rails. In earthen bottom channels, coffer dams may be constructed from materials excavated from the temporary low-flow channel. Inflatable dams (e.g., bladders) should only be used in channels/waterways that have a relatively flat substrate (i.e., concrete lined channels or similar). Pipes (with or without rubber donuts or sandbags) should not be placed beneath the bladder. In addition, sandbag cofferdams are ineffective at preventing water seepage unless plastic (e.g., visqueen) is placed underneath.

As described in Section 5.7.3, no wet concrete product shall encounter any flowing or standing water at any time to avoid pH water quality impacts. Areas where raw cement or grout are applied or where concrete curing or finishing operations are conducted to construct a cofferdam shall be separated from any ponded or diverted water flows until fully dried/cured. All equipment involved with the concrete or grouting operations shall be located within a contained area while using any slurry or concrete product.

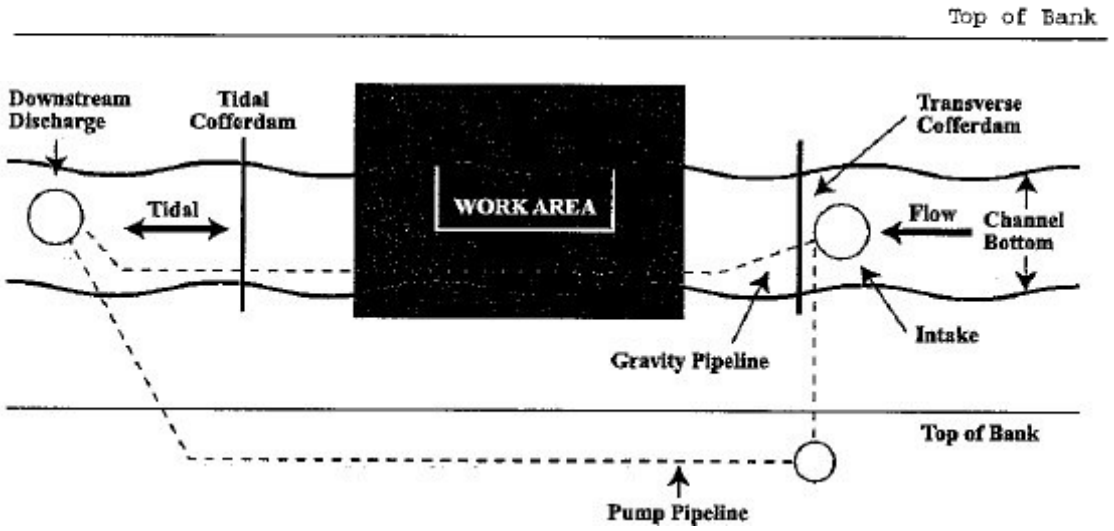
4.2.1.1 Transverse Cofferdam

Transverse cofferdams are used in channels or basins to span the entire cross-section of the facility upstream of the maintenance or repair activity. Water is impounded upstream of the cofferdam and a bypass system is used to route flows through or around the work area.

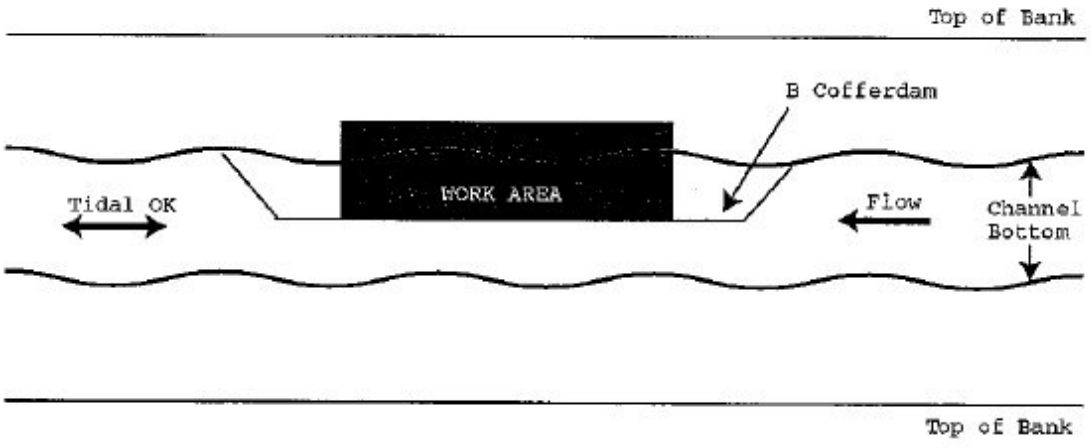
4.2.1.2 Longitudinal Cofferdam

A longitudinal cofferdam allows work to proceed in a portion of the channel while allowing natural flow to continue along the remaining part of the channel. Longitudinal cofferdams are typically constructed parallel to the channel or basin banks. Water quality monitoring is not required when the flow is simply moved to one side of the channel using a longitudinal cofferdam and bypass system as shown below.

FIGURE 2
COFFERDAM AND BYPASS SYSTEMS
Plan View of Transverse Cofferdam and Bypass System



Plan View of Longitudinal Cofferdam and Bypass System



4.2.1.3 Tidal Cofferdams

In channels that convey tidal flows or are tidally influenced, transverse or longitudinal cofferdams may be constructed. A transverse coffer dam in a tidally influenced channel may require a cofferdam both upstream and downstream of the work area. The downstream transverse cofferdam must be constructed at a height adequate to retain tidal flows and must be sturdy enough to withstand tidal surge. If a longitudinal cofferdam is constructed, the bypass channel must have adequate flow capacity to accommodate tides. Tidal cofferdams should be installed and removed at low tide.

4.3 BYPASS SYSTEMS

Bypass systems are used to divert water impounded by an upstream cofferdam around or through the work area. Bypass systems typically consist of pipelines, excavated low-flow channels or constructed channels or flumes. A berm constructed in the channel bottom may also be used to route low flows around the work area. Selection of a bypass system design depends on the type of facility and activity, cofferdam design, flow conditions, and presence of aquatic habitat.

Transverse and tidal cofferdams diversions typically incorporate a pipeline to convey water through the work area. The pipeline may operate by gravity flow or require water to be pumped. Low flow conditions or channel geometry in an earthen bottom channel may require the excavation of an upstream basin and standpipe to facilitate pumping (Figure 3).

FIGURE 3
INTAKE CONFIGURATIONS

Bypass systems for longitudinal cofferdams may consist of an open channel formed by the cofferdam or berm, an excavated low-flow channel adjacent to the work area, a constructed open flume, or a pipeline.

Outlet protection may be required as part of a bypass system to reduce the velocity and energy of concentrated flows by placing temporary devices or rock at pipe outlets. Outlet protection helps prevent scour in earthen bottom channels and prevents erosion and reduces turbidity.

5.0 WATER DIVERSION BEST MANAGEMENT PRACTICES

5.1 GENERAL WATER DIVERSION BMPS

5.1.1 Maintenance and Repair Planning

Prior to maintenance and/or repair activities, the District must determine if a water diversion is necessary and incorporate any water diversion into pre-project planning. Planning for water diversions during maintenance and repair activities should incorporate and identify the following:

- A pre-maintenance biological survey must be conducted by a qualified biologist for facilities with potential habitat for native aquatic species prior to initiation of the water diversion and any construction work (Section 3.2).
- Proposed cofferdam construction methods, materials, and installation, maintenance and removal requirements.
- Identification of erosion control BMPs, including methods, materials, and installation, maintenance and removal requirements.
- A map or drawing indicating the location of cofferdams, type and location of bypass system, anticipated water retention depth, cofferdam height, and location of downstream discharge point.
- Location of proposed upstream and downstream water quality monitoring sites.

5.1.2 Operation and Maintenance

- The water diversion and work area dewatering system must be in place and functional before in-channel work can begin.
- While the water diversion is in place, it must be operational 24 hours a day.
- Inspection and maintenance of the water diversion and associated erosion and sediment control BMPs should be conducted daily.
- Maintenance and/or repair activities shall not be conducted during a rainfall event.
- During cofferdam operation, all water from upstream shall always be allowed to pass downstream to maintain aquatic life below the water diversion.

5.1.3 Removal Post-Maintenance

- The cofferdam, bypass system, and erosion control will be removed when the work is completed. Removal normally proceeds downstream in an upstream direction.
- Remove temporary fill as appropriate, such as access ramps diversion structures or earthen cofferdams. Earthen material excavated from the channel bottom for the construction of temporary in-channel berms or channels may be left in place with recontouring to allow proper flows post project.
- Normal flows should be restored to the affected stream immediately upon completion of work.

5.2 COFFERDAMS

5.2.1 General Design Considerations for Cofferdams

- Cofferdams will be designed with adequate height to retain dry weather flows and anticipated storm flows or be removed prior to storms.
    - Cofferdam height for non-tidally influenced channels should generally be higher than the normal high-water mark.
    - Cofferdam height is to be established by the District based on facility dimensions and conditions, existing flow conditions, time of year, and other pertinent factors.
- Cofferdam construction will be adequate to prevent seepage into or out of the work area.
- Cofferdams may be constructed from sandbags wrapped in visqueen, inflatable dams, compacted earth, brick and mortar, k-rails, or other appropriate material.
- Seepage shall be prevented to the extent feasible using plastic (e.g., visqueen) or sealants.
- Cofferdams constructed of earth or other erodible materials will be enclosed by erosion control measures, such as filter fabric, silt-fencing, or other appropriate materials.
- Materials used for the construction of earthen cofferdams will not incorporate contaminated sediments; i.e., concrete, pavement, trash, or debris.
- Longitudinal cofferdams in low-flow channels may be constructed from alluvium excavated from the channel and compacted on-site.

5.2.2 Inspection and Maintenance

- Inspect all system components twice a day.
- Check for water seepage under the dam and general integrity of the dam, repair as needed.
- Repair all leaks immediately.
- In concrete-lined facilities, the upstream water collection pool shall be cleaned and cleared of sediment and debris regularly to prevent water quality deterioration.
- Clean all debris, dust, loose materials from the work area daily.
- Place wattles, filter fabric, and silt fencing across the flow stream downstream of the work area to catch/filter water in case it is unintentionally discharged the work area:
- Clean water intake to prevent/correct clogging.

5.2.3 Removal

- Once project work is complete, reintroduce water into the channel in a manner that avoids turbidity.
- Remove imported construction materials.
- After removal of the cofferdam, dismantle the bypass system and restore disturbed area to pre-construction grades.
- Flows in an earthen bottom channel may be left within the temporary low-flow channel if re-introduction of the flows to the work area would result in excessive discharge of sediment downstream.

5.3 BYPASS SYSTEMS

5.3.1 General Considerations for Bypass Systems

- Flows within the bypass will be maintained to the greatest extent feasible in order to maintain adequate water quality and quantity to support fish and other aquatic life.
- During the water diversion, the following upstream and downstream monitoring will be conducted:
    - pH, temperature, dissolved oxygen, turbidity, and total suspended solids (and/or other constituents as required by current permits) monitoring will be implemented.
    - Monitoring will generally be conducted daily during the first week of diversion activities, and then on a weekly basis, thereafter, until the in-stream work is complete.
    - Results of the analyses will be retained by the District and submitted to regulatory agencies as required.

5.3.2 Open Channel Bypass Systems

- An open channel bypass will be protected from erosion or spillage of material from channel and basin banks and slopes using readily available BMPs.
    - BMPs include the placement of filter fabric, silt fencing, straw bales, sandbags on cofferdam banks, channel banks, and slopes.
- An upstream silt catchment basin may be constructed so that silt or other deleterious materials are not allowed to pass into the open channel. The silt catchment basin should be monitored and cleaned/repaired weekly.
- For facilities that support sensitive species or in perennial streams, an open bypass channel or flume may be required in conjunction with a longitudinal cofferdam.

5.3.3 Pipeline Bypass Systems

- Bypass systems with pipelines may be gravity flow or pumped as necessary.
- When using a gravity flow system, the pipeline must slope continuously downgrade and, therefore, may have to pass through or near the work area.
- Intakes and/or excavated basins may be required for gravity flow or pump-fed bypass systems (see Figure 3).
    - Turbulence around the intake and associated turbidity can be reduced by means of ponding water behind the cofferdam or in an excavated sump.
    - In earthen bottom channels or basins, the intake pipe end should be substantially above the bottom of the ponded water or excavated basin as shown in Figure 3 to avoid discharge of sediments.
    - For gravity systems, a standpipe arrangement is very effective (see Figure 3). An intake filter can also be used to screen out sediment but can be easily clogged.
    - All intakes systems with pumps must be fitted with screens.
- Outlet protection should be incorporated at the pipe outlet to prevent generation of turbidity erosion, and scour. Refer to Outlet Protection BMPs in this Section.
- As dry weather flows vary, the contractor may select the proper size pump in the field. A backup pump should be provided.
- Bypass pipes have the potential to heat the water and may require shading to prevent temperature increases in diverted water.

5.4 SEDIMENT CONTROL ACTIVITIES

- Work areas, channel banks, or stockpile areas adjacent to the water diversion area that could be subject to erosion during storm events will be stabilized with erosion control measures.
    - Appropriate erosion control materials include silt fencing, sandbags, filter fabric, coir rolls, or wattles.
    - In low flow channels, an upstream silt basin may be constructed so that silt or other deleterious materials settle out before passing through the water diversion area.
    - Erosion control methods used to prevent siltation should be monitored and cleaned/repaired weekly.
- Sediment may be discharged downstream as a result of returning flows to the original low-flow channel:
    - When returning flows, minimize the discharge of sediment by installing filter fabric, wattles, or silt fencing downstream of the work area.
    - Bypass flows should be introduced into the dewatered area at the lowest velocity possible to minimize potential erosion and turbidity.
- Water diversions are not typically used by the District during clean-outs of concrete-lined channels devoid of fish or aquatic life where flows are minimal (less than 2 inches deep) and channel widths are narrow (25 feet or less). In low-flow concrete-lined channels, the District uses small bulldozers or "bobcats" working upstream to downstream within the channel bottom to scrape sediment, trash, and debris into piles for collection. In-stream BMPs typically used by the District for this type of channel clean-out include primary and secondary placement of wattles (net-wrapped coir rolls/wattles) downstream of the work area across the channel width. In low-flow conditions, 6-inch diameter wattles are adequate to contain and filter flows within a concrete-lined channel. Proper placement and removal of the wattles prevents the discharge of sediment and debris downstream of the work area.

5.5 OUTLET PROTECTION

- Place effectively sized outlet protection underneath pipeline outlet of where diverted water is discharged into stream.
- Rock aprons are the most common type of outlet protection for high flows; however, erosion control fabric, wattles, or silt fencing may be installed at the outlet to provide additional velocity reduction.
- Energy dissipation or other protection may not be necessary if the discharge is to an existing hardened structure (culvert, riprap, or concrete), to deep water or a heavily vegetated area.
- When designing the outlet project, consider flow depth roughness, gradient, side slopes, discharge rate, and velocity.
- If the discharge is to a tidal area, it may be necessary to equip the discharge pipe with a flap gate to prevent tidal flows from backing up into the intake.

5.6 AQUATIC LIFE PROTECTION MEASURES

If the results of the pre-construction biological survey indicate that the facility has the potential for native aquatic life, protective measures shall be taken during water diversions to prevent entrapment and mortality of fish and amphibians. If the survey determines that the aquatic life present at the site is and will be only composed of invasive or exotic species, no further action to protect aquatic species during the water diversion is necessary.

The following are minimum measures to be undertaken to protect native aquatic life during the construction, operation, and removal of a water diversion. During construction of the water diversion and during removal, a qualified biologist will be onsite to oversee measures undertaken to prevent entrapment and mortality of native aquatic life. Recovery and replacement of aquatic life may be undertaken by personnel under the supervision of the qualified biologist. For listed and sensitive species, only a qualified biologist with the proper permits may conduct such activities.

5.6.1 Prior to Cofferdam Construction

- Prior to construction of cofferdams, the channel section shall be isolated at the upstream and downstream ends and aquatic organisms removed and relocated by a qualified biologist.
    - Block nets shall be secured upstream and downstream of the channel section fully spanning the cross section of flow.
    - Block nets shall be secured into the substrate in soft channel bottoms or weighted across the channel cross section in hard bottom channel.
    - A seine net shall be used within the isolated area to recover fish, macro-invertebrates, and amphibians under the direction of the biologist.
    - Recovered aquatic life may be placed and transported in water-filled buckets to be released downgradient of the work site.
    - A minimum of three full channel sweeps should be conducted to remove aquatic organisms prior to commencement of dewatering.
    - Alternatives to seine netting, such as electro-shock must be approved by CDFW/NMFS first and then implemented by the site biologist.
    - After initial seine netting and removal of aquatic life, cofferdams may be constructed within the area isolated by the block nets.

5.6.2 Protection of Aquatic Life During Bypass Operation

- Pump inlets and outlets shall be protected using an appropriate mesh screen:
    - Mesh size will be based on protection of smallest native fish or amphibian species as established by field survey.
    - Default mesh size is 5 mm.
- Bypass pipelines will be adequately sized to pass flows and maintain existing water flows downstream of the work area.

5.6.3 Dewatering of Work Area

- Seine nettings of organisms shall continue during dewatering of the dry work space under supervision of the qualified biologist.

- All block nets should be periodically checked for impingement of fish or other wildlife and cleaned of debris to avoid collapse.

5.6.4 Maintaining Flow Through Work Site

- For water diversions where an open flow channel is maintained or an alternative flow channel is excavated, measures shall be taken to ensure that adequate flows are maintained and that aquatic organisms are not trapped or stranded.
- Flow downstream of the work site shall be maintained during construction and operation of the cofferdams.
- A downstream coffer dam shall be constructed in tidal areas for downstream flow protection (water surges upstream of the work area have occurred unexpectedly at times; water may overtop the upstream coffer dam and enter the work area).

5.6.5 Re-establishing Flows Post-construction

- During flows into an existing channel from a temporary channel, the qualified biologist shall survey the de-watered temporary channel to ensure that aquatic organisms are not trapped or stranded.
    - Trapped or stranded organisms will be placed in water-filled buckets for transport and release into the existing flow channel.
    - Applicable to diversions in soft bottom channels: if aquatic life has established itself within a temporary channel during the time of construction, flows may be left within the temporary channel.

5.7 EQUIPMENT AND VEHICLE USE

5.7.1 Equipment Operation

- Stationary equipment such as motors, pumps, generators, and welders located within or adjacent to the channel or basin will be positioned over adequately sized secondary containment.
- Access to the work site via existing roads and access ramps will be shown on the project plans. If no ramps are available in the immediate area, a temporary ramp may be constructed within the flagged work area. Any temporary ramp will be removed upon completion of the project.

5.7.2 Equipment Maintenance During Construction

- Any equipment or vehicles driven and/or operated within or adjacent to the channel or basin should be checked and maintained daily, to prevent leaks of materials that could be deleterious to aquatic life if introduced to water. All maintenance will occur in a designated offsite area. The designated area will include a drain pan or drop cloth and absorbent material to clean up spills.
- Fueling and equipment maintenance will be done in a designated area removed from the area of the channel or basin such that no petroleum products or other pollutants from the equipment may enter these areas via rainfall or runoff. The designated area will include a drain pan or drop cloth and absorbent materials to clean up spills.

5.7.3 Spill Prevention, Control, and Containment

- Prior to maintenance or repair activities, the District or Contractor will identify the methods, materials, and procedures for spill prevention, control, and containment. This information will be incorporated into the contract documents. Spill containment methods should address the types of materials and equipment to be used at the site. Materials for the containment of spills (i.e., absorbent materials, silt fencing, filter fabric, coir rolls) should be identified and be available onsite prior to commencement of maintenance and/or repair activities.
- Any accidental spill of hydrocarbons or coolant that may occur within the work area will be cleaned immediately. Absorbent materials will be maintained within the work area for this purpose.
- No wet concrete product will encounter any flowing or standing water at any time. Areas where raw cement or grout are applied or where concrete curing or finishing operations are conducted will be separated from any ponded or diverted water flows by a cofferdam or silt-free, exclusionary fencing. All equipment involved with the concrete or grouting operations will be located within a contained area while using any slurry or concrete product. The protective berm or other structure will be in place prior to maintenance and/or repair activities.
- Any spill of the grout, concrete curing, or wash water adjacent to or within the work area will be removed immediately.
- During concrete spill clean-up operations and until cessation of maintenance and/or repair activities, pH monitoring will be conducted daily upstream and downstream of the spill site. The results of post-spill pH monitoring will be submitted to the District and kept with the contract documents.
- If vacuum trucks are used to clean up a spill into ponded or diverted water, the vacuum hose should be placed in a 3-to-4 square foot area and protected on all sides by exclusionary fencing to prevent the migration of contaminants. The intake of the vacuum hose should be protected with 5 mm mesh screen to prevent uptake of aquatic life or as determined by regulatory permits.

6.0 REGULATORY SUMMARY

Many of the District's facility maintenance activities occur in watercourses or basins where such activities are regulated by state, federal, or local agencies. The District obtains both individual project permits as well as long-term permits to address routine maintenance and repair activities. This section of the Guidance describes the applicable regulatory authorities and permit requirements for the maintenance program.

6.1 FEDERAL AGENCIES

6.1.1 U.S. Army Corps of Engineers

Activities that result in the discharge of dredged or fill material in natural watercourses (such as bank stabilization and channel shaping) are regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Most of the District's maintenance and repair activities are permitted under Nationwide Permits (NWP) No. 3, No. 31, and No. 33. Alternatively, maintenance actions in this program may be authorized under a Regional General Permit or Individual Permits.

6.1.2 U.S. Fish and Wildlife Service and National Marine Fisheries Service (NMFS)

The requirements of the Endangered Species Act (ESA) apply to any project permitted under a CWA Section 404. An ESA Section 7 Incidental Take Permit is needed if action taken for a project would have the potential to adversely affect listed species or designated critical habitat, either directly or indirectly. Section 7 consultation process takes place concurrent with the Section 404 permit review process. Facilities that convey flows for sensitive species are identified in the Catalog of Facilities.

6.2 STATE AGENCIES

6.2.1 Regional Water Quality Control Board

The Regional Water Control Board (RWQCB) Los Angeles Region administers both the Section 401 Water Quality Certification Program and programs under Section 402 of the CWA, including the National Pollutant Discharge Elimination System (NPDES) in Ventura County.

6.2.1.1 Section 401 Water Quality Certification

The RWQCB requires a Section 401 Water Quality Certification for any activity undertaken under a Section 404 permit. Projects that require water diversions during maintenance and/or repair activities are required by the RWQCB to submit a separate Water Diversion Plan. This Update to the District's 2007 Water Diversion Guide incorporates measures in compliance with the current Section 401 certification requirements for water diversions undertaken by the District. .

6.2.1.2 Section 402

Section 402 of the Clean Water Act governs the NPDES which regulates point source discharges to waters of the United States. The RWQCB issues both NPDES permits for point source discharges to surface water and groundwater.

A maintenance or repair activity undertaken by the District may require the submittal of a Notice of Intent (NOI) for coverage under the California Construction General Stormwater Permit. This permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP). If a water diversion is needed, the appropriate BMPs are incorporated into the SWPPP.

Waste Discharge Requirements (WDRs) can be required for water diversions, dewatering activities or any type of pumping and release of water. Short-term water diversions for District routine maintenance does not normally require WDRs unless there is a need for groundwater dewatering. Groundwater dewatering operations are not covered under this Guidance or the Maintenance Program EIR and will be permitted separately under the following general permit: *Order No.: R4-2018-0125 (Permit No. (CAG 994004), General National Pollutant Discharge Elimination System and Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the State Board on September 13, 2018.*

6.2.2 California Department of Fish and Wildlife

The modification to the bed, bank, and/or vegetation in a natural drainage (and certain man-made drainages) is regulated by the California Department of Fish and Wildlife (CDFW) under Section 1600 of the Fish and Game Code. Such modifications require a Streambed Alteration Agreement. A Section 2081 review process for state listed threatened and endangered species will take place concurrent with the Streambed Alteration Agreement permit review process.

CDFW STREAMBEAD ALTERATION AGREEMENT NO. 1600-2004-0512-R5

State of California – The Resources Agency ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF FISH AND GAME
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201

August 3, 2009

Ventura County Watershed Protection District
Attn: Pam Lindsey
800 South Victoria Avenue
Ventura, CA 93009

Dear Ms. Lindsey:

Enclosed is Lake or Streambed Alteration Agreement # 1600-2004-0512-R5, that authorizes work on the Operations and Maintenance Program project impacting various watercourses in Ventura County. This action is authorized under Section 1602 of the Fish and Game Code and has been approved by the California Department of Fish and Game. Pursuant to the requirements of the California Environmental Quality Act (CEQA), the Department filed a Notice of Determination (NOD) on the project on August 3, 2009. Under CEQA regulations, the project has a 30-day statute of limitations on court challenges of the Department's approval.

The Department believes that the project fully meets the requirements of the Fish and Game Code and CEQA. However, if court challenges on the NOD are received during the 30-day period, then an additional review or even modification of the project may be required. If no comments are received during the 30-day period, then any subsequent comments need not be responded to. This information is provided to you so that if you choose to undertake the project prior to the close of the 30-day period, you do so with the knowledge that additional actions may be required based on the results of any court challenges that are filed during that period.

Please contact Jeff Humble at (805) 652-1868 if you have any questions regarding the Lake or Streambed Alteration Agreement.

Sincerely,

Helen R. Birss
For Environmental Program Manager

RECEIVED
AUG 0 6 2009
WATERSHED PROTECTION DIST.

Enclosure

Revised 11/05

CALIFORNIA DEPARTMENT OF FISH AND GAME
4949 Viewridge Avenue
San Diego, CA 92123

July 7, 2009

Notification No. 1600-2004-0512-R5
Page 1 of ~~22~~ 23

ROUTINE MAINTENANCE AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

THIS AGREEMENT, entered into between the State of California, Department of Fish and Game, hereinafter called the Department, and the Ventura County Watershed Protection District, represented by the Director, (805) 654-2040, 800 South Victoria Avenue, Ventura, CA 93009 hereinafter called the District, defines, delineates and conditions a simplified regulatory review process to maintain proper operation of the District's flood control facilities to protect life and property while minimizing impacts to fish and wildlife resources.

WHEREAS, pursuant to Section 1602 of the California Fish and Game Code, the District, on the April 1, 2008, notified the Department about the availability of their Draft Program Environmental Impact Report (Program EIR) and that they intend to minimize impacts to the natural flow of, to minimize impacts to the bed, channel, or bank of, or minimize use of material from the streambed(s) of the following water(s): all waters within Ventura County, California, that are part of the District's flood control facilities as identified in their Program EIR (See Program EIR for details). The Program EIR includes best management practices (BMPs) to reduce or avoid effects of the following activities on the environment: 1) Routine Operations and Maintenance, 2) Water Diversion, 3) Stream Gauge Maintenance, and 4) Rodent Control Activities.

WHEREAS, the Department (represented by Dan Blankenship) has determined that such operations may substantially adversely affect existing fish and wildlife resources identified in the Program EIR without the use of BMPs and all other aquatic and wildlife resources in the area, including the riparian vegetation which provides valuable habitat for fish and wildlife.

THEREFORE, the Department hereby proposes a long-term agreement that supports the use of the BMPs identified in the Program EIR and the additional conditions in this Agreement to minimize impacts and to protect fish and wildlife resources during the District's work. The District hereby agrees to follow the BMPs developed in the Program EIR and specifically listed in the Agreement along with additional conditions in this agreement as part of the proposed work.

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

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

This Agreement becomes effective the date of the Department's signature and the construction portion terminates on December 31, 2019. This Agreement shall remain in effect to satisfy the terms/conditions of this Agreement. Any provisions of the agreement may be amended at any time provided such amendment is agreed to in writing by both parties. Mutually approved amendments become part of the original agreement and are subject to all previously negotiated provisions.

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

The following provisions, and those that are fully disclosed in the District's Program EIR, constitute the limit of activities agreed to and resolved by this Agreement. The signing of this Agreement does not imply that the District is precluded from doing other activities at the site. However, activities not specifically agreed to and resolved by this Agreement, shall be subject to separate notification pursuant to Fish and Game Code Sections 1600 et seq.

Copies of this Agreement and all required permits and supporting documents (Routine Operations and Maintenance EIR, May 2008) provided with the notification or referenced by this Agreement shall be readily available at the work site at all times during periods of active work.

The District certifies by signing this agreement that the project site(s) has been surveyed and shall not impact any rare, threatened or endangered species. Or the District certifies that such a survey is not required for the proposed project. If rare, threatened or endangered species occur within the proposed work area, or could be impacted by the work proposed, the District shall consult with the Department and obtain any required State and/or Federal permits.

MAINTENANCE ACTIVITES

Description of Routine Operations and Maintenance Activities:

The primary objective of the Watershed Protection District's (District's) routine maintenance program is to maintain the proper operation of the District's flood control facilities to protect life and property. Maintenance preserves the appropriate conveyance capacity of the facilities and prevents the accumulation of obstructing vegetation and sediments that could increase existing flood hazards. By maintaining these facilities consistent with their original design, the District reduces or prevents flooding and erosion hazards that may result in damage to life, property, and infrastructure.

The current maintenance program is an ongoing program that began with the formation of the District in 1946. The program has grown over the years as new flood control facilities were constructed. As such, the program includes a wide range of facilities that were constructed (or

adopted from other public and private entities) over the past 60 years. New facilities to be maintained are added as the District completes or adopts new capital projects. The maintenance program constantly adapts to a wide variety of site conditions, project designs, and maintenance requirements.

The District does not propose to modify the objectives, geographic scope, activity guidelines, or fundamental methodologies of the current maintenance program. The District does not believe that it can reduce, curtail, or scale back any current maintenance work without hindering its responsibility for protecting life and property.

However, the District recognizes that some of its maintenance work can be performed in a more environmentally sensitive manner, or that certain precautions and protective measures can be implemented that would reduce environmental effects of its work.

The proposed project addressed in the Program EIR is to incorporate specific feasible environmental protection measures into the current maintenance program for existing facilities. These measures are called "environmental best management practices" (BMPs) in the Program EIR. The District is voluntarily proposing to adopt these measures as part of the routine maintenance program to reduce incidental effects of the routine maintenance on the environment, and to facilitate acquisition of long-term state and federal permits. The proposed "project," as defined under the California Environmental Quality Act (CEQA) Guidelines is the adoption of the environmental BMPs. This "project" is proposed to improve environmental protection during maintenance activities to the extent feasible without compromising the overall objectives of the maintenance program. Therefore, for this project, the District's objectives are to:

1. Reduce delays in operation and maintenance activities due to delays in permit response time.
2. Improve environmental protection during maintenance activities.
3. Maintain current levels of flood control protection within its jurisdiction to protect life and property.

<u>Maintenance of Future Flood Control Facilities and CEQA/Streambed Alteration Agreement</u>:

The District must conduct a CEQA environmental review for the construction of new flood control facilities. In the past, the District typically approved projects without a specific reference to the maintenance requirements for the facilities. It was generally understood that projects would be maintained as necessary to ensure their proper functioning. This practice has resulted in some uncertainty and confusion about the necessary maintenance requirements for existing facilities because there is no documentation from the design and environmental review processes. To avoid future confusion, the District is now including facility-specific maintenance requirements and methods in the environmental review and approval process for most new capital projects. Hence, the environmental impacts of maintenance of new flood control projects are now being addressed in the CEQA documents for the new projects. Through this process, environmental protection measures for the long-term maintenance of new facilities are now being adopted as part of the original project approvals by the District's Board of Directors.

The District Board of Director's approved the environmental BMPs addressed in the Program EIR, the BMPs will be applied to maintenance requirements of all future capital projects designed and constructed by the District to create uniformity among facilities. The applicability of

these BMPs for future projects will be determined in the CEQA review of the new projects. The proposed BMPs will be incorporated to future projects by reference. The BMPs may be supplemented by additional site- or facility-specific measures, if determined to be necessary based on the environmental impact analysis performed for the new project.

Environmental Best Management Practices:

The District currently implements BMPs during routine maintenance activities. Implementation of these existing BMPs will continue in addition to the new BMPs developed in the Program EIR. The following is a summary of the existing BMPs that the District currently uses during routine maintenance activities that will be continued under this agreement.

- The minimum size/type of equipment is employed to complete the activity to minimize potential impacts.
- The minimum strength required to achieve the goal for each chemical product is used and staff follows specific pesticide protocols. Only products approved for aquatic use are applied within the bed and banks of any channel or basin facility. Post-emergent products are applied only to plants via target application where plants are sparse.
- Gates, fences, and "no trespassing" signs are kept in working order to discourage dumping and vandalism.
- Silt fencing, k-rail, sandbag barriers, and straw wattles are routinely installed and maintained during work to prevent soil from leaving the work areas into the stream or channel.
- Silt fencing or other barriers are placed around temporary soil stockpile sites to contain material. Soil stockpiles are maintained free of vegetation.
- Water diversions are routinely used to prevent soil and concrete from entering surface waters adjacent to maintenance work areas.
- Plastic-lined sandbag concrete wash out pits stationed in uplands are required for each site where concrete pouring occurs.
- Pipe and pump station flushing activities are conducted with a vacuum system to avoid release of materials into channels or surface waters.
- Trash is screened and separated from trash racks and debris collected from channels and basin. Trash is then hauled to a County waste transfer facility.
- Rumble strips, street sweepers, and wattles over storm drain inlets are employed to prevent soil from entering streets and storm drains.
- Local fire abatement requirements are met by conducting annual brush clearance in District right of way adjacent to residential areas.

In addition, the District developed the Operators Manual for Conducting Flood Control Activities in Ventura County Streams and Rivers (1981), which serves as an additional resource for training of operations and maintenance staff.

The District has formally developed 25 additional environmental BMPs to reduce the environmental effects of its routine maintenance program for existing and new flood control facilities. The BMPs represent precautions and procedures to be used when planning and implementing maintenance activities that could affect sensitive environmental resources including wetlands, riparian habitat, aquatic habitat, threatened and endangered species, species of special concern, water quality, and hydraulic conditions in the watershed. The BMPs have been designed to be feasible and practical. They will not curtail, reduce, or otherwise inhibit the District's maintenance requirements and activity guidelines. Implementation of the BMPs will become standard practice for the maintenance crews. The following BMPs are taken from the Program EIR with some additional clarification language added.

BMP 1. Avoid Channel Work During the Rainy Season. Routine maintenance and repair activities in earthen channels and in channels with soft bottoms and bank protection shall not occur during the rainy season December 1 to April 1 to avoid work when water could be present in the drainage due to runoff. Routine maintenance and repair activities may occur during this period if water is absent from the drainage because of low runoff conditions, or activities can be performed without working in flowing water. Work in flowing water during this period may proceed if there are no feasible alternatives and completion of the maintenance work during this time period is critical. Work in flowing water shall be conducted according to the BMPs established in the Water Diversion Guide attached as Appendix E to the Program EIR.

BMP 2. Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning. The removal of sediments, vegetation, algae, and trash from fully lined improved channels for purposes of NPDES storm water permit compliance shall include measures to prevent the discharge of silt-laden water or pollutants to downstream unimproved channels with soft bottoms (Board Order No. 09-0057; NPDES Permit No. CAS004002, adopted on May 7, 2009). These measures may include temporary downstream silt barriers (sand bags, straw bales, in-channel materials), silt fences, upstream diversion, etc. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for water diversion activities.

BMP 3. Location of Temporary Stockpiles. Temporary stockpiles outside the channels or debris basins shall be stabilized by compacting or other measures if present at the work site from December 1 to April 1. Silt fences, berms, or other methods shall be used to prevent sediments from being eroded from the temporary stockpile into the adjacent drainage. Temporary stockpiles may be placed in channel bottoms or debris basins if they are located on barren soil or areas with non-native weeds, and are not placed in such a manner that they would be exposed to flowing water. No temporary stockpiles shall be placed on the channel bed or banks during the period of 1 December to 1 April for more than the duration of the sediment removal work. Temporary stockpiles in the channel bottom shall be for a duration for one working day and not over night.

BMP 4. Survey for Habitat Prior to Routine Maintenance Work. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all native birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).

Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure during the period March 1 to August 1,

a District biologist or consulting biologist shall determine if suitable habitat is present for native breeding birds in or within 300 feet of the work area. Suitable habitat is generally defined as dense or moderately dense willow or mulefat scrub or woodland, but also includes moderately dense stands of non-native vegetation with sufficient density and vegetative structure to support nesting and foraging.

Prior to routine maintenance and repair activities performed within or adjacent to an earthen or earthen bottom channel or in-channel structure that would disrupt foraging or nesting of raptors during the period February 1 to August 1, a District biologist or consulting biologist shall survey the 500 feet radius around the project site for raptor nest initiation or occupation.

Channel cleanout shall be postponed to August 1 if such habitat is present in the work area or within 300 to 500 feet of the work area, or until nestlings have fledged if the District determines that riparian bird or raptor nesting is occurring in the habitat area. This restriction does not apply if the nesting birds are English house sparrows or other introduced species. If any native migratory (passerine) birds are found nesting within the 300 feet or any raptors are found nesting within 500 feet survey radius, the District shall consult with CDFG to develop a conservation plan of action. If any federally or state listed birds are found within 500 feet of the work area, Threatened and Endangered Species BMPs 44-46 (page 17 of this agreement) will be implemented.

BMP 5. Survey for Steelhead Migration Conditions and Sensitive Aquatic Species Prior to Routine Maintenance Work. Prior to maintenance and repair activities in a channel during the period 1 December to 1 June that require the diversion of stream flow, work in flowing water, or work within 100 feet of flowing water on the Ventura River, San Antonio Creek, Thacher Creek, Santa Clara River, Santa Paula Creek, Sespe Creek, Hopper Creek, Pole Creek (unlined portions), and Piru Creek, qualified District personnel shall determine if flow conditions (i.e., flow, depth, stream continuity) are potentially suitable for the upstream or downstream migration of southern steelhead in the work area. Surveys for all sensitive aquatic species that could potentially occur in the project area or could be impacted by the project (i.e. California red-legged frogs including egg masses and tadpoles, Arroyo chub, Arroyo toad, and Southwestern pond turtle) shall also be conducted by a qualified biologist during this same time period. The District shall immediately notify the Department for consultation on specific mitigation actions upon finding sensitive species within, immediately adjacent to any work area, in areas that may be impacted by the routine maintenance work. Channel cleanout shall be postponed to June 1 if flows are sufficient for steelhead migration in the work area or within 100 feet of the work area. Per Section 401 Water Quality Certification requirements, a Water Diversion Plan would be needed for any water diversion activities.

BMP 6. Survey for Steelhead Rearing Habitat and Sensitive Aquatic Species Prior to Routine Maintenance Work. Prior to maintenance and repair activities in a channel during the period December 1 to June 1 that requires the diversion of stream flow, work in flowing water, or work within 100 feet of flowing water on the Ventura River, San Antonio Creek, Thacher Creek, Santa Clara River, Santa Paula Creek, Sespe Creek, Hopper Creek, Pole Creek (unlined portions), and Piru Creek, a District biologist or consulting biologist shall determine if suitable rearing habitat for steelhead is present in the work area or within 100 feet of the work area. If rearing habitat is present, District personnel shall determine if steelhead are present in the pools. If steelhead are not present, the work may proceed. If steelhead are present, the District shall follow avoidance and/or relocation procedures approved by NOAA Fisheries for such maintenance

work if the work will occur while fish are present. Surveys for all sensitive aquatic species that could potentially occur in the project area or could be impacted by the project (i.e. California red-legged frogs including egg masses and tadpoles, Arroyo chub, Arroyo toad, and Southwestern pond turtle) shall also be conducted by a qualified biologist during this same time period.

BMP 7. Continue Existing Procedures for Sediment Removal and Vegetation Control for Calleguas Creek, Conejo Creek, and Revolon Slough. The District shall continue its procedures for sediment removal and in-stream vegetation control along unimproved channels along Calleguas Creek, Conejo Creek, Revolon Slough, Arroyo Las Posas and generally throughout Zone 3 in accordance with previous Streambed Alteration Agreements 5-540-91, 5-542-91, 5-115-89, 5-270-92, 5-541-91, and 5-388-90 unless otherwise negotiated in the new long-term agreement. The terms of these agreements will supersede any conflicting conditions in other BMPs.

BMP 8. Avoid Disturbance to Native Beach or Wetland Species. The District shall avoid areas of beach dune vegetation when accessing storm drain outlets at the beach with vehicles for routine maintenance. The removal of native beach or wetland plants that are located at or near the beach outlet shall be minimized. Prior to the removal of obstructive sand or vegetation from a beach outlet, qualified District personnel shall determine if suitable habitat (i.e., a brackish waterbody) is present at the outlet for tidewater gobies, and if the species is present. In addition, qualified District personnel shall determine if suitable habitat is present along the vehicle access route across the beach for foraging or nesting snowy plovers and California least terns. If any of these sensitive species are present at the storm drain outlet or along the access route, the District will either postpone the routine maintenance work until these species are no longer present, or follow avoidance and/or relocation procedures approved by U.S. Fish and Wildlife Service (USFWS). This BMP shall not apply if there is a threat of a storm and the outlet is plugged. The District shall contact the Department and USFWS when California least terns, snowy plover, or tidewater gobies are observed during the pre-project surveys for consultation.

BMP 9. Aquatic Pesticide BMPs. The District shall follow the most up-to-date Best Management Practices (BMPs) and the monitoring and reporting requirements in the District's NPDES Stormwater Quality Management Plan (Board Order No. 00-108; NPDES Permit No. CAS004002, adopted on July 27, 2000). The District shall also follow BMPs in the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides.

BMP 10. Leave Vegetation on Upper Basin Slopes. The District shall not remove established vegetation on the basin slopes above the 20 percent capacity debris line except as follows: (1) the vegetation is non-native; (2) shrubs and trees become hazards to the stability and function of the basin; (3) the sediment meets or exceeds the 20 percent capacity line; (4) slope re-grading is required to correct or prevent rill erosion or other damage, (5) the vegetation is located on engineered fill, or (6) vegetation constitutes a fire hazard to nearby properties.

BMP 11. Leave Patches of Vegetation in Channel Bottom. The District shall minimize vegetation removal or reduction from earthen or earthen bottom channels to the least amount necessary to achieve the specific maintenance objectives for the reach. Vegetation removal in the channel bottom shall be conducted in a non-continuous manner, allowing small patches of in-channel vegetation to persist provided it will not adversely affect conveyance capacity.

BMP 12. Leave Herbaceous Wetland Vegetation in Channel Bottom. Consistent with the maintenance objectives, the District shall avoid removal or reduction of emergent herbaceous wetland vegetation on the channel bottom that is rooted in or adjacent to the low flow channel or a pond in order to provide cover for aquatic wildlife. This same type of vegetation shall be protected during the removal of taller obstructive woody vegetation on the channel bottom.

BMP 13. Maximum 15-foot Vegetation-Free Zone at the Toe of the Bank. When reducing or removing vegetation from channel banks or bottoms for the sole purpose of visual access to inspect the toe of slopes with riprap or concrete, the District shall treat a maximum 15-foot wide zone from the base of the slope into the channel bottom.

BMP 14. Avoid Road Base Discharge. The District shall implement measures to prevent the discharge of road base, fill, sediments, and asphalt beyond a previously established road bed when working adjacent to channels and basin bottoms.

BMP 15. Mitigate/Replace Temporary Impacts to Habitat. For repair of in-channel structures and features that results in the temporary disturbance of native wetland or riparian vegetation adjacent to the facility, the District shall restore native wetland or riparian vegetation in the affected work areas after the repair or reconstruction work. Restoration shall include planting or seeding native plants that were present prior to the work and/or are compatible with existing riparian vegetation near the work area. The District shall prepare a restoration plan for each repair project that specifies the limits of restoration, planting mix and densities, performance criteria for survival and growth, and at least a three-year maintenance and monitoring procedures. Restoration sites shall be located outside the limits of the repaired structure. If no suitable restoration site is available near the work area or the creation of a restoration area near the work area would conflict with flood control needs, the District shall select another location on District right-of-way in close proximity. If suitable restoration sites are not available, the District shall provide funds to a third party (public agency or non-profit organization) to implement the required mitigation in the same watershed as the impact. Habitat restoration under this BMP shall only occur if the affected areas support native wetland or riparian vegetation; no restoration is required for barren areas or areas dominated by non-native plants. The District shall submit all habitat restoration plans to the Department prior to implementation.

BMP 16. Oak Tree Mitigation Ratio. For any repair of in-channel structures and features that requires the removal of native oak trees with diameters at breast height of 4 inches or more, the District shall replace the trees at the following ratios in or near the affected work areas after the repair or reconstruction work: Oak trees (rooted plants from local stock) 4 to 6 inches diameter at chest height (DBH) shall be replaced at 3:1; oak trees 6-12 inches DBH shall be replaced at 5:1; oak trees from 12 to 24 inch DBH shall be replaced at 10:1; oak trees from 24-36 inches shall be replaced at 15:1; and oak trees greater than 36 inches DBH shall be replaced at a ratio of 20:1. A tree replacement plan shall be developed for each repair project that specifies the tree replacement locations, performance criteria for survival and growth, and at least a five year maintenance and monitoring procedures and shall be submitted to the Department prior to implementation.

BMP 17. Concrete Wash-Out Protocols. The District shall implement appropriate waste management practices during on site concrete repair operations. Waste management practices will be applied to the stockpiling of concrete, curing and finishing of concrete as well as to

concrete wash-out operations. Waste management practices shall be adequate to ensure that fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin. Concrete wastes shall be stockpiled separately from sediment and protected by erosion control measures so that concrete dust and debris are not discharged to the channel, basin, or waters of the State. The District shall determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of erosion control materials and construction costs.

BMP 18. Water Diversion Guide. Water diversion activities undertaken as part of routine repair and maintenance operations in improved and unimproved channels as well as debris basins shall follow the BMP guidance established as the Water Diversion Guide found in the Program EIR.

BMP 19. Minimize Erosion from Stream Gauge Maintenance. During stream gauge maintenance activities, vegetation shall be cleared from channel banks by cutting with chain-saw only. The vegetation roots shall be left intact and not be sprayed with herbicide as a measure to minimize potential erosion of cleared channel banks. The District shall implement additional erosion control methods as needed, based on considerations of flow velocities, site conditions, availability of materials, construction costs, durability and maintenance requirements.

BMP 20. Implementation of Integrated Pest Management. The District shall inspect its critical and non-critical facilities regularly to document and identify the presence or absence of ground squirrels. The District shall implement the Integrated Pest Management (IPM) program developed for the Program EIR that identifies tolerance level, control thresholds and approved rodent control methods and/or combinations of methods at each District facility. Rodent control methods implemented at each facility shall be applied as needed and as appropriate for site conditions and the season. Methods implemented shall minimize potential primary and secondary hazards to non-target species. The District shall maintain a preventative IPM program with zero tolerance for ground squirrels for its critical facilities where failure would impact public safety. When rodent control becomes necessary at non-critical facilities, the District shall choose applicable, cost-effective treatment method(s) from the District's IPM program. Treatment options considered for each site shall include: trapping, habitat modification, alternative construction methods and materials, use of raptors, clean and rodenticide-treated bait stations, broadcast diphacinone and zinc phosphide with or without carcass collection, and other methods. As part of an ongoing monitoring program to determine the effectiveness of the squirrel control program, the District shall maintain uniform inspection records for each facility and all control efforts. The District shall conduct a staff training program that covers the IPM program including rodent issues, inspection and monitoring requirements, and treatment options. The District shall submit treatment records to the Department annually including control methods used and monitoring records.

BMP 21. Avoid Spills and Leaks. The District shall ensure that all equipment operating in and near a watercourse, or in a basin, is in good working condition and free of leaks. No equipment maintenance or refueling shall occur in a channel or basin bottom. Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse. In addition, all maintenance crews working with heavy equipment shall be trained in spill containment and response. All spills shall be reported to the Department's Office of Spill Prevention and Response.

BMP 22. Biological Surveys in Appropriate Habitat Prior to Vegetation Maintenance. Prior to any sediment removal, vegetation control (by herbicide application, mowing, or discing), or repair work in earthen or earthen bottom channels and basins that contain native aquatic, riparian, or wetland habitats suitable for sensitive fish and wildlife species, the District shall conduct appropriate field investigations to determine if any threatened, endangered, or sensitive species are present. If such species are determined to be present in or in close proximity to the work areas, the District shall reschedule the work when the species are not present. If it is necessary to conduct the work while the species are present or in proximity to the work areas, the District shall develop other avoidance or relocation measures in consultation with the Department, USFWS, or NOAA Fisheries prior to conducting the work. If the work could affect state or federally listed species or their habitat, the District would employ avoidance or relocation measures approved by USFWS, NOAA Fisheries, and the Department, as appropriate, for the maintenance program. This measure includes protection for the following threatened, endangered, or sensitive species that could occur at maintenance sites: tidewater goby, southern steelhead, trout, unarmored threespine stickleback, California red-legged frog, arroyo toad, least Bell's vireo, southwestern willow flycatcher, arroyo chub, southwestern pond turtle, two-striped garter snake, Cooper's hawk, sharp-shinned hawk, yellow warbler, yellow breasted chat, purple marlin, tri-colored blackbird, and long-eared owl and other sensitive species that could occur in the treatment area.

BMP 23. Invasive Plant Removal Protocols. Invasive plant species shall be removed in a manner that prevents propagation. Where this type of vegetation is routinely treated, maintenance personnel should spray or mow plants before seeds ripen. All cut/removed invasive vegetation should be taken to a dump as destruction load. Maintenance personnel should avoid letting cut stems or seed pods be washed downstream or be left behind to propagate. In the case of giant reed (*Arundo donax*) removal, the District shall minimize ground disturbance and use foliar glyphosate treatment on smaller infestations as much as possible. Stems shall be removed only when the plants are dead. Root masses should not be removed, as bank overhangs provide cover for wildlife, which may include sensitive fish species.

BMP 24. Air Quality BMPs. The following measures are part of the APCD's Model Fugitive Dust Mitigation Plan and shall be incorporated to maintenance activities as needed to further reduce the District's fugitive dust emissions during grading, excavation, and construction activities.

- The areas disturbed at any one time by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.

- Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during earthmoving, grading, and excavation activities.

- All trucks shall be required to cover their loads as required by California Vehicle Code §23114.

- All graded and excavated material, exposed soil areas, including unpaved parking and staging areas, and other active portions of the construction site, including unpaved on site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.

- Graded and/or excavated inactive areas of the construction site shall be monitored by the District's operation and maintenance staff at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be periodically treated with environmentally-safe dust suppressants.

- During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on site activities and operations from being a nuisance or hazard, either on site or off site. The District staff shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.

- Rumble strips or track out devices shall be installed where vehicles enter and exit unpaved roads onto paved road, or wash off trucks and any other equipment leaving the site.

- All on site construction roads that have a daily traffic volume of more than 50 daily trips shall be stabilized as to minimize transport of earthen material from the site.

- Open material stockpiles shall be roller compacted, periodically watered, or treated with appropriate dust suppressants.

- There shall be at least one qualified District staff on site each work day to monitor the provisions of the Fugitive Dust Mitigation Plan and any other applicable fugitive dust rules, ordinances, or conditions.

- Personnel involved in grading operations shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health Regulations.

- All project construction operations shall be conducted in compliance with all applicable APCD Rules and Regulations with emphasis on Rule 50 (Opacity) and Rule 51 (Nuisance).

BMP 25. Construction Noise BMPs. Noise-generating construction activities shall be restricted to the daytime (i.e., 7:00 AM to 7:00 PM, Monday through Friday). Sustained construction noise adjacent to sensitive wildlife nesting areas should be minimized during the nesting season. The District shall consult with the Department regarding mitigation measures when sensitive wildlife are located adjacent to construction site.

Impacts:

Routine maintenance involves various activities in the bed, bank or channel of various facilities including lined channels, bank protection, pump stations, debris and detention basins, dams, grade stabilizers, etc.

Routine maintenance may involve the removal or reduction in obstructive vegetation, use of bank stabilization material such as rock riprap or concrete, use of herbicides, removal of sediment, and earthwork to repair eroded or damaged areas and facilities. Impacts to biological resources could occur as a result of these activities.

Project Schedule:

Routine maintenance is ongoing and work occurs year-round.

1. The District's activities within stream courses shall be limited to dry conditions or when the stream is not actively flowing and no measurable rain is forecasted. If 0.25 inches or more of measurable rain is forecasted within 12 hours of scheduled maintenance activities, activities shall cease temporarily, and protective measures to prevent siltation/erosion shall be implemented and maintained.

Work Area Limits:

2. The entire work area shown on the repair/construction plans shall be flagged prior to initiation of work to identify its limits within stream(s). No activities shall be permitted outside of the flagged area. Flagging for routine maintenance activities in non-sensitive areas is not required.

3. Disturbance or removal of vegetation/aquatic organisms, etc. for the purpose of routine maintenance, temporary water diversion structures or channels, dewatering, excavation, access roads or ramps, settling basins, staging, storage or stockpile area shall not exceed the limits shown on the plans or facility limits. Temporarily disturbed areas outside facility limits shall be restored to the original condition, to the maximum extent feasible.

Access:

4. Access to the facility work site shall be via existing roads and access ramps as shown on the plans. If no ramps are available in the immediate area, a temporary ramp within the facility/project footprint of the project may be constructed. Any temporary ramp shall be removed upon completion of the project.

5. Staging/storage areas for equipment and materials shall be located outside of the stream/lake. Equipment and material storage shall be done in such a manner as to minimize disturbance to species that forage in the area and to not attract nuisance or predatory animals to the project area.

6. Vehicles may be driven on the stream/lake bed to traverse the distance to the work area and in the immediate vicinity (within 50 feet) of the work area as necessary to complete the authorized work. No vehicle shall be driven in flowing or ponded water, in water covered portions of a stream or lake, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as to complete the routine maintenance work described in the plans. All other equipment shall be operated in the dry portions of the stream.

7. No equipment shall be operated or parked within the dripline of native trees (e.g., oaks, sycamore, cottonwood, maple, California bay, not including willows) except where access roads already exist and routine maintenance work is required as part of the project. Fencing for protected trees shall be placed five (5) feet outside of the

dripline of the trees to prevent compaction of the root zone.

Water Diversion/Dewatering:

8. Water diversion activities associated with routine maintenance shall follow the guidelines provided in the District's Water Diversion Guide as described in the Program EIR, Appendix E. The following procedures may also be implemented to further reduce impacts to aquatic resources.

9. When work in a flowing stream is unavoidable, the entire stream flow shall be diverted around the work area. Construction of the diversion shall normally begin in the downstream area and continue in an upstream direction; the flow shall be diverted only when construction of the diversion structure is complete.

10. Water diversion structures shall be constructed of non-erodible materials unless first enclosed by sheet piling, rock riprap, or other protective material. All water diversion structures shall be removed from the project area when the work is completed. Removal shall normally proceed from downstream in an upstream direction.

11. Seepage of water into or from the work area shall be prevented to the maximum extent feasible.

12. Flows to downstream reaches shall be provided during all times that the natural flow would have supported aquatic life. Flows shall be sufficient quality and quantity to support fish and other aquatic life both above and below the water diversion. Normal flows shall be restored to the stream immediately upon completion of work.

Siltation/Turbidity Control:

13. Precautions to minimize turbidity/siltation shall be determined during project planning and shall be installed prior to routine maintenance. The method(s) used to minimize turbidity/siltation shall be monitored and cleaned/repaired weekly.

14. Silty/turbid water from dewatering or other activities shall not be discharged into the stream. Such water shall be settled, filtered, or otherwise treated prior to discharge.

15. Upon determination that maintenance-related activities could increase the turbidity/siltation and/or the temperature of flows; or could decrease dissolved oxygen (DO) in flows; or could substantially change pH of flows and thereby constitute a threat to aquatic life, the activity shall be halted until effective control devices are installed, or abatement procedures are initiated. Turbidity and temperature of inlet and outlet flows shall not exceed baseline conditions following installation or removal and stabilization of water diversion structure(s). Dissolved oxygen shall not be significantly below baseline conditions (1 ppm decrease) and pH shall not be significantly different than baseline conditions (1 unit of pH change) within inlet and outlet flows. Baseline conditions shall be established prior to construction activities.

16. Off-stream siltation ponds shall be constructed in a location and a manner that prevents discharge of sediment into the stream during periods of high flows.

17. Siltation ponds shall be constructed of non-erodible materials.

18. All siltation pond materials and trapped sediments shall be removed from the stream immediately following completion of work. Removal and disposal of materials and sediment shall be done in a location and manner which prevents discharge of sediment into the stream.

General Best Management Practices:

19. A qualified biological monitor having the appropriate qualifications, shall be on site or on call periodically during routine maintenance activities operations. If any native wildlife species are found in the path of construction, the monitor shall relocate the species to a safe location. Protective measures shall be taken to prevent the migration into or the return of species into the work site where feasible and appropriate. Survey field notes shall be kept and submitted to the Department in the annual report.

20. Materials removed from the stream shall not be stockpiled in the streambed or on its banks overnight where it could be washed into the stream via rainfall or runoff. Stockpile site(s) shall be shown on the plans, and selected to ensure compliance with the other provisions of this Agreement. Where possible, brush (native plants only) piles may be left in upland areas to provide wildlife habitat.

21. All fill materials, including material used for sandbags, shall be obtained from weed free upland sources to the maximum extent feasible. Use of beach or dune sand for sandbags is prohibited.

22. Structures and associated materials not designed to withstand high water flows shall be moved to areas above high water mark before such flows occur.

23. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, construction waste, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any logging, construction, or associated activity of whatever nature shall be allowed to enter into or placed where it may be washed by rainfall or runoff into, waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream or lake, except within designated trash receptacles.

24. The District shall comply with all litter and pollution laws. All contractors, subcontractors and employees shall also obey these laws and it shall be the responsibility of the District to insure compliance.

25. Any equipment or vehicles driven and/or operated within or adjacent to the stream/lake shall be checked and maintained daily, to prevent leaks of materials

that if introduced to water could be deleterious to aquatic life. Any and all heavy equipment shall be removed from the streambed at the end of each work day.

26. Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the stream/lake shall be positioned over drip pans.

27. No equipment maintenance shall be done within or near any stream/lake margin where petroleum products or other pollutants from the equipment may enter these areas via rainfall or runoff.

28. Equipment shall not be operated in wetted areas (including but not limited to ponded, flowing, or wetland areas) except as to complete the project described in the plans.

29. The clean-up of all spills shall begin immediately. The Department shall be notified immediately by the District of any spills and shall be consulted regarding clean-up procedures.

30. Raw cement/concrete or washings thereof, asphalt, paint, construction waste, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from project related activities, shall be prevented from contaminating the soil and/or entering the waters of the state. Any of these materials, placed within or where they may enter a stream or lake, by the District or any party working under contract, or with the permission of the District, shall be removed immediately.

31. Water containing mud, silt, or other pollutants from equipment washing or other activities, shall not be allowed to enter a stream/lake or take place in locations that may be subjected to high flows.

32. Rock, gravel, and/or other materials shall not be imported to, taken from or moved within the bed or banks of the stream, except to complete the project described in the project plans.

33. If vacuum trucks are used to clean up any spills or contamination, the vacuum hose shall be placed in a 3 to 4 square foot area, protected on all side by exclusionary fencing to prevent the uptake of any aquatic life. Appropriate screening shall be placed on the intake. Contact the Department fisheries biologist, Maurice Cardenas (805) 640-1852 for screen size requirements.

34. No herbicides shall be used when wind velocities are above 5 miles per hour.

RESOURCE PROTECTION

35. All exotic fish, invertebrate, amphibian, and reptile species shall, upon positive identification, be dispatched and disposed of properly. Disposal options may include burial or disposal of the exotic species in a trash receptacle.

Vegetation Removal:

36. No living native vegetation, with a diameter at breast height (DBH) in excess of 4 inches, shall be removed from the bed, bank or channel of the stream, except as approved as part of the routine operations and maintenance program.

37. In areas of temporary disturbance, where vegetation must be removed, native plants shall be cut to ground level with hand operated power tools rather than by grading. No replanting will be required for vegetation of this size if it is cleared in this manner.

38. A complete inventory of native trees in excess of 4 inches DBH which may be removed shall be shown on the plans and identified by species and DBH.

39. No herbicides shall be used outside facility limits unless specifically authorized, in writing, by the Department.

40. The District shall remove invasive vegetation (tree tobacco, castor bean, giant reed, ice plant, etc.) from facilities and shall dispose of it in a manner and a location which prevents reestablishment.

41. Whenever possible, invasive species shall be removed by hand or by hand-operated power tools rather than by chemical means. Where control of non-native vegetation is required within the bed, bank, or channel of the stream, the use of herbicides is necessary, and there is a possibility that the herbicides could come into contact with water, the District shall employ only those herbicides, such as Aqua Master (Glyphosate), which are approved for aquatic use. If surfactants are required, they shall be restricted to non-ionic chemicals, such as Agri-Dex, which are approved for aquatic use.

42. Giant reed (*Arundo donax*), if present, shall be cut to a height of 6 inches or less, and the stumps painted with an herbicide approved for aquatic use within 5 minutes of cutting. Herbicides shall be applied at least three times during the period from May 1 to October 1 to eradicate these plants. Where proposed methods for removing giant reed deviate from this procedure, the District shall present alternative methods, in writing, to the Department for review, prior to construction.

Wildlife:

43. Avoidance and relocation measures will be taken for all native wildlife that are observed in the work area during any project. All wildlife shall be relocated out of the work area by a qualified biologist with appropriate permits in order to not needlessly take any wildlife (Section 2000 Fish and Game Code).

Threatened and Endangered Species:

44. If threatened or endangered bird species are observed in the area, no work shall occur during the breeding season (March 1 to September 15) to avoid direct or

indirect (noise) take of listed species and State and/or Federal threatened/endangered species permits may be required prior to commencing project activities. This Agreement does not authorize the take of federal or state-listed threatened and/or endangered species.

45. If any threatened or endangered species are found within 500 feet of the work area, the District shall contact the Department immediately of the sighting and shall request an on site inspection by Department representatives (to be done at the discretion of the Department and within 24 hours of receipt of the request) to determine if work may begin/proceed. If work is in progress when sightings are made, the District shall cease all work within 500 feet of the area in which the sighting(s) occurred and shall contact the Department immediately, to determine if work may recommence.

46. Should any rare, threatened or endangered species occur in the area, the District shall submit, for Department review and approval, a plan to ensure that no rare, threatened or endangered species are disturbed during project implementation. The plan shall be approved by the Department prior to initiation of any work.

47. The District shall apply any herbicides in accordance with state and federal law. No herbicides shall be used where threatened or endangered species occur and may be adversely impacted.

48. An environmental education program shall be created and conducted for all personnel entering the work area where sensitive species occur. The educational program will show illustrations of the sensitive native species and their habitat, discuss measures to protect the species, and discuss the notification protocol if sensitive species are observed.

Fish Passage:

49. When any dam or other artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain aquatic life below the dam/obstruction pursuant to Fish and Game Code section 5937.

50. If flowing or ponded water and sensitive aquatic wildlife is observed within the proposed work limits, the District shall telephone the Department, Dan Blankenship at (661) 259-3750, prior to commencing activities within the bed, bank, and channel of stream(s). The District shall leave his/her name, date and time called, telephone number, the stream name, work location, nature of planned activities and proposed schedule.

51. The District shall report all fish mortality to the Department, Dan Blankenship at (661) 259-3750. The report shall be made within 24 hours of discovery.

52. The District shall install an exclusionary fish screen on the upstream portion of any created diversion channel, until the turbidity/siltation decreases to pre-disturbance

conditions; and the area downstream area has sufficient depth and temperature to support native fish species.

53. The District shall have a sufficient number of qualified fisheries biologists involved with the capture and relocation of all native fish, so as not to put unnecessary stress on the fish during the capture and relocation efforts.

54. Dewatering pump intakes shall be screened. Dewatering of the work area shall occur in a manner which allows native fishes to be retrieved unharmed. All pumping equipment shall be placed in a portable, stable spill containment device. The intake screen shall meet the requirements of National Marine Fisheries Service and the Department of Fish and Game which require no greater than 3/8" mesh, and intake velocities less than 0.8 feet/second.

55. The District shall check intake screens daily and remove excessive algae and debris from the screen surface. Maintenance shall not alter the screen mesh size or intake velocity.

56. No work shall be conducted on the streambed within 100 feet of flowing or ponded water, which have potential to support steelhead. Adult steelhead are expected to be present during periods of high flow (January though March) and smolt are likely to be in the area during periods of receding flows (March through July). National Marine Fisheries Service Biologist shall be contacted to coordinate additional fish salvage and avoidance measures.

57. Any California black walnut, cottonwood, or sycamore trees greater than 4 inches DBH that must be removed from the work area shall be replaced in kind. Replacement ratios shall be 10:1. All planted trees shall have a minimum of 75 percent survival (by species) the first year and 100 percent thereafter. If the survival requirements have not been met, the District is responsible for replacement planting to achieve these requirements. Replacement trees shall be monitored and maintained for a period of five (5) years.

58. The District shall recontour the streambed to its pre-disturbance condition to the maximum extent feasible, including the re-creation of a low flow channel.

59. Planting, maintenance, monitoring and reporting activities shall be overseen by a specialist familiar with restoration of native plants.

60. All plants shall be planted in randomly spaced, naturally clumped patterns. Plantings shall include native species.

REPAIR

61. Maintenance operations shall be conducted in accordance with all applicable Best Management Practices described in this Agreement.

62. If said maintenance deviates from that described in the Program EIR (May 2008),

and protected resources develop in the facility/structure, the District shall notify the Department of the existing condition of the work area prior to initiating maintenance activities to determine the extent and quality of resources. Following this coordination, the District may proceed with maintenance activities following receipt of Department concurrence that the activity would not adversely affect protected resources.

63. Excavated material and debris resulting from maintenance activities shall be disposed of in an appropriate manner and location. Disposal of excavated material and debris in rivers, streams, lakes, ponds, or other natural [upland] areas that support protected resources is prohibited.

ADMINISTRATION

CEQA and Permit Compliance:

A final certified CEQA document shall be provided prior to execution of this Agreement.

Copies of all permits required by the U.S. Army Corps of Engineers, California Coastal Commission, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and/or Los Angeles Regional Water Quality Control Board shall be provided to the Department prior to initiation of construction.

Subsequent Department Approvals:

A copy of the water diversion/water control plan if it deviates from methods included in the Water Diversion Guide shall be submitted to the Department for review prior to construction.

A copy of the Mitigation, Monitoring and Reporting Plan shall be submitted to the Department for review and approval prior to facility maintenance that requires impacts to native vegetation as described in this Agreement.

The Department shall review all maintenance project or activity plans submitted subsequent to execution of this Agreement within 30 days of receipt. The Department shall provide written notification to the District if there are any comments on the plan or to indicate approval. Electronic mail notification will suffice as an appropriate means of communication between the Department and the District on post-Agreement approvals.

Legal Notices:

All provisions of this Agreement remain in force throughout the term of the Agreement. Any provisions of the Agreement may be amended or the Agreement may be terminated at any time provided such amendment and/or termination is agreed to in writing by both parties. Mutually approved amendments become part of the original Agreement and are subject to all previously negotiated provisions.

If the District or any employees, agents, contractors and/or subcontractors violate any of the terms or conditions of this agreement, all work shall terminate immediately and shall not

proceed until the Department has taken all of its legal actions.

The District shall provide a copy of this Agreement, to all contractors, subcontractors, and the District's project supervisors. Copies of this Agreement and all required permits and supporting documents shall be readily available at the work site at all times during periods of active work, and must be presented to any Department personnel, upon demand. All contractors shall read and become familiar with the contents of this Agreement.

The District shall notify the Department, in writing, at least five (5) days prior to initiation of project activities and at least five (5) days prior to completion of project activities that may affect threatened or endangered resources as described in this Agreement. Notification shall be sent to the Department at 4949 Viewridge Avenue, San Diego 92123, Attn: ES. FAX Number (858) 467-4299, Notification No. 1600-2004-0512-R5. Concurrent notification to Dan Blankenship, P.O. Box 221480, Newhall, 91322-1480, 661-259-3750, is also requested.

The District herein grants to Department employees and/or their consultants (accompanied by a Department employee) the right to enter the project site at any time, to ensure compliance with the terms and conditions of this Agreement and/or to determine the impacts of the project on wildlife and aquatic resources and/or their habitats.

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

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

a. The Department determines that the information provided by the District in support of this Agreement/Notification is incomplete or inaccurate;
b. The Department obtains new information that was not known to it in preparing the terms and conditions of this Agreement;
c. The condition of, or affecting fish and wildlife resources change; and
d. The Department determines that project activities have resulted in a substantial adverse effect on the environment.

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

Reporting Requirements:

The District shall provide an Annual Work Plan to the Department by April 30 of each year describing the projects proposed under the Program for 30 day review by the Department. Additional proposed maintenance projects may be submitted for 30 day review periodically each year. By August 31st of each year, the District shall submit an Annual Monitoring Project Report describing the projects completed under the Program, areas affected, natural resource enhancements, modifications to the bed, bank, or channel, and gains to riparian or wetland areas. For projects where revegetation was a component, the report shall include a detailed description of the revegetation efforts in light of the defined performance criteria, representative photographs taken from designated photo-stations, problems encountered, and contingency measures used or planned if necessary to ensure revegetation success. Projects from previous years shall also be included in each annual report until revegetation success has been achieved.

Notices:

Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and be sent by first class mail, addressed as follows, or to such other address as either party shall designate by written notice to the other:

To District:

Director
Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, CA 93009
805-654-2040

To the Department:

California Department of Fish and Game
Attn: Streambed Alteration Program/Dan Blankenship
4949 Viewridge Avenue
San Diego, CA 92123
dsblankenship@dfg.ca.gov

Fees:

California Code of Regulations, Title 14, Section 699.5, establishes fees for projects subject to Fish and Game Code Sections 1600 et seq. Fees applicable to activities undertaken pursuant to this Agreement will be those currently in effect at the time of the activity. The 2008 fees include a $2,400 base fee for long term routine maintenance agreements, of which the District has paid $1,390.50 in 2004, and agrees to pay the balance prior to the execution of this agreement. The District also agrees to pay the currently applicable fee for each maintenance project per calendar year (currently $100 per project). The per project fee will be paid when the Annual Monitoring Project Report is submitted in August, after the end of the District's fiscal year, June 30. Appendix A, attached to this agreement lists the 98 maintenance project facilities included in this agreement.

Administrative:

It is understood the Department has entered into this Streambed Alteration Agreement for purposes of establishing protective features for fish and wildlife. The decision to proceed with the project is the sole responsibility of the District, and is not required by this Agreement. It is further agreed all liability and/or incurred cost related to or arising out of the District's projects and the fish and wildlife protective conditions of this Agreement, remain the sole responsibility of the District. The District shall agree to hold harmless the State of California and the Department of Fish and Game against any related claim made by any party or parties for personal injury or any other damages.

Entire Agreement:

This Agreement constitutes the entire Agreement and understanding between the Department and the District. The District Program EIR contains the full analysis for the environmental protection measures developed for the ongoing routine Operations and Maintenance Program for the flood control channels and facilities throughout Ventura County. The BMPs applicable to this agreement and developed in the District Program EIR were used as the basis for the conditions in this agreement. Specific edits to the BMPs were made to clarify the mitigation necessary to minimize environmental impacts.

Other Environmental Laws, Statutes, and Regulations:

This Agreement does not constitute any form of authorization, permit, biological opinion, or compliance with the requirements and provisions of any other statute, regulation, requirement, or ordinance respecting the protection or conservation of fish and wildlife resources. Those statutes include, but are not limited to, the California Environmental Quality Act, the California Endangered Species Act and the Federal Endangered Species Act.

Concurrence:

This Agreement becomes effective on the Departments signature and the construction portion terminates on December 31, 2019. This Agreement shall remain in effect until the District satisfies the mitigation/maintenance terms/conditions of this Agreement. This agreement was prepared by Dan Blankenship.

Ventura County Watershed Protection District

Name (signature) Date: July 9, 2009

NORMA J. CAMACHO
Name (printed)

DIRECTOR
Title

California Department of Fish and Game

3 June 09

Helen Birss Date
Environmental Program Manager
South Coast Region

For

STREAMBED ALTERATION AGREEMENT NO. 1600-2004-0512-R5
VCWPD INDEX OF FACILITIES JUNE 23, 2009

Zone 1: Ventura River Watershed

List #	Facility Name	Reaches
1	Cozy Dell/ McDonald Canyon/ Bypass & Dam	41311/ 41301, 41302, 41303/ 41911
2	Dent Drain/ Dent 2°/ Dent Debris Basin	41121, 41122, 41124/ 41721/ 41903
3	Fox Canyon	41421, 41422, 41423, 41424
4	Happy Valley Drain / Happy Valley Drain South	41281, 41282, 41283, 41284, 41285/ 41264
5	Howard Ave 2°	41717
6	Kenewa St. 2°	41716
7	Live Oak Creek Diversion & Dam	41217, 41218, 41904
8	Matilija Dam	41901
9	Matilija Hot Springs Gauge Maintenance	602
10	Mirror Lake Drain/ Tributary	41231, 41232/ 41241
11	North Fork Matilija Creek Stream Gauge	604
12	Oakview Drain	41205
13	Prince Barranca / San Jon Barranca	41561, 41562, 41563, 41564/ 41551, 41552, 41553, 41554
14	San Antonio Creek at Casitas Springs Stream Gauge	605
15	Skyline Drain / Felix Drive 2°	41221, 41222, 41223, 41224/ 41712
16	Stewart Canyon/ Stewart Debris Basin	41411, 41412, 41413, 41414/ 41902
17	Thacher Creek at Boardman Road Stream Gauge	669
18	Thatcher Creek	41443
19	Ventura River at Foster Park Stream Gauge	608
20	Ventura River Bank Protection downstream of Foster Park/ Vince St. 2° / Stanley Ave Drain/ Simpson St. 2°/ Ramona St. 2°/ Peking 2°/ Parkview Drive 2°/ Harrison 2°/ Fresno Canyon & Basin/ Freeway Side Drains 1-5/ Cal-Trans 2°/ Canada Larga/ Canada de San Joaquin/	41011, 41012, 41015/ 41732/ 41110/41731/ 41730/ 41729/ 41727/ 41751, 41752, 41753, 41754, 41755/ 41728/ 41152/ 41131, 41134/
21	Ventura River Bank Protection u/s of Foster Park/ Parkview Drive 2°/ Fresno Canyon & Basin	41021,41023, 41031, 41032, 41041/ 41701/ 41181, 41182

2°= Secondary, an open or underground culvert draining to facility or river.

Zone 2: Santa Clara River Watershed

List #	Facility Name	Reaches
1	Adams Debris Basin	43906
2	Arundell Barranca/ Det. Basin/ Reservoir Barranca/ Barlow Barranca/ Mills Road Drain/ Telephone Road Drain	42401, 42402, 42403, 42404, 42405, 42406, 42407, 42408, 42409/ 42901/ 42441/ 42421/ 42411/ 42432
3	Bardsdale Ditch, Santa Clara River Levee	43161/ 42037
4	Basolo Ditch	43191
5	Beardsley Wash/ Camarillo Hills Drain/ Nyeland Drain, Nyeland Trib. Lateral A/ Santa Clara Ave. Drain& Diversion/ Revelon Slough/ Wright Road Drain/	42151, 42152, 42154/ 42131/ 42161, 42162, 42171/ 42191, 42192, 42193, 42181/ 42101, 42102, 42104/ 42201
6	Brown Barranca/ Saticoy Drain & 2°	42511, 42514/ 42521, 42522, 42702
7	Cavin Road Drain/ Debris Basin	43221, 43222/ 43902
8	Doris Drain	42381
9	Ellsworth Barranca	42552
10	Fagan Canyon/ Debris Basin	43051, 43052, 43053, 43054, 43055, 43056/ 43907
11	Franklin Barranca/ Debris Basin/ Wasson Barranca	42531, 42532, 42534/ 42902/ 42541/ 42542
12	Grimes Canyon	43181, 43182
13	Harmon Barranca/ Ondulando Barranca	42471, 42472, 42473, 42474, 42475, 42476, 42477, 42478/ 42482
14	Hueneme Drain/ Hueneme Pump Station/ J St. Drain	42332/ 42331/ 42321, 42322
15	Oxnard Industrial Drain/ Rice Road Drain	42301, 42302, 42303, 42304/ 42311, 42312, 42313, 42314, 42317, 42318, 42319
16	Oxnard West Drain/ West Wooley Road Drain	42351, 42352, 42353, 42354, 42355/ 42361, 42362
17	Peck Road Drain	43041, 43042, 43043
18	Piru Storage & Stockpile	43009
19	Pole Creek / Debris Basin	43201, 43202, 43203, 43204/ 43905
20	Real Canyon/ Debris Basin/ Warring Wash/ Warring Wash South/ & Basin	43251, 43252, 43253, 43254, 43255/ 43903/ 43261, 43262, 43263/ 43271/ /43904
21	Santa Clara River at 12th St. Bridge Stream Gauge	720
22	Santa Clara River at UWCD Freeman Diversion Stream Gg.	724
23	Santa Clara River at Victoria Avenue Bridge Stream Gauge	723

Zone 2: Continued

List #	Facility Name	Reaches
24	Santa Clara River Levee Harbor Blvd. to Freeman Diversion/ Central Avenue Drain/ Clark Barranca/ Sudden Barranca/ Victoria Ave. Drain/ North El Rio Drain/ El Rio Drain/ Moon Ditch/ Montalvo Golf Course	42012, 42017, 42018, 42021, 42025, 42031/ 42205, 42206/ 42491, 42492, 42493, 42494/ 42501, 42502, 42504, 42505, 42506/ 42704/ 42395/ 42391/ 42461, 42462, 42463/ 42701
25	Santa Clara River Levee upstream of Freeman Div.	42035, 42036, 42037
26	Santa Paula Creek	43061, 43062, 43065
27	Santa Paula Creek at Mupu Bridge Stream Gauge	709
28	Saticoy Storage & Stockpile	42009
29	Sespe Creek, Levee/ Jepson Wash/ Jepson Basin/ Keefe Ditch	43308, 43305. 43306/ 43351, 43352/ 43901/ 43361, 43362
30	Silver Strand Drain & Pump Station	42342, 42346, 43249
31	Todd Barranca at Telegraph Rd Bridge Stream Gauge	738
32	Willard Road Drain 2º	43701

2º= Secondary, an open or underground culvert draining to facility or river.

Zone 3: Calleguas Creek Watershed

List #	Facility Name	Reaches
1	Arroyo Colorado/ Beardsley Wash	45271/ 45241, 45243, 45245, 45247, 45248
2	Arroyo Conejo N Fork & Trib./ Waverly Channel/ Castano Channel & Tributary/ Olsen Channel/	46161, 46164, 46165, 46167, 46171, 46172/ 46202, 46203/ 46181, 46182, 46183, 46191, 46192/ 46151, 46152, 46153
3	Arroyo Conejo/ Park Drain/ Thousand Oaks N Drain/ Lynn Ranch 2°/ Erbes Road Drain/ Los Robles Drain/ Cm Dos Rios 2°	46103, 46104, 46105, 46106, 46107, 46108/ 46211/ 46231, 46232, 46233, 46234, 46235/ 46749/ 46241/ 46251, 46252/ 46752
4	Arroyo Las Posas	45051, 45053, 45063, 45065
5	Arroyo Santa Rosa u/s Conejo Ck confluence/ Blanchard Road Drain, Arroyo Santa Rosa Stream Gauge at Blanchard Rd/ Rotsler Ditch 2°/ Duval Rd. Drain 2°/ Santa Rosa Road Deb. Basin	46072, 46073 ,46074, 46075, 46076, 46077/ 46702/ 46081, 46083, 46084, 46086/ 838 / 46701/ 45703/46901, 46902
6	Arroyo Santa Rosa d/s Conejo Cr. confluence	46071
7	Arroyo Simi/ Stream Gauge at Hitch/ Brea Canyon/ Castro Williams Channel, Basin/ Moorpark #1 2°	47011, 47012, 47013, 47014, 47015, 47016, 47017, 47021, 47022, 47024, 47025, 47027, 47031, 47033, 47035, 47037, 47038/ 841/ 47311/ 47161, 47902/ 47701
8	Arroyo Simi/ Piedra Canyon/ Santa Susana Knolls Drain 2°/ Black Canyon 2°	47039/ 841/ 47571/ 47760/ 47750
9	Bus Canyon/ Bus Canyon Tributary	47351, 47352, 47353, 47354, 47355/ 47361, 47362, 47363, 47364
10	Calleguas Creek/ Stream Gauge at CSUCI/ Stream Gauge at Hwy 101 Stream Gauge/ Long Canyon	45021, 45023, 45025 , 45027, 45033, 45035, 45037/ 805/ 806/
11	Camarillo Hills Drain/ Edgemore Debris Basin/ Edgemore Drain/ Edgemore Tributary 2°/ Anacapa Drain/ W. Camarillo Hills Debris Basins E & W Branch/ W. Cam. Hills Drain/ Mission Drain/ Ponderosa Drain/ Las Posas Estates Det. Basin/ Las Posas Estates Drain/ Las Posas Estates Diversion/ N. Ramona Place Drain/ Arneill Drain/ Crestview Drain/ Crestview Basin/ Ramona Det. Basin	45141, 45143, 45144, 45145, 45147, 45148/ 45902/ 45161, 45163/ 45701/ 45211/ 45904, 45903/ 45171, 45173, 45175/ 45181, 45183/ 45191, 45192/ 45906/ 45224, 45225/ 45226/ 45231/ 45201/ 45151, 45153, 45155/ 45901/ 45907

Zone 3: Continued

List #	Facility Name	Reaches
12	Conejo Creek/ Mission Oaks Drain/ East Camarillo Drain/ Upland Road Drain	46011, 46012, 46013, 46014, 46015, 46016/ 46041, 46042/ 46031, 46037/ 46501
13	Conejo Mountain Creek/ Debris Basins #1 - #5	46121, 46906, 46907, 46908, 46909, 46910
14	Coyote Canyon/ Coyote Basin/ Puerta Zuela Barranca & Basin	45522/ 45911/45531, 45912
15	Dry Canyon Channel /Tributary	47381, 47382, 47383, 47384, 47385, 47386, 47387/ 47391
16	Erringer Road Drain/ Basin	47371,47373, 47375/ 47904
17	Ferro Ditch/ Ferro Basin	45301/ 45908
18	Flood Street	49059
19	Fox Barranca/ Debris Basin	45503, 45505, 45910
20	Gabbert Canyon/ Debris Basin/ Moorpark Storm Drain #1 & #2/ Walnut Canyon	47101, 47102, 47103/ 47901/ 47141, 47151/ 47111, 47112, 47114, 47116
21	Groves Place Drop Structure	45913
22	Happy Camp Canyon	47172, 47174
23	Home Acres Dam/ Home Acres Drain/ Peach Hill Wash-Basin	47909/ 47131, 47133/ 47121, 47123
24	Honda Barranca/ E. Fork/ Honda West Basin/ Santa Clara Ave Drain/ Milligan Barranca	45251, 45252, 45255/ 45261, 45262/ 45909/ 45293/ 45282, 45285, 45286
25	Hummingbird Creek/ White Oak Creek	47561, 47562, 47563/ 47551, 47552, 47553, 47554
26	Lang Creek/ Debris & Detention Basins	46221, 46222, 46223, 46224, 46225,46226/ DB3-31, DD3-31
27	Las Llajas Canyon/ Las Llajas Canyon Dam / Marr Diversion/ Kadota Fig Drain	47511, 47512, 47513/ 47908/ 47531, 47532/ 47521, 47522, 47523
28	Lewis Road Drain	45431, 45432, 45433, 45434
29	Long Canyon	45567
30	No.2 Canyon, Basin	47201, 47202/ 47203
31	North Simi Drain	47341, 47342, 47343, 47344, 47345
32	Pleasant Valley Rd. Drain	45133
33	Revelon Slough	45101, 45103, 45105
34	Runkle Canyon/ Debris Basin/ Storage & Stockpile Area/ Appleton Road Drain	47401, 47402, 47403, 47404/ 47907/ 47009/ 47411
35	Santa Susana W Drain/ Line C Det. Basin	47501, 47502, 47503/ DD3-30
36	Somis Drain/ Somis Drain East Tributary/ West Tributary	45451, 45452, 45453, 45454/ 45471/ 45461

Zone 3: Continued

List #	Facility Name	Reaches
37	South Branch Arroyo Conejo/ (Reino) Debris Basin/ Newbury Park S.O. No. 1, 2/ Conejo Valley 2º/ Jenny Drive 2/ South Potrero Det & Debris Basin	46111, 46112, 46113, 46114, 46115, 46118, 46124/ DB3-22/ 46141, 46142, 46143, 46131, 46133/ 46801/ 46800/ DD3-24
38	Strathearn Canyon	47182, 47184
39	Sycamore Canyon, & Dam/ Oak Canyon	47321, 47322, 47325/ 47903/ 47331
40	Tapo Canyon	47421, 47422, 47423, 47424, 47425
41	Tapo Hills Diversions Diversion / Basins #1 & #2	47421, 47432, 47433/ 47905, 47906

2º= Secondary, an open or underground culvert draining to facility or river.

Zone 4: Malibu Creek Watershed

List #	Facility Name	Reaches
1	Lake Eleanor Creek	48031
2	Medea Creek	48071, 48072
3	Potrero Creek/ Instream Basin	48021, 48023, 48025/ DB4-01
4	Schoolhouse 2	48041, 48042

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 82123
(858) 467-4201
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

December 30, 2019

Glenn Shephard
Ventura County Watershed Protection District (VCWPD)
800 South Victoria Avenue
Ventura, CA 93009
Glenn.Shephard@ventura.org

Subject: Extension of Lake or Streambed Alteration Agreement; Notification No. 1600-2004-0512-R5; VCWPD Facilities Operation and Maintenance Project; Ventura County

The California Department of Fish and Wildlife (CDFW) received your request to extend Lake or Streambed Alteration Agreement (Agreement) and extension fee, for the above referenced agreement. CDFW hereby grants your request to extend the Agreement expiration from December 31, 2019 to December 31, 2024. All other conditions in the original Agreement remain in effect.

Copies of the original Agreement and this letter must be readily available at project worksites and must be presented when requested by a CDFW representative or other agency with inspection authority.

If you have any questions regarding this letter, please contact Joseph Stanovich, at (562) 430-7642 or by email at Joseph.Stanovich@wildlife.ca.gov.

Sincerely,

Steve Gibson
Senior Environmental Scientist (Supervisory)

ec: Joseph Stanovich, CDFW
Malinda Santonil, CDFW
Pam Lindsey, VCWPD

RWQCB 401 CERT. NO. 14-038

Los Angeles Regional Water Quality Control Board

December 20, 2019

Glenn Shephard
Director
Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, CA 93009

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
No. 7018 2290 0002 2267 5775

Dear Mr. Shephard:

RE: CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND ORDER FOR THE VENTURA COUNTY ROUTINE MAINTENANCE PROGRAM (4WQC40114038)

Enclosed please find a Clean Water Act Section 401 Water Quality Certification and Order, authorized by Los Angeles Regional Water Quality Control Board Executive Officer, Renee Purdy. This Order is issued to the Ventura County Watershed Protection District for the Ventura County Routine Maintenance Program (Project). Attachments A through C of the Enclosure are also part of the Order.

This Order is issued in response to an application submitted by the Ventura County Watershed Protection District for proposed Project discharges to waters of the state, to ensure that the water quality standards for all waters of the state impacted by the Project are met. You may proceed with your Project according to the terms and conditions of the enclosed Order.

If you require further assistance, please contact Valerie Carrillo Zara by phone at (213) 576-6759 or by email at Valerie.CarrilloZara@waterboards.ca.gov. You may also contact LB Nye, Regional Programs Section Chief, by phone at (213) 576-6622 or by email at LB.Nye@waterboards.ca.gov.

Sincerely,

Jenny Newman
Assistant Executive Officer
Los Angeles Water Quality Control Board

Enclosures (1): Order for Ventura County Routine Maintenance Program, File No. 14-038

cc: [Via email only] (w/ enclosure):

Pam Lindsey
Watershed Ecologist
Ventura County Watershed Protection District

Elizabeth Payne
CWA Section 401 WQC Program
Division of Water Quality
State Water Resources Control Board

Antal Szijj
U.S. Army Corps of Engineers
Regulatory Division, Ventura Field Office

Sarah Rains
California Department of Fish and Wildlife
Streambed Alteration Team
Los Alamitos Field Office

Melissa Scianni
Office of Water
US EPA, Region 9

Chris Dellith
U.S. Fish and Wildlife Service
Ventura, CA

Jason Weiner
Associate Director, Attorney
Ventura Coastkeeper

Brian Trautwein
Watershed Program Director
Environmental Defense Center

California Coastal Commission
89 South California St., Suite 200
Ventura, CA 93001

Kira Redmond
Executive Director
Santa Barbara Channel Keeper
714 Bond Street
Santa Barbara, CA 93103

Los Angeles Regional Water Quality Control Board

CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND ORDER

Effective Date: December 20, 2019

Program Type: Fill/Excavation

Reg. Meas. ID:	393189
Place ID:	798768
WDID:	4WQC40114038
NWP:	Individual Permit
USACOE#:	SPL-2018-00040-AJS
R4 File No	14-038

Project Type: Channel Construction and Maintenance

Project: Routine Operations and Maintenance Program (14-038 Renewal)

Applicant: Ventura County Watershed Protection District

Applicant Contact: Glenn Shephard, P.E.
Director
800 South Victoria Avenue
Ventura, CA 93009
Phone: (805) 654-2040
Email: glenn.shephard@ventura.org

Applicant's Agent: Ms. Pam Lindsey
Watershed Ecologist
800 South Victoria Avenue
Ventura, CA 93009
Phone: (805) 654-2036
Email: pam.lindsey@ventura.org

Water Board Staff: Valerie Carrillo Zara
Engineering Geologist
320 W. 4th Street, Suite 200
Los Angeles, CA 90013
Phone: 213-576-6759
Email: Valerie.carrilloZara@waterboards.ca.gov

Water Board Contact Person:
If you have any questions, please call Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) Staff listed above or (213) 576-6600 and ask to speak with the Water Quality Certification and Wetlands Unit Program Manager.

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I. Order

This Clean Water Act (CWA) section 401 Water Quality Certification action and Order (Order) is issued at the request of the Ventura County Watershed Protection District (hereinafter Permittee) for the Project. This Order is for the purpose described in the application and supplemental information submitted by the Permittee. The application was received on May 22, 2019. The application was deemed complete on June 18, 2019.

II. Public Notice

The Los Angeles Water Board provided public notice of the application pursuant to California Code of Regulations, title 23, section 3858 from May 23, 2019 to the effective date of the Order. The Los Angeles Water Board did not receive any comments during the comment period.

III. Project Purpose

The objective of the Project is to maintain the proper operation of the Permittee's flood control facilities. Maintenance preserves the capacity of the facility and prevents the accumulation of vegetation and sediments that could increase flood hazards. Maintenance and repair also preserve and restore facility structural integrity.

IV. Project Description

The mission of the Permittee is to protect life, property, watercourses, watersheds, and public infrastructure from the dangers and damages associated with flood and storm waters. The Permittee maintains various flood control facilities throughout Ventura County (refer to Attachment D for list of facilities).

The Permittee maintains various flood control facilities throughout Ventura County to ensure proper operations. Maintenance typically involves removal of sediment and vegetation which reduce conveyance capacity of flood control channels and reduce capacity within storage facility basins. Maintenance of facilities includes implementation of environmental Best Management Practices (BMPs) as part of the long-term program for specific types of maintenance activities included within this Order. These BMPs are included in this Order and are updated as necessary via the Annual Work Plan and Addenda review process. The BMPs describe precautions and procedures to be used when planning and implementing maintenance activities that could affect sensitive environmental resources including wetlands, riparian habitat, aquatic habitat, threatened and endangered species, species of special concern, water quality, and hydraulic conditions in the watershed.

The Permittee currently operates and maintains approximately 216 miles of linear channels, inlets, pipe and box culverts, four pump stations, and 56 debris and/or detention basins with dams. Detailed information about the facilities resides in the Catalog of Facilities, which has been amended via the Annual Work Plan and Addendas. Summaries of facility types are listed in the *Final Program Environmental Impact Report: Environmental Protection Measures for the Ongoing Routine Operations and Maintenance Program* (State Clearinghouse No. 2002091107, May 2008) (Final Program EIR). Each of these types of facilities includes various fencing types, gates, access roads, and other appointments associated with security and access.

Upon completion of the Final Program EIR, a Clean Water Act Section 401 Certification for routine maintenance was issued by the Los Angeles Water Board on August 17, 2009 (File

No. 08-148). A second Section 401 Certification was issued on August 27, 2014 (File No. 14-038), expiring on August 26, 2019. This Certification supersedes the previously authorized Certification 14-038 and constitutes a renewal for an additional 5 years.

The Permittee must comply with:

- Federal Emergency Management Agency 44 CFR 65.10 (flood insurance programs).
- U.S. Army Corps of Engineers "Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures" Technical Letter No. 1110-2-571, April 9, 2009.
- CFR Title 33 Navigation and Navigable Waters Part 208- Flood Control Regulations (maintenance standards).
- CA Water Code Division 3 Dams and Reservoirs (maintenance standards)

The ongoing Routine Operations and Maintenance Program includes the following 10 categories (A - J) of maintenance activities as described in the Final Program EIR.

Category A: Channel and Basin Maintenance

This category includes the physical removal or "cleanout" of sediments, vegetation, rock, and trash that accumulate in debris and detention basins, as well as channel facilities, or any Permittee maintained flood control infrastructure. Channel facility types vary from fully or partially lined with rock or concrete, to entirely earthen. Maintenance activities typically involve heavy equipment to excavate, push, pile, and load material into trucks to haul to appropriate stockpile or disposal locations. The majority of work is conducted within the footprint of the existing facilities. Work may be conducted during any time of year during dry weather conditions. Temporary earthen access roads must be constructed in some facilities to allow for equipment and truck access. These are composed of clean fill and are removed when maintenance is completed.

All concrete-lined channels are cleaned at least once per year, prior to the wet season, to remove all sediment, algae, undesirable vegetation, and trash in accordance with the provisions of the Municipal Separate Storm Sewer (MS4) Permit issued to the Permittee by the Los Angeles Water Board (Order R4-2010-0108: NPDES Permit No. CAS004002, July 8, 2010 (Ventura County MS4 Permit), Section G. I. 5.(f) Storm Drain Maintenance. This permit is amended periodically, but this requirement is unlikely to substantively change.

Channels, banks, dams, levees, and other facilities are repaired and reshaped following erosion events. On site or imported (clean) materials are typically used to reshape and recompact engineered fills and slopes. Work areas within the Permittee facilities are returned to pre-existing (as-built) conditions, unless out-of-kind repairs are approved via the Annual Work Plan and Addenda process.

Category B: Brush and Weed Control Activities

The integrity of levees, floodwalls, embankment dams, and appurtenant structures is paramount to the public health, safety, and welfare. Vegetation growth can create both structural and seepage instabilities, prevent adequate inspection, and create obstacles to maintenance and flood-fighting/flood-control activities. Herbicides, equipment, or manual labor are used to remove or reduce vegetation as part of the Routine Operations and Maintenance Program.

Vegetation must be controlled for the following reasons:

- To allow for the proper inspection, surveillance, and monitoring of all structures and adjacent areas for seepage, cracking, sinkholes, settlement, displacement, and other signs of distress.
- To allow access for normal and emergency Operations and Maintenance activities.
- To prevent root-related damage to structures, such as shortened seepage paths through embankments and/or foundations; voids in embankments and/or foundations due to decayed roots or fallen trees; clogged seepage collector systems; and expansion of cracks or joints in concrete walls, spillway floors, and canal linings.
- To limit those habitat characteristics that encourage the creation of animal burrows.
- To allow full design-discharge capability of waterways, spillway inlet and outlet channels, outlet-works discharge channels, and other open conveyance channels.

Vegetation-free zones are maintained at most facilities. The vegetation-free zone is a three-dimensional corridor surrounding all levees, floodwalls, embankment dams, and critical appurtenant structures. This corridor must be free of obstructions to assure adequate access by personnel and equipment for surveillance, inspection, maintenance, monitoring, and flood-fighting. The minimum width of the corridor shall be the width of the levee, floodwall, or embankment dam, including all critical appurtenant structures, plus 15 feet on each side, measured from the outer edge of the outermost critical structure.

The vegetation-free zone serves a secondary purpose of reducing potential root impacts by providing distance between root systems of adjacent vegetation and levees, floodwalls, embankment dams, and appurtenant structures, thereby moderating reliability risks associated with the following: (1) potential piping and seepage due to root penetration; and (2) structural damage (e.g., a hole in the ground surrounded by an area of disturbed earth) resulting from flood or wind-driven tree overturning.

Vegetation is removed or reduced by herbicides in a 15-foot wide zone at the base of any bank protection (e.g., concrete, riprap) to provide an unobstructed view of the toe of the slope to allow for visual inspection. Also, vegetation will be removed or reduced by herbicides along both sides of access roads along channels (10-30 feet from edge of the road) for fire abatement purposes.

The Permittee uses a variety of herbicides, all of which are approved by the Environmental Protection Agency (EPA). The Permittee uses only those products approved for aquatic work by the EPA for maintenance work within the wetted bed and banks of channels and basins. Other products are used in dry portions of facilities. The Permittee applies herbicides throughout the year in areas of concern to prevent or manage undesirable plant cover. It is the Permittee's objective to keep the undesirable vegetation from becoming established through strategic pre-emergent and early growth stages spraying, rather than to treat mature plants. Only the minimum quantity of herbicide needed to achieve control goals is applied. In all cases of herbicide treatment, the Permittee complies with the current Ventura County MS4 Permit.

As an alternative to herbicide treatment, the Permittee removes undesirable plants in channel and basin bottoms by mechanical means (i.e., disking, mowing, or hydroaxe) or by hand crews. Disking and mowing are common weed control methods for basin and channel bottoms during the summer and fall when basins are dry enough for equipment to enter.

Category C: Access Road Work Activities

The Permittee maintains access roads associated with facilities on an as-needed basis. Most of the access roads have a compacted gravel surface which needs periodic resurfacing due to normal deterioration from use and erosion. Resurfacing roads generally occurs in the winter. Base aggregate is placed on the road and compacted with heavy equipment. The Permittee maintains a limited number of asphalt roads along channels and at basins, which are repaired as needed. Access road work generally occurs within previously designated road areas.

Category D: Facilities Repair and Maintenance for Structural Integrity

Facilities deteriorate over time and may require repair or reconstruction, particularly after a winter with high flood flows. This maintenance category includes gate and fence repair, the repair of bank protection damaged from flood flows, including grouted and ungrouted riprap; pipe and wire revetments; earthen slopes (banks, levees, dams); sheet pile walls; rock and/or concrete weirs/groins; concrete piers; flap gates; bollards/debris racks; concrete inlets, outlets, aprons, wing walls, and concrete sack walls.

Repair work generally uses in-kind materials within the original facility footprint. Proposals for minor modifications of repair materials and work footprints are submitted by the Permittee for regulatory agency review during the Annual Work Plan and Addenda approval process. Various types of heavy equipment are used and work will typically be conducted from both the top of the banks and the channel bottom.

The Permittee also maintains and repairs (as necessary) concrete, rock and sheetpile grade control structures located in the channels. The maintenance zone upstream and downstream of grade control structures is usually 15 feet each.

Repair work does not include creation of any new facilities, which would constitute a new capital project that would be planned, designed and permitted independently of this routine maintenance program.

Category E: Stream Gauge Maintenance

As part of the Permittee's stream flow monitoring program, stream gauge stations are maintained throughout the County. The stations consist of flow monitoring equipment mounted on bridges and/or other structures spanning watercourses. In order to obtain accurate flow readings, the flow beneath the monitoring equipment must be laminar (i.e., non-turbulent). Vegetation within the channel must be cleared to bank-full capacity (unless otherwise specified in notification) upstream and downstream of the gauging station or bridge to obtain accurate readings and prevent gauge damage. Vegetation clearing and debris removal from bridge piers is conducted annually or every other year. Hand crews will be used whenever practical, and mechanized equipment (chain saws) will be used when large amounts of debris are being cut and hauled away. Some stations measure water depth with a stilling well, which is typically a corrugated metal pipe suspended from a bridge and fitted with a float. Hand tools are used periodically to clear accumulated sediments or obstructions beneath the well, which sits several feet off the channel bottom. Most stream gauge maintenance occurs between September 15 and March 1.

Category F: Storm Related Activity

During the winter season, Permittee personnel continually monitor flow conditions in channels and inspect facilities. Urgent work conducted during and immediately after storm events is usually not routine maintenance, but instead, may be considered an emergency activity. However, many of the repairs are small in scope and would otherwise fit under the provisions of this permit. Therefore, non-emergency minor repairs during the winter season will be bundled and sent to the Los Angeles Water Board per the notification protocol, detailed in Section XII. B., for this permit for 30-day review.

Any project which is necessitated due to imminent threat to life or property would be subject to the U.S. Army Corps of Engineers emergency authorization regulations and procedures.

Category G: Rodent Control

Public safety standards require engineered fills (dams and levees) to be free of burrowing rodent damage. California ground squirrels (*Spermophilus beecheyi*) and pocket gophers (*Thomomys bottae*) are controlled per the Permittee's Integrated Pest Management Program, as described in the EIR, and revised 2016. This program minimizes the use of anticoagulant and other baits and reduces the potential for primary and secondary poisoning of non-target species.

Category H: Surface Water Diversion Plan

Routine maintenance and repairs as described in other Categories will sometimes occur while there is flowing water present in a channel or basin. This requires the diversion of water which can be achieved in several ways: coffer dams, in-stream basins, or bypass systems. Because of the potential of the water diversion to affect water quality and aquatic life, appropriate BMPs are incorporated into the design and operation of the water diversion. The Permittee has developed specific BMPs for water diversions, which are included in the Water Diversion Guide. The Routine Operations and Maintenance Program includes BMP 18, which applies the Water Diversion Guide for maintenance activities where removal and control of surface water are necessary. As long as water diversion activities are in compliance with this order, follow the Guide and implement the approved BMPs, no additional approval of water diversion plans will be needed for compliance with this permit.

Category I: Beach Elevation Management Plan

The Permittee periodically grooms the natural beach sand berm between the Ormond Lagoon and the Pacific Ocean in accordance with the Beach Elevation Management Plan (BEMP) to prevent flooding to property adjacent to the Ormond Lagoon, including the Oxnard Waste Water Treatment Plant. The BEMP was approved by the Los Angeles Water Board as part of the *tšumaš* Creek Project (formerly the J Street Drain project, File No. 12-087), and is now considered a routine maintenance activity for the Permittee.

The BEMP defines a maximum safe beach height and allows for grooming the berm at a specific location within 72 hours prior to a predicted storm event. Grooming would occur only if all three of the following threshold conditions are met:

1. The Ormond Beach Lagoon is fully enclosed by the Ormond Beach sand berm;

2. The Ormond Beach sand berm elevation adjacent to the lagoon is observed to be above 6.5 feet NGVD (8.9 feet NAVD); and
3. A 72-hour prediction of a storm event of any magnitude affecting the watershed is received, which would likely cause the designed capacity of *tšumaš* Creek to be exceeded if the lagoon water surface elevation cannot overtop the observed adjacent beach sand elevation.

The grooming is performed by one or two tracked dozers at the designated location accompanied by Permittee environmental staff. The dozer(s) shave the sand berm down to the maximum safe elevation along a distance measuring 100 feet parallel to the coastline. The removed sands are placed on the beach adjacent to the groomed area. Grooming operations are usually completed within several hours. Environmental BMPs are implemented, as appropriate. The Permittee may conduct grooming several times or not at all in any year depending on the site circumstances.

Category J: Habitat Restoration

The Permittee implements habitat restoration work both as grant projects and as compensatory mitigation for capital improvement or facility repair projects. Actions conducted by District staff and contractors include periodic site inspection, irrigation installation and maintenance, hand, mechanical, and chemical weeding, seeding, planting of container stock, and minor grading if needed for access. Restoration projects usually include the control of invasive plant species, such as giant reed (*Arundo donax*), castor bean (*Ricinus communis*), tamarisk (*Tamarix* spp.), mustards (*Brassica* spp., *Hirschfeldia incana*), and fountain grass (*Pennisetum setaceum*) in a riparian or upland setting. In areas where native plant recruitment is not expected to naturally replace the voids left by invasive plant removal, the Permittee installs native plant stock and/or seed supported by up to two years of irrigation, depending on rainfall.

For restoration projects where the initial invasive plant removal is substantial, this activity is conducted in the fall and early winter season to avoid nesting birds. Retreatments occur throughout the year; nesting bird surveys are conducted prior to retreatments to identify and avoid areas occupied by sensitive species and/or nests. Work in (including traversing) flowing water is avoided to the extent feasible. Only aquatically approved herbicides, such as glyphosate and imazapyr are applied to the non-native plants. The adjuvants and colorants used are also safe for use near/in water. No chemical products are applied directly to water. Only minor grading of existing access roads to allow for vehicle access, if needed, occurs to facilitate restoration activities. Vehicles may traverse dry stream beds or over areas cleared of vegetation during work.

Restoration projects typically occur over a period of three to five years based on the length of time the grant funds are available or the time required to meet the performance criteria for compensatory mitigation.

V. Project Location

Impacts will occur at various locations throughout the receiving waters listed below in Section VI. All impacts will occur within previously existing facility footprints, unless otherwise approved as qualified under the thresholds for additional review (see Attachment A, Maps and Attachment D, Facilities). The Catalog of Facilities includes information on all facilities,

including descriptions, location information and photographs and will be utilized as a guide to identify specific impact areas where work may take place within this Order.

Latitude	Longitude
34.49986185	-119.3663772
34.48562944	-119.1255007
34.45804189	-118.9313855
34.44571906	-118.7267306
34.25109873	-118.6460147
34.13717002	-118.8253585
34.08545029	-119.0545959
34.32920713	-119.3686148

A map showing the general facility locations for the Routine Operations and Maintenance Program and a listing of facilities are found in Attachments A and D, respectively, of this Order. Facilities generally occur along the streams in the southern half of Ventura County. No District facilities are maintained in the northern portion of Ventura County in the Cuyama Watershed.

VI. Project Impact and Receiving Waters Information

The Project is located within the jurisdiction of the Los Angeles Water Board. Receiving waters and groundwater potentially impacted by this Project are protected in accordance with the applicable water quality control plan (Basin Plan) for the region and other plans and policies which may be accessed online at: http://www.waterboards.ca.gov/plans_policies/. The Basin Plan includes water quality standards, which consist of existing and potential beneficial uses of waters of the state, water quality objectives to protect those uses, and the state and federal antidegradation policies.

It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet contaminant levels designed to protect human health and ensure that water is safe for domestic use.

Receiving Water:	Ventura River 180701010106 Santa Clara River 180701020903 Calleguas Creek 180701030107 Malibu Creek 180701040104
Designated Beneficial Uses:	MUN*, IND, PROC, AGR, GWR, FRSH, NAV, REC-1, REC-2, COMM, AQUA, WARM, COLD, EST, MAR, WILD, BIOL, RARE, MIGR, SPWN, SHELL, WET *Conditional beneficial use

VII. Description of Direct Impacts to Waters of the State

The Permittee conducts annual routine maintenance in its facilities and conducts habitat restoration projects as described in Section IV above. Specific impacts vary per facility and annually, depending on facility and weather conditions. The impacts are primarily temporary and within the established facility boundaries. Most facility repair impacts are also temporary

and in-kind, but may require minor additional temporary impacts beyond the facility footprint for access or proper/safe construction practices. Temporary impacts are estimated as 500 acres due to the large number of facilities and variable work conducted each year.

Minor repairs to facilities may require new placement of rock, concrete, or require new areas of permanent vegetation removal. These new permanent impacts are small and only incrementally affect a waterway adjacent to or within an existing facility. Usually, these minor repairs occur in places which repeatedly experience scour or erosion. Placement of new rock or concrete prevents future erosion.

In the past 10 years, under authorizations 08-148 and 14-038, the Permittee has conducted a total of 3.046 acres of new repairs with permanent impacts, broken down by impact type below:

New concrete/grouted rock in earthen facilities:0.483 acre
New ungrouted rock in earthen facilities: 1.923 acres
New permanent vegetation maintenance: 0.260 acre
Deferred maintenance vegetation removal in earthen facilities: 0.380 acre

Annual work plan activities with new impacts ranged from less than 0.10 acre to about 1.5 acres. The average annual new impact is about 0.30 acre. The most common type of new permanent impact is rock placement in earthen channels to reduce erosion. New concrete is usually needed to stabilize high energy areas, such as the terminus of side drains into channels. Permanent vegetation maintenance usually includes areas under bridges with stream gages.

Based on past performance, the Permitee has estimated the total amounts of new impacts for the next 5 years. For table 1 below, 'stream channels' is interpreted as routinely maintained facilities; 'riparian areas' and 'wetlands' include areas within or adjacent to facilities with native vegetation (such as willow thickets). The Permittee has estimated totals of about 3 acres of stream channels and 1 acre of riparian/wetlands may be permanently impacted by maintenance work. Of these, about 1.0 acre may be permanent physical loss due to placement of concrete. The vegetation maintenance and placement of rock in earthen facilities is estimated in the degradation of ecological condition category.

Prior authorization is required via the Annual Work Plan and Addenda for maintenance or repair actions resulting in new permanent impacts. Actual annual impacts, including cubic yards of materials and linear feet of waters of the U.S. will be quantified and reported in the Annual Monitoring Report as projects are completed. The records shall be updated throughout the authorized permit period.

Total Project fill/excavation quantities for all impacts are summarized in Table 1. Permanent impacts are categorized as those resulting in a physical loss in area and also those degrading ecological condition only.

Table 1: Total Project Fill/Excavation Quantity									
Aquatic Resource Type	Temporary Impact[1]			Permanent Impact					
				Physical Loss of Area			Degradation of Ecological Condition Only		
	Acres	CY[2]	LF	Acres	CY	LF	Acres	CY	LF
Riparian Zone				0.25			0.25		
Stream Channel				0.50			2.50		
Wetland				0.25			0.25		

VIII. Compensatory Mitigation

The Applicant shall provide compensatory mitigation to offset the proposed temporary loss of waters of the United States by restoring riparian habitat in kind on site. The Applicant shall also provide compensatory mitigation for proposed permanent impacts within waters of the United States by creating or restoring riparian habitat or wetland habitat with a ratio ranging between 1:1 and 3:1 depending upon specific project requirements. For purposes of this Order, the Los Angeles Water Board will require not less than a 2:1 mitigation ratio for the Project overall and the mitigation accounting will take place within the annual monitoring report for this program. The Permittee will submit a Mitigation Plan for approval to the Los Angeles Water Board for any new permanent impacts. The boundary of the mitigation sites shall be clearly identified on a map of suitable quality and shall be defined by latitude and longitude. This information shall be submitted to the Los Angeles Water Board for approval prior to any disturbance within waters of the United States and shall include copies of any agreements made between the Applicant and a third party organization regarding compensatory mitigation efforts.

Compensatory mitigation shall be provided for new permanent impacts on a case by case basis considering the type of impact, type of jurisdictional area affected, and type of mitigation (examples of types listed below).

> **Impact Types:** Vegetation Maintenance, Rock Placement, Concrete/Concreted Rock Placement, New Earthen Maintenance Areas
>
> **Jurisdiction Area Types:** Maintained Earthen Channel, Maintained Rock Channel, Natural Vegetated Channel, Natural Unvegetated Channel
>
> **Mitigation Types:** Riparian Habitat Enhancement, Riparian/Channel Creation (widening), Land Preservation, In-lieu Fee Payment

Mitigation shall not be required for rock placement or in-kind repairs in earthen facilities to correct and prevent erosion. The impacts from widening and/or rock-lining the channel will create additional opportunities for infiltration and exfiltration and allow for growth of vegetation. This does not result in further degradation of ecological benefits and reduces the need for earthwork maintenance in the facilities.

[1] Includes only temporary direct impacts to waters of the state and does not include upland areas of temporary disturbance which could result in a discharge to waters of the state.

[2] Cubic Yards (CY); Linear Feet (LF)

Routine maintenance repair projects may result in incremental increases in maintenance zones, including new vegetation free maintenance zones, placement of new concrete, and for new earthen maintenance areas. Compensatory mitigation for these new permanent impacts may be mitigated at a 1:1 or higher ratio, depending on the type of impact, jurisdictional type impacted, and type of mitigation conducted. When each maintenance repair project is proposed as part of the Annual Work Plan and Addenda, compensatory mitigation will be proposed for approval on a case by case basis. Mitigation plans detailing the impacts, mitigation type, location, schedule, and other pertinent information shall be submitted for approval.

IX. California Environmental Quality Act (CEQA)

On May 13, 2008, the Ventura County Watershed Protection District Board of Directors, as lead agency, certified an environmenal impact report (EIR) (State Clearinghouse (SCH) No. 2002091107 for the Project and filed a Notice of Determination (NOD) at the SCH on May 13, 2008. The Los Angeles Water Board is a responsible agency under CEQA (Pub. Resources Code, § 21069) and in making its determinations and findings, must presume that the Ventura County Watershed Protection District Board of Directors adopted environmental document comports with the requirements of CEQA and is valid. (Cal. Code Regs., tit. 14 § 15096(e); Pub. Resources Code, § 21167.2). The Los Angeles Water Board has reviewed and considered the environmental document and finds that the environmental document prepared by the Ventura County Watershed Protection District adequately addresses the Project's water resource impacts. (Cal. Code Regs., tit. 14, § 15096, subd. (f).)

An Addendum to the EIR is in progress to analyze the addition of facilities, maintenance activities, and BMPs documented in the Annual Work Plan and Addendas, as well as disclose additional existing components of the Program, such as habitat restoration. The Permittee has conducted a comprehensive review of the Program and the Permittee has concluded that the Program would not trigger any of the conditions set forth in CEQA Guidelines Section 15162 and, therefore, that approval of an Addendum is appropriate pursuant to CEQA Guidelines Section 15164. Section 15162 describes the conditions under which a subsequent or supplemental EIR must be prepared.

X. Petitions for Reconsideration

Any person aggrieved by this action may petition the State Water Board to reconsider this Order in accordance with California Code of Regulations, title 23, section 3867. A petition for reconsideration must be submitted in writing and received within 30 calendar days of the issuance of this Order.

XI. Fees Received

The fee amount for the proposed project has been determined as required by California Code of Regulations, title 23, sections 3833(b)(3) and 2200(a)(3) and was calculated as Fill and Excavation Discharges, with the dredge and fill fee calculator.

Table 2: Record of Fees Received		
Date Received	**Check No.**	**Amount**
May 22, 2019	1001882916	$1,638.00
September 26, 2019	1001908057	$140,462
	Total	**$142,100**

XII. Conditions

The Los Angeles Water Board has independently reviewed the record of the Project to analyze impacts to water quality and designated beneficial uses within the watersheds of the Project. In accordance with this Order, the Permittee may proceed with the Project under the following terms and conditions:

A. Authorization

Routine maintenance is authorized within existing facilities listed in Attachment D. New impacts to waters of the state shall be authorized on a case by case basis via review of the Annual Work Plan submittals.

B. Reporting and Notification Requirements

Requirements for the content of these reporting and notification types are detailed in Attachment C, including specifications for photo and map documentation during the Project. Written reports and notifications must be submitted using the Reporting and Notification Cover Sheet located in Attachment C, which must be signed by the Permittee or an authorized representative.

1. Project Reporting

a. **Annual Reporting:** The Permittee shall submit an Annual Report each year on the anniversary of Project effective date. Annual Reporting requirements are detailed in Attachment C. Annual reporting shall continue until a Notice of Project Complete Letter is issued to the Permittee.

2. Project Status Notifications

The Permittee shall submit an Annual Work Plan and Addenda to the Regional Board, California Department of Fish and Wildlife, and U.S. Army Corps of Engineers by April 1 of each year, detailing the facility work schedule, repair projects, and other pertinent information for the Routine Operations and Maintenance Program for the following fiscal year July 1 to June 30. Each project is described with a Facility Investigation Form which includes: project location, project description, anticipated temporary and permanent impacts, anticipated work dates, approximate quantities and disposal site, equipment anticipated to be used, water diversion requirements, proposed mitigation if applicable, species potentially impacted, and BMPs that will be applied. The District requests the regulatory agencies to provide authorization decisions typically by May 1. Throughout the year, additional projects may arise that require prior authorization. These projects are submitted via addenda to the work plan and follow the same notification protocol. The District typically requests for authorization decisions on these projects within 30 days of submittal.

The Permittee shall submit an Annual Monitoring Report by August 1 of each year following the fiscal year July 1 to June 30. This report shall detail the routine work conducted, repair projects, new facilities, other new information, permits/authorizations received, status of compensatory mitigation, and other pertinent information.

3. **Conditional Notifications and Reports:** The following notifications and reports are required as appropriate.

   a. **Accidental Discharges of Hazardous Materials**[3]

      Following an accidental discharge of a reportable quantity of a hazardous material, sewage, or an unknown material, the following applies (Wat. Code, § 13271):

      i. As soon as (A) Permittee has knowledge of the discharge or noncompliance, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures then:
         - first call – 911 (to notify local response agency)
         - then call – Office of Emergency Services (OES) State Warning Center at: (800) 852-7550 or (916) 845-8911
         - Lastly, follow the required OES procedures as set forth in: http://www.caloes.ca.gov/FireRescueSite/Documents/CalOES-Spill_Booklet_Feb2014_FINAL_BW_Acc.pdf

      ii. Following notification to OES, the Permittee shall notify the Los Angeles Water Board, as soon as practicable (ideally within 24 hours). Notification may be via telephone, e-mail, or delivered written notice.

      iii. Within five (5) working days of notification to the Los Angeles Water Board, the Permittee must submit an Accidental Discharge of Hazardous Material Report.

   b. **Violation of Compliance with Water Quality Standards:** The Permittee shall notify the Los Angeles Water Board of any event causing a violation of compliance with water quality standards. Notification may be via telephone, e-mail, or delivered written notice.

      i. Examples of noncompliance events include: lack of any reporting in a timely manner, lack of storm water treatment following a rain event, discharges causing a visible plume in a water of the state, water contact with uncured concrete, and exceedances of limits for the analytes for *In-Water Work or Diversions* listed below.

      ii. This notification must be followed within three (3) working days by submission of a Violation of Compliance with Water Quality Standards Report.

[3] "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. (Health & Saf. Code, § 25501.)

c. In-Water Work or Diversion

i. The Permittee's Water Diversion Guide has been approved by the Board and only deviations from the Guide require additional or subsequent review by the Board.

ii. During stream diversion, water quality monitoring shall be conducted. Requirements for water quality monitoring are below.

iii. The Permittee notifies the RWQCB for prior authorization for all projects requiring water diversions via the Annual Work Plan and Addenda.

d. Modifications to Project

Project modifications may require an amendment of this Order. The Permittee shall give advance notice to the Los Angeles Water Board staff if Project implementation as described in the application materials is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority by submitting a Modifications to Project Report. The Permittee shall inform the Los Angeles Water Board staff of any Project modifications that will interfere with the Permittee's compliance with this Order.

Modifications to the Routine Operations and Maintenance Program, such as inclusion or removal of facilities, changes in operations methods or schedules, requirements by other regulatory agencies, etc., shall be provided to the Los Angeles Water Board staff via the Annual Work Plan and Addenda.

e. Transfer of Property Ownership: This Order is not transferable in its entirety or in part to any person or organization except after notice to the Los Angeles Water Board in accordance with the following terms:

i. The Permittee must notify the Los Angeles Water Board of any change in ownership or interest in ownership of the Project area by submitting a Transfer of Property Ownership Report. The Permittee and purchaser must sign and date the notification and provide such notification to the Los Angeles Water Board at least 10 days prior to the transfer of ownership. The purchaser must also submit a written request to the Los Angeles Water Board to be named as the permittee in a revised order.

ii. Until such time as this Order has been modified to name the purchaser as the permittee, the Permittee shall continue to be responsible for all requirements set forth in this Order.

C. Water Quality Monitoring

1. **General:** If surface water is present, continuous visual surface water monitoring shall be conducted to detect accidental discharge of construction related pollutants (e.g. oil and grease, turbidity plume, or uncured concrete).

2. **Accidental Discharges/Noncompliance:** Upon occurrence of an accidental discharge of hazardous materials or a violation of compliance with a water quality standard, Los Angeles Water Board staff may require water quality monitoring based on the discharge constituents and/or related water quality objectives and beneficial uses.

3. In-Water Work or Diversions:

During planned work in water or stream diversions any discharge(s) to waters of the state shall conform to the following water quality standards:

a. Oil and Grease. Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.

b. Dissolved Oxygen. No single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.

The dissolved oxygen content of all surface waters designated as WARM shall not be depressed below 5 mg/L as a result of waste discharges.

The dissolved oxygen content of all surface waters designated as COLD shall not be depressed below 6 mg/L as a result of waste discharges.

The dissolved oxygen content of all surface waters designated as both COLD and SPWN shall not be depressed below 7 mg/L as a result of waste discharges.

c. pH. The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.5 units from natural conditions as a result of waste discharge.

The pH of bays or estuaries shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.2 units from natural conditions as a result of waste discharge

d. Turbidity. Downstream TSS shall be maintained at ambient levels. Where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.

Sampling shall be conducted in accordance with Table 3 sampling parameters.[4]

[4] Pollutants shall be analyzed using the analytical methods described in 40 Code of Federal Regulations Part 136; where no methods are specified for a given pollutant, the method shall be approved by Los Angeles Water Board staff. Grab samples shall be taken between the surface and mid-depth and not be collected at the same time each day to get a complete representation of variations in the receiving water. A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring shall be maintained onsite.

Table 3: Sample Type and Frequency Requirements			
Parameter	Unit of Measurement	Type of Sample	Minimum Frequency
Oil and Grease	N/A	Visual	Continuous
Dissolved Oxygen	mg/L & % saturation	Grab	Daily for the first week, weekly, thereafter
pH	Standard Units	Grab	Daily for the first week, weekly, thereafter
Turbidity	NTU	Grab	Daily for the first week, weekly, thereafter
Temperature	°F (or as °C)	Grab	Daily for the first week, weekly, thereafter

Baseline sampling shall be conducted at a minimum of one location within the project boundary for each phase. All other sampling shall take place at a minimum of two locations. In streams or flowing water the sample locations shall be upstream and downstream. Results of the analyses shall be submitted to the Los Angeles Water Board in the annual montoring report. A map or drawing indicating the locations of sampling points shall be included with each submittal. A summary of results shall discuss the analysis. Every measurement not meeting the compliance limits shall be accompanied by an explanation, the actions taken to correct the degradation to waters, and addressed in *Violation of Compliance with Water Quality Standards* report described above.

D. Standard

1. This Order is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330, and California Code of Regulations, title 23, chapter 28, Article 6 commencing with sections 3867-3869, inclusive. Additionally, the Los Angeles Water Board reserves the right to suspend, cancel, or modify and reissue this Order, after providing notice to the Permittee, if the Los Angeles Water Board determines that: the Project fails to comply with any of the conditions of this Order; or, when necessary to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) or federal Clean Water Act section 303 (33 U.S.C. § 1313). For purposes of Clean Water Act section 401(d), the condition constitutes a limitation necessary to assure compliance with water quality standards and appropriate requirements of state law.

2. This Order is not intended and shall not be construed to apply to 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 subsection 3855(b) of chapter 28, title 23 of the California Code of Regulations, and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. This Order is conditioned upon total payment of any fee required under title 23 of the California Code of Regulations and owed by the Permittee.

4. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under state and federal law. For purposes of Clean Water Act, section 401(d), the applicability of any state law authorizing remedies, penalties,

processes, or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order.

E. General Compliance

1. Failure to comply with any condition of this Order shall constitute a violation of the Porter-Cologne Water Quality Control Act and the Clean Water Act. The Permittee and/or discharger may then be subject to administrative and/or civil liability pursuant to Water Code section 13385.

2. Permitted actions must not cause a violation of any applicable water quality standards, including impairment of designated beneficial uses for receiving waters as adopted in the Basin Plans by any applicable Los Angeles Water Board or any applicable State Water Board (collectively Water Boards) water quality control plan or policy. The source of any such discharge must be eliminated as soon as practicable.

3. In response to a suspected violation of any condition of this Order, the Los Angeles Water Board may require the holder of this Order to furnish, under penalty of perjury, any technical or monitoring reports the Water Boards deem appropriate, provide that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The additional monitoring requirements ensure that permitted discharges and activities comport with any applicable effluent limitations, water quality standards, and/or other appropriate requirement of state law.

4. The Permittee must, at all times, fully comply with engineering plans, specifications, and technical reports submitted to support this Order; and all subsequent submittals required as part of this Order. The conditions within this Order and Attachments supersede conflicting provisions within Permittee submittals.

5. This Order and all of its conditions contained herein continue to have full force and effect regardless of the expiration or revocation of any federal license or permit issued for the Project. For purposes of Clean Water Act, section 401(d), this condition constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements of state law.

6. **Construction General Permit Requirement:** If enrolled, the Permittee shall maintain compliance with conditions described in, and required by, NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-009-DWQ and NPDES No. CAS 000002 as amended by Order No. 2010-0014-DWQ, Order No. 2012-0006-DWQ, and any amendments thereto) (General Construction Permit).

F. Administrative

1. Signatory requirements for all document submittals required by this Order are presented in Attachment B of this Order.

2. This Order does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code, §§ 2050-2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531-1544).

If a "take" will result from any act authorized under this Order held by the Permittee, the Permittee must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. The Permittee is responsible for meeting all requirements of the applicable endangered species act for the Project authorized under this Order.

3. The Permittee shall grant Los Angeles Water Board staff, or an authorized representative (including an authorized contractor acting as a Water Board representative), upon presentation of credentials and other documents as may be required by law, permission to:

   a. Enter upon the Project or compensatory mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records are kept.

   b. Have access to and copy any records that are kept and are relevant to the Project or the requirements of this Order.

   c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order.

   d. Sample or monitor for the purposes of assuring Order compliance.

4. A copy of this Order shall be provided to any consultants, contractors, and subcontractors working on the Project. Copies of this Order shall remain at the Project site for the duration of this Order. The Permittee shall be responsible for work conducted by its consultants, contractors, and any subcontractors.

5. A copy of this Order must be available at the Project site(s) during construction for review by site personnel and agencies. All personnel performing work on the Project shall be familiar with the content of this Order and its posted location at the Project site.

6. Lake and Streambed Alteration Agreement – The Permittee shall submit a signed copy of the Department of Fish and Wildlife's (CDFW) lake and streambed alteration agreement to the Los Angeles Water Board immediately upon execution and prior to any discharge to waters of the state.

7. This Order shall expire **five (5) years** from date of this Order. The Applicant shall submit a complete application at least 90 days prior to termination of this Order if renewal is requested.

G. Best Management Practices

All maintenance actions are required to follow applicable Best Management Practices (BMPs). By implementing these 31 BMPs, the Permittee minimizes impacts to water quality and environmental resources during the execution of maintenance work. Applicable BMPs are specifically identified for maintenance actions requiring prior authorization and/or reporting. The Permittee also follows additional BMPs identified in the Annual Work Plan and Addendas and the other regulatory agency permits, but not listed here.

There are four zones referred to in these BMPs, which are based on watersheds. Zone 1 encompasses the Ventura River Watershed. Zone 2 encompasses the Santa Clara River Watershed. Zone 3 encompasses the Calleguas Creek Watershed. Zone 4 encompasses the

Malibu Creek Watershed. The majority of the Permittee's facilities are located within Zones 1, 2, and 3, though a few are located within Zone 4.

BMP 1: Avoid Channel Earthwork During the Rainy Season/Events.

- The permittee shall avoid earthwork in earthen and soft bottom channels from December 1 to April 1 unless water is absent.
- If work is considered critical, work in flowing water is acceptable, provided flow is diverted according to the Water Diversion Guide and sensitive aquatic species not present.
- No earthwork shall be conducted during rain events, or if 0.25 inches or more of rain is forecast within 12 hours of scheduled work.

BMP 2: Prevent Discharge of Silt-Laden Water During Concrete Channel Cleaning.

- The permittee shall prevent the discharge of silt-laden water or pollutants downstream when removing sediments, vegetation, algae, and trash from concrete channels.

  The permittee shall install BMPs: silt barriers, sand bags, straw bales, as appropriate per Ventura County MS4 Permit or subsequent issued order.
- The permittee shall follow the Water Diversion Guide if a flow diversion is installed.

BMP 3: Location of Temporary Stockpiles.

- Temporary stockpiles in the channel bottom shall be limited to one working day and not overnight.
- Temporary stockpiles may be placed in channel bottoms or debris basins if they are placed in such a manner that they would not be exposed to flowing water.
- Permanent stockpiles shall be located landward of the 100-year floodplain to the maximum extent feasible.

BMP 4: Survey for Habitat (nesting) Prior to Routine Maintenance Work.

- A biological survey for nesting birds is required prior to work from February 1 to September 15 if in or adjacent to suitable habitat.
- Nesting habitat is defined as cattail patches, short and tall trees, and shrubby areas. Open gravel, bridges, culverts, and fence posts may also support nests.
- "Work" = mowing/disking, earth work, clean outs, access road work lasting more than one day, and repairs where nesting bird habitat is in work area or within 300 feet.
- If active bird nests are identified, work within 300 feet (500 feet for raptors) must be postponed until after September 15, unless the biologist determines the nest becomes inactive or a reduced buffer is approved by regulatory agencies.
- No bio survey needed for routine herbicide application in/on facilities to sparse, short (<3 foot) weedy vegetation (includes young (<1year old mule fat, willows or cattails).

BMP 5/6: Survey for Steelhead Migration/Rearing Conditions and Sensitive Aquatic Species Prior to Routine Maintenance Work.

- BMP 5/6 applies to earthwork/repairs in surface water and within 100 feet of water:

ZONE 1:	ZONE 2:

• Matilija Creek • San Antonio Creek • Thacher Creek • Ventura River	• Hopper Creek • Piru Creek • Pole Creek (unlined portions) • Santa Clara River • Santa Paula Creek • Sespe Creek

- Approved biologist must survey for steelhead migration or rearing conditions and other sensitive aquatic species prior to earthwork in or within 100 feet of surface water.
- If flows are deemed sufficient for steelhead migration, earthwork within or adjacent to the channel shall be postponed until after June 15 and before October 31.
- If rearing habitat is present, a permittee approved biologist shall determine if steelhead are present.
- If other sensitive species are found in the work area, the permittee shall stop while Permittee environmental staff contact CDFW and US Fish and Wildlife Service (USFWS). The approved biologist may be authorized to relocate these species to nearby suitable habitat.
- **Special authorization is required for water diversion** if flow conditions are suitable for steelhead or other aquatic species, even if the Water Diversion Guide is followed.
- Steelhead presence notification to NMFS at least 10 days prior to work by Permittee environmental staff.
- If authorized by NMFS, a permittee approved biologist shall isolate the work area with block nets and relocate any steelhead in the work area to suitable habitat with perennial surface water. The biologist shall continuously monitor during water diversion and any work within occupied steelhead habitat.
- Steelhead relocations or other impacts by flow diversion or dewatering shall be documented and reported to the NMFS within 30 days of completion of the maintenance work.
- Concrete, grout, brick & mortar or other cement products shall not be used to construct stream diversions when steelhead and other sensitive aquatic species are likely present.
- If steelhead are found dead or injured at the work site, the permittee shall notify NMFS immediately.
- Any steep-walled excavations that may trap California red-legged frog that will be left overnight in areas within or adjacent to the Ventura River or San Antonio Creek shall be covered.

BMP 7: Continue Existing Procedures for Sediment Removal and Vegetation Control for Specific Reaches in Calleguas Creek Watershed.

- The permittee shall conduct sediment removal and in-stream vegetation control along unimproved channels along Calleguas Creek, Conejo Creek, Revolon Slough, Arroyo Las Posas and generally throughout Zone 3 in accordance with previous Streambed Alteration Agreements.

BMP 8: Avoid Disturbance to Native Beach or Wetland Species.

- BMP 8 applies to facilities maintained in beach/coastal strand.

- Prior to beach access March 1 to September 15, approved biologist shall survey for western snowy plovers or California least terns nesting or roosting on beach. If present, maintenance work shall be postponed until after the breeding season, unless a species protection plan is be prepared, approved by CDFW and USFWS, and implemented.
- The permittee shall avoid driving over beach dune vegetation when accessing storm drain outlets.
- The permittee shall minimize native beach plant removal during outlet maintenance.
- Prior to beach outlet maintenance, the permittee shall determine if suitable habitat is present at the outlet for tidewater gobies. If suitable habitat is present, approved biologist shall conduct fish surveys. If present and maintenance work affects habitat, work shall be postponed until surface water is absent, unless a species protection plan is prepared, approved by USFWS, and implemented.

BMP 9: Aquatic Pesticide Application.

- The permittee shall follow the most up-to-date Best Management Practices and the monitoring and reporting requirements in the Ventura County MS4 Permit or subsequent permit.
- The permittee shall comply with the Ventura County Application Protocol for Pesticides, Fertilizers, and Herbicides, including working under the direction of a Qualified Applicator, using materials approved for aquatic use, following the manufacturer's application directions, avoiding application prior to forecasted storm events and ensuring wind conditions are suitable to avoid spray drift.

BMP 10: Leave Vegetation on Upper Basin Slopes.

- The permittee shall leave native vegetation on the debris and detention basin slopes above the 20 percent capacity debris line unless any of the following apply:
    - Shrubs and trees are hazards to the stability and function of the basin
    - Sediment meets or exceeds the 20 percent capacity line
    - Slope re-grading is required to correct or prevent rill erosion or other damage
    - Vegetation is on engineered fill
    - Vegetation constitutes a fire hazard to nearby properties.

BMP 11: Leave Patches of Vegetation in Channel Bottom.

- The permittee shall minimize vegetation removal or thinning in earthen or earthen bottom channels; remove the least amount necessary to achieve the specific maintenance objectives for the reach.
- The permittee shall remove native vegetation in a non-continuous manner, leaving small patches intact, provided they will not adversely affect conveyance capacity.

BMP 12: Leave Herbaceous Wetland Vegetation in Channel Bottom.

- The permittee shall minimize removal or thinning of emergent native vegetation rooted in or adjacent to the low flow channel or aquatic habitats, unless inconsistent with maintenance objectives or capacity requirements.

BMP 13: Maximum 15-foot Vegetation-Free Zone at the Toe of the Bank.

- The permittee shall not exceed a 15-foot wide vegetation-free zone at levee and bank toes when thinning or removing vegetation for inspection purposes.

BMP 14: Avoid Road Base Discharge.

- The permittee shall not place or spill road base, fill, sediments, and asphalt beyond the previously established road bed when working adjacent to channels and basin bottoms.

BMP 15: Mitigate/Replace Temporary Impacts to Habitat.

- The permittee shall restore native vegetation in temporary work areas after completion of repair or reconstruction work. Prior to work, a vegetation restoration plan must be submitted to the regulatory agencies for approval.
- No habitat restoration sites shall be placed within the routine maintenance limits of the repaired structures.
- Habitat restoration shall only be required if the impacted area supports native wetland or riparian vegetation; no restoration is required for barren areas or areas dominated by non-native plants.

BMP 16: Oak Tree Mitigation Ratio.

- The permittee shall replace native oak trees removed by maintenance activities if greater than 3 inches in diameter at breast height (dbh), or 2 inches dbh if multi-trunked.
- Oak tree replacement ratios:

TRUNK SIZE (dbh)	RATIO
4 to 6 inches	3:1
6 to 12 inches	5:1
12 to 24 inches	10:1
24 to 36 inches	15:1
>36 inches	20:1

- A tree replacement plan consistent with County Policy or permit requirements, whichever is greater, shall be prepared and submitted to the regulatory agencies prior to implementation.

BMP 17: Concrete Wash-Out Protocols.

- Fluids associated with the curing, finishing and wash-out of concrete shall not be discharged to the channel or basin.
- Concrete wastes (liquid, dust, solids) shall be stockpiled separately from sediment and protected by erosion control measures to prevent discharge to the channel, basin, or waters of the State.
- The permittee shall conduct appropriate waste management practices based on considerations of flow velocities, site conditions, suitability of erosion control materials,

and construction costs.

BMP 18: Water Diversion Guide.

- The permittee shall follow water diversion methods and procedures established in the Permittee's Water Diversion Guide.
- Baseline water quality monitoring is required PRIOR to installation of any water diversion, daily for the first 5 days the diversion is in place, and weekly thereafter per section XII. C.
- Fish mortality associated with stream flow diversion or dewatering shall be reported by environmental staff to the California Department of Fish & Wildlife within 24 hours of discovery.

BMP 19: Minimize Erosion from Stream Gauge Maintenance.

- The permittee shall cut interfering vegetation with chain-saw or hand tools to near ground surface. No herbicide application to stumps. No excavation of roots.
- The permittee shall implement additional erosion control methods as needed, based on considerations of flow velocities, site conditions, availability of materials, construction costs, durability and maintenance requirements.

BMP 20: Implementation of Integrated Pest Management Program.

- The permittee shall implement the approved Integrated Pest Management (IPM) program.
- The permittee shall apply appropriate rodent control methods at each facility as appropriate for site conditions (rodent population, type of facility, season).
- The permittee shall maintain uniform inspection records for each facility and all control efforts.
- The permittee shall report IPM Program activities to the regulatory agencies annually in the Annual Monitoring Report.

BMP 21: Avoid Spills and Leaks.

- The permitee shall keep all equipment in good working condition and free of leaks.
- No equipment maintenance or refueling in a channel or basin bottom.
- The permittee shall place drip pans under all stationary equipment such as motors, pumps, generators, compressors, and welders.
- Spill containment materials must be on site or readily available for any equipment maintenance or refueling that occurs adjacent to a watercourse.
- The permitte shall train all maintenance crews in spill containment and response.
- The permittee shall mmediately clean up all spills. Submit report to the Office of Spill Prevention and Response.

BMP 22: Biological Surveys in Appropriate Habitat Prior to Vegetation Maintenance.

- Biologists conducting surveys for tidewater goby, California red-legged frog, least Bell's vireo and southwestern willow flycatcher shall be approved by the U.S. Fish & Wildlife Service in writing.
- Prior to sediment removal, vegetation control, or repair work in earthen or earthen bottom facilities, an approved biologist shall survey for threatened, endangered, or sensitive

species if suitable habitat occurs in or near work area. If such species are within or in close proximity to the work areas, the Permittee shall reschedule the work when the species are not present.

- If it is necessary to conduct the work while sensitive species are present or in proximity to the work areas, a species protection plan shall be developed, approved by US Fish and Wildlife Service/National Marine Fisheries Service/California Department Fisheries and Wildlife, then implemented.
- An approved biologist shall periodically monitor the work area during maintenance activities for wildlife and relocate species as needed to minimize mortality.
- Exotic fish, invertebrate, amphibian and reptile species shall be captured when feasible, dispatched and properly disposed by a qualified biologist.

BMP 23: Invasive Plant Removal Protocols.

- The permittee shall remove invasive plant species in a manner that prevents propagation.
- The permittee shall spray or mow plants before seeds ripen, when feasible.
- All cut/removed invasive vegetation shall be taken to a dump as a destruction load.
- The permittee shall not stockpile invasive vegetation (including mulch) where materials would wash downstream or allowed to propagate.
- For giant reed (*Arundo donax*), minimize ground disturbance and use foliar glyphosate treatment on smaller infestations, as feasible. Best to apply herbicide May 1 to October 1, if breeding birds absent. No grading to remove root masses unless earthwork is part of routine maintenance work.

BMP 24: Air Quality (Dust Control). The following measures shall be incorporated into maintenance activities to minimize fugitive dust emissions during grading, excavation, and construction activities.

- The permittee shall minimize the areas disturbed at any one time by clearing, grading, earth moving, or excavation operations to prevent excessive dust.
- The permittee shall cover all truck loads; required by California Vehicle Code §23114.
- The permittee shall prevent fugitive dust (via treatment) on all graded and excavated material, exposed soil areas, stockpiles, including unpaved parking and staging areas, and other active portions of the construction site.
- Permittee staff shall weekly monitor contractor graded and/or excavated inactive areas of the construction site for dust stabilization.
- No grading/earth work during periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties) to prevent excessive fugitive dust.
- The permittee shall use rumble strips or track out devices where vehicles enter and exit unpaved roads onto paved road.
- All on site construction roads that have a daily traffic volume of more than 50 daily trips shall be stabilized as to minimize transport of earthen material from the site.
- There shall be at least one qualified Permittee staff on site each work day to monitor the provisions of the Fugitive Dust Mitigation Plan and any other applicable fugitive dust rules, ordinances, or conditions.

- Personnel involved in grading operations shall be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health Regulations.
- All project construction operations shall be conducted in compliance with all applicable APCD Rules and Regulations with emphasis on Rule 50 (Opacity) and Rule 51 (Nuisance).

BMP 25: Construction Noise.

- Noise-generating construction activities shall be restricted to the daytime (i.e., 7:00 AM to 7:00 PM, Monday through Friday).
- The permittee shall minimize sustained construction noise adjacent to sensitive wildlife during the nesting season, as directed by the biological monitor.
- When construction noise is anticipated to affect sensitive wildlife, permittee environmental staff shall consult with regulatory agencies regarding additional mitigation measures.

BMP 26: Stabilize Exposed Soil.

- To limit erosion, minimize soil disturbance work in channels and basins to that which can be stabilized prior to rain events.

BMP 27: Native Tree Removal (see BMP 16 for oaks).

- Prior to vegetation removal, a permittee qualified biologist shall prepare an inventory of all native trees in the work area exceeding 4 inches dbh.
- Native trees in temporary impact areas shall be cut to ground level to facilitate regrowth, and not removed by heavy equipment.
- Native California black walnut, cottonwood and sycamore trees exceeding 4 inches dbh shall be replaced at a 10:1 ratio, if removed.
- The permittee shall replacement trees shall attain a survival rate of 75 percent the first year and 100 percent thereafter, and monitored and maintained for a 5 years after planting.

BMP 28: Environmental Training.

- Prior to any sediment removal, vegetation control, or repair work in earthen or earthen-bottomed channels and basins that contain surface water or native vegetation, a qualified biologist familiar with the work site shall provide training to the work crew regarding potential species present, habitats to avoid, measures to implement to minimize impacts, and events/situations that require work to be stopped and the biologist to be contacted.

BMP 29: Work in California Red-legged Frog Habitat.

- Any steep-walled excavations that may trap California red-legged frogs that will be left overnight in suitable habitat (Ventura River, San Antonio Creek) shall be covered.
- Approved biologists handling California red-legged frogs shall not use gloves, unless they are well-rinsed and composed of vinyl.
- Approved biologists working in California red-legged frog habitat shall follow the Declining Amphibian Task Force Fieldwork Code of Practice.

BMP 30: New Zealand Mudsnail Control Protocols

The protocols have been developed to address the sixty work code activities described in the Permittee's 2012-2013 Annual Work Plan and Addenda. The work code activities have been lumped into general types of materials/activities to allow the assignment of protocols to be followed to minimize the spread of this invasive species (Table 4). These protocols address three general modes of potential spread of New Zealand mudsnail; hand tools & boots, mobile equipment and vehicles, and reusable instream materials.

First, determine if the reach to be maintained supports New Zealand mudsnail by reviewing maps and the infested reach list (Table 5). If so, implement Part A.

Second, determine if the equipment to be used was borrowed from the Transportation Department OR last used in another Zone. If so, implement Part B.

Table 4. New Zealand Mudsnail Protocols by Work Code

Protocol	Work Codes
1	PS41, PS42, PT20, PT21, PT22, PT23, PT24, PT25, PT26, PT27, PT28, PT29, PT31, PT32, PT33, PT34, PT35, PT36, PT37, PT38, PT41, PT42, PT43, PT44, PT45, PT47, PT48, PT49, PT51, PT53, PT55, PT56, PT57, PT60, PT61, PT62, PT64, PT65, PT66, PT68, PT70, PT72, PT74, PT76, PT77, PT80, PT83, PT85, PT86, PT88, PT89, PT90, PT91, PT92, PT93
2	PS41, PS42, PT20, PT21, PT22, PT23, PT24, PT25, PT26, PT27, PT28, PT32, PT33, PT34, PT35, PT36, PT37, PT38, PT41, PT42, PT43, PT44, PT45, PT47, PT48, PT49, PT51, PT53, PT55, PT56, PT57, PT60, PT61, PT62, PT64, PT65, PT66, PT68, PT70, PT72, PT74, PT76, PT77, PT80, PT83, PT85, PT86, PT88, PT89, PT90, PT91, PT92, PT93
3	PS41, PS42, PT 22, PT 29, PT31, PT32, PT33, PT40, PT41, PT42, PT43, PT45, PT45, PT48, PT49, PT51, PT53, PT54, PT57, PT60, PT61, PT62, PT64, PT 66, PT68, PT80, PT83, PT85, PT86, PT88, PT89, PT90, PT91, PT92, PT93
4	PT20, PT21, PT23, PT24, PT25, PT26, PT27, PT28, PT34, PT35, PT36, PT37, PT38, PT44, PT51, PT53, PT68, PT70, PT72, PT74, PT76, PT77, PT80, PT85

Part A (infested reaches):

- The permittee shall wash hand tools, boots and power tools that contact surface water using Protocol 1.
- The permittee shall wash mobile equipment used in surface water that may have incidental soil attached (e.g., dozers, excavators, discing equipment, wheeled loaders and motor graders) using Protocol 2A (on-site power wash, on-site or off-site hot pressure wash).
- The permittee shall wash equipment that infrequently crosses the wetted channel and does not have incidental soil attached (e.g., herbicide trailers, chipper, water pumps [hand carried and trailer-mounted], mowers and motor vehicles) using Protocol 3 (on-site or off-site hot or cold pressure wash).

- The permittee shall wash hard surfaced instream materials that may be transported between work sites (e.g., K-rail, diversion pipe, water hoses and concrete forms) using Protocol 4 (on-site or off-site hot pressure wash).
- The permittee shall discard sand bags (and other fibrous materials that could harbor mudsnails) which have been immersed in surface waters in a landfill. Do not re-use at other sites.

Table 5. New Zealand Mudsnail Infested Reaches

ZONE	REACH NO.	NAME
2	42011	Pacific Ocean to Harbor Blvd.
2	42012	Harbor Blvd. to Victoria Avenue
2	42151	Camarillo Hills Drain to Hwy 101
2	42152	Hwy 101 to Central Avenue
3	42154	Central Avenue to Wright Road
3	45241	Wright Road to U/S to Drop Structure #2
3	45243	Drop Structure #2
3	45245	Beardsley Wash Drop Structure #2 U/S to Triple Arch
3	45246	Connelly Triple Arch
3	45247	Connelly Triple Arch U/S to Milligan Barranca
3	46101	Arroyo Santa Rosa to Arroyo Conejo N.Fork
3	46102	Arroyo Conejo N. Fork to Arroyo Conejpo South Branch
3	46103	Arroyo Conejo S. Branch to Hillcrest Drive
3	46104	Hillcrest Drive to Moorpark Road
3	46111	Arroyo Conejo to Ventu Park Road
3	46112	Ventu Park Road to Borchard Road
3	46161	Arroyo Conejo to Lynn Road
4	48061	L.A.County Line to Kanan Road
4	48071	L.A. County Line to Conifer Street
4	48072	Conifer Street to Oak Hills Drive
4	48073	Oak Hills Drive through Kanan Road
4	48076	Medea Creek @ Mile 1.2, U/S
4	48101	L.A. County Line U/S North
4	48107	Las Virgenes Creek @ Mile 2.6, U/S

U/S: upstream

Part B (borrowed equipment or used in other Zone):

- The permittee shall wash mobile equipment used in surface water that may have incidental soil attached (e.g., dozers, excavators, discing equipment, wheeled loaders and motor graders) using Protocol 2B (on-site or off-site hot pressure wash).
- The permittee shall wash equipment that infrequently crosses the wetted channel and does not have incidental soil attached (e.g., herbicide trailers, chipper, water pumps [hand carried and trailer-mounted], mowers and motor vehicles) using Protocol 3 (on-site or off-site hot or cold pressure wash).

Protocol 1 - Hand Tools, Boots and Wetted Power Tools

This control protocol involves cleaning any hand tools, boots and wetted portions of power tools (weed whipper, drill, concrete vibrator, etc.) that come in contact with potentially infected surface water prior to leaving the work site each day OR leaving these materials at the site until the work is complete. Hand tools, boots and wetted portions of power tools must be cleaned before leaving the site using the following procedure:

1. The permittee shall remove any accumulated mud/soil from the article to be cleaned;
2. Fill a portable plastic tub (child's swimming pool, or equivalent) to a depth allowing complete submersion of the boots or tools with a 4 percent solution (5 fluid ounces per gallon) of a commercial disinfectant (GS High Dilution Disinfectant 256, Spartan Chemical Company);
3. The permittee shall scrub all surfaces with a brush;
4. The permittee shall let soak in the disinfectant for approximately 10 minutes;
5. The permitte shall rinse with **potable** water; and
6. The permittee shall dispose of the used disinfectant solution in a sewer or upland area where it cannot enter surface waters.

Protocol 2A – Instream Mobile Equipment (Infested Reaches)

This Protocol applies to equipment that is used in the wetted channel and likely to have incidental soil attached, such as dozers, excavators, discing equipment, wheeled loaders and motor graders.

1. All attached soil must be removed at the project site using a pressurized water hose provided by a water truck (or equivalent pressurized water source);
2. The permittee shall wash water must be contained and not allowed to run-off into a storm drain or drainage feature;
3. The equipment must be washed on-site using a portable hot pressure washer OR taken to the nearest O & M washing facility (Saticoy or Moorpark) for a hot pressure wash.
4. Care must be taken to pressure wash all surfaces with hot water that typically come in contact with surface water and/or wet sediments, such as wheels, tires, discs, dozer tracks, excavator and loader buckets, dozer and grader blades, undercarriage, hydraulic cylinders and hoses, and fenders.

Protocol 2B – Instream Mobile Equipment (All Other Reaches)

This Protocol applies to equipment that is used in the wetted channel and likely to have incidental soil attached, such as dozers, excavators, discing equipment, wheeled loaders and motor graders.

1. The equipment must be washed on-site using a portable hot pressure washer OR taken to the nearest O & M washing facility (Saticoy or Moorpark) for a hot pressure wash.
2. Care must be taken to pressure wash all surfaces with hot water that typically come in contact with surface water and/or wet sediments, such as wheels, tires, discs,

dozer tracks, excavator and loader buckets, dozer and grader blades, undercarriage, hydraulic cylinders and hoses, and fenders.

Protocol 3 – Other Mobile Equipment and Vehicles

This Protocol applies to equipment that infrequently crosses the wetted channel and does not have incidental soil attached, such as herbicide trailers, chipper, water pumps (hand carried and trailer-mounted), mowers and motor vehicles.

1. The wheels, tires and undercarriage of this equipment must be pressure washed, either on-site or the nearest O & M washing facility (Saticoy or Moorpark).
2. If washed on-site, wash water must be contained and not allowed to run-off into a storm drain or drainage feature.

Protocol 4 - Reusable Instream Materials

Materials that may be transported between work sites may include sand bags, K-rail, diversion pipe, water hoses and concrete forms (wood). Sand bags immersed in surface waters cannot be fully cleaned, and must be emptied of sand (on-site or the Permittee's maintenance yard) and the bag deposited in a proper trash receptacle.

1. The Permittee shall wash hard surfaced materials on-site using a portable hot pressure washer OR take to the nearest O & M washing facility (Saticoy or Moorpark) for a hot pressure wash.
2. Care must be taken to remove all attached soil or sediment and fully contact all surfaces.

BMP 31: Stormwater

The project shall comply with the local regulations associated with the Los Angeles Water Board's Municipal Stormwater Permit issued to Ventura County and co-permittees under NPDES No. CAS004002 and Waste Discharge Requirements Order No. R4-2010-0108 or subsequent order.

H. On-site Mitigation for Temporary Impacts

1. The Permittee shall restore all areas of temporary impacts to waters of the state.

2. Restoration shall include grading of disturbed areas to pre-project contours and revegetation with native species. Restored areas shall be monitored and maintained with native species as necessary for five years.

3. If restoration of temporary impacts to waters of the state is not completed within 365 days of the impacts, compensatory mitigation may be required to offset temporal loss of waters of the state

I. Compensatory Mitigation for Permanent Impacts

1. **Final Compensatory Mitigation Plan** The Permittee shall provide compensatory mitigation for impacts to waters of the state in accordance with the Compensatory Mitigation Plan provided with the maintenance project information in the Annual Work Plan or Addenda and incorporated herein by reference. Any deviations from, or revisions to the Compensatory Mitigation Plan must be pre-approved by Los Angeles

Water Board staff. The monitoring period shall continue until the Los Angeles Water Board staff determines that performance standards have been met. This may require the monitoring period to be extended.

2. **Permittee-Responsible Compensatory Mitigation Responsibility**

   a. Permittee responsible compensatory mitigation installation shall be completed within one year (365 days) of authorized impacts.

   b. The Permittee is responsible for the required compensatory mitigation in perpetuity. However, the Permittee may transfer the compensatory mitigation requirements associated with long-term management when the following conditions have been met:

      i. Performance standards are met.

      ii. A Transfer Agreement to a third party has been approved by Los Angeles Water Board staff.

      iii. An endowment fund has been provided by the Permittee to a third party for management in perpetuity of the mitigation site.

      iv. A conservation easement, deed restriction, or other appropriate restrictive covenant for the mitigation site has been recorded and approved by Los Angeles Water Board staff.

3. **Total Required Compensatory Mitigation**

   a. The Permittee is required to provide compensatory mitigation for the authorized permanent impacts with an appropriate replacement ratio based on actual impact acres within or adjacent to facilities and on ecological functions and values as described in Section IX. The Los Angeles Water Board will require not less than a 2:1 mitigation ratio for the Project overall and the actual mitigation accounting will take place within the annual monitoring report for this program. Total required Project compensatory mitigation information for permanent physical loss of area, ecological degradation and temporal loss is summarized in Table 6.

Table 6: Required Project Compensatory Mitigation Quantity

Aquatic Resource Type	Comp Mit. Type[5]	Units	Method[6]					
			Est.	Re-est.	Reh.	Enh.	Pres.	Unknown
Stream Channel	PR	Acres				6		
Riparian Zone	PR	Acres				1		

[5] Compensatory mitigation type may be: In-Lieu-Fee (ILF); Mitigation Bank (MB); Permittee-Responsible (PR)

[6] Methods: establishment (Est.), reestablishment (Re-est.), rehabilitation (Reh.), enhancement (Enh.), preservation (Pres.). Unknown applies to advance credits with an unknown method and or location.

Table 6: Required Project Compensatory Mitigation Quantity								
Aquatic Resource Type	Comp Mit. Type[5]	Units	Method[6]					
			Est.	Re-est.	Reh.	Enh.	Pres.	Unknown
Wetland	PR	Acres				1		

XIII. Water Quality Certification

I hereby issue the Order for the Ventura County Routine Maintenance Program, 4WQC40114038 certifying that as long as all of the conditions listed in this Order are met, any discharge from the referenced Project will comply with the applicable provisions of Clean Water Act 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).

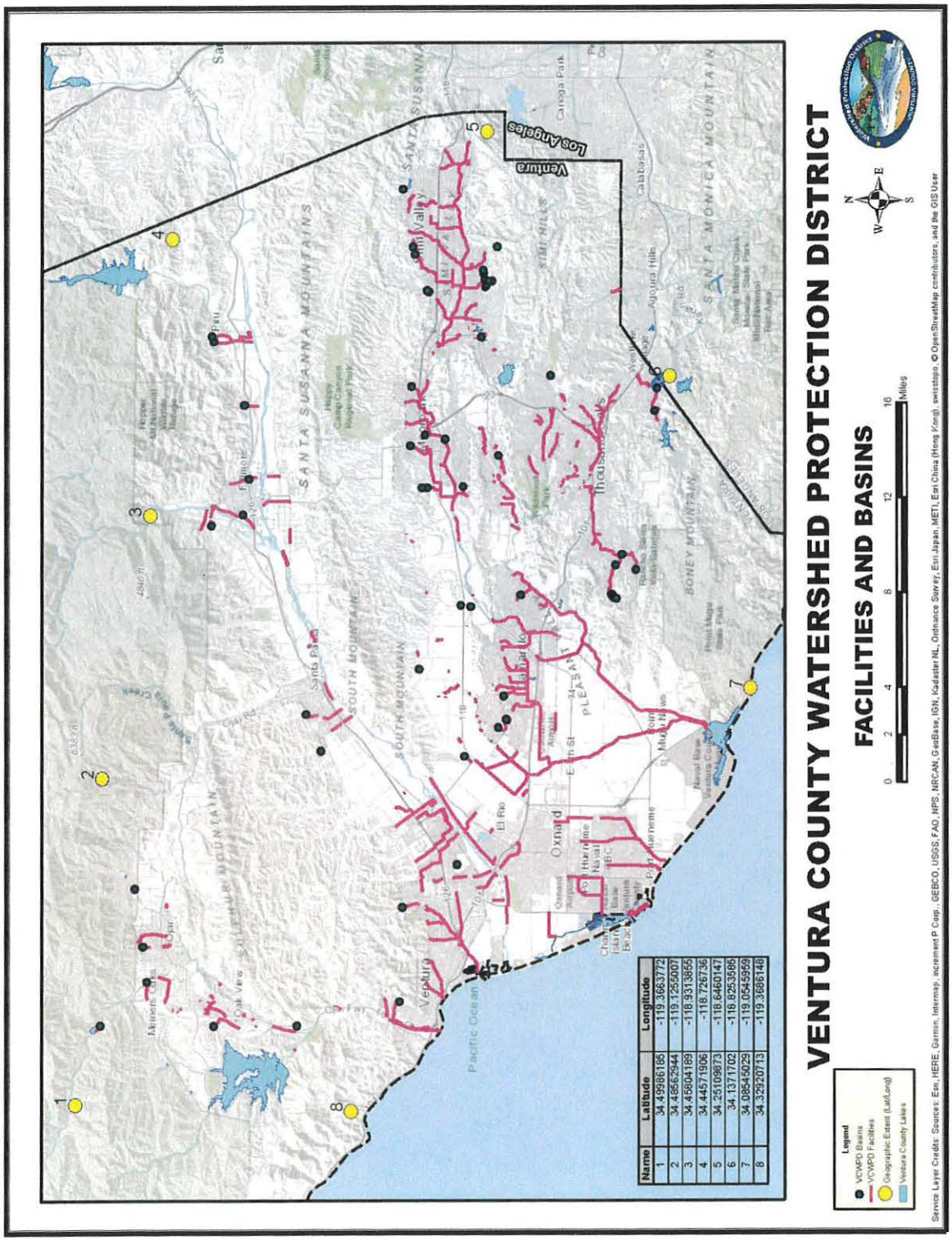
This discharge is also regulated pursuant to State Water Board Water Quality Order No. 2003-0017-DWQ which authorizes this Order to serve as Waste Discharge Requirements pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.).

Except insofar as may be modified by any preceding conditions, all Order actions are contingent on: (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the conditions of this Order and the attachments to this Order; and, (b) compliance with all applicable requirements of Statewide Water Quality Control Plans and Policies, the Regional Water Boards' Water Quality Control Plans and Policies.

12/20/19

Renee Purdy
Executive Officer
Los Angeles Water Quality Control Board

Date


VENTURA COUNTY WATERSHED PROTECTION DISTRICT
FACILITIES AND BASINS
Legend
VCWPD Basins
VCWPD Facilities
Geographic Extent (Lat/Long)
Ventura County Lakes
Miles
Name Latitude Longitude
1 34.49986186 -119.3663772
2 34.48562944 -119.1255007
3 34.45604189 -118.9313855
4 34.44571906 -118.726736
5 34.25109873 -118.6460147
6 34.1371702 -118.8253586
7 34.08545029 -119.0545969
8 34.32920713 -119.3686148
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User

SIGNATORY REQUIREMENTS

All Documents Submitted In Compliance With This Order Shall Meet The Following Signatory Requirements:

1. All applications, reports, or information submitted to the Los Angeles Water Quality Control Board (Los Angeles Water Board) must be signed and certified as follows:

   a) For a corporation, by a responsible corporate officer of at least the level of vice-president.
   b) For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
   c) For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.

2. A duly authorized representative of a person designated in items 1.a through 1.c above may sign documents if:

   a) The authorization is made in writing by a person described in items 1.a through 1.c above.
   b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
   c) The written authorization is submitted to the Los Angeles Water Board Staff Contact prior to submitting any documents listed in item 1 above.

3. Any person signing a document under this section shall make the following certification:

   "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Copies of this Form

Include a copy of the Project specific Cover Sheet below with your report: please retain a copy for your records.

Report Submittal Instructions

1. Check the box on the Report and Notification Cover Sheet next to the report or notification you are submitting.
   - **Part A (Annual Report):** This report will be submitted annually from the anniversary of Project effective date until a Notice of Project Complete Letter is issued.
   - **Part B (Project Status Notifications):** Used to notify the Los Angeles Water Board of the status of the Project schedule that may affect Project billing.
   - **Part C (Conditional Notifications and Reports):** Required on a case by case basis for accidental discharges of hazardous materials, violation of compliance with water quality standards, notification of in-water work, or other reports.
2. Sign the Report and Notification Cover Sheet and attach all information requested for the Report Type.
3. **Electronic Report Submittal Instructions:**
   - Submit signed Report and Notification Cover Sheet and required information via email to: Valerie.CarrilloZara@waterboards.ca.gov
   - Include in the subject line of the email: Subject: ATTN: Valerie CarrilloZara ; File No: 14-038, Reg. Measure ID: 393189 Report

Definition of Reporting Terms

1. **Active Discharge Period:** The active discharge period begins with the effective date of this Order and ends on the date that the Permittee receives a Notice of Completion of Discharges Letter or, if no post-construction monitoring is required, a Notice of Project Complete Letter. The Active Discharge Period includes all elements of the Project including site construction and restoration, and any Permittee responsible compensatory mitigation construction.
2. **Request for Notice of Completion of Discharges Letter:** This request by the Permittee to the Los Angeles Water Board staff pertains to projects that have post construction monitoring requirements, e.g. if site restoration was required to be monitored for 5 years following construction. Los Angeles Water Board staff will review the request and send a Completion of Discharges Letter to the Permittee upon approval. This letter will initiate the post-discharge monitoring period and a change in fees from the annual active discharge fee to the annual post-discharge monitoring fee.

3. **Request for Notice of Project Complete Letter:** This request by the Permittee to the Los Angeles Water Board staff pertains to projects that either have completed post-construction monitoring and achieved performance standards or have no post-construction monitoring requirements, and no further Project activities are planned. Los Angeles Water Board staff will review the request and send a Project Complete Letter to the Permittee upon approval. Termination of annual invoicing of fees will correspond with the date of this letter.
4. **Post-Discharge Monitoring Period:** The post-discharge monitoring period begins on the date of the Notice of Completion of Discharges Letter and ends on the date of the Notice of Project Complete Letter issued by the Los Angeles Water Board staff. The Post-Discharge Monitoring Period includes continued water quality monitoring or compensatory mitigation monitoring.
5. **Effective Date:** Date of Order issuance.

Map/Photo Documentation Information

When submitting maps or photos, please use the following formats.

1. **Map Format Information:**
   Preferred map formats of at least 1:24000 (1" = 2000') detail (listed in order of preference):

   - **GIS shapefiles:** The shapefiles must depict the boundaries of all project areas and extent of aquatic resources impacted. Each shape should be attributed with the extent/type of aquatic resources impacted. Features and boundaries should be accurate to within 33 feet (10 meters). Identify datum/projection used and if possible, provide map with a North American Datum of 1983 (NAD38) in the California Teale Albers projection in feet.
   - **Google KML files** saved from Google Maps: My Maps or Google Earth Pro. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. Include URL(s) of maps. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
   - **Other electronic format** (CAD or illustration format) that provides a context for location (inclusion of landmarks, known structures, geographic coordinates, or USGS DRG or DOQQ). Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
   - Aquatic resource maps marked on paper **USGS 7.5 minute topographic maps** or **Digital Orthophoto Quarter Quads (DOQQ)** printouts. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.

2. **Photo-Documentation:** Include a unique identifier, date stamp, written description of photo details, and latitude/longitude (in decimal degrees) or map indicating location of photo. Successive photos should be taken from the same vantage point to compare pre/post construction conditions.

REPORT AND NOTIFICATION COVER SHEET

Project:	Ventura County Routine Maintenance Program				
Permittee:	Ventura County Watershed Protection District				
Reg. Meas. ID:	393189	**Place ID:**	798768	**File No:**	14-038

Report Type Submitted

Part A – Project Reporting	
Report Type	☐ **Annual Report**
Part B - Project Status Notifications	
Report Type	☐ **Commencement of Construction**
Report Type	☐ **Request for Notice of Completion of Discharges Letter**
Report Type	☐ **Request for Notice of Project Complete Letter**
Part C - Conditional Notifications and Reports	
Report Type	☐ **Accidental Discharge of Hazardous Material Report**
Report Type	☐ **Violation of Compliance with Water Quality Standards Report**
Report Type	☐ **In-Water Work/Diversions Water Quality Monitoring Report**
Report Type	☐ **Modifications to Project Report**
Report Type	☐ **Transfer of Property Ownership Report**

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Print Name [1]	**Affiliation and Job Title**
Signature	**Date**

[1]STATEMENT OF AUTHORIZATION (include if authorization has changed since application was submitted)

I hereby authorize _____ to act in my behalf as my representative in the submittal of this report, and to furnish upon request, supplemental information in support of this submittal.

_____ _____

Permittee's Signature Date

***This Report and Notification Cover Sheet must be signed by the Permittee or a duly authorized representative and included with all written submittals.**

Part A – Project Reporting

Report Type	**Annual Report**
Report Purpose	Notify the Los Angeles Water Board staff of Project status during both the active discharge and post-discharge monitoring periods.
When to Submit	Annual reports shall be submitted each year on the anniversary of Project effective date. Annual reports shall continue until a Notice of Project Complete Letter is issued to the Permittee.
Report Contents	The contents of the annual report shall include the topics indicated below for each project period. Report contents are outlined in Annual Report Topics below. **<u>During the Active Discharge Period</u>** • **Topic 1: Construction Summary** • **Topic 2: Mitigation for Temporary Impacts Status** • **Topic 3: Compensatory Mitigation for Permanent Impacts Status** **<u>During the Post-Discharge Monitoring Period</u>** • **Topic 2: Mitigation for Temporary Impacts Status** • **Topic 3: Compensatory Mitigation for Permanent Impacts Status**
Annual Report Topics (1-3)	
Annual Report Topic 1	**Construction Summary**
When to Submit	With the annual report during the Active Discharge Period.
Report Contents	**1.** Project progress and schedule including initial ground disturbance, site clearing and grubbing, road construction, site construction, and the implementation status of construction storm water best management practices (BMPs). If construction has not started, provide estimated start date and reasons for delay. **2.** Color photos, pre-project and current. **3.** Map showing general Project progress. **4.** If applicable: **a.** Summary of any conditional reports sent during the year such as "Accidental Discharge of Hazardous Material Report" or "Accidental Discharge of Hazardous Material Report" **b.** Copies of revised permits from other agencies **c.** Compilation of all water quality monitoring results for the year in a spreadsheet format.
Annual Report Topic 2	**Mitigation for Temporary Impacts Status**
When to Submit	With the annual report during both the Active Discharge Period and Post-Discharge Monitoring Period.

Report Contents	***If not applicable report N/A.** 1. Planned date of initiation and map showing locations of mitigation for temporary impacts to waters of the state and all upland areas of temporary disturbance which could result in a discharge to waters of the state. 2. If mitigation for temporary impacts has already commenced, provide a map and information concerning attainment of mitigation success.
Annual Report Topic 3	**Compensatory Mitigation for Permanent Impacts Status**
When to Submit	With the annual report during both the Active Discharge Period and Post-Discharge Monitoring Period.
Report Contents	***If not applicable report N/A.** **Part A. Permittee Responsible** 1. Planned date of initiation of compensatory mitigation site installation. 2. If installation is in progress, a map of what has been completed to date. 3. If the compensatory mitigation site has been installed, provide a final map and information concerning attainment of performance standards contained in the compensatory mitigation plan. **Part B. Mitigation Bank or In-Lieu Fee** 1. Status or proof of purchase of credit types and quantities. 2. Include the name of bank/ILF Program and contact information. 3. If ILF, location of project and type if known.

Part B – Project Status Notifications

Report Type	**Request for Notice of Completion of Discharges Letter**
Report Purpose	Notify Los Angeles Water Board staff that post-construction monitoring is required and that active Project construction, including any mitigation and permittee responsible compensatory mitigation, is complete.
When to Submit	Must be received by Los Angeles Water Board staff within thirty (30) days following completion of all Project construction activities.
Report Contents	1. Pre- and post-photo documentation of all Project activity sites where the discharge of dredge and/or fill/excavation was authorized. 2. An updated monitoring schedule for mitigation for temporary impacts to waters of the state and permittee responsible compensatory mitigation during the post-discharge monitoring period, if applicable.

Report Type	**Request for Notice of Project Complete Letter**
Report Purpose	Notify Los Angeles Water Board staff that construction and/or any post-construction monitoring is complete, or is not required, and no further Project activity is planned.
When to Submit	Must be received by Los Angeles Water Board staff within thirty (30) days following completion of all Project activities.

Report Contents	**Part A: Mitigation for Temporary Impacts** 1. A report establishing that areas of temporary impacts to waters of the state, and upland areas of temporary disturbance which could result in a discharge to waters of the state, have been successfully restored and all identified success criteria have been met. Pre- and post-photo documentation of all restoration sites. **Part B: Permittee Responsible Compensatory Mitigation** 2. A report establishing that the performance standards outlined in the compensatory mitigation plan have been met. 3. Status on the implementation of the long-term maintenance and management plan and funding of endowment. 4. Pre- and post-photo documentation of all compensatory mitigation sites. 5. Final maps of all compensatory mitigation areas (including buffers). **Part C: Post-Construction Storm Water BMPs** 6. Date of storm water permit Notice of Termination(s), if applicable. 7. Report status and functionality of all post-construction BMPs.

Part C – Conditional Notifications and Reports

Report Type	**Accidental Discharge of Hazardous Material Report**
Report Purpose	Notifies Los Angeles Water Board staff that an accidental discharge of hazardous material has occurred.
When to Submit	Within five (5) working days following the date of an accidental discharge. Continue reporting as required by Los Angeles Water Board staff.
Report Contents	1. The report shall include the OES Incident/Assessment Form, a full description and map of the accidental discharge incident (i.e. location, time and date, source, discharge constituent and quantity, aerial extent, and photo documentation). If applicable, the OES Written Follow-Up Report may be substituted. 2. If applicable, any required sampling data, a full description of the sampling methods including frequency/dates and times of sampling, equipment, locations of sampling sites. 3. Locations and construction specifications of any barriers, including silt curtains or diverting structures, and any associated trenching or anchoring.

Report Type	**Violation of Compliance with Water Quality Standards Report**
Report Purpose	Notifies Los Angeles Water Board staff that a violation of compliance with water quality standards has occurred.
When to Submit	The Permittee shall report any event that causes a violation of water quality standards within three (3) working days of the noncompliance event notification to Los Angeles Water Board staff.

Report Contents	The report shall include: the cause; the location shown on a map; and the period of the noncompliance including exact dates and times. If the noncompliance has not been corrected, include: the anticipated time it is expected to continue; the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and any monitoring results if required by Los Angeles Water Board staff.

Report Type	**In-Water Work and Diversions Water Quality Monitoring Report**
Report Purpose	Notifies Los Angeles Water Board staff of the completion of in-water work.
When to Submit	Within three (3) working days following the completion of in-water work. Continue reporting in accordance with the approved water quality monitoring plan.
Report Contents	As required by the approved water quality monitoring plan.

Report Type	**Modifications to Project Report**
Report Purpose	Notifies Los Angeles Water Board staff if the Project, as described in the application materials, is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority.
When to Submit	Prior to any alteration or modification of Project activities.
Report Contents	A description and location of any alterations of Project activities. Identify any Project modifications that will interfere with the Permittee's compliance with the Order. Any alteration may require an Amendment, to be determined by Los Angeles Water Board staff.

Report Type	**Transfer of Property Ownership Report**
Report Purpose	Notifies Los Angeles Water Board staff of change in ownership of the Project or Permittee-responsible mitigation area.
When to Submit	At least 10 working days prior to the transfer of ownership.
Report Contents	**1.** A statement that the Permittee has provided the purchaser with a copy of this Order and that the purchaser understands and accepts: **a.** the Order's requirements and the obligation to implement them or be subject to administrative and/or civil liability for failure to do so; and **b.** responsibility for compliance with any long-term BMP[1] maintenance plan requirements in this Order. **2.** A statement that the Permittee has informed the purchaser to submit a written request to the Los Angeles Water Board to be named as the permittee in a revised order.

[1] Best Management Practices (BMPs) is a term used to describe a type of water pollution or environmental control.

Master Index of Facilities

This Index of Facilities includes all facilities by Reach Number.

Zone 1: Ventura River Watershed		
List #	Facility Name	Reaches
1	Cozy Dell/ McDonald Canyon/ Bypass & Dam	41311/ 41301, 41302, 41303/ 41911
2	Dent Drain/ Dent 2°/ Dent Debris Basin	41121, 41122, 41124/ 41721/ 41903
3	Fox Canyon	41421, 41422, 41423, 41424
4	Happy Valley Drain/ Happy Valley Drain South	41281, 41282, 41283, 41284, 41285/ 41264
5	Howard Ave 2°	41717
6	Kenewa St. 2°	41716
7	Live Oak Creek Diversion & Dam	41217, 41218, 41904
8	Matilija Dam	41901
9	Matilija Hot Springs Gauge Maintenance	602
10	Mirror Lake Drain/ Tributary	41231, 41232/ 41241
11	North Fork Matilija Creek Stream Gauge	604
12	Oakview Drain	41205
13	Prince Barranca/ San Jon Barranca	41561, 41562, 41563, 41564/ 41551, 41552, 41553 41554
14	San Antonio Creek at Old Creek Road Stream Gauge (replaces 605)	605A
15	San Antonio Creek Spreading Grounds	41915
16	Santa Ana Creek Stream Gauge	606
17	Skyline Drain/ Felix Drive 2°	41221, 41222, 41223, 41224, 41712
18	Stewart Canyon/ Stewart Debris Basin	41411, 41412, 41413, 41414/ 41902
19	Thacher Creek at Boardman Road Stream Gauge	669
20	Thatcher Creek	41443
21	Ventura River at Foster Park Stream Gauge	608

Reach numbers/names are available at:
https://ventura-county-watershed-protection-district-gis-data-vcwpd.hub.arcgis.com/

Master Index of Facilities

Zone 1: Ventura River Watershed Continued		
List #	**Facility Name**	**Reaches**
22	Ventura River Bank Protection downstream of Foster Park/ Vince St. 2°/ Stanley Ave Drain/ Simpson St. 2°/ Ramona St. 2°/ Peking 2°/ Parkview Drive 2°/ Harrison 2°/ Fresno Canyon & Basin/ Freeway Side Drains 1-5/ Cal-Trans 2°/ Canada Larga/ Canada de San Joaquin/	41011, 41012, 41015/ 41732/ 41110/ 41731/ 41730/ 41729/ 41727/ 41751, 41752, 41753, 41754, 41755/ 41728/ 41152/ 41131, 41134
23	Ventura River Bank Protection u/s of Foster Park/ Parkview Drive 2°/ Fresno Canyon	41021, 41023, 41031, 41032, 41041/ 41701/ 41181, 41182
24	Stream gage at Ojai Valley Sanitary District bank protection site	41016
Zone 2: Santa Clara River Watershed		
1	Adams Debris Basin	43906
2	Arundell Barranca/ Det. Basin/ Reservoir Barranca/ Barlow Barranca/ Mills Road Drain/ Telephone Road Drain	42401, 42402, 42403, 42404, 42405, 42406, 42407, 42408, 42409/ 42901/ 42441, 42421/ 42411/ 42432
3	Bardsdale Ditch, Santa Clara River Levee	43161/ 42037
4	Basolo Ditch	43191
5	Beardsley Wash/ Camarillo Hills Drain/ Nyeland Drain, Nyeland Trib. Lateral A/ Santa Clara Ave. Drain & Diversion/ Revelon Slough/ Wright Road Drain	42151, 42152, 42154/ 42131/ 42161, 42162, 42171/ 42191, 42192, 42193, 42181/ 42101, 42102, 42104/ 42201
6	Brown Barranca/ Saticoy Drain & 2°	42511, 42512, 42514/ 42521, 42522, 42702
7	Cavin Road Drain/ Debris Basin	43221, 43222/ 43902
8	Doris Drain	42381
9	Ellsworth Barranca	42552
10	Fagan Canyon/ Debris Basin	43051, 43052, 43053, 43054, 43055, 43056/ 43907
11	Franklin Barranca/ Wason Barranca	42531, 42532, 42534/ 42537, 42541/ 42542
12	Grimes Canyon	43181, 43182
13	Harmon Barranca/ Ondulando Barranca	42471, 42472, 42473, 42474, 42475, 42476, 42477, 42478/ 42482
14	Hopper Creek Stream Gauge	701
15	Hueneme Drain/ Hueneme Pump Station/ J St. Drain	42332/ 42331/ 42321, 42322

Reach numbers/names are available at:
https://ventura-county-watershed-protection-district-gis-data-vcwpd.hub.arcgis.com/

Master Index of Facilities

Zone 2: Santa Clara River Watershed Continued		
List #	**Facility Name**	**Reaches**
16	Oxnard Industrial Drain/ Rice Road Drain	42301, 42302, 42303, 42304/ 42311, 42312, 42313, 42314, 42317, 42318, 42319
17	Oxnard West Drain/ West Wooley Road Drain	42351, 42352, 42353, 42354, 42355/ 42361, 42362
18	Peck Road Drain	43041, 43042, 43043
19	Piru Storage & Stockpile	43009
20	Pole Creek/ Debris Basin	43201, 43202, 43203, 43204/ 43905
21	Real Canyon/ Debris Basin/ Warring Wash/ Warring Wash South/ & Basin	43251, 43252, 43253, 43254, 43255/ 43903/ 43261, 43262, 43263/ 43271/ 43904
22	Santa Clara River at 12th St. Bridge Stream Gauge	720
23	Santa Clara River at UWCD Freeman Diversion Stream Gauge	724
24	Santa Clara River at Victoria Avenue Bridge Stream Gauge	723
25	Santa Clara River Levee Harbor Blvd. To Freeman Diversion/ Central Avenue Drain/ Clark Barranca/ Sudden Barranca/ Victoria Ave. Drain/ North El Rio Drain/ El Rio Drain/ Moon Ditch/ Montalvo Golf Course	42012, 42017, 42018, 42021, 42025, 42031/ 42205, 42206/ 42491, 42492, 42493, 42494/ 42501,42502, 42504, 42505, 42506/ 42704/ 42395/ 42391/ 42461, 42462, 42463/ 42701
26	Santa Clara River Levee upstream of Freeman Div.	42035, 42036, 42037
27	Santa Paula Creek	43061, 43062, 42037
28	Santa Paula Creek at Mupu Bridge Stream Gauge	709
29	Saticoy Storage & Stockpile	42209
30	Sespe Creek, Levee/ Jepson Wash/ Jepson Basin/ Keefe Ditch	43308, 43305, 43306/ 43351, 43352/ 43901/ 43361, 43362
31	Silver Strand Drain & Pump Station	42342, 42346, 43249
32	Todd Barranca at Telegraph Rd Bridge Stream Gauge	738
33	Willard Road Drain 2°	43701

Reach numbers/names are available at:
https://ventura-county-watershed-protection-district-gis-data-vcwpd.hub.arcgis.com/

Master Index of Facilities

Zone 3: Calleguas Creek Watershed		
List #	Facility Name	Reaches
1	Arroyo Colorado/ Beardsley Wash	45271/ 45241, 45243, 45245, 45247, 45248
2	Arroyo Conejo N Fork & Trib./ Waverly Channel/ Castano Channel & Tributary/ Olsen Channel	46161, 46164, 46165, 46167, 46171, 46172/ 46202, 46203/ 46181, 46182, 46183, 46191, 46192/ 46151, 46152, 46153
3	Arroyo Conejo / Park Drain/ Thousand Oaks N Drain/ Lynn Ranch 2°/ Erbes Road Drain/ Los Robles Drain. Cm Dos Rios 2°	46103, 46104, 46105, 46106, 46107, 46108/ 46211/ 46231, 46232, 46233, 46234, 46235/ 46749/ 46241/ 46251, 46252/ 46752
4	Arroyo Las Posas	45051, 45053, 45063, 45065
5	Arroyo Santa Rosa u/s Conejo Ck confluence/ Blanchard Road Drain, Arroyo Santa Rosa Stream Gauge at Blanchard Rd/ Rotsler Ditch 2°/ Duval Rd. Drain 2°/Santa Rosa No.4/Santa Rosa Road Deb. Basin #2	46072, 46073 ,46074, 46075, 46076, 46077/ 46702/ 46081, 46083, 46084, 46086/ 838 / 46701/ 45703/ 46709/ 46902
6	Arroyo Santa Rosa d/s Conejo Cr. Confluence	46071
7	Arroyo Simi/ Stream Gauge at Hitch/ Brea Canyon/ Castro Williams Channel, Basin/ Moorpark #1 2°	47011, 47012, 47013, 47014, 47015, 47016, 47017, 47021, 47022, 47024, 47025, 47027, 47031, 47033, 47035, 47037, 47038/ 841/ 47311/ 47161, 47902/ 47701
8	Arroyo Simi/ Piedra Canyon/ Santa Susana Knolls Drain 2°/ Black Canyon 2°	47039/ 841/ 47571/ 47760/ 47750
9	Bus Canyon/ Bus Canyon Tributary	47351, 47352, 47353, 47354, 47355/ 47361, 47362, 47363, 47364
10	Calleguas Creek/ Stream Gauge at CSUCI/ Stream Gauge at Hwy 101 Stream Gauge/ Long Canyon /Adolfo Storage and Stockpile Site	45021, 45023, 45025, 45027, 45033, 45035, 45037/ 805/ 806/ 45009
11	Camarillo Hills Drain/ Edgemore Debris Basin/ Edgemore Drain/ Edgemore Tributary 2°/ Anacapa Drain/ W. Camarillo Hills Debris Basins W Branch/ W. Cam. Hills Drain/ Mission Drain/ Ponderosa Drain/ Las Posas Estates Det. Basin/ Las Posas Estates Drain/ Las Posas Estates Diversion/ N. Ramona Place Drain/ Arneill Drain/ Crestview Drain/ Crestview Basin/ Ramona Det. Basin	45141, 45143, 45144, 45145, 45147, 45148/ 45902/ 45161, 45163/ 45701/ 45211/ 45903/ 45171, 45173, 45175/ 45181, 45183/ 45191, 45192/ 45906/ 45224, 45225/ 45226/ 45231/ 45201/ 45151, 45153, 45155/ 45907
12	Conejo Creek/ Mission Oaks Drain/ East Camarillo Drain/ Upland Road Drain	46011, 46012, 46013, 46014, 46015, 64016, 46041, 46042, 46031, 46035, 46051

Reach numbers/names are available at:
https://ventura-county-watershed-protection-district-gis-data-vcwpd.hub.arcgis.com/

Master Index of Facilities

Zone 3: Calleguas Creek Watershed Continued		
List #	Facility Name	Reaches
13	Conejo Mountain Creek/ Debris Basins #1 - #5	46121, 46906, 46907, 46908, 46909, 46910
14	Coyote Canyon/ Coyote Basin/ Puerta Zuela Barranca & Basin	45522/ 45911/45531, 45912
15	Dry Canyon Channel /Tributary /Dry Canyon West Fork	47381, 47382, 47383, 47384, 47385, 47386, 47387/ 47391 /47389
16	Erringer Road Drain/ Erringer Road Debris Basin	47371,47373, 47375/ 47904
17	Ferro Ditch/ Ferro Basin	45301/ 45908
18	Flood Street	49059
19	Fox Barranca/ Debris Basin	45503, 45505, 45910
20	Gabbert Canyon/ Debris Basin/ Moorpark Storm Drain #1 & #2/ Walnut Canyon/Walnut Canyon Detention Basin	47101, 47102, 47103/ 47901/ 47141, 47151/ 47111, 47112, 47114, 47116/47919
21	Groves Place Drop Structure	45913
22	Happy Camp Canyon	47171, 47172, 47174
23	Home Acres Drain/ Peach Hill Wash	47131, 47133/ 47121, 47123
24	Honda Barranca/ E. Fork/ Honda West Basin/ Santa Clara Ave Drain/ Milligan Barranca	45251, 45252, 45255/ 45261, 45262/ 45909/ 45293/ 45282, 45285, 45286
25	Hummingbird Creek/ White Oak Creek	47561, 47562, 47563/ 47551, 47552, 47553, 47554
26	Lang Creek/ Debris & Detention Basins	46221, 46222, 46223, 46224, 46225,46226/ 46227, 46228, 46911
27	Las Llajas Canyon/ Las Llajas Canyon Dam / Marr Diversion/ Kadota Fig Drain	47511, 47512, 47513/ 47908/ 47531, 47532/ 47521, 47522, 47523
28	Lewis Road Drain	45431, 45432, 45433, 45434
29	Long Canyon	45567
30	No.2 Canyon /No. 2 Canyon Debris Basin	47201, 47202,-47203/47918
31	North Simi Drain/North Simi Detention & Debris Basin	47341, 47342, 47343, 47344, 47345, 47346/ 47911
32	Pleasant Valley Rd. Drain	45133
33	Revolon Slough	45101, 45103, 45105
34	Runkle Canyon, Runkle Canyon Upstream of Dam/ Debris Basin/ Storage & Stockpile Area/ Appleton Road Drain	47401, 47402, 47403, 47404, 47406/ 47907/ 47009/ 47411
35	Santa Susana W Drain/ Little Simi Detention Basin (Line C Det. Basin)	47501, 47502, 47503/ 47917
36	Somis Drain/ Somis Drain East Tributary/ West Tributary	47501, 47502, 47503/ DD3-30

Master Index of Facilities

Zone 3: Calleguas Creek Watershed Continued		
List #	**Facility Name**	**Reaches**
37	South Branch Arroyo Conejo/ South Branch Arroyo Conejo (Reino) Basin/ Newbury Park S.O. No. 1, 2/ Conejo Valley 2nd/ Jenny Drive 2/ Potrero Rd East Dam (South Potrero Det)/ Potrero Rd. West Dam (Debris Basin) /Conejo Valley Secondary	46111, 46112, 46113, 46114, 46115, 46118, 46124/ DB3-22/ 46141, 46142, 46143, 46131, 46133/ 46801/ 46800/ 46903/ 46904/ 46801
38	Strathearn Canyon	47182, 47184
39	Sycamore Canyon, & Dam/ Oak Canyon Channel	47321, 47322, 47325/ 47903/ 47331
40	Tapo Canyon	47421, 47422, 47423, 47424, 47425
41	Tapo Hills Diversions Diversion / Basins #1 & #2	474231, 47432, 47433/ 47905, 47906
42	Arielle and Muirfield Debris Basins	47921/ 47920
43	Covington Basin/Crosby Basin/Sycamore Park Basin	47922/47923/ 47924
Zone 4: Malibu Creek Watershed		
1	Lake Eleanor Creek	48031
2	Medea Creek	48071, 48072
3	Potrero Creek/ Instream Basin	48021, 48023, 48025/ DB4-01
4	Schoolhouse 2	48041, 48042
5	Bridgegate Basin	48901

Reach numbers/names are available at:
https://ventura-county-watershed-protection-district-gis-data-vcwpd.hub.arcgis.com/

USACE NO. SPL-2018-0040-AJS

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT
60 SOUTH CALIFORNIA STREET, SUITE 201
VENTURA, CA 93001-2598

February 25, 2020

SUBJECT: Initial Proffered Standard Individual Permit

Glenn Shephard
Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, California 93009-1610

Dear Mr. Shephard

I received your application for a Department of the Army Permit application, dated January 16, 2018. Enclosed are two copies of the permit (ENG FORM 1721) authorizing you to discharge fill into waters of the U.S., in association with the VCWPD Routine Operation and Maintenance Activities Program. The proposed work would take place within various waters of the U.S. throughout Ventura County, California.

THIS PERMIT WILL NOT BECOME VALID UNTIL ALL OF THE FOLLOWING STEPS HAVE BEEN COMPLETED:

1. The owner or authorized responsible official must sign and date both copies of the permit indicating that he/she agrees to the work as described and agrees to comply with all conditions stated in the permit.

2. Both signed copies of the permit must be returned to the U.S. Army Corps of Engineers (Corps) at the above address (Attention: CESPL-RG). Upon receipt of the signed copies, the Corps will sign and forward one of the copies back to you.

Furthermore, you are hereby advised that the Corps has established an Administrative Appeal Process that is fully described in 33 CFR Part 331. The complete appeal process is diagrammed in the enclosed Appendix B. If you object to the terms or special conditions of this permit, you may submit the attached appeal form stating your objections and describing your proposed modifications to the permit terms and special conditions to:

Colonel Aaron C. Barta, District Engineer
Los Angeles District, U.S. Army Corps of Engineers
915 Wilshire Boulevard, Suite 930
Los Angeles, California 90017
Telephone (213) 452-3961
Email: Aaron.C.Barta@usace.army.mil

The District Engineer would then evaluate your objections and determine whether it is appropriate to change some, all, or none of the terms and special conditions of the permit. The permit would then be provided to you a second time, at which point you could accept the permit, appeal the permit conditions to the Corps South Pacific Division office, or withdraw your permit request.

If we do not receive the signed copies of the permit by March 25, 2020, your request for the proposed work will be withdrawn. It is not necessary to submit an appeal form unless you object to the conditions of the permit.

Thank you for participating in the Regulatory Program. If you have questions, please contact me at (805) 484-2147or via e-mail at antal.j.szijj@usace.army.mil. Please help me to evaluate and improve the regulatory experience for others by completing the customer survey form at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

Sincerely,

Digitally signed by SZIJJ.ANTAL.J.1231776784
Date: 2020.02.25 14:10:31 -08'00'

Antal Szijj
Team Lead
Ventura Field Office
North Coast Branch

Enclosures

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL		
Applicant: Ventura County Watershed Protection District	File Number: SPL-2018-00040-AJS	Date: FEBRUARY 25, 2020
Attached is:		See Section below
X	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Antal Szijj
Project Manager
U.S. Army Corps of Engineers
Los Angeles District
60 South California Street, Suite 201
Ventura, CA 93001-2598
Phone: (805) 585-2147
Email: Antal.J.Szijj@usace.army.mil

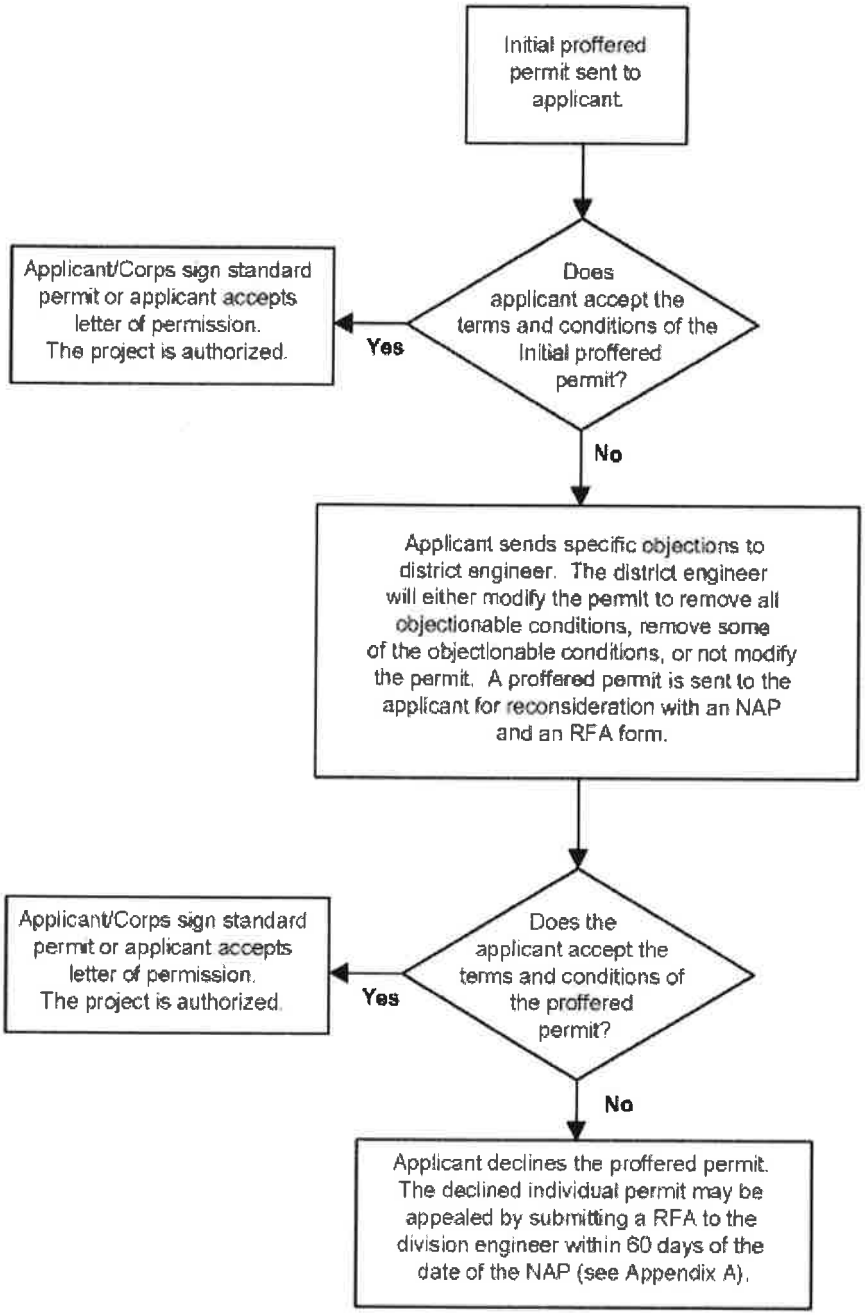
If you only have questions regarding the appeal process you may also contact: Thomas J. Cavanaugh

Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
450 Golden Gate Ave.
San Francisco, California 94102
Phone: (415) 503-6574
Fax: (415) 503-6646
Email: thomas.j.cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

Applicant Options with Initial Proffered Permit



Appendix B

DEPARTMENT OF THE ARMY PERMIT

Permittee: Ventura County Watershed Protection District (VCWPD); Glenn Shephard

Project Name: VCWPD Routine Operation and Maintenance Program

Permit Number: SPL-2018-00040-AJS

Issuing Office: Los Angeles District

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

To construct structures and/or conduct work in or affecting "navigable waters of the United States" pursuant to Section 10 of the Rivers and Harbors Act of 1899, and to discharge fill into waters of the U.S. pursuant to Section 404 of the Clean Water Act of 1972, in association with the VCWPD Routine Operation and Maintenance Activities Program as shown on the attached drawings.

Specifically, you are authorized to:

1. Conduct routine maintenance of "Covered Facilities" including levees, storm drains, debris basins, grade control structures, stream gauges, culverts, and appurtenant structures to all of the above. A complete list of Covered Facilities is provided in Attachment 1. Authorized maintenance includes in-kind structural repairs, sediment and vegetation removal to restore baseline conditions, erosion repair, and temporary surface water diversions to facilitate maintenance and repairs. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make repairs are also authorized.
2. Implement the "Beach Elevation Management Plan" adjacent to Ormond Lagoon and Ormond Beach near the city of Port Hueneme.
3. Conduct exotic vegetation removal including, but not limited to, giant reed (*Arundo donax*) and tamarisk (*Tamarix* sp.) within waters of the U.S. when required for compensatory mitigation purposes or as stand-alone efforts as funds become available (e.g. through watershed improvement grants).

Project Location: Various locations associated with Covered Facilities within Ventura County, California.

Permit Conditions:

General Conditions:

1. The time limit for completing the authorized activity ends on **February 25, 2030**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

Special Conditions:

1. No maintenance activity authorized under this programmatic individual permit, with the exception of those listed below, shall be implemented until the permittee receives written notification from the Corps (in the form of a notice to proceed) verifying compliance with the terms and conditions of the permit. The Corps may at its discretion include additional project-specific special conditions in the notice to proceed to ensure impacts are minimal. The notice to proceed will also indicate whether any specific maintenance activity or activities do not comply with the permit. The permittee may elect to modify such activities

to meet the terms and conditions of the permit or to apply for separate authorization under an alternative permit process (e.g. nationwide permit, standard individual permit, or other general permit). The following maintenance activities do not require project-specific authorization from the Corps and are authorized by default unless such activities may affect a federally listed threatened or endangered species or its designated critical habitat:

a) Routine debris removal and repairs to structural components in debris and detention basins that do not result in the removal of woody vegetation
b) In-kind repairs to fully lined concrete channels in non-tidal waters
c) Temporary surface water diversions and dewatering that may be required to accomplish a) or b)

2. The permittee shall submit annual maintenance plans by April 1 of each year providing the following information for all maintenance activities proposed for the upcoming maintenance year. Supplemental plans may be submitted to address maintenance actions that are unforeseen at the time of the annual plan submission. With the exception of those activities listed in Special Condition 1 a-c, activities proposed in any supplemental plan(s) shall also require written verification from the Corps before work is authorized to begin. Annual maintenance plans and any supplements shall also be provided to the Los Angeles Regional Water Quality Control Board, California Coastal Commission Office of Federal Compliance, U.S. Fish & Wildlife Service (FWS) and National Marine Fisheries Service (NMFS). Annual maintenance plans and any supplements shall include the following information:
   a) List of proposed maintenance activities to be implemented during the upcoming maintenance year including the name of each facility where maintenance is proposed and the need for each maintenance activity;
   b) maps and drawings clearly depicting location, proposed work limits and impacts of each maintenance activity prepared in accordance with the Corps Los Angeles District Map and Drawing Standards;
   c) environmental BMPs to be implemented at each maintenance activity;
   d) total area of temporary impacts to waters of the United States and associated habitat types at each maintenance activity;
   e) total area of permanent impact to waters of the United States and associated habitat types at each maintenance activity;
   f) approximate dates and duration of each maintenance activity;
   g) proposed compensatory mitigation (if required);
   h) extent of any suitable habitat for federally listed threatened and endangered species in the project vicinity including but not limited to designated critical habitat;
   i) disposal sites for any sediment/debris excavated from a facility in excess of 50 cubic yards.

3. The permittee shall submit a compliance report of all maintenance activities authorized under the RGP during the previous maintenance year no later than August 1 following each maintenance year during which maintenance activities authorized under this RGP are conducted. The compliance report shall include the following information:
   a) Summary of all authorized maintenance activities completed under the RGP;
   b) summary of any authorized maintenance activities not completed and their status (postponed, in-progress, etc);

c) compliance with BMPs applied to each completed maintenance activity;
d) results of pre-project biological surveys and biological monitoring during construction;
e) compliance with RGP special conditions;
f) representative photographs of completed maintenance activities;
g) monitoring reports for any approved permittee-responsible compensatory mitigation implemented for activities authorized under the RGP in accordance with the special conditions included at the time of approval;
h) all instances of non-compliance with the terms and conditions of the RGP and/or special conditions included in the notice to proceed.

4. This Corps permit does not authorize you to take the following threatened and endangered species: Coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), California least tern (*Sternula antillarum browni*), western snowy plover (*Charadrius nivosus nivosus*), western yellow-billed cuckoo (*Coccyzus americanus),* California red-legged frog (*Rana draytonii*), tidewater goby (*Eucyclogobius newberryi*), Southern California coastal steelhead trout (*Oncorhynchus mykiss*), Gambel's watercress (*Nasturtium [Rorippa] gambellii*), and marsh sandwort (*Arenaria paludicola*); or to adversely modify designated critical habitat for the coastal California gnatcatcher, western snowy plover, California red-legged frog, tidewater goby, and steelhead trout. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g. ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply). The enclosed FWS and NMFS BOs (nos. 08DEVEN00-2018-F-0330 and WCR-2018-9054, respectively) contain mandatory terms and conditions to implement the reasonable and prudent measures that are associated with incidental take that is also specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BOs, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The FWS and NMFS are the appropriate authorities to determine compliance with the terms and conditions of their respective BOs and with the ESA.

5. Incidents where any individuals of southern steelhead trout (*Oncorhynchus mykiss*) listed by NOAA Fisheries under the Endangered Species Act appear to be injured or killed as a result of discharges of dredged or fill material into waters of the United States or structures or work in navigable waters of the United States authorized by this NWP shall be reported to NOAA Fisheries, Office of Protected Resources at (301) 713-1401 and the Regulatory Office of the Los Angeles District of the U.S. Army Corps of Engineers at (805) 585-2147. The finder should leave the plant or animal alone, make note of any circumstances likely causing the death or injury, note the location and number of individuals involved and, if possible, take photographs. Adult animals should not be disturbed unless circumstances arise where they are obviously

injured or killed by discharge exposure, or some unnatural cause. The finder may be asked to carry out instructions provided by NOAA Fisheries, Office of Protected Resources, to collect specimens or take other measures to ensure that evidence intrinsic to the specimen is preserved.

6. The permittee shall fully implement all environmental BMPs as applied to each maintenance activity described in the annual work plan and any addenda.

7. Beach grooming activity at Ormond Beach authorized under this RGP shall follow the "Beach Elevation and Management Plan" including all avoidance and minimization measures as described in Section 3.7 of the "Final Environmental Impact Report J Street Drain Project Ventura County, California" prepared by HDR Engineering and dated January 2012, and revised access plans dated February 2013.

8. Any temporary surface water diversions required to implement authorized maintenance activities shall adhere to the "Water Diversion Guide for the Program Environmental Impact Report" prepared on behalf of VCWPD by URS and dated November 2007.

9. Pursuant to 36 C.F.R. section 800.13, in the event of any discoveries during construction of either human remains, archeological deposits, or any other type of historic property, the Permittee shall notify the Corps' Regulatory Division at 805-585-2147 and Archeology Staff within 24 hours (Danielle Storey at 213-452-3855 OR Meg McDonald at 213-452-3849). The Permittee shall immediately suspend all work in any area(s) where potential cultural resources are discovered. The Permittee shall not resume construction in the area surrounding the potential cultural resources until the Corps Regulatory Division reauthorizes project construction, per 36 C.F.R. section 800.13.

10. Authorization of maintenance activities within the following Covered Facilities is contingent upon the issuance of a Coastal Zone Management Act (CZMA) consistency certification by the California Coastal Commission:
    - Ventura River levee and associated secondary channels (from downstream terminus to 5,830 feet upstream)
    - San Jon Barranca
    - Prince Barranca
    - Arundell Barranca downstream of US 101
    - Doris Avenue Drain
    - Oxnard West Drain
    - Silver Strand Drain System
    - Hueneme Drain (downstream of Hueneme Road) and Pump Station
    - tšumaš Creek (downstream of Hueneme Road)
    - Ormond Lagoon Waterway (downstream of Hueneme Road)
    - Lower Revolon Slough
    - Lower Calleguas Creek (to approx. 5 miles upstream of Hwy 1

The Permittee shall abide by the terms and conditions of the CZMA consistency certification. The Permittee shall submit the CZMA consistency certification to the Corps Regulatory Division (preferably via email) within two weeks of receipt from the issuing state agency. The Permittee shall not proceed with construction until receiving an email or other written notification from Corps Regulatory Division acknowledging the CZMA consistency certification has been received, reviewed, and determined to be acceptable. If the California Coastal Commission fails to act on a request for concurrence with your certification within six months after receipt, please notify the Corps so we may consider whether to presume a concurrence pursuant to 33 CFR 325.2(b)(2)(ii).

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

2/27/2020

Glenn Shephard, P.E.
Director
Watershed Protection District
Ventura County Public Works

DATE

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

3/2/2020

Antal Szijj
Team Lead
North Coast Branch
Regulatory Division

DATE

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

TRANSFEREE

DATE

Master Index of Facilities with Work Codes
USACE

This Index of Facilities includes facilities by Reach Number with Work Codes.

Zone 1: Ventura River Watershed			
List #	**Facility Name**	**Reaches**	**Work Codes**
1	Cozy Dell/ McDonald Canyon/ Bypass & Dam	41311/ 41301, 41302, 41303/ 41911	PS41, PS42, PT21, PT26, PT34-37, PT41, PT42, PT43, PT44, PT45, PT55, PT89, PT32, PT70, PT76,PT48, PT61, PT77, PT92, PT25, PT40, PT53, PT56, PT57, PT66, PT80, PT88
2	Dent Drain/ Dent 2°/ Dent Debris Basin	41121, 41122, 41124/ 41721/ 41903	PS41, PS42, PT21, PT26, PT32, PT34-37, PT41, PT42, PT43, PT53, PT55, PT76, PT80, PT89, PT92, PT61, PT70, PT25, PT40, PT44, PT45, PT56, PT57, PT66, PT77, PT88
3	Fox Canyon	41421, 41422, 41423, 41424	PT23, PT24, PT28, PT32, PT41, PT61
4	Happy Valley Drain/ Happy Valley Drain South	41281, 41282, 41283, 41284, 41285	PS41, PS42, PT21, PT26, PT28, PT32, PT41, PT42, PT43, PT53, PT55, PT60, PT76, PT80, PT89, PT92, PT24, PT26, PT61, PT64, PT65, PT77
5	Howard Ave 2°	41717	PS41, PS42, PT32, PT34, PT41, PT42, PT43, PT45, PT48, PT76, PT89, PT92
6	Kenewa St. 2°	41716	PS41, PS42, PT26, PT28, PT32, PT41, PT42, PT43, PT61, PT76, PT89
7	Live Oak Creek Diversion & Dam	41217, 41218, 41904	PT34, PT 36, PT41, PT42, PT43, PT44, PT45, PT53, PT55, PT61, PT66, PT70, PT76, PT85, PT89, PT92 PS41, PS42, PT24, PT25, PT60, PT96
8	Matilija Dam	41901	PS41, PS42, PT25, PT32, PT34, PT40, PT41, PT42, PT43, PT44, PT45, PT53, PT55, PT56, PT57, PT66, PT70, PT76, PT77, PT80, PT88, PT89, PT92
9	Matilija Hot Springs Gauge Maintenance	602	PT21, PT22, PT32, PT42, PT43, PT89
10	Mirror Lake Drain/ Tributary	41231, 41232/ 41241	PS41, PS42, PT32, PT34, PT41, PT42, PT43, PT48, PT61, PT76, PT83, PT89, PT92, PT21, PT53, PT55
11	North Fork Matilija Creek Stream Gauge	604	PT21, PT22, PT32, PT42, PT43, PT89
12	Oakview Drain	41205	PS41, PS42, PT29, PT41, PT42, PT43, PT76, PT77, PT85, PT89

Master Index of Facilities with Work Codes
USACE

Zone 1: Ventura River Watershed Continued			
List #	**Facility Name**	**Reaches**	**Work Codes**
13	Prince Barranca/ San Jon Barranca	41561, 41562, 41563, 41564/ 41551, 41552, 41553 41554	PS41, PS42, PT28, PT32, PT41, PT42, PT43, PT53, PT55, PT60, PT64, PT65, PT76, PT77, PT89, PT93, PT26, PT34, PT48, PT61, PT62, PT66, PT70, PT83, PT92, PT26, PT24
14	San Antonio Creek at Casitas Springs Stream Gauge	605	PT21, PT22, PT32, PT42, PT43, PT89
15	San Antonio Creek Spreading Grounds	41915	PT32, PT33, PT34, PT40, PT41, PT42, PT43, PT45, PT51, PT53, PT55, PT60, PT61, PT64, PT66, PT70, PT76, PT83, PT86, PT89, PT91
16	Santa Ana Creek Stream Gauge	606	PT32, PT43
17	Skyline Drain/ Felix Drive 2°	41221, 41222, 41223, 41224, 41712	PS41, PS42, PT26, PT28, PT32, PT41, PT42, PT43, PT45, PT48, PT60, PT61, PT65, PT70, PT76, PT89, PT92
18	Stewart Canyon/ Stewart Debris Basin	41411, 41412, 41413, 41414/ 41902	PS41, PS42, PT26, PT28, PT35-37, PT41, PT42, PT43, PT45, PT48, PT53, PT57, PT60, PT61, PT64, PT76, PT80, PT89, PT90, PT92, PT55, PT56, PT62, PT25, PT32, PT34, PT40, PT44, PT66, PT70, PT77, PT88
19	Thacher Creek at Boardman Road Stream Gauge	669	PT21, PT22, PT32, PT42, PT43, PT89
20	Thatcher Creek	41443	PS41, PS42, PT21, PT34, PT41, PT42, PT43, PT45, PT48, PT60, PT66, PT68, PT70, PT76, PT77, PT80, PT89, PT92
21	Ventura River at Foster Park Stream Gauge	608	PT21, PT22, PT32, PT42, PT43, PT89
22	Vince St. 2°/ Stanley Ave Drain/ Simpson St. 2°/ Ramona St. 2°/ Peking 2°/ Parkview Drive 2°/ Harrison 2°/ Freeway Side Drains 1-5/ Cal-Trans 2°/ Canada Larga/ Canada de San Joaquin/	41732/ 41110/ 41731/ 41730/ 41729/ 41727/ 41751, 41752, 41753, 41754, 41755/ 41728/ 41152/ 41131, 41132, 41134	PS41, PS42, PT41, PT42, PT26, PT43, PT48, PT53, PT55, PT66, PT70, PT76, PT89, PT92, PT32, PT34, PT56, PT58, PT61, PT62, PT65, PT80, PT64

Master Index of Facilities with Work Codes
USACE

Zone 1: Ventura River Watershed Continued			
List #	**Facility Name**	**Reaches**	**Work Codes**
23	Parkview Drive 2°/ Fresno Canyon	41701/ 41181, 41182	PS41, PS42, PT25,PT35-37, PT41, PT42, PT43, PT48, PT60, PT61, PT65, PT70, PT76, PT89, PT25, PT32, PT34, PT40, PT43, PT44, PT45, PT53, PT55, PT57, PT66, PT77, PT80, PT88, PT92
24	ME-VR2: Stream gage at Ojai Valley Sanitary District bank protection site	41016	PT22, PT32, PT 41, PT42, PT43, PT45
Zone 2: Santa Clara River Watershed			
1	Adams Debris Basin	43906	PS41, PS42, PT25, PT32, PT34,PT35-37, PT40, PT41, PT42,PT43, PT44, PT45, PT53, PT55, PT56, PT57, PT66, PT70, PT76, PT77, PT80, PT88, PT89, PT92
2	Arundell Barranca Dam/ Det. Basin/ Reservoir Barranca/ Barlow Barranca/ Mills Road Drain/ Telephone Road Drain	42401, 42402, 42403, 42404, 42405, 42406, 42407, 42408, 42409/ 42901/ 42441, 42421, 42423/ 42411/ 42432	PS41, PS42, PT26, PT28, PT32, PT35-37, PT41, PT42, PT43, PT45, PT48, PT53, PT55, PT60, PT61, PT76, PT80, PT89, PT92, PT34, PT64, PT77, PT93, PT20, PT70, PT25, PT40, PT44, PT57, PT66, PT29, PT85
3	Bardsdale Ditch	43161	PS41, PS42, PT21, PT34, PT41, PT42, PT43, PT45, PT53, PT55, PT56, PT65, PT66, PT80, PT89, PT64, PT70, PT72, PT32, PT44, PT60, PT92
4	Basolo Ditch	43191	PS41, PS42, PT21, PT23, PT34, PT41, PT42, PT43, PT48, PT53, PT55, PT56, PT61, PT89, PT92
5	Beardsley Wash/ Camarillo Hills Drain/ Nyeland Drain, Nyeland Trib. Lateral A/ Santa Clara Ave. Drain & Diversion/ Revelon Slough/ Wright Road Drain	42151, 42152, 42154/ 42131/ 42161, 42162, 42171/ 42191, 42192, 42193, 42181/ 42101, 42102, 42104/ 42201	PS41, PS42, PT26, PT27, PT28, PT32, PT34, PT41, PT42, PT43, PT53, PT55, PT56, PT58, PT60, PT61, PT64, PT65, PT66, PT76, PT77, PT85, PT89, PT92, PT47, PT25, PT80, PT23, PT70, PT74, PT62, PT31, PT40,PT44, PT88, PT93
6	Brown Barranca/ Saticoy Drain & 2°	42511, 42512, 42514/ 42521, 42522	PS41, PS42, PT22, PT32, PT34, PT41, PT42, PT43, PT48, PT53, PT70, PT74, PT77, PT89, PT92, PT56, PT57, PT60, PT61, PT64, PT66, PT80, PT90, PT83
7	Cavin Road Drain/ Debris Basin	43221, 43222/ 43902	PS41, PS42, PT21, PT28, PT35-37, PT41, PT42, PT43, PT49, PT89, PT92, PT32, PT25, PT34, PT40, PT44, PT45, PT53, PT55, PT56, PT57, PT66, PT70, PT76, PT77, PT80, PT88

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Zone 2: Santa Clara River Watershed Continued			
List #	**Facility Name**	**Reaches**	**Work Codes**
8	Doris Drain	42381	PS41, PS42, PT26, PT28, PT32, PT34, PT41, PT42, PT43, PT47, PT53, PT55, PT56, PT58, PT60, PT61, PT64, PT65, PT66, PT70, PT77, PT83, PT85, PT89, PT92
9	Ellsworth Barranca	42552	PS41, PS42, PT41, PT42, PT74, PT89
10	Fagan Canyon/ Debris Basin	43051, 43052, 43053, 43054, 43055, 43056/ 43907	PS41, PS42, PT20, PT21, PT32, PT34, PT35-37, PT41, PT42, PT43, PT48, PT53, PT55, PT76, PT89, PT92, PT26, PT28,PT60, PT61, PT64, PT77, PT70, PT74, PT25, PT40, PT44, PT45, PT56, PT57, PT66, PT80, PT88
11	Franklin Barranca/ Debris Basin/ Wason Barranca	42531, 42532, 42534/ 42902/ 42541/ 42542	PS41, PS42, PT25, PT32, PT34, PT 35-37, PT40, PT41, PT42, PT43, PT44, PT45, PT53, PT55, PT56, PT57, PT66,PT70, PT72, PT76, PT77, PT80, PT83, PT88, PT89, PT92, PT20, PT21, PT60, PT74, PT24, PT26, PT28, PT48, PT60, PT61, PT64, PT85, PT22
12	Grimes Canyon	43181, 43182	PS41, PS42, PT20, PT21, PT26, PT34, PT41, PT42, PT43, PT55, PT56, PT61, PT62, PT65, PT87, PT89, PT92, PT24, PT28, PT32, T48, PT60, PT64, PT66, PT76, PT77, PT80, PT85
13	Harmon Barranca/ Ondulando Barranca/ Ondulando Basin	42471, 42472, 42473, 42474, 42475, 42476, 42477, 42478/ 42481, 42482/ 42903	PS41, PS42, PT20, PT21, PT41, PT42, PT43, PT49, PT55, PT56, PT60, PT64, PT70, PT77, PT89, PT92, PT32, PT34, PT53, PT80, PT44, PT48, PT61, PT66, PT76
14	Hopper Creek Stream Gauge	701	PT22, PT32, PT43
15	Hueneme Drain/ Hueneme Pump Station/ tšumaš Creek	42332, 42333/ 42321, 42322	PS41, PS42, PT21, PT23, PT28, PT29, PT41, PT42, PT43, PT53, PT55, PT56, PT57, PT60, PT61, PT70,PT74, PT76, PT77, PT86, PT89, PT26, PT32, PT64, PT83, PT87, PT92, PT22, PT32, PT45, PT64, PT65, PT66, PT92 , PT26

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Zone 2: Santa Clara River Watershed Continued			
List #	**Facility Name**	**Reaches**	**Work Codes**
16	Ormond Lagoon Waterway/ Rice Road Drain	42301, 42302, 42303, 42304/ 42311, 42312, 42313, 42314, 42317, 42318, 42319	PS41, PS42, PT41, PT42, PT43, PT53, PT55, PT56, PT57, PT61, PT64, PT89, PT24, PT26, PT28, PT32, PT34, PT49, PT60,PT76, T92, PT58, PT80, PT83, PT85, PT87, PT45, PT62, PT65, PT66, PT23, PT58
17	Oxnard West Drain/ West Wooley Road Drain	42351, 42352, 42353, 42354, 42355/ 42361, 42362	PS41, PS42, PT24, PT28, PT32, PT41, PT42, PT43, PT45, PT60, PT61, PT64, PT85, PT89, PT92, PT76, PT87, PT26, PT93, PT34, T53, PT55
18	Peck Road Drain	43041, 43042, 43043	PS41, PS42, PT26, PT28, PT41, PT42, PT43, PT45, PT48, PT53, PT55, PT60, PT61, PT89, PT92, PT76, PT77
19	Piru Storage & Stockpile	43009	PS41, PS42, PT41, PT42, PT31, PT34, PT43, PT44, PT53, PT55, PT56, PT57, PT60, PT64, PT66, PT70, PT76, PT88, PT89
20	Pole Creek	43202, 43203	PS41, PS42, PT25, PT32, PT34, PT35-37, PT40, PT41, PT42, PT43, PT44, PT45, PT53, PT55, PT56, PT57, PT66, PT70, PT76, PT77, PT80, PT88, PT89, PT92, PT21, PT23, PT26, PT28, PT31, PT60, PT61, PT64, PT65, PT87, PT24
21	Real Canyon/ Debris Basin/ Warring Wash/ Warring Wash South/ & Basin	43251, 43252, 43253, 43254, 43255/ 43903/ 43261, 43262, 43263/ 43271/ 43904	PS41, PS42, PT26, PT28, PT34, PT35-37PT41, PT42, PT43, PT48, PT53, PT55, PT57, PT60, PT61, PT64, PT76, PT89, PT92, PT24, PT49, PT22, PT56, PT66, PT74, PT80, PT32, PT44, PT45, PT65, PT21, PT25, PT40, PT70, PT77, PT88, PT23, PT72
22	Santa Clara River at 12th St. Bridge Stream Gauge	720	Removed and replaced by 723
23	Santa Clara River at UWCD Freeman Diversion Stream Gauge	724	No maintenance in Santa Clara River.
24	Santa Clara River at Victoria Avenue Bridge Stream Gauge	723	PT21, PT22, PT32, PT42, PT43, PT89

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Zone 2: Santa Clara River Watershed Continued			
List #	**Facility Name**	**Reaches**	**Work Codes**
25	Ventura Road Bank Protection/ Side Drain 1A/ Central Avenue Drain/ Clark Barranca/ Sudden Barranca/ Victoria Ave. Drain Secondary/ North El Rio Drain/ El Rio Drain/ Moon Ditch/ Montalvo Golf Course	42018/ 42031/ 42205, 42206/ 42491, 42492, 42493, 42494/ 42501,42502, 42504, 42505, 42506/ 42704/ 42395/ 42391/ 42461, 42462, 42463/ 42701	PS41, PS42, PT34, PT41, PT42, PT43, PT53, PT55, PT64, PT70, PT72, PT89, PT32, PT44, PT60, PT80, PT92, PT45,PT48, PT56, PT66, PT76, PT24, PT28, PT57, PT61, PT65, PT88, PT62, PT26, PT40, PT20, PT21, PT60, PT77, PT85, PT87, PT49
26	Santa Paula Airport Bank Protection	42035, 42036	PS41, PS42, PT32, PT41, PT42, PT43, PT53, PT55, PT70, PT72, PT77, PT89, PT44
27	Santa Paula Creek (not yet accepted for maintenance)	43061, 43062	PS41, PS42, PT25, PT26, PT27, PT28, PT41, PT42, PT43, PT48, PT60, PT61, PT62, PT64, PT65, PT66, PT89, PT92,PT28, PT34, PT40, PT53, PT76, PT44
28	Santa Paula Creek at Mupu Bridge Stream Gauge	709	PT21, PT22, PT32, PT42, PT43, PT89
29	Saticoy Storage & Stockpile	42009	PS41, PS42, PT41, PT42, PT31, PT34, PT43, PT44, PT53, PT55, PT56, PT57, PT60, PT64, PT66, PT70, PT76, PT88, PT89
30	Sespe Creek Bank Protection at Goodenough Rd/ Jepson Wash/ Jepson Basin/ Keefe Ditch/ North Fillmore Drain, Sespe Side Drains 1-3	43308/ 43351, 43352/ 43901/ 43361, 43362/ 43305 (individual drain numbers pending)	PS41, PS42, PT31, PT35-37 PT41, PT42, PT43, PT48, PT53, PT55, PT56, PT60, PT61, PT64, PT66, PT72, PT80, PT89, PT98, PT70, PT76, PT32, PT34, PT45, PT62, PT65, PT20, PT21, PT92, PT26, PT28, PT74, PT25, PT40, PT44, PT57, PT77, PT88, PT23, PT24, PT87
31	Silver Strand Drains & Pump Stations	42341,42342, 42345, 42346, 42348, 43249	PT29, PT32, PT43, PT64, PT76, PT80, PT83, PT86, PT89, PT92
32	Todd Barranca at Telegraph Rd Bridge Stream Gauge	738	PT21, PT22, PT32, PT42, PT43, PT89
33	Willard Road Drain 2°	43701	PS41, PS42, PT20, PT21, PT34, PT41, PT42, PT43, PT53, PT55, PT89, PT92

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Zone 3: Calleguas Creek Watershed			
List #	**Facility Name**	**Reaches**	**Work Codes**
1	Arroyo Colorado/ Beardsley Wash	45271/ 45241, 45243, 45245, 45246, 45247	PS41, PS42, PT28,PT32, PT34,PT41, PT42, PT43, PT45, PT53, PT55, PT56, PT61, PT64, PT66, PT74, PT76, PT80,PT89, PT92
2	Arroyo Conejo N Fork & Trib./ Waverly Channel/ Castano Channel & Tributary/ Olsen Channel	46161, 46164, 46165, 46167, 46171, 46172/ 46202, 46203/ 46181, 46182, 46183, 46191, 46192/ 46151, 46152, 46153	PS41, PS42, PT23, PT24, PT26, PT28, PT32, PT33, PT34, PT41, PT42, PT43, PT44, PT45, PT47, PT49, PT53, PT55, PT57, PT60, PT61, PT64, PT76, PT77, PT85, PT89, PT92 PT97
3	Arroyo Conejo / Park Drain/ Thousand Oaks N Drain/ Lynn Ranch 2°/ Camino Flores-Corta 2° Erbes Road Drain/ Los Robles Drain. Cm Dos Rios 2°	46103, 46104, 46105, 46106, 46107, 46108/ 46211/ 46231, 46232, 46233, 46234, 46235/ 46749/ 46751/ 46241/ 46251, 46252/ 46752	PS41, PS42, PT26, PT28, PT32, PT34, PT41, PT42, PT43, PT44, PT45, PT48, PT53, PT55, PT57, PT60, PT61, PT64, PT76, PT77, PT85, PT87, PT89, PT92
4	Arroyo Las Posas	45051, 45053, 45063, 45065	PS41, PS42, PT32, PT41, PT42, PT43, PT44, PT47, PT53, PT55, PT57, PT60, PT61, PT64, PT66, PT70, PT74, PT77,PT89, PT92
5	Arroyo Santa Rosa u/s Conejo Ck confluence/ Blanchard Road Drain, Arroyo Santa Rosa Stream Gauge at Blanchard Rd/ Rotsler Ditch 2°/ Duval Rd. Drain 2°/ Rose Lane Drain 2°/ N. Redondo 2°/ Santa Rosa No.4/Santa Rosa Road Deb. Basin	46072, 46073, 46074, 46075, 46076, 46077/ 46702/ 46081, 46083, 46084, 46086/ 838 / 46701/ 46703/ 46704/ 46709/ 46901, 46902	PS41, PS42, PT21,PT22, PT23, PT24, PT25, PT26, PT28, PT32, PT33, PT34, PT40, PT41, PT42, PT43, PT44, PT45, PT47, PT53, PT55, PT56, PT57, PT60, PT61, PT64, PT66, PT70, PT76, PT77, PT80, PT89, PT92
6	Arroyo Santa Rosa d/s Conejo Cr. Confluence	46071	PT23, PT24, PT28, PT32, PT41, PT42, PT61

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Zone 3: Calleguas Creek Watershed Continued			
List #	**Facility Name**	**Reaches**	**Work Codes**
7	Arroyo Simi/ Stream Gauge at Hitch/ Brea Canyon/ Castro Williams Channel, Basin/ Moorpark #1 2°/ Katherine St. 2° #1, 2, 3	47011, 47012, 47013, 47014, 47015, 47016, 47017, 47021, 47022, 47024, 47025, 47027, 47031, 47033, 47035, 47037, 47038/ 841/ 47311/ 47161, 47902/ 49078, 49080, 49081	PS41, PS42, PT21, PT22, PT23, PT24, PT25, PT26, PT28, PT32, PT33, PT34, PT40, PT41, PT42, PT43, PT44, PT45, PT47, PT48, PT49, PT53, PT55, PT56, PT57, PT60, PT61, PT62, PT64, PT65, PT66, PT70, PT74, PT76, PT77, PT80, PT85, PT88, PT89, PT92
8	Arroyo Simi/ Piedra Canyon/ Santa Susana Knolls Drain 2°/ Black Canyon 2°	47039/ 47571/ 47760/ 47750	PS41, PS42, PT21, PT28, PT32, PT41, PT42, PT43, PT53, PT55, PT60, PT61, PT64, PT65, PT76, PT77, P85, PT89, PT92
9	Bus Canyon/ Bus Canyon Tributary	47351, 47352, 47353, 47354, 47355/ 47361, 47362, 47363, 47364	PS41, PS42, PT26, PT28, PT32, PT41, PT42, PT43, PT45, PT48, PT49, PT53, PT55, PT56, PT57, PT60, PT61, PT64, PT65, PT76, PT77, PT89, PT92
10	Calleguas Creek/ Stream Gauge at CSUCI/ Stream Gauge at Hwy 101 Stream Gauge/ Long Canyon /Adolfo Storage and Stockpile Site	45021, 45023, 45025, 45027, 45029,45031/ 45033, 45035, 45037/ 805/ 806/ 45009	PS41, PS42, PT25, PT26, PT27, PT32, PT34, PT40, PT41, PT42, PT43, PT44, PT45, PT53, PT55, PT56, PT57, PT66, PT70, PT76, PT77, PT80, PT88, PT89, PT92, PT31, PT47, PT61, PT48, PT74, PT60, PT64, PT65
11	Camarillo Hills Drain/ Edgemore Debris Basin/ Edgemore Drain/ Edgemore Tributary 2°/ Anacapa Drain/ W. Camarillo Hills Deb. Basins E & W Branch/ W. Cam. Hills Drain/ Mission Drain/ Ponderosa Drain/ Las Posas Estates Det. Basin/ Las Posas Estates Drain/ Las Posas Estates Diversion/ Las Posas Estates Dam/ N. Ramona Place Drain/ Arneill Drain/ Crestview Deb Basin & Drain/ Crestview Basin/ Ramona Det. Basin/Dam	45141, 45143, 45144, 45145, 45147, 45148/ 45902/ 45161, 45163/ 45701/ 45211/ 45904, 45903/ 45171, 45173, 45175/ 45181, 45183/ 45191, 45192/ 45906/ 45224, 45225/ 45226/ 45231/ 45201/ 45151, 45153, 45155/ 45901/ 45907	PS41, PS42, PT23, PT32, PT34, PT35-37, PT41, PT42, PT43, PT57, PT60, PT61, PT64, PT70, PT76, PT77, PT89, PT92, PT21, PT22, PT24, PT27, PT28, PT45, PT53, PT55, PT85, PT32, PT26, PT65, PT25, PT40, PT44, PT47, PT56, PT66, PT80, PT88, PT62, PT25, PT32, PT34, PT40, PT44, PT66, PT70, PT76, PT77, PT80, PT88, PT89, PT92

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Zone 3: Calleguas Creek Watershed Continued			
List #	**Facility Name**	**Reaches**	**Work Codes**
12	Conejo Creek/ Mission Oaks Drain/ East Camarillo Drain/ Upland Road Drain	46011, 46012, 46013, 46014, 46015, 46016, 46041, 46042, 46031, 46037, 46051	PS41, PS42, PT23, PT26, PT32, PT33, PT34, PT41, PT42, PT43, PT44, PT47, PT53, PT55, PT56, PT57, PT60, PT61, PT62, PT64, PT66, PT70, PT74, PT76, PT77, PT89, PT92
13	Conejo Mountain Creek Detention / Debris Basins #1 - #5	46121/ 46906, 46907, 46908, 46909, 46910	PT23, PT24, PT28, PT32, PT36, PT41, PT42, PT61, PT43
14	Coyote Canyon/ Coyote Basin/ Puerta Zuela Barranca	45522/ 45911/45531	PT23, PT24, PT28, PT32, PT 35-37, PT41, PT42, PT61, PT36
15	Dry Canyon Channel /Tributary /Dry Canyon West Fork	47381, 47382, 47383, 47384, 47385, 47386, 47387/ 47391 /47389	PS41, PS42, PT28, PT41, PT42, PT43, PT44, PT45, PT47, PT48, PT49, PT53, PT55, PT57, PT60, PT61, PT64, PT65, PT70, PT74, PT76, PT77, PT85, PT89, PT92
16	Erringer Road Drain/ Erringer Road Debris Basin	47371,47373, 47375/ 47904	PS41, PS42, PT23, PT24, PT26, PT28, PT32, PT35-37, PT41, PT42, PT43, PT45, PT60, PT61, PT64, PT65, PT76, PT77, PT87, PT89, PT92
17	Ferro Ditch/ Ferro Debris Basin	45301/ 45908	PS41, PS42, PT23, PT24, PT28, PT32, PT34, PT35-37, PT41, PT42, PT53, PT61, PT74, PT76, PT77, PT89, PT92
18	Flood Street	49059	PS41, PS42, PT42, PT43, PT45, PT57, PT60, PT61, PT64, PT76, PT89, PT92
19	Fox Barranca/ Debris Basin	45503, 45505, 45910	PT23, PT24, PT28, PT32, PT35-37, PT41, PT42, PT61
20	Gabbert Canyon/ Debris Basin/ Moorpark Storm Drain #1 & #2/ Walnut Canyon/Walnut Canyon Detention/ Debris Basin	47101, 47102, 47103/ 47901/ 47141, 47151/ 47111, 47112, 47114, 47116/47919	PS41, PS42, PT23, PT24, PT26, PT28, PT32, PT33, PT34, PT41, PT 35-37, PT42, PT43, PT47, PT49, PT53, PT55, PT56, PT60, PT61, PT64, PT66, PT76, PT77, PT80, PT89, PT92
21	Groves Place Drop Structure	45913	PT38, PT42, PT43, PT60, PT61, PT74
22	Happy Camp Canyon	47171, 47172, 47173	PS41, PS42, PT23, PT24, PT25, PT26, PT32, PT33, PT34, PT41, PT42, PT43, PT44, PT48, PT49, PT53, PT55, PT56, PT60, PT61, PT64, PT65, PT76, PT77, PT89, PT92

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Zone 3: Calleguas Creek Watershed Continued			
List #	**Facility Name**	**Reaches**	**Work Codes**
23	Home Acres Dam/ Home Acres Drain/ Peach Hill Wash	47909/ 47131, 47133/ 47121, 47123	PS42, PT23, PT24, PT28, PT32, PT35-37, PT41, PT42, PT43, PT48, PT55, PT56, PT57, PT60, PT61, PT64, PT87, PT90, PT92
24	Honda Barranca/ E. Fork/ Honda West Debris Basin/ Santa Clara Ave Drain/ Milligan Barranca	45251, 45252, 45255/ 45262/ 45909/ 45293/ 45285, 45286	PS41, PS42, PT23, PT24, PT26, PT28, PT32, PT33, PT34, PT41,PT36, PT42, PT43, PT45, PT47, PT53, PT55, PT57, PT60, PT61, PT64, PT74, PT76, PT77, PT89, PT92
25	Hummingbird Creek/ White Oak Creek	47561, 47562, 47563/ 47551, 47552, 47553, 47554	PS41, PS42, PT26, PT28, PT32, PT41, PT42, PT43, PT45, PT47, PT53, PT55, PT56, PT60, PT61, PT64, PT76, PT77, PT87, PT89, PT92
26	Lang Creek/ Debris & Detention Basins	46221, 46222, 46223, 46224, 46225,46226/ 46227, 46228, 46911	PT21, PT22, PT23, PT24, PT28, PT32, PT35-37, PT41, PT42, PT43, PT61, PT89
27	Las Llajas Canyon/ Las Llajas Canyon Dam / Marr Diversion/ Kadota Fig Drain	47511, 47512, 47513/ 47908/ 47531, 47532/ 47521, 47522, 47523	PS41, PS42, PT23, PT24, PT28, PT32, PT34, PT35-37, PT41, PT42, PT43, PT48, PT49, PT53, PT55, PT60, PT61, PT64, PT65, PT66, PT70, PT74, PT76, PT77, PT80, PT87, PT89, PT92
28	Lewis Road Drain	45431, 45432, 45433, 45434	PS41, PS42, PT28, PT32, PT34, PT41, PT42, PT43, PT53, PT55, PT76, PT77, PT89, PT92
29	Long Canyon	45567	PS41, PS42, PT23, PT24, PT26, PT28, PT32, PT34, PT41, PT42, PT43, PT53, PT55, PT60, PT61, PT64, PT74, PT76, PT77, PT89, PT92
30	No.2 Canyon, /No. 2 Canyon Debris Basin	47201, 47202, 47203/47918	PS41, PS42, PT26, PT28, PT32, PT41, PT35-37, PT42, PT43, PT47, PT48, PT53, PT55, PT60, PT61, PT64, PT65, PT76, PT77, PT92
31	North Simi Drain/North Simi Detention & Debris Basin	47341, 47342, 47343, 47344, 47345/ 47911	PS41, PS42, PT26, PT28, PT32, PT41, PT42, PT43, PT47, PT48, PT53, PT55, PT38, PT36, PT35 PT60, PT61, PT64, PT65, PT76, PT77, PT89, PT92
32	Pleasant Valley Rd. Drain	45133	PS41, PS42, PT24, PT26, PT28, PT32, PT34, PT41, PT42, PT47, PT64, PT66, PT77, PT89, PT92
33	Revolon Slough	45101, 45103, 45105	PS41, PS42, PT22, PT27, PT26, PT28, PT32, PT34, PT41, PT42, PT43, PT44, PT47, PT53, PT55, PT61, PT66, PT74, PT76, PT77, PT80, PT87, PT88, PT89, PT92

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Zone 3: Calleguas Creek Watershed Continued			
List #	**Facility Name**	**Reaches**	**Work Codes**
34	Runkle Canyon/ Debris Basin/ Storage & Stockpile Area/ Appleton Road Drain	47401, 47402, 47403, 47404, 47406/ 47907/ 47009/ 47411	PS41, PS42, PT23, PT24, PT28, PT32, PT35-37. PT41, PT42, PT43, PT44, PT47, PT48, PT53, PT55, PT56, PT57, PT60, PT61, PT64, PT65, PT76, PT77, PT89, PT92
35	Santa Susana W Drain/ Little Simi Detention Basin (Line C Det. Basin)	47501, 47502, 47503/ 47917	PT23, PT24, PT28, PT32, PT35, PT36, PT37, PT41, PT42, PS41, PS42, PT43, PT53, PT55, PT60, PT61, PT64, PT76, PT89, PT92
36	Somis Drain/ Somis Drain East Tributary/ West Tributary	45451, 45452, 45452, 45454/ 45471/ 45461	PS41, PS42, PT26, PT28, PT34, PT41, PT42, PT43, PT45, PT53, PT55, PT57, PT60, PT61, PT64, PT76, PT77, PT89, PT92
37	South Branch Arroyo Conejo/ (Reino) Debris Basin/ Newbury Park S.O. No. 1, 2/ Conejo Valley 2º/ Jenny Drive 2/ Potrero Rd East Dam (South Potrero Det)/ Potrero Rd. West Dam (Debris Basin) /Conejo Valley Secondary	46111, 46112, 46113, 46114, 46115, 46118, 46119, 46124/ 46905/ 46141, 46142, 46143, 46131, 46133/ 46801/ 46800/ 46903/ 46904	PS41, PS42, PT26, PT28, PT32, PT34, PT35-37, PT41, PT42,PT43, PT44, PT53, PT55, PT60, PT61, PT64, PT72,PT76, PT77, PT89, PT92
38	Strathearn Canyon	47182, 47184	PS41, PS42, PT26, PT28, PT41, PT42, PT43, PT44, PT48, PT49, PT53, PT55, PT56, PT60, PT61, PT64, PT65, PT76, PT77, PT85, PT89, PT92
39	Sycamore Canyon, & Dam/ Oak Canyon Channel	47321, 47322, 47325/ 47903/ 47331	PS41, PS42, PT26, PT28, PT42, PT35-37, PT43, PT53, PT55, PT60, PT61, PT64, PT76, PT77, PT89, PT92
40	Tapo Canyon	47421, 47422, 47423, 47424, 47425	PS41, PS42, PT24, PT26, PT28, PT32, PT41, PT42, PT43, PT44, PT45, PT47, PT48, PT53, PT55, PT56, PT57, PT60, PT61, PT64, PT65, PT70, PT76, PT77, PT89, PT92
41	Tapo Hills Diversions Diversion / Debris Basins #1 & #2	47431, 47432, 47433/ 47905, 47906	PS41, PS42, PT23, PT24, PT28, PT32, PT33,PT35-37, PT41, PT42, PT43, PT44, PT48, PT49, PT53, PT55, PT60, PT61, PT64, PT76, PT77, PT87, PT89, PT92
42	Arielle Detention and Muirfield Debris/ Detention Basins	47920, 47921	PS42, PT34, PT36, PT37, PT38, PT51, PT52, PT60, PT64, PT93
43	Covington Detention Basin/Crosby Detention Basin/Sycamore Park Detention Basin	47922/47923/47924	PS42, PT34, PT36, PT37, PT38, PT51, PT52, PT60, PT64, PT93

Master Index of Facilities with Work Codes
USACE

Zone 4: Malibu Creek Watershed			
List #	**Facility Name**	**Reaches**	**Work Codes**
1	Lake Eleanor Creek	48031	PS41, PS42, PT26, PT28, PT43, PT61, PT70, PT76, PT89, PT92
2	Medea Creek	48071, 48072	PS41, PS42, PT24, PT32, PT33, PT34, PT41, PT42, PT43, PT53, PT55, PT56, PT70, PT76, PT77, PT87, PT89, PT92
3	Potrero Creek/ In-Channel Basin	48021/ 48023, 48025	PS41, PS42, PT26, PT32, PT34, PT35-37, PT38, PT41, PT42, PT43, PT44, PT53, PT55, PT60, PT61, PT64, PT66, PT70, PT74, PT76, PT87, PT89, PT92
4	Schoolhouse 2	48041, 48042	No Maintenance
5	Bridgegate Debris Basin	48901	PT42, PT43, PT38, PT36, PT33, PT55, PT56, PT57, PT76, PT61, PT64, PT60, PT84, PT92
6	Westlake Debris Basin (Data/description for Debris Basin Manual pending)	48902	PS41, PS42, PT26, PT32, PT34, PT35-37, PT38, PT41, PT42, PT43, PT44, PT53, PT55, PT60, PT61, PT64, PT66, PT70, PT74, PT76, PT87, PT89, PT92

USFWS O&M BO NO. 2018-F-0330

United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Ecological Services
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
08EVEN00-2018-F-0330

December 31, 2019

Antal J. Szijj, Senior Project Manager
North Coast Branch, Regulatory Division
U.S. Army Corps of Engineers
2151 Alessandro Drive, Suite 110
Ventura, California 93001

Subject: Reinitiated Biological Opinion for the Ventura County Watershed Protection District's Routine Operation and Maintenance Program, Ventura County, California

Dear Mr. Szijj:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the U.S. Army Corps of Engineers' (Corps) proposed authorization of a permit, pursuant to section 404 of the Clean Water Act, for the Ventura County Watershed Protection District's (District) routine operations and maintenance program (O&M Program). At issue are the effects of this action on the federally endangered tidewater goby (*Eucyclogobius newberryi*) and its critical habitat, least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*) and its critical habitat, and the federally threatened California red-legged frog (*Rana draytonii*) and its critical habitat, in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.). The Corps is proposing to reauthorize the O&M Program under a programmatic Individual Permit rather than a Regional General Permit, for a 10-year term. We received your February 5, 2018, request for reinitiation of formal consultation on March 5, 2018.

We have based this biological opinion on information that accompanied your February 5, 2018, request for reinitiation of formal consultation, including the District's analysis of impacts to critical habitat (District 2019), correspondence between our staff and the District, and information in our files. We can make available a record of this consultation at the Ventura Fish and Wildlife Office.

Consultation History

On December 12, 2012, we issued a programmatic biological and conference opinion (2012-F-0531, Service 2012) to the Corps for the District's O&M Program and its effects on the endangered tidewater goby and its critical habitat, least Bell's vireo, southwestern willow

flycatcher and its critical habitat, California least tern (*Sterna antillarum browni*), arroyo toad (*Anaxyrus californicus*), Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), marsh sandwort (*Arenaria paludicola*), Gambel's watercress (*Nasturtium* [*Rorippa*] *gambellii*), and the federally threatened California red-legged frog and its critical habitat, coastal California gnatcatcher (*Polioptila californica*) and its critical habitat, and the western snowy plover (*Charadrius nivosus nivosus*) and its critical habitat. On October 19, 2015, we issued a reinitiated programmatic biological and conference opinion (2015-F-0055, Service 2015) to the Corps for the District's O&M Program and its effects on the tidewater goby and its critical habitat, least Bell's vireo, southwestern willow flycatcher and its critical habitat, California red-legged frog and its critical habitat, and the yellow-billed cuckoo (*Coccyzus americanus*). We received your February 5, 2018, request for reinitiation of formal consultation on March 5, 2018. Following the reinitiation request we received additional information regarding impacts to critical habitat from you on June 7, 2019 (District 2019). We reinitiated consultation the same day.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on October 28, 2019 [84 FR 44976]. This consultation was pending at that time, and we are applying the updated regulations to the consultation. As the preamble to the final rule adopting the regulations noted, "[t]his final rule does not lower or raise the bar on section 7 consultations, and it does not alter what is required or analyzed during a consultation. Instead, it improves clarity and consistency, streamlines consultations, and codifies existing practice." We have reviewed the information and analyses relied upon to complete this biological opinion in light of the updated regulations and conclude the opinion is fully consistent with the updated regulations.

To accommodate the dynamic nature of the O&M Program, this consultation document is structured to provide a program-level assessment of effects to listed species and critical habitats, and is amended by the submittal of work plans outlining specific tasks as they are proposed to the Corps for authorization. To achieve this flexibility this document includes two components: 1) a program-wide concurrence for species and critical habitats that the Corps determined are not likely to be adversely affected by any aspect of the O&M Program; this concurrence concludes Section 7 consultation for this subset of species and critical habitat; and 2) a programmatic consultation for species or critical habitats that may be affected by one or more of the specific projects within the O&M Program; for this set of species a determination will be made by the Corps whether each project "may affect, and is likely to adversely affect" or "may affect, and is not likely to adversely affect" one or more of the covered species. A summary of how all of the species described above are covered by this document is shown in Table 1.

Table 1. Summary table of species and critical habitats that are covered through the program-wide concurrence or are subject to the programmatic consultation.

Species	Corps Determination	Service Response
California red-legged frog	May affect, likely to adversely affect *or* not likely to adversely affect	**Programmatic Consultation**
California red-legged frog designated critical habitat	May affect, likely to adversely affect *or* not likely to adversely affect	
Least Bell's vireo	May affect, likely to adversely affect *or* not likely to adversely affect	
Southwestern willow flycatcher	May affect, likely to adversely affect *or* not likely to adversely affect	
Southwestern willow flycatcher proposed critical habtiat[1]	May affect, likely to adversely affect *or* not likely to adversely affect	
Tidewater goby	May affect, likely to adversely affect *or* not likely to adversely affect	
Tidewater goby designated critical habtiat	May affect, likely to adversely affect *or* not likely to adversely affect	
Coastal California gnatcatcher	May affect, not likely to adversely affect	**Program-wide Concurrence**
Coastal California gnatcatcher designated critical habitat	May affect, not likely to adversely affect	
Gambel's watercress	May affect, not likely to adversely affect	
Marsh sandwort	May affect, not likely to adversely affect	
California least tern	May affect, not likely to adversely affect	
Western snowy plover	May affect, not likely to adversely affect	
Western snowy plover critical habtiat	May affect, not likely to adversely affect	
Yellow-billed cuckoo	May affect, not likely to adversely affect	
Arroyo toad [2]	No effect	**No Response**
Ventura marsh milk-vetch[2]	No effect	

[1] The programmatic conference opinion converted to a biological opinion upon final designation of critical habitat for the southwestern willow flycatcher on January 3, 2013.

[2] The Corps and Service are not required to consult on "no effect" determinations.

PROGRAM-WIDE CONCURRENCE

The program-wide concurrence for coastal California gnatcatcher and its critical habitat, Gambel's watercress, marsh sandwort, California least tern, western snowy plover and its critical habitat, and yellow-billed cuckoo are described in the original consultation (2012-F-0531) and the reinitiated consultation (2015-F-0055) remains unchanged and is hereby incorporated by reference.

ADMINISTRATION OF THE PROGRAMMATIC BIOLOGICAL OPINION

The administration of the programmatic biological opinion will also remain unchanged. As with all other actions subject to this programmatic consultation, the Corps will notify the Service of proposed restoration actions and provide project-specific details including:

- Location of the restoration project;
- Size of the restoration project;
- Restoration methods (including any herbicide use);
- Description of any proposed modifications to the Best Management Practices (BMPs) or minimization measures that appear in the original consultation (2012-F-0531);
- Species and critical habitats affected; and
- Determination of effects to listed species and critical habitats;

We will review the Corps' notification and respond in writing, or via electronic mail, to acknowledge that activities are being conducted under the programmatic biological opinion, and to notify the Corps of any concerns or questions regarding the proposed action, or if we feel that there would be effects that would necessitate a separate consultation. The tracking sheet attached in Appendix A of the original biological opinion (2012-F-0531) can be used to facilitate this notification. The Service will strive to respond within 30 days, but will request an extension if additional processing time is necessary.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The description of the proposed action remains largely unchanged from the descriptions in our previous biological opinions for the project (2012-F-0531 and 2015-F-0055), and are hereby incorporated by reference. In brief, the District proposes to conduct activities such as vegetation management, sediment removal from channels and basins, and maintenance and repair of flood control facilities. However, the Corps proposes to re-authorize the program under a programmatic individual permit rather than a regional general permit (RGP) which is how the program was previously authorized. The new permit would authorize the program for 10 years rather than 5 years as the RGP did. Furthermore, the District has updated the list of facilities with potential impacts to California red-legged frog, tidewater goby, least Bell's vireo, and southwestern willow flycatcher critical or suitable habitat in the Ventura River, Santa Clara River, and Calleguas Creek Watersheds. Changes to the O&M Program include addition and subtraction of facilities, adjustments in facility boundaries, clarification of facility locations and maintenance area specifications. Since 2012, the District has both incorporated new facilities into the O&M program, and has relinquished maintenance of other facilities. In 2013, the District conducted a geographic information system update to map and catalog data associated with named reaches and facilities, which clarified lengths and facility characteristics. No other aspects of the O&M Program have been altered and the minimization and avoidance measures remain the same. We provide below a list of the estimated differences in project impact area on habitat

with the potential to support each listed species resulting from these changes in facility status (District 2019).

Tidewater Goby

Tidewater gobies occur in the coastal portions of the three main watersheds (Ventura River, Santa Clara River, and Callelugas Creek) with the O&M program area. The District estimates that the proposed changes would reduce the estimated area of impact on habitat with the potential to support the tidewater goby from 350.94 acres to 350.64 acres, a difference of 0.3 acre (0.08 percent; District 2019). The District attributes this difference to a correction in the estimated length of the Ventura River with potential to support the species.

Least Bell's Vireo

Least Bell's vireos occur in riparian habitat in all three watersheds within the O&M program area. The District estimates that the proposed changes would increase the estimated area of impact on habitat with the potential to support the least Bell's vireo from 721.02 acres to 972.01 acres, a difference of 250.99 acres (34.8 percent; District 2019). This increase in estimated area of impact is largely driven by an increase in the amount of the Callelugas Creek watershed now occupied by the species, thereby exposing the species to a greater amount of impacts from project activities.

Southwestern Willow Flycatcher

Southwestern willow flycatchers occur in riparian habitat with dense thickets and perennial water in all three watersheds within the O&M program area. The District estimates that the proposed changes would increase the estimated area of impact on habitat with the potential to support the southwestern willow flycatcher from 408.45 acres to 413.65 acres, a difference of 5.2 acres (1.3 percent District 2019). This increase in estimated area of impact is largely driven by the District's inclusion of additional facilities within the Ventura River as habitat with the potential to support the species.

California Red-legged Frog

Within the O&M program area the California red-legged frog occurs only in the Ventura River watershed. Following the previous reinitiation of this biological opinion, the species range has expanded to the lower reaches of the Ventura River. The District estimates that the proposed changes would increase the estimated area of impact on habitat with the potential to support the California red-legged frog from 6.51 acres to 13.73 acres, a difference of 7.22 acres (111 percent; District 2019). This increase in estimated area of impact is driven by the expansion of the species into the lower reaches of the Ventura River and the District's inclusion of an additional levee system within its facilities.

Critical Habitat of the Tidewater Goby

Within the O&M program area critical habitat of the tidewater goby is present within the Ventura River, the Santa Clara River, and Ormond Lagoon. Following the Service's 2015 reinitiated biological opinion (2015-F-0055), the District has provided new estimates of the amount of critical habitat that project activities may impact (District 2019). In the VEN-1 critical habitat unit, the District has revised its estimate of the maximum annual impacts of project activities from 40 acres (80 percent of the unit) to 29 acres (58 percent of the unit). In the VEN-2 critical habitat unit, the District has clarified that they own no facilities in this critical habitat unit and thus the District has revised its estimate of the maximum annual impacts of project activities from 106 acres (32.9 percent of the unit) to zero acres. In the VEN-3 critical habitat unit, the District has revised its estimate of the maximum annual impacts of project activities from 24 acres (19.8 percent of the unit) to 13.8 acres (11 percent of the unit). In total, the District estimates that the proposed changes would reduce the maximum annual impacts of project activities on critical habitat by 126.3 acres.

Critical Habitat of the Southwestern Willow Flycatcher

Within the O&M program area critical habitat of the southwestern willow flycatcher is present within the Santa Clara and Ventura Rivers. Following the Service's 2015 reinitiated biological opinion (2015-F-0055), the District has provided new estimates of the amount of critical habitat that project activities may impact (District 2019). In the Santa Clara River subunit of critical habitat, the District has revised its estimate of annual maximum impacts to critical habitat from 300 acres (3.8 percent of the unit) to 720 acres (9.1 percent of the unit). In the Ventura River subunit of critical habitat, the District has revised its estimate of annual maximum impacts to critical habitat from 300 acres (20.7 percent of the unit) to 306 acres (21.2 percent of the unit). In total the District estimates that the proposed changes would increase the maximum annual impacts of project activities on critical habitat by 426 acres. The District attributes this increase to its inclusion of the Live Oak Acres Bank Protection area in the Ventura River and drain outlets to the Santa Clara River within its facilities.

Critical Habitat of the California red-legged frog

Within the O&M program area critical habitat of the California red-legged frog is present near the Ventura River. Following the Service's 2015 reinitiated biological opinion (2015-F-0055), the District has provided new estimates of the amount of critical habitat within and adjacent to the project area (District 2019). In the STB-7 unit of critical habitat, the District has revised its estimate of annual maximum impacts to critical habitat from 1.9 acres (0.012 percent of the unit) to 77.25 acres (0.5 percent of the unit). In the VEN-1 unit of critical habitat, the District has revised its estimate of annual maximum impacts to critical habitat from 0.4 acre (0.013 percent of the unit) to 42.19 acres (1.4 percent of the unit). In total the District estimates that the proposed changes would increase the maximum annual impacts of project activities on critical habitat by 117.14 acres. The District attributes this increase in estimated impacts to the inclusion of additional facilities within critical habitat.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY AND ADVERSE MODIFICATION DETERMINATIONS

Jeopardy Determination

Section 7(a)(2) of the Endangered Species Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. "Jeopardize the continued existence of" means "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 CFR 402.02).

The jeopardy analysis in this biological opinion relies on four components: (1) the Status of the Species, which describes the range-wide condition of the tidewater goby, least Bell's vireo, southwestern willow flycatcher, and California red-legged frog, the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which analyzes the condition of the tidewater goby, least Bell's vireo, southwestern willow flycatcher, and California red-legged frog, in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the tidewater goby, least Bell's vireo, southwestern willow flycatcher, and California red-legged frog, (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the tidewater goby, least Bell's vireo, southwestern willow flycatcher, and California red-legged frog, and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities, that are reasonably certain to occur in the action area, on the tidewater goby, least Bell's vireo, southwestern willow flycatcher, and California red-legged frog.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of the tidewater goby, least Bell's vireo, southwestern willow flycatcher, and California red-legged frog, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to reduce appreciably the likelihood of both the survival and recovery of the tidewater goby, least Bell's vireo, southwestern willow flycatcher, and California red-legged frog, in the wild by reducing the reproduction, numbers, and distribution of that species.

Adverse Modification Determination

Section 7(a)(2) of the Act requires that Federal agencies insure that any action they authorize, fund, or carry out is not likely to destroy or to adversely modify designated critical habitat. A final rule revising the regulatory definition of "destruction or adverse modification" was

published on February 11, 2016 (81 FR 7214). The final rule became effective on March 14, 2016. The revised definition states:

> "Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features."

The "destruction or adverse modification" analysis in this biological opinion relies on four components: (1) the Status of Critical Habitat, which describes the range-wide condition of the critical habitat in terms of the key components (i.e., essential habitat features, primary constituent elements, or physical and biological features) that provide for the conservation of the listed species, the factors responsible for that condition, and the intended value of the critical habitat overall for the conservation/recovery of the listed species; (2) the Environmental Baseline, which analyzes the condition of the critical habitat in the action area, the factors responsible for that condition, and the value of the critical habitat in the action area for the conservation/recovery of the listed species; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated and interdependent activities on the key components of critical habitat that provide for the conservation of the listed species, and how those impacts are likely to influence the conservation value of the affected critical habitat; and (4) Cumulative Effects, which evaluate the effects of future non-Federal activities that are reasonably certain to occur in the action area on the key components of critical habitat that provide for the conservation of the listed species and how those impacts are likely to influence the conservation value of the affected critical habitat.

For purposes of making the "destruction or adverse modification" determination, the Service evaluates if the effects of the proposed Federal action, taken together with cumulative effects, are likely to impair or preclude the capacity of critical habitat in the action area to serve its intended conservation function to an extent that appreciably diminishes the rangewide value of critical habitat for the conservation of the listed species. The key to making that finding is understanding the value (i.e., the role) of the critical habitat in the action area for the conservation/recovery of the listed species based on the Environmental Baseline analysis.

STATUS OF THE SPECIES AND THEIR CRITICAL HABITATS

The statuses of the tidewater goby and its critical habitat, least Bell's vireo, southwestern willow flycatcher, and California red-legged frog and its critical habitat remain unchanged from the descriptions in our previous consultations (2012-F-0531 and 2015-F-0055), and are hereby incorporated by reference.

ENVIRONMENTAL BASELINE

Action Area

The action area is unchanged from the previous consultations (2012-F-0531 and 2015-F-0055) and we hereby incorporate those discussions by reference.

Habitat Characteristics and Existing Conditions of the Action Area

The habitat characteristics and existing conditions in the action area are unchanged from the previous consultations (2012-F-0531 and 2015-F-0055) and we hereby incorporate those discussions by reference.

Previous Consultations in the Action Area

Following issuance of the reinitiated biological opinion (2015-F-0055), the Service has consulted numerous times on the effects of projects (primarily small transportation projects) in the action area on tidewater goby and its critical habitat, least Bell's vireo, southwestern willow flycatcher and its critical habitat, and California red-legged frog and its critical habitat. None of these consultations have concluded that project activities would jeopardize the tidewater goby, least Bell's vireo, southwestern willow flycatcher, or California red-legged frog. Additionally, none of these consultations have concluded that project activities would destroy or adversely modify critical habitat of the tidewater goby, southwestern willow flycatcher, and California red-legged frog.

Condition (Status) of the Species in the Action Area

Tidewater goby

The status of the species in the action area is unchanged from the previous biological opinion (2015-F-0055) and we hereby incorporate that discussion by reference.

Least Bell's vireo

The status of the species in the action area is unchanged from the previous biological opinion (2015-F-0055) with the exception of an increase in observed abundance of least Bell's vireo in lower Calleguas Creek within the action area.

Southwestern willow flycatcher

The status of the species in the action area is unchanged from the previous biological opinion (2015-F-0055) and we hereby incorporate that discussion by reference.

California red-legged frog

The status of the species in the action area is unchanged from the previous biological opinion (2015-F-0055) with the exception that California red-legged frogs have expanded their range in the lower Ventura River within the action area.

Recovery

Tidewater goby

The status of the recovery of the tidewater goby in the action area is unchanged from the previous biological opinion (2015-F-0055) and we hereby incorporate that discussion by reference.

Least Bell's vireo

The status of the recovery of the least Bell's vireo in the action area is unchanged from the previous biological opinion (2015-F-0055) and we hereby incorporate that discussion by reference.

Southwestern willow flycatcher

The status of the recovery of the southwestern willow flycatcher in the action area is unchanged from the previous biological opinion (2015-F-0055) and we hereby incorporate that discussion by reference.

California red-legged frog

The status of the recovery of the California red-legged frog in the action area is unchanged from the previous biological opinion (2015-F-0055) and we hereby incorporate that discussion by reference.

Condition (Status) of Critical Habitat in the Action Area

Tidewater goby

The status of the critical habitat of the tidewater goby in the action area is unchanged from the previous biological opinion (2015-F-0055) and we hereby incorporate that discussion by reference.

Southwestern willow flycatcher

The status of the critical habitat of the southwestern willow flycatcher in the action area is unchanged from the previous biological opinion (2015-F-0055) and we hereby incorporate that discussion by reference.

California red-legged frog

The status of the critical habitat of the California red-legged frog in the action area is unchanged from the previous biological opinion (2015-F-0055) and we hereby incorporate that discussion by reference.

EFFECTS OF THE ACTION

Following the 2015 reinitiation of the programmatic biological opinion (2015-F-0055) the District has added and removed O&M facilities, adjusted O&M facility boundaries, clarified facility locations and maintenance area specifications. Additionally, the areas in which tidewater goby, least Bell's vireo, southwestern willow flycatcher, and California red-legged frog are known or have the potential to occur has changed.

Specifically, for tidewater goby the area affected by O&M activities decreases by approximately 0.3 acre (0.085 percent), a negligible difference. For least Bell's vireo the area affected by O&M activities increases by approximately 250.99 acres, an increase of 26 percent, because the range of the species has increased in the action area. For southwestern willow flycatcher the area affected by O&M activities increases by approximately 5.2 acres (1.5 percent), a negligible difference. For California red-legged frog the area affected by O&M activities increases by approximately 34.33 acres, a 53 percent increase, because the range of the species has increased in the action area. The area affected by O&M activities within tidewater goby critical habitat decreases by 126.3 acres, a 74 percent decrease, primarily because of the clarification that the District does not own or operate facilities in VEN-2 (Santa Clara River) critical habitat unit. The area affected by O&M activities within southwestern willow flycatcher critical habitat increases by 426 acres, a 42 percent increase, primarily because the District is now including additional areas of critical habitat within its scope of effects. The area affected by O&M activities within California red-legged frog critical habitat increases by 117.14 acres, a 98 percent increase, though almost all of this increase is because the District now includes suitable critical habitat adjacent to its facilities within its estimates. Furthermore, the Corps is proposing to issue a 10-year individual permit in contrast to the 5-year permit term consulted upon in the 2015 reinitiated biological opinion (2015-F-0055).

Tidewater goby

Compared to the 2015 reinitiated programmatic biological opinion (2015-F-0055), the geographic scale of effects on suitable habitat of the tidewater goby proposed by the current reinitiation request has decreased by a total of 0.3 acre, a negligible decrease of 0.085 percent.

The types and intensity of project activities have not changed. However, relative to the 2015 reinitiated programmatic biological opinion, the duration of effects has doubled from five to ten years.

Least Bell's vireo

The original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055) discussed potential effects of the proposed activities on the least Bell's vireo and its recovery. The applicant would continue to avoid and minimize effects on the least Bell's vireo by implementing the measures discussed in the original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055). However, the extent of project activities with the potential to affect least Bell's vireo has increased from approximately 721 total acres to approximately 972 total acres, a 26 percent increase. Accordingly, we expect a proportionate increase of the effects of project activities on the least Bell's vireo as well. Additionally, relative to the 2015 reinitiated programmatic biological opinion, the duration of effects has doubled from five to ten years. Nevertheless, project activities will continue to occur primarily in already developed areas, consist of low-intensity activities of limited duration and scale, and the District would implement suitable avoidance and minimization measures.

Southwestern willow flycatcher

The original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055) discussed potential effects of the proposed activities on the southwestern willow flycatcher and its recovery. The applicant would continue to avoid and minimize effects on the southwestern willow flycatcher by implementing the measures discussed in the original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055). However, the extent of project activities with the potential to affect southwestern willow flycatcher has increased from approximately 408 total acres to approximately 414 total acres, a 1.5 percent increase. Accordingly, we expect a proportionate increase of the effects of project activities on the southwestern willow flycatcher as well. Additionally, relative to the 2015 reinitiated programmatic biological opinion, the duration of effects has doubled from five to ten years. Nevertheless, project activities will continue to occur primarily in already developed areas, consist of low-intensity activities of limited duration and scale, and the District would implement suitable avoidance and minimization measures.

California red-legged frog

The original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055) discussed potential effects of the proposed activities on the California red-legged frog and its recovery. The applicant would continue to avoid and minimize effects on the California red-legged frog by implementing the measures discussed in the original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055). However, the extent of project activities with the potential to affect the California red-legged frog has increased from approximately 29 total acres to approximately 59 total acres, a 51 percent increase. Accordingly,

we expect a proportionate increase of the effects of project activities on the California red-legged frog as well. Additionally, relative to the 2015 reinitiated programmatic biological opinion, the duration of effects has doubled from five to ten years. Nevertheless, project activities will continue to occur primarily in already developed areas, consist of low-intensity activities of limited duration and scale, and the District would implement suitable avoidance and minimization measures.

Tidewater goby critical habitat

Compared to the 2015 reinitiated programmatic biological opinion (2015-F-0055), the geographic scale of effects on critical habitat of the tidewater goby proposed by the current reinitiation request has decreased by a total of 126.3 acres, a 74 percent decrease. The types and intensity of project activities have not changed. However, relative to the 2015 reinitiated programmatic biological opinion, the duration of effects has doubled from five to ten years.

Southwestern willow flycatcher critical habitat

The original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055) discussed potential effects of the proposed activities on critical habitat of the southwestern willow flycatcher. The applicant would continue to avoid and minimize effects on the on critical habitat of the southwestern willow flycatcher by implementing the measures discussed in the original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055). However, the extent of project activities with the potential to affect critical habitat of the southwestern willow flycatcher vireo has increased from approximately 600 total acres to approximately 1026 total acres, a 42 percent increase. Accordingly, we expect a proportionate increase of the effects of project activities on critical habitat of the southwestern willow flycatcher as well. Additionally, relative to the 2015 reinitiated programmatic biological opinion, the duration of effects has doubled from five to ten years. Nevertheless, project activities will continue to occur primarily in already developed areas that do not contain the PBFs (Physical or Biological Features) of critical habitat of the species, consist of low-intensity activities of limited duration and scale, and the District would implement suitable avoidance and minimization measures.

California red-legged frog critical habitat

The original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055) discussed potential effects of the proposed activities on critical habitat of the California red-legged frog. The applicant would continue to avoid and minimize effects on critical habitat of the California red-legged frog by implementing the measures discussed in the original biological opinion (2012-F-0531) and 2015 reinitiated biological opinion (2015-F-0055). However, the extent of project activities with the potential to directly affect critical habitat of the California red-legged frog has increased from approximately 2.3 total acres to approximately 119.44 total acres, a 98 percent increase (Ventura County Watershed Protection District 2019). As discussed above, this increase is primarily derived from the District's inclusion of suitable

upland and dispersal habitat nearby District facilities within its effects analysis. Relative to the 2015 reinitiated programmatic biological opinion, the duration of effects has doubled from five to ten years. Nevertheless, project activities will continue to occur primarily in already developed areas that do not contain PBFs of critical habitat of the species, consist of low-intensity activities of limited duration and scale, and the District would implement suitable avoidance and minimization measures.

CUMULATIVE EFFECTS

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

We are unaware of any non-federal actions that are reasonably certain to occur and are likely to adversely affect the tidewater goby and its critical habitat, least Bell's vireo, southwestern willow flycatcher and its critical habitat, and California red-legged frog and its critical habitat.

CONCLUSION

Tidewater goby

As discussed above, the status of the species in the action area and effects of the action on the tidewater goby are relatively unchanged from the 2015 reinitiated biological opinion (2015-F-0055). However, the duration of project activities would double in duration from five to ten years relative to the 2015 reinitiated biological opinion. Nevertheless, because (1) project activities would continue to occur primarily on already developed land, (2) consist of low-intensity impacts of limited scale, and (3) the District would implement suitable avoidance and minimization measures we conclude that the authorization, as proposed, would not jeopardize the continued survival or recovery of the tidewater goby.

Least bell's vireo

As discussed above, the species has become more abundant and widespread in the action area and the geographic scale of project activities within occupied least Bell's vireo habitat has increased substantially relative to the scope analyzed by the 2015 reinitiated biological opinion (2015-F-0055). Additionally, the duration of project activities would double in duration from five to ten years relative to the 2015 reinitiated biological opinion (2015-F-0055). Nevertheless, because (1) project activities would continue to occur primarily on already developed land, (2) consist of low-intensity impacts of limited scale, and (3) the District would implement suitable avoidance and minimization measures we conclude that the authorization, as proposed, would not jeopardize the continued survival or recovery of the least Bell's vireo.

Southwestern willow flycatcher

As discussed above, the status of the species in the action area and effects of the action on the southwestern willow flycatcher are relatively unchanged from the 2015 reinitiated biological opinion (2015-F-0055). However, the duration of project activities would double in duration from five to ten years relative to the 2015 reinitiated biological opinion (2015-F-0055). Nevertheless, because (1) project activities would continue to occur primarily on already developed land, (2) consist of low-intensity impacts of limited scale, and (3) the District would implement suitable avoidance and minimization measures we conclude that the authorization, as proposed, would not jeopardize the continued survival or recovery of the southwestern willow flycatcher.

California red-legged frog

As discussed above, the species has become more widespread in the action area and the geographic scale of project activities within occupied California red-legged frog habitat has increased substantially following the 2015 reinitiated biological opinion (2015-F-0055). Additionally, the duration of project activities would double in duration from five to ten years relative to the 2015 reinitiated biological opinion (2015-F-0055). Nevertheless, because (1) project activities would continue to occur primarily on already developed land, (2) consist of low-intensity impacts of limited scale, and (3) the District would implement suitable avoidance and minimization measures we conclude that the authorization, as proposed, would not jeopardize the continued survival or recovery of the California red-legged frog.

Critical habitat of the tidewater goby

As discussed above, the status of the critical habitat of the tidewater goby in the action area has not changed substantially from the 2015 reinitiated biological opinion (2015-F-0055). The district has clarified the scale of effects and reduced the scale of effects on critical habitat. Additionally, project effects would double in duration from five to ten years. Nevertheless because (1) project activities would continue to occur primarily on already developed land, (2) consist of low-intensity impacts of limited scale, and (3) the District would implement suitable avoidance and minimization measures we conclude that the authorization, as proposed, would not destroy or adversely modify designated critical habitat of the tidewater goby.

Critical habitat of the southwestern willow flycatcher

As discussed above, the status of the critical habitat of the southwestern willow flycatcher in the action area has not changed substantially from the 2015 reinitiated biological opinion (2015-F-0055). However, the district has increased its estimate of the geographic scale of effects on designated critical habitat because it is now including additional activity areas relative to 2015 reinitiated biological opinion (2015-F-0055). Additionally, the duration of project effects would double in duration from five to ten years. Nevertheless, because (1) project activities would continue to occur primarily on already developed land, (2) consist of low-intensity impacts of

limited scale, and (3) the District would implement suitable avoidance and minimization measures we conclude that the authorization, as proposed, would not destroy or adversely modify critical habitat of the southwestern willow flycatcher.

Critical habitat of the California red-legged frog

As discussed above, the status of the critical habitat of the California red-legged frog in the action area has not changed substantially from the 2015 reinitiated biological opinion (2015-F-0055). However, the district has greatly increased its estimate of the geographic scale of effects on designated critical habitat because it is now including areas of critical habitat adjacent to its facilities. Additionally, the duration of project effects would double in duration from five to ten years. Nevertheless, because (1) project activities would continue to occur primarily on already developed land, (2) consist of low-intensity impacts of limited scale, and (3) the District would implement suitable avoidance and minimization measures we conclude that the authorization, as proposed, would not destroy or adversely modify critical habitat of the California red-legged frog.

INCIDENTAL TAKE STATEMENT

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

In June 2015, the Service finalized new regulations implementing the incidental take provisions of section 7(a)(2) of the Act. The new regulations also clarify the standard regarding when the Service formulates an Incidental Take Statement [50 CFR 402.14(g)(7)], from "…if such take may occur" to "…if such take is reasonably certain to occur." This is not a new standard, but merely a clarification and codification of the applicable standard that the Service has been using and is consistent with case law. The standard does not require a guarantee that take will result; only that the Service establishes a rational basis for a finding of take. The Service continues to rely on the best available scientific and commercial data, as well as professional judgment, in reaching these determinations and resolving uncertainties or information gaps.

AMOUNT OR EXTENT OF TAKE

We anticipate that some tidewater gobies, least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs could be taken as a result of the proposed action. We expect the incidental take to be in the form of capture, injury, and kill. We cannot quantify the precise number of tidewater gobies, least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs that may be taken as a result of the actions that the Corps has proposed because tidewater gobies, least Bell's vireo, southwestern willow flycatchers, and California red-legged frogs move over time; for example, animals may have entered or departed the action area since the time of pre-construction surveys. Other individuals may not be detected due to their cryptic nature, small size, and low mobility. The protective measures proposed by the Corps are likely to prevent mortality or injury of most individuals. In addition, finding a dead or injured tidewater goby, least Bell's vireo, southwestern willow flycatcher, or California red-legged frog is unlikely.

Consequently, we are unable to reasonably anticipate the actual number of tidewater gobies, least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs that would be taken by the proposed project; however, we must provide a level at which formal consultation would have to be reinitiated. The Environmental Baseline and Effects Analysis sections of this biological opinion indicate that adverse effects to tidewater gobies, least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs would likely be low given the nature of the proposed activities, and we, therefore, anticipate that take of tidewater gobies, least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs would also be high/low. We also recognize that for every tidewater goby, least Bell's vireo, southwestern willow flycatcher, or California red-legged frog found dead or injured, other individuals may be killed or injured that are not detected, so when we determine an appropriate take level we are anticipating that the actual take would be higher and we set the number below that level.

Similarly, for estimating the number of tidewater gobies and California red-legged frogs that would be taken by capture, we cannot predict how many may be encountered for reasons stated earlier. While the benefits of relocation (i.e., minimizing mortality) outweigh the risk of capture, we must provide a limit for take by capture at which consultation would be reinitiated because high rates of capture may indicate that some important information about the species' in the action area was not apparent (e.g., it is much more abundant than thought). Conversely, because capture and relocation can be highly variable, depending upon the species and the timing of the activity, we do not anticipate a number so low that reinitiation would be triggered before the effects of the activity were greater than what we determined in the Effects Analysis.

The Incidental Take Statement contained within the 2015 reinitiated biological opinion (2015-F-0055) contained a thorough analysis of estimated incidental take as a result of project actions. As discussed above, we expect project effects to increase or decrease on tidewater gobies, least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs proportionate to decreases or increases in the geographic scale of effects on these species. The geographic scale of effects has decreased by 0.085 percent on tidewater gobies, increased by 26 percent on least

Bell's vireos, increased by 1.5 percent on southwestern willow flycatcher, and increased by 51 percent on California red-legged frogs. Accordingly, we expect the number of tidewater gobies, least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs that will be incidentally taken by project activities proposed by the current reinitiation to decrease or increase proportionately as well relative to the incidental take estimated by the 2015 reinitiated biological opinion (2015-F-0055).

Tidewater goby

The geographic scale of proposed project activities with potential to incidentally take tidewater gobies would remain relatively unchanged (a 0.085 percent decrease) for the relative to the scale analyzed within the 2015 reinitiated biological opinion (2015-F-0055). However, the duration of project effects has doubled relative to the scale of effects analyzed by the 2015 biological opinion (2015-F-0055). Therefore, we expect incidental take of tidewater gobies as a result of project activities to double the estimate contained within the 2015 reinitiated biological opinion (2015-F-0055) as well.

Therefore, if 20 adult, subadult, or juvenile tidewater gobies are found dead or wounded, the Corps must contact our office immediately to reinitiate formal consultation. Project activities that are likely to cause additional take should cease as the exemption provided pursuant to section 7(o)(2) may lapse and any further take could be a violation of section 4(d) or 9.

Least Bell's vireo

The geographic scale of proposed project activities with potential to incidentally take least Bell's vireo would increase by 26 percent relative to the scale analyzed within the 2015 reinitiated biological opinion (2015-F-0055). Additionally, the duration of project activities has doubled relative to the scale of effects analyzed by the 2015 biological opinion (2015-F-0055). Therefore, we expect incidental take of last Bell's vireos as a result of the proposed project activities to increase proportionately from the estimate contained within the 2015 reinitiated biological opinion (2015-F-0055) as well.

Therefore, if 3 (three) adult, subadult, or juvenile least Bell's vireos are found dead or wounded, the Corps must contact our office immediately to reinitiate formal consultation. Project activities that are likely to cause additional take should cease as the exemption provided pursuant to section 7(o)(2) may lapse and any further take could be a violation of section 4(d) or 9.

Southwestern willow flycatcher

The geographic scale of proposed project activities with potential to incidentally take southwestern willow flycatchers would remain relatively unchanged (a 1.5 percent increase) relative to the scale analyzed within the 2015 reinitiated biological opinion (2015-F-0055). However, the duration of project effects has doubled relative to the scale of effects analyzed by the 2015 biological opinion (2015-F-0055). Therefore, we expect incidental take of southwestern

willow flycatchers as a result of project activities to double the estimate contained within the 2015 reinitiated biological opinion (2015-F-0055) as well.

Therefore, if 2 (two) adult, subadult, or juvenile southwestern willow flycatchers are found dead or wounded, the Corps must contact our office immediately to reinitiate formal consultation. Project activities that are likely to cause additional take should cease as the exemption provided pursuant to section 7(o)(2) may lapse and any further take could be a violation of section 4(d) or 9.

California red-legged frog

The geographic scale of proposed project activities with potential to incidentally take California red-legged frogs would increase by 51 percent relative to the scale analyzed within the 2015 reinitiated biological opinion (2015-F-0055). Additionally, the duration of project activities has doubled relative to the scale of effects analyzed by the 2015 biological opinion (2015-F-0055). Therefore, we expect incidental take of California red-legged frogs as a result of the proposed project activities to increase from the estimate contained within the 2015 reinitiated biological opinion (2015-F-0055) proportionately as well.

Therefore, if any California red-legged frog egg mass is destroyed; if 6 (six) adult or metamorphosed California red-legged frogs are found dead or wounded; or if 90 California red-legged frogs of any age class are captured the Corps must contact our office immediately to reinitiate formal consultation. Project activities that are likely to cause additional take should cease as the exemption provided pursuant to section 7(o)(2) may lapse and any further take could be a violation of section 4(d) or 9.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species.

REASONABLE AND PRUDENT MEASURES

The measures described below are non-discretionary, and must be undertaken by the Corps or made binding conditions of any grant or permit issued to the (applicant), as appropriate, for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to assume and implement the terms and conditions or (2) fails to require the District to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the Corps or the District must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR 402.14(i)(3)].

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the impacts of the incidental take of least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs:

1. The taking of least Bell's vireos and southwestern willow flycatchers must be minimized by using qualified biologists to conduct surveys or other activities related to the protection of these species; and

2. The take of California red-legged frogs from capture, relocation, and construction activities must be minimized by employing qualified biologists who are able to handle California red-legged frogs safely and without transmitting diseases or pathogens.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the Corps must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline reporting and monitoring requirements. These terms and conditions are non-discretionary.

The following terms and conditions implement reasonable and prudent measure 1:

a. Only qualified personnel authorized under the auspices of this reinitiated biological opinion (inclusive of personnel authorized under the original biological opinion (2012-F-0531) and reinitiated biological opinion (2015-F-0055)) can survey for, designate suitable buffers, and monitor for least Bell's vireos and southwestern willow flycatchers. The Corps, or the District on behalf of the Corps, must request our approval of any additional biologists they wish to employ to conduct these activities in association with the O&M Program. The request must be received at least 30 days prior to any such activities being conducted.

b. Due to the rarity of southwestern willow flycatchers in Ventura County, restoration within areas where southwestern willow flycatchers are known to occur should be designed to minimize the chance that birds returning to the area the following year would find the habitat unsuitable for nesting. This may involve leaving a certain percentage of giant reed (*Arundo donax*) in place to provide the vegetation structure these birds require. Additionally, any treatments required during the breeding season in areas known to support southwestern willow flycatcher nesting should be done with an abundance of caution, including robust pre-treatment surveys, large buffer areas, and other measures to minimize potential impacts to nesting birds. These recommendations should be developed by the qualified biologist.

The following terms and conditions implement reasonable and prudent measure 2:

a. Only qualified personnel authorized under the auspices of this reinitiated biological opinion (inclusive of personnel authorized under the original biological opinion (2012-F-0531) and reinitiated biological opinion (2015-F-0055)) can survey for, capture, and relocation California red-legged frogs. The Corps and the District must request our approval of any additional biologists at least 30 days prior to any such activities being conducted.

b. Latex or nitrile gloves must not be used when handling California red-legged frogs. Clean hands, free of lotions, sun screens, and fragrances are recommended. If gloves are necessary, well-rinsed vinyl gloves may be used.

c. To ensure that diseases are not conveyed between work sites by Service-approved biologists, the fieldwork code of practice developed by the Declining Amphibian Population Task Force must be followed at all times. A copy of the code of practice is enclosed as Appendix A of this document. The Service-approved biologist may substitute a bleach solution. Care must be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.

REPORTING REQUIREMENTS

Pursuant to 50 CFR 402.14(i)(3), the Corps must report the progress of the action and its impact on the species to the Service as specified in this incidental take statement. The Corps or the District must also provide an annual report by March 1st of the following year that includes the following:

- The programmatic consultation tracking sheet (Appendix A) populated with individual projects that were initiated under the auspices of the programmatic consultation (inclusive of the original biological opinion (2012-F-0531) and reinitiated biological opinion (2015-F-0055)) in that year;
- Documentation of the number of tidewater gobies, least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs that were detected during surveys and project monitoring along with the location where they were found;
- Documentation of the number of tidewater gobies, least Bell's vireos, southwestern willow flycatchers, and California red-legged frogs that were taken during project activities, and the nature of the taking (e.g., capture, injury, etc.); and
- A brief discussion of any problems encountered in implementing minimization measures.

DISPOSITION OF DEAD OR INJURED SPECIMENS

As part of this incidental take statement and pursuant to 50 CFR 402.14(i)(1)(v), upon locating a dead or injured tidewater goby, least Bell's vireo, southwestern willow flycatcher, or California

red-legged frog, initial notification within 3 working days of its finding must be made by telephone and in writing to the Ventura Fish and Wildlife Office (805-644-1766). The report must include the date, time, location of the carcass, a photograph, cause of death or injury, if known, and any other pertinent information.

The Corps or the District must take care in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. The Corps or the District must transport injured animals to a qualified veterinarian. Should any treated tidewater goby, least Bell's vireo, southwestern willow flycatcher, or California red-legged frog survive, the Corps or the District must contact the Service regarding the final disposition of the animal(s).

The remains of tidewater gobies, least Bell's vireos, southwestern willow flycatchers, or California red-legged frogs must be placed with educational or research institutions holding the appropriate State and Federal permits, such as the Santa Barbara Natural History Museum (Contact: Paul Collins, Santa Barbara Natural History Museum, Vertebrate Zoology Department, 2559 Puesta Del Sol, Santa Barbara, California 93105, telephone 805/682-4711 ext. 321).

CONSERVATION RECOMMENDATIONS

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

> Long term maintenance of large scale restoration sites will be imperative to maintain the biological integrity of the habitat and ensure invasive plant species do not reinvade the area. We recommend that the Corps and the District work with the Service and other Partners to develop a strategy for ensuring that large scale restoration sites are maintained after the initial maintenance period has expired.

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

REINITIATION NOTICE

This concludes formal consultation on the action outlined in the reinitiation request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that

causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, the exemption issued pursuant to section 7(o)(2) may have lapsed and any further take could be a violation of section 4(d) or 9. Consequently, we recommend that any operations causing such take cease pending reinitiation.

If you have any questions about this biological opinion, please contact Dou-Shuan Yang of my staff at 805-677-3302, or by electronic mail at Dou-Shuan_Yang@fws.gov.

Sincerely,

Stephen P. Henry
Field Supervisor

LITERATURE CITED

[District] Ventura County Watershed Protection District. 2019. Ventura County Watershed Protection District Routine Operations and Maintenance Program USFWS Biological Opinion –Critical Habitat Analysis. Prepared by the Ventura County Watershed Protection District, Ventura, California.

[Service] U.S. Fish and Wildlife Service. 2012. Final Programmatic Biological and Conference opinion for Ventura County Watershed Protection District's Routine Operation and Maintenance Program, Ventura County, California (8-8-11-F/C-12; 2012-F-0531).

[Service] U.S. Fish and Wildlife Service. 2015. Reinitiated Biological Opinion for Ventura County Watershed Protection District's Routine Operation and Maintenance Program, Ventura County, California (8-8-18-F-7R, 2015-F-0055).

USFWS O&M BO NO. 2015-F-0055

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
08EVEN00-2015-F-0055

October 19, 2015

Antal Szijj, Senior Project Manager
Department of the Army
Los Angeles District, Corps of Engineers
2151 Alessandro Drive, Suite 110
Ventura, California 93001

Subject: Reinitiated Biological Opinion for Ventura County Watershed Protection District's Routine Operation and Maintenance Program, Ventura County, California (8-8-15-F-7R)

Dear Mr. Szijj:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the U.S. Army Corps of Engineers' (Corps) proposed issuance of a permit, pursuant to section 404 of the Clean Water Act, for the Ventura County Watershed Protection District's (District) routine operations and maintenance program (O&M Program). At issue are the effects of this action on the federally endangered tidewater goby (*Eucyclogobius newberryi*) and its critical habitat, least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*) and its critical habitat, and the federally threatened California red-legged frog (*Rana draytonii*) and its critical habitat, and yellow-billed cuckoo (*Coccyzus americanus*), in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*). Your letter requesting reinitiation of formal consultation, dated August 26, 2014, was received by our office on August 28, 2014. On August 10, 2015, we received your letter via electronic mail amending your request to include western yellow-billed cuckoo.

This biological opinion is based on information which accompanied your August 26, 2014 and August 10, 2015 requests for reinitiation of formal consultation, as well as information associated with your original request for consultation, including the Final Environmental Impact Report (District 2008), Impact Analysis for Federally-listed Species (District 2010), Invasive Plant Removal Plan (District 2014), survey reports for listed species in the project area, site visit notes, correspondence between our staff and the District, and information in our files. We can make available a complete record of this consultation at the Ventura Fish and Wildlife Office.

Consultation History

On December 12, 2012 we issued a programmatic biological and conference opinion (8-8-11-F/C-12) to the Corps for the District's O&M Program and its effects on the endangered tidewater goby and its critical habitat, least Bell's vireo, southwestern willow flycatcher and its critical habitat, California

least tern (*Sterna antillarum browni*), arroyo toad (*Anaxyrus* californicus), Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), marsh sandwort (*Arenaria paludicola*), Gambel's watercress (*Nasturtium* [*Rorippa*] *gambellii*), and the federally threatened California red-legged frog (*Rana draytonii*) and its critical habitat, coastal California gnatcatcher (*Polioptila californica*) and its critical habitat, and the western snowy plover (*Charadrius nivosus nivosus*) and its critical habitat.

To accommodate the dynamic nature of the O&M Program, the consultation document is structured to provide a program-level assessment of effects to listed species and critical habitats, and is amended by the submittal of work plans outlining specific tasks as they are proposed to the Corps for authorization. To achieve this flexibility this document includes two components:
1) a program-wide concurrence for species and critical habitats that the Corps determined are not likely to be adversely affected by any aspect of the O&M Program; this concurrence concludes Section 7 consultation for this subset of species and critical habitat; and 2) a programmatic consultation and conference opinion for species or critical habitats that may be affected by one or more of the specific projects within the O&M Program; for this set of species a determination will be made by the Corps whether each project "may affect, and is likely to adversely affect" or "may affect, and is not likely to adversely affect" one or more of the covered species. A summary of how all of the species described above are covered by this document is shown in
Table 1.

Table 1. Summary table of species and critical habitats that are covered through the program-wide concurrence or are subject to the programmatic consultation.

Species	Corps Determination	Service Response
California red-legged frog	May affect, likely to adversely affect *or* not likely to adversely affect	**Programmatic Consultation**
California red-legged frog designated critical habitat	May affect, likely to adversely affect *or* not likely to adversely affect	
Least Bell's vireo	May affect, likely to adversely affect *or* not likely to adversely affect	
Southwestern willow flycatcher	May affect, likely to adversely affect *or* not likely to adversely affect	
Southwestern willow flycatcher proposed critical habtiat[1]	May affect, likely to adversely affect *or* not likely to adversely affect	
Tidewater goby	May affect, likely to adversely affect *or* not likely to adversely affect	
Tidewater goby designated critical habtiat	May affect, likely to adversely affect *or* not likely to adversely affect	
Coastal California gnatcatcher	May affect, not likely to adversely affect	**Program-wide Concurrence**
Coastal California gnatcatcher designated critical habitat	May affect, not likely to adversely affect	
Gambel's watercress	May affect, not likely to adversely affect	
Marsh sandwort	May affect, not likely to adversely affect	
California least tern	May affect, not likely to adversely affect	
Western snowy plover	May affect, not likely to adversely affect	
Western snowy plover critical habtiat	May affect, not likely to adversely affect	
Yellow-billed cuckoo	May affect, not likely to adversely affect	
Arroyo toad [2]	No effect	**No Response**
Ventura marsh milk-vetch[2]	No effect	

[1] The programmatic conference opinion converted to a biological opinion upon final designation of critical habitat for the southwestern willow flycatcher on January 3, 2013.

[2] The Corps and Service are not required to consult on "no effect" determinations.

On August 26, 2014 you requested reinitiation of the programmatic biological and conference opinion to allow large-scale restoration projects to be implemented and to analyze effects of the use of imazapyr herbicide in addition to glyphosate herbicide, which has already been evaluated in the December 12, 2012 biological opinion.

Effective November 3, 2014, the Western Distinct Population Segment of the yellow-billed cuckoo was listed as federally threatened.

On August 10, 2015, we received your determination that the O&M program may affect, but is not likely to adversely affect the yellow-billed cuckoo, and your request for our concurrence.

PROGRAM-WIDE CONCURRENCE

The program-wide concurrence for coastal California gnatcatcher and its critical habitat, Gambel's watercress, marsh sandwort, California least tern, and western snowy plover and it's critical habitat are described in the original consultation (8-8-11-F/C-12) and remain unchanged and is hereby incorporated by reference.

You determined that the O&M Program may affect, but is not likely to adversely affect the yellow-billed cuckoo. The yellow-billed cuckoo has been found in dense, mature riparian habitat within the Santa Clara River. There are recent records of its occurrence in areas near the District's facilities and restoration sites in the vicinity of Hedrick Ranch Nature Area and the South Mountain Road groins (near 34.3538° North; -119.0198° West). The yellow-billed cuckoo requires extensive contiguous patches of cottonwood-willow habitat for nesting, as described as follows in primary constituent element 1 of the proposed rule to designate yellow-billed cuckoo critical habitat (79 FR 48547):

> Riparian woodlands with mixed willow/cottonwood vegetation, mesquite-thorn forest vegetation, or a combination of these that contain habitat for nesting and foraging in contiguous or nearly contiguous patches that are greater than 325 ft (100 m) in width and 200 ac (81 ha) or more in extent. These habitat patches contain one or more nesting groves, which are generally willow-dominated, have above average canopy closure (greater than 70 percent), and have a cooler, more humid environment than the surrounding riparian and upland habitats.

Although nesting has not been documented within the past twenty years in Ventura County, the habitat in the vicinity of Hedrick Ranch Nature Area meets the criteria for nesting (described above). We anticipate that the yellow-billed cuckoos that have been observed in this area may use the habitat for nesting. Other riparian habitats within the Ventura River, Santa Clara River, and Calleguas Creek may be used by yellow-billed cuckoos for stop-over habitat during migration, but we do not anticipate these would support nesting.

District facilities covered under the O&M Program are predominantly located in areas that are frequently disturbed and do not contain the extensive, well-developed, habitat areas described above. Habitat restoration activities associated with the O&M Program may occur in suitable habitat; however, no restoration actions are currently proposed in or near cuckoo habitat in the foreseeable future with the exception of low-impact retreatment of previously conducted exotic vegetation removal projects. Where such habitat exists near covered facilities, existing minimization measures are incorporated into the O&M Program, and would ensure adverse indirect effects to yellow-billed cuckoos are avoided.

The following minimization measures for least Bell's vireo and southwestern willow flycatcher listed in the existing O&M Program Programmatic Biological Opinion are applicable to yellow-billed cuckoo:

• LBV-1: Prior to routine maintenance and repair activities performed during the period March 1 to September 15, a District biologist or consulting biologist will determine if suitable habitat is present for native breeding birds in or within 500 feet of the work area. Project activities will be postponed to September 15 if such habitat is present in the work area or within 500 feet of the work area, to the extent possible.

• LBV-2: In the event that operations and maintenance activities in suitable habitat for least Bell's vireo, or southwestern willow flycatcher, or yellow-billed cuckoo cannot be postponed until after the end of the breeding season (September 15), and if the activities involve the direct disturbance of habitat for these species (i.e., vegetation trimming or removal), the District will conduct surveys according to Service guidance to determine presence or absence of least Bell's vireos, southwestern willow flycatcher, and yellow-billed cuckoo. A modified survey protocol may be appropriate on a case-by-case basis and must be approved by the Service.

• LBV-3: If a least Bell's vireo, southwestern willow flycatcher, or yellow-billed cuckoo nest is detected within the project area during pre-project surveys, a Service-approved biologist will establish a buffer zone around the nest that they deem sufficient to avoid the abandonment of the nest by the adults. The Service generally recommends a minimum 500 foot buffer around nests where no work is to occur; however, a smaller buffer can be established if deemed protective by the Service-approved biologist and approved by the Service. The Service-approved biologist must monitor the nests during all O&M Program activities occur immediately adjacent to buffer zones to determine the effects of project activities on the nesting least Bell's vireos, southwestern willow flycatchers, and yellow-billed cuckoos. The Service-approved biologist will have the authority to stop work if deemed necessary to protect the nesting birds.

• LBV-4: For mitigation/restoration projects where non-native plant species are targeted for removal within suitable habitat for Least Bell's vireos, southwestern willow flycatchers, or yellow-billed cuckoos, native vegetation will be left in place to the maximum extent practical; willows (*Salix* sp.) and cottonwoods (*Populus* sp.) with a diameter at breast height of 8 inches or greater may be trimmed, but will be left in place.

We concur with your determination that the O&M Program may affect but is not likely to adversely affect the yellow-billed cuckoo based on the following:

- The only O&M Program area that may support nesting habitat for yellow-billed cuckoos is in the vicinity of Hedrick Ranch Nature area;
- The only O&M Program activities planned to occur in the vicinity of suitable nesting habitat are low-impact re-treatments of restoration areas (i.e., hand-crews removing giant reed (*Arundo donax*) resprouts);
- Protective measures will be implemented that we anticipate will avoid adverse effects to any nesting yellow-billed cuckoos that may be in the vicinity of O&M Program activities;
- We anticipate that O&M Program activities would have insignificant effects to yellow-billed cuckoos that may be migrating through the area because the portion of habitat affected by these activities at any given time is small and of low quality, being made up of primarily invasive plants, and non-breeding yellow-billed cuckoos can readily move to nearby unaffected and better quality habitat areas without the realistic potential to lead to adverse effects; and

- Large scale restoration associated with the O&M Program is anticipated to have beneficial long-term effects to yellow-billed cuckoos.

ADMINISTRATION OF THE PROGRAMMATIC BIOLOGICAL OPINION

The administration of the programmatic biological opinion will remain unchanged. As with all other actions subject to this programmatic consultation, the Corps will notify the Service of proposed restoration actions and provide project-specific details including:

- Location of the restoration project;
- Size of the restoration project;
- Restoration methods (including any herbicide use);
- Description of any proposed modifications to the Best Management Practices (BMPs) or minimization measures that appear in the original consultation (8-8-11-F/C-12);
- Species and critical habitats affected; and
- Determination of effects to listed species and critical habitats;

We will review the Corps' notification and respond in writing, or via email, to acknowledge that activities are being conducted under the programmatic biological opinion, and to notify the Corps of any concerns or questions regarding the proposed action, or if we feel that there would be effects that would necessitate a separate consultation. The tracking sheet attached in Appendix A can be used to facilitate this notification. The Service will strive to respond within 30 days, but will request an extension if additional processing time is necessary.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The description of the proposed action remains largely unchanged from the description in our previous consultation for the project (8-8-11-F/C-12), and is hereby incorporated by reference. Two aspects of the project have changed: 1) the amount of habitat restoration has increased; and 2) the use of imazapyr for invasive plant control is requested. No other aspects of the O&M Program have been altered and the minimization and avoidance measures remain the same.

The Corps and the District propose to implement restoration projects opportunistically within portions of the Ventura River, Santa Clara River, Ormond Lagoon, and Calleguas Creek that fall within Ventura County. The existing consultation (8-8-11-F/C-12) limits the amount of restoration or mitigation that can occur in any single year to 10 acres in the Ventura and Calleguas Creek watersheds and 15 acres in the Santa Clara River watershed. The Corps and the District propose to revise the authorized activities to allow for the implementation of larger scale restoration projects that may exceed the estimated acerages in the original programmatic biological opinion when funding and/or partnering with other conservation organizations provide such opportunities. The primary type of restoration that is envisioned to be implemented under this consultation is invasive plant removal targeting giant reed (*Arundo donax*), tree of heaven (*Ailanthus altissima*), castor bean (*Ricinus communis*), fennel (*Foeniculum vulgare*), and salt cedar (*Tamarisk sp.*), although other invasive plant species may be targeted as well.

The exact location, size, and timing of individual restoration projects that will be covered under this programmatic consultation are not known at this time; therefore, the effects of each of these projects considered together cannot be comprehensively determined in advance. For purposes of this consultation, we will assume that a maximum of 300 acres of restoration in each of the three major watersheds in Ventura County will be initiated in any given year. Additionally, we anticipate up to 24 acres of restoration in Ormond Lagoon may be initiated in any given year.

The analysis below represents our understanding of the general nature of effects that restoration projects will have on listed species and critical habitats. As new restoration projects are considered for coverage under this programmatic consultation, we will consider previous projects that have been covered by this programmatic consultation, current status of the overall riparian habitats, and the projected effects of the individual project at hand to determine whether the effects on whole are commensurate with the analysis herein.

Restoration methods - initial invasive vegetation removal

Restoration methods for controlling invasive plants, including herbicide control, are described below. These methods may be modified or combined to address site-specific conditions. Any modifications to these general methods will be described in project-specific documents.

Shredding/masticating
For areas with high cover (75-100 percent) of giant reed, small mechanized equipment can be used to shred the standing giant reed canes to near ground level as an initial treatment method. Shredded material would remain in situ. No soil disturbance or road grading would occur; no driving of equipment in flowing water would occur. No herbicide application would occur during or immediately after the shredding. No crossing of open water with shredding equipment would be allowed; driving the shredder over dry land would be allowed. All removed vegetation would be placed in containers or truck beds, or shredded directly into truck beds, to avoid attracting wildlife to waste piles.

Cut and Daub
To implement the cut and daub method, all live plant material would be cut with hand held equipment such as chain saws, loppers and power brush cutters to a maximum of six inches above grade level. Herbicide (Method A or B as appropriate) would then be applied to the freshly cut stalk cambium. For stalks emerging from surface water, the stalks would be cut about 6 inches above the water surface. The herbicide application would be completed within approximately two minutes of cutting and within six inches of grade (or surface water); it would comprise painting the cambium layer of the freshly cut stalks with a cloth-covered wand or a sponge in a manner that would maximize the stalks' herbicide absorption. Application of herbicides to the ground, open water, or to non-target vegetation will be avoided.

> *Method A*: For stalks emerging from surface water or within 25 feet of surface water, a solution of approximately 50 percent glyphosate, such as full strength Aquamaster®, would applied with a colorant to cut stems immediately (within 2 minutes) after cutting.

Method B: For treatment areas more than 25 feet from surface water, to the glyphosate-based herbicide and colorant solution used for Method A, imazapyr-based (29 percent) herbicide, such as Habitat® would be added. No surfactant is required with the cut and daub application method.

Spray only
With this method, approved herbicides would be sprayed directly onto standing giant reed leaves and stems, either using backpack sprayers or vehicle-mounted spray tanks. This method has been shown to be effective in areas where leaving dying and dead giant reed stems is appropriate (e.g., in areas with low giant reed cover and/or where dead material will not increase fire risks) (Lambert and Dudley 2012).

Bend-and-spray
The bend-and-spray method involves physically bending giant reed stems away from native vegetation and spraying the bent stems with an approved herbicide. The sprayed stems would be left in place for 5 to 6 months. This method minimizes the risk of herbicide application to non-target vegetation and is one of the most suitable methods for remotely located, small- to moderately-sized infestations with interspersed native vegetation.

Chipping
For projects that involve chipping, cut giant reed would be transported to designated staging areas for chipping. Cut plant material would be placed in haul trucks which would park at points along existing access roads that provide the closest vehicular access to the targeted removal sites.

Restoration Methods - monitoring and re-treatment

Following the initial removal of invasive plants, monitoring and multiple re-treatments are often necessary in order to prevent the species from recolonizing the restoration area. Monitoring generally occurs over a period between 3-5 years after initial removal. The number, timing, and exact method of re-treatments would depend on project-specific requirements. Re-treatments may be necessary during any time of the year and often involve the use of herbicide applied by small work crews.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY AND ADVERSE MODIFICATION DETERMINATIONS

Jeopardy Determination

Section 7(a)(2) of the Endangered Species Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. "Jeopardize the continued existence of" means "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 CFR 402.02).

The jeopardy analysis in this biological opinion relies on four components: (1) the Status of the Species, which describes the range-wide condition of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher, the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which analyzes the condition of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher; and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities, that are reasonably certain to occur in the action area, on the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed federal action in the context of the current status of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to reduce appreciably the likelihood of both the survival and recovery of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher in the wild by reducing the reproduction, numbers, and distribution of that species.

Adverse Modification Determination

Section 7(a)(2) of the Endangered Species Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of designated critical habitat. This biological opinion does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR 402.02. Instead, we have relied on the statutory provisions of the Act to complete the analysis with respect to critical habitat.

In accordance with policy and regulation, the adverse modification analysis in this biological opinion relies on four components: (1) the Status of Critical Habitat, which describes the range-wide condition of designated critical habitat for the tidewater goby, California red-legged frog and southwestern willow flycatcher in terms of primary constituent elements (PCEs), the factors responsible for that condition, and the intended recovery function of the critical habitat overall; (2) the Environmental Baseline, which analyzes the condition of the critical habitat in the action area, the factors responsible for that condition, and the recovery role of the critical habitat in the action area; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated and interdependent activities on the PCEs and how that will influence the recovery role of the affected critical habitat units; and (4) Cumulative Effects, which evaluates the effects of future non-Federal activities, that are reasonably certain to occur in the action area, on the PCEs and how that will influence the recovery role of affected critical habitat units.

For purposes of the adverse modification determination, the effects of the proposed Federal action on the critical habitat of the tidewater goby, California red-legged frog and southwestern willow flycatcher are evaluated in the context of the range-wide condition of the critical habitat, taking into

account any cumulative effects, to determine if the critical habitat range-wide would remain functional (or would retain the current ability for the PCEs to be functionally established in areas of currently unsuitable but capable habitat) to serve its intended recovery role for the tidewater goby, California red-legged frog and southwestern willow flycatcher.

STATUS OF THE SPECIES AND ITS CRITICAL HABITAT

The status of the tidewater goby and its critical habitat, California red-legged frog and its critical habitat, least Bell's vireo, and southwestern willow flycatcher and its critical habitat remains unchanged from the description in our previous consultation (8-8-11-F/C-12), and is hereby incorporated by reference. On February 4, 2013 and March 8, 2013 respectively, the designation of critical habitat for the southwestern willow flycatcher and tidewater goby took effect. The sections of the previous consultation that described southwestern willow flycatcher and tidewater goby proposed critical habitat, which were included in the consultation as a conference opinions, are now in effect as part of the biological opinion.

ENVIRONMENTAL BASELINE

The environmental baseline, including the action area, remains unchanged from the description in our previous consultation (8-8-11-F/C-12), and is hereby incorporated by reference.

EFFECTS OF THE ACTION

The effects of the action for all program activities described in the previous consultation (8-8-11-F/C-12) remain unchanged and are hereby incorporated by reference. The sections below describe the effects associated with the additional program components that are the subject of this reinitiated consultation including large-scale restoration, and the use of imazapyr herbicide in addition to glyphosate herbicide. Effects of glyphosate on the tidewater goby and its critical habitat, the California red-legged frog and its critical habitat, the least Bell's vireo and southwestern willow flycatchers and their critical habitat, were discussed in the previous consultation (8-8-11-F/C-12) but are revisited in the sections below due the proposed use of this product in large-scale restoration.

The exact location, size, and timing of individual restoration projects that will be covered under this programmatic consultation are not known at this time. For purposes of this analysis we anticipate that up to 300 acres of restoration may be initiated in each of the three major Ventura County watersheds in any given year. The analysis below represents our understanding of the general nature of effects that individual restoration projects will have on listed species and critical habitats. As new restoration projects are considered for coverage under this programmatic consultation, we will consider previous projects that have been covered by this programmatic consultation, the status of the riparian habitat, and the projected effects of the individual project at hand to determine whether the effects on whole are commensurate with the analysis herein.

Environmental Fate and Ecological Toxicity of Glyphosate and Imazapyr

This section contains general information about the environmental fate and ecological toxicity of glyphosate and imazapyr, which is applicable to all species covered in this biological opinion. Detailed analysis regarding the specific anticipated effects of these herbicides on each of the species and critical habitats subject to this programmatic biological opinion is found in the following sections dedicated to each species and critical habitat.

Glyphosate is a systemic herbicide that kills broadleaf and grass species by inhibiting the production of aromatic amino acids in plants and some microorganisms that are necessary to build proteins (Devine et al. 1993). Because many animals lack the amino acid synthesis pathway that glyphosate disrupts, it is considered to have low potential to cause toxicity in animals (Devine et al. 1993). The half-life of glyphosate in pond water ranges between 12 days and 10 weeks depending on environmental conditions (Extoxnet 1996); however, the half-life in brackish or saline water may be different. The potential for the compound to build up in the tissues of aquatic invertebrates or other aquatic organisms is considered very low (Extoxnet 1996).

Many glyphosate products are formulated to contain surfactants that allow the active ingredients to spread over and penetrate the plant cuticles. Surfactants can be the most toxic portion of a pesticide product. The glyphosate used in aquatic areas during all restoration activities would be formulated without a surfactant. When a surfactant is absolutely necessary, the product Agri-dex by Helena Chemicals would be used (BMP-9 of the original consultation), and has been approved for aquatic applications due to its low toxicity.

The mode of action of Imazapyr is similar to glyphosate. Imazapyr is a broad-spectrum herbicide that is effective for the treatment of pre-emergent or post-emergent grasses and broadleaf plants. Imazapyr acts as an enzyme inhibitor in plants, disrupting the biosynthesis of the three branched-chain aliphatic amino acids valine, leucine, and isoleucine, which are produced in plants but not in animals. Because animals receive these animo acids from their diet as opposed to synthesizing them, the enzyme inhibition that imazapyr causes is not generally relevant to birds, mammals, fish or invertebrates (Pless 2005, WSDA 2009). Field studies conducted with imazapyr demonstrate that it degrades rapidly in water, and no detectable residues were found in water or sediment within two months (Pless 2005). Degradation of imazapyr in soil depends on environmental conditions, with an average half-life between one and five months (Tu *et al.* 2004). Imazapyr does not appreciably bioaccumulate and does not bioconcentrate (USEPA 2007).

Imazapyr may be actively exuded from the roots of legumes (such as mesquite), likely as a defense mechanism by those plants. This exudate may move via intertwined root grafts to nearby vegetation and may therefore adversely affect the surrounding desirable plant species with little to no control of the target species (Tu *et al.* 2004).

In a review of pesticide ecotoxicity (Service 2007), the Service classifies glyphosate and aquatic formulations of imazapyr as Class 0 pesticides for ecotoxicity to small avian species, cold water fish, warm water fish, terrestrial amphibians, and aquatic amphibians. Based on the results of this screening-level hazard assessment, the Service considers glyphosate and imazapyr pesticides to be practically nontoxic to these receptors, and that these pesticides do not require additional protection measures. No information was found that describes the toxicity of the combined use of glyphosate

and imazapyr, as toxicity studies are generally designed to identify effect to an individual organism from exposure to one chemical.

Effects of the Proposed Action on the Tidewater goby

Large-scale restoration - initial invasive vegetation removal
Restoration projects would target plant species that occur predominantly outside of suitable habitat for tidewater gobies, however there is the potential for tidewater gobies to be present in small areas along the edges of restoration sites where invasive plants occur near the estuaries of the Ventura River, Santa Clara River, Ormond Lagoon and Calleguas Creek. The Corps and the District propose to minimize the chance of crushing tidewater gobies and their eggs by keeping shredding equipment out of wetted habitats and minimizing foot traffic in wetted areas suitable for tidewater gobies. We anticipate that some personnel will need to travel on foot through wetlands occupied by tidewater gobies during initial treatments. Adult tidewater gobies may move out of the area disturbed by work crews. Some tidewater gobies may remain in the disturbed area, along with eggs and larval tidewater gobies, which may be crushed by foot traffic.

Herbicides that are applied to invasive plant treatment areas within or adjacent to tidewater goby habitat have the potential to wash or drift into waters that are occupied by tidewater gobies. The herbicides proposed for use during restoration activities contain the active ingredients glyphosate and imazapyr.

No information is available regarding the toxicity of glyphosate products specifically to tidewater goby. Acute toxicity studies on bluegill sunfish (*Lepomis macrochirus*) and rainbow trout (*Oncorhynchus mykiss*) indicate that Aquamaster herbicide, which uses glyphosate as the active ingredient and does not contain a surfactant, is practically non-toxic (i.e., LC 50 value >100 miligrams per liter (mg/L)) to these species (Monsanto 2005). For chronic life-cycle exposures, the "no observable effects concentration" measured in fathead minnows was 25.7 mg/L (Durkin 2010). The concentration of glyphosate that would be used in restoration projects would not exceed the maximum allowable application rate of 8 pounds per acre. At this application rate, with full strength Aquamaster applied directly to water that is one-foot deep, the maximum concentration of glyphosate would be 3 mg/L. This is substantially lower than the chronic and acute toxicity thresholds for various fish species that act as suitable surrogates for the tidewater goby. For the purposes of this project, glyphosate will be applied with a cut and daub method in habitats that are suitable for tidewater gobies, and will generally not be applied at the maximum allowable application rate, therefore the chance of toxicity to tidewater gobies from glyphosate use is very low.

No information is available regarding the toxicity of imazapyr products specifically to tidewater goby. Acute freshwater toxicity studies on rainbow trout (*Oncorhynchus mykiss*), Bluegill sunfish (*Lepomis macrochirus*), and channel catfish (*Ictalurus punctatus*) demonstrated that full strength (93 percent active ingredient) imazapyr was practically non-toxic (i.e., LC50 > 100 mg/L for each species tested) (USEPA 2007). A recent study from a tidal estuary in Washington showed that imazapyr, even when supplied at concentrations up to 1600 mg/L, did not affect the osmoregulatory capacity of Chinook salmon smolts (Patten 2003 as cited by Tu *et al.* 2004). The "no observed adverse effect concentration" for chronic toxicity in rainbow trout is 43.1 mg/L (USEPA 2007). The concentration of imazapyr that would be used in restoration projects would not exceed the maximum allowable application rate of 1.5 pounds per acre. At this application rate, with full strength

imazapyr applied directly to water that is one-foot deep, the maximum concentration of imazapyr would be 0.6 mg/L. This is substantially lower than the chronic and acute toxicity thresholds for various fish species that act as suitable surrogates for the tidewater goby. For the purposes of this project, imazapyr would not be used within 25 feet of open water, and will generally not be applied at full strength and at the maximum allowable application rate, therefore the chance of toxicity to tidewater gobies from imazapyr use is very low.

Removing invasive vegetation may cause the soils in the treatment area to be more easily mobilized during storm events, causing increased sedimentation into tidewater goby habitat. Sedimentation may result in tidewater goby injury, death, and lowered breeding success. Sediment may affect tidewater gobies by impairing the efficiency of their gill filaments and exposing them to higher salinities and/or predation as they flee downstream. Direct effects of sedimentation include mortality, reduced physiological function, and burrow smothering. Indirect effects of sedimentation include potential alteration to the food web which could create cascading effects to higher trophic levels. A reduction in phytoplankton can be attributed to increased turbidity, which can therefore reduce zooplankton, in turn reducing benthic macroinvertebrates, and thus reducing prey available to tidewater gobies (Henley et al. 2000). Any increase in sedimentation would be minor and temporary, because no new sediment sources are being added to the area, and native vegetation re-growth would replace any soil stabilization role that the invasive species were fulfilling.

Monitoring and maintenance
Following the initial removal of invasive plant species, follow-up monitoring and maintenance is necessary to identify and treat re-sprouting invasive plants. Monitoring and maintenance personnel may enter wetted habitats that are suitable for tidewater goby and may injure or kill tidewater gobies and their eggs. We anticipate that any area subject to large scale restoration will be maintained free of giant reed following the completion of the project, that the greatest disturbance to tidewater gobies would occur in the first year an area is treated, and that impacts will be much less in subsequent years.

The herbicides glyphosate and imazapyr may be used in follow-up treatments, likely in lower amounts than necessary for the initial control. As described above, the toxicity of these herbicides to fish species is very low, and we do not anticipate that tidewater gobies would be injured or killed due to herbicide exposure.

Number of tidewater gobies affected
We anticipate that less than 20 percent of tidewater goby potential habitat within each Ventura County estuary would be subject to large scale restoration projects and associated monitoring and maintenance in any given year. Table 2 summarizes the total potential habitat in each estuary along with the maximum number of acres that would be affected. As described in the original consultation, habitat that is considered potentially suitable includes lower watershed areas that may be inundated and support vegetation during various times of the year or as estuary morphology changes. Not all potentially suitable habitat is suitable at all times, and not all suitable habitat is occupied at all times.

Because the population of tidewater gobies in each estuary fluctuates throughout the year and between years, we cannot predict the exact number that may be injured or killed by the O&M Program activities described above. Within the 20 percent of potential tidewater goby habitat that may be affected each year, we anticipate worker traffic traveling through the area will affect a

smaller footprint, because giant reed occurs in patches within these areas and because some of the patches can be treated from the banks and from dry habitat areas. Adult tidewater gobies are highly mobile; however, eggs and larvae that reside within burrows in the sediment may be crushed by these workers walking through the project area as described above. We anticipate that the number of individuals injured or killed by these workers would be small in comparison to the overall population of tidewater gobies at each site.

Table 2. Total potential tidewater goby habitat and maximum area affected by large scale restoration projects.

	Total potential habitat (Acres)	Maximum area affected annually (Acres)
Ventura River	202	40
Santa Clara River	532	106
Ormond Lagoon	121	24
Calleguas Creek	677	135
TOTAL	1,532	305

Recovery of the tidewater goby

The goal of the tidewater goby recovery plan is to conserve and recover the tidewater goby throughout its range by managing threats and perpetuating viable metapopulations within each recovery unit while maintaining morphological and genetic adaptations to regional and local environmental conditions. We do not expect large scale habitat restoration or the use of glyphosate and imazapyr herbicides to substantially affect the conservation of the tidewater goby within the Los Angeles/Ventura Recovery Unit, in terms of the recovery strategy described in the recovery plan because:

1. The tidewater goby recovery plan emphasizes the importance of the conservation of population units rather than individual fish, and the effects of restoration actions are not expected to cause population-level declines in the Ventura River, Santa Clara River, Ormond Lagoon or Calleguas Creek; and

2. The O&M Program would not disrupt the metapopulation dynamics between each individual population in the Los Angeles/Ventura Recovery Unit.

Summary of effects to tidewater goby

In summary, the proposed action could adversely affect all lifestages of tidewater goby that occur within the Ventura River, Santa Clara River, Ormond Lagoon, and Calleguas Creek by workers crushing tidewater gobies and increased sedimentation. Based on the toxicity data available, we conclude that the proposed use of glyphosate and imazapyr would not injure or kill any tidewater gobies. The number of tidewater gobies in each estuary that could be affected by the proposed projects is low in comparison to the overall population in each estuary. We expect the effects would be temporary and minor, and do not anticipate the effects would cause local extirpation of the species. We conclude that large scale restoration involving the use of imazapyr and glyphosate herbicide would not compromise the recovery of the tidewater goby, and may ultimately improve the quality of the species' habitat.

Effects of the Proposed Action on Tidewater goby critical habitat

Restoration activities may occur within or adjacent to tidewater goby designated critical habitat units VEN-1, VEN-2, VEN-3 or VEN-4. Critical habitat may be affected by the removal of emergent aquatic vegetation and through temporary increases in sedimentation that may follow the removal of invasive vegetation. Table 2 lists the amount of tidewater goby critical habitat that we anticipate may be affected in any given year, based on assumptions of the maximum amount of tidewater goby habitat that may be subject to large scale restoration (described above).

Table 3. Tidewater goby critical habitat units that may be affected by large scale restoration.

Unit	Location	Critical Habitat (acres)	Maximum area affected annually (acres)
VEN-1	Ventura River	50.3	40
VEN-2	Santa Clara River	322.1	106
VEN-3	Ormond Lagoon	121.0	24

Only non-native plant species will be targeted for removal, and native vegetation will be left in place. Nevertheless, this decrease in emergent aquatic vegetation may adversely affect the primary constituent element specific to providing protection from predators and high flow events. We anticipate that native vegetation will recolonize a majority of the restoration area within 1 year. Within this 1-year period, we anticipate existing native vegetation will provide adequate protection for predators and high flows.

Increased sedimentation may adversely affect the primary constituent element specific to tidewater goby habitat that concerns substrates suitable for the construction of burrows for reproduction. If fine-grained substrates are mobilized through the removal of invasive vegetation and deposited in critical habitat for tidewater goby, suitable substrates may be covered up or otherwise become less available. The quantity of sediment that may be mobilized through projects authorized under this programmatic consultation cannot be estimated, but any increase in sedimentation is anticipated to be minor and temporary because no new sediment sources are being added to the area, and native vegetation re-growth is anticipated to replace any soil stabilization role that the invasive species were fulfilling.

In summary, large scale restoration activities may adversely affect the primary constituent elements that deal with substrate and vegetation. These effects are anticipated to be temporary and minor, and are not anticipated to disrupt the function of the critical habitat units where the activities would occur.

Effects of the Proposed Action on the California red-legged frogs

Large-scale restoration - initial invasive vegetation removal
As described in the Environmental Baseline section, California red-legged frogs may be present within restoration areas of the Ventura River watershed only, the species is not know to occur within the Santa Clara River, Ormond Lagoon, or Calleguas Creek watersheds within Ventura County.

California red-legged frogs may be directly injured or killed during initial invasive vegetation removal activities when workers and equipment are present in occupied habitat. The Corps and the

District propose to survey the project area daily prior to conducting activities that could injure or kill California red-legged frogs (minimization measure CRLF-1). Any California red-legged frogs that are identified and could be injured or killed by project activities would be relocated to a nearby suitable habitat. As the species is cryptic and can be difficult to detect during surveys, California red-legged frogs may still be present within the project area while restoration activities are occurring, despite efforts to relocate them. California red-legged frogs may be injured or killed by shredding/masticating equipment, and may be trampled by foot traffic or other equipment.

The Corps and the District propose to place all removed vegetation directly in storage containers or truck beds to avoid creating waste piles that may be an attractive nuisance for California red-legged frogs.

Herbicides that are applied to invasive plant treatment areas within or adjacent to California red-legged frog habitat have the potential to come in contact with California red-legged frogs through direct dermal exposure in their terrestrial or aquatic habitats. The herbicides proposed for use during restoration activities contain the active ingredients glyphosate and imazapyr.

California red-legged frog eggs, tadpoles, juveniles and adults can be exposed to glyphosate products in aquatic habitats through direct overspray of wetlands, drift from treated areas, or contaminated runoff from treated areas. The half-life of glyphosate in pond water ranges between 12 days and 10 weeks (Extoxnet 1996). Additionally, juvenile and adult California red-legged frogs can be exposed in terrestrial habitats that have been treated. Glyphosate readily sorbs to soil particles and can be degraded by microbes in 7 to 70 days depending on soil conditions (Giesy et al. 2000).

No information is available regarding the toxicity of glyphosate products specifically to California red-legged frogs. Studies exploring the lethal and sublethal effects of glyphosate products on other amphibians, including ranids, are available but are largely focused on aquatic stages of the species and formulations of glyphosate that include surfactants. Several studies suggest that the toxicity of glyphosate products is linked with the surfactant, and not the glyphosate. Howe et al. (2004) compared the toxicity of glyphosate alone, to glyphosate with POEA surfactant, and POEA alone, on green frogs. Results indicated that the toxicity of glyphosate with POEA surfactant was similar to the POEA surfactant alone, which was much greater than glyphosate alone, indicating that the POEA was responsible for the toxic effects. In a comprehensive review of studies involving the effects of glyphosate on amphibians Govindarajulu (2008) concluded that the toxic effect of glyphosate products containing POEA are due to the POEA rather than the active glyphosate ingredient.

In the absence of robust toxicity data for amphibians in aquatic habitats, USEPA uses fish toxicity as a surrogate. In a 2008 study, USEPA compiled toxicity studies for technical glyphosate (formulated without a surfactant) that were deemed suitable to act as surrogates for California red-legged frogs. Results ranged from practically nontoxic to slightly toxic with the lowest (most conservative) acute toxicity LC50 value of 43 mg active ingredient per liter (mg/L), and the lowest no observed adverse effect concentration was 30.6 mg/L (USEPA 2008). The concentration of glyphosate that would be used in restoration projects would not exceed the maximum allowable application rate of 8 pounds per acre. At this application rate, with full strength Aquamaster applied directly to water that is one-foot deep, the maximum concentration of glyphosate would be 3 mg/L. This is substantially lower than the toxicity thresholds for various fish species that act as suitable surrogates for California red-legged frogs in their aquatic habitat. For the purposes of this project, glyphosate will not be applied

directly to water, and would generally not be applied at the maximum allowable application rate, therefore the likelihood of toxicity to California red-legged frogs from glyphosate use in their aquatic habitat is very low.

Glyphosate toxicity data for California red-legged frogs or other amphibians that inhabit terrestrial environments is also lacking. USEPA uses toxicity data from avian receptors as a surrogate for California red-legged frogs in terrestrial environments (USEPA 2008). USEPA compiled toxicity data for technical glyphosate (formulated without a surfactant) that were deemed suitable to act as surrogates for California red-legged frogs (USEPA 2008). These studies showed that glyphosate is slightly toxic to the selected avian species with the lowest LD50 value reported as ingestion of greater than 3,196 milligrams of active ingredient per kilogram of body weight (USEPA 2008), although no mortalities occurred in any of the studies so this number is likely to be strongly conservative. Based on these conservative numbers, USEPA used a modeling approach to further understand risk to California red-legged frogs from glyphosate exposure in terrestrial habitats. USEPA determined that California red-legged frogs may be at risk of some toxic effects if glyphosate is applied at an application rate of 5.5 pounds per acre. At the maximum-allowable application rate of 8 pounds per acre for Aquamaster, the potential exists for red-legged frogs to be adversely affected in terrestrial environments, although this conclusion appears to be highly conservative. The Corps and the District propose to minimize this effect by conducting biological surveys and relocating California red-legged frogs out of areas that would be treated.

As with glyphosate, California red-legged frog eggs, tadpoles, juveniles and adults can be exposed to imazapyr products in aquatic habitats through direct overspray of wetlands, drift from treated areas, or contaminated runoff from treated areas. Imazapyr quickly photodegrades in aqueous solutions with a half-life between 3 and 5 days (Tu *et al.* 2001, Durkin and Fallonsbee 2004 as cited by Service 2012). Additionally, juvenile and adult California red-legged frogs can be exposed in terrestrial habitats that have been treated. The half-life of Imazapyr in soil ranges from one to five months (Tu *et al.* 2001).

No information is available regarding the toxicity of imazapyr products specifically to California red-legged frogs or other similar amphibian species. In the absence of robust toxicity data for amphibians in aquatic habitats, USEPA uses fish toxicity as a surrogate. Acute freshwater toxicity studies on rainbow trout, bluegill sunfish, and channel catfish demonstrated that full strength (93 percent active ingredient) imazapyr was practically non-toxic (i.e., LC50 > 100 mg/L for each species tested) (USEPA 2007). The "no observed adverse effect concentration" for chronic toxicity in rainbow trout is 43.1 mg/L (USEPA 2007). The concentration of imazapyr that would be used in restoration projects would not exceed the maximum allowable application rate of 1.5 pounds per acre. At this application rate, with full strength imazapyr applied directly to water that is one-foot deep, the maximum concentration of imazapyr would be 0.6 mg/L. This is substantially lower than the chronic and acute toxicity thresholds for various fish species that act as suitable surrogates for the California red-legged frog. For the purposes of this project, imazapyr will not be applied within 25 feet of water, and will generally not be applied at full strength nor at the maximum allowable application rate, therefore the likelihood of toxicity effects to California red-legged frogs from imazapyr use is very low.

Imazapyr toxicity data for California red-legged frogs or other amphibians that inhabit terrestrial environments is also lacking. USEPA uses toxicity data from avian receptors as a surrogate for

California red-legged frogs in terrestrial environments (USEPA 2008). USEPA compiled acute and chronic toxicity data for avian species to assess the potential direct effects to California red-legged frogs. Results showed that imazapyr is practically non-toxic to the selected avian receptors with acute LD50 values greater than 2,150 miligrams of active ingredient per kilogram, and the lowest chronic no observed adverse effect concentration was 1,670 miligrams active ingredient per kilogram (USEPA 2007). No treatment-related sublethal effects were observed during the acute or chronic exposures (USEPA 2007). Based on their analyses, USEPA determined that the use of imazapyr in accordance with the label has no direct acute or chronic effects on aquatic or terrestrial phase California red-legged frogs (USEPA 2007).

Monitoring and maintenance
Following the initial removal of invasive plant species, follow-up monitoring and maintenance is necessary to identify and treat re-sprouting invasive plants. California red-legged frogs may be injured or killed by foot or equipment traffic present in the project area during monitoring and maintenance activities. The herbicides glyphosate and imazapyr may be used in follow-up treatments, likely in lower amounts than necessary for the initial control. Effects from the use of these herbicides are described in the sections above. The Corps and the District propose to minimize effects to California red-legged frogs from monitoring and maintenance activities by conducting surveys and relocating California red-legged frogs when necessary to avoid injury or death.

Number of California red-legged frogs affected
Large-scale restoration projects may occur throughout the riparian corridors of the Ventura River watershed, which have varying quality of habitat and usage by California red-legged frogs. California red-legged frogs are known to breed, forage, shelter, and disperse through the Ventura River watershed. Based on the records of California red-legged frogs in the Ventura River, we anticipate approximately 10 California red-legged frogs may be present per acre of wetted habitat (as described in the original biological opinion). California red-legged frogs are most likely to occur along freshwater wetland areas of the Ventura River, which represents a smaller subset of the overall restoration footprint in any given year. For purposes of this consultation, we estimate that 5 percent of each large-scale restoration project in the Ventura River would include wetted areas that are most suitable for California red-legged frogs. Based on this estimate of California red-legged frog population density, we expect that up to 150 California red-legged frogs may be affected by large-scale restoration each year.

Of the 150 California red-legged frogs that may be affected by large-scale restoration, we anticipate that only a small portion of these would be injured or killed. California red-legged frogs within the restoration footprint will only be captured and relocated if deemed necessary to avoid injuring or killing the animal (many areas within the overall restoration footprint will not actually require invasive plant removal and treatment). Of the California red-legged frogs that are relocated, a small number may be injured during relocation, and a small number may be injured or killed by attempting to travel back to the site where they were captured. Individuals that escape detection may be injured or killed by foot or equipment traffic. A substantial portion of the California red-legged frogs that are present in the restoration area are anticipated to be successfully identified and relocated without being injured or killed. For purposes of this consultation, we anticipate that 20 percent of individuals in the project footprint may be relocated (that is, identified and deemed necessary to move), representing up to 30 individuals. Furthermore, we anticipate that of the 80 percent (or up to 120 frogs) that either go undetected or are not deemed necessary to move in the restoration area, 1

percent may be injured or killed by workers and equipment in the project area, representing 2 individuals.

Recovery of the California red-legged frog
As stated in the Status of the Species Section, the recovery status of the California red-legged frog is considered within the scale of the Recovery Unit as opposed to the overall range. Because of the varied status of this species and differing levels of threats throughout its range, recovery strategies differ by recovery unit to best meet the goal of delisting the species. The goal of the recovery plan is to protect the long-term viability of all extant populations within each recovery unit. Overall, the strategy for the recovery of the California red-legged frog involves: (1) protecting existing populations by reducing threats; (2) restoring and creating habitat that would be protected and managed in perpetuity; (3) surveying and monitoring populations and conducting research on the biology and threats to the species; and (4) reestablishing populations of the species within its historical range.

We do not expect the proposed project to substantially affect the conservation of the California red-legged frog within the Northern Transverse Ranges Recovery Unit, in terms of the recovery strategy described in the recovery plan because:

1. The proposed project would not increase the threats currently impacting the California red-legged frog in the Northern Transverse Ranges Recovery Unit;

2. The proposed project would not preclude our ability to survey and monitor populations of California red-legged frog or conduct research on the biology and threats to the species;

3. The proposed project would not preclude our ability to reestablish populations of the California red-legged frog within its historical range; and

4. Mitigation/restoration projects conducted in the Ventura River by the O&M Program may restore habitat and remove non-native plants, which are activities listed as "conservation needs" in the recovery plan.

Summary of effects to California red-legged frogs
In summary, large-scale restoration could adversely affect California red-legged frogs when they are captured and relocated, trampled by workers, crushed by equipment, or exposure to glyphosate in terrestrial habitats. These effects would be minimized by the District's implementation of the minimization measures described in this biological opinion (inclusive of the measures that appear in our original biological opinion, 8-8-11-F/C-12). We do not expect that these restoration projects would compromise the recovery of California red-legged frogs. We anticipate that up to 30 California red-legged frogs may be relocated each year, and that up to 2 may go undetected in the project area and be injured or killed by project activities. Large scale restoration would be ultimately beneficial to California red-legged frogs by improving habitat conditions.

Effects of the Proposed Action on California red-legged frog critical habitat

Restoration projects may occur within designated critical habitat units STB-7 and VEN-1. As much of unit STB-7 that lies within Ventura County is located above Matilija dam, restoration in this area

is largely covered by other consultation documents. Unit VEN-1, comprised mostly of portions of San Antonio Creek, supports many areas of invasive vegetation that are a prime candidate for restoration that may eventually be covered under this consultation.

California red-legged frog critical habitat may be temporarily adversely affected through vegetation removal. Vegetation removal would target invasive species such as giant reed, tamarisk and tree of heaven. These activities may temporarily affect aquatic breeding habitat, non-aquatic breeding habitat and dispersal habitat, depending on the location and extent of the mitigation/restoration activities, however, these effects would be temporary in nature and the long-term effect on critical habitat would ultimately be beneficial.

Least Bell's vireo and southwestern willow flycatcher

Large-scale restoration - initial invasive vegetation removal
Least Bell's vireos and southwestern willow flycatchers may use the Ventura River, Santa Clara River, and Calleguas Creek habitat for breeding, foraging, and sheltering. Restoration projects involving invasive vegetation removal are a top priority for the recovery of Least Bell's vireos and southwestern willow flycatchers. Restoration projects that will ultimately be beneficial to these species may nonetheless have temporary adverse effects to both of these species.

The Corps and the District have proposed to conduct initial removal of invasive vegetation outside of the breeding season for least Bell's vireos and southwestern willow flycatchers, when the species are not present in the project area. Vegetation removed from habitat for the least Bell's vireo and southwestern willow flycatcher, even during the time of year when adults are not present can adversely affect these species. Least Bell's vireo and southwestern willow flycatcher adults often return to the previous season's territory to breed and are strongly territorial.

Temporary or permanent loss of habitat may cause the species to seek out new territories and breeding sites. Moving to an unfamiliar territory may expose least Bell's vireo or southwestern willow flycatchers to exhaustion and reduced fitness or starvation associated with decreased foraging opportunities, increased predation risk, inter- and intra-species interactions, and decreased probability of nesting success. The loss of habitat within a territory could also diminish available foraging and sheltering habitat for the birds. These effects would be minimized by the District's proposed measures to avoid vegetation removal during the breeding season (March 1 to September 15) to the maximum extent practical; to conduct surveys in any areas where vegetation removal would occur during the nesting season; and to avoid any active nests by a buffer distance established by Service-approved biologists.

The habitat value for least Bell's vireo and southwestern willow flycatcher would be reduced in the first few years following invasive vegetation removal, but as native vegetation grows back in, the mitigation/restoration sites will provide higher quality habitat for the species. We anticipate that up to 300 acres of restoration will be started in each Ventura County watershed each year. Within this 300-acre footprint, a smaller portion of the habitat would be changed to an extent that least Bell's vireos and southwestern willow flycatchers would find it unsuitable for nesting in the following year. Abandonment is most likely to happen in mixed stands of native and non-native vegetation, where the non-natives are dominant. Following treatment in these areas, native vegetation will be sparse

during the following breeding season, and birds returning to territories in these areas may find the habitat unsuitable for nesting.

We anticipate that of each 300-acre project area, approximately 20 percent of the affected habitat may be unsuitable for least Bell's vireo nesting in the following year, representing approximately 60 acres in each watershed. We anticipate that of each 300-acre project area, approximately 5 percent of the affected habitat may be unsuitable for southwestern willow flycatcher nesting in the following year, representing approximately 15 acres in each watershed. Large-scale restoration will affect southwestern willow flycatcher habitat proportionally less than least Bell's vireo habitat for two reasons: 1) in any 300-acre restoration area, there is likely to be more suitable nesting habitat for least Bell's vireos than for southwestern willow flycatchers; and 2) nesting habitat for southwestern willow flycatchers is generally more structurally complex, and the removal of giant reed from these habitats is less likely to make the remaining habitat unsuitable for nesting.

The original biological opinion (8-8-11-F/C-12) outlines a method for generally estimating the number of least Bell's vireos and southwestern willow flycatchers that may be affected by habitat removal. The method relies on estimating the number of pairs in two ways, described below:

1. High estimate: determine the theoretical maximum number of pairs that could possibly be affected by calculating the maximum number of territories that could fit within the affected area; and

2. Low estimate: use the average density of least Bell's vireos and southwestern willow flycatchers throughout each watershed (i.e. total acres of suitable habitat divided by total number of pairs in the watershed) to calculate the number of affected pairs within the project area. Using this approach, we originally calculated densities of one pair per 67 acres and one pair per 840 acres for least Bell's vireo and southwestern willow flycatcher, respectively.

Table 4 shows a summary of the maximum acres of habitat that may be made unsuitable for nesting in the year following the initiation large-scale restoration in each of the three Ventura County watersheds, and the low and high estimates of pairs that we estimate could be affected.

Table 4. Acres of least Bell's vireo and southwestern willow flycatcher habitat that we estimate could be made unsuitable for nesting in the year following the initiation of large-scale (300-acre) restoration projects in any Ventura County watershed, along with low and high estimates of pairs affected.

High and low estimates of pairs affected by restoration activities each year			
	Acres Affected	Low estimate	High estimate
Least Bell's vireo	60 ac	1 pair	15 pairs
Southwestern willow flycatcher	15 ac	0 pair	5 pairs

Removal of invasive vegetation may involve the application of glyphosate and/or imazapyr herbicides. The greatest herbicide use will occur during the initial treatment of the invasive vegetation, when least Bell's vireos and southwestern willow flycatchers are not present. The potential exists for least Bell's vireos and southwestern willow flycatchers to be exposed to these herbicides through drift, if they come in contact with vegetation that was recently treated, or if they ingest water or food that contains the herbicides.

No toxicity information is available for glyphosate and imazapyr exposure in least Bell's vireos or southwestern willow flycatchers, so toxicity information for other avian species will be used as a proxy. As described above, avian toxicity data is used to understand toxicity risk to California red-legged frogs in their terrestrial environment, and this data is described in the sections above. In summary, toxicity studies using imazapyr demonstrated a very low chance for acute or chronic toxicity at the maximum allowable application rate, and these studies resulted in no lethal or sub-lethal effects during acute and chronic exposures. Toxicity studies using glyphosate demonstrated that the herbicide may be slightly toxic to tested avian species; although no mortalities occurred in any of the studies so this number is likely to be strongly conservative.

Monitoring and maintenance
Following the initial removal of invasive plant species, follow-up monitoring and maintenance is necessary to identify and treat re-sprouting invasive plants. Monitoring and maintenance activities including herbicide treatments may occur when active nests are present in the action area. Worker foot traffic and construction equipment could dislodge the nests and crush eggs. Young fledglings in the action area could be flushed from protected areas by worker or construction vehicle presence, excessive noise, or physical impact. The District has proposed to minimize these effects by conducting the surveys described in LBV-2 and establishing buffer zones described in LBV-3.

Anecdotal evidence also suggests that human presence can attract predators to least Bell's vireo and southwestern willow flycatcher habitat areas. Predators and cowbirds may both be capable of "homing in" on agitated least Bell's vireos and southwestern willow flycatchers, and subsequently destroy or parasitize nearby nests (The Nature Conservancy 1997, Chace et al. 2002). Project-induced alterations, reductions, or disturbances of occupied and potential least Bell's vireo and southwestern willow flycatcher habitat and an increased human presence may induce higher rates of cowbird parasitism and nest depredation.

Recovery of least Bell's vireo
The draft recovery plan for the least Bell's vireo calls for stable or increasing populations of "several hundred or more breeding pairs" within each of the population/metapopulation units in order for the species to be downlisted from endangered to threatened. Delisting will be considered when populations are stable or increasing over a 5-year period and when threats are reduced or eliminated so that populations/metapopulations are capable of persisting without significant human intervention or when perpetual endowments are secured for cowbird trapping and exotic plant control in riparian habitat.

We do not expect the proposed project to substantially affect the conservation of the least Bell's vireo, in terms of the recovery strategy described in the recovery plan because habitat restoration is one of the primary recovery actions listed in the least Bell's vireo recovery plan.

Recovery of southwestern willow flycatcher
Within Ventura County, the Santa Clara River is the most important watershed for the recovery of the southwestern willow flycatcher, with the Ventura River and Calleguas Creek acting as supporting habitats that may facilitate metapopulation health. The Santa Clara River is one area within the Santa Clara River Management Unit within the Central California Recovery Unit. The metapopulation in this management unit has been identified for increased population stability and enhancement. The

minimum number of territories targeted for this management unit before the southwestern willow flycatcher can be reclassified to threatened is 25.

We do not expect the proposed project to substantially affect the conservation of the southwestern willow flycatcher, in terms of the recovery strategy described in the recovery plan because habitat restoration is one of the primary recovery actions listed in the southwestern willow flycatcher recovery plan.

Summary of effects to least Bell's vireos and southwestern willow flycatchers
In summary, large-scale restoration could adversely affect least Bell's vireos and southwestern willow flycatchers by temporarily removing habitat, providing exposure to glyphosate and imazapyr herbicide, or disturbing active nests while monitoring during the breeding season. These effects would be minimized by the District's implementation of the minimization measures described in this consultation (inclusive of the measures listed in 8-8-11-F/C-12). The effects to least Bell's vireos and southwestern willow flycatchers are anticipated to be predominantly non-lethal, temporary in nature, and ultimately beneficial.

Effects of the Proposed Action on southwestern willow flycatcher critical habitat

Critical habitat for the southwestern willow flycatcher is designated in portions of the Ventura River and Santa Clara River corridors and would be adversely affected by large-scale restoration activities through the removal of vegetation that supports suitable breeding, foraging, and sheltering habitat for the subspecies. All mitigation/restoration activities are anticipated to ultimately benefit habitat for southwestern willow flycatchers and will only have temporary impacts to critical habitat as described above.

Table 5 shows the amount of southwestern willow flycatcher critical habitat that is designated in the Ventura and Santa Clara Rivers along with the maximum projected area that would be affected in any given year.

Unit	Location	Critical Habitat (acres)	Maximum area affected annually (acres)
Ventura River	Ocean to Matilija Dam	1,445	300
Santa Clara River	Ocean to City of Santa Clarita, including Castaic Creek	9,505	300

CUMULATIVE EFFECTS

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

We are unaware of any non-federal actions that are reasonably certain to occur and are likely to adversely affect the tidewater goby and its critical habitat, California red-legged frog and its critical habitat, least Bell's vireo, and southwestern willow flycatcher and its critical habitat.

CONCLUSION

Large scale restoration using glyphosate and imazapyr herbicide is likely to temporarily adversely affect the tidewater goby and its critical habitat, California red-legged frog and its critical habitat, least Bell's vireo, and southwestern willow flycatcher and its critical habitat. As this is a programmatic consultation, we are unable to determine the exact footprint and timing of restoration projects that may occur during this program. For purposes of this consultation, we assume that up to 300 acres of restoration may be initiated in any given year. Each year that restoration is proposed, the Service will consider the current habitat conditions and footprint of the proposed project to ensure that the analysis contained in this biological opinion is sufficient.

Although we estimate that up to 300 acres of restoration may be initiated in each watershed in each year, the funding and logistical constraints associated with planning and implementing restoration projects will likely preclude many consecutive large-scale restoration projects. Each year after the initial removal phase, we anticipate that the habitat conditions will incrementally improve. After approximately 5 years, we anticipate that large-scale restoration projects will provide high quality habitat for all native wildlife, including the species that are the subject of this consultation.

Tidewater goby

The regulatory definition of "to jeopardize the continued existence of the species" focuses on assessing the effects of the proposed action on the reproduction, numbers, and distribution, and their effect on the survival and recovery of the species being considered in the biological opinion. For that reason, we have used those aspects of the tidewater goby's status as the basis to assess the overall effect of the proposed action on the species.

Reproduction

The Corps and District propose to conduct large scale habitat restoration that is anticipated to affect less than 20 percent of tidewater goby potential habitat in the Ventura River, Santa Clara River, Ormond Lagoon, and Calleguas Creek each year that project activities occur. We anticipate that tidewater goby reproduction may occur within wetted areas during project activities, and may be adversely affected. Workers traveling by foot through wetted habitat to remove invasive vegetation may crush tidewater goby burrows. We anticipate that the number of burrows that are affected by project activities in each of the Ventura County estuaries in any given year will be small in comparison to the total number of burrows present in each estuary in any given year. We reached this conclusion because foot traffic in wetted areas will be minimized and will affect less than 20 percent of potential tidewater goby habitat for a short duration each year. This level of effects on reproduction is not anticipated to appreciably reduce the likelihood of both survival and recovery of tidewater gobies in any Ventura County estuary, and therefore will not compromise the metapopulation dynamics that sustain the overall tidewater goby population.

Numbers

We anticipate that tidewater goby adults, eggs, and larvae may be injured or killed during project activities, by foot traffic entering wetted areas during large scale restoration. We cannot estimate the precise number of individuals that may be affected due to their small size, cryptic nature, and high variation in numbers throughout the year and between years. In order to determine the magnitude of

effects on numbers of tidewater gobies in each Ventura County estuary, we used the proportion of affected habitat as a proxy. We determined that the proportion of affected habitat is small in comparison to the overall available habitat in each Ventura County estuary, and that the duration the habitat would be affected is a small portion of each year. We anticipate that the number of tidewater gobies injured or killed by large scale restoration will be small compared to the overall population in each Ventura County estuary, and that the loss of these individuals will not decrease the population to an extent where any of the estuaries are at risk of extirpation due to the restoration activities.

Distribution

Large scale restoration activities are not anticipated to affect the distribution of tidewater gobies.

Recovery

We do not expect large scale habitat restoration to substantially affect the conservation of the tidewater goby within the Los Angeles/Ventura Recovery Unit. We reached this conclusion because the tidewater goby recovery plan emphasizes the importance of the conservation of population units rather than individual fish, and the effects of restoration actions are not expected to cause population-level declines in the Ventura River, Santa Clara River, Ormond Lagoon or Calleguas Creek. Additionally, the O&M Program would not adversely affect the metapopulation dynamics between each individual population in the Los Angeles/Ventura Recovery Unit. Furthermore, large scale habitat restoration may ultimately promote the recovery of tidewater gobies by removing invasive vegetation from tidewater goby habitat.

After reviewing the current status of the tidewater goby, the environmental baseline for the action area, the effects of the District's proposed O&M Program large scale restoration and the cumulative effects, it is the Service's biological opinion that large scale restoration, as proposed, is not likely to jeopardize the continued existence of the tidewater goby for the reasons below.

1. The effects on reproduction are temporary and minor;

2. The effects on numbers are small in comparison to the population in each affected estuary;

3. The distribution of tidewater gobies will not be affected; and

4. The effects of the project will not compromise the recovery of tidewater gobies as outlined in the recovery plan.

After reviewing the current status of the critical habitat of the tidewater goby, the environmental baseline of critical habitat within for the action area, the effects of the District's proposed O&M Program large scale restoration on critical habitat, and the cumulative effects, it is the Service's biological opinion that large scale restoration, as proposed, is not likely to result in the destruction or adverse modification of critical habitat of the tidewater goby for the reasons stated below.

1. The proposed project may cause a temporary minor increase in sedimentation in areas where invasive vegetation is removed. This may have a temporary minor effect on tidewater goby

substrate; however, we do not anticipate that this effect will preclude tidewater goby breeding activity in affected areas;

2. The proposed project will remove invasive vegetation from portions of tidewater goby habitat, thereby reducing the amount of plant cover available to provide protection from predators and from storm flows. This effect is temporary and minor as existing native vegetation within tidewater goby critical habitat will not be affected, and we anticipate that native vegetation will readily replace invasive vegetation following restoration; and

3. The effects on the conservation value and function of critical habitat are temporary and minor.

California red-legged frog

The regulatory definition of "to jeopardize the continued existence of the species" focuses on assessing the effects of the proposed action on the reproduction, numbers, and distribution, and their effect on the survival and recovery of the species being considered in the biological opinion. For that reason, we have used those aspects of the California red-legged frog's status as the basis to assess the overall effect of the proposed action on the species.

Reproduction

The Corps and District propose to conduct large scale habitat restoration that is anticipated to affect California red-legged frogs in the Ventura River. We do not anticipate that California red-legged frog eggs or tadpoles would be affected by large scale restoration due to project timing and proposed minimization measures. Adult California red-legged frogs detected by surveys and determined to be at risk of injury or death from project activities will be relocated out of the action area. We do not anticipate that this affect will affect reproduction of California red-legged frogs.

Numbers

We anticipate that up to 150 California red-legged frogs may be present within the footprint of the 300 acre restoration project in any given year. Of these 150 individuals, we anticipate that up to 30 individuals each year may require relocation out of the work area to avoid injury or death. Furthermore, we estimate that for a 300-acre restoration site in the Ventura River, 2 California red-legged frogs may go undetected and may be injured or killed by project activities each year a project of this size is initiated. The relocation of 30 individuals to unaffected habitat within the Ventura River, and death of 2 individuals each year represents a relatively minor effect in comparison to the number of California red-legged frogs that are estimated to occur in the Ventura River.

Distribution

Up to 30 California red-legged frogs may be relocated to other suitable habitats in the Ventura River each year that large scale restoration projects are initiated, representing a temporary, minor, distribution change within the Ventura River population. As California red-legged frogs are highly mobile, we do not anticipate that this short-distance relocation will permanently affect the distribution of California red-legged frogs in the Ventura River. Furthermore, this project will have no effect on the overall distribution of California red-legged frogs throughout the range.

Recovery

We do not expect the proposed project to substantially affect the conservation of the California red-legged frog within the Northern Transverse Ranges Recovery Unit, in terms of the recovery strategy described in the recovery plan (Service 2002). Because the proposed project would not increase the threats currently impacting the California red-legged frog in the recovery unit, the proposed project would not preclude our ability to survey and monitor populations of California red-legged frog or conduct research on the biology and threats to the species, the proposed project would not preclude our ability to reestablish populations of the California red-legged frog within its historical range, and large-scale restoration is listed as a "conservation need" in the recovery plan, and therefore will ultimately promote the recovery of the species.

After reviewing the current status of the California red-legged frog, the environmental baseline for the action area, the effects of the District's proposed O&M Program large scale restoration and the cumulative effects, it is the Service's biological opinion that large scale restoration, as proposed, is not likely to jeopardize the continued existence of the California red-legged frog for the reasons below.

1. Reproduction of California red-legged frogs will not be affected;

2. The effects on numbers of California red-legged frogs are small in comparison to the population in the Ventura River;

3. The distribution of California red-legged frogs will not be affected; and

4. The effects of the project will not compromise the recovery of California red-legged frogs as outlined in the recovery plan, and will fulfill an identified recovery action.

After reviewing the current status of the critical habitat of the California red-legged frog, the environmental baseline of critical habitat within the action area, the effects of the District's proposed O&M Program large scale restoration on critical habitat, and the cumulative effects, it is the Service's biological opinion that large scale restoration, as proposed, is not likely to result in the destruction or adverse modification of critical habitat of the California red-legged frog for the reasons below.

1. Restoration activities may temporarily affect aquatic breeding habitat, non-aquatic foraging and dispersal habitat, depending on the location and extent of the individual project; however, these effects would be temporary in nature and minor in comparison to the other habitat available within the critical habitat unit; and

2. The effects on the conservation value and function of critical habitat are temporary and minor, and are anticipated to have long-term beneficial effects.

Least Bell's vireo

The regulatory definition of "to jeopardize the continued existence of the species" focuses on assessing the effects of the proposed action on the reproduction, numbers, and distribution, and their effect on the survival and recovery of the species being considered in the biological opinion. For that

reason, we have used those aspects of the least Bell's vireo status as the basis to assess the overall effect of the proposed action on the species.

Reproduction
The Corps and District have proposed measures that are designed to avoid impacts to least Bell's vireo reproduction. These measures include conducting the initial removal during the winter when the birds are not present, and establishing protective buffers around nests when re-treatments are necessary during the breeding season. Reproductive effects may occur if least Bell's vireos return to territories that were substantially altered by the removal of invasive vegetation such that they are unsuitable for breeding. In these cases, a majority of the birds would likely travel to nearby unaffected habitats to set up a new territory.

Numbers
Each year in each watershed a large restoration project is initiated, we anticipate that between one and 15 pairs of least Bell's vireos may be sub-lethally affected by the removal of invasive plants within territories that were established in previous years. This effect would be greatest in the first year after initial removal, and would lessen over time as native vegetation grows in. There is also the potential for least Bell's vireos to be injured or killed by follow-up monitoring and maintenance if they are not detected during the pre-treatment surveys. On whole, the number of least Bell's vireos that could potentially be affected by large scale restoration is low in comparison to the population within Ventura County habitats. Numbers of least Bell's vireos in restored areas are anticipated to increase following the completion of these multi-year projects.

Distribution
In each watershed, between one and 15 pairs of least Bell's vireos may be displaced from large scale restoration areas in the year following initial removal of invasive vegetation. We anticipate that these displaced birds would establish a new territory in nearby suitable habitat. Following the completion of restoration projects, least Bell's vireos are anticipated to utilize the habitat in greater numbers than prior to restoration. Therefore, the overall distribution of least Bell's vireos would not be affected.

Recovery
We expect the proposed project will help fulfill a high priority recovery objective for the Santa Clara River, which is identified as one of 14 population/metapopulation units that need to show a stable or increasing population in order to downlist the species to threatened status. Although large scale restoration will have temporary adverse effects to least Bell's vireo, the long term effect is overwhelmingly beneficial.

After reviewing the current status of the least Bell's vireo, the environmental baseline for the action area, the effects of the District's proposed O&M Program large scale restoration and the cumulative effects, it is the Service's biological opinion that large scale restoration, as proposed, is not likely to jeopardize the continued existence of the least Bell's vireo for the reasons below.

1. The effects to reproduction of least Bell's vireo will be temporary and minor;

2. The effects on numbers of least Bell's vireos are small in comparison to the population throughout Ventura County;

3. The distribution of least Bell's vireo will not be affected; and

4. The project will promote the recovery of least Bell's vireos as outlined in the recovery plan.

Southwestern willow flycatcher

The regulatory definition of "to jeopardize the continued existence of the species" focuses on assessing the effects of the proposed action on the reproduction, numbers, and distribution, and their effect on the survival and recovery of the species being considered in the biological opinion. For that reason, we have used those aspects of the southwestern willow flycatcher status as the basis to assess the overall effect of the proposed action on the species.

Reproduction
The Corps and District have proposed measures that are designed to avoid impacts to southwestern willow flycatcher reproduction. These measures include conducting the initial invasive vegetation removal during the winter when the birds are not present, and establishing protective buffers around nests when re-treatments are necessary during the breeding season. Reproductive effects may occur if southwestern willow flycatchers return to territories that were substantially altered by the removal of invasive vegetation such that they are unsuitable for breeding. In these cases, we anticipate a majority of the birds would likely travel to nearby unaffected habitats to set up a new territory.

Numbers
Each year, in each watershed in which a large restoration project is initiated, we anticipate that between zero and 5 pairs of southwestern willow flycatchers may be sub-lethally affected by the removal of invasive plants within territories that were established in previous years. This effect would be greatest in the first year after initial removal, and would lessen over time as native vegetation grows in. There is also the potential for southwestern willow flycatchers to be injured or killed by follow-up monitoring and maintenance if they are not detected during the pre-treatment surveys. On whole, the high estimate for southwestern willow flycatcher pairs that could potentially be affected by large scale restoration (5 pairs) is relatively high in comparison to the population within Ventura County habitats. We do not anticipate that any 300 acre project area would realistically support 5 pairs of southwestern willow flycatchers due to their rarity in the area; however, because they are so rare, any decrease in numbers may represent a substantial effect to the population within Ventura County. This number is not substantial in comparison to the overall population.

Distribution
Between zero and five pairs of southwestern willow flycatchers may be displaced from large scale restoration areas in the year following initial removal of invasive vegetation. We anticipate that these displaced birds would establish a new territory in nearby suitable habitat. Following the completion of restoration projects, southwestern willow flycatchers would theoretically utilize the habitat in greater numbers than prior to restoration. However, due to the rarity of the species and uncertain population trajectory, any displacement of southwestern willow flycatchers from existing territories could eventually lead to local extirpation.

Recovery

We expect the proposed project would help fulfill a high priority recovery objective for the Santa Clara River management unit within the Coastal California Recovery Unit; however, temporary adverse effects may outweigh the recovery benefit of large scale habitat restoration. All territories documented in the Coastal California Recovery Unit were found in native or native-dominated habitats in 2002 when the recovery plan was drafted. Increasing native habitat areas through large scale restoration should theoretically increase the number of southwestern willow flycatcher pairs, unless high quality habitat is not limiting their population in Ventura County. Due to their rarity, any loss of individuals during the implementation of large scale restoration may have a negative impact on the recovery of the species within the Santa Clara River management unit. This effect is not anticipated to be substantial enough, in itself, to compromise the recovery of the southwestern willow flycatcher in the Coastal California Recovery Unit; however, it would be prudent to implement all possible measures necessary to avoid adverse effects to southwestern willow flycatchers during the implementation of large scale restoration.

After reviewing the current status of the southwestern willow flycatcher, the environmental baseline for the action area, the effects of the District's proposed O&M Program large scale restoration and the cumulative effects, it is the Service's biological opinion that large scale restoration, as proposed, is not likely to jeopardize the continued existence of the southwestern willow flycatcher for the reasons below.

1. The effects to reproduction of southwestern willow flycatchers will be temporary and minor;

2. The effects on numbers of southwestern willow flycatchers are potentially substantial compared to the population throughout Ventura County; however, the effects are not anticipated to be lethal and the numbers are not substantial compared to the overall population;

3. The distribution of southwestern willow flycatchers will not be affected; and

4. The project will promote the recovery of southwestern willow flycatchers as outlined in the recovery plan.

After reviewing the current status of the critical habitat of the southwestern willow flycatcher, the environmental baseline of critical habitat within the action area, the effects of the District's proposed O&M Program large scale restoration on critical habitat, and the cumulative effects, it is the Service's biological opinion that large scale restoration, as proposed, is not likely to result in the destruction or adverse modification of critical habitat of the southwestern willow flycatcher for the reasons below.

1. Restoration activities may temporarily affect the primary constituent element that calls for cover and shelter; however, these effects would be temporary in nature and minor in comparison to the other habitat available within the critical habitat management unit; and

2. The effects on the conservation value and function of critical habitat are temporary and minor, and are anticipated to have long-term beneficial effects.

INCIDENTAL TAKE STATEMENT

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

The measures described below are non-discretionary, and must be undertaken by the the Corps or made binding conditions of any grant or permit issued to the District, as appropriate, for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to assume and implement the terms and conditions or (2) fails to require the District to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the Corps or District must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR 402.14(i)(3)]

Tidewater goby

We anticipate that some tidewater gobies could be taken as a result of the proposed action within up to 20 percent of potential tidewater goby habitat in the Ventura River (40 acres), Santa Clara River (106 acres), Ormond Lagoon (24 acres), and Calleguas Creek (135 acres) each year. We expect the incidental take to be in the form of harm and harassment as tidewater gobies may be crushed or displaced by workers walking through occupied habitat. Tidewater gobies may also be subject to harm if the project causes increased sedimentation upstream, which may ultimately flow to occupied habitats and smother burrows. Both of these effects are temporary and minor.

We cannot quantify the precise number of tidewater gobies that may be taken as a result of the actions that the Corps has proposed because tidewater gobies move over time, and may not be detected due to their cryptic nature and small size. The protective measures proposed by the Corps and the District are likely to reduce mortality or injury of most individuals. In addition, finding a dead or injured tidewater goby is unlikely.

Consequently, we are unable to reasonably anticipate the actual number of tidewater gobies that would be taken by the proposed project; however, we must provide a level at which formal consultation would have to be reinitiated. The Environmental Baseline and Effects Analysis sections of this biological opinion indicate that adverse effects to tidewater gobies would likely be relatively low given the nature of the proposed activities, and we, therefore, anticipate that take of tidewater

gobies would also be low. We also recognize that for every tidewater goby found dead or injured, other individuals may be killed or injured that are not detected, so when we determine an appropriate take level we are anticipating that the actual take would be higher and we set the number below that level.

Therefore, if 10 adult, subadult, or juvenile tidewater gobies are found dead or wounded at any single restoration site, the Corps must contact our office immediately to reinitiate formal consultation. Project activities that are likely to cause additional take should cease during this review period because the exemption provided under section 7(o)(2) would lapse and any additional take would not be exempt from the section 9 prohibitions.

California red-legged frog

We anticipate that some California red-legged frogs could be taken as a result of large-scale restoration in the Ventura River. We expect the incidental take to be in the form of harm and harassment during capture and relocation, exposure to herbicides, and by impacts from workers and equipment traveling through occupied habitat.

We cannot quantify the precise number of California red-legged frogs that may be taken as a result of the actions that the Corps has proposed because California red-legged frogs move over time; for example, animals may have entered or departed the action area since the time of pre-construction surveys. Other individuals may not be detected due to their cryptic nature. The protective measures proposed by the Corps and the District are likely to prevent mortality or injury of most individuals. In addition, finding a dead or injured California red-legged frogs is unlikely.

For estimating the number of California red-legged frogs that would be taken by capture, we estimated that of the 150 frogs that might be present in the Ventura watershed annual treatment area of up to 300 acres, up to 30 might be located and deemed necessary to move out of harm's way. While the benefits of relocation (i.e., minimizing mortality) outweigh the risk of capture, we must provide a limit for take by capture at which consultation would be reinitiated because high rates of capture may indicate that some important information about the species' in the action area was not apparent (e.g, it is much more abundant than thought). Conversely, because capture and relocation can be highly variable, depending upon the species and the timing of the activity, we do not anticipate an number so low that reinitiation would be triggered before the effects of the activity were greater than what we determined in the Effects Analysis.

Therefore, if more than 2 adult, subadult, or juvenile California red-legged frogs are found dead or wounded or if 30 are captured and relocated in any project year, the Corps must contact our office immediately to reinitiate formal consultation. Project activities that are likely to cause additional take should cease during this review period because the exemption provided under section 7(o)(2) would lapse and any additional take would not be exempt from the section 9 prohibitions.

Least Bell's vireo

We anticipate that between one and 15 pairs of least Bell's vireos could be taken as a result of the large-scale restoration in the Ventura River, Santa Clara River, and Calleguas Creek each year. We expect the incidental take to be in the form of harm as least Bell's vireos returning to affected

territories may be displaced in the year following initial restoration activities. Least Bell's vireos may also be harassed during vegetation re-treatments during the breeding season if they are not detected during pre-activity surveys. The protective measures proposed by the Corps and the District are likely to prevent mortality or injury of most individuals.

Finding a dead or injured least Bell's vireo is unlikely. We also recognize that for every least Bell's vireo found dead or injured, other individuals may be killed or injured that are not detected, so when we determine an appropriate take level we are anticipating that the actual take would be higher and we set the number below that level.

Therefore, if more than 1 least Bell's vireo adult, subadult, or egg is found dead or wounded in any project year, the Corps must contact our office immediately to reinitiate formal consultation. Project activities that are likely to cause additional take should cease during this review period because the exemption provided under section 7(o)(2) would lapse and any additional take would not be exempt from the section 9 prohibitions.

Southwestern willow flycatcher

We anticipate that between zero and five pairs of southwestern willow flycatchers could be taken as a result of the large-scale restoration in the Ventura River, Santa Clara River, and Calleguas Creek each year. We expect the incidental take to be predominantly in the form of harassment as southwestern willow flycatchers returning to affected territories may be displaced in the year following initial restoration activities. Southwestern willow flycatchers may also be harmed during vegetation re-treatments during the breeding season if they are not detected during pre-activity surveys. The protective measures proposed by the Corps and the District are likely to prevent mortality or injury of most individuals.

Finding a dead or injured southwestern willow flycatcher is unlikely. We also recognize that for every southwestern willow flycatcher found dead or injured, other individuals may be killed or injured that are not detected, so when we determine an appropriate take level we are anticipating that the actual take would be higher and we set the number below that level.

Therefore, if any southwestern willow flycatcher adults, subadults, or eggs are found dead or wounded in any project year, the Corps must contact our office immediately to reinitiate formal consultation. Project activities that are likely to cause additional take should cease during this review period because the exemption provided under section 7(o)(2) would lapse and any additional take would not be exempt from the section 9 prohibitions.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the impacts of the incidental take of California red-legged frogs, least Bell's vireos and southwestern willow flycatchers:

1. The take of California red-legged frogs from capture, relocation, and construction activities must be minimized by employing qualified biologists who are able to handle California red-legged frogs safely and without transmitting diseases or pathogens; and

2. The taking of least Bell's vireos and southwestern willow flycatchers must be minimized by using qualified biologists to conduct surveys or other activities related to the protection of these species.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the Corps must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline reporting and monitoring requirements. These terms and conditions are non-discretionary.

The following terms and conditions implement reasonable and prudent measure 1:

a. Only qualified personnel authorized under the auspices of this reinitiated biological opinion (inclusive of personnel authorized under the original biological opinion, 8-8-11-F/C-12) can survey for, capture, and relocation California red-legged frogs. The District and the Corps have requested our approval of Lawrence Hunt. We have reviewed Mr. Hunt's qualifications and have determined that he has the appropriate experience to survey for, capture, and relocate California red-legged frogs and is hereby authorized to conduct those activities pursuant to this biological opinion. The Corps and the District must request our approval of any additional biologists at least 30 days prior to any such activities being conducted.

b. Latex or nitrile gloves must not be used when handling California red-legged frogs. Clean hands, free of lotions, sun screens, and fragrances are recommended. If gloves are necessary, the use of well-rinsed vinyl gloves is recommended.

c. To ensure that diseases are not conveyed between work sites by Service-approved biologists, the fieldwork code of practice developed by the Declining Amphibian Population Task Force must be followed at all times. A copy of the code of practice is enclosed as Appendix A of this document. The Service-approved biologist may substitute a bleach solution. Care must be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.

The following terms and conditions implement reasonable and prudent measure 2:

a. Only qualified personnel authorized under the auspices of this reinitiated biological opinion (inclusive of personnel authorized under the original biological opinion, 8-8-11-F/C-12) can survey for, designate suitable buffers, and monitor for least Bell's vireos and southwestern willow flycatchers. The Corps, or the District on behalf of the Corps, must request our approval of any additional biologists they wish to employ to conduct these activities in association with the O&M Program. The request must be received at least 30 days prior to any such activities being conducted.

b. Due to the rarity of southwestern willow flycatchers in Ventura County, restoration within areas where southwestern willow flycatchers are known to occur should be designed to minimize the chance that birds returning to the area the following year would find the habitat

unsuitable for nesting. This may involve leaving a certain percentage of arundo in place to provide the vegetation structure these birds require. Additionally, any treatments required during the breeding season in areas known to support southwestern willow flycatcher nesting should be done with an abundance of caution, including robust pre-treatment surveys, large buffer areas, and other measures to minimize potential impacts to nesting birds. These recommendations should be developed by the qualified biologist.

REPORTING REQUIREMENTS

Pursuant to 50 CFR 402.14(i)(3), the Corps must report the progress of the action and its impact on the species to the Service as specified in this incidental take statement. The Corps or the District must also provide an annual report that includes the following:

- The programmatic consultation tracking sheet (Appendix A) populated with individual projects that were initiated under the auspices of the programmatic consultation (inclusive of 8-8-11-F/C-12 and this document, 8-8-15-F-7R) in that year;
- Documentation of the number of tidewater gobies, California red-legged frogs, least Bell's vireos and southwestern willow flycatchers that were detected during surveys and project monitoring along with the location where they were found;
- Documentation of the number of tidewater gobies, California red-legged frogs, least Bell's vireos and southwestern willow flycatchers that were taken during project activities, and the nature of the taking (e.g., capture, injury, etc.); and
- A brief discussion of any problems encountered in implementing minimization measures.

DISPOSITION OF DEAD OR INJURED SPECIMENS

As part of this incidental take statement and pursuant to 50 CFR 402.14(i)(1)(v), upon locating a dead or injured tidewater goby, California red-legged frog, least Bell's vireo, or southwestern willow flycatcher, initial notification within 3 working days of its finding must be made by telephone and in writing to the Ventura Fish and Wildlife Office (805-644-1766). The report must include the date, time, location of the carcass, a photograph, cause of death or injury, if known, and any other pertinent information.

The Corps or the District must take care in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. The Corps or the District must transport injured animals to a qualified veterinarian. Should any treated tidewater goby, California red-legged frog, least Bell's vireo, or southwestern willow flycatcher survive, the Corps or the District must contact the Service regarding the final disposition of the animal(s). The Corps or the District must contact the service to determine a location for final disposition of any dead specimens.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse

effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

- Long term maintenance of large scale restoration sites will be imperative to maintain the biological integrity of the habitat and ensure invasive plant species do not reinvade the area. We recommend that the Corps and the District work with the Service and other Partners to develop a strategy for ensuring that large scale restoration sites are maintained after the initial maintenance period has expired.

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

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the reinitiation request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, the exemption issued pursuant to section 7(o)(2) may have lapsed and any further take could be a violation of section 4(d) or 9. Consequently, we recommend that any operations causing such take cease pending reinitiation.

If you have any questions about this biological opinion, please contact Jenny Marek of my staff at (805) 644-1766 extension 325, or by e-mail at jenny_marek@fws.gov.

Sincerely,

Stephen P. Henry
Field Supervisor

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Appendix A. Restoration tracking sheet

Mitigation/Restoration Activites [Insert Year]							
Activities	**Acres of habitat affected**						
	TWG	**TWG CH**	**CRLF**	**CRLF CH**	**LBV**	**WIFL**	**WIFL CH**
Ventura River Watershed							
[Insert project title here]							
[Insert project title here]							
Total	0	0	0	0	0	0	0
Annual Maximum Allowable	40	40	300	300	300	300	300
Santa Clara River Watershed							
[Insert project title here]							
[Insert project title here]							
Total	0	0	0	0	0	0	0
Annual Maximum Allowable	106	106	N/A	N/A	300	300	300
Ormond Lagoon							
[Insert project title here]							
[Insert project title here]							
Total	0	0	0	0	0	0	0
Annual Maximum Allowable	24	24	N/A	N/A	N/A	N/A	N/A
Calleguas Creek							
[Insert project title here]							
[Insert project title here]							
Total	0	N/A	0	0	0	0	0
Annual Maximum Allowable	135	N/A	N/A	N/A	300	300	N/A

Note: Only enter mitigation/restoration projects that will directly remove habitat or adversely affect species or critical habitat. Include all projects that require relocation of California red-legged frogs, as well as any projects that occur during the breeding season within suitable habitat for least Bell's vireo or southwestern willow flycatcher.

USFWS O&M BO NO. 2012-F-0531

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
08EVEN00-2012-F-0531

December 12, 2012

Antal Szijj, Senior Project Manager
Department of the Army
Los Angeles District, Corps of Engineers
2151 Alessandro Drive, Suite 110
Ventura, California 93001

Subject: Final Programmatic Biological and Conference Opinion for Ventura County Watershed Protection District's Routine Operation and Maintenance Program, Ventura County, California (8-8-11-F/C-12)

This document transmits the U.S. Fish and Wildlife Service's (Service) biological and conference opinion regarding the Ventura County Watershed Protection District's (District) routine operations and maintenance program (O&M Program) proposed for authorization by the U.S. Army Corps of Engineers (Corps). At issue are the effects of this action on the federally endangered tidewater goby (*Eucyclogobius newberryi*) and its critical habitat, least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*) and its proposed critical habitat, California least tern (*Sterna antillarum browni*), arroyo toad (*Anaxyrus* californicus), Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), marsh sandwort (*Arenaria paludicola*), Gambel's watercress (*Nasturtium* [*Rorippa*] *gambellii*), and the federally threatened California red-legged frog (*Rana draytonii*) and its critical habitat, coastal California gnatcatcher (*Polioptila californica*) and its critical habitat, and the western snowy plover (*Charadrius nivosus nivosus*) and its critical habitat in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq*.).

The District's O&M Program involves routine maintenance, minor repair, mitigation/restoration, and implementation of the Beach Elevation Management Plan (BEMP) necessary to maintain the conveyance of stormwater throughout Ventura County. A majority of the work done under the O&M Program is routine maintenance that occurs periodically at District facilities; however, the O&M Program is not static. The location and extent of maintenance that occurs each year fluctuates depending on facility conditions and budgets: unpredictable repairs to facilities are necessary following storm events; mitigation/restoration is implemented as necessary; and new facilities may be added to the O&M Program at any time.

To accommodate the dynamic nature of the O&M Program, this document is structured to provide a program-level assessment of effects to listed species and critical habitats, and will be amended by the submittal of work plans outlining specific tasks as they are proposed to the Corps for authorization. To achieve this flexibility this document includes two components:

1) a program-wide concurrence for species and critical habitats that the Corps determined are not likely to be adversely affected by any aspect of the O&M Program; this concurrence concludes Section 7 consultation for this subset of species and critical habitat; and 2) a programmatic consultation and conference opinion for species or critical habitats that may be affected by one or more of the specific projects within the O&M Program; for this set of species a determination will be made by the Corps whether each project "may affect, and is likely to adversely affect" or "may affect, and is not likely to adversely affect" one or more of the covered species. A summary of how all of the species described above are covered by this document is shown in Table 1.

Table 1. Summary table of species and critical habitats that are covered through the program-wide concurrence or are subject to the programmatic consultation.

Species	Corps Determination	Service Response
California red-legged frog	May affect, likely to adversely affect *or* not likely to adversely affect	**Programmatic Consultation**
California red-legged frog designated critical habitat	May affect, likely to adversely affect *or* not likely to adversely affect	
Least Bell's vireo	May affect, likely to adversely affect *or* not likely to adversely affect	
Southwestern willow flycatcher	May affect, likely to adversely affect *or* not likely to adversely affect	
Southwestern willow flycatcher proposed critical habtiat[1]	May affect, likely to adversely affect *or* not likely to adversely affect	
Tidewater goby	May affect, likely to adversely affect *or* not likely to adversely affect	
Tidewater goby designated critical habtiat	May affect, likely to adversely affect *or* not likely to adversely affect	
Coastal California gnatcatcher	May affect, not likely to adversely affect	**Program-wide Concurrence**
Coastal California gnatcatcher designated critical habitat	May affect, not likely to adversely affect	
Gambel's watercress	May affect, not likely to adversely affect	
Marsh sandwort	May affect, not likely to adversely affect	
California least tern	May affect, not likely to adversely affect	
Western snowy plover	May affect, not likely to adversely affect	
Western snowy plover critical habtiat	May affect, not likely to adversely affect	
Arroyo toad [2]	No effect	**No Response**
Ventura marsh milk-vetch[2]	No effect	

[1] A programmatic conference opinion is provided that will convert to a biological opinion upon final designation of critical habitat for the southwestern willow flycatcher.

[2] The Corps and Service are not required to consult on "no effect" determinations.

This biological opinion is based on information provided by the Corps and the District including the Final Environmental Impact Report (District 2008), Impact Analysis for Federally-listed

Species (District 2010), survey reports for listed species in the project area, site visit notes, correspondence between my staff and the District, and information in our files. A complete record of this consultation can be made available at the Ventura Fish and Wildlife Office.

CONSULTATION HISTORY

July 31, 2008	The Corps submitted a request for consultation on the subject project and made the following determinations about the projects effects to listed species: Tidewater goby – may affect Tidewater goby critical habitat – not likely to adversely affect California red-legged frog – not likely to adversely affect California red-legged frog critical habitat – not likely to adversely affect Arroyo toad – not likely to adversely affect Arroyo toad critical habitat – not likely to adversely affect Western snowy plover – not likely to adversely affect Western snowy plover critical habitat – not likely to adversely affect Least Bell's vireo – not likely to adversely affect California gnatcatcher – not likely to adversely affect California gnatcatcher critical habitat – not likely to adversely affect California least tern – not likely to adversely affect Ventura marsh milk-vetch – not likely to adversely affect
October 17, 2008	The Service concurred with your not likely to adversely affect determinations for the routine activities performed by the O&M Program, and requested additional information necessary to initiate formal consultation for the tidewater goby.
2009	During ongoing discussions between the Corps, District and Service, it became clear that the development of a programmatic biological opinion covering the breadth of activities and continual addition of new facilities and mitigation sites associated with the District's O&M Program would allow the Corps flexibility to quickly approve and implement the District's projects that may affect listed species. During the discussions that led up to the issuance of this biological opinion, the Service continued to engage in individual consultations with the Corps for District projects on an as needed basis.
August 19, 2010	The Corps submitted to the Service a document developed by the District titled, "Ventura County Watershed Protection District Operations and Maintenance Program Impact Analysis for Federally-Listed Species," in support of your July 31, 2008 request for consultation.
October 2010-January 2011	The Corps, District and Service held meetings and conducted site visits to discuss the consultation and evaluate the various types of facilities and habitats that would be subject to the programmatic consultation.

January 19, 2011	The Corps submitted a consultation request including the following determinations: Least Bell's vireo – may affect California red-legged frog – may affect California red-legged frog critical habitat – may affect Southwestern willow flycatcher – no effect Arroyo toad – no effect Ventura marsh milk-vetch – no effect Tidewater goby – may affect Tidewater goby critical habitat – may affect Western snowy plover – not likely to adversely affect Western snowy plover critical habitat – not likely to adversely affect California least tern – not likely to adversely affect Coastal California gnatcatcher – not likely to adversely affect Coastal California gnatcatcher critical habitat – not likely to adversely affect
March 23, 2011	The Service, Corps, and District met and discussed the anticipated release of proposed critical habitat for the southwestern willow flycatcher, which included areas where District facilities are located, and potential for marsh sandwort and Gambel's watercress to occur within District facilities.
December 20, 2011	The Corps amended the consultation request to add/revise the following effects determinations: Marsh sandwort - not likely to adversely affect Gambel's watercress - not likely to adversely affect Southwestern willow flycatcher – may affect Southwestern willow flycatcher proposed critical habitat – may affect
February 1, 2012	The Service issued an acknowledgement letter stating that the biological opinion is estimated to be issued 6 weeks following the receipt of all necessary information.
May 24, 2012	The District transmitted the final information necessary to complete the consultation.

PROGRAM-WIDE CONCURRENCE AND ACKNOWLEDGEMENT

You determined that the O&M Program may affect, but is not likely to adversely affect Gambel's watercress, marsh sandwort, coastal California gnatcatcher and its critical habitat, western snowy plover and its critical habitat, and California least tern. We concur with your determination based on the following:

Gambel's watercress and marsh sandwort

- The District will conduct comprehensive surveys within the 6.98 acres of facilities identified as having suitable habitat within the first year following the issuance of the Corps authorization for the O&M Program (District 2011);
- The Service will provide the District with a list of individuals that are qualified to positively identify both plants, or will provide training to District biologists so that they are qualified to identify both plants;
- District staff will opportunistically survey for Gambel's watercress and marsh sandwort while conducting routine biological surveys throughout the life of the O&M Program; and
- If any Gambel's watercress or marsh sandwort is found, no project activities that could injure or destroy the plants would take place until additional consultation can be conducted.

Coastal California gnatcatcher and its critical habitat

- No suitable nesting habitat is located within maintenance areas;
- Currently, none of the suitable habitat adjacent to District facilities is known to be occupied by coastal California gnatcatchers;
- Where suitable habitat for the coastal California gnatcatcher occurs adjacent to District facilities if long-term operations (more than 1 day) with heavy equipment are planned for the facility reaches identified with adjacent suitable habitat, a qualified biologist will survey for coastal California gnatcatchers for three mornings within 7 days prior to such work to determine presence or absence. If work will last longer than 3 days, the monitor will conduct morning surveys every other day before work begins to check for adjacent California gnatcatcher activity. If gnatcatchers are present in adjacent habitats, work will stop and the Corps and District will coordinate with the Service to achieve the appropriate level of consultation (District 2010); and
- The District maintains three sedimentation basins within designated critical habitat for the coastal California gnatcatcher; however, the basins do not support the primary constituent elements of coastal California gnatcatcher critical habitat.

Western snowy plover and its critical habitat

- No District facilities are located within areas known to support western snowy plover nesting;
- If beach grooming activities associated with the BEMP (described below) are conducted during the nesting season for the western snowy plover (March 1 to September 15), the District will conduct surveys or coordinate with western snowy plover monitors in the area to ensure that no nesting is occurring within the grooming location or access route. If a nest is detected, grooming activities will not commence until appropriate consultation is reached.
- BEMP equipment will travel along the same path that is currently used by lifeguard vehicles to reduce disturbance of western snowy plover habitat;
- BEMP activities would not affect the primary constituent elements of the western snowy plover critical habitat;

California least tern

- No District facilities are located within areas known to support California least tern nesting;
- Foraging and roosting in the vicinity of District facilities near the Ventura River estuary, Santa Clara River estuary, and Mugu Lagoon would not be precluded by O&M activities;

- If beach grooming activities associated with the BEMP are conducted during the nesting season for the California least tern (March 15 to August 15), the District will conduct surveys or coordinate with western snowy plover monitors in the area to ensure that no California least tern nesting is occurring within the grooming location or access route. If a nest is detected, grooming activities will not commence until appropriate consultation is reached.
- BEMP equipment will travel along the same path that is currently used by lifeguard vehicles to reduce disturbance of California least tern habitat;

You have also determined that the proposed project will have no effect on the arroyo toad and Ventura marsh milk-vetch. We acknowledge your determination.

ADMINISTRATION OF THE PROGRAMMATIC CONCURRENCE, BIOLOGICAL OPINION, AND CONFERENCE OPINION

Each year the District would prepare an annual work plan that outlines the O&M Program activities to be conducted in the following year. Although the District attempts to anticipate all O&M Program work that would be necessary throughout the year, additional projects may be proposed and transmitted to the Corps in an addendum to the work plan. The Corps would review the District's work plan to determine if the proposed activities would be authorized under the Regional General Permit, and to determine how the proposed projects would affect tidewater gobies, California red-legged frogs, least Bell's vireos, southwestern willow flycatcher and their respective designated critical habitat. All proposed projects that the Corps determines may affect, but are not likely to adversely affect these species and critical habitats would be subject to the programmatic concurrence procedures below. Projects that the Corps determines may affect, and will likely adversely affect these species and critical habitat would be subject to the programmatic biological opinion and conference opinion.

Programmatic Concurrence
For projects where effects to tidewater goby, California red-legged frog, least Bell's vireo, and/or southwestern willow flycatcher and their designated critical habitats are insignificant, discountable, or completely beneficial, a "not likely to adversely affect" determination is appropriate. The Service defines these thresholds as follows:

- Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects;

- Discountable effects are those extremely unlikely to occur. Based on best judgment a person would not expect discountable effects to occur;

- Beneficial effects are contemporaneous positive effects without any adverse effects to the species.

In order for activities to be incorporated into the programmatic concurrence, the Corps must notify our office in writing or via electronic mail (email), at least 30 days prior to the start of project activities. We will review the Corps' notification and respond in writing or via email

with our concurrence or non-concurrence. If we do not concur with the Corps' determination, the activity would be subject to the programmatic biological opinion and/or conference opinion. The Service will strive to respond within 30 days, but will request an extension if additional processing time is necessary.

Programmatic Biological Opinion and Conference Opinion

All proposed projects within the District's O&M Program that the Corps determines may affect, and are likely to adversely affect the tidewater goby, California red-legged frog, least Bell's vireo, and/or southwestern willow flycatcher and their respective designated critical habitats will be subject to this biological opinion. The programmatic consultation and conference opinion in this document is based on an appended programmatic consultation approach, which is a two-stage consultation process. This document represents the first stage and includes the initial development of a programmatic biological opinion that analyzes the potential landscape-level effects that may result from implementing the District's O&M Program. The second stage involves the development of documentation that outlines the specific project activities that are proposed to be implemented under the auspices of this biological opinion (i.e., annual work plans or annual work plan addenda). Upon submission of the work plans by the District, the Corps will determine whether the projects within the work plan are consistent with the tasks outlined in the "Description of the Proposed Action" section of this biological opinion, and whether the proposed activities and anticipated effects fall within the scope of the effects analysis of the biological opinion, and associated incidental take statement. If all projects within the work plan are determined to be sufficiently evaluated by this biological opinion, the work plan is then appended to the programmatic biological opinion. This programmatic document, together with the appended project-specific documentation, encompasses the complete consultation document for each individual work plan. If projects are deemed to be inadequately covered by this biological opinion, a separate consultation must be initiated.

At least 30 days prior to conducting any O&M Program activities that are likely to adversely affect the tidewater goby, California red-legged frog, least Bell's vireo, and/or southwestern willow flycatcher and/or designated critical habitat for these species, the Corps will notify the Ventura Fish and Wildlife Office, in writing, of projects they propose to authorize under the auspices of this biological opinion. At a minimum, the following information will accompany the Corps' project notification to the Service:

1. Facility names and numbers (or for mitigation projects that are not located at District facilities, provide a description of the location);

2. Activity codes or brief activity description;

3. Extent of the effects in acres;

4. Species and critical habitats affected; and

5. Description of any proposed modifications to the Best Management Practices (BMP) or minimization measures.

We will review the Corps' notification and respond in writing, or via email, to acknowledge that activities are being conducted under the Programmatic Biological Opinion and Conference Opinion, and to notify the Corps of any concerns or questions regarding the proposed action, or if we feel that there would be effects that would necessitate a separate consultation. Again, the Service will strive to respond within 30 days, but will request an extension if additional processing time is necessary.

BIOLOGICAL AND CONFERENCE OPINION

DESCRIPTION OF THE PROPOSED ACTION

The Corps proposes to issue a Regional General Permit (RGP) to the District for implementation of the O&M Program. The permit would be valid for a period of 5 years. The Corps' permitting process allows for streamlined renewal/reissuance of the RGP after the 5-year permit term elapses if certain criteria are met. If the Corps proposes to reissue the RGP without substantial changes, and none of the consultation reinitiation criteria specified at 50 CFR 402.16 have been otherwise triggered, the Service may reissue the biological opinion without substantial changes as well. Proposed activities within the O&M Program involve routine maintenance and repair of District facilities including implementation of the BEMP program, and mitigation/restoration activities. The Corps' RGP and this biological opinion do not consider emergency actions, the construction of entirely new facilities, or projects that substantially expand facilities, and such actions will not be discussed further in this consultation.

The District only maintains its own facilities and does not routinely conduct activities in natural channels or facilities owned and operated by other agencies. District facilities are located throughout Ventura County and occur in each of the three major watersheds of Ventura County-the Ventura River, Santa Clara River, and Calleguas Creek, as well as tributaries to Malibu Creek, and smaller watersheds, which are not hydrologically connected to these major watersheds, such as Ormond Lagoon (Figure 1). District facilities vary in age from recent to over 50 years old and comprise primarily four basic types: debris and detention basins, rock bank protection/levees, channels and confluences, and stream gauges. Important features for each of the District facilities are provided in the District's Catalog of Facilities (District 2008), including type, location, size, routine maintenance actions, and special-status species known to occur or potentially occur in the area.

The specific maintenance actions that are implemented on or near District facilities vary from year to year, as are the specific areas that require maintenance. The type, extent, and frequency of activities undertaken by the District during a given year are dependent on several factors, including the condition of flood-control facilities, the degree of flood hazard, weather forecasts, the environmental impacts of the maintenance activities, and budgetary constraints.

Prior to each work year, the District undergoes a planning process and identifies activities that will be included in the annual work plan for that year. The District then submits the annual work plan to the Corps, National Marine Fisheries Service, California Department of Fish and Game, and the Service for review. Most facilities require the same maintenance actions every year, including vegetation removal and sediment management, and are included in the work plan as

routine maintenance items. The number and type of small repair projects varies each year, and these are included in the annual work plan with details regarding facility, repair type (in-kind or out-of-kind), quantities, work footprint, schedule, potential natural resource impacts, and any proposed compensatory mitigation. After agency review, the annual work plan is revised, if necessary, to respond to any agency comments, or to parse out any projects, which the agencies feel warrant further review, mitigation, or separate consultation. After budgetary approval, the projects are scheduled and implemented.

The annual work plan is also the vehicle to add new facilities to the O&M Program. Each year, if new facilities are constructed or acquired from other entities, they are included in the work plan along with relevant details (i.e., description of facility location, size, species present, O&M activities to be performed, etc.) as were provided for the other facilities.

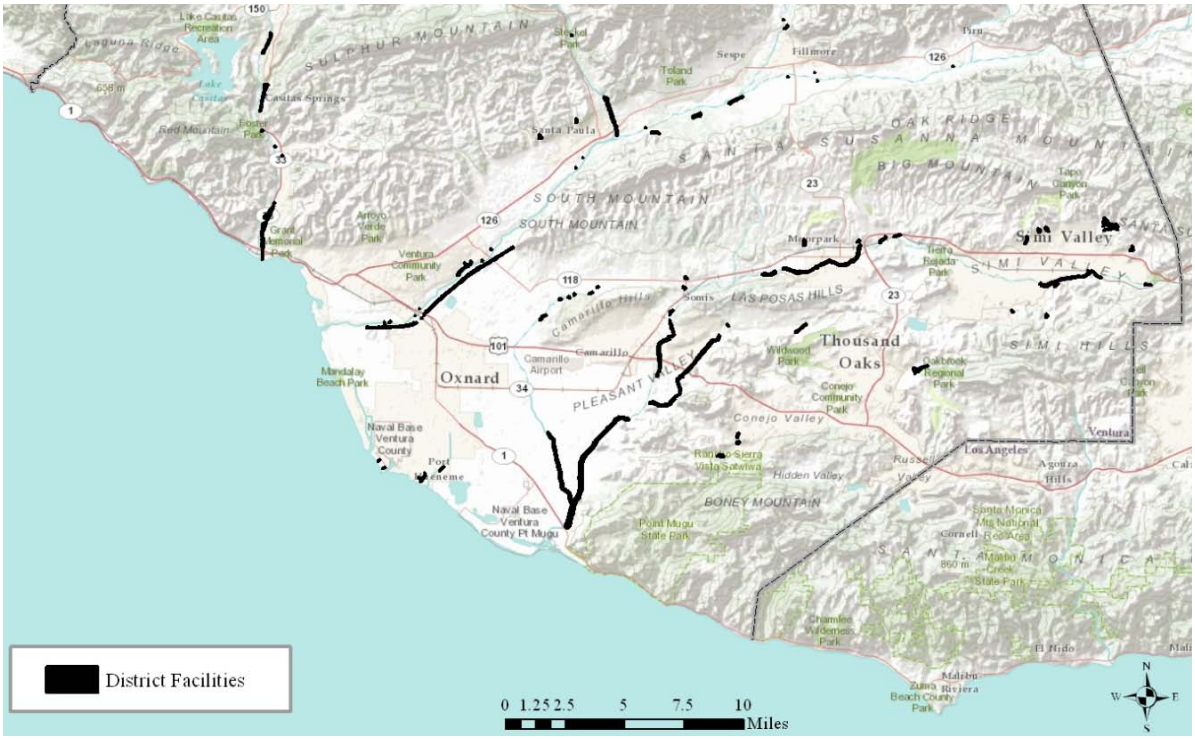

Figure 1. Location of District facilities throughout Ventura County that are within or adjacent to suitable habitat for threatened or endangered species.

Routine Maintenance Activities

The breadth of activities that may appear on annual work plans are summarized below (Table 2).

Table 2. Routine maintenance activity codes and descriptions.

Code	Routine Maintenance Description
PS41	BRUSH & WEED CONTROL, SPRAY WITH BOOM. The application of herbicides, to designated areas, with a boom-mounted spray bar to prevent new growth and/or control existing vegetation, for the purpose of insuring the capacity and integrity of District facilities.
PS42	WEED CONTROL, HAND SPRAY. The application of herbicides, to designated areas, by hand spray to prevent new growth and/or control existing vegetation, for the purpose of insuring the capacity and integrity of District facilities.
PT20	UNIMPROVED CHANNEL CLEANOUT, SEDIMENT REMOVAL WITH CRANE. The removal, hauling, and disposal of sediment and other materials deposited in unimproved channels, to restore the channel capacity.
PT21	UNIMPROVED CHANNEL CLEANOUT, SEDIMENT REMOVAL WITH EXCAVATOR. The removal, hauling, and disposal of sediment and other materials deposited in unimproved channels, to restore the channel capacity.
PT22	UNIMPROVED CHANNEL CLEANOUT TRASH. The removal, hauling, and disposal of trash deposits and other materials from unimproved channels, to prevent channel blockages, accelerated debris deposition, and to restore the channel capacity.
PT23	IMPROVED CHANNEL CLEANOUT, SEDIMENT REMOVAL WITH CRANE. The removal by crane, hauling, and disposal of sediment and other materials deposited in improved channels, to restore the channel capacity.
PT24	IMPROVED CHANNEL CLEANOUT, SEDIMENT REMOVAL WITH EXCAVATOR. The removal by excavator, hauling and disposal of sediment and other materials deposited in improved channels, to restore the channel capacity.
PT25	IMPROVED CHANNEL CLEANOUT, SEDIMENT REMOVAL WITH LOADER. The removal by loader, hauling, and disposal of sediment and other materials deposited in improved channels, to restore the channel capacity.
PT26	IMPROVED CHANNEL CLEANOUT, TRASH AND GROWTH WITH CRANE. The hauling, and disposal of trash deposits; weed and willow growth; or other materials from improved channels and large accessible conduits to prevent blockages, accelerated debris depositing, and to restore the channel capacity.
PT27	IMPROVED CHANNEL CLEANOUT, TRASH LOADER/CRANE. The removal, hauling, and disposal of trash, vegetative growth, and other materials from channels to restore the channel capacity.
PT28	IMPROVED CHANNEL CLEANOUT, TRASH AND VEGATATIVE GROWTH/EXCAVATOR. The manual removal of trash, vegetative growth or sediment from channels where other methods are not applicable to prevent blockages and accelerated debris depositing and to restore the channel capacity.
PT29	CONDUIT CLEANOUT. The removal of debris of any type from within conduits by: flushing with water; or by physically entering the conduit and manually removing debris, to restore full capacity.
PT31	STORAGE AREA OR STOCKPILE CLEAN-UP. The clean-up of designated storage sites, drying, separating of trash, removal of sediment stockpile. Fire prevention, weed and brush control. Grading shall be in compliance with National Pollution Discharge Elimination System requirements.
PT32	EARTHWORK, BY HAND. The replacement and compaction of material removed by erosion, using hand tools or other methods, to restore flood control channels, supporting embankments, levees or access roads.
PT33	EARTHWORK-PREPARATION. The mechanical preparation for the repairing of earthen levees, access roads and supporting embankments.
PT34	EARTHWORK, MECHANICAL. The mechanical replacement and compaction of material removed by erosion to restore flood control channels, supporting embankment, levees or access roads, or the removal of material not covered by a facility clean out activity.
PT35	DAM AND DEBRIS BASIN SEDIMENT REMOVAL WITH SCRAPER. Removal by scraper, including disposal, of sediment deposited in dams or debris basins to restore full capacity and original shape.

PT36	DAM AND DEBRIS BASIN SEDIMENT REMOVAL. Removal by crane, (including hauling, and disposal) of sediment deposited in dams or debris basins to restore full capacity and original shape.
PT38	BLEEDER PIPE MAINTENANCE AND REPAIR. The removal of debris by hand or mechanically to restore proper bleeder operations.
PT39	CONTRACT - DEBRIS BASIN. Use this activity code to track all contract effort for debris basin cleanout. Actions mirror those described under PT36 Dam and Debris Basin Sediment Removal.
PT40	WEED CONTROL - NON SPRAY. The minor maintenance and repair of the spray trucks, the maintenance of inventory and other records, applicable to the herbicide crew and site evaluation.
PT41	BRUSH AND WEED CONTROL, SPRAY WITH BOOM. The application of herbicides, to designated areas, with a boom-mounted spray bar to prevent new growth and/or control existing vegetation, for the purpose of insuring the capacity and integrity of flood control facilities.
PT42	WEED CONTROL, HAND SPRAY. The application of herbicides, to designated areas, by hand spray to prevent new growth and/or control existing vegetation, for the purpose of insuring the capacity and integrity of flood control facilities.
PT43	WEED CONTROL, HAND CREW. The manual removal of brush and weeds using hand tools to control existing vegetation, for the purpose of insuring the capacity and integrity of flood control facilities.
PT44	CHANNEL ACTIVITIES, MECHANICAL. The mechanical removal (i.e., mowing and/or discing) of brush and weeds to provide for unobstructed flow through channels, and to maintain channels, access roads and dams free of vegetation. This includes pilot channel work where low flow is redefined in channel.
PT45	BACKPACK WEED SPRAY. Brush and weed control by all spray methods, performed solely for the purpose of improving the appearance of Flood Control rights-of-way beyond limits of channels and access roads.
PT47	BRUSH & WEED CONTROL, EXCAVATOR. Brush and weed control by mechanical methods performed solely for the purpose of improving the appearance of District rights-of-way beyond the limits of channels and access roads.
PT48	WEED CONTROL, FIRE ABATEMENT. Brush and weed removal by hand or mechanical methods performed solely for the purpose of eliminating potential fire hazards.
PT49	TUMBLEWEED ABATEMENT. The hand removal and disposal of tumbleweeds (*Salsola* sp.) along channel rights-of-way, to maintain proper channel flow and access. Hauling shall be included in this activity if required.
PT51	CONSTRUCTION OR REPLACEMENT OF ACCESS ROAD. The construction of new or replacement of access roads by placing, shaping and compacting base material. Such roads are constructed to provide access to District facilities at new locations or where existing access roads are severely damaged, or where no road exists.
PT52	A.C. ACCESS ROAD. Repair asphalt concrete access road by overlay, slurry seal, crack repair, with or without surface grinding. Also covers replacement of asphalt concrete road by fully removing existing asphalt and base material, placing and compacting new base, then applying new asphalt concrete layer(s). Includes repair and replacement of asphalt concrete curbs. No asphalt may be placed within the banks or bottoms of facilities where water flows.
PT53	REBASING & SHAPING OF ACCESS ROADS. The non-routine, mechanical, scarification and overlaying of access roads to include adding road base, re-grading and re-compacting. This work is done to re-establish drainage and compaction when such roads have become rutted and are soft when wet.
PT55	ROUTINE GRADING OF ACCESS ROADS. Mechanical grading of access roads to remove minor ruts and erosion and restore normal shape and cross slope, for access to District facilities.
PT56	GRADER OPERATIONS ON ACCESS ROADS AND V-DITCHES. Mechanical grading of haul roads used during cleanout of District facilities to insure safe, smooth operation on haul roads. Grading of roads where no base material or roller compaction is necessary.
PT57	MAINTENANCE OF MISC ACCESS ROAD STRUCTURES. Hand or mechanical debris removal and cleanout of pipe, inlets and outlets, small ditches and overpours along access roads to assure proper drainage of roads and adjacent areas. Hauling and dumping of debris is included when required.
PT60	FENCE REPAIR. The repair and/or re-establishment of downed or damaged fences to restore fence to proper condition and to provide right-of-way control.
PT61	MISC FENCE MAINTENANCE. The minor or temporary repair of fences to restore fence to proper

	condition and to provide right-of-way control or temporary and integrity.
PT62	FENCE CONSTRUCTION. Construction of chain link and other fences and the installation of gates of similar fence material to provide proper right-of-way control.
PT64	GATE REPAIR/CHAINLINK. The routine adjusting of gates, the repair of damaged or downed gates, and the repair or replacement of locks and chains to provide proper control of access to channel rights-of-way.
PT65	GATE CONSTRUCTION CHAINLINK. Shop, field fabrication, or purchase of chain link gates, and their installation, at points of access onto District rights-of-way to provide proper right-of-way control.
PT66	PIPE/GATE CONSTRUCTION/REPAIR. Shop and field fabrication of gates, and their installation, at points of access of District rights-of-way to provide proper right-of-way control.
PT68	PIPE AND WIRE REVETMENT REPAIR. The removal of backfill and repair of pipe and wire revetments to restore integrity of bank protection or stabilizer.
PT70	RIPRAP REPAIR. Repair of damaged areas of riprap slopes to restore riprap to original condition. This work is done to prevent further deterioration and eliminate potential erosion problems.
PT72	BANK PROTECTION CONSTRUCTION. Hand or mechanical construction or replacement of protective concrete, riprap or other durable material against channel sides or banks to protect them from erosion.
PT74	STABILIZER CONSTRUCTION/REPAIR. Placement of concreted riprap stabilizer across unlined channels to stabilize the channel bottom and prevent progressive head-cutting.
PT76	CONCRETE CONSTRUCTION/REPAIR. Repair of damaged concrete structures including small structures, channel linings, retaining walls, etc. to original condition and prevent further deterioration.
PT77	SURFACE DRAINAGE FACILITY CONSTRUCTION. Hand or mechanical construction by the most productive method of surface drainage facilities including over-pours, headwalls, pipes and other facilities to dispose of surface runoff onto District rights-of-way.
PT80	PIPE/FLAP GATE MAINT AND REPAIR. The maintenance, repair or replacement of damaged or deteriorated flap, pipe gates and sucker rod and fencing to restore them to their proper function.
PT83	TRASH RACK CLEANING. The removal of trash and debris from trash racks to eliminate obstructions and insure normal flow.
PT85	SUB-DRAIN FLUSHING & REAMING. The flushing and reaming of sub-drains and cleaning weep holes to remove debris and prevent blockage.
PT86	PUMP STATION MAINTENANCE AND STORM PREPARATION. The routine inspection and maintenance of pump stations and their outlet structures to include lubrication and operational testing. Also included is the required storm preparation to assure that outlets are unblocked and pump systems are operational at the beginning of and during significant storms.
PT88	STOCKPILE AND STORAGE AREA WORK. The blading of designated stockpile and storage area sites to keep them in a neat uncluttered condition. Rip and push material into piles to be loaded out for use elsewhere.
PT89	MISCELANEOUS MAINTENANCE. All work performed that is not described in previous activities. A description of activities that would fall under this category would be provided in the workplan.
PT90	STORM PROTECTION. Patrol and inspection of District facilities during and just after storms to identify problems, either existing or potential and where damage has occurred.
PT91	SAFETY INSPECTION. Patrol and inspection of District facilities during and just after significant disaster events to identify problems, either existing or potential and where damage has occurred.
PT92	WORK RELEASE. Perform hand weed control outside of normal work hours; i.e. weekends, using personnel furnished by Ventura County Work Release program.
PT93	NPDES INSPECTION/MAINTENANCE. The inspection/maintenance of NPDES structures and facilities, within the District's responsibility.
PT97	MISCELANEOUS CRANE ACTIVITY. The inspection/minor repair, maintenance and cleaning of the truck crane.

Repair Activities

As District facilities are damaged by flood flows and natural degradation, the District must conduct repairs to maintain conveyance and flood control. Repair activities may take many forms and could involve replacing riprap, diverting water, vegetation trimming, etc. Repair activities primarily occur within existing District facilities. Temporary or permanent impacts may occur outside existing facility footprints. Details of each repair project will be listed in the annual work plans. The repair activity may or may not be covered by this programmatic biological opinion depending on the magnitude and location of the impacts to the affected species or critical habitats.

Beach Elevation Management Plan (BEMP)

In addition to the routine maintenance activities described above, the District has a Beach Elevation Management Plan in place that will be implemented when the criteria described below are met. BEMP activities are considered to be a part of the O&M Program. The Ormond Beach Lagoon inlet normally remains in a semi-closed condition due to sand accretion on Ormond Beach, but during most winters it breaches naturally to allow free outflow during storms and some high tides. These events do not drain the lagoon entirely, as urban runoff and high tides contribute fresh and salt water flows. To date, there has been one instance of the inlet remaining closed during a minor storm event and causing upstream flooding; this took place on January 18, 2010. This event flooded the Oxnard Waste Water Treatment Plant, which was at risk of releasing untreated sewage effluent into the surrounding waterways, roads, and residential properties due to electrical failure of inundated equipment. To prepare for the reoccurrence of the combination of the outlet being closed, the lagoon water surface being above a high threshold level, and a storm being forecast, a BEMP has been developed. The BEMP defines a maximum safe beach height, and provides for a coordinated response to groom the sand berm at a pre-specified location immediately prior to a predicted storm event. The purpose of the BEMP is to protect the lives and well-being of the communities and industrial facilities along J Street Drain and Ormond Beach Lagoon by maintaining water levels below a predetermined safe elevation.

The BEMP is a guideline to assist the District in responding to the potential flood threat caused by persistence of the sand berm during potentially damaging storm events of varying magnitudes. It should be noted that the BEMP would be implemented when conditions warrant, which may be more than once annually, to avoid an emergency. Therefore, implementation of the BEMP would constitute a new maintenance activity associated with operation of the J Street Drain and pump station facilities.

The lead role of the District in flood emergency avoidance is aided by Ventura County Automated Local Evaluation in Real Time (ALERT) system. ALERT is a flood warning system for Ventura County developed by the National Weather Service of the National Oceanic and Atmospheric Administration that has been in operation since 1979. ALERT provides reliable rainfall and flow information for determination of storm magnitude. ALERT will be used as the primary source for rainfall and storm event data in the BEMP. The District water level gauge(s) in the J Street Drain will be used as the primary means to monitor water surface elevation.

Grooming Criteria

Normal Ormond Beach Lagoon conditions result in a natural breaching of the sand berm before the lagoon water elevation reaches its highest recorded elevation of about 7.5 feet National Geodetic Vertical Datum (NGVD) (9.9 feet North American Vertical Datum (NAVD)). This has resulted in the sand berm naturally breaching each year, typically in the early months of the fall rainy season. The sand berm naturally breaches during this time because increased drainage from seasonal storm water raises the lagoon water level sufficiently above sea level prompting a breach. The breach closes as sand blows and washes in, and freshwater drainage diminishes. The condition that would initiate the BEMP is a combination of the following three threshold conditions. The BEMP coordinates the grooming response with sensitivity to environmental resources.

The BEMP threshold conditions are:

1. The Ormond Beach Lagoon is fully enclosed by the Ormond Beach sand berm;

2. The Ormond Beach sand berm elevation adjacent to the lagoon is observed to be above 6.5 feet NGVD (8.9 feet NAVD); and

3. A 72-hour prediction of a storm event affecting the watershed is received, which would likely cause the designed capacity of the J Street Drain to be exceeded if the lagoon water surface elevation cannot overtop the observed adjacent beach sand elevation.

Any one of the above conditions alone may not trigger initiation of the BEMP. All three conditions must occur simultaneously to enact the BEMP.

Grooming Procedure

The grooming would be performed by a tracked dozer and initiated by the O&M Deputy Director in coordination with the District Director or his/her designee. Once the O&M Deputy Director determines that the BEMP threshold criteria have been met, the dozer shall be pre-positioned at the south side parking lot of Port Hueneme Beach Park. As soon as the BEMP is enacted, the dozer operator accompanied by District environmental staff would move the dozer to the designated beach grooming location, and shave the sand berm down to the maximum safe beach elevation. The dozer access path to the groom location would be the same as the one currently used by lifeguards from Port Hueneme Beach Park. The grooming width would measure approximately 100 feet parallel to the coastline (Figure 2). The removed sands would be placed on the beach adjacent to the groomed area. The grooming procedure would be completed within several hours, including removal of equipment from the beach. The designated grooming area would be permanently marked with rods driven deep into the sand. Elevation markings would be depicted on the rods. The grooming location would be coordinated with the Service to limit potential impact to habitat areas. Work would be conducted via PT34 Earthwork, Mechanical. BMPs 3, 4, 8, 21, 22, 24, and 25 (described below) would be implemented as appropriate.

During the grooming operation, the work site would be secured by the District to prevent interruption by or injury of the general public. Members of the Ventura County Sheriff

Department or lifeguards, as well as their designees, may assume responsibility for the protective duty.

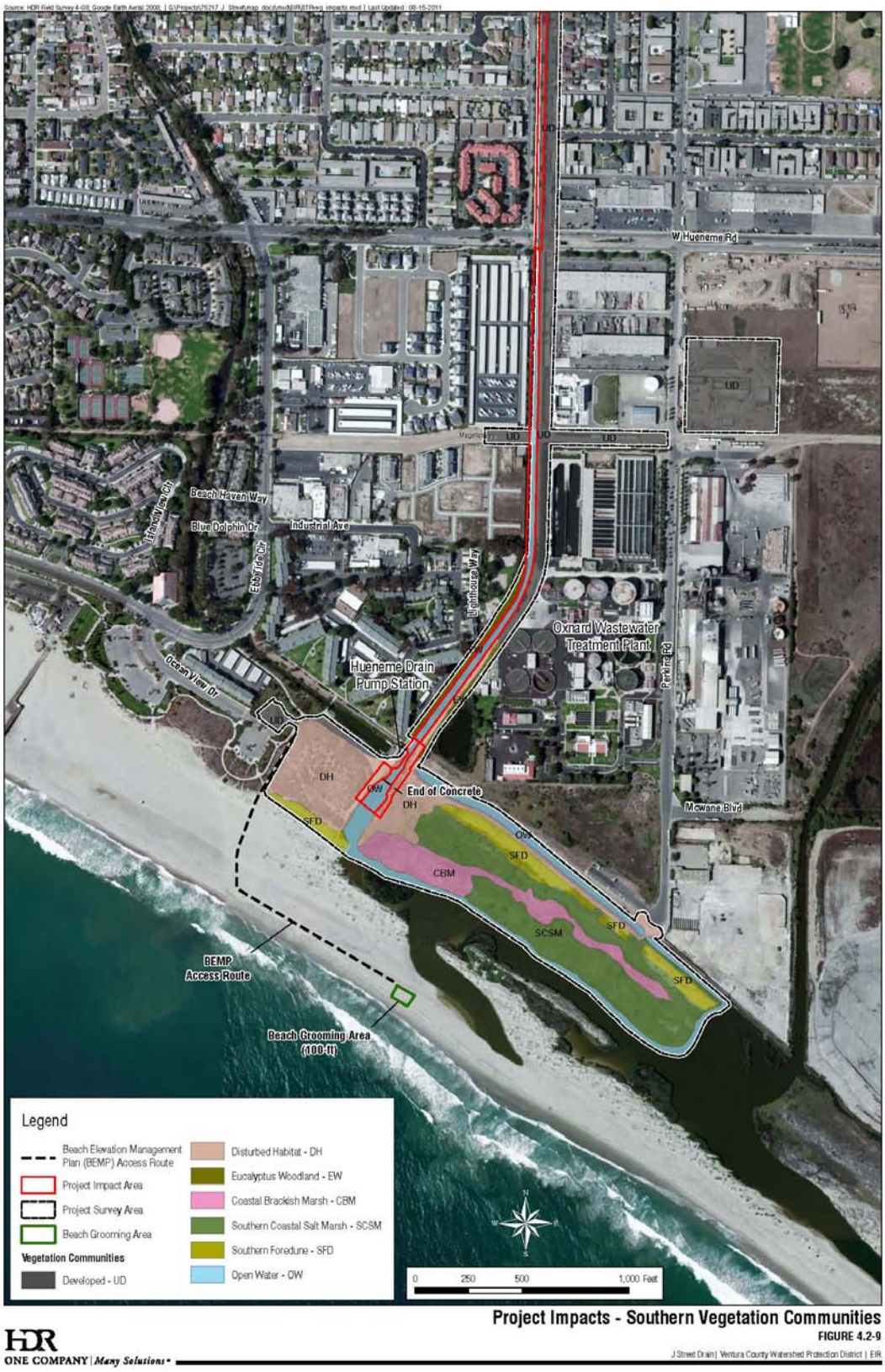

Figure 2. Beach Elevation Management Plan access route and grooming area.

Mitigation Activities

The District implements habitat restoration work both as grant projects and as compensatory mitigation for capital improvement or repair projects. Actions conducted by District staff and contractors include:

a. periodic site inspection;
b. irrigation installation, operation and maintenance;
c. hand, mechanical, and chemical weeding;
d. seeding;
e. planting of container stock;
f. rodent control;
g. and minor grading.

Activities with the potential to affect sensitive species are described by the activity code in the following text. The District evaluates mitigation sites for the potential to support sensitive species, and implements BMPs or avoids work during the breeding season for the Least Bell's vireo and southwestern willow flycatcher, as appropriate. Proposed mitigation activities for each year will be included in the District's annual work plan that will be submitted to the Corps and reviewed for compliance and inclusion in this biological and conference opinion.

Table 3. Mitigation/Restoration task descriptions

Code	Mitigation/Restoration Task Descriptions
PM04	MITIGATION ANNUAL REPORT. Field and report review/writing time associated with production of an annual report, includes site data collection, map drafting and data work.
PM05	MITIGATION SITE INSPECTION. Field inspection by District staff when no contractors are out on site to check site needs/conditions.
PM06	MITIGATION FIELDWORK. When O&M Staff conduct irrigation repairs and spot treatments of weeds, access road maintenance, and fencing/signage tasks on mitigation sites.
PM11	MITIGATION CONTRACTOR MANAGEMENT AND INSPECTION. Used for field inspections when contractor is working or has worked at site to verify tasks, personnel, equipment, and other information.
PM13	MITIGATION CONTRACTOR FIELD WORK. Contractor field work such as mowing, herbicide application, grading, planting, etc.

The Corps and District will submit a mitigation/restoration plan to the Service for approval at least 30 days prior to initiating project activities that includes:

- Location and description of the mitigation/restoration to be performed;
- Information about the presence and extent of least Bell's vireo and southwestern willow flycatcher territories in the vicinity of the mitigation project based on known data and average territory size;
- An estimate of how many territories or portions of territories will be affected by the vegetation removal;
- Information on the presence and extent of tidewater gobies or California red-legged frogs, and how these species are anticipated to be affected by the project;
- An estimated level of take associated with the project, and comparison to the level of take allowed in the Incidental Take Statement associated with this biological opinion; and

- A description of monitoring and maintenance that will be conducted following the vegetation removal.

Minimization Measures
To reduce adverse effects to listed species and migratory birds the District has incorporated numerous general BMPs into their project description (District 2008; District 2010). The proposed BMPs are summarized below.

General BMPs

BMP 1	Avoid Channel Work during the Rainy Season
BMP 2	Prevent Discharge of Silt-Laden Water during Concrete Channel Cleaning
BMP 3	Location of Temporary Stockpiles
BMP 4	Survey for Habitat Prior to Routine Maintenance Work
BMP 5	Survey for Steelhead (*Oncorhynchus mykiss*) Migration Conditions and Sensitive Aquatic Species
BMP 6	Survey for Steelhead Rearing Habitat and Sensitive Aquatic Species
BMP 7	Continue Existing Procedures for Sediment Removal and Vegetation Control for Calleguas Creek, Conejo Creek, and Revolon Slough
BMP 8	Avoid Disturbance to Native Beach or Wetland Species
BMP 9	Aquatic Pesticide BMPs
BMP 10	Leave Vegetation on Upper Basin Slopes
BMP 11	Leave Patches of Vegetation in Channel Bottom
BMP 12	Leave Herbaceous Wetland Vegetation in Channel Bottom
BMP 13	Maximum 15-foot Vegetation-Free Zone at the Toe of the Bank
BMP 14	Avoid Road Base Discharge
BMP 15	Mitigate/Replace Temporary Impacts to Habitat
BMP 16	Oak Tree Mitigation Ratio
BMP 17	Concrete Wash-Out Protocols
BMP 18	Water Diversion Guide
BMP 19	Minimize Erosion from Stream Gauge Maintenance
BMP 20	Implementation of Integrated Pest Management Program
BMP 21	Avoid Spills and Leaks
BMP 22	Biological Surveys in Appropriate Habitat Prior to Vegetation Maintenance
BMP 23	Invasive Plant Removal Protocols
BMP 24	Air Quality BMPs
BMP 25	Construction Noise BMPs (BMP 24 in Los Angeles Regional Water Quality Control Board Permit)

The District has also incorporated the following species-specific measures to minimize adverse effects to California red-legged frogs, tidewater gobies, least Bell's vireos and southwestern willow flycatchers.

California red-legged frog (CRLF) minimization measures

CRLF-1 A Service-approved biologist will conduct daily pre-project surveys each morning prior to conducting O&M Program activities at facilities that are potentially occupied by California red-legged frogs, and will relocate all life stages of California red-legged frogs that are likely to be injured or killed by work activities.

CRLF-2 The Service-approved biologist(s) will relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with O&M Program activities.

CRLF-3 The Service-approved biologist(s) will maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the original point of capture.

CRLF-4 Before any activities begin on a project, a Service-approved biologist(s) will conduct a training session for all construction personnel. At a minimum, the training will include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished.

CRLF-5 The Service-approved biologist(s) will be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and removal of vegetation in suitable habitat has been completed.

CRLF-6 Service-approved biologists will permanently remove individuals of non-native species to the maximum extent possible.

Tidewater goby (TWG) minimization measures

TWG-1 The District will only conduct channel cleanout activities in J Street drain downstream of Hueneme Road and in the concrete lined portion of the Oxnard Industrial drain upstream and downstream of Hueneme Road if surface water is absent (not from diversion or pumping).

TWG-2 Prior to initiation of dewatering or sediment removal work at facilities in tidewater goby habitat where water is present, a Service-approved biologist will install 1/8 inch block nets outside the impact areas and across the stream a minimum of 20 feet above and below the locations proposed for excavation. If widely separated sites are involved, more than one set of block nets will be placed to protect the work area. The nets will be installed on the first day of work and monitored thereafter for the duration of the work.

TWG-3 Should dewatering occur, any pumps used will be fitted with an anti-entrapment device(s) to prevent tidewater gobies from being drawn into the pump or impinged on intake screening.

TWG-4 Once the block nets are secured, Service-approved biologist(s) will remove all tidewater gobies found between the block nets using a 1/8 inch seine and dip nets, and relocate tidewater gobies to suitable habitat downstream of the proposed project site.

TWG-5 A Service-approved biologist will remain onsite and observe for tidewater gobies and turbidity levels within the work areas during all creek dewatering activities, and will capture and relocate tidewater gobies to suitable habitat as necessary.

TWG-6 If operations cannot be completed in one day, block nets will remain in place overnight or nets will be reinstalled prior to work each day, with subsequent surveys and capture/relocation performed accordingly. The decision of whether to leave nets up overnight or to install new nets at the beginning of each work day will be at the discretion of the Service-approved tidewater goby biologist. All nets left up overnight will be inspected to ensure they are in proper functioning condition and to ensure that fish have not re-entered the work area overnight.

TWG-7 In the case of multiple-day projects, tidewater gobies released from one day's work will not be released into areas projected to be excavated on successive days.

<u>Least Bell's vireo (LBV) and southwestern willow flycatcher minimization measures</u>

LBV-1 Prior to routine maintenance and repair activities performed during the period March 1 to September 15, a District biologist or consulting biologist shall determine if suitable habitat is present for native breeding birds in or within 500 feet of the work area. Project activities shall be postponed to September 15 if such habitat is present in the work area or within 500 feet of the work area, to the extent possible.

LBV-2 In the event that operations and maintenance activities in suitable habitat for least Bell's vireo and/or southwestern willow flycatcher cannot be postponed until after the end of the breeding season (September 15), and if the activities involve the direct disturbance of habitat for these species (i.e., vegetation trimming or removal), the District will conduct surveys according to Service guidance to determine presence or absence of least Bell's vireos and southwestern willow flycatcher. A modified survey protocol may be appropriate on a case-by-case basis and must be approved by the Service.

LBV-3 If a least Bell's vireo or southwestern willow flycatcher nest is detected within the project area during pre-project surveys, a Service-approved biologist will establish a buffer zone around the nest that they deem sufficient to avoid the abandonment of the nest by the adults. The Service generally recommends a minimum 500 foot buffer around nests where no work is to occur; however, a

smaller buffer can be established if deemed protective by the Service-approved biologist and approved by the Service. The Service-approved biologist must monitor the nests during all O&M Program activities occur immediately adjacent to buffer zones to determine the effects of project activities on the nesting least Bell's vireos and southwestern willow flycatcher. The Service-approved biologist will have the authority to stop work if deemed necessary to protect the nesting birds.

LBV-4 For mitigation/restoration projects where non-native plant species are targeted for removal within suitable habitat for Least Bell's vireos or southwestern willow flycatchers, native vegetation will be left in place to the maximum extent practical; willows (*Salix* sp.) and cottonwoods (*Populus* sp.) with a diameter at breast height of 8 inches or greater may be trimmed, but will be left in place.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY AND ADVERSE MODIFICATION DETERMINATIONS

Jeopardy Determination

The jeopardy analysis in this Biological Opinion relies on four components: (1) the *Status of the Species,* which evaluates the range-wide condition of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher and the factors responsible for that condition, and their survival and recovery needs; (2) the *Environmental Baseline,* which evaluates the condition of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of these species and subspecies; (3) the *Effects of the Action,* which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher; and (4) the *Cumulative Effects,* which evaluates the effects of future, non-Federal activities in the action area on the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher, in the wild.

The jeopardy analysis in this biological opinion places an emphasis on consideration of the range-wide survival and recovery needs of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher, and the role of the action area in their survival and recovery, as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

Adverse Modification Determination

The Biological Opinion does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR 402.02. Instead, we rely on the statutory provisions of the Act to complete the following analysis with respect to critical habitat.

In accordance with policy and regulation, the adverse modification analysis in this Biological Opinion relies on four components: (1) the *Status of Critical Habitat*, which evaluates the range-wide condition of designated critical habitat for the tidewater goby, California red-legged frog and southwestern willow flycatcher in terms of primary constituent elements (PCEs), the factors responsible for that condition, and the intended recovery function of the critical habitat overall; (2) the *Environmental Baseline*, which evaluates the condition of the critical habitat in the action area, the factors responsible for that condition, and the recovery role of the critical habitat in the action area; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated and interdependent activities on the PCEs and how that will influence the recovery role of the affected critical habitat units; and (4) *Cumulative Effects*, which evaluates the effects of future non-Federal activities in the action area on the PCEs and how that will influence the recovery role of affected critical habitat units.

For purposes of the adverse modification determination, the effects of the proposed federal action on the critical habitat of the tidewater goby, California red-legged frog and southwestern willow flycatcher are evaluated in the context of the range-wide condition of the critical habitat, taking into account any cumulative effects, to determine if the critical habitat range-wide would remain functional (or would retain the current ability for the PCEs to be functionally established in areas of currently unsuitable but capable habitat) to serve its intended recovery role for the tidewater goby, California red-legged frog and southwestern willow flycatcher.

The analysis in the Biological Opinion places an emphasis on using the intended range-wide recovery function of critical habitat for the tidewater goby, California red-legged frog and southwestern willow flycatcher and the role of the action area relative to that intended function as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the adverse modification determination.

STATUS OF THE SPECIES

Tidewater goby

The tidewater goby was listed as endangered on March 7, 1994 (59 Federal Register (FR) 5494). On June 24, 1999, the Service proposed to remove the populations occurring north of Orange County, California, from the endangered species list (64 FR 33816). In November 2002, the Service withdrew this proposed delisting rule and determined it appropriate to retain the tidewater goby's listing as endangered throughout its range (67 FR 67803). A recovery plan for the tidewater goby was completed on December 12, 2005 (Service 2005). A 5-Year Review for the tidewater goby was completed in September 2007 (Service 2007). Detailed information on the biology of the tidewater goby can be found in Wang (1982), Irwin and Soltz (1984), Swift *et al*. (1989), Worcester (1992), and Swenson (1995); much of the information from this account was taken from these sources.

The tidewater goby is endemic to California and typically inhabits coastal lagoons, estuaries, and marshes, preferring relatively low salinities of approximately 12 parts per thousand (ppt). Tidewater goby habitat is characterized by brackish estuaries, lagoons, and lower stream reaches where the water is fairly still but not stagnant. They tend to be found in the upstream portions of lagoons. Tidewater gobies can withstand a range of habitat conditions and have been documented in waters with salinity levels that range from 0 to 41 ppt, temperatures from 46 to 77 degrees Fahrenheit, and depths from approximately 10 inches to 6.5 feet.

The tidewater goby is primarily an annual species in central and southern California, although some variation in life history has been observed. If reproductive output during a single season fails, few (if any) tidewater gobies survive into the next year. Reproduction typically peaks from late April or May to July and can continue into November or December depending on the seasonal temperature and amount of rainfall. Males begin the breeding ritual by digging burrows (3 to 4 inches deep) in clean, coarse sand of open areas. Females then deposit eggs into the burrows, averaging 400 eggs per spawning effort. Males remain in the burrows to guard the eggs. They frequently forego feeding, which may contribute to the mid-summer mortality observed in some populations. Within 9 to 10 days, larvae emerge and are approximately 0.20 to 0.27 inch in length. Tidewater gobies live in vegetated areas in the lagoon until they are 0.60 to 0.70 inch long. When they reach this life stage, they become substrate-oriented, spending the majority of time on the bottom rather than in the water column. Both males and females can breed more than once in a season, with a lifetime reproductive potential of 3 to 12 spawning events. Vegetation is critical for over-wintering tidewater gobies because it provides refuge from high water flows.

Tidewater gobies feed on small invertebrates, including mysids, amphipods, ostracods, snails, aquatic insect larvae, and particularly chironomid larvae. Tidewater gobies of less than 0.30 inch in length probably feed on unicellular phytoplankton or zooplankton, similar to many other early stage larval fishes.

Historically, the tidewater goby occurred in at least 135 California coastal lagoons and estuaries from Tillas Slough near the Oregon border south to Agua Hedionda Lagoon in northern San Diego County. The southern extent of its distribution has been reduced by approximately 8 miles. The species is currently known to occur in about 112 locations, although the number of sites fluctuates with climatic conditions. Currently, the most stable populations are in lagoons and estuaries of intermediate size (5 to 124 acres) that are relatively unaffected by human activities. Six regional clades based on morphological differences (Ahnelt et. al. 2004) that are supported by genetic work done by Dawson et al. (2001) have been used to define recovery units for the tidewater goby (Service 2005). The recovery plan describes 26 recovery sub-units for the tidewater goby (Service 2005).

Tidewater gobies enter the marine environment when sandbars are breached during storm events. The species' tolerance of high salinities (up to 60 ppt) for short periods of time enables it to withstand marine environment conditions where salinities are approximately 35 ppt, thereby allowing the species to re-establish or colonize lagoons and estuaries following flood events. However, genetic studies indicate that individual populations rarely have contact with other populations so natural recolonization may be rare. In Santa Barbara County during the fall of

1994, tidewater gobies were reported as common in the Santa Ynez River 4 miles upstream from the lagoon (Swift et al. 1997); however, by January 1995, they were absent at the upstream sites. Tidewater gobies that are found upstream of lagoons in summer and fall tend to be juveniles. The highest densities of tidewater gobies are typically present in the fall.

Recovery Plan for the Tidewater Goby

The goal of the tidewater goby recovery plan is to conserve and recover the tidewater goby throughout its range by managing threats and perpetuating viable metapopulations within each recovery unit while maintaining morphological and genetic adaptations to regional and local environmental conditions. The decline of the tidewater goby is attributed primarily to habitat loss or degradation resulting from urban, agricultural, and industrial development in and around coastal wetlands. The recovery plan identifies 6 recovery units: North Coast Unit, Greater Bay Unit, Central Coast Unit, Conception Unit, LA/Ventura Unit, and South Coast Unit.

The recovery plan specifics that the tidewater goby may be considered for downlisting when:

1. Specific threats to each metapopulation (e.g., coastal development, upstream diversion, channelization of rivers and streams, etc.) have been addressed through the development and implementation of individual management plans that cumulatively cover the full range of the species.

2. A metapopulation viability analysis based on scientifically credible monitoring over a 10-year period indicates that each Recovery Unit is viable. The target for downlisting is for individual sub-units within each recovery unit to have a 75 percent or better chance of persistence for a minimum of 100 years.

The tidewater goby may be considered for delisting when downlisting criteria have been met and a metapopulation viability analysis projects that all recovery units are viable and have a 95 percent probability of persistence for 100 years.

Tidewater goby critical habitat

We originally designated critical habitat for the tidewater goby on November 20, 2000 (65 FR 69693). In January 2008, revised designated critical habitat was finalized (73 FR 5920). On October 19, 2011, another revision to critical habitat was proposed (76 FR 64996). The proposed rule is scheduled to be finalized in November 2012, therefore when this biological and conference opinion is finalized it is anticipated that the currently designated critical habitat will be in place, and subsequently, the currently proposed critical habitat will be finalized and supersede the currently designated critical habitat.

Under the Act and its implementing regulations, we are required to identify the physical and biological features essential to the conservation of tidewater goby in areas occupied at the time of listing, focusing on the features' primary constituent elements. We consider primary constituent elements to be the elements of physical and biological features that, when laid out in the appropriate quantity and spatial arrangement to provide for a species' life-history processes, are essential to the conservation of the species. The primary constituent elements specific to tidewater goby are substantially the same in the designated and proposed rule, and include:

Persistent, shallow (in the range of about 0.3 to 6.6 feet) still-to-slow-moving, coastal aquatic habitat most commonly ranging in salinity from 0.5 ppt to about 10 to 12 ppt, which provides adequate space for normal behavior and individual and population growth that contain:

- Substrates (e.g., sand, silt, mud) suitable for the construction of burrows for reproduction;

- Submerged and emergent aquatic vegetation, such as *Potamogeton pectinatus, Ruppia maritime, Typha latifola,* and *Scirpus* spp., that provides protection from predators and high flow events; or

- Presence of a sandbar(s) across the mouth of a lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary, thereby providing relatively stable water levels and salinity.

In total, approximately 10,003 acres fall within the boundaries of the final revised critical habitat designation. The revised critical habitat is located in Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles Counties, California.

In total, approximately 12,157 ac are included in the proposed critical habitat rule. The proposed critical habitat is located in Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Diego Counties, California.

California red-legged frog

The California red-legged frog was federally listed as threatened on May 23, 1996 (61 FR 25813). The Service completed a recovery plan for the species in 2002 (Service 2002a).

Detailed information on the biology of California red-legged frogs can be found in Storer (1925), Stebbins (2003), and Jennings et al. (1992). This species is the largest native frog in the western U.S., ranging from 1.5 to 5.1 inches long. The abdomen and hind legs of adults are largely red; the back is characterized by small black flecks and larger irregular dark blotches with indistinct outlines on a brown, gray, olive, or reddish background color. Dorsal spots usually have light centers, and dorsolateral folds are prominent on the back. Tadpoles range from 0.6 to 3.1 inches long and are dark brown and yellow with dark spots.

The California red-legged frog uses a variety of habitat types, including various aquatic systems, riparian, and upland habitats. The diet of California red-legged frogs is highly variable. Hayes and Tennant (1985) found invertebrates to be the most common food item of adults. Vertebrates, such as Pacific treefrogs (*Pseudacris regilla*) and California mice (*Peromyscus californicus*), represented over half of the prey mass eaten by larger frogs (Hayes and Tennant 1985). Feeding activity occurs along the shoreline and on the surface of the water. Hayes and Tennant (1985) found juveniles to be active diurnally and nocturnally, whereas adults were largely nocturnal.

California red-legged frogs breed from November through March; earlier breeding has been recorded in southern localities (Storer 1925). Males appear at breeding sites from 2 to 4 weeks before females (Storer 1925). California red-legged frogs are often prolific breeders, typically laying their eggs during or shortly after large rainfall events in late winter and early spring.

Female California red-legged frogs deposit egg masses on emergent vegetation so that the masses float on the surface of the water (Hayes and Miyamoto 1984). Egg masses contain about 2,000 to 5,000 moderately-sized (0.08 to 0.11 inch) in diameter, dark reddish brown eggs (Storer 1925, Jennings and Hayes 1985). Eggs hatch in 6 to 14 days (Storer 1925). Larvae undergo metamorphosis between 3.5 to 7 months after hatching (Storer 1925, Wright and Wright 1949). Sexual maturity can be attained at 2 years of age by males and 3 years of age by females and is usually reached at 3 to 4 years of age (Jennings and Hayes 1985); adults may live 8 to 10 years (Jennings et al. 1992) although the average life span is considered to be much lower.

California red-legged frogs spend most of their lives in and near sheltered backwaters of ponds, marshes, springs, streams and reservoirs. Deep pools with dense stands of overhanging willows and an intermixed fringe of cattails (*Typha* spp.) are considered optimal habitat. California red-legged frogs breed in aquatic habitats. Eggs, larvae, transformed juveniles and adults also have been found in ephemeral creeks and drainages and in ponds that do not have riparian vegetation. California red-legged frogs frequently breed in artificial impoundments such as stock ponds, if conditions are appropriate. Although California red-legged frogs successfully breed in streams and riparian systems, high seasonal flows and cold temperatures in streams often make these sites risky environments for eggs and tadpoles. The importance of riparian vegetation for this species is not well understood. When riparian vegetation is present, California red-legged frogs spend considerable time resting and feeding in it; the moisture and camouflage provided by the riparian plant community likely provide good foraging habitat and may facilitate dispersal in addition to providing pools and backwater aquatic areas for breeding. Accessibility to sheltering habitat is essential for the survival of California red-legged frogs within a watershed, and can be a factor limiting population numbers and distribution.

Juvenile and adult California red-legged frogs may disperse long distances from breeding sites throughout the year. They can be encountered living within streams at distances exceeding 1.8 miles from the nearest breeding site, and have been found up to 400 feet from water in adjacent dense riparian vegetation (Bulger et al. 2003). Some California red-legged frogs have moved long distances over land between water sources during winter rains. Adult California red-legged frogs have been documented to move more than 2 miles in northern Santa Cruz County “without apparent regard to topography, vegetation type, or riparian corridors” (Bulger et al. 2003). Most of these overland movements occur at night. These individual California red-legged frogs were observed to make long-distance movements that are straight-line, point to point migrations over variable upland terrain rather than using riparian corridors for movement between habitats. For the California red-legged frog, suitable habitat is considered to include all aquatic and riparian areas within the range of the species and includes any landscape features that provide cover and moisture (61 FR 25813).

California red-legged frogs have been found at elevations that range from sea level to about 5,000 feet. In the Sierra Nevada Mountains, California red-legged frogs typically occur below

4,000 feet in elevation (61 FR 25813). The historical range of the California red-legged frog extended coastally from southern Mendocino County and inland from the vicinity of Redding, California, southward to northwestern Baja California, Mexico (Jennings and Hayes 1985, Storer 1925). The California red-legged frog has been extirpated or nearly extirpated from 70 percent of its former range. Historically, this species was found throughout the Central Valley and Sierra Nevada foothills. At present, California red-legged frogs are known to occur in 243 streams or drainages in 22 counties, primarily in central coastal California. Four additional occurrences have been recorded in the Sierra Nevada foothills since listing, bringing the total to five extant populations, compared to approximately 26 historical records (61 FR 25813).

Currently, California red-legged frogs are known from three disjunct regions in 26 California counties and one region in Baja California, Mexico (Grismer 2002, Fidenci 2004, Smith and Krofta 2005). The most secure aggregations of California red-legged frogs are found in aquatic sites that support substantial riparian and aquatic vegetation and lack non-native predators. Over-harvesting, habitat loss, non-native species introduction, and urban encroachment are the primary factors that have negatively affected the California red-legged frog throughout its range (Jennings and Hayes 1985, Hayes and Jennings 1988). Habitat loss and degradation, combined with over-exploitation and introduction of exotic predators, were important factors in the decline of the California red-legged frog in the early to mid-1900s. Continuing threats to the California red-legged frog include direct habitat loss due to stream alteration and loss of aquatic habitat, indirect effects of expanding urbanization, competition or predation from non-native species including the bullfrog (*Rana catesbeiana*), catfish (*Ictalurus* spp.), bass (*Micropterus* spp.), mosquitofish (*Gambusia affinis*), and crayfish (*Procambarus clarkii*). Chytrid fungus (*Batrachochytrium dendrobatidis*) is a waterborne fungus that can decimate amphibian populations, and is considered a threat to California red-legged frog populations.

Although the presence of California red-legged frogs is correlated with still water deeper than approximately 1.6 feet, riparian shrubbery, and emergent vegetation (Jennings and Hayes 1985), there are numerous locations in the species' historical range where these elements are well represented yet California red-legged frogs appear to be absent. The cause of local extirpations does not appear to be restricted solely to loss of aquatic habitat. The most likely causes of local extirpation are thought to be changes in faunal composition of aquatic ecosystems (i.e., the introduction of non-native predators and competitors) and landscape-scale disturbances that disrupt California red-legged frog population processes, such as dispersal and colonization. The introduction of contaminants or changes in water temperature may also play a role in local extirpations. These changes may also promote the spread of predators, competitors, parasites and diseases.

<u>Recovery Plan for the California Red-Legged Frog</u>

The recovery plan for the California red-legged frog identifies eight recovery units (Service 2002a). These recovery units are based on the Recovery Team's determination that various regional areas of the species' range are essential to its survival and recovery. The status of this species is considered within the smaller scale of Recovery Units as opposed to the overall range. These recovery units are delineated by major watershed boundaries as defined by U.S. Geological Survey hydrologic units and the limits of the range of the California red-legged frog. The goal of the recovery plan is to protect the long-term viability of all extant populations within

each recovery unit. Within each recovery unit, core areas have been delineated and represent contiguous areas of moderate to high California red-legged frog densities that are relatively free of exotic species such as bullfrogs. The goal of designating core areas is to protect metapopulations that, combined with suitable dispersal habitat, will allow for the long term viability of existing populations. This management strategy will allow for the recolonization of habitat within and adjacent to core areas that are naturally subjected to periodic localized extinctions, thus assuring the long-term survival and recovery of California red-legged frogs.

A summary of the recovery criteria, which must be met in order for the Service to consider delisting the species, is below.

1. Suitable habitats within all core areas are protected and/or managed for California red-legged frog in perpetuity, and the ecological integrity of these areas is not threatened by adverse anthropogenic habitat modification;

2. Existing populations, throughout the range, are stable;

3. Populations are geographically distributed in a manner that allows for the continued existence of viable metapopulations despite fluctuations in the status of individual populations;

4. The subspecies is successfully reestablished in portions of its historical range such that at least one reestablished population is stable/increasing at each core area where frogs are currently absent; and

5. The amount of additional habitat needed for population connectivity, recolonization, and dispersal has been determined, protected, and managed for California red-legged frogs.

California red-legged frog critical habitat
Critical habitat was designated for the species on April 13, 2006 (71 FR 19244). On March 17, 2010, the Service revised the designation of critical habitat to encompass an area more than three times larger than the 2006 designation for the species (75 FR 12815).

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to designate as critical habitat, we are required to identify the known physical and biological features (also known as Primary Constituent Elements (PCEs)) essential to the conservation of the California red-legged frog. All areas designated as critical habitat for California red-legged frogs are occupied, are within the species' historical geographic range, and contain sufficient PCEs to support at least one life history function. Based on our current knowledge of the life history, biology, and ecology of the species and the requirements of the habitat to sustain the essential life history functions of the species, we have determined that the PCEs for California red-legged frog critical habitat are:

1. Aquatic Breeding Habitat. Standing bodies of fresh water (with salinities less than 7.0 ppt), including: natural and manmade (e.g., stock) ponds, slow moving streams or pools within

streams, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a minimum of 20 weeks in all but the driest of years.

2. Non-Breeding Aquatic Habitat. Fresh water habitats, as described above, that may or may not hold water long enough for the species to hatch and complete its aquatic life cycle but that do provide for shelter, foraging, predator avoidance, and aquatic dispersal for juvenile and adult California red-legged frogs. Other wetland habitats that would be considered to meet these elements include, but are not limited to: plunge pools within intermittent creeks; seeps; quiet water refugia during high water flows; and springs of sufficient flow to withstand the summer dry period.

3. Upland Habitat. Upland areas within 200 feet of the edge of the riparian vegetation or dripline surrounding aquatic and riparian habitat and comprises various vegetation series such as grasslands, woodlands, and/or wetland/riparian plant species that provides the California red-legged frog shelter, forage, and predator avoidance. Upland features are also essential in that they are needed to maintain the hydrologic, geographic, topographic, ecological, and edaphic features that support and surround the wetland or riparian habitat. These upland features contribute to the filling and drying of the wetland or riparian habitat and are responsible for maintaining suitable periods of pool inundation for larval California red-legged frogs and their food sources, and provide breeding, non-breeding, feeding, and sheltering habitat for juvenile and adult California red-legged frogs (e.g., shelter, shade, moisture, cooler temperatures, a prey base, foraging opportunities, and areas for predator avoidance). Upland habitat can include structural features such as boulders, rocks and organic debris (e.g. downed trees, logs), as well as small mammal burrows and moist leaf litter.

4. Dispersal Habitat. Accessible upland or riparian dispersal habitat within designated units and between occupied locations within 0.7 mi (1.2 km) of each other that allows for movement between such sites. Dispersal habitat includes various natural habitats and altered habitats such as agricultural fields, which do not contain barriers to dispersal. An example of a barrier to dispersal is a heavily traveled road (Vos and Chardon 1998) constructed without bridges or culverts. Dispersal habitat does not include moderate to high density urban or industrial developments with large expanses of asphalt or concrete, nor does it include large reservoirs over 50 ac (20 ha) in size, or other areas that do not contain those features identified in PCE 1, 2, or 3 as essential to the conservation of the species. This designation is designed for the conservation of PCEs necessary to support the life history functions and essential to the conservation of the species. Because not all life history functions require all the PCEs, not all areas designated as critical habitat will contain all the PCEs. Each of the areas designated as critical habitat have been determined to contain sufficient PCEs to provide for one or more of the life history functions of the California red-legged frog.

Least Bell's Vireo

The least Bell's vireo was federally listed as endangered on May 2, 1986 (51 FR 16474) and critical habitat was designated for the subspecies on February 2, 1994 (59 FR 4845). A draft recovery plan was completed in 1998 (Service 1998); no final plan has been published. The Service completed a 5-year review for the least Bell's vireo in September 2006 in which we

indicated that, due to new information on the subspecies and an improved understanding of ongoing recovery actions to reduce threats, the recovery goals and strategies should be modified and refined. In addition, we recommended that the least Bell's vireo should be down listed from endangered status to threatened status because of a 10-fold increase in population size since its listing in 1986, expansion of locations with breeding least Bell's vireo throughout southern California, and conservation and management of suitable breeding habitat throughout its range (Service 2006). Additional information on the least Bell's vireo may be found in Wilbur (1980), Garrett and Dunn (1981), Zembal et al. (1985), Miner (1989), Pike and Hays (1992), and Service (1998).

The least Bell's vireo is a small, migratory songbird that nests and forages almost exclusively in riparian woodland habitats. The least Bell's vireo is in the family Vireonidae and is one of four subspecies of Bell's vireo (*Vireo bellii*) that have been recognized (American Ornithological Union (AOU) 1998), with each subspecies isolated from one another throughout the year (Hamilton 1962; Service 1998). They are site-tenacious across breeding seasons, highly territorial, and almost exclusively insectivorous. Least Bell's vireos are obligate riparian breeders, typically inhabiting structurally diverse woodlands along watercourses that feature dense cover within 3 to 6 feet of the ground and a dense, stratified canopy (Goldwasser 1981; Salata 1983; Gray and Greaves 1984; Service 1998). The understory within this riparian habitat is typically dominated by mulefat (*Baccharis salicifolia*), California wild rose (*Rosa californica*), poison oak (*Toxicodendron diversiloba*), sandbar willow (*Salix hindsiana*), young individuals of other willow species, and several perennial species (Service 1998). Important canopy species include mature arroyo willows (*S. lasiolepis*) and black willows (*S. gooddingii*), and occasional cottonwoods, western sycamore (*Platanus racemosa*), or coast live oak (*Quercus agrifolia*). Least Bell's vireos primarily forage and nest in riparian habitat, but they may also use adjoining upland scrub habitat (Salata 1983; Kus and Miner 1989).

Least Bell's vireos primarily feed on invertebrates, especially lepidopteran larvae, within willow stands or associated riparian vegetation (Miner 1989; Brown 1993). Least Bell's vireos occasionally forage in nonriparian vegetation such as coastal sage scrub, chaparral, and oak woodlands, although foraging in these other habitats usually occurs within 100 feet of the edge of riparian vegetation (Salata 1983; Gray and Greaves 1984; Kus and Miner 1989). Least Bell's vireo feeding behavior largely consists of gleaning prey from leaves or woody surfaces while perched or hovering, and less frequently by capturing prey by aerial pursuit (Salata 1983; Miner 1989). Least Bell's vireos concentrate most of their foraging between 0 to 20 feet above ground level (Salata 1983; Miner 1989).

Least Bell's vireos generally arrive in southern California breeding areas by mid-March to early April, with males arriving before females and older birds arriving before first-year breeders (Service 1998). Least Bell's vireos generally remain on the breeding grounds until late September, although some post-breeding migration may begin as early as late July (Service 1998). Male least Bell's vireos establish and defend breeding territories through singing and physically chasing intruders (Barlow 1962; Beck 1996; Service 1998). Although territories typically range in size from 0.5 to 7.5 acres (Service 1998), no relationship appears to exist between territory size and various measures of territory quality (Newman 1992).

Nest building commences a few days after pair formation, with the female selecting a nest-site location and both sexes constructing the nest (Pitelka and Koestner 1942; Barlow 1962; Service 1998). Nests are typically suspended in forked branches within 3 feet above the ground with no clear preference for any particular plant species as the nest host (Nolan 1960; Barlow 1962; Gray and Greaves 1984; Service 1998). Typically 3 or 4 eggs are laid on successive days shortly after nest construction (Service 1998). The eggs are incubated by both parents for about 14 days with the young remaining in the nest for another 10 to 12 days (Pitelka and Koestner 1942; Nolan 1960; Barlow 1962). Each nest appears to be used only once with new nests constructed for each nesting attempt (Greaves 1987). Least Bell's vireos may attempt up to five nests within a breeding season, but they are typically limited to one or two successful nests within a given breeding season (Service 1998).

Multiple long-term monitoring studies indicate that approximately 59 percent of nests successfully produce fledglings, although on average only 1.8 chicks fledge per nest (Service 1998). Although least Bell's vireo nests appear to be more accessible to terrestrial predators because of their relatively low placement (Franzreb 1989), western scrub-jays (*Aphelocoma californica*) have been documented to account for the majority of documented depredation events (Peterson 2002; Peterson et al. 2004); depredation by jays and other avian predators may have selected for relatively low nest placement (Ferree 2002). Predation rates can exceed 60 percent of the least Bell's vireo nests in a given area within a year (Kus 1999), but typical nest predation rates average around 30 percent (Franzreb 1989), which is comparable to predation rates for other North American passerines (Martin and Clobert 1996; Grishaver et al. 1998; Ferree 2002).

Nest parasitism by cowbirds is another major source of failure for least Bell's vireo nests (Franzreb 1989; Service 1998; Kus 1999, 2002; Griffith and Griffith 2000; Sharp 2002); nests that are parasitized are either abandoned or fledge cowbird chicks rather than least Bell's vireos. Cowbirds did not historically occur within the least Bell's vireo's range, and therefore least Bell's vireos have not evolved adequate defenses to avoid loss of productivity due to parasitism (Franzreb 1989; Kus 2002). Parasitism of least Bell's vireo nests may exceed 42 percent in some locations (Kus 1999), but extensive cowbird trapping and focused nest monitoring can substantially reduce parasitism or its effects (Franzreb 1989; Service 1998; Griffith and Griffith 2000; Kus 2002).

Cowbird trapping has proven a successful tool to halt least Bell's vireo population declines over the short term within a limited area, but Kus and Whitfield (2005) have argued that trapping may not be the best method for long-term recovery of the least Bell's vireo because maintaining cowbird populations at low levels may not allow the least Bell's vireo to evolve resistance to cowbird parasitism. The issue of cowbird trapping remains unclear as to the best way to manage this threat over the long term, and additional research is needed to determine whether there are any alternatives to the intensive cowbird trapping programs currently being implemented (Service 2006).

Fledgling least Bell's vireos expand their dispersal distances from about 35 feet the first day to about 200 feet several weeks after fledging (Hensley 1950; Nolan 1960). This distance has been shown to increase to at least 1 mile prior to their first fall migration (Gray and Greaves 1984).

Banding records indicate that while most first-year breeding least Bell's vireos return to their natal drainage after winter migration, some disperse considerable distances to other breeding locations (Greaves and Labinger 1997; Service 1998; Kus and Beck 1998). Movement by least Bell's vireos between drainages within San Diego County is not uncommon (Kus and Beck 1998). Additionally, several least Bell's vireos banded as nestlings in San Diego County have been resighted as breeding adults in Ventura County, and the opposite movement from Ventura to San Diego has also been observed (Greaves and Labinger 1997). The maximum dispersal distance currently documented is approximately 130 miles (Service 1998), but this is probably an underestimate due to the limited number of least Bell's vireos that are banded and insufficient re-sighting efforts. Although movement between sites by older birds may occur, site fidelity by least Bell's vireos after the first breeding season is generally high, and most dispersal between sites occurs between the time that least Bell's vireos fledge from their nest and their first breeding season (Service 1998).

The least Bell's vireo historically occupied willow riparian habitats from Tehama County, in northern California, southward to northwestern Baja California, Mexico, and as far east as Owens Valley, Death Valley, and the Mojave River (Grinnell and Miller 1944; Service 1998). Although originally considered to be abundant locally, regional declines of this subspecies were noticeable by the 1940s (Grinnell and Miller 1944), and the least Bell's vireo was believed to have been extirpated from California's Central Valley by the early 1980s (Franzreb 1989). Except for a few outlying pairs, the least Bell's vireo is currently restricted to southern California south of the Tehachapi Mountains and northwestern Baja California (Wilbur 1980; Garrett and Dunn 1981; Franzreb 1989; U.S. Geological Survey (USGS) 2002). The largest current concentrations of least Bell's vireos are in San Diego County along the Santa Margarita River on Camp Pendleton and in Riverside County at the Prado flood control basin (Service 2006).

Historically, the San Joaquin and Sacramento Valleys were considered to be the center of the least Bell's vireo's breeding range (60 to 80 percent of the historical population; 51 FR 16474), but the least Bell's vireo has not yet meaningfully re-colonized those areas. In 2005 and 2006, the first breeding pair of least Bell's vireos detected in the San Joaquin Valley since the listing of the this subspecies successfully bred at the San Joaquin National Wildlife Refuge in Stanislaus County (Service 2006). There have been no sightings of least Bell's vireos in the Sacramento Valley since prior to the listing, and it is unlikely that any breeding least Bell's vireos have occurred within recent years in the Sacramento Valley (Service 2006).

Greater than 99 percent of the remaining least Bell's vireos were concentrated in southern California (Santa Barbara County and southward) at the time of the listing in 1986 (51 FR 16474), with San Diego County containing 77 percent of the population. Greater than 99 percent still remain in southern California, although the populations are now more evenly distributed in southern California with 54 percent of the total population occurring in San Diego County and 30 percent of the population occurring in Riverside County (Service 2006); however, there has been only a slight shift northward in the subspecies' overall distribution. Thus, despite a significant increase in overall population numbers, the population remains restricted to the southern portion of its historical range (Service 2006).

Causes for decline of the least Bell's vireo included destruction or degradation of habitat, river channelization, water diversions, lowered water tables, gravel mining, agricultural development, and cowbird parasitism (Service 1986, 1994, 1998). Habitat losses had fragmented most remaining populations into small, disjunct, widely dispersed subpopulations (Franzreb 1989). Habitat fragmentation negatively affects abundance and distribution of neotropical migratory songbirds, in part by increasing incidence of nest predation and parasitism (Whitcomb et al. 1981; Small and Hunter 1988; Yahner and DeLong 1992; Sharp 2002; Peterson 2002). Least Bell's vireos nesting in areas containing a high proportion of degraded habitat have lower productivity (e.g., hatching success) than those in areas of high quality riparian woodland (Pike and Hays 1992).

The least Bell's vireo population in the U.S. has increased 10-fold since its listing in 1986, from 291 to 2,968 known territories (Service 2006). The population has grown during each 5-year period since the original listing, although the rate of increase has slowed over the last 10 years. Population growth has been greatest in San Diego County and Riverside County, with lesser but significant increases in Orange County, Ventura County, San Bernardino County, and Los Angeles County. The population in Santa Barbara County has declined since the listing in 1986, although it is uncertain whether this population was historically significant. Kern, Monterey, San Benito, and Stanislaus counties have had a few isolated individuals and/or breeding pairs since the original listing, but these counties have not supported any sustained populations (Service 2006).

Draft Recovery Plan for the Least Bell's vireo

The 1998 draft recovery plan for the least Bell's vireo states that the goal of recovery efforts is the reclassification of the subspecies from endangered to threatened and, ultimately, delisting of the subspecies. The draft plan states that reclassification to threatened status may be considered when there are stable or increasing population/metapopulations of least Bell's vireos for a period of 5 consecutive years, each consisting of several hundred or more breeding pairs at the following sites: Tijuana River, Dalzura/Jamul Creek/Otay River, Sweetwater River, San Diego River, San Luis Rey River, Camp Pendleton/Santa Margarita River, Santa Ana River, an Orange County/Los Angeles County metapopulation, Santa Clara River, Santa Ynez River, and an Anza Borrego Desert metapopulation. The draft plan states that each of these populations and metapopulations should be protected and managed.

The draft plan states that delisting of the least Bell's vireo may be considered when the subspecies meets the criterion for downlisting and there are stable or increasing least Bell's vireo population/metapopulations for a period of 5 consecutive years established at the following currently unoccupied areas of the subspecies' historical range: Salinas River, a San Joaquin Valley metapopulation, and a Sacramento Valley metapopulation. The draft plan states that each of these populations and metapopulations should be protected and managed.

Lastly, the draft plan states that threats to the least Bell's vireo at the aforementioned sites should be reduced or eliminated so that these populations/metapopulations are capable of persisting without significant human intervention, or perpetual endowments are secured for cowbird trapping and exotic plant control in riparian habitat occupied by the least Bell's vireos.

The draft recovery plan describes a strategy for reclassification, recovery, and delisting. Instrumental to this strategy is securing and managing riparian habitat within the historical breeding range of the least Bell's vireo, annual monitoring and rangewide surveys, and research activities necessary to monitor and guide the recovery effort.

Southwestern Willow Flycatcher

The southwestern willow flycatcher was federally listed as endangered on February 27, 1995 (60 FR 10694). The final recovery plan for the subspecies was completed in August 2002 (Service 2002b).

The southwestern willow flycatcher breeds in southern California (north to the Santa Ynez River, Kern River, and Independence on the Owens River), southern Nevada, southern Utah, Arizona, New Mexico, and extreme western Texas. All subspecies of the willow flycatcher are completely migratory. The species as a whole winters from southern Mexico south through Central America to Panama and western Venezuela. Subspecies *extimus* has been collected in winter in Guatemala, El Salvador, Honduras, and Costa Rica (Unitt 1987).

Unitt (1987) concluded that the southwestern willow flycatcher was once fairly common in the Los Angeles Basin, where habitat is virtually absent now. Approximately 616 acres of riparian habitat has regenerated along the South Fork Kern River since the early 1980s, but fluctuations in the number of territories in this area has made it difficult to determine a trend in the population for the area (Whitfield et al. 1999). Downstream from the South Fork Kern River, willow flycatchers (unknown subspecies) were common breeders in the early 1900s, but today virtually no riparian habitat remains. Outside of the Kern River, southwestern willow flycatcher populations are present along the Owens, San Luis Rey, and Santa Margarita (Camp Pendleton) Rivers. Changes in land use along the San Luis Rey River have improved habitat quality and extent, which has resulted in an increase in the number of territorial southwestern willow flycatcher males from 12 in the late 1980s (Unitt 1987) to more than 40 in 1999 (Kus et al. 1999). In contrast, the populations on Camp Pendleton have remained fairly constant for the past two decades despite apparently suitable habitat to support population expansion. The remaining southwestern willow flycatcher populations in southern California, most of which number fewer than five territories, occur at scattered sites along drainages that have changed little in the past 15 years.

The southwestern willow flycatcher breeds only in riparian woodland, typically adjacent to or over water. Surface water or saturated soil is usually present in or adjacent to nesting sites during at least the initial portion of the nesting period (Muiznieks et al. 1994, Tibbits et al. 1994). Riparian woodland used by willow flycatchers typically has a canopy and an understory of shrubs or saplings. Native willows dominate the habitat commonly represented in current and historical records.

Southwestern willow flycatchers do nest in some riparian habitats containing and even dominated by salt cedar (*Tamarisk* sp.)_ (McKernan and Braden 1999, Paradzick et al. 2000). In terms of southwestern willow flycatcher productivity, the suitability of tamarisk dominated habitats is not known. Southwestern willow flycatcher productivity in some sites dominated by non-native vegetation is lower than in some native-dominated habitats (Sferra et al. 1997, Sogge

et al. 1997). The reverse is also true, however, within some tamarisk-dominated habitats where southwestern willow flycatcher productivity is similar or higher than nearby native-dominated sites (McKernan and Braden 1999, Paradzick et al. 1999).

The southwestern willow flycatcher is a diurnal insectivore, catching its prey on the wing usually in the middle story of riparian woodland. Males maintain and advertise a territory by singing to attract females. There is little information on the factors a southwestern willow flycatcher female uses to select a mate, though it may be related to some factor of habitat quality or potential quality of the male (Service 2002b). Territorial defense begins immediately after spring arrival. Females occasionally sing, apparently when stimulated by territorial disputes (Sogge et al. 1997). Male southwestern willow flycatchers sing most persistently early in the breeding season, but song rate declines as the season progresses, particularly once the male finds a mate and nesting efforts begin (Finch et al. 2000). Their response to taped playback of songs during surveys has also been known to decrease as the nesting season progresses. Mapped breeding territory sizes are 0.15 to 0.5 acre on the Colorado River (Sogge et al. 1997), 0.5 to 1.25 acres along the Verde River, Arizona (Sogge 1995), and 0.35 to 5.7 acres along the Kern River, California (Whitfield and Enos 1996).

Southwestern willow flycatchers typically arrive on breeding grounds from late April to early June (Maynard 1995, Skaggs 1996, Sferra et al. 1997). Evidence gathered during multi-year studies of color-banded populations show that although most southwestern willow flycatchers return to former breeding areas, they regularly move among sites within and between years (Netter et al. 1998). From 1997 to 2000, 66 to 78 percent of southwestern willow flycatchers returned to the same breeding site (Luff et al. 2000). Within drainage movements are more common than between drainage movements.

Nests are initiated usually within one week of pair formation, 10 to 14 days after spring arrival. Building nests takes 3 to 8 days. In historical egg collections from southern California, 86 percent of nests were in willow, 4 percent in *Urtica dioica* (stinging nettles), and 10 percent in other plants (Unitt 1987). Females typically lay one egg per day, until the nest contains three to four eggs. Incubation begins after the last egg is laid, and lasts 12 to 13 days (Service 2002b). For the southwestern willow flycatcher, incubation generally lasts 12 to 15 days from the date that the last egg was laid. During incubation, females spend approximately 50 percent of the day attending (incubating or shading) the eggs and incubate throughout the night. Incubation and shading bouts can last from less than 1 to more than 60 minutes (Finch et al. 2000).

Southwestern willow flycatcher young usually leave the nest 12 to 15 days after hatching. During the brooding period, the young are cared for by both the male and female. Feeding trips during the peak of this period can reach 30 trips per hour during days 5 to 10 (Finch et al. 2000). Fledglings stay close to the nest and each other for 3 to 5 days, and may repeatedly return to and leave the nest during this period (Spencer et al. 1996).

The decline of the southwestern willow flycatcher is attributed to numerous factors, including nest depredation and brood parasitism by the brown-headed cowbird. However, large scale loss of southwestern wetlands, particularly cottonwood-willow riparian habitat, is the principal reason for the southwestern willow flycatcher's current status. Habitat loss is a result of urban and

agricultural development, water diversion and impoundment, livestock grazing, and hydrological changes attributable to these and other land uses (60 FR 10694). In some cases, willow flycatchers are faced with situations that force movement, such as when catastrophic habitat loss occurs from fire or flood. Several such cases have been documented, with some of the resident willow flycatchers moving to remaining habitat within the breeding site, some moving to other sites 1.2 to 16.8 miles away (Paxton et al. 1997, Owen and Sogge 1997), and others disappearing without being seen again. For a discussion on the status of riparian habitat, see the status of the least Bell's vireo above.

Recovery Plan for the Southwestern Willow Flycatcher

The 2002 final recovery plan for the southwestern willow flycatcher identifies that the goal of recovery efforts is the reclassification of the subspecies from endangered to threatened and, ultimately, delisting of the subspecies. The plan states that reclassification to threatened status may be considered when either of the following criteria has been met:

Criterion A: Increase the total known population to a minimum of 1,950 territories (equating to approximately 3,900 individuals), geographically distributed to allow proper functioning as metapopulations, so that the southwestern willow flycatcher is no longer in danger of extinction. For reclassification to threatened status, these prescribed numbers and distributions must be reached as minimum, and maintained over a 5 year period.

Criterion B: Increase the total known populations to a minimum of 1,500 territories (equating to approximately 3,000 individuals), geographically distributed among Management Units and Recovery Units, so that the southwestern willow flycatcher is no longer in danger of extinction. Recovery Units are large watershed or hydrologic areas, while Management Units are a subset of the Recovery units and encompass local drainages and distinct geographic features. For reclassification to threatened status, these prescribed numbers and distributions must be reached as a minimum, and maintained over a 3 year period, and the habitats supporting this subspecies must be protected from threats and loss.

The recovery plan states that the southwestern willow flycatcher may be removed from the list of threatened and endangered species when both of the following criteria have been met:

Criterion 1: Meet and maintain, at a minimum, the population levels and geographic distribution specified under reclassification to threatened Criterion A.

Criterion 2: Provide protection from threats and create/secure sufficient habitat to assure maintenance of these populations and/or habitat over time. The sites containing southwestern willow flycatcher breeding groups, in sufficient number and distribution to warrant downlisting, must be protected into foreseeable future through development and implementation of conservation management agreements (e.g., public land management planning process for Federal lands, habitat conservation plans (under Section 10 of the Act), conservation easements, and land acquisition agreements for private lands, and intergovernmental conservation agreements with Tribes). Prior to delisting, the Service must confirm that the agreements have been created and executed in such a way as to achieve their role in southwestern willow flycatcher recovery, and individual agreements for all areas within all Management Units

(public, private, and Tribal) that are critical to metapopulation stability (including suitable, unoccupied habitat) must have demonstrated their effectiveness for a period of at least 5 years.

The recovery plan categorizes recovery actions into nine types: (1) increase and improve occupied, suitable, and potential breeding habitat; (2) increase metapopulation stability; (3) improve demographic parameters; (4) minimize threats to wintering and migration habitat; (5) survey and monitor; (6) conduct research; (7) provide public education and outreach; (8) assure implementation of laws, policies, and agreements that benefit the southwestern willow flycatcher; and (9) track recovery progress.

Critical habitat for the southwestern willow flycatcher

Critical habitat was designated for the subspecies on October 19, 2005 (70 FR 60886). In California, units are located in Kern, Santa Barbara, San Bernardino, and San Diego counties; critical habitat is not designated in the action area. However, on August 15, 2011, revised critical habitat was proposed including riparian areas within the Ventura River and Santa Clara River (76 FR 50542). The proposed rule is anticipated to be finalized in December 2012.

In total, approximately 2,090 stream miles are being proposed for designation as critical habitat. These areas are being proposed as stream segments, with the lateral extent including the riparian areas and streams that occur within the 100-year floodplain or flood-prone areas.

In accordance with sections 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species (in this case a subspecies) at the time of listing to designate as critical habitat, we consider the physical or biological features essential to the conservation of the flycatcher and which may require special management considerations or protection. These include, but are not limited to:

1. Space for individual and population growth and for normal behavior;

2. Food, water, air, light, minerals, or other nutritional or physiological requirements;

3. Cover or shelter;

4. Sites for breeding, reproduction, or rearing (or development) of offspring; and

5. Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species.

ENVIRONMENTAL BASELINE

The implementing regulations for section 7(a)(2) define the action area being addressed in a consultation as the area that may be directly or indirectly affected by the proposed action (50 *Code of Federal Regulations* 402.02). We consider the action area for this biological opinion to include anywhere in Ventura County where the District currently has facilities, where the District may have facilities in the future, and where the District conducts mitigation related to the O&M Program.

Ventura County contains three major watersheds, the Ventura River watershed, Santa Clara River watershed, and the Calleguas Creek watershed. In addition to these three large watersheds, there are numerous smaller drainages that lead directly or indirectly to the Pacific Ocean. These watersheds provide a variety of habitats including sandy beaches, estuaries, riparian channels and floodplains, grasslands, woodlands, coastal scrub, chaparral, and other habitats.

Facilities that are known to currently be within suitable habitat for the tidewater goby and its critical habitat, California red-legged frog and its critical habitat, least Bell's vireo, and the Southwestern willow flycatcher and its proposed critical habitat are shown in Figure 3 and listed in Appendix A. Additional facilities may be added or taken out of the O&M Program over time. The District will update these tables as necessary when new facilities are entered into the O&M Program.

Tidewater goby

Within Ventura County, tidewater gobies are known to occur in the Ventura River estuary, Santa Clara River Estuary, Ormond Lagoon, Calleguas Creek/Mugu Lagoon, and Sycamore Cover. O&M Program facilities that are located in habitat that is potentially suitable for tidewater gobies are listed in Appendix A, and summarized in Table 4. Habitat that is considered potentially suitable includes lower watershed areas that may be inundated and support vegetation during various times of year or as estuary morphology changes. Not all potentially suitable habitat is suitable at all times.

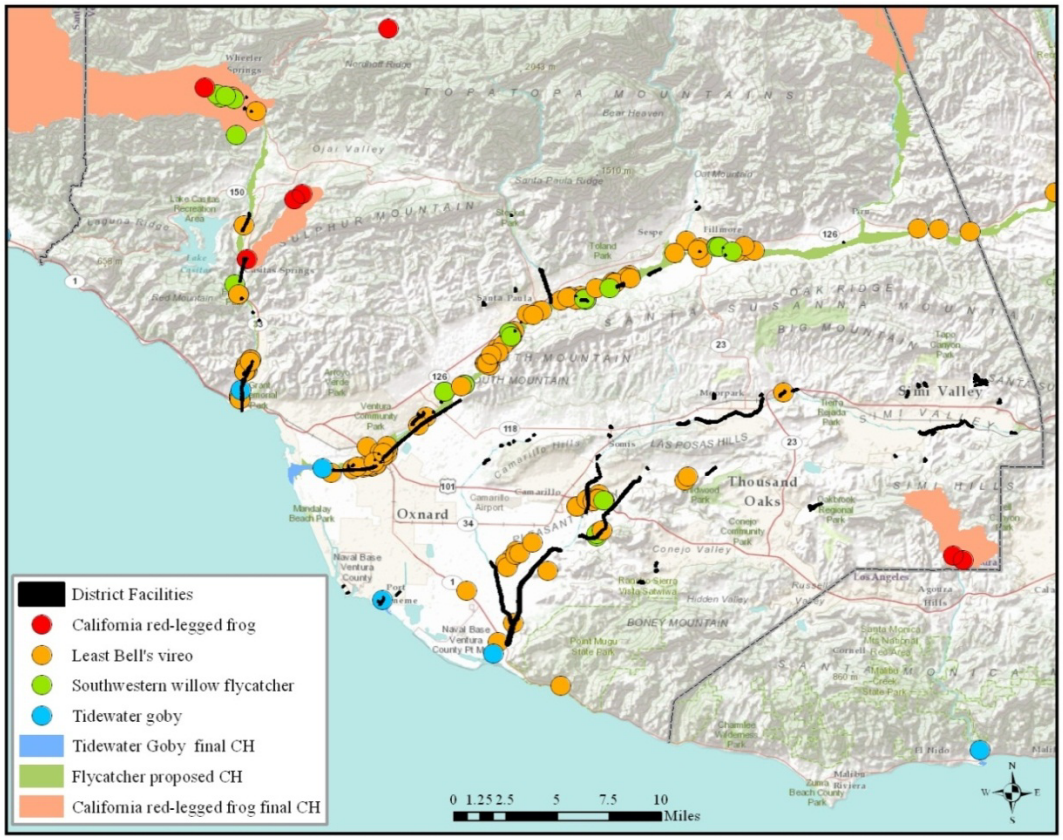

Figure 3. Location of O&M Program facilities and occurrences of California red-legged frogs, southwestern willow flycatchers, least bell's vireos, tidewater gobies, and their designated and proposed critical habitats within Ventura County.

Table 4. Total potential habitat, and facilities in potential habitat for tidewater gobies.

	Total potential habitat (Acres)	Facilities in potential habitat (Acres)
Ventura River	202	29
Santa Clara River	532	1
Ormond Lagoon	121	1
Calleguas Creek	677	213
TOTAL	1,532	244

Tidewater gobies were detected in the Ventura River in 1998 and 2005, which is currently presumed occupied. The available tidewater goby habitat in the Ventura River encompasses approximately 2 to 25 acres. The mouth of the Ventura River occurs at a public beach, owned by the City of Ventura. Upstream of the estuary, much of the land adjacent to the river is privately owned. The District maintains a levee from the Pacific Ocean to just north of Stanley Avenue as well as 14 side drains and short channels that convey stormwater into the river. The levee toe and side drains are in contact with surface water and potentially occupied tidewater goby habitat along about 10 to 20 percent of its length in any given year.

In the Santa Clara River, tidewater goby habitat encompasses approximately 75 to 125 acres. Tidewater gobies have been detected in the Santa Clara River estuary in 1998 and 2004. In 2010 the estuary was artificially breached and numerous tidewater gobies were flushed out of the lagoon and washed up dead on the shores surrounding the estuary. Similar breaching events have impacted this estuary in the past, and will likely occur again in the future. These unnatural events may be artificially depressing the tidewater goby population in this area; however there are locations within the estuary that likely provide refugia for tidewater gobies during these events and it is unlikely that extirpation has occurred.

In Ormond Lagoon, the available tidewater goby habitat encompasses approximately 0.7 to 2.5 acres and is hydrologically connected with the Oxnard Industrial Drain and J Street Drain. Tidewater gobies were first collected here in 1993 and then were observed again in 1998, 2004, 2005, 2006, 2008, and 2011. In 2005 and 2006, the District conducted 215 seine hauls in the J-Street drain, in order to relocate tidewater gobies out of their project area and captured and released a total of 4,437 individuals (Mulder and Swift 2007). Tidewater gobies were the most abundant species captured followed by mosquitofish (*Gsambusia* sp.), sailfin mollies (*Poecilia latipinna*) , and crayfish (*Orconectes* sp.) (Mulder and Swift 2007). In 2011 the Environmental Protection Agency detected abundant tidewater gobies in Ormond Lagoon during sampling for the remedial investigation of the Halaco Superfund Site, further confirming the species presence in this location.

Historically, Calleguas Creek and its tributaries were intermittent and flowed seasonally from its headwaters near the City of Simi Valley onto the Oxnard Plain. Due to development, Calleguas Creek is now primarily a perennial stream predominantly fed by treated wastewater flows, with secondary surface flows originating from groundwater, agricultural and urban runoff, and periodic stormwater flows. Revolon Slough is a major tributary of Calleguas Creek that flows into the creek near Highway 1 (Pacific Coast Highway), just prior to the creek's outflow into Mugu Lagoon.

Much of the available tidewater goby habitat in Calleguas Creek/Mugu Lagoon is owned by Naval Base Ventura County. Tidewater gobies were detected at the site in 1940 (Swift et al. 1989), but then were not detected during surveys in 2001 and 2002 by Lafferty and Swift (Service 2005). On July 20, 2011, tidewater gobies were found in Calleguas Creek above the Highway 1 Bridge (BonTerra Consulting 2011). The District performed surveys of the downstream portions of Calleguas Creek and Revolon Slough, in August and September 2011. The results of the survey indicated that tidewater gobies were present in the lower reaches of both channels, but suggested that during winter flows, individuals are expected to move a considerable distance upstream (Cardno Entrix 2011). The dispersal limit for tidewater gobies in both drainages is about 4 miles upstream of Highway 1 due to the dam on Calleguas Creek and the concrete channel in Revolon Slough that starts at Wood Road (Cardno Entrix 2011).

Recovery of the tidewater goby

All tidewater goby populations within Ventura County are within the Los Angeles/Ventura Recovery Unit. The tidewater goby populations and habitats within the Los Angeles/Ventura Recovery Unit are shown in Table 5. Of these, only the Ventura River, Santa Clara River, Ormond Lagoon, and Calleguas Creek/Mugu Lagoon are anticipated to be affected by O&M Program activities.

Table 5. Tidewater goby populations within the Los Angeles/Ventura Recovery Unit along with occupancy status at the time the recovery plan was developed (2005), and current status.

Sub-Unit	Status in the Recovery Plan	Current Status
Ventura River	Occupied	Occupied
Santa Clara River	Occupied	Occupied
Ormond Lagoon	Occupied	Occupied
Calleguas Creek/Malibu Lagoon	Extirpated	Occupied
Sycamore Canyon	No historical records	Occupied
Arroyo Sequit	No historical records	No historical records
Zuma Canyon	No historical records	No historical records
Malibu Creek	Occupied	Occupied
Topanga Creek	Occupied	Occupied
Santa Monica Artesian Springs	Extirpated	Extirpated
Ballona Creek	No historical records	No historical records

Tidewater goby critical habitat

Within Ventura County, tidewater goby designated critical habitat is located within the Ventura River (VEN-1), Santa Clara River (VEN-2), and Ormond Lagoon (VEN-3). Proposed tidewater goby critical habitat is located in these same areas and in one additional unit located in Big Sycamore Canyon (VEN-4). The unit boundaries for VEN-1 in the designated and proposed rules are identical. The unit boundaries for VEN-2 in the designated and proposed rules are similar, with the primary difference being less proposed critical habitat in an area that is currently a sand bar and does not contain PCEs. The unit boundaries for VEN-3 in the designated and proposed rules are significantly different with the designated rule covering

Ormond Lagoon, and the proposed rule covering Ormond Lagoon and the adjacent wetlands on property owned by The Nature Conservancy. No District facilities or O&M Program activities would occur within the additional area identified in the proposed critical habitat rule, therefore the nature and extent of impacts to VEN-3 is anticipated to be the same for the designated and proposed rules, despite the difference in unit size. Each of these critical habitat units is currently known to support all of the PCEs.

Table 6. Designated and proposed tidewater goby critical habitat within Ventura County.

Unit	Location	Designated CH (Acres)	Proposed CH (Acres)
VEN-1	Ventura River Estuary	50.3	50.3
VEN-2	Santa Clara River Estuary	360.5	322.1
VEN-3	Ormond Lagoon	44.4	121.0
VEN-4	Big Sycamore Canyon	N/A	0.69

The unit boundaries that are presented in the proposed revision of critical habitat are similar to the currently designated critical habitat units such that the effect of the O&M Program on the proposed critical habitat would be the same as currently designated critical habitat.

California red-legged frog

Within Ventura County, California red-legged frogs are known to occur in the Ventura River watershed and in Las Virgenes Creek near the City of Calabasas (Figure 1). In the Ventura River watershed, California red-legged frogs are known to occur in San Antonio Creek downstream of Soule Park to the Ventura River confluence, in Matilija Creek upstream of Matilija Dam, and in the lower Ventura River at Foster Park. Each of these areas typically supports perennial river flow, although the water levels can be low during summer months. Due to suitable habitat within the mainstem of the Ventura River, and lack of barriers to dispersal, it is feasible that California red-legged frogs could be located anywhere within the Ventura River mainstem. California red-legged frogs are also known to occur in Las Virgenes Creek, near the City of Calabasas on the border of Ventura County and Los Angeles County; however, no District facilities are located in the vicinity of these occurrences.

Currently 25 acres of O&M Program facilities are located within suitable habitat for California red-legged frogs (Appendix A). A majority of this area is maintained vegetation-free and may or may not be inundated depending on the time of year and river morphology. The entire Ventura River riparian corridor is potentially suitable habitat for California red-legged frogs, and totals approximately 1,500 acres from the estuary to Matilija Dam. The Ventura River likely acts as a movement corridor regardless of presence of vegetation. California red-legged frogs may use the riprap levees as sheltering habitat. Additionally up to 10 acres per year of mitigation/restoration may occur within suitable habitat for the California red-legged frog in Calleguas Creek.

<u>Recovery of the California red-legged frog</u>

Ventura County is split between Recovery Unit 7 (Northern Transverse Ranges and Tehachapi Mountains) and Recovery Unit 8 (Southern Transverse Ranges and Peninsular Ranges). Recovery Unit 7 includes portions of Santa Barbara, San Luis Obispo, Kern, Ventura, and Los Angeles Counties and includes the Ventura River and Santa Clara River tributaries. Recovery

Unit 8 includes portions of Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties, however the portions of Ventura County within this recovery unit do not support any District facilities that are the subject of this biological opinion, and Recovery Unit 8 will not be considered further in this consultation.

The Ventura River and tributaries to the Santa Clara River make up Core Area 26 of the California red-legged frog recovery plan. Conservation needs for this core area include restoring habitat, controlling non-native predators and non-native plants, and removing Matilija Dam.

California red-legged frog critical habitat

Within the Ventura River watershed, critical habitat for the California red-legged frog is designated above Matilija Dam to the headwaters of the Santa Ynez River, extending approximately 1.6 miles below the dam (STB-7), and in San Antonio Creek including approximately 0.4 miles of the Ventura River at the confluence of San Antonio Creek and the Ventura River (VEN-1) (Figure 3). There are currently 1.9 acres of District facilities within unit STB-7 and 0.4 acres of District facilities within VEN-1. The District facility located within STB-7 does not contain the PCEs for the California red-legged frog. The District facility within VEN-1 is generally thought to support PCEs for aquatic breeding habitat, aquatic non-breeding habitat, and/or dispersal habitat. Invasive vegetation including giant reed (*Arundo donax*), salt cedar, and tree of heaven (*Ailanthus altissima*) are pervasive within the Ventura River watershed, including within STB-7 and VEN-1. The O&M Program contains a mitigation/restoration component that may target the removal of these invasive vegetation species. We anticipate up to 10 acres of invasive vegetation removal within the Ventura River watershed each year. This vegetation removal could occur partially or fully within STB-7 or VEN-1.

Table 7. Designated critical habitat units that may be affected by O&M Program activities.

Unit	Location	Designated CH (Acres)
STB-7	Upper Santa Ynez River and Matilija Creek	145,121
VEN-1	San Antonio Creek	2,915

Least Bell's vireo

Within Ventura County, least Bell's vireos are known to occur within the Ventura River, Santa Clara River, and in various locations within the Calleguas Creek watershed (Figure 3). The suitable habitat within these watersheds is located within the floodplain but will change in extent and configuration when large storms scour vegetation, and regrowth occurs in the following seasons. Because of this dynamic, the entire primary floodplain area of each of these watersheds provides potentially suitable habitat and is quantified in table 8, along with the acres of District facilities that are within these suitable habitat areas in each watershed. Facilities currently included in the O&M Program that may affect least Bell's vireo are listed in Appendix A, Table 2. A summary of these facilities is shown in Table 8.

Table 8. Total potential habitat and facilities within potential habitat for least Bell's vireo.

	Total potential habitat (Acres)	Facilities in potential habitat (Acres)
Ventura River	1,500	35
Santa Clara River	6,700	46
Calleguas Creek	2,300	174
TOTAL	10,500	255

In the Ventura River watershed, least Bell's vireos have routinely been observed near the Main Street Bridge, just above the estuary. Here, District facilities include 3.5 miles of levee on the east bank of the river and 17 side drains. Least Bell's vireos may also occur in the upper mainstem of the Ventura River from the Santa Ana Road bridge upstream to Matilija Dam. Willow thicket habitat is patchy, but present in this area. The District maintains nearly 1-mile of levee on the west side of the river, as well as the tributary channels of Cozy Dell and Live Oak Creek Diversion. In the upper watershed, least Bell's vireos have been observed upstream of the dam in habitat that was recently cleared of giant reed (VCWPD 2010). The District conducts minor vegetation management and dam maintenance in this area.

In the Santa Clara River watershed least Bell's vireo habitat occurs in extensive patches within the floodplain of the mainstem and in tributaries such as Santa Paula Creek and Sespe Creek. Much of the river and creek bottom area is open and sandy. The system is highly dynamic and the mosaic of willow thickets and open sandy channels change location frequently. Approximately 5,000 acres of river bottom occur along the Santa Clara River over more than 30 miles from the river mouth to the Ventura County line. The District maintains approximately 9.1 miles of levees on the main stem and 23 tributary channels and side drains that enter the Santa Clara River or Sespe Creek as well as three stream gauges and hydrography sampling locations, and the Piru storage and stockpile site. Additionally, the Corps recently constructed approximately 3-miles of channel facility in lower Santa Paula Creek. The District has not yet taken this facility over for maintenance, but is expected to in the next few years. Facilities that are within habitat that could become suitable for Least Bell's vireos if not property maintained, total approximately 46 acres.

The Calleguas Creek watershed is an alternating mix of heavily disturbed reaches and more natural channels. Starting downstream near Mugu Lagoon, Calleguas Creek is a channelized facility with levees on both banks from Highway 1 to just upstream of University Drive bridge at Camarillo Regional Park, a distance of 5.8 miles. In this area the District maintains the vegetation in an early seral state by discing, leaving a vegetated strip along alternating sides of the low flow channel every other year. This allows for a slightly more developed vegetation band along the water for wildlife use. Revlon slough is similar to lower Calleguas Creek in that the District maintains the channel and levees with annual discing and leaving a vegetated strip. Adjacent land uses comprise primarily active agricultural fields, limiting the availability of adjacent upland foraging habitat. Much of these reaches are not suitable for least Bell's vireo nesting, but may serve as foraging habitat for traveling birds nesting upstream.

From Conejo Creek to Pleasant Valley Road (approximately 2 miles), Calleguas Creek is a natural channel and the District does not conduct maintenance in this reach. Upstream of

Pleasant Valley Road, the District maintains bank protection facilities and levees on one or both sides of Calleguas Creek for approximately 3.2 miles to the former Seminary Road Bridge. Willow habitat is sparse and likely not suitable for least Bell's vireo nesting in this stretch.

Upstream of Upland Road in Camarillo, Calleguas Creek changes names to Arroyo Las Posas. Another 4-miles upstream, District bank protection facilities begin near the Moorpark Waste Water Treatment Plant. Low quality habitat occurs within this reach upstream to Grimes Canyon. Patches of willows and cattails are allowed to remain in this reach, but the slopes and 15 feet at the toe are maintained vegetation free through herbicide application (glyphosate). At Hitch Boulevard, Arroyo Las Posas changes names again to Arroyo Simi. For the next 4-miles through Moorpark the channel is mostly rock riprap on both banks with an earthen bottom, maintained mostly vegetation free and provides little habitat value for least Bell's vireo. Several areas include only rock slopes on the north bank. Between Gabbert Canyon and Beltramo Road, approximately 4,700 linear feet of the Arroyo Simi south bank supports willow scrub habitat and perennial flows where least Bell's vireos could potentially nest and raise young. Through the Virginia Colony area the perennial creek is dense with willows and giant reed, and has largely unprotected banks. Least Bell's vireos are known to occur in this area. The only District facility here is the outlet of Canyon 2 near Collins Road. The only other suitable habitat for least Bell's vireo in the Arroyo Simi occurs in the Parker Ranch reach near Stearns Street and the Metrolink Station. The District is in negotiations with the landowner to take over maintenance of a 1-mile facility in this area.

The District also maintains several ancillary basins and washes that are maintained fully or partially vegetation free and may support marginal habitat for least-Bell's vireo within or adjacent to these facilities. The District does not conduct any maintenance along the Arroyo Santa Rosa from the confluence with Conejo Creek in Santa Rosa Park upstream to Blanchard Road Drain. Least Bell's vireos have been observed in Arroyo Santa Rosa near the Hill Canyon Road bridge.

At the time the draft recovery plan was issued (1998), the Santa Clara River watershed was thought to support 60 pairs of least Bell's vireos and the Ventura river was thought to support 1 to 2 pairs (Service 1998). As of 2001, the comprehensive estimate of least Bell's vireo territories in the Santa Clara river was 119 (Service 2006). In 2005 and 2006 avian surveys were conducted in the Santa Clara River watershed by Jim Greaves and Zev Labinger. These surveys detected 84 male least Bell's vireos in 2005 and 67 males in 2006 in the portion of the Santa Clara River that is within Ventura County (Labinger at al. 2011). The locations thought to support the largest areas of breeding habitat for least Bell's vireo are predominately in the lower Santa Clara River watershed, within Ventura County (Labinger et al. 2011). The largest known populations in the Santa Clara River are centered around the Freeman diversion, Fillmore fish hatchery, and Hedrick Ranch.

Recovery of the Least Bell's vireo

The draft recovery plan identified the O&M Program area to be within the historical and current range of the least Bell's vireo. The recovery plan identified 14 vireo "population/metapopulation units," which must show stable or increasing populations in order to downlist the least Bell's vireo to threatened status. The Santa Clara River is one of these 14 population/metapopulation

units essential to the recovery of the species. The proximity of the Ventura River and Calleguas Creek watersheds to the Santa Clara River makes these habitats a valuable resource for achieving a stable or increasing population in the Santa Clara River unit. If habitat within the Ventura River and Calleguas Creek watersheds becomes increasingly utilized by least Bell's vireos, this area could provide a source population for birds that may ultimately select territories in the Santa Clara River watershed.

Southwestern willow flycatcher

Within Ventura County, southwestern willow flycatchers are known to occur within the Ventura River, Santa Clara River, and in various locations within the Calleguas Creek watershed (Figure 3). The suitable habitat within these watersheds is located within the floodplain but will change in extent and configuration when large storms scour vegetation, and regrowth occurs in the following seasons. Because of this dynamic, the entire primary floodplain area of each of these watersheds provides potentially suitable habitat and is quantified in table 9, along with the acres of District facilities that are within these suitable habitat areas in each watershed. Facilities currently included in the O&M Program that may affect southwestern willow flycatchers are listed in Appendix A, Table 4.

Table 9. Total potential habitat and facilities within potential habitat for southwestern willow flycatcher.

	Total potential habitat (Acres)	Facilities in potential habitat (Acres)
Ventura River	1,500	32
Santa Clara River	6,700	45
Calleguas Creek	2,300	84
TOTAL	10,500	161

In the Ventura River watershed, the habitat conditions for southwestern willow flycatcher match those of the Least Bell's vireo, described in the section above. Southwestern willow flycatchers have been identified in the Ventura River, approximately 1 mile below the confluence with San Antonio Creek and above Matilija Dam. Nesting has not been documented in the Ventura River below Matilija Dam, where various District facilities are located, however, there is suitable habitat present and as habitat conditions continue to improve in local watersheds, the probability of the Ventura River supporting nesting activity in the future is high.

In the Santa Clara River watershed, the habitat conditions for southwestern willow flycatcher are similar to those of the Least Bell's vireo, described in the section above; however, southwestern willow flycatchers tend to prefer a more complex riparian structure that includes cottonwoods, willows, and a herbaceous understory. Southwestern willow flycatchers are known to occur in extensive thickets of willow scrub at the California Department of Fish and Game hatchery east of the City of Fillmore, near the confluence with Balcom Canyon, and just west of Santa Paula near South Mountain Road. The Santa Clara River system is highly dynamic, and the mosaic of willow thickets and open sandy channels change frequently. In any given year or series of years, a low flow channel can persist during the spring potentially supporting the development of riparian habitat suitable for flycatcher nesting, so all district facilities in the floodplain could potentially be located within or adjacent to suitable habitat for the flycatcher.

In the Calleguas Creek watershed, the creeks are generally narrow, which is thought to be less suitable for this species' riparian foraging and nesting requirements, and therefore the amount of suitable habitat for the southwestern willow flycatcher is likely less than described for the least Bell's vireo in the section above. Southwestern willow flycatchers have been observed in Conejo Creek and in Hill Canyon near the wastewater treatment plants, but not elsewhere in the watershed.

A majority of southwestern willow flycatcher observations in Ventura County were in late May and early June when willow flycatchers of several races are migrating in concentrated numbers. These birds are likely migrating through the area and are using habitat in the Ventura River, Santa Clara River and Calleguas Creek watersheds as stop-over habitat for resting and foraging. In 2006 singing birds were observed at United Water property near Highway 118, Hedrick Ranch Nature Area, and west of the Fillmore Fish Hatchery (Labinger at al. 2011) indicating that breeding attempts may be likely in these areas.

Recovery of the Southwestern Willow Flycatcher

The action area is located within the Coastal California Recovery Unit identified in the final recovery plan. As described in the 2002 recovery plan, this recovery unit stretches along the coast of southern California from just north of Point Conception south to the Mexico border. As of 2002 there were 186 known southwestern willow flycatcher territories in this recovery unit, representing 19 percent of the rangewide total, distributed along 15 relatively small watersheds, mostly in the southern third of the recovery unit. All known territories in this recovery unit were found in native or native-dominated habitats. The recovery unit is further divided into management units. The Santa Clara River is designated as a management unit within the Central California Recovery Unit. The metapopulation in his management unit has been identified for increased population stability and enhancement. The minimum number of territories targeted for this management unit before the southwestern willow flycatcher can be reclassified to threatened is 25.

Southwestern willow flycatcher territories have been detected in small numbers in the Santa Clara Management Unit, ranging from 0 to 13 territories annually between 1995 and 2001 (Service 2002b). In 2007 there were 8 territories estimated to be occupied throughout the Santa Clara Management Unit (Durst et al. 2008). In 2005 and 2006 Labinger and Greaves detected 7 southwestern willow flycatchers in the Ventura County portion of the Santa Clara River (Labinger et al. 2011).

Southwestern willow flycatcher critical habitat

Within Ventura County, designated critical habitat is located in the Santa Clara Management Unit, and includes the Ventura River, Santa Clara River and Piru Creek. The proposed critical habitat units are summarized in Table 6 and are shown in Figure 3.

Table 10. Proposed southwestern willow flycatcher critical habitat units within Ventura County and VCWPD facilities within proposed critical habitat (calculated based on GIS overlays of VCWPD facilities and critical habitat boundaries).

Unit	Location	Proposed CH (Acres)	Facilities in CH (Acres)
Ventura River	Ventura River from the ocean to Matilija Dam	1,445	29
Santa Clara River	Santa Clara River from the ocean to the City of Santa Clarita, including Castaic Creek.	9,505	31
Piru Creek	Piru Creek from the confluence of the Santa Clara River to just past the Ventura County Line	1,862	0

Southwestern willow flycatcher habitat within the action area is characterized by riparian vegetation dominated by native willows, cottonwoods, sycamores, and invasive giant reed and salt cedar. The extent and quality of southwestern willow flycatcher habitat within these critical habitat units naturally fluctuates through time as large storm events scour vegetation and subsequent low flow seasons allow vegetation to regrow. Channel morphology in these units also changes drastically with large storm events such that vegetation may not regrow in the same locations after storm events, thereby causing the locations of territories to shift as conditions change.

Approximately 60 acres of facilities are currently within proposed critical habitat for the southwestern willow flycatcher. Much of the area within existing facilities is maintained as bare earth or hardscape and does not support the primary constituent elements of southwestern willow flycatcher critical habitat. For example, the District currently maintains a 15-foot vegetation-free area at the foot of levees. These areas may fall within proposed critical habitat boundaries but do not currently support the primary constituent elements. Other areas subject to O&M Program activities including mitigation/restoration projects support ideal habitat for the species.

EFFECTS OF THE ACTION

Tidewater goby

Tidewater gobies and their eggs located adjacent to District facilities may be injured or killed during maintenance activities that occur within standing water within lower portions of the Ventura River, Santa Clara River, Ormond Lagoon and Calleguas Creek. A variety of O&M Program activities will adversely affect tidewater gobies in these areas including routine maintenance activities, facility repair; BEMP activities; and mitigation/restoration activities. Current facilities subject to the O&M Program activities that would adversely affect tidewater gobies are listed in Appendix A, Table 1. The Service anticipates that additional facilities may be added to the O&M Program over time, and that the effects to tidewater gobies from these facilities would be equivalent to the effects described below.

Tidewater gobies may be directly injured or killed by heavy equipment entering occupied habitat for the removal of sediment, vegetation, or other routine maintenance, repair, or mitigation/restoration activities. The District has proposed to work within suitable habitat for tidewater gobies when conditions are dry and will not support the species to the maximum extent possible thereby minimizing potential effects to the species. In the Ventura River, some habitat near the levees and drains may never go dry and therefore maintenance and repair activities

would need to be conducted within occupied habitat. Additionally, mitigation/restoration activities may occur in the lower Ventura River where tidewater gobies may occur; however project activities are anticipated to occur outside of wetted areas, and the BMPs and minimization measures are anticipated to avoid injury or killing of tidewater gobies during mitigation/restoration activities.

In the Santa Clara River, maintenance within suitable habitat is restricted to one stream gauge and one outlet and may require work when tidewater gobies are present. In Ormond Lagoon, routine maintenance is only anticipated to occur when the channel is dry thereby precluding adverse effects to tidewater gobies from routine maintenance activities. However, repair activities at Facilities within Ormond Lagoon may require work when water is present.

In Calleguas Creek, vegetation mowing, discing, sediment removal and trash removal occurs when flow is confined to a small channel. Tidewater gobies have been documented up to 2,800 feet above Highway 1 in Calleguas Creek, and this distance will likely fluctuate through time as storm conditions alter passage conditions for tidewater gobies. Tidewater gobies could be crushed whenever heavy equipment traverses the low flow channel. The total area of potential tidewater goby habitat within Calleguas Creek is large (213 acres) however, because O&M Program activities would only occur during low flow conditions, the amount of habitat potentially affected in any given year is anticipated to be much lower.

The potential exists for the O&M Program to conduct repair or other activities that would require relocating tidewater gobies out of the project area. These activities are estimated to affect no more than 10 percent of facilities within potential tidewater goby habitat in the Ventura River, Santa Clara River, and Ormond Lagoon, and 1 percent of facilities within suitable habitat in Calleguas Creek in any given year (Table 11). These effects are anticipated to occur within the footprint of existing facilities, and therefore this 10 percent and 1 percent per year does not represent a compounding effect to habitat; rather, these effects would be confined to a specific footprint where optimal habitat is not expected to generally occur.

Table 11. Acreage of facilities within potential habitat for tidewater gobies and the amount of habitat anticipated to require tidewater goby relocation in any given year.

	Facilities in potential habitat (Acres)	Habitat requiring goby capture/relocation (Acres)
Ventura River	29	3
Santa Clara River	1	0.1
Ormond Lagoon	1	0.1
Calleguas Creek	213[1]	2[2]
TOTAL	244	4.2

Dewatering activities may result in the death of any tidewater gobies in the dewatered area due to stranding resulting in desiccation, suffocation, or opportunistic predation. To minimize stranding the District has proposed to relocate all tidewater gobies out of areas to be dewatered. Tidewater

[1] Includes entire channel area of Revolon slough and Calleguas Creek to the first dispersal barrier approximately 4 miles upstream in both drainages. Under low flow conditions far less area provides suitable habitat.
[2] Represents 1% of facilities in potential tidewater goby habitat.

gobies may be injured or killed during relocation activities, from mishandling, physiological stress, or from capture and relocation equipment. To minimize these potential effects the District proposes to use personnel with experience relocating tidewater gobies and follow guidelines in the Service's tidewater goby survey protocol. However, the potential exists that some tidewater gobies may not be located or may still be killed or injured during the capture and relocation procedures. Furthermore, tidewater gobies may be breeding during the proposed project, and any eggs located within the dewatering area would not be detectable. These eggs may be injured or killed during the proposed project.

Sedimentation that would occur during O&M activities may result in tidewater goby injury, death, and lowered breeding success. Sediment may affect tidewater gobies by impairing the efficiency of their gill filaments and exposing them to higher salinities and/or predation as they flee downstream. Direct effects of sedimentation include mortality, reduced physiological function, and burrow smothering. Indirect effects of sedimentation include potential alteration to the food web which could create cascading effects to higher trophic levels. A reduction in phytoplankton can be attributed to increased turbidity, which can therefore reduce zooplankton, in turn reducing benthic macroinvertebrates, and thus reducing prey available to tidewater gobies (Henley et al. 2000). These effects would be minimized by the District's proposed implementation of standard BMPs for the project, which includes measures to minimize erosion and sedimentation.

Construction equipment and materials that have the potential to contribute pollutants to storm water discharges include vehicle fluids (e.g., oil, grease, petroleum, coolants, etc.), raw landscaping materials and wastes (e.g., plant materials, etc.), and general litter. These materials may injure or kill tidewater gobies. The release of these materials into tidewater goby habitats would be minimized by the implementation of the general BMPs, which includes measures to minimize or avoid the release of contaminants into tidewater goby habitat.

Maintenance activities would include weed control. Herbicides may be used if other non-chemical weed control methods have been exhausted. The specific herbicide that would be used in all aquatic habitat areas is glyphosate with Agri-dex or similar aquatically-approved surfactant. Tidewater gobies can be exposed to herbicides in aquatic habitats through direct overspray of wetlands, drift from treated areas, or contaminated runoff from treated areas.

Glyphosate is a systemic herbicide that will kill broadleaf and grass species by inhibiting the production of aromatic amino acids in plants and some microorganisms that are necessary to build proteins (Devine et al. 1993). Because many animals lack the amino acid synthesis pathway that glyphosate disrupts, it is considered to have low potential to cause toxicity in animals (Devine et al. 1993). The half-life of glyphosate in pond water ranges between 12 days and 10 weeks depending on environmental conditions (Extoxnet 1996), however, the half-life in brackish or saline water may be different. No information is available regarding the toxicity of glyphosate products specifically to tidewater goby. Toxicity studies on bluegill sunfish (*Lepomis macrochirus*) and rainbow trout (*Oncorhynchus mykiss*) indicate that Aquamaster herbicide is

practically non-toxic[3] to these species (Monsanto 2005). Studies compiled by the Pesticide Action Network indicate that glyphosate ranges from not acutely toxic to moderately toxic depending on the species of fish[4] (Kegley et al., 2010). Because the toxicity of glyphosate-containing products can vary significantly between species, a conservative assumption would be that glyphosate-containing products are moderately toxic to tidewater gobies. Because tidewater gobies would only be exposed to glyphosate through overspray, the actual glyphosate concentration that tidewater gobies would be exposed to is anticipated to be much less than the application concentration, due to dilution by estuary/lagoon waters. This diluted concentration is anticipated to not result in toxic effects to tidewater gobies.

Most glyphosate products are formulated to contain surfactants that allow the active ingredients to spread over and penetrate the plant cuticles. Surfactants can be the most toxic portion of a pesticide product. The glyphosate used in aquatic areas will be formulated without a surfactant. When a surfactant is absolutely necessary the product Agri-dex by Helena Chemicals, will be used (BMP-9), and has been approved for aquatic applications due to its low toxicity.

Effects of the BEMP program on tidewater goby

When the criteria for initiating activities under the BEMP program are met, the sand berm between Ormond Lagoon and the ocean would be groomed to decrease the beach elevation such that Ormond Lagoon would be allowed to breach at a lower elevation than it would if the grooming did not occur. The BEMP program is designed such that the beach grooming itself would not cause a breach, rather, the BEMP program will lower the elevation of the berm such that a subsequent rain event would raise the water level of Ormond Lagoon and allow a natural breach to occur. Natural breaches that occur due to storm events have been demonstrated to have very little adverse effects on tidewater goby populations while artificial breaches can substantially adversely affect the species.

During natural breach events, a limited number of tidewater gobies may be washed out to the ocean, while the majority of fish are able to persist within the estuary/lagoon. In a study by Lafferty et al. (1999), tidewater goby populations throughout Santa Barbara and Ventura Counties were surveyed before and after large flood events. Results showed that all of the populations that were surveyed persisted through the flood events, and that the density of tidewater gobies prior to and after the storms were not significantly different (Lafferty et al. 1999). Tidewater gobies can survive in ocean water for a limited amount of time and may be able to disperse to another estuary/lagoon or back into the same feature they came from. This is the mechanism that is thought to have sustained tidewater goby metapopulations throughout their range and underscores the importance of local populations, not individual fish, as the important unit for conservation (Lafferty et al. 1999).

This is in contrast to unnatural breach events, where tidewater gobies and other estuarine fish are not queued by precipitation events to find refuge, and large numbers of individuals can become stranded on the estuary shores or be killed by a quick transition to high saline water as they are

[3] The concentration that causes the mortality of 50 percent of exposed individuals was greater than 1,000 milligram/liter (mg/L) for both species.

[4] The concentrations that caused the mortality of 50 percent of exposed individuals was between 1 mg/L and greater than 1,000 mg/L for several species of fish.

washed into the ocean. Tidewater gobies are thought to be weak swimmers and are intolerant of currents, preferring slack-water habitats (Swenson 1995). These habitats may become abruptly dewatered during un-natural breaching events that do not occur with a simultaneous influx of water as would happen during a storm, and can leave tidewater gobies stranded on the inner shores of the lagoon. Furthermore, tidewater gobies have wide tolerances of salinity (0 – 41 parts per thousand) (Sewnson 1995), but require some time to acclimate and may not be able to survive a quick transition from low saline lagoon waters to the full salinity of the ocean that would occur during an unnatural breach event (C. Swift pers comm 2010).

In September 2010, the Santa Clara River estuary was artificially breached by an unidentified party, and the flats of the lagoon and the outer ocean beach to the north were "littered with dead small fish, mostly flathead minnows, green sunfish, and tidewater gobies" (C. Swift pers comm 2010). The tidewater goby mortality was attributed primarily to stranding, while a minority of the fish were potentially killed because they were exposed too rapidly to full saline water (C. Swift pers comm 2010).

The BEMP program is not anticipated to cause a breach without a storm event and is therefore not anticipated to have the adverse effects to tidewater gobies that an artificial breaching event would. The BEMP program has the potential to increase the number of naturally-occurring breaches that occur, however we do not anticipate this to substantially adversely affect tidewater gobies due to their documented persistence of tidewater gobies in lagoons following storm events and natural breaches.

<u>Recovery of the tidewater goby</u>
The goal of the tidewater goby recovery plan is to conserve and recover the tidewater goby throughout its range by managing threats and perpetuating viable metapopulations within each recovery unit while maintaining morphological and genetic adaptations to regional and local environmental conditions. We do not expect the O&M Program to substantially affect the conservation of the tidewater goby within the Los Angeles/Ventura Recovery Unit, in terms of the recovery strategy described in the recovery plan because:

1. The tidewater goby recovery plan emphasizes the importance of the conservation of population units rather than individual fish, and the effects of the O&M Program are not expected to cause population-level declines in the Ventura River, Santa Clara River, Ormond Lagoon or Calleguas Creek; and

2. The O&M Program would not adversely affect the metapopulation dynamics between each individual population in the Los Angeles/Ventura Recovery Unit.

In summary, the proposed action could adversely affect tidewater goby adults, juveniles, and/or eggs that may occur within the Ventura River, Santa Clara River, Ormond Lagoon, and Calleguas Creek through capture and relocation, stranding, crushing, increased sedimentation, exposure to glyphosate, and implementation of the BEMP. These effects will be minimized by the District's implementation of the minimization measures described above, and are not anticipated to substantially affect the survival of the species in the Ventura River, Santa Clara River, Ormond Lagoon or Calleguas Creek. These routine maintenance, repair, and

mitigation/restoration projects are not anticipated to compromise the recovery of the tidewater goby.

Tidewater goby critical habitat

Critical habitat for the tidewater goby may be adversely affected by the routine maintenance, repair, and mitigation/restoration components of the O&M Program through the removal of vegetation and sediment that contribute to primary constituent elements. Vegetation removal may be temporary or permanent depending on the specific project activity. For example, vegetation within 15 feet of levees will be permanently removed, whereas invasive vegetation in mitigation/restoration areas would be temporarily removed to allow native vegetation to grow back. Most of the O&M Program Facilities are maintained vegetation-free and do not support this component of the PCEs for tidewater gobies. Infrequently, areas that are intended to be maintained vegetation-free are not maintained and vegetation grows back to support the PCEs once again. In these cases, permanent vegetation removal is required, but the footprint of such removal will always be within that of existing District facilities. For the purposes of this consultation, we will assume that all District facilities are intended to be maintained vegetation free, but that 10 percent per year have mature vegetation that regrew and requires removal or require some kind of repair that may affect critical habitat. Because the District has proposed to avoid activities within Ormond Lagoon when water is present, we do not anticipate adverse effects to unit VEN-3. There are no district facilities within VEN-2.

The removal of vegetation associated with the construction of new District facilities is not covered under this biological opinion. Such new facilities would be permitted individually and then added to the O&M Program once initial vegetation removal activities have occurred. Therefore, the addition of new facilities to the O&M Program will not generate additional adverse effects of critical habitat that have not been adequately analyzed in other consultations.

O&M Program activities also include mitigation/restoration activities such as invasive plant removal. Mitigation/restoration activities may occur within VEN-1 and VEN-2; however, the vegetation species generally targeted for removal (e.g. giant reed, tamarisk, tree of heaven, etc.) is not typically characteristic of tidewater goby habitat. Mitigation/restoration activities may occur adjacent to habitat that contains PCEs, but is not anticipated to occur within habitat that supports the PCEs. Mitigation/restoration activities are not anticipated to occur within VEN-3 or VEN-4.

The BEMP program would affect critical habitat unit VEN-3 (Ormond Lagoon), and has the potential to increase the number of breaches that occur. The frequency at which the BEMP would be initiated is difficult to determine; however, based on the program criteria, and frequency of implementation in the past, we anticipate that the BEMP would be initiated approximately one time per year. Because the habitat in VEN-3 has developed along with a flood/breach regime, and because the breaches under the program would still be initiated by natural conditions (freshwater input from storm runoff) the potential additional breaches are anticipated to have an insignificant effect on the PCEs for tidewater goby critical habitat.

Table 12. Maximum yearly tidewater goby critical habitat anticipated to be affected by O&M Program activities.

Unit	Designated CH (Acres)	Facilities within Designated CH (Acres)	CH Affected by routine maintenance and repair (Acres)	CH Affected by mitigation/ restoration (Acres)
VEN-1	50.3	1.7	0.2	0
VEN-2	360.5	0	0	0
VEN-3	44.4	0.78	0	0
VEN-4	N/A	0	0	0

In summary, as described in the Environmental Baseline section above, the critical habitat units in the designated and proposed critical habitat rules are similar such that we anticipate that effects to designated and proposed critical habitat are equivalent. Routine maintenance and repair activities may adversely affect up to 0.2 acres of tidewater goby critical habitat in unit VEN-1 per year, however these effects are small in comparison to the total habitat available (0.4 percent) and are not anticipated to compromise the function of VEN-1.

California red-legged frog

The only California red-legged frog populations that are anticipated to be affected by the O&M Program are within the Ventura River watershed. District facilities within the Ventura River contain habitat for California red-legged frog breeding, feeding, and sheltering. California red-legged frogs may be injured or killed during the implementation of O&M Program activities. The Service anticipates that additional facilities within the Ventura River watershed may be added to the O&M Program over time, and that the effects to California red-legged frogs from these facilities will be the equivalent to the effects described below.

The Ventura River currently contains approximately 25 acres of facilities within suitable habitat for California red-legged frogs. Within any given year, up to 10 percent of these facilities (2.5 acres) may require maintenance or repair activities that involve activities that could injure or kill California red-legged frogs. Additionally, up to 10 acres of mitigation/restoration activities per year may occur within suitable habitat for California red-legged frogs; however, the amount of suitable habitat within any given 10-acre restoration project site is not anticipated to be entirely suitable for California red-legged frogs. Based on the records of California red-legged frogs in the Ventura River, we anticipate approximately 10 California red-legged frogs may be present per acre of suitable habitat; however, this number may be larger or smaller depending on site specific conditions. Based on this estimate of California red-legged population density we expect that up to 25 California red-legged frogs may be affected by maintenance and repair activities each year. We also estimate that up to 50 California red-legged frogs may be affected by mitigation/restoration activities each year.

California red-legged frogs may be injured or killed by inadvertent trampling by workers from foot traffic and operation of equipment during the removal of sediment, vegetation, or other routine maintenance, repair, or mitigation/restoration activities. This effect would be minimized by the District's proposal to conduct pre-construction surveys and to have a biologist present during vegetation clearing activities in order to identify California red-legged frogs in the project area. Any California red-legged frogs found and determined by the biologist to be at risk would be relocated to a nearby suitable habitat. It is possible that not all California red-legged frogs

within the proposed disturbance area would be detected during these surveys, and may be injured or killed despite survey efforts intended to detect their presence.

California red-legged frogs could be injured or killed if they are improperly handled or contained during capture and relocation efforts. Larval amphibians have been shown to be sensitive to latex, nitrile, and vinyl, with latex and nitrile causing up to 100 percent tadpole mortality following only 30 to 90 seconds of direct contact (Cashins et al. 2008). Effects of these materials on adult frogs are less well documented. Rinsed vinyl gloves appear to be the least toxic alternative, when the use of gloves is necessary (Cashins et al. 2008). If gloves containing these products are worn during capture and relocation activities, there is the potential that California red-legged frogs could be injured or killed. Additionally, adverse effects due to handling and relocation could be increased or prolonged if a suitable relocation area is not identified prior to initiating surveys. These threats should be minimized by the District's proposed use of biologists with experience in the capture and relocation of these species.

Relocated California red-legged frogs may be at risk of injury or death through predation or dehydration during an attempt to return to a work area from which they had been moved. This risk may increase with the distance of the relocation site from the work area. However, relocating individuals will minimize the direct risk of injury or mortality as a result of construction activities.

Handling California red-legged frogs, or introducing equipment into their breeding ponds, can also result in the spread of chytrid fungus (*Batrachochytrium dendrobatidis*), a pathogen linked to declines in amphibians. Chytrid fungus is a water-borne fungus that can be spread through direct contact between aquatic animals and by a spore that can move short distances through the water. The fungus can decimate amphibian populations, causing fungal dermatitis, which usually results in death in 1 to 2 weeks. Infected animals may spread the fungal spores to other ponds and streams before they die. Once a pond has become infected with chytrid fungus, the fungus stays in the water for an undetermined amount of time. If California red-legged frogs that are relocated from the project are infected with chytrid fungus, they may spread the fungal spores to uninfected individuals in the relocation areas. If they are not infected, they may become infected through exposure to infected amphibians inhabiting the relocation area.

California red-legged frogs are known to be more surface active (e.g., foraging, dispersing) at night. If trenches or other excavations are left open overnight, California red-legged frogs may fall in and become trapped. Trapped individuals may be more vulnerable to predators *(*e.g., raccoons (*Procyon lotor*)) or they may exhaust themselves trying to get out. If they remain in the trench until daylight, they may desiccate in the sun, be exposed to daytime predators (e.g. great blue herons (*Ardea herodias*)), or be found in harm's way when trench installation activities resume.

Glyphosate is the active ingredient in a variety of herbicides including Roundup, Rodeo, Aquamaster, Buccaneer, Glyfos, Honcho, Touchdown, Vision, Duramax, Rattler, and others. Glyphosate is a systemic herbicide that will kill broadleaf and grass species by inhibiting the production of aromatic amino acids in plants and some microorganisms that are necessary to build proteins (Devine et al. 1993). Because many animals lack the amino acid synthesis

pathway that glyphosate disrupts, it is considered to have low potential to cause toxicity in animals (Devine et al. 1993). Most glyphosate products are formulated to contain surfactants that allow the active ingredients to spread over and penetrate the plant cuticles. Surfactants can be the most toxic portion of a pesticide product. The surfactant associated with many glyphosate products is a polyethoxylated tallowamine (POEA) surfactant.

California red-legged frog eggs, tadpoles, juveniles and adults can be exposed to glyphosate products and POEA surfactants in aquatic habitats through direct overspray of wetlands, drift from treated areas, or contaminated runoff from treated areas. The half-life of glyphosate in pond water ranges between 12 days and 10 weeks (Extoxnet 1996). Additionally, juvenile and adult California red-legged frogs can be exposed in terrestrial habitats that have been treated. Glyphosate and POEA readily sorbs to soil particles and can be degraded by microbes in 7 to 70 days depending on soil conditions (Giesy et al. 2000).

No information is available regarding the toxicity of glyphosate products specifically to California red-legged frogs. Studies exploring the lethal and sublethal effects of glyphosate products on other amphibians, including ranids, are available but are largely focused on aquatic stages of the species and formulations of glyphosate that include surfactants. Roundup Original Max, a glyphosate product with POEA surfactant, was demonstrated to be moderately to highly toxic to nine species of frog and toad tadpoles including five Ranidae species: wood frog (*Rana sylvatica),* leopard frog (*Rana pipiens*), Cascades frog (*Rana cascadae*), green frog (*Rana clamitans*), and American bullfrog (*Rana catesbeiana*) (Relyea and Jones 2009). The mortality of tadpoles is hypothesized to be caused by the lysis (i.e. destruction) of gill cells from exposure to surfactants (Lajmanovich et al. 2003, Edington et al. 2004) indicating that the life stage during which frogs and toads have gills may be particularly vulnerable. Glyphosate products containing POEA surfactants have also been shown to have sub-lethal effects to amphibians including decreased size, increased time to metamorphosis, tail malformations, and gonadal abnormalities (Govindarajulu 2008, Howe et al. 2004).

Several studies suggest that the toxicity of glyphosate products is linked with the surfactant, and not the glyphosate. Howe et al. (2004) compared the toxicity of glyphosate alone, to glyphosate with POEA surfactant, and POEA alone, on green frogs. Results indicated that the toxicity of glyphosate with POEA surfactant was similar to the POEA surfactant alone, which was much greater than glyphosate alone, indicating that the POEA was responsible for the toxic effects. In a comprehensive review of studies involving the effects of glyphosate on amphibians Govindarajulu (2008) concluded that the toxic effect of glyphosate products containing POEA are due to the POEA rather than the active glyphosate ingredient.

These studies indicate that glyphosate products formulated with POEA surfactants will likely kill or injure California red-legged frogs in aquatic habitats, with tadpoles being particularly vulnerable. Because glyphosate and POEA readily bind to soil and sediments, these chemicals may be less available to California red-legged frogs on land, however, research is needed to determine toxicity mechanisms and thresholds from terrestrial exposure. Effects to California red-legged frogs from the use of glyphosate products will be minimized by the District's proposal to use a glyphosate formulation that does not contain a surfactant. When a surfactant is absolutely necessary, the District will use Agri-dex, produced by Helena Chemicals.

Recovery of the California red-legged frog

As stated above in the Status of the Species Section, the recovery status of the California red-legged frog is considered within the scale of the Recovery Unit as opposed to the overall range. Because of the varied status of this species and differing levels of threats throughout its range, recovery strategies differ by recovery unit to best meet the goal of delisting the species. The goal of the recovery plan is to protect the long-term viability of all extant populations within each recovery unit. Overall, the strategy for the recovery of the California red-legged frog involves: (1) protecting existing populations by reducing threats; (2) restoring and creating habitat that would be protected and managed in perpetuity; (3) surveying and monitoring populations and conducting research on the biology and threats to the species; and (4) reestablishing populations of the species within its historical range (Service 2002a).

We do not expect the proposed project to substantially affect the conservation of the California red-legged frog within the Northern Transverse Ranges Recovery Unit, in terms of the recovery strategy described in the recovery plan (Service 2002a) because:

1. The proposed project would not increase the threats currently impacting the California red-legged frog in the Northern Transverse Ranges Recovery Unit;

2. The proposed project would not preclude our ability to survey and monitor populations of California red-legged frog or conduct research on the biology and threats to the species;
3. The proposed project would not preclude our ability to reestablish populations of the California red-legged frog within its historical range; and

4. Mitigation/restoration projects conducted in the Ventura River by the O&M Program may restore habitat and remove non-native plants, which are activities listed as "conservation needs" in the recovery plan.

In summary, projects within the O&M Program could adversely affect California red-legged frogs by capture and relocation, trampling by workers, crushing by equipment and entrapment in excavations. These effects will be minimized by the District's implementation of the minimization measures described above. These routine maintenance, repair, and mitigation/restoration projects are not anticipated to compromise the recovery of California red-legged frogs. We anticipate that up to 25 California red-legged frogs may be affected by maintenance and repair activities, and up to 50 California red-legged frogs could be affected by mitigation each year. We anticipate that only a small portion of these individuals affected would be injured or killed. We do not expect the loss of these few California red-legged frog adults, subadults, egg masses, or tadpoles to compromise the ability of the species to survive and recover.

California red-legged frog critical habitat

The District facilities that are located within designated critical habitat for the California red-legged frog currently total approximately 1.9 acres in STB-7 and 0.4 acres in VEN-1. The facility within STB-7 comprises the Matilija Dam and gauge (hardscape) and only supports PCEs peripheral to the hardscape. Within VEN-1, the facility within critical habitat is a stream gauge that would require vegetation trimming as the primary maintenance activity and may

affect up to 0.4 acres per year. In addition to routine maintenance and repair activities, up to 10 acres of mitigation/restoration activities may occur within the Ventura River watershed each year. This mitigation may occur entirely, partially, or not at all within either STB-7 or VEN-1.

California red-legged frog critical habitat may be adversely affected through vegetation trimming during routine maintenance activities within VEN-1 and STB-7. Vegetation surrounding the stream gauge in VEN-1 is maintained at a low height, trimming activities are conducted to bring the vegetation back to that low height. Trimming may adversely affect aquatic breeding habitat, non-aquatic breeding habitat and dispersal habitat depending on river morphology at the time of maintenance. Critical habitat in VEN-1 and STB-7 may also be affected by mitigation/ restoration activities within STB-7 and VEN-1. Vegetation removal would target invasive species such as giant reed, tamarisk and tree of heaven. These activities may temporarily affect aquatic breeding habitat, non-aquatic breeding habitat and dispersal habitat, depending on the location and extent of the mitigation/restoration activities, however, these effects would be temporary in nature and the long-term effect on critical habitat would ultimately be beneficial.

Table 13. Summary of potential annual effects to critical habitat for the California red-legged frog.

Unit	Designated CH (Acres)	Facilities in CH (Acres)	CH Affected by routine maintenance and repair (Acres)	CH Affected by mitigation/ restoration (Acres)
STB-7	145,121	1.9	1.9	10
VEN-1	2,915	0.4	0.4	10

In summary, the amount of critical habitat that would be affected by the O&M Program is small in comparison to the amount of critical habitat available in STB-7 and VEN-1, and is not anticipated to substantially affect the recovery function of these units. The mitigation/restoration projects may ultimately have a beneficial effect on California red-legged frog critical habitat after native vegetation has regrown and matured such that these areas support the PCEs.

Least Bell's vireo and southwestern willow flycatcher

Various District facilities within the Ventura River, Santa Clara River, and Calleguas Creek watersheds are within or adjacent to habitat that supports least Bell's vireo and southwestern willow flycatcher breeding, foraging, and sheltering. Least Bell's vireos and southwestern willow flycatchers may be injured, or killed during the implementation of O&M Program activities.

Approximately 255 acres of District Facilities occur in areas that have the potential to support habitat for least Bell's vireo, and 161 acres of District facilities are in areas that have the potential to support habitat for southwestern willow flycatchers (Tables 8 and 9). These facilities were predominantly designed to be maintained vegetation-free as described in the Environmental Baseline section above; however, if frequent vegetation control does not occur, suitable habitat may become established in these areas. The Service anticipates that additional facilities within the Ventura River, Santa Clara River, and Calleguas Creek watersheds may be added to the O&M Program over time, and that the effects to least Bell's vireos and southwestern willow flycatchers from these facilities will be equivalent in nature to the effects described below.

Up to 10 percent of District facilities each year may require maintenance or repair that would involve the removal of vegetation that provides suitable habitat for least Bell's vireos and southwestern willow flycatchers. This vegetation removal is anticipated to occur predominantly within the footprint of existing facilities that are managed vegetation-free, and therefore this 10 percent per year vegetation removal does not represent a compounding loss of habitat; rather this vegetation removal is confined to a specific footprint where habitat is not expected to generally occur.

Mitigation/restoration projects required by the Corps, California Department of Fish and Game, and others, which involve protecting and enhancing habitat for the least Bell's vireo and southwestern willow flycatcher by removing invasive vegetation, will help to offset the effect of habitat loss for both of these species. We estimate that up to 10 acres per year of mitigation/restoration would occur in the Ventura River and Calleguas Creek watersheds and up to 15 acres per year would occur in the Santa Clara River. In the first few years following invasive vegetation removal, the habitat value for least Bell's vireo and southwestern willow flycatcher is anticipated to be reduced, but as native vegetation grows back in, the mitigation/restoration sites are anticipated to provide higher quality habitat for the species.

Table 14. Estimated annual habitat removal for least Bell's vireo and southwestern willow flycatcher from maintenance and repair activities where vegetation has matured or repair activities that require vegetation removal are necessary, and from mitigation/restoration activities.

EXPECTED ANNUAL HABITAT REMOVAL (Acres)				
	Least Bell's Vireo		*Southwestern Willow Flycatcher*	
	Maintenance & Repair	Mitigation/ Restoration	Maintenance & Repair	Mitigation/ Restoration
Ventura River	3.5	10	3.2	10
Santa Clara River	4.6	15	4.5	15
Calleguas Creek	17.4	10	8.4	10
TOTAL	60.5		51.1	

To analyze the effects to least Bell's vireo and southwestern willow flycatcher from losing the amount of suitable habitat quantified in Table 14, we followed a three step process:

- **Estimation Method 1:** We estimated the theoretical maximum number of breeding pairs that could be affected by the O&M Program by calculating the maximum number of territories that could occur within the impact area, assuming full occupancy of territories. This estimation method is most appropriate for high quality habitat, where breeding pairs may be found in tight clusters, fully occupying the habitat (Table 15).

- **Estimation Method 2:** Because we know that the project area also contains habitat of moderate to low quality where all potential breeding territories are not occupied, we also estimated the pairs affected by the O&M Program using the average density of birds throughout the watershed (pairs of breeding birds per acre). This estimate would be accurate if the birds and their suitable habitat were distributed evenly throughout the floodplain, which does not account for the clustering of territories observed in Least Bell's vireos or irregular distribution of habitat (Table 16).

- Based on our knowledge of least Bell's vireos and southwestern willow flycatchers within the project area we synthesized the two methodologies described above to arrive at our best estimate of the expected number of breeding pairs for each species that we expect to be affected by the O&M Program; and that final result is depicted in Table 17.

The first method used to estimate the number of pairs of least Bell's vireos and southwestern willow flycatchers that would be affected by the O&M Program is designed to calculate the theoretical maximum pairs that could potentially be affected. Based upon the published territory sizes for the least Bell's vireo (0.5 to 7.5 acres per pair) and assuming a uniform distribution of territories and saturation of suitable habitat, the O&M Program could theoretically result in the removal of habitat for 11 to 122 pairs of least Bell's vireos from maintenance, repair, and mitigation/restoration activities. Based on the range of territory sizes for southwestern willow flycatcher (0.15 to 5.7 acres per pair) and assuming a uniform distribution of territories and saturation, the O&M Program could result in the removal of habitat for 13 to 347 pairs of southwestern willow flycatchers from maintenance, repair and mitigation/restoration activities. A breakdown of these effects by watershed is shown in Table 15.

Table 15. Theoretical maximum number of pairs of least Bell's vireo and southwestern willow flycatcher potentially affected annually, based on minimum and maximum territory size and assuming full occupancy of all territories. Numbers in parenthesis indicate the mean.

METHOD 1: THEORETICAL MAXIMUM PAIRS AFFECTED				
	Least Bell's Vireo		*Southwestern Willow Flycatcher*	
	Maintenance & Repair	Mitigation/ Restoration	Maintenance & Repair	Mitigation/ Restoration
Ventura River	1-7 (4)	2-20 (6)	3-21 (12)	2-67 (35)
Santa Clara River	1-10 (6)	2-30 (9)	1-30 (16)	3-100 (52)
Calleguas Creek	3-35 (19)	2-20 (6)	2-56 (29)	2-67 (35)
TOTAL	11-122 (50)		13-341 (179)	

These estimates based on territory size, and assuming full occupancy of suitable habitat, represent the theoretical maximum number of pairs that could be affected, however the number of pairs actually anticipated to be affected is far less based on the small proportion of suitable habitat and number of potential territories that are actually occupied by breeding pairs each year. This is particularly true for the Southwestern willow flycatcher, which has only been observed in very low densities throughout the Santa Clara River, and nesting has not been documented in the Ventura River and Calleguas Creek watersheds.

In order to obtain a more accurate estimate of the actual number of least Bell's vireos and southwestern willow flycatchers that may be affected by the O&M Program, we used the Santa Clara River floodplain as a proxy for the entire project area and calculated the average density of least Bell's vireos and southwestern willow flycatchers in the project area. To do this, we used biological survey data (described in the Environmental Baseline section) to estimate the total number of pairs of least Bell's vireos and southwestern willow flycatchers within the Ventura County portion of the Santa Clara River floodplain and divided the total potential habitat area by the total number of pairs.

Based on survey data for least Bell's vireos, the trajectory of least Bell's vireo population numbers, and expansion of habitat for least Bell's vireo in the Santa Clara River since the last survey data in 2006, we estimate that the portion of the Santa Clara River floodplain within Ventura County may currently support approximately 100 territorial males. For the purposes of this estimation, we will assume all 100 males are successful in attracting a mate, and therefore there are 100 pairs within this 6,700-acre area of potential suitable habitat. Using this estimation method, there would be an average of one pair of least Bell's vireos for every 67 acres of potentially suitable habitat within the Ventura County portion of the Santa Clara River floodplain.

Survey data for the southwestern willow flycatcher in the Santa Clara River floodplain is less robust than for the least Bell's vireo and therefore a watershed-wide total number of pairs is more difficult to determine. Durst et al. (2008) reported 8 pairs within the Santa Clara River management unit in 2007 (inclusive of the Ventura River, Piru Creek, San Francisquito Creek, Soledad canyon, and Big Tujunga Creek and portions of the San Gabriel River). Labinger et al (2011) reported 7 pairs throughout the Santa Clara River during surveys conducted in 2005 and 2006, although all suitable habitat was not surveyed. These survey results likely under-represent the actual number of birds present because southwestern willow flycatchers are difficult to detect after a pairs has formed (i.e., the male may no longer respond to taped calls played during surveys) and because surveys have only been conducted in limited areas of the Santa Clara River. For purposes of this estimation, we will assume that 8 pairs are located within the Ventura County portion of the Santa Clara River floodplain, within the project area. Using this estimation method, there would be an average of 1 pair of southwestern willow flycatchers for every 840 acres of potentially suitable habitat within the Ventura County portion of the Santa Clara River floodplain.

Table 16 shows the average number of pairs of least Bell's vireos and southwestern willow flycatchers we anticipate could be affected by the O&M Program throughout the project area based on the total occupancy and total potential suitable habitat area for the Santa Clara River. Because watershed-wide survey data for the Ventura River and Calleguas Creek watersheds is not available, we used the average least Bell's vireo density (one pair per 67 acres) and average southwestern willow flycatcher density (one pair per 840 acres) calculated for Santa Clara River for these watersheds.

Table 16. Average number of pairs of least Bell's vireos and southwestern willow flycatchers estimated to be affected by maintenance and repair and mitigation activities based on calculated average density of these species throughout the entire watershed.

METHOD 2: PAIRS AFFECTED BASED ON AVERAGE DENISTY				
	Least Bell's Vireo		*Southwestern Willow Flycatcher*	
	Maintenance & Repair	Mitigation/ Restoration	Maintenance & Repair	Mitigation/ Restoration
Ventura River	1	1	1	1
Santa Clara River	1	1	1	1
Calleguas Creek	1	1	1	1
TOTAL	6		6	

Using the theoretical maximum number of pairs affected (Method 1 - Table 15) would produce a substantial overestimate because this method assumes that all suitable habitat is occupied. The estimate based on average number of pairs (Method 2 - Table 16) also has uncertainty associated with it because it assumes a uniform distribution of least Bell's vireos and southwestern willow flycatchers and uniform distribution of suitable habitat over the entire watershed area, which is not biologically valid, particularly for least Bell's vireos. In the lower Santa Clara River, least Bell's vireos aggregate their nesting in high quality habitat areas, creating nodes where there may be several territories closely spaced together, but separated by other nodes by otherwise apparently suitable habitat.

Habitat for least Bell's vireo and southwestern willow flycatchers at District facilities covers the full spectrum from high to low quality. The theoretical maximum estimates (Method 1, Table 15) are more appropriate for estimating least Bell's vireo pairs affected by O&M Program activities in high quality habitat, and the density-based estimates (Method 2, Table 16) are more appropriate for estimating least Bell's vireo pairs in medium to low quality habitat. Therefore, for purposes of this biological opinion, we expect that the number of least Bell's vireos pairs that could be affected by the O&M Program annually is the mean of the estimates projected using the theoretical maximum (Method 1) and density-based estimates (Method 2), as shown in Table 17. Because southwestern willow flycatcher nesting is thought to be very low throughout the project area and has not been observed in the aggregated spatial orientation typical of least Bell's vireos in this area (Labinger et al. 2011, Service 2011), the expected number of pairs potentially affected by District activities are more realistically represented by the density-based projections (Method 2). The expected number of pairs of least Bell's vireos and southwestern willow flycatchers anticipated to be affected by the O&M Program annually is shown in Table 17.

Table 17. Expected pairs of least Bell's vireos and southwestern willow flycatchers projected to be affected by the O&M Program annually.

EXPECTED PAIRS AFFECTED ANNUALLY				
	Least Bell's Vireo		*Southwestern Willow Flycatcher*	
	Maintenance & Repair	Mitigation/ Restoration	Maintenance & Repair	Mitigation/ Restoration
Ventura River	3	6	1	1
Santa Clara River	4	9	1	1
Calleguas Creek	10	6	1	1
TOTAL	38		6	

The anticipated effects are likely to be predominately from habitat removal during the non-breeding season, when the birds are not present. Removal of suitable habitat for least Bell's vireo and southwestern willow flycatchers may occur when routine maintenance has been neglected at a facility thereby allowing establishment of suitable habitat, when repair activities are necessary, and during mitigation/restoration projects. Vegetation removed from habitat for the least Bell's vireo and southwestern willow flycatcher, even during the time of year when adults are not present can adversely affect these species. Least Bell's vireo and southwestern willow flycatcher adults often return to the previous season's territory to breed and are strongly territorial. Temporary or permanent loss of habitat may cause the species to seek out new

territories and breeding sites. Moving to an unfamiliar territory may expose least Bell's vireo or southwestern willow flycatchers to exhaustion and reduced fitness or starvation associated with decreased foraging opportunities, increased predation risk, inter- and intra-species interactions, and decreased probability of nesting success. The loss of habitat within a territory could also diminish available foraging and sheltering habitat for the birds. These effects will be minimized by the District's proposed measures to avoid vegetation removal during the breeding season (March 1 to September 15) to the maximum extent practical; to conduct surveys in any areas where vegetation removal would occur during the nesting season; and to avoid any active nests by a buffer distance established by Service-approved biologists.

If O&M Program activities occur when active nests are present in the action area, worker foot traffic and construction equipment could dislodge the nests and crush eggs. Young fledglings in the action area could be flushed from protected areas by worker or construction vehicle presence, excessive noise, or physical impact. The District has proposed to minimize these effects by conducting the surveys described in LBV-2 and establishing buffer zones described in LBV-3.

Anecdotal evidence also suggests that human presence can attract predators to least Bell's vireo and southwestern willow flycatcher habitat areas. Predators and cowbirds may both be capable of "homing in" on agitated least Bell's vireos and southwestern willow flycatchers, and subsequently destroy or parasitize nearby nests (The Nature Conservancy 1997, Chace et al. 2002). Project-induced alterations, reductions, or disturbances of occupied and potential least Bell's vireo and southwestern willow flycatcher habitat and an increased human presence may induce higher rates of cowbird parasitism and nest depredation. To minimize this effect, the District has proposed to conduct as much work as possible outside of the nesting season for these subspecies.

The O&M Program includes various activities that would occur adjacent to suitable habitat, but would not affect the habitat itself. Activities such as mechanical grading and paving access roads as well as repairing damaged concrete structures will produce noise and human traffic in areas adjacent to least Bell's vireo and Southwestern willow flycatcher nests. The least Bell's vireo and southwestern willow flycatcher are sensitive to prolonged, loud noise. In addition, excessive airborne or deposited dust may degrade habitat to the point that it is no longer suitable for the species. Project activities causing noise and dust include hammering piles, grading the access road, and moving vehicles on dirt roads. In particular, construction-related noise, vibration, and night lighting could adversely affect nesting and breeding behavior, resulting in a decrease in nesting success. If construction activity or noise increases once a least Bell's vireo or southwestern willow flycatcher pair has established a nest or breeding territory near the project activities, the pair may abandon their nest, resulting in a failed breeding attempt and an unnecessary expenditure of energy. This could cause failure of a nesting attempt, death of eggs and fledglings, exposure of adults to increased predation risk, violent inter- and intraspecific interactions, and decreased foraging opportunities. Moreover, birds rely on auditory signals in the form of songs, alarm and scolding calls, to establish and defend territories, attract a mate, feed and care for young at the nest, and to locate and evade potential predators (e.g., Scherzinger 1979). Ambient noise levels may hinder vital calls by the least Bell's vireo and southwestern willow flycatcher.

We have used 60 decibels (dB) as a practical threshold above which substantial impacts to the least Bell's vireo and southwestern willow flycatcher might occur. The 60 dB threshold is considered average conversation level from 3-feet away and is typically the level encountered under ambient conditions (i.e., without noise sources such as vehicles or tools). Based upon this threshold, RECON (1989) estimated that noise levels above 60 dB from March 15 to September 15 may impact least Bell's vireo reproductive success. While least Bell's vireos often continue to occupy areas subject to noise levels above 60 dB, one study has documented significantly reduced reproductive success due to noise impacts (U.S. Marine Corps 1995). A power mower at a distance of 3 feet is approximately 107 dB and a power saw at 3 feet is approximately 110 dB (Galen Carol Audio 2007).

The District proposes to avoid work adjacent to suitable habitat for least Bell's vireo and southwestern willow flycatchers during the breeding season to the maximum extent possible; however, due to the extent of O&M Program activities required each year, it is not feasible to entirely avoid work adjacent to occupied habitat throughout the breeding season. The duration required to complete O&M Program tasks adjacent to suitable habitat varies by the activity type. Typical durations for representative O&M activities in each of the three watersheds from data recorded between 2005 and 2011 are shown in Appendix B. These data show that on average, O&M Program activities require 4 days of work per facility per year, but that this duration will vary based on facility type and required maintenance. The highest number of days worked at any of these facilities over a 7 year timespan was 41 days. These data are representative of work activities that occur throughout the entire year, and therefore the number of days worked when least Bell's vireos and southwestern willow flycatchers are present would be lower. The average work duration adjacent to suitable habitat of 4 days per facility per year represents a low frequency of disturbance that is not likely to have a substantial adverse effect on least Bell's vireos and southwestern willow flycatchers that may inhabit areas adjacent to O&M Program activities.

Trash left during or after project activities could attract predators to work sites, which could prey on least Bell's vireos and southwestern willow flycatchers. For example, coyotes (*Canis latrans*) and raccoons are attracted to trash and could also prey opportunistically on many bird species. This potential impact will be reduced or avoided by careful control of trash at all O&M Program sites as specified in the BMPs.

Recovery of least Bell's vireo

The draft recovery plan for the least Bell's vireo calls for stable or increasing populations of "several hundred or more breeding pairs" within each of the population/metapopulation units in order for the species to be downlisted from endangered to threatened. Delisting will be considered when populations are stable or increasing over a 5-year period and when threats are reduced or eliminated so that populations/metapopulations are capable of persisting without significant human intervention or when perpetual endowments are secured for cowbird trapping and exotic plant control in riparian habitat.

We do not expect the proposed project to substantially affect the conservation of the least Bell's vireo, in terms of the recovery strategy described in the recovery plan because:

1. The current trend in the Santa Clara River population/metapopulation unit is increasing (Service 2006), and this increasing trend has been observed over a period during which the O&M Program has been operating in a manner proposed in this biological opinion (1996 to 2005); and

2. The mitigation/restoration portion of the O&M Program will target exotic plants for removal and may support cowbird trapping, thereby facilitating the reduction of these major threats to the species identified in the recovery plan.

Recovery of southwestern willow flycatcher

Within Ventura County the Santa Clara River is the most important watershed for the recovery of southwestern willow flycatchers, with the Ventura River and Calleguas Creek acting as supporting habitats that may facilitate metapopulation health. The Santa Clara River is one area within the Santa Clara River Management Unit within the Central California Recovery Unit. The metapopulation in this management unit has been identified for increased population stability and enhancement. The minimum number of territories targeted for this management unit before the southwestern willow flycatcher can be reclassified to threatened is 25.

We do not expect the proposed project to substantially affect the conservation of the southwestern willow flycatcher, in terms of the recovery strategy described in the recovery plan because:

1. The current trend in the Santa Clara River Management Unit is stable, and this trend has been observed over a period during which the O&M Program has been operating in a manner proposed in this biological opinion (1993 to 2007); and

2. The mitigation/restoration portion of the O&M Program will target exotic plants for removal and may support cowbird trapping, thereby facilitating the reduction of these major threats to the species identified in the recovery plan, and promoting the establishment of additional pairs.

In summary, projects within the O&M Program could adversely affect least Bell's vireos and southwestern willow flycatchers by removing habitat, or working in close proximity to nests during the breeding season. These effects will be minimized by the District's implementation of the minimization measures described above. These routine maintenance, repair, and mitigation/restoration projects are not anticipated to compromise the recovery of least Bell's vireos and southwestern willow flycatchers. We anticipate that a maximum of 25.5 acres of suitable habitat for least Bell's vireo containing approximately 17 pairs; and a maximum of 16.1 acres of suitable habitat for southwestern willow flycatchers containing approximately 3 pairs may be adversely affected each year by maintenance and repair activities. The effects to least Bell's vireos and southwestern willow flycatchers are anticipated to be predominately non-lethal (i.e., birds returning to territories where suitable habitat has been removed is the predominant adverse effect), and because habitat removal associated with maintenance and repair activities is confined to a defined footprint that is generally maintained free of suitable habitat, we do not expect the maintenance and repair activities to compromise the survival and recovery of least Bell's vireos or southwestern willow flycatchers.

We anticipate that a maximum of 35 acres of suitable habitat for least Bell's vireos and southwestern willow flycatchers containing approximately 21 pairs of least Bell's vireos and 3 pairs of southwestern willow flycatchers may be adversely affected each year by mitigation/restoration activities. The adverse effects from these activities are anticipated to be temporary in nature, and mitigation/restoration will ultimately benefit the species by enhancing native vegetation that provides higher quality habitat, allowing a higher number of pairs to occupy the area after the restoration is complete.

Southwestern willow flycatcher critical habitat

Critical habitat for the southwestern willow flycatcher would be adversely affected by the O&M Program routine maintenance, repair, and mitigation/restoration components through the removal of vegetation that supports suitable breeding, foraging, and sheltering habitat for the subspecies. Vegetation removal may be temporary or permanent depending on the specific project activity. For example, vegetation within 15 feet of levees will be permanently removed, whereas invasive vegetation in mitigation/restoration areas would be temporarily removed to allow native vegetation to grow back. Most of the O&M Program Facilities are maintained vegetation-free and do not support the PCEs for southwestern willow flycatcher. Infrequently, areas that are intended to be maintained vegetation-free are not maintained and vegetation grows back to support the PCEs once again. In these cases, permanent vegetation removal is required, but the footprint of such removal will always be within that of existing District facilities.

The removal of vegetation associated with the construction of new District facilities is not covered under this biological and conference opinion. Such new facilities would be permitted individually and then added to the O&M Program once initial vegetation removal activities have occurred. Therefore, the addition of new facilities to the O&M Program will not generate additional losses of critical habitat that have not been adequately analyzed in other consultations.

O&M Program activities also include mitigation/restoration activities such as invasive plant removal. These activities may occur anywhere within Ventura County, inside or outside of critical habitat units. All mitigation/restoration activities are anticipated to ultimately benefit habitat for southwestern willow flycatchers and will only have temporary impacts to critical habitat as described above.

For the purposes of this consultation, we will assume that all District facilities are intended to be maintained vegetation free, but that 10 percent per year have mature vegetation that unintentionally regrew and requires removal. We will also assume that the District will conduct 10 acres of mitigation/restoration work in the Ventura River and 15 acres of mitigation/restoration in the Santa Clara River per year. Based on these assumptions, we anticipate that up to 13 acres of critical habitat within the Ventura River and 18 acres of critical habitat within the Santa Clara River may be adversely affected each year (Table 18).

Table 18. Summary of potential annual effects to critical habitat for the southwestern willow flycatcher.

Unit	Proposed CH (Acres)	Facilities in CH (Acres)	CH Affected by routine maintenance and repair (Acres)	CH Affected by mitigation/ restoration (Acres)
Ventura River	1,445	29	3	10
Santa Clara River	9,505	31	3	15
Piru Creek	1,862	0	0	0

The amount of critical habitat that would be affected by the O&M Program is small in comparison to the amount of critical habitat available in the Ventura River and Santa Clara River units, and is not anticipated to substantially affect the function of the Santa Clara Complex. The mitigation/restoration projects may ultimately have a beneficial effect on southwestern willow flycatcher critical habitat after native vegetation has regrown and matured to the point where these areas support the PCEs.

CUMULATIVE EFFECTS

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

We are unaware of any non-federal actions that are reasonably certain to occur and are likely to adversely affect the tidewater goby and its critical habitat, California red-legged frog and its critical habitat, least Bell's vireo, southwestern willow flycatcher and/or critical habitat for the southwestern willow flycatcher.

CONCLUSION

The O&M Program includes routine maintenance, repair, and mitigation/restoration activities associated with the upkeep of flood control facilities throughout Ventura County. These activities will adversely affect tidewater gobies and their critical habitat, California red-legged frogs and their critical habitat, least Bell's vireos, and southwestern willow flycatchers and their critical habitat. The impacts of the O&M Program will change from year-to year; however, a majority of District facilities are maintained vegetation-free and the routine maintenance and repair activities are designed to keep them in that condition, which does not generally support habitat for listed species. Habitat removal is only anticipated to occur in areas where vegetation has been allowed to grow into suitable habitat and in areas where repair projects require temporary removal of habitat. Therefore, the effects of O&M Program maintenance and repair activities are anticipated to be limited to a small portion of habitat available for tidewater gobies, California red-legged frogs, least Bell's vireo and southwestern willow flycatchers (Table 19). Furthermore any permanent removal of habitat will be primarily confined to the footprint of existing facilities. Any permanent removal of habitat beyond the existing footprint will be minor and not represent a substantial loss of habitat. Overall, the O&M program is not anticipated to generate an additional loss of habitat.

O&M Program mitigation/restoration activities are anticipated to impact a maximum of 10 acres of habitat in the Ventura River, 15 acres of habitat in the Santa Clara River, and 10 acres of habitat in Calleguas Creek per year and may occur within or outside the boundaries of District facilities. Mitigation/restoration activities are anticipated to have temporary adverse effects to tidewater gobies, California red-legged frogs and their critical habitat, least Bell's vireos and southwestern willow flycatchers and their critical habitat; however the long-term effects of mitigation/restoration projects are anticipated to be beneficial to these species and critical habitats.

Table 19. Summary of anticipated effects to threatened and endangered species and their critical habitats

	Ventura River	Santa Clara River	Ormond Lagoon	Calleguas Creek	TOTAL
Tidewater Goby					
Suitable habitat affected by maintenance and repair activities (acres/year)	3	0.1	0.1	2	5.2
Expected take by maintenance and repair	All individuals within the affected area				Indeterminate
Suitable habitat affected by mitigation activities (acres/year)	0	0	0	0	0
Expected take by mitigation	0	0	0	0	0
Tidewater Goby Critical Habitat					
Critical habitat affected by maintenance and repair activities (acres/year)	0.2	0	0	N/A	0.2
Critical habitat affected by mitigation activities (acres/year)	0	0	0	N/A	0
California Red-Legged Frog					
Suitable habitat affected by maintenance and repair activities (acres/year)	2.5	N/A	N/A	N/A	2.5
Expected take by maintenance and repair (individuals)	25	N/A	N/A	N/A	25
Suitable habitat affected by mitigation activities (acres/year)	10	N/A	N/A	N/A	10
Expected take by mitigation (individuals)	50	N/A	N/A	N/A	50
California Red-legged Frog Critical Habitat					
Critical habitat affected by maintenance and repair activities (acres/year)	2.3	N/A	N/A	N/A	2.3
Critical habitat affected by mitigation activities (acres/year)	10	0	N/A	N/A	10
Least Bell's Vireo					
Suitable habitat affected by maintenance and repair activities (acres/year)	3.5	4.6	N/A	17.4	25.5
Expected take by maintenance and repair (pairs)	3	4	N/A	10	17
Suitable habitat affected by mitigation activities (acres/year)	10	15	N/A	10	35
Expected take by mitigation (pairs)	6	9	N/A	6	21
Southwestern Willow Flycatcher					
Suitable habitat affected by maintenance and repair activities (acres/year)	3.2	4.5	N/A	8.4	16.1
Expected take by maintenance and repair (pairs)	1	1	N/A	1	3
Suitable habitat affected by mitigation activities (acres/year)	10	15	N/A	10	35
Expected take by mitigation (pairs)	1	1	N/A	1	3
Southwestern Willow Flycatcher Critical Habitat					
Critical habitat affected by maintenance and repair activities (acres/year)	3	3	N/A	N/A	6
Critical habitat affected by mitigation activities (acres/year)	10	15	N/A	N/A	25

Tidewater goby
The O&M program is not anticipated to substantially interfere with the reproduction, numbers, and distribution of the tidewater goby because:

- O&M Program activities may require the temporary relocation of tidewater gobies out of a small portion of their habitat within the Ventura River, Santa Clara River, Ormond Lagoon and Calleguas Creek; however, the vast majority of each of these populations will be unaffected, and reproduction within each of these populations as a whole will not be compromised, therefore reproduction necessary to maintain the species-wide metapopulation will not be compromised.

- O&M Program activities are anticipated to result in the detection of no more than 10 dead tidewater gobies throughout the action area each year. This represents an insignificant number in comparison to the thousands of individuals that are projected to inhabit each of these populations, and is not a substantial decrease in numbers of tidewater gobies that exist range-wide.

- The O&M Program is not anticipated to interfere with metapopulation dynamics that facilitate the distribution of the species and maintain their distribution range-wide.

California red-legged frog
The O&M program is not anticipated to substantially interfere with the reproduction, numbers, and distribution of the California red-legged frog because:

- O&M Program activities may require the temporary relocation of California red-legged frogs out of a small portion of their habitat within the Ventura River, however, relocations will predominantly occur during the time of year that avoids the breeding season for California red-legged frogs, and reproduction within the Ventura River will not be substantially affected. The O&M program is not anticipated to have a substantial effect to reproduction when considering the species range-wide.

- O&M Program activities are anticipated to result in the take of up to 75 eggs, tadpoles, adults and juveniles each year, primarily through relocation. We anticipate the detection of no more than 1 dead adult or juvenile, 5 dead tadpoles, or 1 disturbed egg mass each year. The loss of this number of individuals is low in comparison to the number of individuals that are projected to inhabit the Ventura River, and is not a substantial decrease in numbers of California red-legged frogs that exist range-wide. Furthermore, restoration actions are anticipated to facilitate an increased number of individuals in the future.

- The O&M Program will not affect the distribution of California red-legged frogs range-wide, because the population will continue to persist in the Ventura River.

Least Bell's vireo
The O&M program is not anticipated to substantially interfere with the reproduction, numbers, and distribution of the least Bell's vireo because:

- O&M Program activities may require the removal of habitat primarily from areas where habitat does not routinely exist, and may interfere with reproduction of individuals that return to a territory that has been partially or fully removed. Because of the abundance of habitat that generally exists adjacent to affected areas, most of the affected least Bell's vireos are anticipated to find suitable alternative habitat, and reproduction within the Ventura River, Santa Clara River and Calleugas Creek as a whole will not be substantially affected. Therefore the overall reproduction of the species is not anticipated to be substantially affected.

- O&M Program activities are anticipated to result in the take of up to 38 least Bell's vireo each year, primarily through harm associated with finding alternative habitat. We anticipate the detection of no more than 1 dead adult or juvenile least Bell's vireo or the abandonment of no more than 1 active nest each year. The loss of this number of individuals is low in comparison to the number of individuals that are projected to inhabit the action area, and is not a substantial decrease in numbers of least Bell's vireos that exist range-wide. Furthermore, restoration actions are anticipated to facilitate an increased number of individuals in the future, which will vastly outweigh the loss of these few individuals.

- The O&M Program will not affect the distribution of least Bell's vireo range-wide, because the population will continue to persist throughout the action area and no barriers to dispersal will be created by the O&M Program.

Southwestern willow flycatcher
The O&M program is not anticipated to substantially interfere with the reproduction, numbers, and distribution of the southwestern willow flycatcher because:

- O&M Program activities may require the removal of habitat primarily from areas where habitat does not routinely exist, and may interfere with reproduction of individuals that return to a territory that has been partially or fully removed. Because of the abundance of habitat that generally exists adjacent to affected areas, most of the affected southwestern willow flycatchers are anticipated to find suitable alternative habitat, and reproduction within the Ventura River, Santa Clara River and Calleugas Creek as a whole will not be substantially affected. Therefore the O&M program will not interfere with overall reproduction of the species range-wide.

- O&M Program activities are anticipated to result in the take of up to 6 paris of southwestern willow flycatchers each year, primarily through harm associated with finding alternative habitat. We do not anticipate the detection of any dead southwestern willow flycatchers or the abandonment of any active nests. Restoration actions are anticipated to facilitate an increased number of individuals in the future that will promote increased numbers of southwestern willow flycatchers within the action area. On whole, we do not anticipate the O&M Program to substantially affect the number of southwestern willow flycatchers range-wide.

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- The O&M Program will not affect the distribution of southwestern willow flyactchers range-wide, because the population will continue to persist throughout the action area and no barriers to dispersal will be created by the O&M Program.

After reviewing the current status of the tidewater goby and its critical habitat, California red-legged frog and its critical habitat, least Bell's vireo, and southwestern willow flycatcher and its proposed critical habitat, the environmental baseline for the action area, the effects of the project activities on the reproduction, number and distribution of each species, and the cumulative effects, it is the Service's biological and conference opinion that the Corps' approval of the District's O&M Program is not likely to jeopardize the continued existence of the tidewater goby, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher and is not likely to destroy of adversely modify designated critical habitat for the tidewater goby, California red-legged frog, and the proposed critical habitat for the southwestern willow flycatcher.

This concludes formal conference for the proposed action. The Corps may request that the Service confirm the conference opinion on the proposed critical habitat of the southwestern willow flycatcher as a biological opinion if the critical habitat designation is finalized. The request must be in writing. If the Service reviews the proposed action and finds that there have been no significant changes in the action as planned or in the information used during the conference, the Service will confirm the conference opinion as the biological opinion on the project and no further consultation would be necessary. After designation of the southwestern willow flycatcher critical habitat and adoption of this conference opinion as a biological opinion, the Corps must request reinitiation if any of the criteria described in the Reinitiation Notice at the end of this document are met.

INCIDENTAL TAKE STATEMENT

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

The measures described below are non-discretionary, and must be undertaken by the Corps so that they become binding conditions of any grant or permit issued to the District, as appropriate, for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the

activity covered by this incidental take statement. If the Corps (1) fails to assume and implement the terms and conditions or (2) fails to require the District to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the Corps or District must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR 402.14(i)(3)]

Tidewater goby

The Service anticipates that all tidewater gobies within up to 5.2 acres of occupied habitat per year could be taken in the form of harm or harassment through capture and relocation, crushing, stranding, and lowered breeding success as a result of O&M Program activities that require dewatering or other activities that directly affect occupied habitat. The exact number of tidewater gobies that could be affected cannot be predicted because of the natural fluctuations in numbers that these species experience and the difficulty in determining how many individuals are present at any given time. The Service anticipates that all individuals of all life stages of the tidewater goby within the area that will be netted and seined during dewatering activities will be taken as a result of capture, and that a subset of these individuals may be killed or injured during handling and release during routine maintenance, repair and mitigation/restoration activities. We also anticipate that tidewater goby eggs many be killed through damage to, and destruction of, burrows during maintenance and repair activities that involve dewatering or disturbance to wetted habitat. Additionally, O&M Program activities may also have effects to tidewater gobies through increased sedimentation; however, with the implementation of the BMPs and minimization measures, these activities are anticipated to have insignificant effects to tidewater gobies.

Because we cannot definitively anticipate the number of tidewater gobies that may be taken, yet must provide a trigger for reinitiation, if more than ten (10) tidewater gobies in any one year are found dead or injured, and those deaths or injuries can be attributed to the proposed actions, the Corps should require the District to stop work and contact our office immediately so we can review the project activities to determine if additional protective measures are needed.

California red-legged frog

The Service anticipates that all California red-legged frogs within 2.5 acres per year, estimated at 25 individuals, could be taken as a result of monitoring and repair activities. We also anticipate that all California red-legged frogs within 10 acres per year, estimated at 50 individuals, may be taken as a result of mitigation/restoration activates. The incidental take is expected to be in the form of capture. Any individuals in affected habitats that are not detected and relocated may be injured or killed by heavy equipment and personnel in the project area.

Incidental take of California red-legged frog adults, subadults, or tadpoles may be difficult to detect for the following reasons: (1) the California red-legged frog is generally difficult to detect due to its small body size; (2) finding a dead or impaired specimen is unlikely; and (3) losses may be masked by seasonal fluctuations in hydrology unrelated to the project. Because we must provide a limit at which consultation must be reinitiated, we anticipate that no more than 1 adult or subadult California red-legged frogs, 1 egg mass, or 10 tadpoles will be injured or killed in a given year. If more than 1 California red-legged frog adult, or 5 California red-legged frog tadpoles are found dead or if more than 1 eggmass is detected within a project area, the Corps

should require the District to stop work and contact our office immediately so we can review the project activities to determine if additional protective measures are needed.

Least Bell's vireo
The Service anticipates that up to 25.5 acres of suitable habitat for least Bell's vireo each year may be affected during routine maintenance and repair activities and up to 35 acres per year may be affected by mitigation/restoration activities. Based on the range of documented territory sizes, watershed-wide survey data, and total potential habitat, we anticipate that up to 17 pairs of least Bell's vireos per year could be taken by maintenance and repair activities and up to 21 pairs per year will be taken through mitigation/restoration activities. The nature of this taking consists primarily of non-lethal harm through habitat removal that occurs during the non-breeding season, where birds with territories that have been cleared of vegetation will be harmed by the effort required to find alternative breeding and feeding habitat. We also anticipate that least Bell's vireos will be taken through harassment by O&M Program activities that occur during the nesting season through work activities adjacent to nests that may cause birds to flush from the nests or attract predators to nests. The likelihood of detecting dead individuals is low due to the birds' small size and cryptic coloring, therefore if more than 1 least Bell's vireo is found dead or more than 1 active nest is identified to be damaged or abandoned due to O&M program activities in any given year, the Corps should require the District to stop work and contact our office immediately so we can review the project activities to determine if additional protective measures are needed.

Southwestern willow flycatcher
The Service anticipates that up to 16.1 acres of suitable habitat for the southwestern willow flycatcher each year may be affected during routine maintenance and repair activities and up to 35 acres per year may be affected by mitigation activities. Based on watershed-wide survey data, and total potential habitat, we anticipate that up to 3 pairs of southwestern willow flycatchers will be taken by maintenance and repair activities, and up to 3 pairs per year will be taken by mitigation/restoration activities. The nature of this taking consists primarily of habitat removal that occurs during the non-breeding season, where birds with territories that have been cleared of vegetation will be harmed by the effort required to find alternative habitat. If any southwestern willow flycatchers are found dead or if any active nests are determined to be damaged or permanently abandoned due to O&M Program activities, the Corps should require the District to stop work and contact our office immediately so we can review the project activities to determine if additional protective measures are needed.

In summary, the anticipated maximum annual take of tidewater gobies, California red-legged frogs, least Bell's vireos and southwestern willow flycatchers is summarized in Table 20.

Table 20. Reinitiation criteria based on habitat affected and documented mortality. The consultation must be reinitiated if these estimates are exceeded in any given year.

	Habitat Affected by Maintenance & Repair	Habitat affected by Mitigation/Restoration	Dead Individuals
Tidewater goby	5.2 acres	0 acres	10 individuals
California red-legged frog	2.5 acres	10 acres	1 adult or juvenile; 5 tadpoles; 1 eggmass
Least Bell's vireo	25.5 acres	35 acres	1 adult or juvenile; 1 active nest abandoned or destroyed
Southwestern willow flycatcher	16.1 acres	35 acres	No adults or juveniles; No active nests abandoned or destroyed

REASONABLE AND PRUDENT MEASURES

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the incidental take of tidewater gobies, California red-legged frogs, least Bell's vireos and southwestern willow flycatchers:

1. Take of tidewater gobies must be minimized by using qualified individuals to conduct monitoring, capture, and relocation;

2. The take of California red-legged frogs from capture, relocation, and construction activities must be minimized by employing qualified biologists who are able to handle California red-legged frogs safely and without transmitting diseases or pathogens; and

3. The taking of least Bell's vireos and southwestern willow flycatchers must be minimized by using qualified biologists to conduct surveys and other activities related to the protection of these species.

TERMS AND CONDITIONS

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

The following term and condition implements reasonable and prudent measure 1:

a. Only qualified personnel authorized under the auspices of this biological opinion can survey for, capture, and relocate tidewater gobies. The District and the Corps must request our approval of any biologists they wish to employ to survey for, capture and relocate tidewater gobies from work areas. The request must be in writing and be received by us at least 30 days prior to any such activities being conducted.

The following terms and conditions implement reasonable and prudent measure 2:

a. Only qualified personnel authorized under the auspices of this biological opinion can survey for, capture, and relocate California red-legged frogs. The District and the Corps must request our approval of any biologists they wish to employ to survey for, capture and relocate California red-legged frogs from work areas. The request must be in writing and be received by us at least 30 days prior to any such activities being conducted.

b. Any steep-walled holes or trenches that will be left open overnight in suitable habitat for California red-legged frogs must be covered such that they will not entrap California red-legged frogs.

c. Latex or nitrile gloves must not be used when handling California red-legged frogs. Clean hands, free of lotions, sun screens, and fragrances are recommended. If gloves are necessary, the use of well-rinsed vinyl gloves is recommended.

d. To ensure that diseases are not conveyed between work sites by Service-approved biologists, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force must be followed at all times. A copy of the code of practice is enclosed as Appendix C of this document. The Service-approved biologist may substitute a bleach solution (0.5 to 1.0 cup of bleach to 1.0 gallon of water) for the ethanol solution. Care must be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.

The following term and condition implements reasonable and prudent measure 3:

a. Only qualified personnel authorized under the auspices of this biological opinion can survey for, designate suitable buffers, and monitor for least Bell's vireos and southwestern willow flycatchers. The District and the Corps must request our approval of any biologists they wish to employ to conduct these activities in

association with the O&M Program. The request must be in writing and be received by us at least 30 days prior to any such activities being conducted.

REPORTING REQUIREMENTS

Pursuant to 50 CFR 402.14(i)(3), Corps must report the progress of the action and its impact on the species to the Service as specified in this incidental take statement. The Corps or the District, on behalf of the Corps, will provide an annual report in August of each year. The report must describe all activities that were conducted under the auspices of this biological opinion, including activities that were described in the project description and required under the terms and conditions. The report must include the following:

- Documentation of the number of tidewater gobies, California red-legged frogs, least Bell's vireo and southwestern willow flycatcher that were found along with the location where they were found;

- Documentation of the number of tidewater gobies, California red-legged frogs, least Bell's vireo and southwestern willow flycatchers that were taken during project activities, and the nature of the taking (e.g., capture, injury, etc.);

- Description of the nature and extent of tidewater goby, California red-legged frog, and southwestern willow flycatcher designated critical habitat adversely affected;

- Description of instances of when the BEMP was implemented, dates when subsequent storms occurred, and when breaching occurred; and

- A brief discussion of any problems encountered in implementing minimization measures.

DISPOSITION OF DEAD OR INJURED SPECIMENS

As part of this incidental take statement and pursuant to 50 CFR 402.14(i)(1)(v), upon locating a dead or injured tidewater goby, California red-legged frog, least Bell's vireo, southwestern willow flycatcher, initial notification within three working days of its finding must be made by telephone and in writing to the Ventura Fish and Wildlife Office (805-644-1766). The report must include the date, time, location of the carcass, a photograph, cause of death or injury, if known, and any other pertinent information.

Care must be taken in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. Injured animals must be transported to a qualified veterinarian. Should any treated tidewater goby, California red-legged frog, least Bell's vireo, southwestern willow flycatcher survive, the Service should be contacted regarding the final disposition of the animals. The Service should be contacted to determine the appropriate deposition location for any dead specimens that are identified.

CONSERVATION RECOMMENDATIONS

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

- Work with landowners throughout the Calleguas Creek watershed to modify flood control facilities so that they may provide enhanced habitat for least Bell's vireos, southwestern willow flycatchers, and tidewater gobies.

- Coordinate mitigation/restoration projects in the Santa Clara River with The Nature Conservancy, and in the Ventura River with the Ventura Hillsides Conservancy and Ojai Valley Land Conservancy.

- Where possible, consolidate small mitigation/restoration projects into a focused area to have a larger cumulative benefit through the restoration of larger contiguous areas.

- Conduct species monitoring before and after the completion of mitigation/restoration projects to document the beneficial effects of such activities.

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

REINITIATION NOTICE

This concludes formal consultation on the Corps' authorization for activities conducted through the District's O&M Program. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, the exemption issued pursuant to section 7(o)(2) will have lapsed and any further take would be a violation of section 4(d) or 9. Consequently, we recommend that any operations causing such take cease pending reinitiation.

Sincerely,

Diane K. Noda

Diane K. Noda
Field Supervisor

Appendices

1. Appendix A – O&M Program Facilities and Habitat
2. Appendix B – Average Work Duration at O&M Program Facilities
3. Appendix C – Declining Amphibian Taskforce Field Work Code of Practice

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PERSONAL COMMUNICATION

Camm Swift. 2010. Tidewater goby technical expert, retired. Email correspondence, September 19, 2010.

APPENDIX A. TABLE 1 – TIDEWATER GOBY

VENTURA RIVER WATERSHED FACILITIES	LENGTH	HARD	FAC HAB	TOTAL	ADJ HAB	DAYS	DAYS	DAYS
Levees	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg.**	**Low**	**High**
41011 Bank Protection/Levee: Ocean to Main St.*	2,800	4.42	0.59	**5.01**	32.81	7.6	1	18
Note: incl. 1.09 acres of willow habitat removal within 630 linear feet of toe hardscape.								
41012 Bank Protection/Levee (Main St. to Hwy 33)*	10,115	23.20	0.00	**23.20**	91.40	24.9	19	34
SUBTOTALS	**12,915**	**27.62**	**0.59**	**28.21**	**124.21**			
Outlets to Ventura River								
41728 Cal-trans Secondary Outlet*	40	0.00	0.01	**0.01**	9.27			
41131 Canada de San Joaquin Channel & Outlet	195	0.00	0.18	**0.18**	12.39			
41110 Stanley Ave. Drain Outlet*	440	0.00	0.62	**0.62**	12.94			
41121 Dent Drain Outlet	180	0.00	0.46	**0.46**	9.01	1	0	3
41721 Dent Secondary Outlet	380	0.00	0.52	**0.52**	12.38			
41751 Freeway Side Drain #1 Outlet*	270	0.00	0.37	**0.37**	12.46	0.6	0	1
41752 Freeway Side Drain #2 Outlet*	250	0.00	0.27	**0.27**	10.15			
41753 Freeway Side Drain #3 Outlet*	170	0.00	0.20	**0.20**	8.56			
41754 Freeway Side Drain #4 Outlet*	395	0.00	0.52	**0.52**	10.81			
41755 Freeway Side Drain #5 Outlet*	50	0.05	0.00	**0.05**	8.60	0.1	0	1
41729 Peking & 41727 Harrison Secondary Outlets*	1175	0.00	2.50	**2.50**	23.17	4.1	0	9
41730 Ramona St. Secondary Outlet*	240	0.00	0.39	**0.39**	10.78			
41731 Simpson St. Secondary Outlet*	375	0.00	0.77	**0.77**	17.03	3	0	9
41732 Vince St. Secondary Outlet*	200	0.00	0.19	**0.19**	7.81			
SUBTOTALS	**4,360**	**0.05**	**6.97**	**7.02**	**165.36**			
Mitigation/Restoration Sites								
Lower Ventura River Giant Reed Removal Phase 1*	2,400	0.000	9.850	**9.85**	49.13	6	4	10
Lower Ventura River Giant Reed Removal Phase 2*	2,330	0.000	11.240	**11.24**	43.78	6	4	10
SUBTOTALS	**4,730**	**0.00**	**21.09**	**21.09**	**92.91**			
Ventura River Watershed Grand TOTALS	**22,005**	**27.67**	**28.66**	**56.33**	**382.48**			
SANTA CLARA RIVER WATERSHED	**LENGTH**	**HARD**	**FAC HAB**	**TOTAL**	**ADJ HAB**	**DAYS**	**DAYS**	**DAYS**
Ormond Beach Channels	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg**	**Low**	**High**
42302 Oxnard Industrial Drain RR to Pleasant Val. Rd.* ^	1000	2.00	0.00	**2.00**	0.56	16	9	32
42321 J Street Drain Pacific Ocean to Pump Sta.**^	500	0.00	0.78	**0.78**	4.13	11.3	5	33
42322 J Street Drain Pump Station to RR Spur*^	1600	1.58	0.00	**1.58**	2.51	21.1	15	27
SUBTOTALS	**3,100**	**3.58**	**0.78**	**4.36**	**7.20**			

Levees and Stream Gauges								
42012 Santa Clara River Harbor Blvd to Victoria Avenue	4000	6.95	0.00	**6.95**	49.62	0.6	0	2
42017 Santa Clara River Victoria Ave to Ventura Road	7216	14.60	0.00	**14.60**	4.63			
723 Santa Clara River at Victoria Stream Gauge	100	0.00	0.88	**0.88**	14.75			
Note: Maint. done by Vta County Transportation Dept.								
Victoria Ave Drain Secondary Outlet	0	0.00	0.16	**0.16**	9.25			
SUBTOTALS	**11,316**	**21.55**	**1.04**	**22.60**	**78.25**			
Mitigation/Restoration Sites								
None								
SUBTOTALS	**0**	**0.00**	**0.00**	**0.00**	**0.00**			
Santa Clara River Watershed GRAND TOTALS	**14,416**	**25.13**	**1.82**	**26.95**	**85.45**			

CALLEGUAS CREEK WATERSHED FACILITIES	LENGTH	HARD	FAC HAB	TOTAL	ADJ HAB	DAYS	DAYS	DAYS
Channels	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg**	**Low**	**High**
45021 Calleguas Creek Hwy 1 to Broome Ranch Crossing*^	21,120	30.41	109.74	**140.15**	5.80	23.4	14	30
45023 Calleguas Creek Broome Ranch to Hueneme Rd*^	8660	28.02	73.11	**101.13**	0.02			
45101 Revolon Slough Hwy 1 to Las Posas Rd.*^	21,120	17.28	30.20	**47.48**	5.93	6.9	5	11
SUBTOTALS	**50,900**	**75.72**	**213.04**	**288.75**	**11.75**			
Calleguas Creek Watershed GRAND TOTALS	**50,900**	**75.72**	**213.04**	**288.75**	**11.75**			
GRAND TOTAL ALL WATERSHEDS	**87,321**	**128.52**	**243.52**	**372.03**	**479.69**			

* Known or presumed occupied habitat within water present

** Designated critical habitat

^: Hardscape concrete lined channel is potentially occupied or known occupied habitat for tidewater goby

HARD = FACILITY HARDSCAPE: access road, rock, concrete, compacted earth slopes, etc. with no habitat value

FAC POT = FACILITY POTENTIAL HABITAT: maintained facility areas with potential to support species (earth bottom, wet channels, etc.)

ADJ HAB = ADJACENT SUITABLE HABITAT: non-facility areas with suitable habitat for species adjacent to District facilities.

DAYS: Average annual work days, with low and high numbers of days for the period January 1, 2005 through December 27, 2011. If blank, data were not analyzed for this facility.

Mitigation/Restoration Sites: not covered by other BOs or permits.

PT Codes: 20, 21, 26, 27, 28, 32, 34, 41, PS41, 42, PS42, 43, 44, 45, 48, 49, 53, 55, 56, 57, 76, 80, 85, 86, 87, 89, 92.

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APPENDIX A. TABLE 2 – CALIFORNIA RED-LEGGED FROG

VENTURA RIVER WATERSHED FACILITIES	LENGTH	HARD	FAC HAB	TOTAL	ADJ HAB	DAYS	DAYS	DAYS
Levees/Dams	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg**	**Low**	**High**
41021 Casitas Spgs Bank Protection: Fresno Cyn to Hwy 33*^	5,810	9.65	1.86	**11.51**	70.97	9.6	5	17
Note: includes 1.7 ac of existing willow riparian vegetation to be removed at toe upon issuance of permits.								
41031 Live Oak Acs Bank Protect/ Levee u/s Santa Ana	4,640	5.95	1.72	**7.67**	55.74	5.8	1	9
Note: includes 1.0 acre of willow scrub to be removed upon issuance of permits.								
41023 Santa Ana Road Bridge Sediment Removal*	240	0.00	1.07	**1.89**	10.85			
41181 Fresno Canyon Outlet to Ventura River*	220	0.00	0.22	**0.22**	11.23			
41901 Matilija Dam and Gage Maintenance**	215	1.88	0.00	**1.88**	31.71	17	4	35
SUBTOTALS	**11,125**	**17.48**	**4.86**	**23.17**	**180.50**			
Stream Gauges								
602 Matilija Creek at Matilija Hot Springs Stream Gage*	100	0.00	0.30	**0.30**	23.28	15	6	30
604 North Fork Matilija Creek at Hwy 33 Stream Gage	65	0.00	0.08	**0.08**	2.48	18	6	30
605 San Antonio Creek at Casitas Springs Stream Gage**	100	0.00	0.33	**0.33**	14.90	12	6	30
608 Ventura River at Foster Park Stream Gage*	100	0.00	0.85	**0.85**	7.68	11	6	30
ME-VR2 WQ Gage at Ventura River at OVSD Facility*	150	0.00	0.10	**0.10**	5.50	10	5	20
SUBTOTALS	**515**	**0.00**	**1.66**	**1.66**	**53.84**			
Mitigation/Restoration Sites								
None								
SUBTOTALS	**0**	**0.00**	**0.00**	**0.00**	**0.00**			
Ventura River Watershed GRAND TOTALS	**11,640**	**17.48**	**6.51**	**24.82**	**234.34**			

* Known or presumed occupied habitat if water present

** Designated critical habitat

^: Hardscape rock riprap is potential habitat for frog.

HARD = FACILITY HARDSCAPE: access road, rock, concrete, compacted earth slopes, etc. with no habitat value

FAC HAB = FACILITY POTENTIAL HABITAT: Maintained facility areas with potential to support species (earth bottom, wet channels, etc.)

ADJ HAB = ADJACENT SUITABLE HABITAT: non-facility areas with suitable habitat for species adjacent to District facilities.

DAYS: Average annual work days, with low and high numbers of days for the period January 1, 2005 through December 27, 2011. If no data supplied, the facility was not analyzed.

Notes: Current condition includes overgrown vegetation within routine maintenance area (15 foot width along the toe).

Mitigation/Restoration Sites: not covered by other BOs or permits.

PT Codes: 30, 32, 33, 34, 41, PS41, 42, 43, 45, 48, 53, 55, 57, 77, 89, 92

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APPENDIX A. TABLE 3 – LEAST BELL'S VIREO

VENTURA RIVER WATERSHED FACILITIES	LENGTH FT	HARD	FAC HAB	TOTAL	ADJ HAB	DAYS	DAYS	DAYS
Levees	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg**	**Low**	**High**
41021 Casitas Springs Bank Protection	5,810	9.65	1.86	**11.51**	71.50	4.7	3	7
Note: includes 1.7 ac of existing willow riparian vegetation to be removed at toe upon issuance of permits.								
41011 Bank Protection/Levee (Ocean to Main St.)*	2,800	4.42	0.59	**5.01**	32.79	4.4	0	11
Note: incl. 1.09 acres of willow habitat removal within 630 linear feet of toe hardscape.								
41012 Bank Protection/Levee (Main St. to Hwy 33)*	10,115	23.20	0.00	**23.20**	91.39	12.3	7	21
41031 Live Oak Ac Bank Protect./Levee u/s Santa Ana Rd.*	4,640	5.95	1.72	**7.67**	55.75	3.7	1	8
SUBTOTALS	**23,365**	**43.22**	**4.17**	**47.39**	**251.43**			
Outlets to Ventura River								
41131 Canada de San Joaquin Channel and Outlet*	195	0.00	0.18	**0.18**	12.40			
41110 Stanley Ave. Drain Outlet*	440	0.00	0.62	**0.62**	12.95			
41121 Dent Drain Outlet*	180	0.00	0.46	**0.46**	9.01	0	0	0
41152 Canada Larga Channel & Outlet	240	0.28	0.00	**0.28**	1.17			
41181 Fresno Canyon Outlet to Ventura River*	220	0.00	0.22	**0.22**	11.23			
41721 Dent Secondary Outlet*	380	0.00	0.52	**0.52**	12.38			
41728 Cal-trans Secondary Outlet*	40	0.00	0.01	**0.01**	9.27			
41729 Peking Secondary & 41727 Harrison Secondary Outlets*	1175	0.00	2.50	**2.50**	23.18	0.4	0	3
41730 Ramona St. Secondary Outlet*	240	0.00	0.39	**0.39**	10.78			
41731 Simpson St. Secondary Outlet*	375	0.00	0.77	**0.77**	17.03	0	0	0
41732 Vince St. Secondary Outlet*	200	0.00	0.19	**0.19**	7.81			
41751 Freeway Side Drain #1 Outlet*	270	0.00	0.37	**0.37**	12.46	0	0	0
41752 Freeway Side Drain #2 Outlet*	250	0.00	0.27	**0.27**	10.15			
41753 Freeway Side Drain #3 Outlet*	170	0.00	0.20	**0.20**	8.56	0	0	0
41754 Freeway Side Drain #4 Outlet*	395	0.00	0.52	**0.52**	10.81			
41755 Freeway Side Drain #5 Outlet*	50	0.05	0.00	**0.05**	8.57	0	0	0
SUBTOTALS	**4,820**	**0.33**	**7.22**	**7.55**	**177.76**			
Other Facilities								
41901 Matilija Dam and Gage Maintenance*	215	1.88	0.00	**1.88**	1.26	4.1	2	14
41023 Santa Ana Road Bridge Sediment Removal	240	0.00	0.89	**0.89**	10.85			
SUBTOTALS	**455**	**1.88**	**0.89**	**2.77**	**12.11**			

Stream Gages								
602 Matilija Creek at Matilija Hot Springs Stream Gage*	100	0.00	0.30	**0.30**	2.66	15	6	30
604 North Fork Matilija Creek at Hwy 33 Stream Gage	65	0.00	0.08	**0.08**	2.48	18	6	30
605 San Antonio Creek at Casitas Springs Stream Gage	100	0.00	0.30	**0.30**	6.03	12	6	30
608 Ventura River at Foster Park Stream Gage	100	0.00	0.85	**0.85**	7.69	11	6	30
ME-VR2 WQ Gage at Ventura River at OVSD Facility	150	0.00	0.10	**0.10**	5.46	10	5	20
SUBTOTALS	**515**	**0.00**	**1.63**	**1.63**	**24.32**			
Mitigation/Restoration Sites								
Lower Ventura River Giant Reed Removal Phase 1*	2,400	0.00	9.85	**9.85**	49.16	6	4	10
Lower Ventura River Giant Reed Removal Phase 2*	2,330	0.00	11.24	**11.24**	43.80	6	4	10
SUBTOTALS	**4,730**	**0.00**	**21.09**	**21.09**	**92.96**			
Ventura River Watershed GRAND TOTALS	**33,885**	**45.43**	**35.00**	**80.43**	**558.58**			

SANTA CLARA RIVER WATERSHED FACILITIES	LENGTH FT	HARD	FAC HAB	TOTAL	ADJ	DAYS	DAYS	DAYS
Levees and Bank Protection	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg**	**Low**	**High**
42012 Santa Clara River Harbor Blvd to Victoria Levee *	4000	6.95	0.00	**6.95**	55.24	0.3	0.0	1.0
42017 Santa Clara River Victoria Ave to Ventura Rd Levee*	7200	13.32	0.00	**13.32**	92.43			
42030 Santa Clara River Weir Field	n/a	1.85	0.78	**2.63**	30.34			
42021 Santa Clara River 101 Fwy to South Mountain Levee*	24929	92.57	0.00	**92.57**	273.66	4.7	0.0	11.0
42025 Sudden Barranca to Saticoy Ave Levee*	2545	7.01	0.92	**7.93**	28.89	1.3	0.0	4.0
42026 Santa Clara River North Bank Groins*	1500	2.79	1.09	**3.88**	36.72			
42036 Groins @ South Mtn Road*	1825	1.72	0.57	**2.29**	32.15	0.9	0.0	4.0
42037 Bardsdale Levee	3836	5.12	1.23	**6.35**	49.39			
43061 &43062 Santa Paula Creek Corps Project	9000	31.68	21.66	**53.34**	8.61			
43308 Sespe Bank Protection at Goodenough Road	990	0.89	0.00	**0.89**	14.62			
SUBTOTALS	**55825**	**163.90**	**26.25**	**190.15**	**622.05**			
Outlets to Santa Clara River								
43161 Bardsdale Ditch Outlet	30	0	0.02	**0.02**	10.08			
43191 Basolo Ditch Outlet	30	0	0.05	**0.05**	10.90			
42511 Brown Barranca Outlet	30	0	0.05	**0.05**	10.93	0.6	0	2
42205 Central Ave. Drain Outlet	30	0	0.02	**0.02**	10.12	0.3	0	1
42491 Clark Barranca Outlet	30	0	0.07	**0.07**	8.96			
42391 El Rio Drain Outlet*	30	0	0.02	**0.02**	9.78	9.6	3	26
43051 Fagan Canyon Outlet	30	0	0.03	**0.03**	9.57			

42531 Franklin Barranca Outlet*	30	0	0.17	**0.17**	9.80			
43181 Grimes Canyon Outlet	30	0	0.03	**0.03**	10.67	5.6	0	21
42471 Harmon Barranca Outlet*	30	0	0.05	**0.05**	8.33			
43351 Jepson Wash Outlet to Sespe Creek	30	0	0.02	**0.02**	9.48			
43361 Keefe Ditch Outlet to Sespe Creek	30	0	0.09	**0.09**	11.15	4.1	0	15
42701 Montalvo Golf Course Secondary Outlet*	600	0.43	0.30	**0.73**	12.42	2	0	6
42461 Moon Ditch Outlet*	30	0	0.05	**0.05**	10.03	3.6	3	4
43041 Peck Road Drain Outlet*	30	0	0.02	**0.02**	10.12	1.4	0	3
43201 Pole Creek Outlet	30	0	0.01	**0.01**	13.35			
43251 Real Canyon Outlet	30	0	0.05	**0.05**	2.42			
42021 Stroube Drain Outlet*	200	0.07	0.21	**0.28**	12.71			
42501 Sudden Barranca Outlet*	30	0	0.02	**0.02**	9.48			
42704 Victoria Ave. Drain Secondary Outlet*	30	0	0.16	**0.16**	12.45	0.7	0	3
43701 Willard Road Secondary Outlet*	30	0	0.02	**0.02**	12.87			
SUBTOTALS	**1370**	**0.50**	**1.46**	**1.96**	**215.62**			
Mitigation/Restoration Sites								
SCR Upstream of Balcom Cyn Wash *	2000	0.00	15.57	**15.57**	38.31			
SCR So. Mountain Rd. Mitigation Site 1*	275	0.00	0.58	**0.58**	12.28			
SCR So. Mountain Rd. Mitigation Site 2*	270	0.00	0.50	**0.50**	12.86			
SUBTOTALS	**2545**	**0.00**	**16.65**	**16.65**	**63.45**			
Stream Gages								
709 Santa Paula Crk at Mupu Br Stream Gage (Steckel Pk)	100	0.00	0.24	**0.24**	3.89			
723 Santa Clara River at Victoria Stream Gage*	100	0.00	0.88	**0.88**	29.88			
SUBTOTALS	**200**	**0.00**	**1.12**	**1.12**	**33.77**			
Santa Clara River Watershed GRAND TOTALS	**59,940**	**164.40**	**45.48**	**209.88**	**934.89**			

CALLEGUAS CREEK WATERSHED FACILITIES	**LENGTH FT**	**HARD**	**FAC HAB**	**TOTAL**	**ADJ**	**DAYS**	**DAYS**	**DAYS**
Channels	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg**	**Low**	**High**
45021 Calleguas Creek Hwy 1 to Broome Ranch Crossing*	21120	30.41	0.00	**30.41**	0.00	14.3	0	24
45023 Calleguas Creek Broome Ranch to Hueneme Rd	8660	28.02	0.00	**28.02**	0.00	7.3	0	12
45025 Calleguas Creek Hueneme Rd to Lewis Rd	7670	18.01	0.00	**18.01**	0.92	2	0	5
45027 Calleguas Creek Lewis Rd to 850 ft u/s University Drive	2420	5.03	9.31	**14.34**	3.32	0.8	0	2
45033 Calleguas Creek Pleasant Valley Rd. to Hwy 101	3860	8.37	1.39	**9.76**	16.42	2.3	0	4
45035 Calleguas Creek Hwy 101 to Adolfo Rd	2900	8.8	1.37	**10.17**	16.56	0.4	0	2

45037 Calleguas Creek Adolfo Rd to Seminary Rd.	2720	11.72	3.62	**15.34**	65.72	0.1	0	1
45051 Arroyo Las Posas @ Seminary	1500	2.26	0.53	**2.79**	18.86	0	0	0
45063 Arroyo Las Posas WWTP to S. Grimes Cyn	2800	7.49	12.66	**20.15**	13.99	0.3	0	2
47011 Arroyo Simi Hitch Blvd to Gabbert Cyn*	2740	7.53	6.60	**14.13**	2.81	1.7	0	3
47012 Arroyo Simi Gabbert Cyn to Beltramo Rd*	5790	10.16	4.67	**14.83**	15.89	0.1	0	1
47013 Arroyo Simi Beltramo Rd to Moorpark Rd (Spring St.)	7640	17.12	11.58	**28.70**	3.38	2.4	0	9
47014 Arroyo Simi Moorpark Rd. to SPRR	3525	12.93	7.69	**20.62**	5.91	0.3	0	1
47015 Arroyo Simi SPRR to No. 2 Canyon	2700	4.08	0.92	**5.00**	21.86			
47031 Arroyo Simi Tapo Cyn Rd to Parker Ranch	3750	16.07	3.30	**19.37**	0.61	0.3	0	1
47031 Arroyo Simi Parker Ranch to Lined Section	2410	1.23	1.67	**2.90**	4.52	0.3	0	1
45240 Beardsley Wash u/s of Zone 2	1500	3.22	1.35	**4.57**	1.66			
45241 Beardsley Wash Drop Structure #2	100	0.07	0.00	**0.07**	2.26	0	0	0
45243 Beardsley Wash Drop Structure #3 @ Bella Vista	235	1.06	0.00	**1.06**	5.79	0.1	0	1
45245 Beardsley Wash Drop Structure #4 (d/s Triple arch)	160	1.17	0.00	**1.17**	4.56			
45247 Beardsley Wash Connelly Triple Arch	160	0.69	0.00	**0.69**	4.58	0	0	0
46011 Conejo Creek: Calleguas Crk to Pancho Rd	3250	4.51	5.13	**9.64**	11.71	5.3	0	8
46012 Conejo Creek Pancho Rd to Howard Rd	3260	5.54	17.02	**22.56**	1.90	0	0	0
46013 Conejo Creek Howard Rd to u/s end Sanitation Plant*	2240	1.66	1.56	**3.22**	13.35	0	0	0
46014 Conejo Creek u/s end WWTP to Hwy 101 + Gage	5560	7.01	13.25	**20.26**	15.93			
46015 Conejo Creek Hwy 101 to Mission Oaks Drain	5980	4.35	29.56	**33.91**	2.06	1.1	0	5
46016 Conejo Creek Mission Oaks Drain to Upland Drain	5090	5.72	20.03	**25.75**	11.87	1.9	0	11
45251 Honda Barr. Milligan Barranca to Center School Rd.	1050	0	1.80	**1.80**	2.69	0.6	0	4
45252 Honda Barranca Center School Rd. to Hwy 118	310	0.56	0.00	**0.56**	0.86	0.7	0	5
45101 Revolon Slough Hwy 1 to Las Posas Rd.	6870	17.31	0.00	**17.31**	0.00	3.7	3	5
45103 Revolon Slough Las Posas Rd. to Hueneme Rd.	8210	22.51	0.00	**22.51**	0.00	7.4	3	11
45105 Revolon Slough Hueneme Rd. to Wood Rd.	7940	20.49	0.00	**20.49**	0.00	7.6	3	12
46116 So. Branch Arroyo Conejo Chan Kimber to Maurice	1140	0.22	2.99	**3.21**	3.83	0	0	0
46074 Arroyo Santa Rosa Blanchard Rd Drain to Santa Rosa Rd.	2960	4.82	0.47	**5.29**	0.51			
SUBTOTALS	**138220**	**290.14**	**158.47**	**448.61**	**274.33**			

Channel Outlets								
47201 No. 2 Canyon Outlet to Arroyo Simi	1530	2.07	1.41	**3.48**	7.71	1.9	0	7
46076 Camrosa Drain Outlet to Conejo Creek & Gage	30	0.00	0.39	**0.39**	3.17	0.1	0	1
SUBTOTALS	**1,560**	**2.07**	**1.80**	**3.87**	**10.88**			
Dams and Basins								
45911 Coyote Debris Basin	510	0.92	1.68	**2.60**	5.76	13	2	41
45910 Fox Debris Basin	740	0.45	1.89	**2.34**	2.73	5.6	0	17
Mt. Sinai Debris and Detention Basins*	935	0.00	7.04	**7.04**	1.90			
So. Branch Arroyo Conejo Detention Basin	500	0.56	3.43	**3.99**	1.53			
SUBTOTALS	**2,685**	**1.93**	**14.04**	**15.97**	**11.92**			
Restoration Sites								
None								
Calleguas Creek Watershed GRAND TOTALS	**142,465**	**294.14**	**174.31**	**468.45**	**297.13**			
GRAND TOTAL ALL WATERSHEDS	**236,290**	**503.97**	**254.79**	**758.76**	**1,790.60**			

* Known or presumed occupied habitat adjacent to facility

** Designated critical habitat

HARD = FACILITY HARDSCAPE: access road, rock, concrete, compacted earth slopes, etc. with no habitat value

FAC HAB = FACILITY POTENTIAL HABITAT: Maintained facility areas with potential to support species (earth bottom, wet channels, etc.)

ADJ HAB = ADJACENT SUITABLE HABITAT: non-facility areas with suitable habitat for species adjacent to District facilities.

DAYS: Average annual work days, with low and high numbers of days for the period January 1, 2005 through December 27, 2011. If no data supplied, the facility was not analyzed.

Mitigation/Restoration Sites: not covered by other BOs or permits.

PT Codes: 20-28, 32-39, 40-49, PS41, PS42, 51-57, 68-87, 89, 92.

5.24.2012

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APPENDIX A. TABLE 4 – SOUTHWESTERN WILLOW FLYCATCHER

VENTURA RIVER WATERSHED FACILITIES	LENGTH FT	HARD	FAC HAB	TOTAL	ADJ HAB	DAYS	DAYS	DAYS
Levees	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg**	**Low**	**High**
41021 Casitas Springs Bank Protection	5,810	9.65	1.86	**11.51**	71.50	4.7	3	7
Note: includes 1.7 ac of existing willow riparian vegetation to be removed at toe upon issuance of permits.								
41011 Bank Protection/Levee (Ocean to Main St.)*	2,800	4.42	0.59	**5.01**	32.79	4.4	0	11
Note: incl. 1.09 acres of willow habitat removal within 630 linear feet of toe hardscape.								
41012 Bank Protection/Levee (Main St. to Hwy 33)*	10,115	23.20	0.00	**23.20**	91.39	12.3	7	21
SUBTOTALS	**18,725**	**37.27**	**2.45**	**39.72**	**195.68**			
Outlets to Ventura River								
41131 Canada de San Joaquin Channel and Outlet*	195	0.00	0.18	**0.18**	12.40			
41110 Stanley Ave. Drain Outlet*	440	0.00	0.62	**0.62**	12.95			
41121 Dent Drain Outlet*	180	0.00	0.46	**0.46**	9.01	0	0	0
41152 Canada Larga Channel & Outlet	240	0.28	0.00	**0.28**	1.17			
41181 Fresno Canyon Outlet to Ventura River*	220	0.00	0.22	**0.22**	11.23			
41721 Dent Secondary Outlet*	380	0.00	0.52	**0.52**	12.38			
41728 Cal-trans Secondary Outlet*	40	0.00	0.01	**0.01**	9.27			
41729 Peking Secondary & 41727 Harrison Secondary	1175	0.00	2.50	**2.50**	23.18	0.4	0	3
41730 Ramona St. Secondary Outlet*	240	0.00	0.39	**0.39**	10.78			
41731 Simpson St. Secondary Outlet*	375	0.00	0.77	**0.77**	17.03	0	0	0
41732 Vince St. Secondary Outlet*	200	0.00	0.19	**0.19**	7.81			
41751 Freeway Side Drain #1 Outlet*	270	0.00	0.37	**0.37**	12.46	0	0	0
41752 Freeway Side Drain #2 Outlet*	250	0.00	0.27	**0.27**	10.15			
41753 Freeway Side Drain #3 Outlet*	170	0.00	0.20	**0.20**	8.56	0	0	0
41754 Freeway Side Drain #4 Outlet*	395	0.00	0.52	**0.52**	10.81			
41755 Freeway Side Drain #5 Outlet*	50	0.05	0.00	**0.05**	8.57	0	0	0
SUBTOTALS	**4,820**	**0.33**	**7.22**	**7.55**	**177.76**			
Other Facilities								
41901 Matilija Dam and Gage Maintenance*	215	1.88	0.00	**1.88**	1.26	4.1	2	14
SUBTOTALS	**215**	**1.88**	**0.00**	**1.88**	**1.26**			

Stream Gages								
602 Matilija Creek at Matilija Hot Springs Stream Gage*	100	0.00	0.30	**0.30**	2.66	15	6	30
604 North Fork Matilija Creek at Hwy 33 Stream Gage	65	0.00	0.08	**0.08**	2.48	18	6	30
605 San Antonio Creek at Casitas Springs Stream Gage	100	0.00	0.33	**0.33**	6.03	12	6	30
608 Ventura River at Foster Park Stream Gage	100	0.00	0.85	**0.85**	7.69	11	6	30
ME-VR2 WQ Gage at Ventura River at OVSD Facility	150	0.00	0.10	**0.10**	5.46	10	5	20
SUBTOTALS	**515**	**0.00**	**1.66**	**1.66**	**24.32**			
Mitigation/Restoration Sites								
Lower Ventura River Giant Reed Removal Phase 1*	2,400	0.00	9.85	**9.85**	49.16	6	4	10
Lower Ventura River Giant Reed Removal Phase 2*	2,330	0.00	11.24	**11.24**	43.80	6	4	10
SUBTOTALS	**4,730**	**0.00**	**21.09**	**21.09**	**92.96**			
Ventura River Watershed GRAND TOTALS	**29,005**	**39.48**	**32.42**	**71.90**	**491.98**			

SANTA CLARA RIVER WATERSHED FACILITIES	LENGTH	HARD	FAC HAB	TOTAL	ADJ	DAYS	DAYS	DAYS
Levees and Bank Protection	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg**	**Low**	**High**
42012 Santa Clara River Harbor Blvd to Victoria Levee *	4000	6.95	0.00	**6.95**	54.15	0.3	0.0	1.0
42017 Santa Clara River Victoria Ave to Ventura Rd	7200	13.32	0.00	**13.32**	92.43			
42021 Santa Clara River 101 Fwy to South Mountain	24929	92.57	0.00	**92.57**	273.66	4.7	0.0	11.0
42025 Sudden Barranca to Saticoy Ave Levee*	2545	7.17	0.92	**8.09**	28.89	1.3	0.0	4.0
42026 Santa Clara River North Bank Groins*	1500	2.79	1.09	**3.88**	36.72			
42030 Santa Clara River Weir Field	n/a	1.85	0.78	**2.63**	30.34			
42036 Groins @ South Mtn Road*	1825	1.72	0.57	**2.29**	32.15	0.9	0.0	4.0
42037 Bardsdale Levee	3836	5.12	1.23	**6.35**	49.39			
43061 &43062 Santa Paula Creek Corps Project	9000	31.68	21.66	**53.34**	8.61			
SUBTOTALS	**54835**	**163.17**	**26.25**	**189.42**	**606.34**			

Outlets to Santa Clara River								
43161 Bardsdale Ditch Outlet	30	0	0.02	**0.02**	10.08			
43191 Basolo Ditch Outlet	30	0	0.05	**0.05**	10.90			
42511 Brown Barranca Outlet	30	0	0.05	**0.05**	10.93	0.6	0	2
42205 Central Ave. Drain Outlet	30	0	0.02	**0.02**	10.12	0.3	0	1
42491 Clark Barranca Outlet	30	0	0.07	**0.07**	8.96			
42391 El Rio Drain Outlet*	30	0	0.02	**0.02**	9.78	9.6	3	26
43051 Fagan Canyon Outlet	30	0	0.03	**0.03**	9.57			
42531 Franklin Barranca Outlet*	30	0	0.17	**0.17**	9.80			
43181 Grimes Canyon Outlet	30	0	0.03	**0.03**	10.67	5.6	0	21
42471 Harmon Barranca Outlet*	30	0	0.05	**0.05**	8.33			
42701 Montalvo Golf Course Secondary Outlet*	600	0.43	0.30	**0.73**	12.42	2	0	6
42461 Moon Ditch Outlet*	30	0	0.05	**0.05**	10.03	3.6	3	4
43041 Peck Road Drain Outlet*	30	0	0.02	**0.02**	10.12	1.4	0	3
43201 Pole Creek Outlet	30	0	0.01	**0.01**	13.35			
43251 Real Canyon Outlet	30	0	0.05	**0.05**	2.42			
42021 Stroube Drain Outlet*	200	0.07	0.21	**0.28**	12.71			
42501 Sudden Barranca Outlet*	30	0	0.02	**0.02**	9.48			
42704 Victoria Ave. Drain Secondary Outlet*	30	0	0.16	**0.16**	12.45	0.7	0	3
43701 Willard Road Secondary Outlet*	30	0	0.02	**0.02**	12.87			
SUBTOTALS	**1310**	**0.50**	**1.35**	**1.85**	**194.99**			
Mitigation/Restoration Sites								
SCR Upstream of Balcom Cyn Wash*	2000	0.00	15.57	**15.57**	38.31			
SCR So. Mountain Rd. Mitigation Site 1*	275	0.00	0.58	**0.58**	12.28			
SCR So. Mountain Rd. Mitigation Site 2*	270	0.00	0.50	**0.50**	12.86			
SUBTOTALS	**2545**	**0.00**	**16.65**	**16.65**	**63.45**			
Stream Gages								
723 Santa Clara River at Victoria Stream Gage*	100	0.00	0.88	**0.88**	29.88			
SUBTOTALS	**100**	**0.00**	**0.88**	**0.88**	**29.88**			
Santa Clara River Watershed GRAND TOTALS	**58,790**	**163.67**	**45.13**	**208.80**	**894.66**			

CALLEGUAS CREEK WATERSHED FACILITIES	LENGTH	HARD	FAC HAB	TOTAL	ADJ	DAYS	DAYS	DAYS
Channels	**Feet**	**Acres**	**Acres**	**Acres**	**Acres**	**Avg**	**Low**	**High**
45063 Arroyo Las Posas WWTP to S. Grimes Cyn	2800	7.49	12.66	**20.15**	14.06	0.3	0	2
47011 Arroyo Simi Hitch Blvd to Gabbert Cyn	2740	7.53	6.60	**14.13**	2.81	1.7	0	3
47012 Arroyo Simi Gabbert Cyn to Beltramo Rd	5790	10.16	4.67	**14.83**	14.47	0.1	0	1
47013 Arroyo Simi Beltramo Rd to Moorpark Rd (Spring St.)	7640	17.12	11.58	**28.70**	3.38	2.4	0	9
47014 Arroyo Simi Moorpark Rd. to SPRR	3525	12.93	7.69	**20.62**	4.84	0.3	0	1
47015 Arroyo Simi SPRR to No. 2 Canyon	2700	4.08	0.92	**5.00**	21.86			
47031 Arroyo Simi Parker Ranch to Lined Section	2410	1.23	1.67	**2.90**	4.52	0.3	0	1
46011 Conejo Creek: Calleguas Crk to Pancho Rd	3250	4.51	5.13	**9.64**	11.71	5.3	0	8
46012 Conejo Creek Pancho Rd to Howard Rd	3260	5.54	17.02	**22.56**	1.90	0	0	0
46013 Conejo Creek Howard Rd to u/s end Sanitation	2240	1.66	1.56	**3.22**	13.35	0	0	0
46014 Conejo Creek u/s end WWTP to Hwy 101 + Gage	5560	7.01	13.25	**20.26**	11.35			
SUBTOTALS	**41915**	**79.26**	**82.75**	**162.01**	**104.25**			
Channel Outlets								
47201 No. 2 Canyon Outlet to Arroyo Simi	1530	2.07	1.41	**3.48**	7.71	1.9	0	7
SUBTOTALS	**1,530**	**2.07**	**1.41**	**3.48**	**7.71**			
Dams and Basins								
None								
Stream Gages								
None								
Restoration Sites								
None								
Calleguas Creek Watershed GRAND TOTALS	**43,445**	**81.33**	**84.16**	**165.49**	**111.96**			
GRAND TOTAL ALL WATERSHEDS	**131,240**	**284.48**	**161.71**	**446.19**	**1,498.60**			

* Known or presumed occupied habitat adjacent to facility

HARD = FACILITY HARDSCAPE: access road, rock, concrete, compacted earth slopes, etc. with no habitat value

FAC POT = FACILITY POTENTIAL HABITAT: Maintained facility areas with potential to support species (earth bottom, wet channels, etc.)

ADJ HAB = ADJACENT SUITABLE HABITAT: non-facility areas with suitable habitat for species adjacent to District facilities.

DAYS: Average annual work days, with low and high numbers of days for the period January 1, 2005 through December 27, 2011. If no data supplied, the facility was not analyzed.

Mitigation/Restoration Sites: not covered by other BOs orpermits.

PT Codes: 20-28, 32-39, 40-49, PS41, PS42, 51-57, 68-87, 89, 92.

5.24.2012

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APPENDIX B

Table 1. Days worked at representative O&M Program facilities in habitat for least Bell's vireo between 2005 and 2011 (VCWPD 2012).

VENTURA RIVER WATERSHED FACILITIES	LENGTH FT	DAYS WORKED PER YEAR		
	Feet	Avg	Low	High
41021 Casitas Springs Bank Protection	5,810	4.7	3	7
41011 Bank Protection/Levee (Ocean to Main St.)*	2,800	4.4	0	11
41012 Bank Protection/Levee (Main St. to Hwy 33)*	10,115	12.3	7	21
41031 Live Oak Ac Bank Protect./Levee u/s Santa Ana Rd.*	4,640	3.7	1	8
41121 Dent Drain Outlet*	180	0	0	0
41729 Peking Secondary & 41727 Harrison Secondary Outlets*	1175	0.4	0	3
41901 Matilija Dam and Gage Maintenance*	215	4.1	2	14
602 Matilija Creek at Matilija Hot Springs Stream Gage*	100	15	6	30
604 North Fork Matilija Creek at Hwy 33 Stream Gage	65	18	6	30
605 San Antonio Creek at Casitas Springs Stream Gage	100	12	6	30
608 Ventura River at Foster Park Stream Gage	100	11	6	30
ME-VR2 WQ Gage at Ventura River at OVSD Facility	150	10	5	20
Lower Ventura River Giant Reed Removal Phase 1*	2,400	6	4	10
Lower Ventura River Giant Reed Removal Phase 2*	2,330	6	4	10
SANTA CLARA RIVER WATERSHED FACILITIES	**Feet**	**Avg**	**Low**	**High**
42012 Santa Clara River Harbor Blvd to Victoria Levee *	4000	0.3	0.0	1.0
42036 Groins @ South Mtn Road*	1825	0.9	0.0	4.0
42021 Santa Clara River 101 Fwy to South Mountain Levee*	24929	4.7	0.0	11.0
42025 Sudden Barranca to Saticoy Ave Levee*	2545	1.3	0.0	4.0
42511 Brown Barranca Outlet	30	0.6	0	2
42205 Central Ave. Drain Outlet	30	0.3	0	1
42391 El Rio Drain Outlet*	30	9.6	3	26
43181 Grimes Canyon Outlet	30	5.6	0	21
43361 Keefe Ditch Outlet to Sespe Creek	30	4.1	0	15
42701 Montalvo Golf Course Secondary Outlet*	600	2	0	6
42461 Moon Ditch Outlet*	30	3.6	3	4
43041 Peck Road Drain Outlet*	30	1.4	0	3
42704 Victoria Ave. Drain Secondary Outlet*	30	0.7	0	3
CALLEGUAS CREEK WATERSHED FACILITIES	**Feet**	**Avg**	**Low**	**High**
45021 Calleguas Creek Hwy 1 to Broome Ranch Crossing*	21120	14.3	0	24
45023 Calleguas Creek Broome Ranch to Hueneme Rd	8660	7.3	0	12
45025 Calleguas Creek Hueneme Rd to Lewis Rd	7670	2	0	5
45027 Calleguas Creek Lewis Rd to 850 ft u/s University Drive	2420	0.8	0	2
45037 Calleguas Creek Adolfo Rd to Seminary Rd.	2720	0.1	0	1
45051 Arroyo Las Posas @ Seminary	1500	0	0	0
45063 Arroyo Las Posas WWTP to S. Grimes Cyn	2800	0.3	0	2
47011 Arroyo Simi Hitch Blvd to Gabbert Cyn*	2740	1.7	0	3
47012 Arroyo Simi Gabbert Cyn to Beltramo Rd*	5790	0.1	0	1
47013 Arroyo Simi Beltramo Rd to Moorpark Rd (Spring St.)	7640	2.4	0	9
47014 Arroyo Simi Moorpark Rd. to SPRR	3525	0.3	0	1
47031 Arroyo Simi Parker Ranch to Lined Section	2410	0.3	0	1
47031 Arroyo Simi Tapo Cyn Rd to Parker Ranch	3750	0.3	0	1
45241 Beardsley Wash Drop Structure #2	100	0	0	0
45243 Beardsley Wash Drop Structure #3 @ Bella Vista	235	0.1	0	1
46015 Conejo Creek Hwy 101 to Mission Oaks Drain	5980	1.1	0	5
45247 Beardsley Wash Connelly Triple Arch	160	0	0	0
46011 Conejo Creek: Calleguas Crk to Pancho Rd	3250	5.3	0	8
46016 Conejo Creek Mission Oaks Drain to Upland Drain	5090	1.9	0	11
45251 Honda Barr. Milligan Barranca to Center School Rd.	1050	0.6	0	4
45252 Honda Barranca Center School Rd. to Hwy 118	310	0.7	0	5
45101 Revolon Slough Hwy 1 to Las Posas Rd.	6870	3.7	3	5
45103 Revolon Slough Las Posas Rd. to Hueneme Rd.	8210	7.4	3	11
46076 Camrosa Drain Outlet to Conejo Creek & Gage	30	0.1	0	1
47201 No. 2 Canyon Outlet to Arroyo Simi	1530	1.9	0	7
45910 Fox Debris Basin	740	5.6	0	17
45911 Coyote Debris Basin	510	13	2	41
Overall Average, Absolute Lowest, and Absolute Highest Days Worked		**4.0**	**0**	**41**

APPENDIX C

The Declining Amphibian Task Force Fieldwork Code of Practice

1. Remove mud, snails, algae, and other debris from nets, traps, boots, vehicle tires, and all other surfaces. Rinse cleaned items with sterilized (e.g., boiled or treated) water before leaving each study site.

2. Scrub boots, nets, traps, and other types of equipment used in the aquatic environment with 70 percent ethanol solution or a bleach solution of one-half to one cup of bleach in one gallon of water and rinse clean with sterilized water between study sites. Avoid cleaning equipment in the immediate vicinity of a pond, wetland, or riparian area.

3. In remote locations, clean all equipment with 70 percent ethanol or a bleach solution, and rinse with sterile water upon return to the lab or a "base camp." Elsewhere, when laundry facilities are available, remove nets from poles and wash (in a protective mesh laundry bag) with bleach on a "delicate" cycle.

4. When working at sites with known or suspected disease problems, or when sampling populations of rare or isolated species, wear disposable, non-latex, gloves and change them between handling each animal. Dedicate separate sets of nets, boots, traps, and other equipment to each site being visited. Clean and store them separately at the end of each field day.

5. Safely dispose of used cleaning materials and fluids. Do not dispose of cleaning materials and fluids in or near ponds, wetland, and riparian areas; if necessary, return them to the lab for proper disposal. Safely dispose of used disposable, non-latex, gloves in sealed bags.

6. When amphibians are collected, ensure the separation of animals from different sites and take great care to avoid indirect contact (e.g., via handling or reuse of containers) between them or with other captive animals. Do not expose animals to unsterilized vegetation or soils which have been taken from other sites. Always use disinfected and disposable husbandry equipment.

7. If a dead amphibian is found, place it in a sealable plastic bag and refrigerate (do not freeze). If any captured live amphibians appear unhealthy, retain each animal in a separate plastic container that allows air circulation and provides a moist environment from a damp sponge or sphagnum moss. For each collection of live or dead animals, record the date and time collected, location of collection, name of collector, condition of animal upon collection, and any other relevant environmental conditions observed at the time of collection. Immediately contact the Ventura Fish and Wildlife Office at (805) 644-1766 for further instructions.

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

For further information on this Code, or on the Declining Amphibian Populations Task Force, contact John Wilkinson, Biology Department, the Open University, Walton Hall, Milton Keynes, MK7 6AA, UK.
Email: DAPTF@open.ac.uk

EXHIBITS

VENTURA COUNTY PUBLIC WORK AGENCY - WATERSHED PROTECTION

PUBLIC WORKS
VENTURA COUNTY

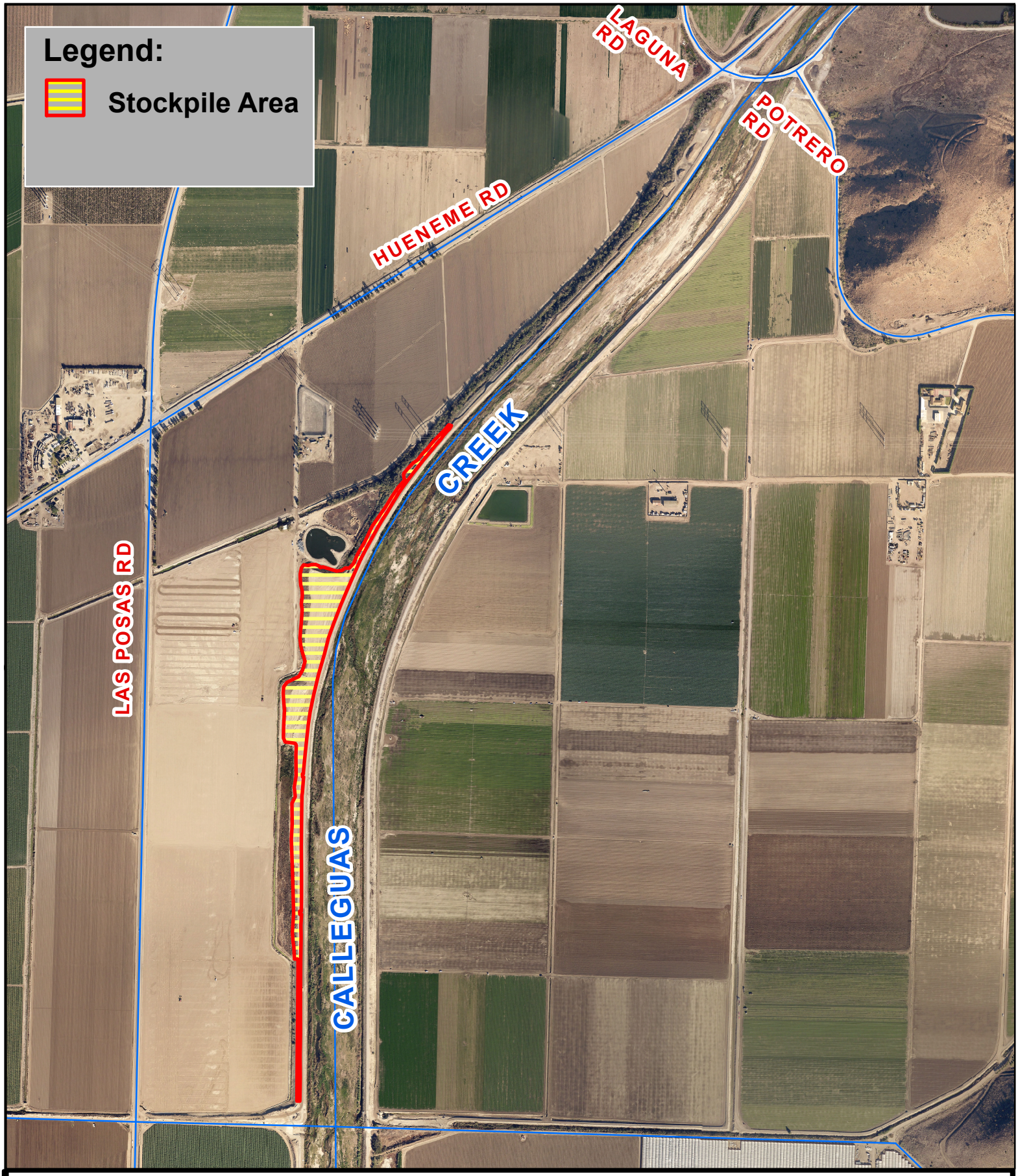
CALLEGUAS CREEK D/S OF UPLAND ROAD BRIDGE
2023 SEDIMENT REOMOVAL

SITE 1, STOCKPILE LOCATION MAP

N

0 0.025 0.05 Miles

EXHIBIT A



VENTURA COUNTY PUBLIC WORK AGENCY - WATERSHED PROTECTION

PUBLIC VENTURA COUNTY WORKS

CALLEGUAS CREEK D/S OF UPLAND ROAD BRIDGE
2023 SEDIMENT REOMOVAL

SITE 2, STOCKPILE LOCATION MAP

N

0 0.1 0.2 Miles

EXHIBIT B

INSERT MAP/PLANS

(remove this sheet prior to printing)

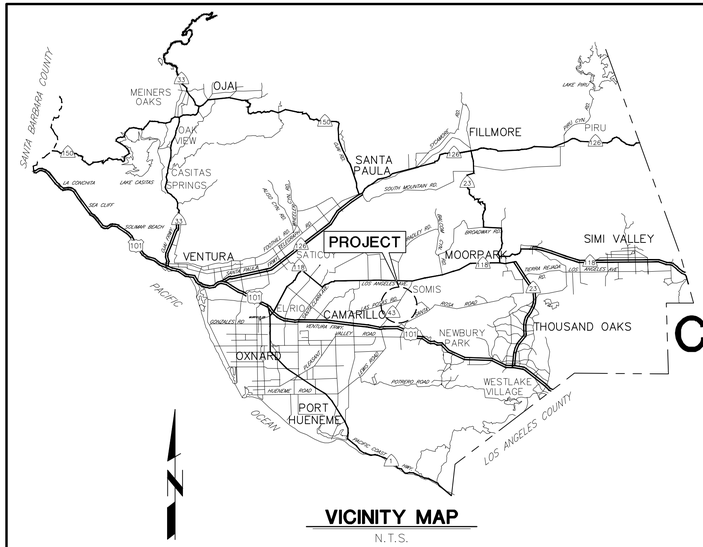
VENTURA COUNTY
PUBLIC WORKS AGENCY
WATERSHED PROTECTION

ZONE 3

CALLEGUAS CREEK D/S OF UPLAND ROAD BRIDGE
2023 SEDIMENT REMOVAL
IN THE CITY OF CAMARILLO

INDEX TO SHEETS

SHEET NO.	TITLE
1.	GENERAL PLAN
2.	PLAN – STA 33+00.00 TO STA 65+00.00
3.	PLAN – STA 65+00.00 TO STA 82+65.00
4.	CROSS SECTION FROM STA 33+00.00 TO STA 51+00.00
5.	CROSS SECTION FROM STA 53+00.00 TO STA 71+00.00
6.	CROSS SECTION FROM STA 73+00.00 TO STA 82+65.00



VICINITY MAP
N.T.S.

GENERAL NOTES

1. ELEVATIONS SHOWN ARE IN US FEET, NATIONAL GEODETIC VERTICAL DATUM OF NORTH AMERICAN VERTICAL DATUM OF 1988, EPOCH DATE.
2. STATIONS SHOWN ON DRAWINGS ARE ALONG CENTERLINE OF STRUCTURE.
3. E.G.L. AND H.G.L. ARE SHOWN FOR FUTURE REFERENCE BY THE DISTRICT ONLY.
4. NUMBERS IN ⬡ INDICATE BID ITEMS FOR WHICH PAYMENT WILL BE MADE.
5. LETTER AND NUMBER IN ◯ INDICATE THE DETAIL CALL–OUT AND SHEET ON WHICH REFERENCE DETAIL IS SHOWN.
6. NUMBERS IN △ REFER TO NOTES ON SAME SHEET UNLESS OTHERWISE NOTED.
7. TREES AND VEGETATION DESIGNATED BY SHALL BE REMOVED. ALL OTHER TREES SHALL BE PROTECTED IN PLACE UNLESS INDICATED OTHERWISE.
8. ———— DELINEATES LIMITS OF VCWPD RIGHT OF WAY.
9. ——○—— DELINEATES LIMITS OF TEMPORARY WORK AREA.
10. TOPOGRAPHY AND CROSS SECTIONS FOR THIS PROJECT WERE TAKEN FROM SURVEYS PERFORMED IN 05/2023.
11. SYMBOL △ INDICATES THE LOCATION OF HORIZONTAL AND VERTICAL CONTROL POINTS WHICH WILL BE FURNISHED BY THE AGENCY FOR CONSTRUCTION USE.

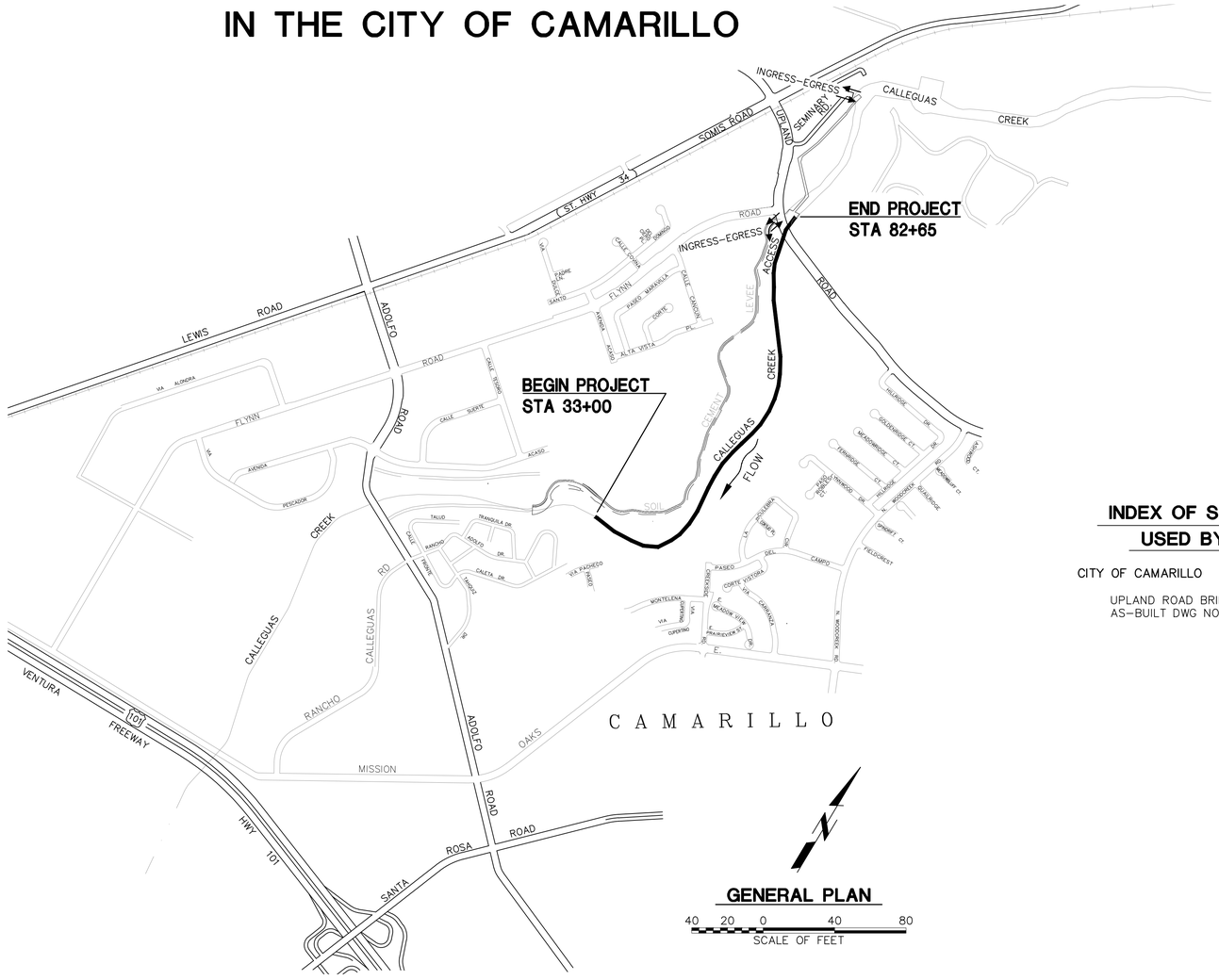
SURVEY CONTROL POINTS

PT 127	NORTHING/Y: 1,913,365.55	EASTING/X: 6,257,081.56	ELEV/Z: 226.02
PT 1001	NORTHING/Y: 1,910,498.89	EASTING/X: 6,258,439.75	ELEV/Z: 274.90
PT 1002	NORTHING/Y: 1,910,532.32	EASTING/X: 6,257,169.41	ELEV/Z: 206.86
PT 1433	NORTHING/Y: 1,910,652.26	EASTING/X: 6,258,265.97	ELEV/Z: 261.65
PT 1434	NORTHING/Y: 1,911,866.61	EASTING/X: 6,256,845.36	ELEV/Z: 216.81

12. EXISTING IMPROVEMENTS WITHIN THE RIGHT OF WAY AND WORK AREAS SHALL REMAIN AND SHALL BE PROTECTED UNLESS OTHERWISE NOTED. DAMAGED IMPROVEMENTS SHALL BE REPLACED IN KIND TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION.
13. UTILITIES ARE SHOWN AS KNOWN TO EXIST AT TIME OF SURVEY. UTILITIES MAY HAVE BEEN OMITTED, MISPLACED, AND/OR RELOCATED. CONTRACTOR SHALL EXERCISE CARE IN EXCAVATION AND SHALL PROTECT ALL UTILITIES.
14. CONTRACTOR SHALL NOTIFY UTILITY OWNERS A MINIMUM OF 48 HOURS PRIOR TO STARTING WORK IN AREAS AFFECTING THEIR FACILITIES.

FRONTIER COMMUNICATIONS	*TEL. NO. (805) 445–9116*	*TOM PEARSON*
SOUTHERN CALIFORNIA EDISON COMPANY	*TEL. NO. (805) 654–7315*	*DAVE RUPP*
SOUTHERN CALIFORNIA GAS COMPANY	*TEL. NO. (805) 701–3324*	*JIM HAMMEL*
CALLEGUAS MUNICIPAL WATER DISTRICT	*TEL. NO. (805) 526–9323*	*FERNANDO BAEZ*

UNDERGROUND SERVICE ALERT
1–800–422–4133
CALL USA/SC
FOR UNDERGROUND LOCATION
2 WORKING DAYS BEFORE YOU DIG



GENERAL PLAN
40 20 0 40 80
SCALE OF FEET

INDEX OF STANDARD PLANS USED BY REFERENCE

CITY OF CAMARILLO

UPLAND ROAD BRIDGE
AS–BUILT DWG NO. C–5392 THRU C–5405

REGISTERED PROFESSIONAL ENGINEER
SALVADOR DIAZ-RUBIN
No. 71625
CIVIL
STATE OF CALIFORNIA

PLOT DATE: 7/27/23

SAVE DATE: 7/27/23 MACHARIA, ROBERT K:\PROJECTS\ZONE3\CALLEGUASCREEK\86025_CALLEGUAS_CREEK_DS_UPLAND_ROAD_BRIDGE_2023_SEDIMENT_REMOVAL\DESIGN\DESIGNDRAWINGS\FINAL_PLANS\GENERAL_PLAN.DWG

	REVISION	DESCRIPTION	APP.	DATE
D				
C				
B				
A				
△				

WATERSHED DEPUTY DIRECTOR	07/28/2023 DATE
WATERSHED DIRECTOR	07/28/2023 DATE
AGENCY DIRECTOR	7/28/23 DATE

VENTURA COUNTY PUBLIC WORKS AGENCY WATERSHED PROTECTION

SPEC. NO.	WP24–01
PROJ. NO.	86025

CALLEGUAS CREEK D/S OF UPLAND ROAD BRIDGE 2023 SEDIMENT REMOVAL
GENERAL PLAN

SHEET	1
OF	6
DRAWING SET NO.	WPD–3–521

LINE DATA			
TAG NO.	ALIGNMENT	LENGTH	BEARING
L1	CALLEGUAS CREEK	205.72'	S85°06'26"E
L2	CALLEGUAS CREEK	99.83'	N74°06'25"E
L3	CALLEGUAS CREEK	72.79'	N20°14'03"E
L4	CALLEGUAS CREEK	125.38'	N5°16'38"E
L5	CALLEGUAS CREEK	408.20'	N8°16'03"W
L6	CALLEGUAS CREEK	256.15'	N13°36'22"E

CURVE DATA							
TAG NO.	ALIGNMENT	DELTA	RADIUS	LENGTH	TANGENT	BC STATION	EC STATION
C1	CALLEGUAS CREEK	9°31'39"	840.00'	139.68'	70.00'	32+00.00	33+39.68
C2	CALLEGUAS CREEK	20°47'08"	800.00'	290.22'	146.72'	35+45.40	38+35.63
C3	CALLEGUAS CREEK	53°52'22"	300.00'	282.08'	152.44'	39+35.45	42+17.53
C4	CALLEGUAS CREEK	14°57'26"	400.00'	104.42'	52.51'	42+90.33	43+94.75
C5	CALLEGUAS CREEK	13°32'41"	700.00'	165.48'	83.13'	45+20.12	46+85.60
C6	CALLEGUAS CREEK	21°52'25"	900.00'	343.59'	173.91'	50+93.80	54+37.39
C7	CALLEGUAS CREEK	54°10'55"	1040.00'	983.48'	531.99'	56+93.54	66+77.03

NOTES:

1. *EXISTING IMPROVEMENTS WITHIN THE RIGHT OF WAY AND WORK AREAS SHALL REMAIN AND SHALL BE PROTECTED UNLESS OTHERWISE NOTED. DAMAGED IMPROVEMENTS SHALL BE REPLACED IN KIND TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION AT CONTRACTOR'S OWN EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.*
2. *TEMPORARY WORK AREA LIMITS SHALL BE STAKED AND ALL EQUIPMENT SHALL BE OPERATED WITHIN THE TEMPORARY WORK AREA LIMITS.*
3. *CLEAR, GRUB, REMOVE, AND DISPOSE OF EXISTING VEGETATION INCLUDING TREES WITHIN THE LIMITS OF GRADING.*

STA 33+00.00
BEGIN PROJECT
BEGIN SCHEDULE 1
SEDIMENT REMOVAL
N: 1,907,289.30
E: 6,257,264.76
ELEV: 176.11'

32+00 · 35+00 · 40+00 · 45+00 · 50+00 · 55+00 · 60+00 · 65+00

EC · BC · S=0.0035 · FLOW · CALLEGUAS CREEK

1 EXIST POWER POLE PROTECT IN PLACE
2 TEMPORARY WORK AREA LIMITS (TYP)
3 LIMITS OF GRADING (TYP)
1 EXIST BIKE TRAIL
1 EXIST CHAIN–LINK FENCE (TYP)
VCPWA–WP R/W (TYP)
3(H) TO 1(V) SLOPE (TYP)

SEE SHEET 3 MATCHLINE STA 65+00

STA 65+00.00
END SCHEDULE I
BEGIN SCHEDULE II
SEDIMENT REMOVAL
N: 1,909,740.42
E: 6,258,047.13
ELEV: 194.16'

1 UPLAND ROAD MITIGATION SITE

PLAN

100 0 100 200
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER · SALVADOR DIAZ-RUBIN · No. 71625 · CIVIL · STATE OF CALIFORNIA

PLOT DATE: 7/27/23
SAVE DATE: 7/27/23 MACHARIA, ROBERT K:\PROJECTS\ZONE1\CALLEGUASCREEK\86025_CALLEGUAS_CREEK_DS_UPLAND_ROAD_BRIDGE_2023_SEDIMENT_REMOVAL\DESIGN\DESIGNDRAWINGS\FINAL_PLANS\PLAN.DWG

D			
C			
B			
A			
△	REVISION DESCRIPTION	APP.	DATE

R MACHARIA — DESIGNED
R MACHARIA — DRAWN
S DIAZ–RUBIN — CHECKED

WATERSHED PROJECT MANAGER — 07/27/2023
WATERSHED DEPUTY DIRECTOR — 07/28/2023
Acting for WATERSHED DIRECTOR — 07/28/2023

VENTURA COUNTY
PUBLIC WORKS AGENCY
WATERSHED PROTECTION

SPEC. NO. WP24–01
PROJ. NO. 86025

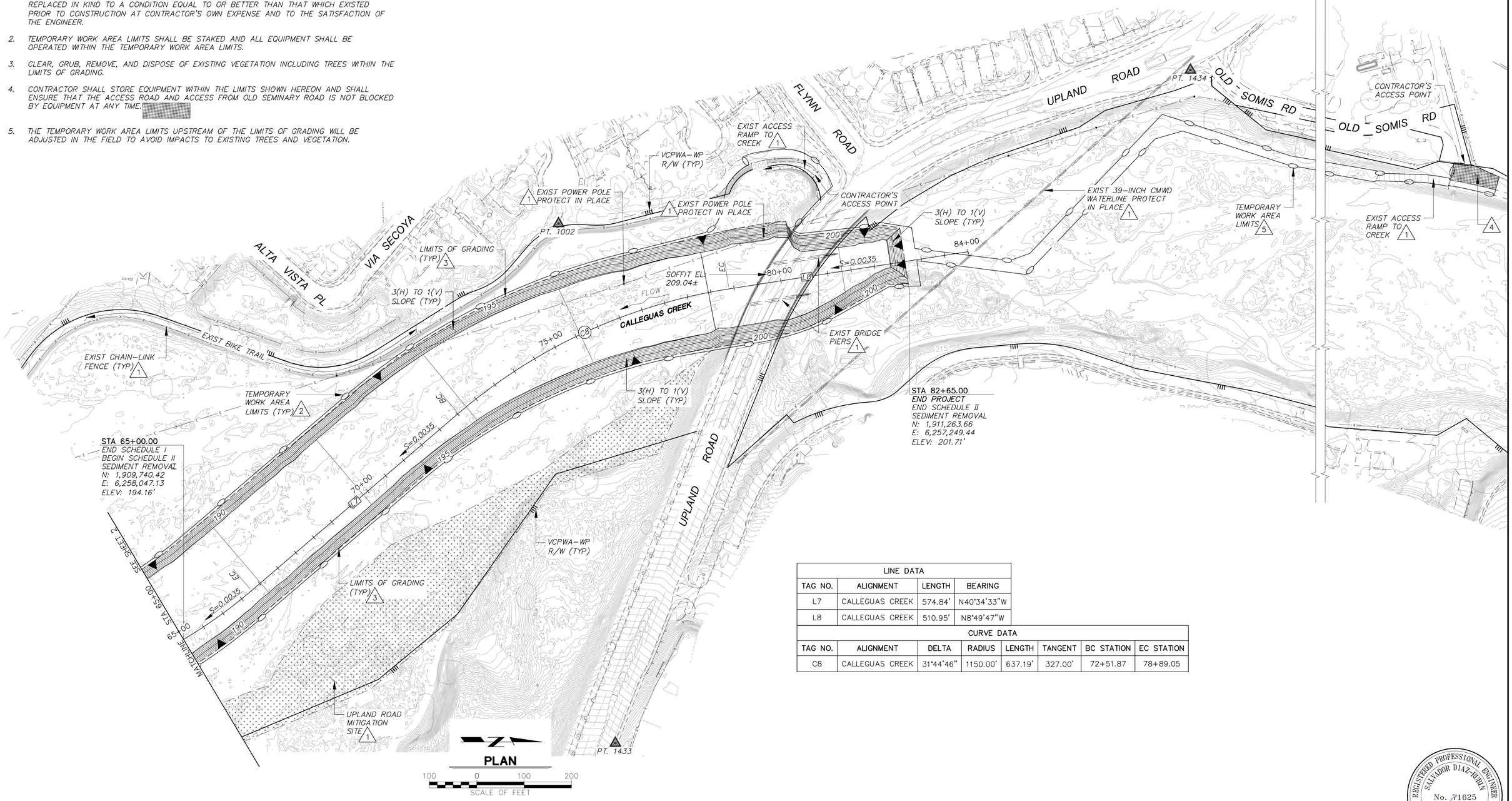
CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE
2023 SEDIMENT REMOVAL

PLAN – STA. 33+00.00 TO STA. 65+00.00

SHEET 2 OF 6
DRAWING SET NO. WPD–3–521

NOTES:

1. EXISTING IMPROVEMENTS WITHIN THE RIGHT OF WAY AND WORK AREAS SHALL REMAIN AND SHALL BE PROTECTED UNLESS OTHERWISE NOTED. DAMAGED IMPROVEMENTS SHALL BE REPLACED IN KIND TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION AT CONTRACTOR'S OWN EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.
2. TEMPORARY WORK AREA LIMITS SHALL BE STAKED AND ALL EQUIPMENT SHALL BE OPERATED WITHIN THE TEMPORARY WORK AREA LIMITS.
3. CLEAR, GRUB, REMOVE, AND DISPOSE OF EXISTING VEGETATION INCLUDING TREES WITHIN THE LIMITS OF GRADING.
4. CONTRACTOR SHALL STORE EQUIPMENT WITHIN THE LIMITS SHOWN HEREON AND SHALL ENSURE THAT THE ACCESS ROAD AND ACCESS FROM OLD SEMINARY ROAD IS NOT BLOCKED BY EQUIPMENT AT ANY TIME.
5. THE TEMPORARY WORK AREA LIMITS UPSTREAM OF THE LIMITS OF GRADING WILL BE ADJUSTED IN THE FIELD TO AVOID IMPACTS TO EXISTING TREES AND VEGETATION.



PLAN

100 0 100 200

SCALE OF FEET

LINE DATA			
TAG NO.	ALIGNMENT	LENGTH	BEARING
L7	CALLEGUAS CREEK	574.84'	N40°34'33"W
L8	CALLEGUAS CREEK	510.95'	N8°49'47"W

CURVE DATA							
TAG NO.	ALIGNMENT	DELTA	RADIUS	LENGTH	TANGENT	BC STATION	EC STATION
C8	CALLEGUAS CREEK	31°44'46"	1150.00'	637.19'	327.00'	72+51.87	78+89.05

REGISTERED PROFESSIONAL ENGINEER
SALVADOR DIAZ-RUBIN
No. 71625
CIVIL
STATE OF CALIFORNIA

PLOT DATE: 7/27/23

SAVE DATE: 7/27/23 MACHARIA, ROBERT K:\PROJECTS\ZONE3\CALLEGUASCREEK\86025_CALLEGUAS_CREEK_DS_UPLAND_ROAD_BRIDGE_2023_SEDIMENT_REMOVAL\DESIGN\DESIGNDRAWINGS\FINAL_PLANS\PLAN.DWG

	REVISION	DESCRIPTION	APP.	DATE
D				
C				
B				
A				
△				

R MACHARIA, DESIGNED
R MACHARIA, DRAWN
S DIAZ–RUBIN, CHECKED

WATERSHED PROJECT MANAGER — 07/27/2023 DATE
WATERSHED DEPUTY DIRECTOR — 07/28/2023 DATE
WATERSHED DIRECTOR (Acting for) — 07/28/2023 DATE

VENTURA COUNTY
PUBLIC WORKS AGENCY
WATERSHED PROTECTION

SPEC. NO. WP24–01
PROJ. NO. 86025

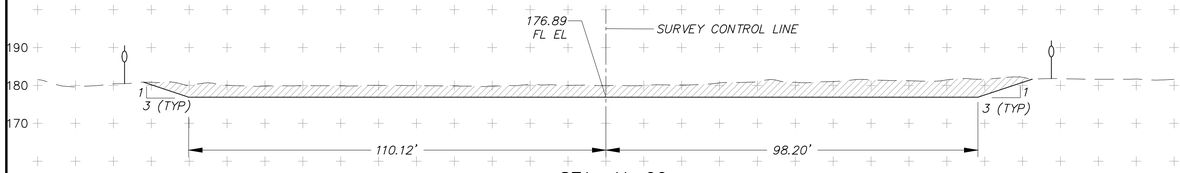
CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE
2023 SEDIMENT REMOVAL

PLAN – STA. 65+00.00 TO STA. 82+65.00

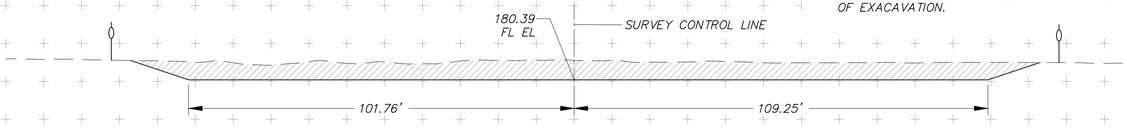
SHEET 3 OF 6
DRAWING SET NO. WPD–3–521

NOTES:

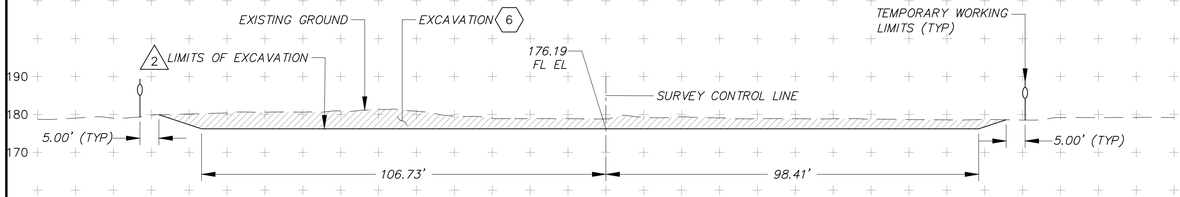
1. TEMPORARY WORK AREA LIMITS SHALL BE STAKED AND ALL EQUIPMENT SHALL BE OPERATED WITHIN THE TEMPORARY WORK AREA LIMITS.
2. CLEAR, GRUB, REMOVE, AND DISPOSE OF EXISTING VEGETATION INCLUDING TREES WITHIN THE LIMITS OF EXACAVATION.



STA. 41+00



STA. 51+00



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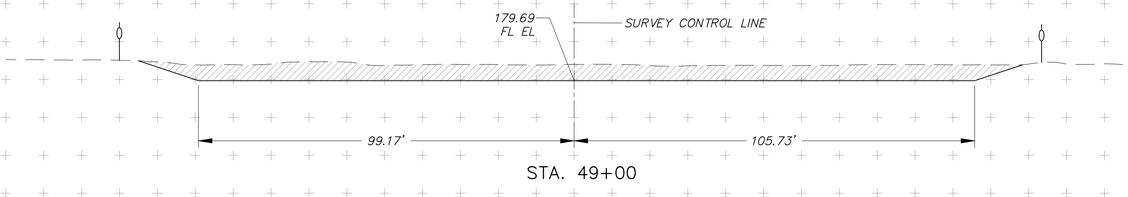
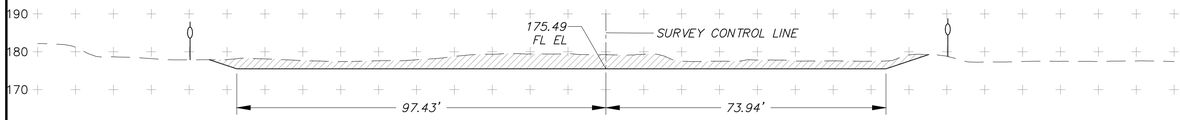


STA. 49+00

TYPICAL PAY STATION
(SCHEDULE I)



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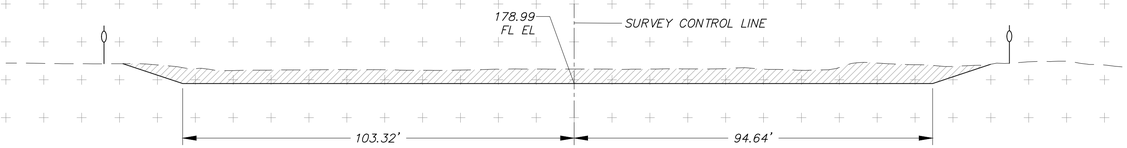
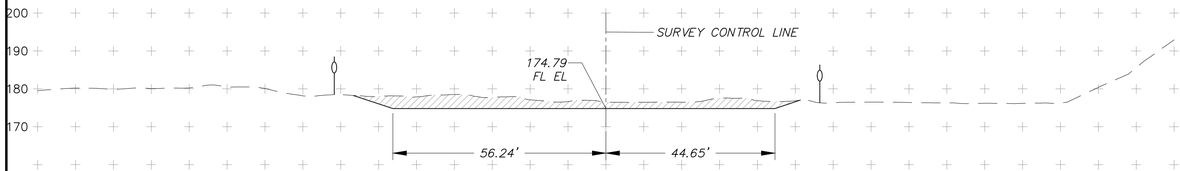


STA. 47+00



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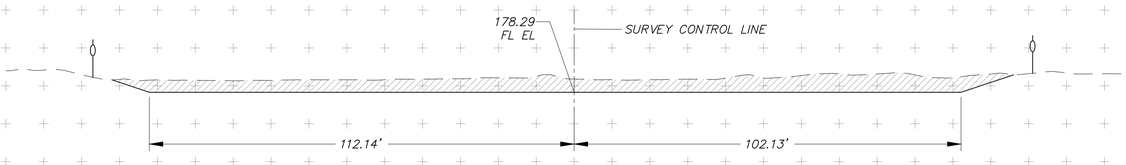

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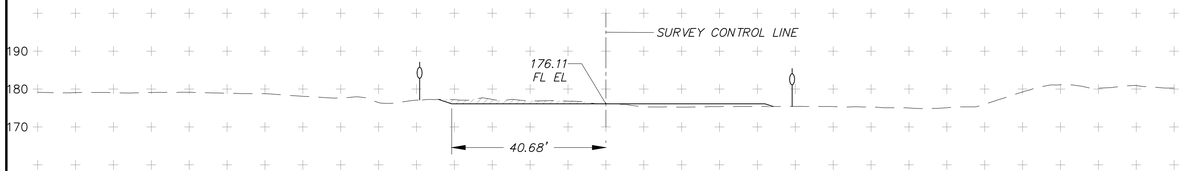
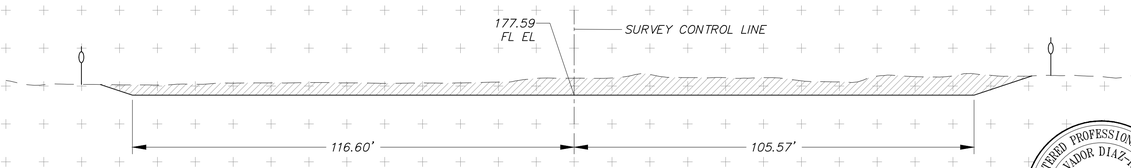


STA. 33+00
(BEGIN SCHEDULE I)



STA. 43+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 140 120 100 80 60 40 20 0 20 40 60 80 100 120

CROSS SECTIONS

SCALE: HORZ: 1" = 20'
VERT: 1" = 20'

REGISTERED PROFESSIONAL ENGINEER
SALVADOR DIAZ-RUBIN
No. 71625
CIVIL
STATE OF CALIFORNIA

PLOT DATE: 7/27/23

SAVE DATE: 7/27/23 MACHARIA, ROBERT K:\PROJECTS\ZONE5\CALLEGUASCREEK\86025_CALLEGUAS_CREEK_DS_UPLAND_ROAD_BRIDGE_2023_SEDIMENT_REMOVAL\DESIGN\DESIGNDRAWINGS\FINAL_PLANS\CROSS-SECTIONS.DWG

D			
C			
B			
A			
△	REVISION DESCRIPTION	APP.	DATE

R MACHARIA — DESIGNED
AR, RKM — DRAWN
S DIAZ-RUBIN — CHECKED

WATERSHED PROJECT MANAGER — DATE 07/27/2023
WATERSHED DEPUTY DIRECTOR — DATE 07/28/2023
WATERSHED DIRECTOR — Acting for — DATE 07/28/2023

VENTURA COUNTY
PUBLIC WORKS AGENCY
WATERSHED PROTECTION

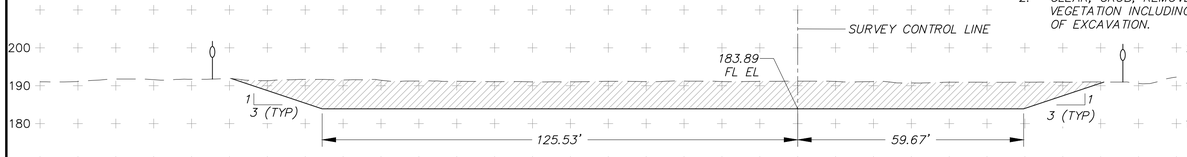
SPEC. NO. WP24-01
PROJ. NO. 86025

CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE
2023 SEDIMENT REMOVAL
CROSS SECTIONS STA. 33+00.00 TO STA.51+00.00

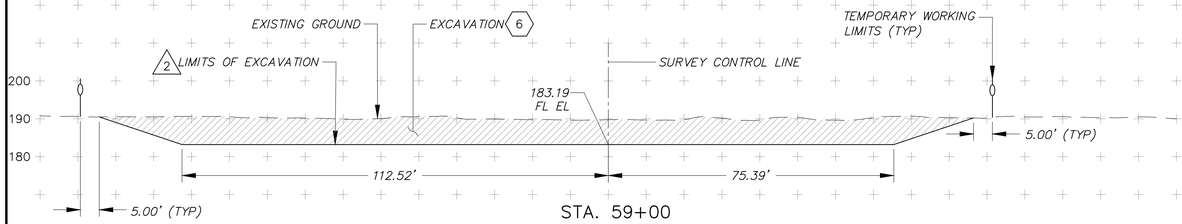
SHEET 4 OF 6
DRAWING SET NO. WPD-3-521

NOTES:

1. TEMPORARY WORK AREA LIMITS SHALL BE STAKED AND ALL EQUIPMENT SHALL BE OPERATED WITHIN THE TEMPORARY WORK AREA LIMITS.
2. CLEAR, GRUB, REMOVE, AND DISPOSE OF EXISTING VEGETATION INCLUDING TREES WITHIN THE LIMITS OF EXCAVATION.

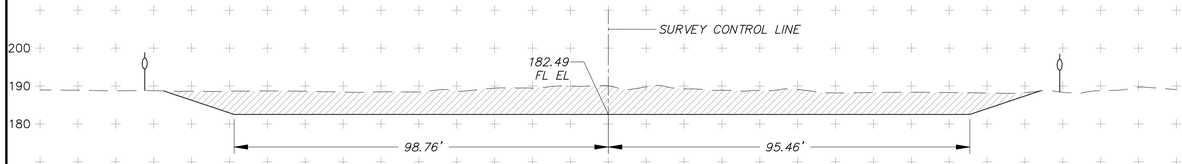


STA. 61+00

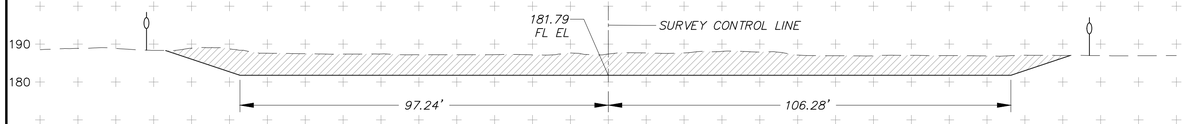


STA. 59+00

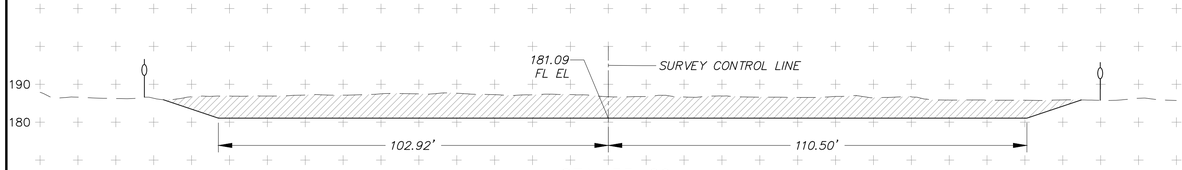
TYPICAL PAY STATION
(SCHEDULE I)



STA. 57+00



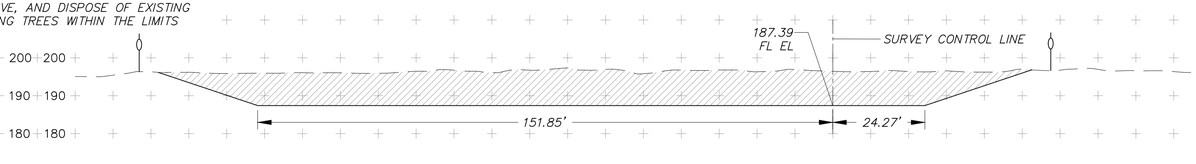
STA. 55+00



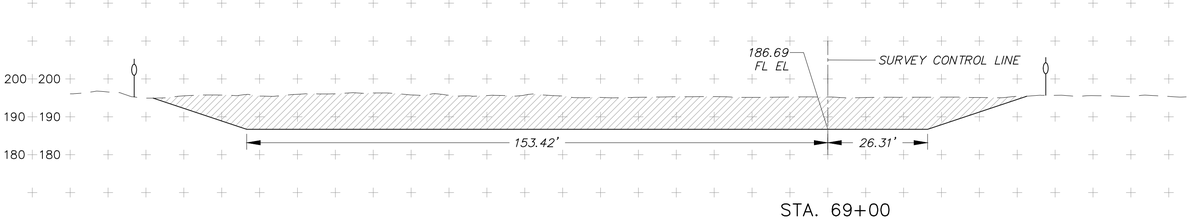
STA. 53+00

CROSS SECTIONS

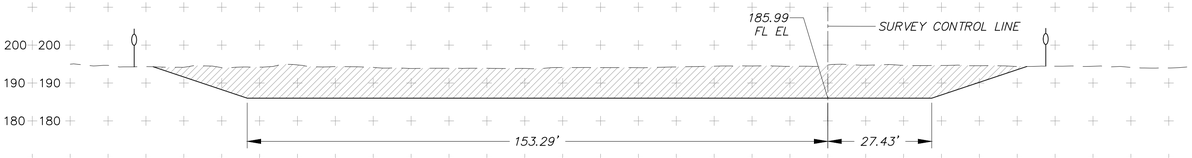
SCALE: HORZ: 1" = 20'
VERT: 1" = 20'



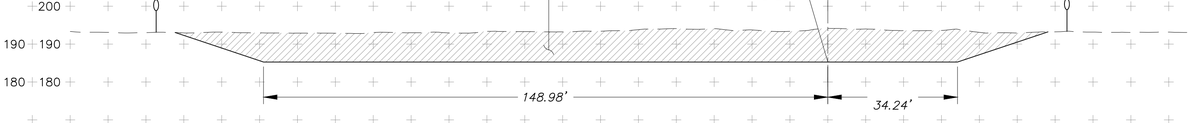
STA. 71+00



STA. 69+00

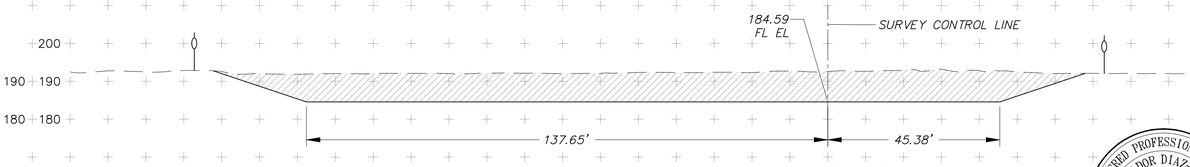


STA. 67+00



STA. 65+00

TYPICAL PAY STATION
(END SCHEDULE I, BEGIN SCHEDULE II)



STA. 63+00

REGISTERED PROFESSIONAL ENGINEER
SALVADOR DIAZ-RUBIN
No. 71625
CIVIL
STATE OF CALIFORNIA

PLOT DATE: 7/27/23

SAVE DATE: 7/27/23 MACHARIA, ROBERT K:\PROJECTS\ZONE1\CALLEGUASCREEK\86025_CALLEGUAS_CREEK_DS_UPLAND_ROAD_BRIDGE_2023_SEDIMENT_REMOVAL\DESIGN\DESIGNDRAWINGS\FINAL_PLANS\CROSS-SECTIONS.DWG

D			
C			
B			
A			
△	REVISION DESCRIPTION	APP.	DATE

R MACHARIA, DESIGNED
AR, RKM, DRAWN
S DIAZ-RUBIN, CHECKED

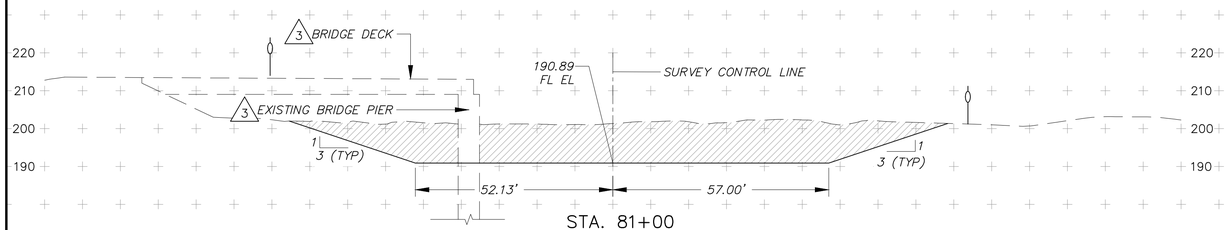
WATERSHED PROJECT MANAGER — DATE 07/27/2023
WATERSHED DEPUTY DIRECTOR — DATE 07/28/2023
WATERSHED DIRECTOR, Acting for — DATE 07/28/2023

VENTURA COUNTY
PUBLIC WORKS AGENCY
WATERSHED PROTECTION

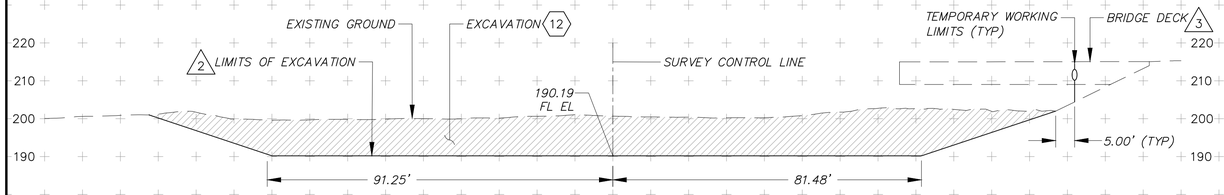
SPEC. NO. WP24-01
PROJ. NO. 86025

CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE
2023 SEDIMENT REMOVAL
CROSS SECTIONS STA. 53+00.00 TO STA.71+00.00

SHEET 5 OF 6
DRAWING SET NO. WPD-3-521

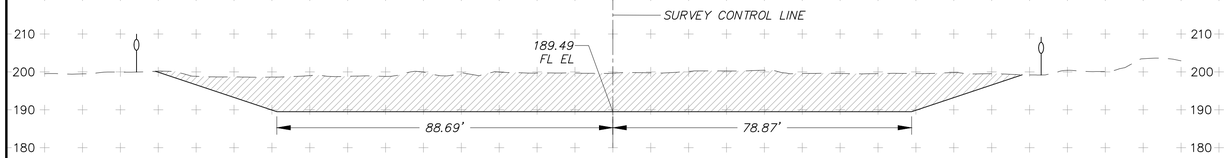


STA. 81+00

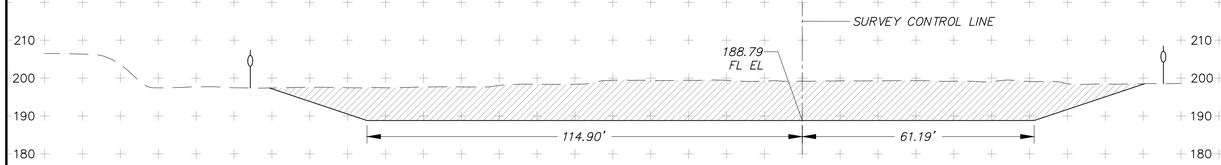


STA. 79+00

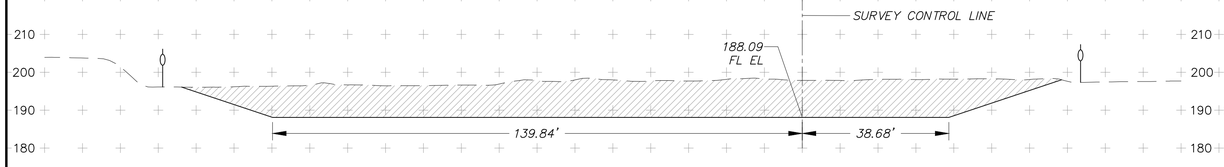
TYPICAL PAY STATION (SCHEDULE II)



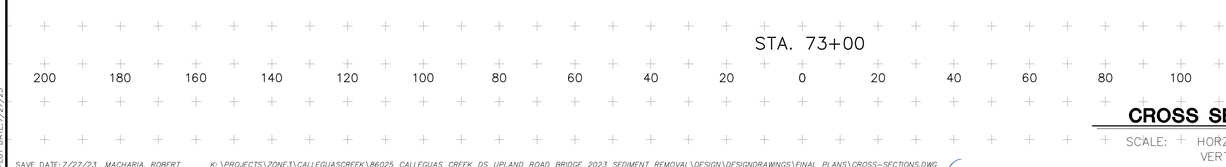
STA. 77+00

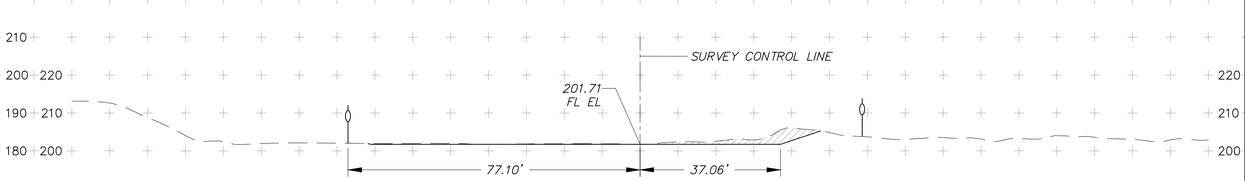


STA. 75+00

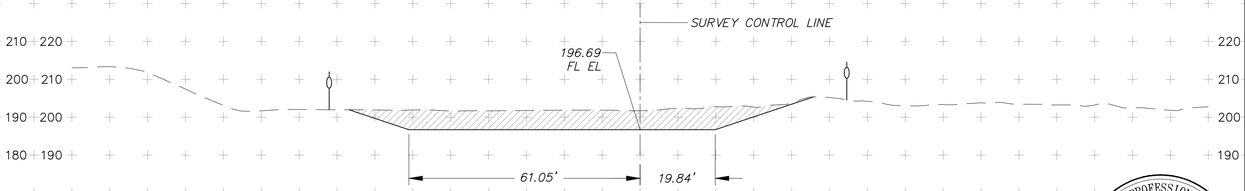


STA. 73+00

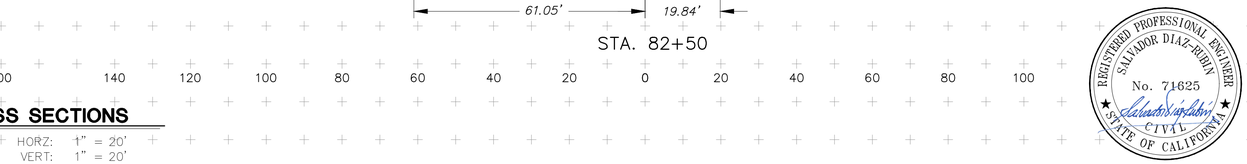




STA. 82+65
(END SCHEDULE II)



STA. 82+50



CROSS SECTIONS

SCALE: HORZ: 1" = 20'
VERT: 1" = 20'

NOTES:

1. TEMPORARY WORK AREA LIMITS SHALL BE STAKED AND ALL EQUIPMENT SHALL BE OPERATED WITHIN THE TEMPORARY WORK AREA LIMITS.
2. CLEAR, GRUB, REMOVE, AND DISPOSE OF EXISTING VEGETATION INCLUDING TREES WITHIN THE LIMITS OF EXCAVATION.
3. EXISTING IMPROVEMENTS WITHIN THE RIGHT OF WAY AND WORK AREAS SHALL REMAIN AND SHALL BE PROTECTED UNLESS OTHERWISE NOTED. DAMAGED IMPROVEMENTS SHALL BE REPLACED IN KIND TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION AT CONTRACTOR'S OWN EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

REGISTERED PROFESSIONAL ENGINEER
SALVADOR DIAZ-RUBIN
No. 71625
CIVIL
STATE OF CALIFORNIA

PLOT DATE: 7/27/23

SAVE DATE: 7/27/23 MACHARIA, ROBERT K:\PROJECTS\ZONE1\CALLEGUASCREEK\86025_CALLEGUAS_CREEK_DS_UPLAND_ROAD_BRIDGE_2023_SEDIMENT_REMOVAL\DESIGN\DESIGNDRAWINGS\FINAL_PLANS\CROSS_SECTIONS.DWG

D			
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A			
△	REVISION DESCRIPTION	APP.	DATE

R MACHARIA — DESIGNED
AR, RKM — DRAWN
S DIAZ-RUBIN — CHECKED

WATERSHED PROJECT MANAGER	07/27/2023 DATE
WATERSHED DEPUTY DIRECTOR	07/28/2023 DATE
WATERSHED DIRECTOR (Acting for)	07/28/2023 DATE

VENTURA COUNTY
PUBLIC WORKS AGENCY
WATERSHED PROTECTION

SPEC. NO. WP24-01
PROJ. NO. 86025

CALLEGUAS CREEK DS OF UPLAND ROAD BRIDGE
2023 SEDIMENT REMOVAL
CROSS SECTIONS STA. 73+00.00 TO STA.82+65.00

SHEET 6 OF 6
DRAWING SET NO. WPD-3-521